



**BUREAU
VERITAS**

MINERAL LABORATORIES
Canada

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 07, 2022
Report Date: April 19, 2022
Page: 1 of 5

CERTIFICATE OF ANALYSIS

VAN22000374.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 0131
P.O. Number: 3000732409
Number of Samples: 119

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	119	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	119	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013I771001 Sediment Pulp	0.01	0.04	0.02	0.2	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	0.9	<0.1	<0.5	<0.01	<0.02	<0.02	<1	0.01	<0.001
013I771002 Sediment Pulp	16.88	48.84	3.73	134.1	371	10.3	13.2	247	5.14	0.2	32.6	1.5	4.1	29.9	0.47	0.10	0.10	86	0.30	0.238
013I771003 Sediment Pulp	1.94	38.01	3.66	51.9	126	10.8	32.7	946	6.88	0.6	4.3	4.3	2.2	9.1	0.16	0.05	0.05	82	0.09	0.131
013I771004 Sediment Pulp	1.70	20.40	1.57	17.9	19	2.7	5.3	266	1.67	0.6	6.4	<0.2	4.2	9.1	0.03	0.04	0.03	21	0.21	0.105
013I771005 Sediment Pulp	0.85	41.36	1.92	30.6	205	5.9	2.3	47	0.55	0.5	10.5	1.8	0.5	17.8	0.09	0.03	0.03	20	0.20	0.058
013I771006 Sediment Pulp	0.29	29.75	7.76	22.9	72	3.4	2.0	25	0.39	<0.1	3.0	1.7	0.7	20.1	0.24	0.06	0.10	9	0.14	0.056
013I771007 Sediment Pulp	3.16	36.23	5.70	83.5	595	6.0	3.2	174	2.20	0.3	8.4	4.0	0.9	33.1	0.40	0.05	0.06	100	0.28	0.324
013I771008 Sediment Pulp	0.57	22.20	2.55	26.2	107	3.2	1.0	51	0.48	0.3	6.4	0.9	0.4	18.5	0.11	0.04	0.03	24	0.21	0.049
013I771009 Sediment Pulp	1.41	25.32	3.31	83.1	245	8.6	12.8	491	4.39	0.4	4.8	1.3	2.9	22.5	0.40	0.05	0.04	78	0.25	0.162
013I771010 Sediment Pulp	1.41	25.76	3.29	80.9	282	9.3	12.9	521	4.07	<0.1	5.1	0.9	2.7	23.6	0.38	0.05	0.04	79	0.26	0.168
013I771011 Sediment Pulp	0.93	13.99	1.79	73.1	42	6.4	4.3	174	1.29	0.5	2.1	2.4	3.3	28.8	0.14	0.03	<0.02	30	0.46	0.072
013I771012 Sediment Pulp	2.53	39.66	2.19	71.5	138	6.4	5.5	195	2.04	0.6	8.3	0.9	2.4	15.1	0.28	0.07	0.04	63	0.23	0.154
013I771013 Sediment Pulp	4.87	69.00	2.87	137.7	345	17.6	52.6	1330	10.83	1.1	12.3	1.1	7.2	23.2	0.49	0.07	0.07	91	0.21	0.239
013I771014 Sediment Pulp	0.46	9.45	2.11	21.0	14	5.3	3.2	115	0.67	0.8	1.5	0.8	3.8	19.7	0.07	0.06	<0.02	22	0.34	0.068
013I771015 Sediment Pulp	8.29	36.98	78.92	278.3	590	10.7	6.7	417	1.70	30.7	10.3	4.3	1.6	67.3	1.30	0.59	0.96	20	6.16	0.064
013I771016 Sediment Pulp	2.11	52.93	2.74	87.3	154	6.8	10.2	364	3.69	0.4	7.3	0.4	3.0	15.5	0.24	0.05	0.02	65	0.16	0.155
013I771017 Sediment Pulp	1.28	5.97	2.77	33.5	25	5.4	5.0	206	1.31	1.5	1.6	1.2	4.8	22.6	0.10	0.05	0.02	28	0.42	0.110
013I771018 Sediment Pulp	1.09	4.97	2.31	29.5	19	5.0	4.1	175	1.13	1.1	1.3	2.0	4.2	18.0	0.07	0.05	<0.02	24	0.38	0.104
013I771019 Sediment Pulp	0.81	17.35	2.12	32.0	102	4.1	2.0	76	0.68	0.5	2.2	1.5	0.9	16.5	0.15	0.03	<0.02	22	0.16	0.049
013I771020 Sediment Pulp	1.53	21.29	4.09	71.7	85	10.1	10.8	450	2.57	1.1	2.6	1.3	4.2	30.3	0.18	0.04	0.04	58	0.44	0.146
013I771021 Sediment Pulp	5.11	75.88	3.12	148.2	366	18.9	53.9	1350	11.26	0.9	13.5	0.6	7.5	23.7	0.51	0.06	0.07	95	0.21	0.264
013I771022 Sediment Pulp	0.80	15.04	2.09	33.8	131	5.6	4.7	126	0.96	<0.1	3.7	1.5	1.5	18.3	0.09	0.02	<0.02	29	0.30	0.062
013I771023 Sediment Pulp	0.96	29.54	25.27	122.3	2505	41.6	25.8	1194	3.02	23.9	4.2	2.3	8.3	30.0	0.52	0.69	3.55	48	0.59	0.093
013I771024 Sediment Pulp	2.10	16.26	6.31	85.9	76	13.0	16.6	370	4.41	1.6	3.0	1.8	5.9	28.3	0.21	0.07	0.06	68	0.39	0.106
013I771025 Sediment Pulp	1.60	14.97	6.97	72.1	57	11.4	11.9	327	3.81	1.5	2.6	5.9	6.8	28.7	0.10	0.08	0.06	58	0.43	0.112
013I771026 Sediment Pulp	1.43	14.04	6.84	78.4	59	11.0	12.1	332	3.86	1.7	2.6	4.5	6.9	30.4	0.15	0.08	0.07	58	0.45	0.113
013I771027 Sediment Pulp	0.51	5.78	2.94	37.4	16	5.8	4.8	201	1.29	0.4	1.3	<0.2	3.8	25.3	0.06	0.03	0.02	30	0.46	0.098
013I771028 Sediment Pulp	1.11	14.03	5.05	75.6	60	9.8	8.7	186	1.67	0.7	9.8	0.6	5.7	27.6	0.18	0.08	0.04	37	0.39	0.066
013I771029 Sediment Pulp	4.35	37.58	6.67	106.9	134	13.7	10.5	223	2.11	0.9	32.9	1.9	4.5	30.1	0.28	0.22	0.09	42	0.40	0.113
013I771030 Sediment Pulp	5.22	20.03	10.13	238.1	238	7.2	3.9	119	1.92	0.7	11.8	<0.2	6.8	33.3	0.62	0.07	0.03	35	0.35	0.088



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Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013I771001	Sediment Pulp	<0.5	0.5	<0.01	<0.5	0.001	<20	<0.01	0.006	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
013I771002	Sediment Pulp	208.9	18.6	0.10	69.8	0.057	<20	1.84	0.014	0.03	0.5	3.6	0.30	0.25	495	4.0	0.02	3.9	0.54	0.2
013I771003	Sediment Pulp	59.7	46.6	0.12	35.7	0.063	<20	2.04	0.016	0.04	0.2	3.6	0.13	0.14	290	1.7	<0.02	3.2	0.42	0.1
013I771004	Sediment Pulp	22.6	6.3	0.12	21.5	0.056	<20	0.40	0.012	0.05	0.2	1.7	0.03	<0.02	69	<0.1	<0.02	1.4	0.28	<0.1
013I771005	Sediment Pulp	65.6	7.5	0.09	47.4	0.032	<20	0.70	0.015	0.04	0.2	0.8	0.09	0.13	297	1.0	<0.02	2.0	0.32	<0.1
013I771006	Sediment Pulp	45.6	8.0	0.06	49.2	0.029	<20	0.55	0.011	0.02	<0.1	1.4	<0.02	0.36	174	1.4	<0.02	1.5	0.12	<0.1
013I771007	Sediment Pulp	143.1	16.0	0.07	119.8	0.072	<20	1.97	0.013	0.02	0.1	2.5	0.10	0.24	243	2.9	<0.02	10.2	0.30	0.2
013I771008	Sediment Pulp	35.8	9.2	0.07	35.0	0.038	<20	0.51	0.017	0.03	0.1	1.1	0.04	0.15	112	1.1	<0.02	2.0	0.31	<0.1
013I771009	Sediment Pulp	73.3	12.9	0.10	65.7	0.059	<20	1.64	0.019	0.04	0.2	4.0	0.18	0.17	150	2.2	<0.02	4.5	0.42	<0.1
013I771010	Sediment Pulp	74.6	13.7	0.10	72.6	0.062	<20	1.63	0.021	0.04	0.2	3.8	0.19	0.16	157	2.1	<0.02	4.7	0.44	0.1
013I771011	Sediment Pulp	56.7	9.4	0.21	45.1	0.080	<20	0.76	0.034	0.07	0.4	2.7	0.09	0.11	65	0.3	<0.02	2.8	0.45	0.1
013I771012	Sediment Pulp	104.1	11.6	0.13	53.7	0.066	<20	1.26	0.024	0.06	0.3	2.9	0.13	0.09	93	1.4	<0.02	2.8	0.56	<0.1
013I771013	Sediment Pulp	212.4	19.0	0.09	120.5	0.057	<20	1.98	0.017	0.04	0.4	5.6	0.33	0.26	122	4.0	<0.02	3.9	0.59	0.2
013I771014	Sediment Pulp	39.2	8.2	0.18	45.3	0.065	<20	0.44	0.024	0.07	0.1	1.9	0.06	0.15	54	0.1	<0.02	1.8	0.40	<0.1
013I771015	Sediment Pulp	11.4	11.0	0.57	90.0	0.038	<20	0.43	0.028	0.05	0.5	2.3	0.20	1.46	92	0.8	<0.02	1.9	0.48	<0.1
013I771016	Sediment Pulp	113.1	10.4	0.10	62.8	0.053	<20	1.38	0.014	0.04	0.1	3.2	0.14	0.16	136	1.4	<0.02	2.9	0.34	<0.1
013I771017	Sediment Pulp	35.1	10.3	0.31	47.6	0.090	<20	0.65	0.050	0.14	0.2	2.3	0.10	0.06	28	<0.1	<0.02	2.4	0.74	<0.1
013I771018	Sediment Pulp	33.4	8.9	0.27	41.0	0.072	<20	0.54	0.036	0.12	0.1	1.8	0.08	0.05	34	<0.1	<0.02	2.1	0.65	<0.1
013I771019	Sediment Pulp	48.5	7.7	0.09	45.4	0.035	<20	0.58	0.015	0.03	0.3	1.4	0.05	0.16	109	0.4	<0.02	1.9	0.46	<0.1
013I771020	Sediment Pulp	71.0	17.6	0.41	111.2	0.126	<20	1.40	0.044	0.22	0.3	4.1	0.17	0.08	87	0.5	<0.02	5.3	1.66	<0.1
013I771021	Sediment Pulp	226.6	19.3	0.10	127.3	0.061	<20	2.08	0.019	0.04	0.4	6.0	0.36	0.28	139	4.0	<0.02	4.1	0.62	0.3
013I771022	Sediment Pulp	27.8	12.7	0.25	57.9	0.076	<20	0.67	0.031	0.10	<0.1	1.7	0.10	0.07	219	0.1	<0.02	2.5	0.56	<0.1
013I771023	Sediment Pulp	45.8	45.4	0.78	159.7	0.099	<20	1.65	0.031	0.26	0.2	5.3	0.27	0.15	270	0.4	0.03	5.8	1.36	<0.1
013I771024	Sediment Pulp	55.9	22.7	0.45	93.9	0.117	<20	1.41	0.052	0.20	0.4	3.9	0.22	0.18	212	0.5	<0.02	4.5	1.12	<0.1
013I771025	Sediment Pulp	48.6	22.5	0.50	94.7	0.128	<20	1.31	0.053	0.24	0.4	4.1	0.19	0.12	174	0.4	<0.02	4.6	1.28	<0.1
013I771026	Sediment Pulp	47.9	22.6	0.51	99.9	0.134	<20	1.33	0.057	0.24	0.4	4.4	0.19	0.12	219	0.2	<0.02	4.4	1.27	0.1
013I771027	Sediment Pulp	26.7	12.1	0.34	60.3	0.094	<20	0.74	0.049	0.15	0.2	2.4	0.10	0.02	86	<0.1	<0.02	2.7	0.66	<0.1
013I771028	Sediment Pulp	59.1	18.7	0.42	90.0	0.106	<20	1.23	0.037	0.19	1.8	3.1	0.22	0.31	312	0.2	<0.02	4.1	1.40	<0.1
013I771029	Sediment Pulp	121.1	19.5	0.43	108.1	0.107	<20	1.47	0.042	0.23	0.2	4.0	0.33	0.45	314	1.1	<0.02	4.4	1.37	0.2
013I771030	Sediment Pulp	377.2	10.6	0.15	78.1	0.051	<20	1.51	0.028	0.07	0.4	2.9	0.34	0.52	500	2.1	<0.02	3.2	0.49	0.2



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Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013I771001 Sediment Pulp	<0.02	<0.1	<0.1	<0.05	7.9	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
013I771002 Sediment Pulp	2.10	2.9	0.4	<0.05	1.3	68.82	321.3	0.03	3	0.7	2.3	45.75	156.61	23.95	4.20	16.91	2.39	11.25	2.40	6.09
013I771003 Sediment Pulp	1.23	2.8	0.4	<0.05	0.4	27.86	112.4	<0.02	<1	0.7	1.9	14.51	45.58	8.35	1.77	6.05	0.98	5.00	1.14	2.85
013I771004 Sediment Pulp	1.51	3.4	0.3	<0.05	0.6	10.25	55.8	<0.02	2	0.5	2.5	6.29	20.64	3.82	0.78	2.45	0.42	2.21	0.42	1.18
013I771005 Sediment Pulp	0.76	2.8	0.3	<0.05	0.9	16.73	97.9	<0.02	<1	0.3	2.0	14.80	43.04	7.43	1.44	5.19	0.72	3.16	0.64	1.79
013I771006 Sediment Pulp	1.11	0.9	0.9	<0.05	1.5	10.85	74.5	<0.02	<1	<0.1	0.5	10.33	29.00	4.26	0.79	2.24	0.44	2.06	0.37	1.05
013I771007 Sediment Pulp	3.88	2.2	0.6	<0.05	0.6	42.55	245.4	0.06	1	0.6	1.4	36.03	106.28	15.97	2.48	9.34	1.74	8.21	1.67	4.38
013I771008 Sediment Pulp	1.58	1.6	0.5	<0.05	0.6	11.13	64.7	<0.02	1	0.2	1.1	8.15	24.26	4.27	0.72	2.81	0.45	2.25	0.44	1.17
013I771009 Sediment Pulp	2.51	3.0	0.3	<0.05	0.5	26.53	128.4	0.04	<1	0.5	1.8	18.57	57.49	9.97	1.83	6.06	1.04	5.21	1.07	2.99
013I771010 Sediment Pulp	2.58	3.1	0.3	<0.05	0.5	27.49	131.1	0.04	<1	0.8	1.6	19.18	57.62	10.00	1.81	5.29	1.07	5.53	1.14	3.10
013I771011 Sediment Pulp	2.33	4.5	0.4	<0.05	1.1	20.18	101.8	<0.02	1	0.4	4.9	14.65	47.94	7.59	1.38	5.25	0.83	3.71	0.72	2.02
013I771012 Sediment Pulp	2.24	4.5	0.3	<0.05	0.4	36.48	205.0	0.02	1	0.7	3.2	27.90	91.04	14.58	2.67	9.49	1.48	6.76	1.49	3.85
013I771013 Sediment Pulp	1.99	3.5	0.3	<0.05	0.3	74.09	485.2	0.04	2	1.0	2.0	52.69	174.30	27.95	4.99	18.94	3.00	13.57	2.85	8.31
013I771014 Sediment Pulp	2.71	5.6	0.4	<0.05	1.2	15.08	68.9	<0.02	<1	0.2	3.8	9.03	28.19	4.59	0.75	3.30	0.53	2.59	0.58	1.68
013I771015 Sediment Pulp	0.62	3.3	3.0	<0.05	1.1	10.25	17.1	0.51	21	<0.1	3.8	2.91	10.69	2.26	0.48	2.24	0.31	1.62	0.39	1.08
013I771016 Sediment Pulp	1.83	3.8	0.2	<0.05	0.3	34.88	221.7	0.02	1	0.7	2.1	29.00	89.98	13.96	2.25	9.21	1.43	6.31	1.39	3.58
013I771017 Sediment Pulp	2.05	9.9	0.4	<0.05	1.3	12.41	65.4	<0.02	<1	0.4	6.8	8.15	25.68	4.72	0.71	3.06	0.46	2.37	0.47	1.28
013I771018 Sediment Pulp	1.81	8.5	0.4	<0.05	1.1	10.59	59.9	<0.02	<1	<0.1	5.3	7.38	23.94	4.00	0.66	2.58	0.37	1.91	0.41	1.06
013I771019 Sediment Pulp	1.02	2.7	0.2	<0.05	0.3	11.73	88.3	<0.02	<1	0.1	2.5	11.19	34.70	5.41	0.89	3.27	0.52	2.31	0.45	1.32
013I771020 Sediment Pulp	2.75	17.7	0.5	<0.05	1.2	21.63	128.0	0.02	<1	0.7	9.6	18.01	56.18	9.28	1.69	6.12	0.92	4.24	0.90	2.25
013I771021 Sediment Pulp	1.97	3.6	0.3	<0.05	0.3	79.84	515.1	0.04	3	1.1	2.1	56.00	193.76	31.09	5.52	20.66	3.24	14.56	3.28	8.89
013I771022 Sediment Pulp	1.58	6.9	0.3	<0.05	0.5	8.06	48.0	<0.02	1	0.5	5.2	6.00	17.72	2.73	0.48	2.21	0.30	1.48	0.32	0.90
013I771023 Sediment Pulp	2.15	23.1	1.1	<0.05	5.3	19.62	75.4	0.04	1	0.4	20.5	10.75	36.89	6.67	1.07	4.90	0.71	3.62	0.72	1.98
013I771024 Sediment Pulp	2.93	16.3	0.7	<0.05	1.9	17.76	98.7	0.03	<1	0.6	9.9	12.79	39.25	6.23	1.02	4.47	0.66	3.49	0.72	1.92
013I771025 Sediment Pulp	3.29	19.9	0.7	<0.05	2.7	17.31	89.2	0.02	<1	0.4	10.3	11.08	34.40	5.68	0.95	3.95	0.63	3.10	0.71	1.79
013I771026 Sediment Pulp	3.29	19.8	0.9	<0.05	2.7	16.44	90.0	<0.02	<1	0.5	12.4	11.69	35.41	6.08	1.06	3.87	0.66	3.23	0.67	1.87
013I771027 Sediment Pulp	2.15	11.1	0.5	<0.05	1.6	11.18	52.2	<0.02	<1	0.2	8.3	6.44	20.19	3.52	0.62	2.24	0.40	2.06	0.48	1.24
013I771028 Sediment Pulp	3.01	18.4	0.6	<0.05	2.3	18.66	103.2	<0.02	<1	0.4	12.5	14.27	44.39	7.20	1.05	4.79	0.75	3.68	0.74	2.01
013I771029 Sediment Pulp	2.88	21.1	0.5	<0.05	1.8	43.44	199.5	<0.02	1	1.0	11.6	31.28	104.45	16.50	2.77	11.69	1.75	8.55	1.79	5.08
013I771030 Sediment Pulp	3.63	9.9	0.4	<0.05	2.1	100.19	719.7	0.05	2	5.2	6.8	95.31	317.68	49.31	3.76	32.39	4.92	25.22	4.79	13.56



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013I771001	Sediment Pulp		<0.02	<0.02	<0.02	<10	<2
013I771002	Sediment Pulp		1.03	5.33	0.94	<10	<2
013I771003	Sediment Pulp		0.46	2.53	0.43	<10	<2
013I771004	Sediment Pulp		0.17	1.12	0.19	<10	<2
013I771005	Sediment Pulp		0.24	1.38	0.24	<10	<2
013I771006	Sediment Pulp		0.17	0.85	0.14	<10	<2
013I771007	Sediment Pulp		0.68	3.70	0.55	<10	<2
013I771008	Sediment Pulp		0.17	0.84	0.15	<10	<2
013I771009	Sediment Pulp		0.48	2.45	0.38	<10	<2
013I771010	Sediment Pulp		0.46	2.63	0.45	<10	<2
013I771011	Sediment Pulp		0.26	1.74	0.26	<10	<2
013I771012	Sediment Pulp		0.62	3.39	0.53	<10	<2
013I771013	Sediment Pulp		1.29	6.91	1.18	<10	<2
013I771014	Sediment Pulp		0.27	1.41	0.24	<10	<2
013I771015	Sediment Pulp		0.14	0.87	0.14	<10	<2
013I771016	Sediment Pulp		0.51	2.83	0.52	<10	<2
013I771017	Sediment Pulp		0.21	1.11	0.18	<10	2
013I771018	Sediment Pulp		0.18	0.94	0.16	<10	<2
013I771019	Sediment Pulp		0.16	1.02	0.15	<10	<2
013I771020	Sediment Pulp		0.34	1.96	0.31	<10	<2
013I771021	Sediment Pulp		1.38	7.52	1.34	<10	<2
013I771022	Sediment Pulp		0.13	0.75	0.12	<10	<2
013I771023	Sediment Pulp		0.31	1.57	0.27	<10	<2
013I771024	Sediment Pulp		0.28	1.61	0.27	<10	<2
013I771025	Sediment Pulp		0.33	1.56	0.26	<10	<2
013I771026	Sediment Pulp		0.30	1.62	0.26	<10	<2
013I771027	Sediment Pulp		0.18	1.00	0.17	<10	<2
013I771028	Sediment Pulp		0.34	1.84	0.30	<10	2
013I771029	Sediment Pulp		0.76	4.26	0.71	<10	<2
013I771030	Sediment Pulp		1.99	10.96	1.86	<10	<2



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	Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250			
					Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
					ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
					0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013I771031	Sediment Pulp	1.14	11.55	3.52	83.2	51	7.8	5.4	154	1.53	0.5	1.9	2.3	3.2	26.8	0.14	0.04	<0.02	34	0.41	0.065			
013I771032	Sediment Pulp	1.66	8.21	3.21	67.9	47	8.2	8.4	189	2.35	2.0	1.7	0.7	3.4	36.9	0.10	0.04	0.05	40	0.46	0.098			
013I771033	Sediment Pulp	0.57	4.99	2.35	34.6	19	5.6	4.9	161	1.24	0.6	1.0	1.2	2.9	20.1	0.04	0.02	<0.02	25	0.39	0.084			
013I771034	Sediment Pulp	0.28	10.32	3.57	23.7	16	5.1	3.4	112	0.78	0.7	1.5	0.4	3.6	26.4	0.09	0.03	0.04	19	0.33	0.073			
013I771035	Sediment Pulp	1.36	11.34	1.62	41.2	110	4.4	4.2	100	1.26	0.3	2.4	0.7	1.1	20.5	0.14	0.03	<0.02	41	0.24	0.071			
013I771036	Sediment Pulp	1.79	26.45	2.12	44.2	209	7.0	5.7	94	1.59	0.2	18.3	0.7	1.7	18.5	0.15	0.02	<0.02	58	0.24	0.132			
013I771037	Sediment Pulp	1.60	13.87	3.20	30.0	47	6.0	6.3	140	1.79	0.5	2.6	5.9	2.4	17.1	0.09	0.05	0.09	46	0.27	0.092			
013I771038	Sediment Pulp	3.78	32.68	3.16	94.4	197	11.4	47.4	676	12.36	<0.1	6.5	<0.2	5.4	21.6	0.34	0.05	0.06	92	0.19	0.207			
013I771039	Sediment Pulp	1.29	15.89	2.63	39.2	53	9.4	6.5	119	1.37	0.4	13.1	3.1	4.5	19.3	0.09	0.04	0.04	39	0.24	0.056			
013I771040	Sediment Pulp	8.82	41.25	3.10	79.3	296	9.4	12.5	120	3.98	<0.1	13.1	0.7	2.1	41.7	0.34	0.04	0.05	73	0.53	0.191			
013I771041	Sediment Pulp	4.98	18.46	9.35	233.6	224	6.5	3.9	109	1.86	0.4	10.9	0.7	5.9	30.1	0.61	0.09	0.04	30	0.33	0.085			
013I771042	Sediment Pulp	5.20	25.59	7.86	98.7	270	9.2	5.9	159	3.64	0.8	36.4	<0.2	2.9	16.1	0.61	0.09	0.07	73	0.18	0.148			
013I771043	Sediment Pulp	3.99	28.88	4.97	66.5	210	7.5	18.5	178	5.45	0.9	16.6	<0.2	4.7	19.6	0.25	0.08	0.06	96	0.17	0.136			
013I771044	Sediment Pulp	1.46	18.53	3.32	24.9	93	5.3	2.3	38	0.96	0.4	13.4	0.9	1.8	22.9	0.12	0.03	0.04	33	0.17	0.049			
013I771045	Sediment Pulp	2.08	15.21	2.17	30.6	67	6.1	4.4	60	2.35	0.3	9.8	<0.2	3.0	21.4	0.11	0.04	<0.02	62	0.20	0.055			
013I771046	Sediment Pulp	6.34	33.67	3.70	132.7	260	9.2	43.2	566	11.57	0.6	14.9	<0.2	9.0	23.4	0.49	0.05	0.04	116	0.21	0.145			
013I771047	Sediment Pulp	0.25	4.55	1.70	17.2	14	2.9	2.8	62	1.00	0.5	1.1	0.9	2.4	19.1	0.10	0.03	<0.02	21	0.26	0.047			
013I771048	Sediment Pulp	1.50	12.91	3.78	35.7	49	6.8	5.5	168	1.61	0.6	4.1	0.3	3.1	41.7	0.21	0.06	0.04	35	0.47	0.066			
013I771049	Sediment Pulp	4.10	28.99	5.99	184.2	121	9.9	10.5	312	6.77	<0.1	7.8	<0.2	5.6	17.1	0.34	0.04	0.04	60	0.21	0.085			
013I771050	Sediment Pulp	4.40	31.52	5.91	223.5	139	12.0	12.0	337	8.01	<0.1	8.7	<0.2	5.9	18.2	0.40	0.04	0.04	70	0.22	0.090			
013I771051	Sediment Pulp	4.25	32.81	7.46	112.5	130	11.0	8.1	216	3.94	0.3	6.3	0.5	3.4	31.4	0.33	0.03	0.06	69	0.36	0.127			
013I771052	Sediment Pulp	12.63	39.95	15.93	267.5	370	9.2	9.3	641	4.83	<0.1	14.6	0.3	10.9	49.0	1.26	0.05	0.06	58	0.47	0.171			
013I771053	Sediment Pulp	3.21	22.61	4.83	83.0	96	10.3	8.6	172	2.54	0.6	6.5	<0.2	5.8	24.0	0.09	0.03	0.03	71	0.33	0.079			
013I771054	Sediment Pulp	3.26	26.36	4.34	96.8	74	10.6	10.5	130	7.73	0.9	6.8	0.4	10.4	20.1	0.25	0.11	0.04	164	0.21	0.066			
013I771055	Sediment Pulp	9.31	41.09	86.59	294.4	590	12.0	7.4	433	1.76	34.4	9.9	2.1	1.8	71.8	1.34	0.53	1.05	19	6.45	0.070			
013I771056	Sediment Pulp	0.12	1.62	1.67	6.8	6	1.1	0.4	27	0.20	0.3	0.7	<0.2	0.8	18.2	0.06	0.03	0.02	11	0.14	0.014			
013I771057	Sediment Pulp	0.40	7.46	1.82	19.1	9	3.6	2.4	99	0.74	0.4	1.7	3.9	2.7	30.5	0.04	0.03	0.03	47	0.42	0.065			
013I771058	Sediment Pulp	5.07	21.99	8.01	62.4	139	9.1	8.3	146	3.63	0.5	15.6	<0.2	4.9	19.1	0.21	0.19	0.05	59	0.19	0.077			
013I771059	Sediment Pulp	12.24	30.78	7.41	52.6	165	6.3	5.5	91	3.12	0.8	25.1	<0.2	4.8	21.4	0.23	0.11	0.04	64	0.20	0.074			
013I771060	Sediment Pulp	10.17	14.29	3.44	51.2	158	5.6	6.0	122	1.38	0.4	5.0	<0.2	1.1	45.1	0.23	0.06	0.04	74	0.46	0.176			



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013I771031	Sediment Pulp	66.0	12.5	0.28	55.1	0.083	<20	0.98	0.037	0.11	0.2	2.3	0.18	0.14	238	<0.1	<0.02	3.0	0.61	<0.1	0.06
013I771032	Sediment Pulp	39.7	15.7	0.35	61.3	0.086	<20	1.01	0.040	0.13	1.1	2.4	0.17	0.25	216	0.1	<0.02	3.1	0.93	<0.1	0.03
013I771033	Sediment Pulp	21.2	10.1	0.29	46.2	0.081	<20	0.67	0.033	0.12	0.3	2.0	0.08	0.02	99	<0.1	<0.02	2.2	0.60	<0.1	0.03
013I771034	Sediment Pulp	33.8	11.4	0.19	39.4	0.070	<20	0.52	0.021	0.08	0.1	2.2	0.06	0.11	109	0.4	<0.02	2.2	0.45	<0.1	0.04
013I771035	Sediment Pulp	42.3	9.2	0.10	53.7	0.038	<20	0.74	0.015	0.03	0.2	1.5	0.11	0.16	213	0.6	<0.02	2.0	0.21	<0.1	<0.02
013I771036	Sediment Pulp	80.8	15.1	0.14	82.3	0.044	<20	0.85	0.014	0.04	0.2	1.8	0.15	0.19	361	1.7	<0.02	2.3	0.34	<0.1	<0.02
013I771037	Sediment Pulp	33.3	15.1	0.25	49.4	0.084	<20	0.73	0.025	0.06	0.2	2.2	0.07	0.09	159	0.7	<0.02	2.9	0.40	<0.1	0.02
013I771038	Sediment Pulp	92.0	27.7	0.17	90.5	0.064	<20	1.50	0.016	0.06	0.4	3.6	0.31	0.15	284	2.5	0.02	3.2	0.51	0.3	<0.02
013I771039	Sediment Pulp	51.9	19.1	0.25	74.6	0.063	<20	0.72	0.025	0.09	0.4	2.4	0.11	0.14	193	0.6	<0.02	2.3	0.79	<0.1	0.02
013I771040	Sediment Pulp	109.2	18.0	0.16	92.7	0.049	<20	1.93	0.013	0.04	0.4	2.4	0.29	0.38	348	2.5	<0.02	3.9	0.29	0.1	<0.02
013I771041	Sediment Pulp	360.0	10.2	0.14	71.6	0.046	<20	1.46	0.020	0.06	0.4	2.7	0.32	0.47	514	1.7	<0.02	3.2	0.46	0.3	<0.02
013I771042	Sediment Pulp	95.3	24.2	0.12	49.4	0.043	<20	1.87	0.010	0.03	0.5	2.9	0.08	0.17	334	2.6	<0.02	3.0	0.50	0.1	<0.02
013I771043	Sediment Pulp	97.8	16.2	0.16	66.7	0.069	<20	1.25	0.014	0.05	0.3	3.3	0.17	0.24	472	1.8	0.02	4.2	0.55	0.1	<0.02
013I771044	Sediment Pulp	93.3	13.0	0.06	49.5	0.026	<20	0.62	0.009	0.02	0.2	1.8	0.03	0.30	289	1.5	<0.02	1.8	0.20	<0.1	<0.02
013I771045	Sediment Pulp	78.2	16.5	0.08	58.5	0.036	<20	0.78	0.011	0.02	0.2	2.3	0.06	0.24	220	1.1	<0.02	2.1	0.22	<0.1	<0.02
013I771046	Sediment Pulp	159.7	23.5	0.11	71.6	0.044	<20	1.91	0.014	0.04	0.4	4.4	0.35	0.23	329	2.9	<0.02	2.9	0.36	0.2	<0.02
013I771047	Sediment Pulp	24.4	8.5	0.09	26.3	0.037	<20	0.33	0.020	0.03	0.1	1.7	0.03	0.23	125	0.3	<0.02	1.1	0.14	<0.1	<0.02
013I771048	Sediment Pulp	51.4	15.6	0.24	81.1	0.069	<20	0.81	0.030	0.08	0.4	3.1	0.10	0.35	352	0.7	<0.02	2.6	0.47	<0.1	0.03
013I771049	Sediment Pulp	167.0	26.5	0.22	54.3	0.057	<20	1.91	0.013	0.06	0.2	4.7	0.16	0.22	376	2.2	<0.02	2.7	0.41	0.1	<0.02
013I771050	Sediment Pulp	185.5	30.6	0.21	62.7	0.053	<20	2.17	0.012	0.06	0.2	5.3	0.19	0.28	288	2.5	0.03	3.2	0.43	0.2	0.03
013I771051	Sediment Pulp	95.9	24.0	0.37	99.6	0.066	<20	1.71	0.022	0.11	0.2	3.4	0.18	0.16	531	1.5	<0.02	3.7	0.47	<0.1	<0.02
013I771052	Sediment Pulp	429.8	25.6	0.18	117.1	0.063	<20	3.18	0.022	0.07	0.2	5.8	0.50	0.26	313	4.3	0.02	5.0	0.40	0.4	<0.02
013I771053	Sediment Pulp	112.1	24.4	0.31	79.6	0.089	<20	1.64	0.040	0.11	0.2	3.7	0.14	0.11	313	0.5	<0.02	3.1	0.65	0.2	<0.02
013I771054	Sediment Pulp	112.2	33.6	0.19	52.5	0.084	<20	1.59	0.019	0.05	0.4	6.5	0.16	0.48	285	1.1	<0.02	3.1	0.48	0.1	0.06
013I771055	Sediment Pulp	11.4	11.7	0.56	93.3	0.037	<20	0.44	0.025	0.05	0.6	2.4	0.20	1.51	107	1.0	<0.02	1.9	0.49	<0.1	0.03
013I771056	Sediment Pulp	14.3	4.5	0.05	16.2	0.035	<20	0.19	0.015	0.01	<0.1	1.4	<0.02	0.16	90	0.3	<0.02	0.9	0.07	<0.1	<0.02
013I771057	Sediment Pulp	60.2	13.7	0.17	34.4	0.062	<20	0.58	0.035	0.05	0.2	2.8	0.04	0.26	141	0.3	<0.02	1.7	0.24	<0.1	<0.02
013I771058	Sediment Pulp	94.1	20.7	0.19	51.6	0.068	<20	1.28	0.015	0.05	0.5	3.1	0.11	0.18	374	1.3	<0.02	3.3	0.66	0.1	<0.02
013I771059	Sediment Pulp	124.3	15.1	0.13	51.5	0.062	<20	0.99	0.015	0.04	0.4	2.9	0.11	0.24	311	1.5	<0.02	3.4	0.58	0.1	<0.02
013I771060	Sediment Pulp	65.8	10.4	0.12	90.7	0.050	<20	0.88	0.024	0.05	2.9	1.5	0.11	0.13	239	1.1	<0.02	3.3	0.37	<0.1	<0.02



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000374.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013I771031	Sediment Pulp	2.84	9.3	0.4	<0.05	1.6	25.92	117.9	<0.02	<1	0.2	7.0	16.94	54.44	8.52	1.02	6.28	1.00	4.82	1.10	2.69
013I771032	Sediment Pulp	2.62	11.7	0.4	<0.05	1.5	13.57	72.9	<0.02	<1	0.2	9.2	9.15	28.65	4.61	0.80	3.18	0.50	2.62	0.53	1.53
013I771033	Sediment Pulp	1.68	9.3	0.3	<0.05	1.2	9.67	40.0	<0.02	<1	<0.1	7.2	5.30	17.31	3.07	0.50	2.45	0.37	1.85	0.41	0.97
013I771034	Sediment Pulp	2.52	6.4	0.5	<0.05	1.0	11.58	60.5	<0.02	1	0.2	4.1	7.96	24.59	3.88	0.71	2.86	0.43	2.19	0.46	1.21
013I771035	Sediment Pulp	1.26	2.4	0.1	<0.05	0.3	12.35	74.8	<0.02	<1	0.3	1.9	9.56	30.59	4.24	0.83	3.15	0.48	2.41	0.51	1.31
013I771036	Sediment Pulp	1.27	3.4	0.2	<0.05	0.5	18.07	129.1	<0.02	1	0.1	2.8	17.12	51.08	7.58	1.20	5.21	0.78	3.60	0.69	1.80
013I771037	Sediment Pulp	2.13	4.0	0.6	<0.05	0.8	11.39	58.7	<0.02	<1	<0.1	5.2	7.98	24.77	4.30	0.77	2.92	0.43	2.14	0.48	1.18
013I771038	Sediment Pulp	2.09	5.0	0.4	<0.05	0.5	35.38	182.5	0.02	<1	0.6	3.4	22.30	71.47	10.94	2.29	8.10	1.32	6.01	1.46	3.93
013I771039	Sediment Pulp	1.52	7.0	0.4	<0.05	0.7	13.38	89.9	<0.02	<1	<0.1	6.5	12.02	36.95	5.79	0.95	3.76	0.57	2.68	0.57	1.42
013I771040	Sediment Pulp	2.01	2.5	0.3	<0.05	0.3	35.27	215.1	0.02	3	0.6	2.0	26.32	84.01	12.42	2.06	9.45	1.44	7.07	1.58	3.96
013I771041	Sediment Pulp	3.40	8.9	0.6	<0.05	1.8	94.14	722.3	0.04	1	3.7	6.1	97.57	317.25	45.16	3.66	31.15	4.68	22.42	4.59	12.57
013I771042	Sediment Pulp	1.63	3.1	0.4	<0.05	0.5	41.69	202.9	0.02	<1	2.8	3.1	25.90	84.88	13.88	1.84	10.27	1.67	8.27	1.83	5.14
013I771043	Sediment Pulp	2.48	4.0	0.5	<0.05	1.0	30.33	185.9	0.02	<1	0.7	4.4	24.04	74.54	11.05	1.91	8.11	1.17	6.11	1.13	3.23
013I771044	Sediment Pulp	1.11	1.6	0.3	<0.05	0.4	24.10	158.3	<0.02	1	0.3	1.4	21.53	69.41	10.75	1.73	6.71	0.93	4.34	0.92	2.34
013I771045	Sediment Pulp	1.40	2.1	0.3	<0.05	0.5	19.79	123.3	<0.02	<1	<0.1	1.9	16.92	55.51	8.12	1.32	6.02	0.77	3.97	0.81	2.03
013I771046	Sediment Pulp	2.39	4.6	0.4	<0.05	0.7	72.40	364.8	<0.02	2	2.0	2.8	42.86	147.25	21.08	2.80	16.35	2.49	12.75	2.81	7.96
013I771047	Sediment Pulp	1.58	2.1	0.3	<0.05	0.6	9.82	44.3	<0.02	<1	0.2	1.4	5.70	18.37	2.83	0.54	2.61	0.36	1.93	0.36	1.18
013I771048	Sediment Pulp	2.63	7.2	0.5	<0.05	1.5	18.58	93.0	<0.02	<1	0.4	3.9	12.10	38.00	6.54	1.03	4.43	0.65	3.27	0.71	1.90
013I771049	Sediment Pulp	2.33	7.5	0.4	<0.05	1.0	113.01	312.5	0.04	<1	2.5	7.9	45.03	145.95	24.55	2.21	20.80	3.36	19.05	4.27	11.99
013I771050	Sediment Pulp	2.13	7.3	0.4	<0.05	0.9	124.96	359.8	0.03	<1	2.1	7.6	53.11	173.74	27.92	2.40	22.90	4.04	21.67	5.02	14.05
013I771051	Sediment Pulp	2.05	9.7	0.4	<0.05	1.1	41.95	169.1	<0.02	<1	1.4	6.1	24.30	79.22	12.85	1.85	9.61	1.46	7.35	1.66	4.76
013I771052	Sediment Pulp	4.42	13.0	0.5	<0.05	1.8	247.82	939.3	0.06	2	3.6	10.6	106.29	369.40	67.73	4.80	56.26	9.07	49.06	9.91	26.64
013I771053	Sediment Pulp	2.38	10.8	0.5	<0.05	1.2	37.89	238.5	<0.02	1	0.7	9.7	30.93	96.94	14.10	1.81	9.31	1.45	7.34	1.50	4.37
013I771054	Sediment Pulp	3.86	5.3	0.7	<0.05	2.3	47.98	207.2	0.02	<1	1.3	3.7	28.44	94.30	15.62	2.40	11.42	1.68	8.51	1.82	5.05
013I771055	Sediment Pulp	0.61	3.3	3.1	<0.05	1.3	10.28	17.3	0.50	21	<0.1	4.5	3.00	11.53	2.31	0.54	2.28	0.32	1.73	0.38	1.00
013I771056	Sediment Pulp	1.81	0.6	0.4	<0.05	0.5	6.06	26.8	<0.02	<1	<0.1	0.5	3.36	10.94	2.03	0.40	1.41	0.20	1.32	0.26	0.70
013I771057	Sediment Pulp	2.50	3.0	0.5	<0.05	1.1	20.06	99.0	<0.02	<1	0.3	3.3	13.04	42.85	6.33	1.23	5.01	0.72	3.63	0.72	2.00
013I771058	Sediment Pulp	2.11	4.9	0.5	<0.05	0.6	28.63	177.8	<0.02	<1	0.5	5.3	22.83	76.32	11.11	1.72	8.18	1.06	5.23	1.10	2.94
013I771059	Sediment Pulp	2.32	3.5	0.4	<0.05	0.9	34.42	236.1	0.02	<1	0.7	3.2	30.88	97.88	14.40	2.07	10.72	1.40	6.80	1.37	3.81
013I771060	Sediment Pulp	1.96	3.2	0.3	<0.05	0.4	19.99	113.7	<0.02	8	0.4	2.5	14.70	49.29	7.26	1.15	4.90	0.69	3.61	0.77	1.98



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Project: None Given
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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013I771031	Sediment Pulp	0.41	2.28	0.35	<10	<2
013I771032	Sediment Pulp	0.23	1.39	0.22	<10	<2
013I771033	Sediment Pulp	0.14	0.85	0.14	<10	<2
013I771034	Sediment Pulp	0.19	1.02	0.18	<10	<2
013I771035	Sediment Pulp	0.20	1.04	0.18	<10	<2
013I771036	Sediment Pulp	0.27	1.50	0.23	<10	<2
013I771037	Sediment Pulp	0.18	1.06	0.17	<10	<2
013I771038	Sediment Pulp	0.60	3.27	0.57	<10	<2
013I771039	Sediment Pulp	0.24	1.25	0.19	<10	<2
013I771040	Sediment Pulp	0.55	3.21	0.50	<10	<2
013I771041	Sediment Pulp	1.87	10.73	1.70	<10	<2
013I771042	Sediment Pulp	0.80	4.51	0.72	<10	<2
013I771043	Sediment Pulp	0.51	2.92	0.50	<10	<2
013I771044	Sediment Pulp	0.35	1.85	0.32	<10	<2
013I771045	Sediment Pulp	0.34	1.66	0.32	<10	<2
013I771046	Sediment Pulp	1.34	7.61	1.25	<10	<2
013I771047	Sediment Pulp	0.16	1.05	0.14	<10	<2
013I771048	Sediment Pulp	0.31	1.69	0.31	<10	3
013I771049	Sediment Pulp	2.05	10.03	1.78	<10	<2
013I771050	Sediment Pulp	2.29	12.14	1.96	<10	<2
013I771051	Sediment Pulp	0.75	4.02	0.66	<10	<2
013I771052	Sediment Pulp	4.17	21.72	3.34	<10	<2
013I771053	Sediment Pulp	0.71	3.92	0.64	<10	<2
013I771054	Sediment Pulp	0.86	4.64	0.86	<10	<2
013I771055	Sediment Pulp	0.15	0.89	0.13	<10	<2
013I771056	Sediment Pulp	0.12	0.67	0.11	<10	<2
013I771057	Sediment Pulp	0.31	1.80	0.30	<10	<2
013I771058	Sediment Pulp	0.49	2.47	0.42	<10	<2
013I771059	Sediment Pulp	0.54	3.14	0.50	<10	<2
013I771060	Sediment Pulp	0.35	1.82	0.29	<10	<2



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013I771061 Sediment Pulp	1.37	16.78	3.30	24.8	96	5.1	2.4	38	0.98	0.1	12.8	8.3	1.9	22.3	0.13	0.03	0.03	34	0.17	0.051
013I771062 Sediment Pulp	8.51	30.09	4.55	118.5	217	12.8	44.5	2185	12.50	0.5	6.4	0.6	5.2	22.3	0.40	0.04	0.04	95	0.16	0.160
013I771063 Sediment Pulp	6.16	31.41	3.34	91.0	266	12.1	17.5	390	3.70	0.2	5.8	<0.2	2.4	35.6	0.28	0.04	0.03	84	0.42	0.254
013I771064 Sediment Pulp	1.24	11.61	2.44	42.6	59	6.5	4.9	134	1.52	0.7	2.8	<0.2	3.9	23.3	0.09	0.04	<0.02	37	0.34	0.080
013I771065 Sediment Pulp	1.61	13.28	6.47	39.3	43	8.1	5.5	147	1.63	0.9	6.8	0.3	5.7	39.5	0.17	0.15	0.04	34	0.45	0.081
013I771066 Sediment Pulp	2.92	10.73	4.97	53.6	35	3.8	2.6	88	0.91	0.5	26.9	<0.2	4.6	15.6	0.15	0.20	0.04	24	0.24	0.072
013I771067 Sediment Pulp	0.33	11.81	1.65	14.1	27	3.6	1.2	114	0.67	<0.1	0.5	0.4	0.6	39.6	0.11	<0.02	<0.02	12	0.40	0.036
013I771068 Sediment Pulp	0.29	27.88	7.41	51.7	37	15.4	6.6	217	1.35	0.8	1.2	<0.2	4.3	32.5	0.11	0.07	0.05	43	0.33	0.068
013I771069 Sediment Pulp	0.08	6.77	1.69	28.7	6	6.1	4.8	119	0.72	<0.1	0.6	0.3	5.1	22.9	0.07	<0.02	<0.02	18	0.33	0.059
013I771070 Sediment Pulp	0.39	16.23	6.44	85.1	33	20.8	12.0	444	2.67	0.6	1.1	<0.2	8.1	46.3	0.12	0.05	0.03	55	0.55	0.076
013I771071 Sediment Pulp	0.54	14.75	3.24	71.1	18	5.9	3.0	124	1.28	0.5	1.1	<0.2	1.8	49.9	0.13	0.04	<0.02	17	0.51	0.051
013I771072 Sediment Pulp	0.45	6.54	3.08	30.3	13	5.1	2.1	166	1.18	<0.1	0.8	<0.2	1.6	58.3	0.11	0.05	<0.02	15	0.57	0.046
013I771073 Sediment Pulp	0.46	7.02	3.04	41.9	18	7.2	3.5	218	1.19	0.6	0.8	1.2	2.5	53.4	0.09	0.12	0.12	19	0.53	0.048
013I771074 Sediment Pulp	1.22	7.73	4.30	28.7	25	5.0	2.4	104	0.97	1.5	0.8	1.5	1.9	75.7	0.08	0.23	0.10	16	0.74	0.051
013I771075 Sediment Pulp	0.84	31.22	30.51	128.2	2566	40.6	26.0	1142	3.02	24.0	4.0	1.8	8.2	29.5	0.52	0.60	3.28	44	0.60	0.095
013I771076 Sediment Pulp	0.39	6.87	2.72	46.7	17	12.0	6.5	231	1.24	0.9	1.1	<0.2	5.5	35.1	0.09	<0.02	0.03	25	0.51	0.112
013I771077 Sediment Pulp	0.38	19.36	2.23	19.0	31	4.2	1.4	70	0.50	<0.1	1.5	0.6	0.9	61.6	0.10	0.05	0.06	8	0.45	0.052
013I771078 Sediment Pulp	0.69	6.42	2.65	37.4	17	10.2	5.2	199	1.31	1.5	1.2	<0.2	5.7	30.3	0.05	0.03	<0.02	27	0.45	0.084
013I771079 Sediment Pulp	8.28	14.06	4.29	45.2	40	15.1	7.7	280	2.57	8.1	4.5	0.5	7.8	42.4	0.18	0.15	0.03	47	0.49	0.091
013I771080 Sediment Pulp	0.84	6.19	1.92	33.4	22	4.7	2.6	111	0.89	0.6	1.1	<0.2	1.5	56.3	0.16	0.04	0.02	17	0.51	0.047
013I771081 Sediment Pulp	0.31	12.39	1.73	14.9	25	3.4	1.1	113	0.69	<0.1	0.5	0.9	0.6	38.1	0.13	<0.02	0.03	12	0.40	0.038
013I771082 Sediment Pulp	0.35	4.62	2.35	10.3	16	2.6	0.9	27	0.16	<0.1	0.4	1.0	0.6	27.8	0.13	0.04	0.03	14	0.17	0.024
013I771083 Sediment Pulp	0.30	25.47	7.69	71.3	27	24.3	10.8	366	2.62	0.7	2.0	1.1	8.8	44.7	0.12	0.06	0.05	58	0.51	0.063
013I771084 Sediment Pulp	9.45	39.29	81.20	300.5	585	11.9	7.6	430	1.76	33.9	9.8	1.9	1.7	69.3	2.29	0.61	0.98	20	6.48	0.064
013I771085 Sediment Pulp	0.20	6.62	2.40	22.4	21	7.0	2.3	86	1.00	<0.1	2.0	1.0	2.1	26.1	0.07	0.02	<0.02	27	0.22	0.033
013I771086 Sediment Pulp	0.48	5.75	1.86	32.8	12	3.2	1.4	64	0.85	<0.1	0.8	1.5	0.6	46.7	0.04	0.04	<0.02	8	0.37	0.052
013I771087 Sediment Pulp	0.46	26.10	4.45	26.9	40	8.3	3.8	176	1.81	0.5	6.0	1.3	3.1	63.1	0.22	0.03	<0.02	21	0.64	0.054
013I771088 Sediment Pulp	0.95	2.41	1.46	18.6	6	4.4	1.8	60	0.54	<0.1	1.0	<0.2	1.3	18.2	0.07	0.03	<0.02	21	0.18	0.034
013I771089 Sediment Pulp	0.18	7.02	4.70	26.8	14	9.1	3.7	100	1.17	0.2	1.0	0.5	1.2	9.5	0.02	<0.02	0.03	30	0.14	0.067
013I771090 Sediment Pulp	0.27	9.39	6.87	30.7	31	8.7	3.8	93	1.65	0.4	1.3	<0.2	3.1	13.3	0.06	0.04	0.06	49	0.16	0.083



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000374.1

	Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250			
					La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
					ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
					0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013I771061	Sediment Pulp	94.5	12.7	0.06	50.9	0.026	<20	0.63	0.009	0.02	0.2	1.8	0.03	0.31	280	1.8	<0.02	1.9	0.20	<0.1	<0.02			
013I771062	Sediment Pulp	108.1	28.5	0.10	137.6	0.053	<20	1.69	0.016	0.04	0.6	3.9	0.25	0.22	314	3.0	<0.02	3.6	0.30	0.2	<0.02			
013I771063	Sediment Pulp	109.7	27.4	0.17	73.9	0.059	<20	1.78	0.022	0.04	0.9	3.1	0.17	0.13	387	1.7	<0.02	4.5	0.33	0.1	<0.02			
013I771064	Sediment Pulp	48.2	12.0	0.25	53.8	0.085	<20	0.80	0.031	0.10	0.5	2.7	0.10	0.14	193	0.3	<0.02	2.6	0.66	<0.1	<0.02			
013I771065	Sediment Pulp	63.6	17.2	0.30	47.4	0.075	<20	0.83	0.040	0.12	0.6	2.8	0.11	0.26	203	0.5	<0.02	3.0	0.70	<0.1	0.06			
013I771066	Sediment Pulp	41.4	8.4	0.19	23.5	0.072	<20	0.62	0.014	0.06	1.3	1.6	0.10	0.06	108	<0.1	<0.02	1.8	0.66	<0.1	0.03			
013I771067	Sediment Pulp	18.6	8.4	0.08	73.4	0.012	<20	0.24	0.014	0.01	<0.1	0.5	<0.02	0.37	74	1.0	<0.02	0.7	0.08	<0.1	0.04			
013I771068	Sediment Pulp	38.1	35.0	0.59	124.6	0.140	<20	1.88	0.019	0.31	<0.1	5.1	0.14	0.17	87	0.4	<0.02	7.5	1.65	<0.1	0.14			
013I771069	Sediment Pulp	21.3	13.9	0.20	61.3	0.059	<20	0.38	0.021	0.06	<0.1	1.6	0.06	0.10	34	<0.1	<0.02	1.6	0.33	<0.1	0.06			
013I771070	Sediment Pulp	38.2	41.0	0.91	177.0	0.180	<20	1.70	0.055	0.43	0.2	6.1	0.21	0.12	109	0.2	<0.02	6.9	2.39	<0.1	0.20			
013I771071	Sediment Pulp	33.1	12.7	0.22	50.7	0.042	<20	0.59	0.031	0.07	<0.1	2.0	0.04	0.33	95	0.5	<0.02	1.9	0.45	<0.1	0.05			
013I771072	Sediment Pulp	15.3	12.2	0.29	44.9	0.039	<20	0.49	0.031	0.08	<0.1	1.4	0.04	0.32	77	0.5	<0.02	1.8	0.49	<0.1	0.05			
013I771073	Sediment Pulp	17.5	16.4	0.38	54.4	0.059	<20	0.64	0.036	0.14	<0.1	2.6	0.07	0.33	45	0.5	<0.02	2.5	0.82	<0.1	0.06			
013I771074	Sediment Pulp	13.0	10.2	0.22	59.6	0.036	<20	0.36	0.037	0.08	<0.1	1.5	0.05	0.74	65	0.5	<0.02	1.4	0.37	<0.1	0.08			
013I771075	Sediment Pulp	43.3	47.8	0.77	152.9	0.100	<20	1.62	0.031	0.25	0.2	6.1	0.26	0.14	259	0.5	0.03	5.4	1.41	<0.1	0.12			
013I771076	Sediment Pulp	31.5	19.5	0.57	85.5	0.114	<20	1.02	0.061	0.26	<0.1	3.5	0.12	0.11	30	<0.1	<0.02	3.6	1.12	<0.1	0.05			
013I771077	Sediment Pulp	26.5	8.3	0.17	48.6	0.031	<20	0.59	0.038	0.03	<0.1	1.7	0.03	0.48	112	0.9	<0.02	1.4	0.23	<0.1	0.03			
013I771078	Sediment Pulp	29.9	18.7	0.47	71.8	0.101	<20	0.86	0.052	0.23	<0.1	3.0	0.08	0.36	27	<0.1	<0.02	3.2	0.95	0.1	0.07			
013I771079	Sediment Pulp	34.6	29.3	0.67	88.5	0.142	<20	1.10	0.104	0.35	0.1	4.4	0.16	1.68	31	<0.1	0.03	4.0	1.37	<0.1	0.17			
013I771080	Sediment Pulp	17.7	11.2	0.25	38.7	0.043	<20	0.50	0.043	0.09	<0.1	1.7	0.06	0.48	43	0.7	<0.02	1.5	0.43	<0.1	0.05			
013I771081	Sediment Pulp	18.7	9.2	0.08	69.0	0.013	<20	0.24	0.015	0.01	<0.1	0.6	<0.02	0.37	77	1.2	<0.02	0.6	0.09	<0.1	0.03			
013I771082	Sediment Pulp	9.1	11.1	0.08	50.4	0.023	<20	0.29	0.023	0.02	<0.1	0.9	<0.02	0.41	68	0.5	<0.02	1.1	0.13	<0.1	0.04			
013I771083	Sediment Pulp	54.0	55.9	0.88	160.5	0.194	<20	1.82	0.043	0.42	0.1	7.6	0.19	0.25	86	0.7	0.02	8.2	1.99	<0.1	0.20			
013I771084	Sediment Pulp	11.9	12.5	0.56	92.1	0.043	<20	0.46	0.029	0.05	0.6	2.3	0.21	1.49	81	0.9	<0.02	1.9	0.52	<0.1	0.03			
013I771085	Sediment Pulp	18.2	16.3	0.20	59.8	0.049	<20	0.62	0.026	0.09	<0.1	2.3	0.05	0.22	47	0.4	<0.02	2.0	0.54	<0.1	0.03			
013I771086	Sediment Pulp	19.1	8.5	0.14	53.7	0.023	<20	0.47	0.046	0.04	<0.1	1.8	0.03	0.43	70	0.5	<0.02	1.3	0.30	<0.1	0.04			
013I771087	Sediment Pulp	46.8	24.8	0.28	113.2	0.048	<20	0.72	0.033	0.08	0.3	2.9	0.05	0.44	139	2.0	<0.02	2.0	0.55	<0.1	0.07			
013I771088	Sediment Pulp	12.6	24.2	0.13	68.8	0.034	<20	0.35	0.019	0.05	0.2	1.0	0.04	0.13	25	0.4	<0.02	1.4	0.24	<0.1	<0.02			
013I771089	Sediment Pulp	22.7	26.5	0.31	47.1	0.074	<20	0.89	0.012	0.07	0.1	2.0	0.05	0.06	16	<0.1	<0.02	4.0	0.69	<0.1	<0.02			
013I771090	Sediment Pulp	37.0	29.3	0.26	70.7	0.071	<20	1.13	0.018	0.08	<0.1	2.0	0.06	0.09	39	0.6	<0.02	4.6	0.64	<0.1	<0.02			



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013I771061	Sediment Pulp	1.06	1.6	0.2	<0.05	0.4	23.23	159.4	<0.02	<1	0.7	1.9	21.08	69.53	10.44	1.76	6.57	0.94	4.36	0.90	2.40
013I771062	Sediment Pulp	1.70	3.2	0.3	<0.05	0.4	50.68	213.0	0.02	1	0.7	2.2	25.22	87.42	13.77	2.36	10.91	1.67	8.51	1.85	5.06
013I771063	Sediment Pulp	2.52	3.3	0.3	<0.05	0.3	41.53	213.3	0.03	<1	1.0	2.4	28.24	95.27	14.86	2.57	11.02	1.58	8.15	1.62	4.52
013I771064	Sediment Pulp	2.94	9.1	0.5	<0.05	1.1	17.18	90.1	<0.02	<1	0.4	5.8	12.09	39.58	5.99	1.05	4.84	0.67	3.45	0.64	1.79
013I771065	Sediment Pulp	3.43	9.3	0.7	<0.05	2.2	21.39	102.1	<0.02	<1	0.5	6.5	13.51	44.09	6.80	0.99	5.08	0.72	3.83	0.77	2.19
013I771066	Sediment Pulp	2.98	6.1	0.7	<0.05	1.5	22.59	70.1	<0.02	<1	0.5	8.5	11.61	42.19	7.57	1.24	5.91	0.87	4.58	0.87	2.53
013I771067	Sediment Pulp	0.43	0.5	0.2	<0.05	1.3	4.15	31.0	<0.02	<1	<0.1	0.1	3.43	11.18	1.61	0.22	1.10	0.16	0.70	0.14	0.36
013I771068	Sediment Pulp	4.42	25.9	1.0	<0.05	5.8	11.62	69.4	0.03	<1	0.4	10.5	8.26	28.31	4.56	0.83	3.46	0.48	2.48	0.47	1.24
013I771069	Sediment Pulp	1.29	4.7	0.4	<0.05	2.5	7.38	40.2	<0.02	<1	0.2	3.0	5.18	17.94	2.90	0.49	2.27	0.28	1.51	0.28	0.78
013I771070	Sediment Pulp	4.71	34.7	1.0	<0.05	6.3	13.02	71.8	0.03	2639	0.5	19.3	8.84	30.41	4.95	0.92	3.84	0.55	2.92	0.54	1.37
013I771071	Sediment Pulp	1.37	5.2	0.3	<0.05	1.9	8.33	58.5	<0.02	<1	0.2	2.5	6.96	24.68	3.60	0.69	2.67	0.30	1.52	0.28	0.77
013I771072	Sediment Pulp	1.24	6.6	0.2	<0.05	1.9	5.20	28.9	<0.02	<1	<0.1	2.9	3.56	11.54	1.91	0.32	1.20	0.20	0.88	0.19	0.51
013I771073	Sediment Pulp	2.02	10.7	1.1	<0.05	2.6	5.93	32.5	0.02	<1	0.3	4.6	3.95	13.70	2.11	0.39	1.58	0.23	1.11	0.21	0.51
013I771074	Sediment Pulp	1.14	6.1	1.0	<0.05	2.2	4.79	23.7	<0.02	1	<0.1	3.1	2.67	9.84	1.79	0.29	1.29	0.17	0.80	0.17	0.42
013I771075	Sediment Pulp	2.00	22.8	1.2	<0.05	5.6	19.08	75.0	0.05	<1	0.6	21.5	10.62	38.19	6.53	1.14	5.06	0.70	3.81	0.69	1.91
013I771076	Sediment Pulp	2.16	17.5	0.7	<0.05	2.5	11.84	59.2	0.02	<1	0.7	11.0	7.40	26.18	4.70	0.78	3.00	0.53	2.49	0.46	1.06
013I771077	Sediment Pulp	1.04	2.1	0.6	<0.05	1.1	7.78	45.4	<0.02	<1	0.1	0.7	5.34	18.24	2.94	0.54	2.27	0.30	1.63	0.30	0.74
013I771078	Sediment Pulp	2.16	16.2	0.5	<0.05	3.0	11.25	57.6	<0.02	<1	0.4	10.0	7.29	26.31	4.28	0.77	3.24	0.52	2.28	0.44	0.94
013I771079	Sediment Pulp	2.61	25.1	0.8	<0.05	6.5	12.89	64.3	<0.02	3	0.5	13.0	8.06	28.29	4.89	0.89	3.77	0.53	2.65	0.54	1.33
013I771080	Sediment Pulp	1.35	6.9	0.4	<0.05	1.8	6.42	34.4	<0.02	<1	0.2	3.2	4.07	13.98	2.22	0.42	1.59	0.25	1.32	0.22	0.64
013I771081	Sediment Pulp	0.47	0.5	0.3	<0.05	1.0	4.33	32.0	<0.02	<1	<0.1	0.2	3.54	12.13	1.72	0.28	1.30	0.16	0.76	0.14	0.38
013I771082	Sediment Pulp	0.66	1.0	0.4	<0.05	1.2	3.32	17.2	<0.02	<1	<0.1	0.2	2.08	6.83	1.08	0.18	1.02	0.14	0.68	0.14	0.29
013I771083	Sediment Pulp	5.44	33.1	1.2	<0.05	8.8	16.94	98.7	0.04	<1	0.5	16.8	11.92	42.34	6.43	1.31	4.86	0.66	3.20	0.63	1.69
013I771084	Sediment Pulp	0.79	3.4	3.5	<0.05	1.6	11.22	18.9	0.51	22	<0.1	4.4	3.06	12.44	2.82	0.55	2.48	0.38	1.80	0.42	0.98
013I771085	Sediment Pulp	1.49	7.2	0.5	<0.05	1.5	6.42	34.0	<0.02	<1	0.1	4.6	4.01	14.63	2.18	0.50	1.93	0.25	1.35	0.27	0.70
013I771086	Sediment Pulp	0.85	2.3	0.3	<0.05	1.0	5.26	32.8	<0.02	<1	0.1	0.7	4.03	13.86	2.14	0.56	1.59	0.23	1.22	0.20	0.61
013I771087	Sediment Pulp	1.68	6.2	0.5	<0.05	3.2	17.27	82.9	<0.02	<1	<0.1	2.7	9.86	36.96	5.78	1.15	4.89	0.61	3.34	0.62	1.69
013I771088	Sediment Pulp	0.66	3.5	0.3	<0.05	1.3	5.82	20.9	<0.02	<1	0.1	3.3	2.80	10.08	1.68	0.33	1.50	0.23	0.98	0.24	0.56
013I771089	Sediment Pulp	1.20	7.0	0.7	<0.05	0.6	8.67	45.2	<0.02	<1	0.1	6.2	5.50	19.61	3.55	0.61	2.70	0.41	2.08	0.37	1.01
013I771090	Sediment Pulp	1.64	7.2	0.7	<0.05	0.7	14.07	62.4	0.02	<1	0.4	5.1	8.05	28.51	4.82	0.86	3.93	0.56	2.83	0.56	1.38



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Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000374.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013I771061	Sediment Pulp	0.37	2.11	0.27	<10	<2
013I771062	Sediment Pulp	0.84	4.49	0.75	<10	<2
013I771063	Sediment Pulp	0.78	3.97	0.62	<10	<2
013I771064	Sediment Pulp	0.29	1.58	0.29	<10	<2
013I771065	Sediment Pulp	0.33	1.92	0.32	<10	<2
013I771066	Sediment Pulp	0.41	2.20	0.34	<10	<2
013I771067	Sediment Pulp	0.05	0.33	0.05	<10	<2
013I771068	Sediment Pulp	0.17	0.87	0.16	<10	<2
013I771069	Sediment Pulp	0.13	0.62	0.11	<10	<2
013I771070	Sediment Pulp	0.18	1.17	0.20	<10	<2
013I771071	Sediment Pulp	0.11	0.58	0.09	<10	<2
013I771072	Sediment Pulp	0.08	0.43	0.07	<10	<2
013I771073	Sediment Pulp	0.06	0.44	0.07	<10	<2
013I771074	Sediment Pulp	0.05	0.33	0.05	<10	<2
013I771075	Sediment Pulp	0.30	1.65	0.24	<10	<2
013I771076	Sediment Pulp	0.15	0.93	0.14	<10	<2
013I771077	Sediment Pulp	0.11	0.66	0.08	<10	<2
013I771078	Sediment Pulp	0.17	0.92	0.13	<10	<2
013I771079	Sediment Pulp	0.19	1.05	0.17	<10	2
013I771080	Sediment Pulp	0.09	0.56	0.10	<10	<2
013I771081	Sediment Pulp	0.04	0.31	0.04	<10	<2
013I771082	Sediment Pulp	0.04	0.30	0.03	<10	<2
013I771083	Sediment Pulp	0.31	1.34	0.21	<10	<2
013I771084	Sediment Pulp	0.18	0.91	0.15	<10	<2
013I771085	Sediment Pulp	0.12	0.61	0.08	<10	<2
013I771086	Sediment Pulp	0.09	0.48	0.06	<10	<2
013I771087	Sediment Pulp	0.27	1.42	0.27	<10	6
013I771088	Sediment Pulp	0.09	0.52	0.08	<10	<2
013I771089	Sediment Pulp	0.13	0.75	0.09	<10	<2
013I771090	Sediment Pulp	0.22	1.01	0.17	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013I771091	Sediment Pulp	1.55	12.23	3.97	46.9	62	8.2	3.1	102	2.36	<0.1	2.5	<0.2	1.1	25.1	0.23	0.02	0.07	41	0.20	0.086
013I771092	Sediment Pulp	3.58	18.90	4.43	84.4	186	16.1	59.6	4097	9.79	2.8	6.5	0.5	3.1	50.2	0.56	0.03	0.12	111	0.37	0.316
013I771093	Sediment Pulp	9.30	20.95	4.06	161.0	166	25.8	43.7	2739	10.11	5.1	8.7	7.5	2.3	37.8	0.67	0.03	0.04	110	0.29	0.248
013I771094	Sediment Pulp	0.49	16.46	2.77	35.1	146	7.1	2.2	48	0.87	<0.1	1.5	1.4	0.5	18.6	0.20	0.02	<0.02	51	0.17	0.094
013I771095	Sediment Pulp	7.02	30.02	2.57	83.8	27	23.8	17.6	1872	4.47	11.8	17.9	0.6	6.4	21.8	0.33	0.03	<0.02	66	0.23	0.142
013I771096	Sediment Pulp	4.35	27.25	3.67	70.8	35	25.5	23.1	6262	4.51	19.8	17.9	0.7	7.3	25.6	0.25	0.04	0.02	53	0.30	0.118
013I771097	Sediment Pulp	1.21	11.00	3.27	55.0	51	11.7	5.0	124	1.47	<0.1	2.1	3.3	1.1	22.2	0.21	<0.02	0.02	52	0.24	0.063
013I771098	Sediment Pulp	2.23	8.76	3.90	31.0	29	6.7	3.8	230	1.44	0.7	1.8	2.4	0.8	21.1	0.14	0.03	0.03	41	0.20	0.108
013I771099	Sediment Pulp	3.58	7.58	3.95	47.6	38	7.5	6.4	444	4.13	2.5	9.7	1.6	2.6	26.1	0.12	0.03	0.03	89	0.28	0.150
013I771100	Sediment Pulp	5.55	8.92	2.69	49.5	51	7.6	5.3	560	3.39	1.8	17.3	2.0	0.6	29.8	0.27	0.04	0.02	133	0.29	0.178
013I771101	Sediment Pulp	1.70	11.71	3.96	46.5	72	7.8	3.3	94	2.34	<0.1	2.6	0.9	0.7	24.8	0.24	0.04	0.03	41	0.20	0.085
013I771102	Sediment Pulp	3.90	7.30	4.53	51.5	26	9.6	5.8	257	2.62	2.4	8.5	0.8	2.1	26.3	0.16	0.05	0.02	87	0.32	0.062
013I771103	Sediment Pulp	2.69	6.93	2.58	47.5	31	8.5	4.9	158	1.18	1.2	7.0	1.3	1.3	23.9	0.16	0.08	<0.02	51	0.29	0.047
013I771104	Sediment Pulp	0.23	6.86	5.47	31.5	38	8.5	3.0	97	0.66	<0.1	0.9	0.6	1.9	10.7	0.05	0.02	0.03	39	0.13	0.065
013I771105	Sediment Pulp	0.21	7.36	6.86	26.1	33	7.5	2.3	75	0.48	<0.1	1.0	0.7	0.7	9.5	0.05	<0.02	0.06	30	0.09	0.050
013I771106	Sediment Pulp	0.84	30.56	5.16	75.3	169	17.9	8.9	414	3.58	<0.1	2.4	0.6	2.1	31.5	0.41	0.03	0.05	60	0.28	0.148
013I771107	Sediment Pulp	0.93	7.66	3.10	52.0	130	7.6	2.9	131	0.64	<0.1	1.0	1.0	0.3	32.5	0.23	0.03	<0.02	60	0.24	0.090
013I771108	Sediment Pulp	0.22	8.16	3.00	28.0	26	7.3	4.1	123	1.10	<0.1	0.7	0.5	1.7	50.3	0.16	0.03	0.02	13	0.39	0.024
013I771109	Sediment Pulp	0.74	8.60	2.00	54.8	25	4.4	1.8	80	0.84	0.7	0.9	1.7	0.8	73.5	0.12	0.07	0.30	17	0.42	0.044
013I771110	Sediment Pulp	0.90	32.88	25.29	120.5	2723	44.7	28.1	1183	3.02	23.7	4.1	3.4	8.0	30.5	0.54	0.80	3.80	43	0.59	0.094
013I771111	Sediment Pulp	1.11	11.69	4.16	51.5	38	16.1	9.4	286	2.50	5.2	2.2	1.2	6.9	46.5	0.09	0.06	0.04	36	0.52	0.098
013I771112	Sediment Pulp	0.76	10.62	5.02	57.9	33	15.9	9.4	281	1.94	3.3	1.4	2.1	6.1	39.0	0.09	0.05	0.03	40	0.50	0.102
013I771113	Sediment Pulp	0.39	10.94	4.46	76.2	33	19.0	9.8	317	2.05	1.2	1.1	1.0	5.8	44.0	0.10	0.03	<0.02	42	0.53	0.094
013I771114	Sediment Pulp	2.56	18.10	4.60	54.7	59	18.9	8.9	264	2.21	7.5	1.9	0.7	6.5	39.4	0.10	0.11	0.03	42	0.56	0.094
013I771115	Sediment Pulp	0.39	77.20	3.99	45.9	203	7.8	2.8	88	0.67	0.5	1.3	0.7	0.7	27.9	0.19	0.03	0.03	45	0.21	0.099
013I771116	Sediment Pulp	0.17	14.01	2.35	12.9	22	3.1	1.0	36	0.86	0.3	0.5	2.8	0.8	28.5	0.07	0.05	0.05	12	0.25	0.029
013I771117	Sediment Pulp	1.14	50.04	4.72	83.3	347	14.5	6.2	205	2.32	0.2	13.0	1.7	1.7	34.0	0.35	0.04	0.03	67	0.35	0.307
013I771118	Sediment Pulp	0.68	11.74	4.19	30.3	71	8.0	2.9	62	0.93	<0.1	3.8	6.5	1.4	18.2	0.10	0.03	<0.02	35	0.18	0.041
013I771119	Sediment Pulp	0.62	13.00	4.36	36.3	46	9.2	3.9	91	0.88	<0.1	5.5	2.6	2.3	16.7	0.11	0.22	<0.02	32	0.22	0.046



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CERTIFICATE OF ANALYSIS

VAN22000374.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013I771091	Sediment Pulp	48.8	29.4	0.12	157.2	0.029	<20	1.45	0.016	0.03	0.2	2.2	0.06	0.23	56	2.9	<0.02	3.0	0.33	<0.1	<0.02
013I771092	Sediment Pulp	50.4	40.8	0.12	738.7	0.046	<20	2.13	0.025	0.05	0.6	3.3	0.18	0.34	150	3.2	<0.02	5.2	0.28	0.1	<0.02
013I771093	Sediment Pulp	73.5	52.9	0.11	490.4	0.045	<20	3.08	0.015	0.04	0.6	3.7	0.26	0.25	149	5.0	<0.02	4.8	0.24	<0.1	<0.02
013I771094	Sediment Pulp	24.3	19.7	0.12	100.5	0.042	<20	1.09	0.013	0.03	<0.1	1.1	0.05	0.14	81	1.4	<0.02	3.7	0.35	<0.1	0.02
013I771095	Sediment Pulp	84.8	35.8	0.18	394.7	0.041	<20	1.63	0.029	0.07	0.7	5.0	0.30	0.83	62	1.2	<0.02	3.2	0.33	<0.1	<0.02
013I771096	Sediment Pulp	74.6	31.6	0.28	232.4	0.069	<20	1.26	0.032	0.13	0.5	5.0	0.42	1.15	54	0.8	<0.02	3.9	0.58	<0.1	0.04
013I771097	Sediment Pulp	35.1	35.1	0.22	115.9	0.052	<20	1.41	0.020	0.06	0.2	2.4	0.05	0.15	33	0.8	<0.02	3.6	0.43	<0.1	<0.02
013I771098	Sediment Pulp	26.8	28.0	0.19	194.5	0.040	<20	0.87	0.031	0.07	0.6	1.4	0.06	0.11	27	1.0	<0.02	3.5	0.44	<0.1	<0.02
013I771099	Sediment Pulp	31.2	50.4	0.15	255.7	0.044	<20	1.10	0.020	0.05	1.0	2.5	0.07	0.15	50	2.1	<0.02	3.8	0.29	<0.1	<0.02
013I771100	Sediment Pulp	36.2	58.3	0.11	429.7	0.021	<20	1.23	0.015	0.04	2.2	2.0	0.07	0.13	80	2.6	<0.02	4.2	0.23	<0.1	<0.02
013I771101	Sediment Pulp	49.0	28.3	0.12	163.6	0.028	<20	1.41	0.015	0.03	0.2	2.3	0.05	0.23	74	2.7	<0.02	3.1	0.32	<0.1	<0.02
013I771102	Sediment Pulp	31.4	43.9	0.25	223.5	0.062	<20	1.09	0.028	0.09	1.3	2.6	0.08	0.20	50	1.3	<0.02	4.4	0.53	<0.1	<0.02
013I771103	Sediment Pulp	25.2	30.4	0.19	184.9	0.044	<20	0.76	0.021	0.07	0.9	1.8	0.09	0.18	33	0.4	<0.02	2.8	0.40	<0.1	<0.02
013I771104	Sediment Pulp	24.1	27.4	0.29	42.3	0.121	<20	1.08	0.012	0.10	<0.1	2.4	0.05	0.06	38	0.4	<0.02	6.4	0.95	<0.1	0.03
013I771105	Sediment Pulp	20.3	23.0	0.24	41.5	0.099	<20	1.00	0.013	0.09	<0.1	1.5	0.05	0.06	49	0.6	<0.02	7.6	0.97	<0.1	0.04
013I771106	Sediment Pulp	55.2	45.1	0.34	179.7	0.083	<20	2.59	0.020	0.15	<0.1	4.5	0.12	0.21	106	4.4	<0.02	6.0	1.06	<0.1	0.03
013I771107	Sediment Pulp	21.7	21.6	0.14	144.6	0.050	<20	0.71	0.026	0.04	0.1	1.1	0.04	0.13	79	0.7	<0.02	3.7	0.37	<0.1	<0.02
013I771108	Sediment Pulp	13.0	12.1	0.19	66.2	0.040	<20	0.54	0.015	0.05	<0.1	1.6	0.03	0.28	72	1.5	<0.02	1.9	0.34	<0.1	0.07
013I771109	Sediment Pulp	14.7	11.1	0.29	59.9	0.032	<20	0.47	0.118	0.07	<0.1	1.4	0.04	0.34	56	0.5	<0.02	1.7	0.39	<0.1	0.06
013I771110	Sediment Pulp	45.9	49.6	0.76	169.3	0.096	<20	1.59	0.027	0.25	0.2	5.7	0.27	0.14	251	0.3	0.08	5.8	1.38	<0.1	0.11
013I771111	Sediment Pulp	34.1	28.5	0.71	134.6	0.137	<20	1.23	0.070	0.36	0.1	4.4	0.16	1.41	25	<0.1	<0.02	5.1	1.49	<0.1	0.15
013I771112	Sediment Pulp	32.7	28.7	0.73	105.0	0.140	<20	1.29	0.061	0.36	<0.1	4.5	0.16	0.32	35	<0.1	<0.02	5.8	1.61	<0.1	0.09
013I771113	Sediment Pulp	33.4	32.4	0.88	128.0	0.162	<20	1.52	0.083	0.41	0.1	5.1	0.18	0.09	32	<0.1	<0.02	6.9	1.99	<0.1	0.11
013I771114	Sediment Pulp	36.0	32.3	0.66	105.7	0.138	<20	1.18	0.046	0.35	0.1	4.4	0.19	0.86	25	<0.1	<0.02	5.0	1.47	<0.1	0.10
013I771115	Sediment Pulp	39.8	19.2	0.16	78.5	0.047	<20	1.19	0.022	0.06	0.1	1.3	0.09	0.17	124	0.5	<0.02	4.4	0.42	<0.1	0.03
013I771116	Sediment Pulp	14.1	10.3	0.06	33.9	0.018	<20	0.24	0.012	<0.01	<0.1	1.0	<0.02	0.26	101	0.6	<0.02	0.9	0.10	<0.1	0.03
013I771117	Sediment Pulp	90.4	38.6	0.24	127.7	0.066	<20	3.20	0.013	0.06	0.1	3.9	0.18	0.25	229	2.5	<0.02	6.6	1.04	<0.1	0.03
013I771118	Sediment Pulp	33.1	15.7	0.18	43.1	0.049	<20	0.81	0.019	0.03	<0.1	1.8	0.05	0.19	96	0.7	<0.02	3.7	0.93	<0.1	<0.02
013I771119	Sediment Pulp	45.0	18.0	0.24	36.6	0.068	<20	1.04	0.020	0.05	0.1	2.4	0.07	0.11	70	0.5	<0.02	3.9	1.56	<0.1	<0.02



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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 19, 2022

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Part: 3 of 4

CERTIFICATE OF ANALYSIS

VAN22000374.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013I771091 Sediment Pulp	0.91	3.1	0.4	<0.05	0.5	28.21	55.3	<0.02	<1	0.9	2.5	10.69	36.49	6.16	1.21	5.24	0.83	4.26	0.92	2.16
013I771092 Sediment Pulp	1.11	3.4	0.4	<0.05	0.6	24.06	85.4	<0.02	<1	0.5	1.9	11.19	38.43	6.56	1.33	5.33	0.76	4.04	0.86	2.37
013I771093 Sediment Pulp	0.94	2.7	0.3	<0.05	0.3	33.91	131.7	<0.02	1	0.9	2.4	16.13	55.85	9.33	1.71	7.94	1.19	6.21	1.24	3.57
013I771094 Sediment Pulp	1.34	2.7	0.5	<0.05	0.5	10.64	42.8	<0.02	<1	0.4	3.0	5.93	21.29	3.69	0.70	3.26	0.44	2.30	0.43	1.25
013I771095 Sediment Pulp	0.91	4.7	0.3	<0.05	0.9	41.69	141.2	<0.02	5	0.7	6.1	22.83	77.82	14.22	2.28	11.39	1.50	8.01	1.69	4.48
013I771096 Sediment Pulp	1.10	9.1	0.4	<0.05	1.2	34.78	117.7	<0.02	6	1.0	7.2	19.40	68.22	11.50	1.93	9.33	1.32	6.51	1.41	3.81
013I771097 Sediment Pulp	1.32	4.9	0.5	<0.05	0.5	15.67	59.2	<0.02	1	0.3	5.9	8.13	29.29	4.81	0.99	4.13	0.61	3.06	0.61	1.56
013I771098 Sediment Pulp	0.78	5.7	0.4	<0.05	0.3	12.00	47.7	<0.02	<1	0.4	4.6	5.93	20.21	3.64	0.71	3.01	0.48	2.37	0.43	1.16
013I771099 Sediment Pulp	1.10	3.4	0.5	<0.05	0.4	15.31	51.9	<0.02	2	1.0	3.2	6.98	24.21	4.23	0.76	3.03	0.57	2.75	0.56	1.57
013I771100 Sediment Pulp	0.45	2.8	0.4	<0.05	0.1	18.17	55.4	<0.02	<1	0.5	2.2	8.12	27.17	4.97	0.89	4.03	0.55	3.12	0.66	1.73
013I771101 Sediment Pulp	0.86	3.2	0.4	<0.05	0.2	26.49	56.8	<0.02	<1	0.5	3.1	10.75	36.20	5.87	1.25	5.51	0.81	4.43	0.91	2.47
013I771102 Sediment Pulp	1.49	7.2	0.5	<0.05	0.8	14.79	52.8	<0.02	<1	0.3	4.6	6.93	25.09	4.57	0.73	3.71	0.49	2.79	0.52	1.34
013I771103 Sediment Pulp	1.16	5.8	0.4	<0.05	0.5	12.75	42.1	<0.02	2	0.2	4.0	5.45	19.46	3.44	0.68	2.85	0.44	2.23	0.48	1.16
013I771104 Sediment Pulp	2.61	10.6	1.1	<0.05	1.4	7.56	45.9	0.02	<1	0.2	6.0	5.76	18.66	3.22	0.58	2.26	0.38	1.84	0.34	0.83
013I771105 Sediment Pulp	2.37	8.7	1.1	<0.05	0.8	6.68	38.3	0.03	<1	0.4	4.7	4.54	15.92	3.04	0.49	2.21	0.34	1.73	0.30	0.66
013I771106 Sediment Pulp	2.70	14.1	0.7	<0.05	1.2	31.03	95.2	0.03	<1	1.3	7.7	13.97	47.26	8.88	1.78	7.41	1.13	5.89	1.30	3.28
013I771107 Sediment Pulp	1.31	3.7	0.6	<0.05	0.4	9.21	33.4	<0.02	<1	<0.1	3.1	5.22	18.31	3.05	0.62	2.63	0.37	1.95	0.43	1.11
013I771108 Sediment Pulp	1.32	4.2	0.4	<0.05	2.3	4.55	24.1	<0.02	<1	0.2	1.6	2.74	9.18	1.61	0.29	1.19	0.19	1.02	0.17	0.41
013I771109 Sediment Pulp	1.37	5.8	2.7	0.05	1.5	5.08	27.5	<0.02	<1	<0.1	1.6	3.28	10.84	1.75	0.33	1.20	0.21	0.88	0.18	0.53
013I771110 Sediment Pulp	2.12	24.4	1.6	<0.05	5.5	18.74	77.4	0.04	1	1.0	20.9	10.81	35.95	6.41	1.11	4.93	0.75	3.47	0.79	2.05
013I771111 Sediment Pulp	2.95	26.9	0.8	<0.05	5.3	12.46	62.4	0.02	2	0.6	15.9	7.93	26.68	4.27	0.83	3.36	0.56	2.65	0.54	1.43
013I771112 Sediment Pulp	2.72	27.1	0.9	<0.05	3.8	11.69	62.9	0.02	6	0.6	15.3	7.82	26.42	4.47	0.81	3.21	0.50	2.56	0.48	1.27
013I771113 Sediment Pulp	2.99	31.2	1.0	<0.05	3.8	11.94	62.2	0.03	<1	0.8	18.8	7.88	26.42	4.38	0.83	3.45	0.51	2.53	0.52	1.24
013I771114 Sediment Pulp	2.62	25.9	0.7	<0.05	4.8	12.85	65.1	0.03	4	0.3	13.6	8.38	28.90	4.84	0.87	3.39	0.56	2.68	0.53	1.39
013I771115 Sediment Pulp	1.46	4.8	0.5	<0.05	0.8	9.97	70.6	<0.02	<1	0.6	3.3	8.51	30.06	4.58	1.00	3.47	0.48	2.22	0.43	0.99
013I771116 Sediment Pulp	0.64	0.6	0.7	<0.05	0.9	4.07	23.7	<0.02	1	<0.1	0.2	2.95	10.75	1.56	0.31	1.05	0.15	0.79	0.17	0.39
013I771117 Sediment Pulp	3.75	7.0	0.6	<0.05	1.2	48.20	154.0	0.04	2	1.2	5.6	22.30	80.94	14.83	2.41	12.55	1.94	9.56	1.91	4.87
013I771118 Sediment Pulp	1.74	3.0	0.6	<0.05	0.7	18.63	62.1	<0.02	3	0.3	3.4	8.61	29.47	5.45	0.76	4.21	0.74	3.27	0.71	1.98
013I771119 Sediment Pulp	1.90	5.4	0.6	<0.05	0.9	21.98	80.5	<0.02	<1	0.3	7.6	11.65	41.22	7.02	1.13	6.04	0.94	4.26	0.90	2.23



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000374.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013I771091	Sediment Pulp	0.34	1.68	0.28	<10	<2
013I771092	Sediment Pulp	0.33	1.91	0.30	<10	<2
013I771093	Sediment Pulp	0.52	2.86	0.46	<10	<2
013I771094	Sediment Pulp	0.18	0.77	0.13	<10	<2
013I771095	Sediment Pulp	0.67	3.88	0.70	<10	<2
013I771096	Sediment Pulp	0.60	3.14	0.57	<10	<2
013I771097	Sediment Pulp	0.26	1.35	0.20	<10	<2
013I771098	Sediment Pulp	0.17	0.86	0.15	<10	3
013I771099	Sediment Pulp	0.21	1.09	0.18	<10	<2
013I771100	Sediment Pulp	0.25	1.52	0.23	<10	<2
013I771101	Sediment Pulp	0.33	1.83	0.28	<10	<2
013I771102	Sediment Pulp	0.21	1.17	0.19	<10	<2
013I771103	Sediment Pulp	0.20	1.00	0.18	<10	<2
013I771104	Sediment Pulp	0.10	0.52	0.08	<10	2
013I771105	Sediment Pulp	0.10	0.47	0.06	<10	<2
013I771106	Sediment Pulp	0.52	2.99	0.45	<10	<2
013I771107	Sediment Pulp	0.15	0.74	0.12	<10	<2
013I771108	Sediment Pulp	0.07	0.38	0.06	<10	<2
013I771109	Sediment Pulp	0.08	0.45	0.08	<10	<2
013I771110	Sediment Pulp	0.31	1.61	0.28	<10	<2
013I771111	Sediment Pulp	0.22	1.13	0.19	<10	<2
013I771112	Sediment Pulp	0.19	0.89	0.13	<10	<2
013I771113	Sediment Pulp	0.18	0.98	0.14	<10	<2
013I771114	Sediment Pulp	0.20	1.11	0.19	<10	<2
013I771115	Sediment Pulp	0.14	0.73	0.11	<10	<2
013I771116	Sediment Pulp	0.05	0.32	0.05	<10	<2
013I771117	Sediment Pulp	0.70	3.61	0.54	<10	<2
013I771118	Sediment Pulp	0.27	1.41	0.23	<10	<2
013I771119	Sediment Pulp	0.33	1.72	0.22	<10	<2



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Project: None Given
Report Date: April 19, 2022

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Part: 1 of 4

QUALITY CONTROL REPORT

VAN22000374.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013I771001	Sediment Pulp	0.01	0.04	0.02	0.2	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	0.9	<0.1	<0.5	<0.01	<0.02	<0.02	<1	0.01	<0.001
REP 013I771001	QC	0.02	0.03	0.02	0.2	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	0.9	<0.1	<0.5	<0.01	<0.02	<0.02	<1	0.01	<0.001
013I771031	Sediment Pulp	1.14	11.55	3.52	83.2	51	7.8	5.4	154	1.53	0.5	1.9	2.3	3.2	26.8	0.14	0.04	<0.02	34	0.41	0.065
REP 013I771031	QC	1.11	11.50	3.65	89.2	64	7.8	5.7	152	1.50	0.6	2.0	5.9	3.7	28.2	0.11	0.04	<0.02	34	0.41	0.066
013I771067	Sediment Pulp	0.33	11.81	1.65	14.1	27	3.6	1.2	114	0.67	<0.1	0.5	0.4	0.6	39.6	0.11	<0.02	<0.02	12	0.40	0.036
REP 013I771067	QC	0.32	12.30	1.67	14.3	24	3.4	1.1	114	0.66	<0.1	0.5	0.5	0.4	38.9	0.08	<0.02	<0.02	12	0.40	0.036
013I771103	Sediment Pulp	2.69	6.93	2.58	47.5	31	8.5	4.9	158	1.18	1.2	7.0	1.3	1.3	23.9	0.16	0.08	<0.02	51	0.29	0.047
REP 013I771103	QC	2.66	6.35	2.38	41.3	30	8.4	5.0	156	1.16	1.2	6.6	1.9	1.1	21.3	0.14	0.07	<0.02	52	0.29	0.047
Reference Materials																					
STD DS11	Standard	13.79	140.06	136.70	319.5	1677	78.4	13.4	972	3.01	41.0	2.8	56.6	9.1	74.8	2.31	6.87	12.03	44	1.00	0.068
STD DS11	Standard	13.42	136.90	137.04	314.6	1674	70.8	12.6	968	2.99	41.3	2.7	114.7	8.3	71.9	2.25	7.41	13.22	43	0.99	0.072
STD DS11	Standard	12.61	137.33	139.25	328.7	1698	75.2	12.5	991	2.94	42.2	2.7	67.8	8.7	73.9	2.34	7.15	13.07	47	0.99	0.070
STD DS11	Standard	11.72	136.34	132.88	309.8	1597	73.4	13.1	955	2.94	39.5	2.9	69.2	8.4	77.4	2.26	6.66	12.79	43	1.00	0.064
STD DS11	Standard	13.23	140.84	127.19	345.9	1717	79.8	14.0	1026	3.01	43.2	2.5	118.3	7.0	62.3	2.41	6.17	10.45	46	1.04	0.068
STD OREAS262	Standard	0.54	107.38	60.12	142.4	451	59.9	24.4	523	3.12	33.0	1.3	51.8	10.4	39.4	0.65	2.42	1.08	20	2.85	0.039
STD OREAS262	Standard	0.58	112.54	58.72	145.3	455	60.1	26.4	539	3.22	35.0	1.3	51.0	10.8	38.7	0.67	2.30	1.12	20	2.87	0.039
STD OREAS262	Standard	0.59	108.38	56.90	149.7	467	63.2	25.9	525	3.11	35.8	1.3	49.9	10.0	38.1	0.73	2.49	1.12	20	2.88	0.040
STD OREAS262	Standard	0.52	111.76	56.59	148.9	483	59.6	26.4	523	3.10	36.0	1.3	52.3	10.2	40.1	0.60	2.11	1.07	20	2.84	0.037
STD OREAS262	Standard	0.61	116.12	52.22	152.0	472	63.8	27.7	547	3.22	36.0	1.1	50.2	8.5	33.7	0.65	2.36	0.90	20	3.03	0.039
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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QUALITY CONTROL REPORT

VAN22000374.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013I771001	Sediment Pulp	<0.5	0.5	<0.01	<0.5	0.001	<20	<0.01	0.006	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	0.18
REP 013I771001	QC	<0.5	0.5	<0.01	<0.5	0.001	<20	<0.01	0.006	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	0.18
013I771031	Sediment Pulp	66.0	12.5	0.28	55.1	0.083	<20	0.98	0.037	0.11	0.2	2.3	0.18	0.14	238	<0.1	<0.02	3.0	0.61	<0.1	0.06
REP 013I771031	QC	67.4	13.3	0.28	57.4	0.083	<20	0.98	0.037	0.11	0.2	2.4	0.18	0.14	249	0.4	<0.02	3.2	0.64	0.1	0.05
013I771067	Sediment Pulp	18.6	8.4	0.08	73.4	0.012	<20	0.24	0.014	0.01	<0.1	0.5	<0.02	0.37	74	1.0	<0.02	0.7	0.08	<0.1	0.04
REP 013I771067	QC	18.7	8.9	0.08	71.7	0.012	<20	0.24	0.013	0.01	<0.1	0.5	<0.02	0.37	87	1.3	<0.02	0.8	0.08	<0.1	0.03
013I771103	Sediment Pulp	25.2	30.4	0.19	184.9	0.044	<20	0.76	0.021	0.07	0.9	1.8	0.09	0.18	33	0.4	<0.02	2.8	0.40	<0.1	<0.02
REP 013I771103	QC	22.7	28.8	0.17	171.7	0.041	<20	0.75	0.021	0.07	0.8	1.9	0.09	0.18	36	0.6	<0.02	2.6	0.39	<0.1	<0.02
Reference Materials																					
STD DS11	Standard	19.7	53.9	0.81	388.2	0.092	<20	1.11	0.071	0.38	2.5	3.1	4.63	0.26	268	2.1	4.17	4.9	2.73	<0.1	0.06
STD DS11	Standard	18.6	53.5	0.80	383.8	0.086	<20	1.06	0.069	0.37	2.6	2.9	4.84	0.26	283	1.7	4.22	4.5	2.63	<0.1	0.07
STD DS11	Standard	19.6	57.4	0.82	411.4	0.089	<20	1.08	0.067	0.37	2.3	2.9	4.72	0.27	277	1.9	4.58	4.5	2.71	<0.1	0.05
STD DS11	Standard	19.1	54.4	0.79	406.5	0.086	<20	1.09	0.069	0.38	2.9	3.0	4.60	0.26	267	2.2	4.31	4.9	2.80	<0.1	0.06
STD DS11	Standard	16.6	57.5	0.82	394.6	0.085	<20	1.11	0.070	0.38	2.4	3.1	5.09	0.27	269	2.3	4.64	4.8	2.80	<0.1	0.07
STD OREAS262	Standard	19.2	41.0	1.12	234.1	0.003	<20	1.20	0.064	0.31	<0.1	3.5	0.46	0.24	166	0.3	0.23	3.6	2.46	<0.1	0.16
STD OREAS262	Standard	17.9	38.9	1.15	246.3	0.003	<20	1.16	0.065	0.30	0.1	3.1	0.45	0.25	153	0.2	0.23	3.6	2.35	<0.1	0.17
STD OREAS262	Standard	18.0	37.3	1.12	243.4	0.003	<20	1.17	0.063	0.29	<0.1	3.1	0.45	0.25	166	0.3	0.21	3.9	2.39	<0.1	0.19
STD OREAS262	Standard	17.9	38.7	1.11	255.4	0.003	<20	1.20	0.064	0.31	<0.1	3.3	0.46	0.24	160	0.6	0.24	4.0	2.37	<0.1	0.16
STD OREAS262	Standard	14.8	40.4	1.16	228.3	0.003	<20	1.25	0.067	0.29	<0.1	3.1	0.46	0.25	167	0.5	0.22	3.7	2.28	<0.1	0.25
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	6	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



Bureau Veritas Commodities Canada Ltd.

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QUALITY CONTROL REPORT

VAN22000374.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013I771001	Sediment Pulp	<0.02	<0.1	<0.1	<0.05	7.9	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
REP 013I771001	QC	<0.02	<0.1	<0.1	<0.05	7.6	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
013I771031	Sediment Pulp	2.84	9.3	0.4	<0.05	1.6	25.92	117.9	<0.02	<1	0.2	7.0	16.94	54.44	8.52	1.02	6.28	1.00	4.82	1.10	2.69
REP 013I771031	QC	2.75	9.4	0.4	<0.05	1.6	26.65	120.2	<0.02	<1	0.1	7.6	17.09	54.70	8.80	0.91	6.29	1.05	4.96	1.07	2.74
013I771067	Sediment Pulp	0.43	0.5	0.2	<0.05	1.3	4.15	31.0	<0.02	<1	<0.1	0.1	3.43	11.18	1.61	0.22	1.10	0.16	0.70	0.14	0.36
REP 013I771067	QC	0.42	0.5	0.2	<0.05	1.0	4.15	31.3	<0.02	<1	<0.1	0.2	3.53	11.70	1.59	0.26	1.03	0.16	0.68	0.12	0.32
013I771103	Sediment Pulp	1.16	5.8	0.4	<0.05	0.5	12.75	42.1	<0.02	2	0.2	4.0	5.45	19.46	3.44	0.68	2.85	0.44	2.23	0.48	1.16
REP 013I771103	QC	1.05	5.3	0.4	<0.05	0.5	12.15	37.8	<0.02	2	<0.1	4.2	5.24	17.39	3.34	0.64	2.79	0.41	2.22	0.45	1.15
Reference Materials																					
STD DS11	Standard	1.35	32.4	1.8	<0.05	2.5	8.06	37.5	0.26	47	0.7	24.5	3.95	14.31	2.55	0.61	2.11	0.32	1.61	0.30	0.87
STD DS11	Standard	1.42	30.8	1.8	<0.05	2.5	7.75	33.9	0.23	51	0.7	22.5	3.94	13.12	2.20	0.54	2.09	0.31	1.53	0.27	0.78
STD DS11	Standard	1.40	32.3	1.7	<0.05	2.5	8.09	36.0	0.26	46	0.3	23.1	4.26	14.09	2.58	0.48	1.87	0.30	1.42	0.29	0.77
STD DS11	Standard	1.37	33.3	1.7	<0.05	2.4	8.04	37.3	0.22	42	0.5	21.6	4.20	14.65	2.63	0.63	1.92	0.31	1.62	0.32	0.84
STD DS11	Standard	1.19	33.0	1.7	<0.05	2.9	7.52	32.5	0.23	45	0.7	22.2	3.49	13.25	2.40	0.45	1.94	0.25	1.45	0.27	0.75
STD OREAS262	Standard	<0.02	19.3	0.6	<0.05	6.9	11.20	37.5	0.02	1	1.1	17.1	4.47	17.12	3.49	0.78	3.12	0.48	2.17	0.44	0.99
STD OREAS262	Standard	<0.02	17.7	0.5	<0.05	7.2	11.02	34.1	0.02	<1	0.8	15.9	4.29	16.09	3.33	0.76	3.09	0.42	2.11	0.42	1.15
STD OREAS262	Standard	<0.02	17.9	0.6	<0.05	7.1	11.13	33.2	0.04	1	0.8	16.3	4.20	13.38	3.34	0.65	2.52	0.42	1.76	0.42	1.07
STD OREAS262	Standard	<0.02	18.6	0.5	<0.05	6.2	11.16	34.2	0.02	2	0.4	17.8	4.27	15.01	3.33	0.76	2.99	0.47	2.29	0.41	1.13
STD OREAS262	Standard	<0.02	17.5	0.5	<0.05	10.9	10.48	28.9	0.03	<1	1.1	16.8	3.47	13.83	3.04	0.59	2.77	0.36	2.03	0.37	0.99
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.2	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 19, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000374.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013I771001	Sediment Pulp	<0.02	<0.02	<0.02	<10	<2
REP 013I771001	QC	<0.02	<0.02	<0.02	<10	<2
013I771031	Sediment Pulp	0.41	2.28	0.35	<10	<2
REP 013I771031	QC	0.37	2.25	0.36	<10	<2
013I771067	Sediment Pulp	0.05	0.33	0.05	<10	<2
REP 013I771067	QC	0.05	0.28	0.06	<10	2
013I771103	Sediment Pulp	0.20	1.00	0.18	<10	<2
REP 013I771103	QC	0.18	0.97	0.14	<10	<2
Reference Materials						
STD DS11	Standard	0.12	0.72	0.12	85	161
STD DS11	Standard	0.11	0.79	0.13	80	163
STD DS11	Standard	0.12	0.68	0.11	82	154
STD DS11	Standard	0.12	0.73	0.11	79	172
STD DS11	Standard	0.10	0.66	0.10	97	168
STD OREAS262	Standard	0.13	0.83	0.14	<10	<2
STD OREAS262	Standard	0.18	0.95	0.13	<10	2
STD OREAS262	Standard	0.16	0.87	0.13	<10	<2
STD OREAS262	Standard	0.15	0.93	0.13	<10	<2
STD OREAS262	Standard	0.13	0.79	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Client:

Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 16, 2022
Report Date: April 13, 2022
Page: 1 of 11

CERTIFICATE OF ANALYSIS

VAN22000375.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 013J
P.O. Number: 3000732409
Number of Samples: 272

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	190	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	171	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



BUREAU MINERAL LABORATORIES
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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771001 Sediment Pulp	3.78	7.03	1.73	52.7	65	6.0	7.1	251	4.53	0.3	0.9	1.0	3.1	62.1	0.19	<0.02	<0.02	45	0.76	0.045
013J771002 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771003 Sediment Pulp	0.54	6.04	1.47	27.3	31	5.3	2.4	95	2.19	0.2	1.4	0.8	4.2	33.8	0.11	0.04	<0.02	53	0.51	0.024
013J771004 Sediment Pulp	0.19	2.89	1.13	20.7	30	4.2	3.4	120	4.07	0.4	0.9	0.7	2.5	39.1	0.13	<0.02	<0.02	9	0.55	0.017
013J771005 Sediment Pulp	3.94	7.61	1.76	52.8	63	6.4	7.4	252	4.61	<0.1	0.9	2.0	3.1	65.5	0.17	<0.02	<0.02	45	0.78	0.045
013J771006 Sediment Pulp	1.33	10.77	3.74	81.5	66	8.4	10.0	875	6.58	0.4	2.1	1.7	3.2	30.6	0.25	0.04	0.02	62	0.25	0.125
013J771007 Sediment Pulp	0.72	11.32	3.07	118.0	37	10.0	8.1	211	2.90	<0.1	1.0	1.5	5.0	41.0	0.36	0.06	<0.02	33	0.33	0.049
013J771008 Sediment Pulp	1.52	11.19	3.84	84.8	73	8.3	10.3	892	6.38	0.3	2.2	4.8	3.4	32.8	0.25	0.03	0.03	62	0.26	0.125
013J771009 Sediment Pulp	0.61	8.78	3.07	54.2	39	9.3	6.1	227	1.37	0.5	1.8	5.2	3.1	37.8	0.15	0.03	<0.02	29	0.37	0.063
013J771010 Sediment Pulp	0.79	7.13	4.27	56.0	31	10.1	6.1	258	1.77	0.5	0.9	0.9	3.7	41.3	0.07	0.05	<0.02	40	0.42	0.077
013J771011 Sediment Pulp	0.78	5.51	2.03	26.4	9	4.7	6.2	154	0.99	0.3	0.9	1.4	2.7	21.2	0.08	0.06	<0.02	21	0.28	0.056
013J771012 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771013 Sediment Pulp	8.74	39.03	77.86	299.9	580	11.2	7.8	425	1.75	33.7	9.7	3.4	1.7	74.7	1.29	0.55	1.03	19	6.40	0.062
013J771014 Sediment Pulp	0.28	11.10	1.50	11.4	140	3.7	0.6	16	0.14	0.3	0.6	1.1	0.4	15.8	5.96	<0.02	0.07	10	0.12	0.046
013J771015 Sediment Pulp	3.62	12.28	2.84	43.4	76	4.8	5.5	208	1.72	1.0	2.3	2.8	3.1	27.3	0.13	0.07	0.03	36	0.36	0.074
013J771016 Sediment Pulp	2.88	12.45	2.09	23.4	89	5.7	1.2	45	0.55	0.3	2.1	1.9	0.8	19.9	0.12	0.06	<0.02	20	0.15	0.031
013J771017 Sediment Pulp	4.91	13.57	2.44	44.5	104	5.0	3.9	157	1.12	0.2	2.7	2.5	1.0	19.8	0.10	0.06	<0.02	31	0.20	0.069
013J771018 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771019 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771020 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771021 Sediment Pulp	0.66	11.32	3.12	117.1	43	9.5	8.2	207	2.84	0.6	1.0	1.7	5.1	42.4	0.34	0.06	<0.02	33	0.32	0.052
013J771022 Sediment Pulp	2.13	34.06	1.77	57.6	149	6.5	3.6	47	0.49	<0.1	2.8	1.3	0.3	38.2	0.15	0.09	<0.02	13	0.39	0.042
013J771023 Sediment Pulp	6.29	13.02	4.66	39.0	142	5.0	4.1	113	2.42	0.4	5.6	1.4	2.6	16.5	0.16	0.09	<0.02	30	0.11	0.071
013J771024 Sediment Pulp	15.01	14.51	1.88	64.5	215	7.0	2.5	50	1.97	0.1	10.9	0.9	0.5	22.4	0.25	0.08	<0.02	29	0.19	0.090
013J771025 Sediment Pulp	2.97	14.36	1.81	54.5	159	7.1	2.0	43	0.25	<0.1	7.7	0.9	0.3	27.2	0.16	0.09	<0.02	14	0.24	0.044
013J771026 Sediment Pulp	0.96	31.91	24.37	128.5	2671	43.8	26.1	1143	2.97	24.5	4.1	3.2	9.0	31.7	0.56	0.65	3.54	44	0.59	0.093
013J771027 Sediment Pulp	19.12	17.64	2.76	35.3	124	4.2	6.6	180	2.99	<0.1	21.9	0.7	4.6	17.5	0.06	0.10	<0.02	39	0.29	0.032
013J771028 Sediment Pulp	3.52	117.46	5.44	106.0	682	10.2	4.6	90	1.77	0.9	12.1	2.1	1.9	26.1	0.49	0.11	0.08	44	0.20	0.221
013J771029 Sediment Pulp	3.73	9.04	4.44	34.2	58	3.8	4.5	128	1.22	0.7	4.5	0.6	1.9	21.5	0.09	0.07	<0.02	27	0.27	0.049
013J771030 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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Part: 2 of 4

CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J771001	Sediment Pulp	37.5	12.9	0.12	50.2	0.038	<20	0.89	0.025	0.07	0.9	2.7	0.07	3.93	110	0.1	<0.02	2.5	0.25	<0.1	<0.02
013J771002	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771003	Sediment Pulp	47.3	16.8	0.08	249.4	0.023	<20	0.89	0.012	0.03	<0.1	2.9	0.05	0.91	65	0.2	<0.02	1.7	0.18	<0.1	<0.02
013J771004	Sediment Pulp	14.0	5.6	0.06	51.4	0.011	<20	0.35	0.011	0.02	<0.1	1.5	0.04	4.32	163	<0.1	<0.02	0.9	0.13	<0.1	<0.02
013J771005	Sediment Pulp	38.3	13.0	0.13	53.6	0.039	<20	0.91	0.025	0.07	0.8	2.9	0.08	3.97	137	0.1	<0.02	2.5	0.27	<0.1	<0.02
013J771006	Sediment Pulp	58.6	20.9	0.19	248.9	0.044	<20	1.60	0.021	0.08	0.2	4.2	0.06	0.35	131	0.4	<0.02	3.2	0.55	0.1	<0.02
013J771007	Sediment Pulp	38.7	16.8	0.30	115.2	0.069	<20	0.84	0.015	0.08	0.1	2.9	0.10	0.18	83	0.4	<0.02	3.6	0.69	0.1	0.05
013J771008	Sediment Pulp	64.0	20.8	0.20	259.5	0.046	<20	1.60	0.023	0.09	0.2	3.9	0.08	0.34	129	0.7	<0.02	3.3	0.58	<0.1	<0.02
013J771009	Sediment Pulp	37.6	15.2	0.34	210.4	0.084	<20	1.07	0.037	0.18	0.2	3.0	0.11	0.14	126	<0.1	0.02	3.9	1.12	<0.1	0.04
013J771010	Sediment Pulp	28.9	18.7	0.53	135.3	0.127	<20	1.26	0.045	0.25	0.3	3.6	0.13	0.06	68	<0.1	<0.02	6.1	1.82	<0.1	0.06
013J771011	Sediment Pulp	19.2	8.2	0.19	95.5	0.062	<20	0.55	0.025	0.07	0.7	1.9	0.07	0.15	67	<0.1	<0.02	2.4	0.47	<0.1	<0.02
013J771012	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771013	Sediment Pulp	11.2	11.4	0.55	92.3	0.040	<20	0.45	0.028	0.05	0.5	2.6	0.20	1.48	99	0.9	<0.02	2.1	0.51	<0.1	0.05
013J771014	Sediment Pulp	13.8	4.0	0.03	47.0	0.015	<20	0.36	0.008	0.01	<0.1	0.6	<0.02	0.10	120	<0.1	<0.02	1.2	0.15	<0.1	<0.02
013J771015	Sediment Pulp	39.1	8.9	0.23	55.0	0.082	<20	0.73	0.032	0.10	1.5	2.0	0.09	0.08	95	0.3	<0.02	3.3	0.84	<0.1	0.04
013J771016	Sediment Pulp	36.0	6.4	0.06	38.0	0.028	<20	0.39	0.011	0.03	0.8	1.2	0.03	0.19	103	0.8	<0.02	1.6	0.32	<0.1	<0.02
013J771017	Sediment Pulp	44.2	7.8	0.14	43.8	0.047	<20	0.68	0.016	0.06	1.0	1.3	0.09	0.12	177	0.6	<0.02	2.7	0.68	<0.1	<0.02
013J771018	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771019	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771020	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771021	Sediment Pulp	39.2	17.2	0.29	116.9	0.072	<20	0.82	0.016	0.08	0.2	3.2	0.10	0.17	82	0.7	<0.02	3.5	0.68	<0.1	0.07
013J771022	Sediment Pulp	48.9	4.7	0.04	50.7	0.019	<20	0.46	0.010	0.03	0.4	0.5	0.13	0.53	198	0.6	0.02	1.5	0.25	<0.1	<0.02
013J771023	Sediment Pulp	70.0	7.6	0.07	52.9	0.029	<20	0.61	0.008	0.04	0.6	1.8	0.05	0.12	148	1.1	<0.02	1.8	0.47	0.1	<0.02
013J771024	Sediment Pulp	93.1	6.8	0.03	47.7	0.014	<20	0.79	0.009	0.02	0.5	1.1	0.10	0.28	224	1.2	<0.02	1.6	0.24	<0.1	<0.02
013J771025	Sediment Pulp	58.8	6.0	0.05	46.9	0.022	<20	0.47	0.010	0.02	0.1	0.9	0.06	0.22	168	1.0	<0.02	1.5	0.28	<0.1	<0.02
013J771026	Sediment Pulp	45.6	45.9	0.75	172.3	0.095	<20	1.61	0.030	0.25	0.2	6.0	0.28	0.14	287	0.4	0.03	5.7	1.43	<0.1	0.10
013J771027	Sediment Pulp	80.8	10.3	0.10	50.6	0.053	<20	0.80	0.016	0.04	1.2	2.2	0.04	0.07	207	4.4	<0.02	3.1	0.62	<0.1	<0.02
013J771028	Sediment Pulp	166.4	20.6	0.09	77.9	0.051	<20	2.21	0.008	0.04	0.2	3.1	0.18	0.30	223	3.6	<0.02	4.9	0.74	<0.1	<0.02
013J771029	Sediment Pulp	33.8	6.9	0.16	40.8	0.060	<20	0.58	0.023	0.07	2.0	1.4	0.06	0.11	81	0.8	<0.02	2.5	0.72	<0.1	0.04
013J771030	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771001 Sediment Pulp	1.38	4.1	0.3	<0.05	0.7	13.17	70.4	<0.02	3	0.3	3.1	9.11	31.82	4.93	0.85	3.79	0.56	2.77	0.52	1.40
013J771002 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771003 Sediment Pulp	0.92	2.3	0.3	<0.05	1.2	18.10	87.4	<0.02	1	1.2	3.4	11.80	42.27	6.94	1.29	4.64	0.76	3.37	0.63	1.76
013J771004 Sediment Pulp	0.55	1.6	0.1	<0.05	1.1	6.63	26.2	<0.02	<1	0.1	1.3	3.54	12.42	2.28	0.45	1.81	0.28	1.38	0.28	0.65
013J771005 Sediment Pulp	1.44	4.2	0.3	<0.05	0.7	13.32	71.6	<0.02	3	0.9	2.7	9.42	32.58	5.07	0.94	4.09	0.54	2.59	0.52	1.29
013J771006 Sediment Pulp	1.66	7.1	0.4	<0.05	0.7	30.35	103.3	0.03	<1	1.8	3.8	15.99	55.82	9.79	1.86	7.63	1.16	5.60	1.12	3.03
013J771007 Sediment Pulp	2.39	7.1	0.5	<0.05	1.6	12.86	73.0	<0.02	<1	0.3	5.5	9.34	31.30	5.14	0.86	3.84	0.56	2.53	0.50	1.39
013J771008 Sediment Pulp	1.73	7.4	0.4	<0.05	0.7	30.44	111.1	<0.02	1	1.4	4.8	16.81	60.13	10.81	2.22	8.47	1.27	6.11	1.21	3.46
013J771009 Sediment Pulp	2.44	14.2	0.5	<0.05	1.7	15.91	71.1	<0.02	<1	0.7	9.1	9.77	34.41	5.94	1.20	4.43	0.71	3.68	0.69	1.78
013J771010 Sediment Pulp	2.98	22.3	0.7	<0.05	2.4	9.69	53.8	<0.02	<1	0.6	13.2	6.89	21.81	3.53	0.65	2.47	0.43	1.92	0.39	1.05
013J771011 Sediment Pulp	1.60	5.9	0.4	<0.05	1.1	9.40	36.8	<0.02	<1	0.2	4.9	4.61	16.77	2.92	0.63	2.11	0.37	1.89	0.36	0.97
013J771012 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771013 Sediment Pulp	0.75	3.5	3.2	<0.05	1.4	10.94	17.9	0.48	18	0.3	3.5	3.21	11.72	2.62	0.55	2.11	0.34	1.82	0.36	1.04
013J771014 Sediment Pulp	0.33	0.9	0.3	<0.05	0.4	3.53	25.5	<0.02	<1	0.4	0.7	3.27	10.62	1.96	0.25	1.43	0.16	0.91	0.15	0.37
013J771015 Sediment Pulp	3.07	8.2	0.6	<0.05	1.5	14.44	61.6	<0.02	1	0.4	6.8	8.93	29.66	4.78	0.77	3.37	0.52	2.52	0.52	1.30
013J771016 Sediment Pulp	1.14	2.3	0.3	<0.05	0.6	10.24	55.1	<0.02	<1	<0.1	1.7	7.58	24.13	3.66	0.60	2.65	0.41	2.01	0.39	1.01
013J771017 Sediment Pulp	1.38	4.9	0.4	<0.05	0.5	13.53	70.8	<0.02	<1	<0.1	3.8	10.12	33.37	4.90	0.81	3.55	0.55	2.39	0.52	1.22
013J771018 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771019 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771020 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771021 Sediment Pulp	2.42	7.2	0.5	<0.05	1.5	12.87	73.0	<0.02	<1	0.4	6.2	9.56	31.96	5.16	0.85	3.88	0.61	2.60	0.51	1.32
013J771022 Sediment Pulp	0.68	1.8	0.2	<0.05	0.2	13.06	74.9	<0.02	2	0.2	1.4	11.09	36.80	5.42	0.92	3.79	0.56	2.39	0.47	1.22
013J771023 Sediment Pulp	0.97	3.3	0.3	<0.05	0.4	22.92	96.9	<0.02	1	0.3	2.0	15.48	52.40	7.74	1.23	5.93	0.85	3.99	0.81	2.01
013J771024 Sediment Pulp	0.84	1.6	0.2	<0.05	0.1	33.34	110.5	<0.02	4	0.4	1.0	21.16	70.80	11.16	1.66	9.11	1.23	5.83	1.17	2.90
013J771025 Sediment Pulp	1.06	2.1	0.3	<0.05	0.5	19.72	89.5	<0.02	3	0.4	1.2	14.77	50.54	8.41	1.26	5.23	0.88	4.12	0.86	2.07
013J771026 Sediment Pulp	1.91	24.6	1.3	<0.05	6.2	19.65	76.0	0.04	<1	0.4	21.5	11.40	37.75	6.64	1.12	4.75	0.73	3.70	0.76	1.96
013J771027 Sediment Pulp	1.62	3.7	0.5	<0.05	1.2	26.70	117.5	<0.02	4	0.2	4.7	18.86	65.85	9.59	1.73	7.32	1.09	4.85	0.99	2.61
013J771028 Sediment Pulp	3.70	4.0	0.7	<0.05	1.7	71.39	286.5	0.03	3	1.4	3.2	42.40	143.36	24.17	4.25	17.81	2.90	14.60	2.92	7.47
013J771029 Sediment Pulp	2.16	5.4	0.5	<0.05	1.2	11.95	52.2	<0.02	<1	0.3	5.7	7.54	25.51	4.02	0.73	3.10	0.47	2.25	0.45	1.22
013J771030 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J771001	Sediment Pulp		0.21	1.08	0.20	<10	<2
013J771002	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771003	Sediment Pulp		0.28	1.58	0.26	<10	<2
013J771004	Sediment Pulp		0.09	0.58	0.10	<10	2
013J771005	Sediment Pulp		0.20	1.08	0.18	<10	<2
013J771006	Sediment Pulp		0.44	2.59	0.40	<10	<2
013J771007	Sediment Pulp		0.18	1.08	0.19	<10	<2
013J771008	Sediment Pulp		0.52	2.83	0.48	<10	<2
013J771009	Sediment Pulp		0.27	1.38	0.22	<10	<2
013J771010	Sediment Pulp		0.16	0.86	0.13	<10	<2
013J771011	Sediment Pulp		0.13	0.80	0.13	<10	<2
013J771012	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771013	Sediment Pulp		0.15	0.87	0.16	<10	<2
013J771014	Sediment Pulp		0.05	0.36	0.03	<10	<2
013J771015	Sediment Pulp		0.20	1.23	0.22	<10	<2
013J771016	Sediment Pulp		0.17	0.79	0.13	<10	<2
013J771017	Sediment Pulp		0.19	1.08	0.16	<10	<2
013J771018	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771019	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771020	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771021	Sediment Pulp		0.20	1.13	0.16	<10	<2
013J771022	Sediment Pulp		0.20	1.04	0.17	<10	<2
013J771023	Sediment Pulp		0.30	1.61	0.24	<10	<2
013J771024	Sediment Pulp		0.45	2.31	0.43	<10	<2
013J771025	Sediment Pulp		0.33	1.71	0.25	<10	3
013J771026	Sediment Pulp		0.27	1.82	0.29	<10	2
013J771027	Sediment Pulp		0.36	1.93	0.32	<10	4
013J771028	Sediment Pulp		1.10	5.86	0.87	<10	<2
013J771029	Sediment Pulp		0.19	0.94	0.13	<10	<2
013J771030	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771031 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771032 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771033 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771034 Sediment Pulp	8.45	37.12	2.77	88.6	95	9.6	7.2	108	1.60	1.3	5.8	4.0	4.4	30.1	0.22	0.14	0.16	29	0.35	0.045
013J771035 Sediment Pulp	4.51	33.87	2.88	47.1	63	7.6	6.1	142	1.29	1.4	5.0	<0.2	5.7	30.1	0.11	0.09	0.05	27	0.40	0.049
013J771036 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771037 Sediment Pulp	3.63	19.00	2.89	32.4	115	3.6	3.0	66	0.78	0.5	2.6	2.2	1.3	15.3	0.35	0.11	<0.02	26	0.13	0.039
013J771038 Sediment Pulp	0.30	5.02	1.90	17.3	23	2.0	1.6	75	0.46	0.6	0.7	<0.2	2.6	15.4	0.02	0.03	<0.02	11	0.23	0.056
013J771039 Sediment Pulp	0.56	7.80	1.55	29.8	50	3.2	1.8	89	0.51	0.6	1.0	0.3	1.7	21.6	0.10	0.03	<0.02	15	0.26	0.049
013J771040 Sediment Pulp	1.71	16.07	1.86	72.2	87	6.1	5.7	197	1.34	0.2	1.3	<0.2	1.8	28.0	0.20	0.04	<0.02	33	0.30	0.057
013J771041 Sediment Pulp	1.71	22.48	2.19	72.6	131	6.9	3.6	89	0.96	0.5	1.5	0.7	0.6	30.1	0.15	0.04	<0.02	26	0.23	0.057
013J771042 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771043 Sediment Pulp	1.43	37.36	1.82	66.0	77	8.4	7.3	79	0.70	0.2	2.9	<0.2	1.5	31.6	0.14	0.02	<0.02	23	0.28	0.051
013J771044 Sediment Pulp	1.66	22.61	2.19	70.5	141	6.3	3.5	91	0.96	0.2	1.4	0.4	0.6	30.6	0.13	0.05	0.03	26	0.23	0.055
013J771045 Sediment Pulp	1.51	54.57	3.09	72.4	392	7.1	3.3	108	4.83	0.8	2.4	1.6	2.4	38.1	0.35	0.04	<0.02	91	0.30	0.252
013J771046 Sediment Pulp	0.44	11.52	1.69	34.4	97	4.1	1.1	47	0.41	0.5	0.8	1.1	0.2	27.9	0.16	0.04	<0.02	19	0.20	0.074
013J771047 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771048 Sediment Pulp	0.57	13.80	4.56	40.8	70	4.9	4.1	151	1.11	0.5	1.3	<0.2	0.7	33.1	0.15	0.05	<0.02	27	0.28	0.094
013J771049 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771050 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771051 Sediment Pulp	0.24	5.03	2.76	22.4	32	3.3	2.3	119	0.53	0.8	0.8	1.4	2.5	27.3	0.05	0.07	<0.02	13	0.34	0.063
013J771052 Sediment Pulp	0.70	4.79	2.67	27.6	26	2.3	1.7	94	0.60	0.8	0.7	<0.2	1.5	22.2	0.04	0.05	<0.02	12	0.24	0.033
013J771053 Sediment Pulp	2.67	8.19	1.65	39.6	54	3.6	1.5	44	0.28	0.3	1.5	<0.2	0.3	26.7	0.12	0.08	<0.02	23	0.22	0.029
013J771054 Sediment Pulp	0.59	23.72	3.16	33.2	71	5.9	3.1	117	0.95	0.9	2.4	0.6	2.5	20.0	0.07	0.03	0.04	21	0.27	0.111
013J771055 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771056 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771057 Sediment Pulp	8.80	39.05	82.03	290.2	602	11.8	7.2	405	1.74	32.8	9.6	1.6	1.8	72.7	1.25	0.61	1.01	19	6.00	0.066
013J771058 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771059 Sediment Pulp	4.33	12.21	2.14	46.8	86	3.3	2.5	78	0.43	0.1	11.3	<0.2	0.3	21.2	0.19	0.12	0.02	16	0.17	0.046
013J771060 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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Part: 2 of 4

CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J771031	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771032	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771033	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771034	Sediment Pulp	57.7	13.0	0.17	57.7	0.054	<20	0.77	0.024	0.08	3.0	2.7	0.17	0.43	296	1.2	<0.02	2.0	0.77	<0.1	0.03
013J771035	Sediment Pulp	43.6	11.7	0.23	57.7	0.076	<20	0.73	0.034	0.13	1.4	2.8	0.10	0.26	331	<0.1	<0.02	2.3	0.88	<0.1	0.05
013J771036	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771037	Sediment Pulp	49.5	7.8	0.05	26.6	0.031	<20	0.75	0.011	0.03	1.1	1.3	0.05	0.11	108	0.9	<0.02	1.7	0.31	<0.1	<0.02
013J771038	Sediment Pulp	16.6	4.5	0.12	26.9	0.052	<20	0.29	0.019	0.06	0.1	1.2	0.03	0.03	49	<0.1	<0.02	1.5	0.42	<0.1	0.03
013J771039	Sediment Pulp	24.1	6.6	0.14	36.4	0.055	<20	0.40	0.026	0.07	0.3	1.6	0.04	0.06	82	0.2	<0.02	1.7	0.45	<0.1	0.03
013J771040	Sediment Pulp	46.2	9.6	0.14	55.4	0.058	<20	0.93	0.024	0.07	0.3	1.7	0.09	0.15	244	0.5	<0.02	2.6	0.50	<0.1	<0.02
013J771041	Sediment Pulp	54.7	8.6	0.06	62.1	0.033	<20	0.98	0.010	0.03	0.3	1.1	0.07	0.18	140	0.6	<0.02	2.1	0.28	<0.1	<0.02
013J771042	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771043	Sediment Pulp	96.3	10.1	0.09	53.0	0.034	<20	1.23	0.014	0.04	0.8	1.7	0.10	0.28	298	0.8	0.02	1.7	0.27	<0.1	<0.02
013J771044	Sediment Pulp	52.9	8.4	0.06	60.2	0.032	<20	0.97	0.010	0.03	0.3	1.0	0.07	0.17	150	0.6	<0.02	2.1	0.27	<0.1	<0.02
013J771045	Sediment Pulp	69.0	17.3	0.12	106.1	0.064	<20	1.41	0.013	0.04	0.2	2.7	0.10	0.14	281	1.3	<0.02	4.2	0.40	<0.1	<0.02
013J771046	Sediment Pulp	21.7	6.0	0.07	44.0	0.024	<20	0.55	0.016	0.02	<0.1	0.6	0.03	0.11	101	0.5	<0.02	1.8	0.21	<0.1	<0.02
013J771047	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771048	Sediment Pulp	38.7	9.1	0.16	53.0	0.057	<20	0.89	0.028	0.05	0.2	1.4	0.04	0.12	164	0.7	<0.02	3.0	0.51	<0.1	0.04
013J771049	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771050	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771051	Sediment Pulp	16.5	6.2	0.17	41.2	0.073	<20	0.43	0.041	0.11	0.2	1.8	0.05	0.03	71	<0.1	<0.02	2.1	0.59	<0.1	0.05
013J771052	Sediment Pulp	15.9	5.3	0.13	30.3	0.066	<20	0.34	0.028	0.06	0.4	1.6	0.03	0.07	65	0.3	<0.02	1.8	0.61	<0.1	0.06
013J771053	Sediment Pulp	22.0	5.3	0.06	31.1	0.019	<20	0.30	0.013	0.03	1.2	0.7	0.05	0.19	215	0.9	<0.02	1.3	0.27	<0.1	<0.02
013J771054	Sediment Pulp	41.6	12.0	0.21	42.2	0.068	<20	0.73	0.026	0.12	0.2	2.2	0.07	0.10	46	0.8	<0.02	2.7	0.74	<0.1	0.04
013J771055	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771056	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771057	Sediment Pulp	11.3	11.6	0.55	88.9	0.037	<20	0.43	0.026	0.05	0.9	2.4	0.20	1.46	98	1.1	<0.02	1.9	0.51	<0.1	0.04
013J771058	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771059	Sediment Pulp	67.6	8.0	0.11	45.7	0.025	<20	0.50	0.018	0.06	<0.1	0.7	0.05	0.17	120	1.4	<0.02	1.7	0.90	<0.1	<0.02
013J771060	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	



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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771031 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771032 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771033 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771034 Sediment Pulp	2.00	6.7	1.1	<0.05	1.2	20.74	96.3	0.02	4	<0.1	5.1	13.56	46.80	7.57	1.33	6.30	0.82	3.78	0.74	1.92
013J771035 Sediment Pulp	2.47	9.9	0.8	<0.05	2.2	16.30	73.8	<0.02	5	0.1	6.1	10.06	34.51	5.62	1.00	4.55	0.67	3.05	0.60	1.65
013J771036 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771037 Sediment Pulp	1.00	2.2	0.4	<0.05	0.3	17.44	96.2	<0.02	2	0.3	1.9	13.93	50.21	8.50	1.58	6.60	0.79	3.81	0.73	2.00
013J771038 Sediment Pulp	1.76	4.2	0.5	<0.05	0.9	6.22	31.4	<0.02	<1	0.2	3.4	3.89	13.19	2.09	0.42	1.52	0.25	1.35	0.23	0.67
013J771039 Sediment Pulp	2.10	4.7	0.5	<0.05	1.1	8.79	45.4	<0.02	<1	0.2	3.9	5.54	19.13	3.01	0.65	2.54	0.34	1.65	0.32	0.90
013J771040 Sediment Pulp	1.88	4.8	0.6	<0.05	0.6	12.73	88.6	<0.02	<1	0.4	4.0	11.85	40.89	6.27	1.05	4.14	0.64	2.92	0.51	1.32
013J771041 Sediment Pulp	1.64	2.0	0.5	<0.05	0.4	15.34	102.7	<0.02	2	0.8	1.4	14.34	49.07	7.42	1.45	4.50	0.69	3.34	0.58	1.59
013J771042 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771043 Sediment Pulp	1.52	2.4	0.3	<0.05	0.7	28.22	175.6	<0.02	2	0.4	2.2	28.29	101.21	14.68	2.76	10.21	1.32	6.53	1.09	2.90
013J771044 Sediment Pulp	1.59	2.0	0.5	<0.05	0.4	15.91	102.2	<0.02	<1	0.3	1.7	13.84	46.95	7.21	1.45	5.18	0.69	3.18	0.61	1.56
013J771045 Sediment Pulp	2.89	3.3	0.5	<0.05	1.0	21.00	128.0	<0.02	<1	0.9	2.5	17.09	56.39	8.87	1.61	6.23	0.95	4.96	0.85	2.09
013J771046 Sediment Pulp	0.87	1.7	0.3	<0.05	0.2	6.67	41.6	<0.02	<1	0.3	1.3	5.48	19.60	3.27	0.58	1.86	0.30	1.37	0.27	0.70
013J771047 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771048 Sediment Pulp	2.34	3.6	0.4	<0.05	0.9	12.31	74.2	<0.02	<1	0.7	4.4	9.36	33.47	4.90	0.97	3.53	0.54	2.84	0.51	1.23
013J771049 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771050 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771051 Sediment Pulp	2.55	7.0	0.5	<0.05	1.7	8.92	33.0	<0.02	<1	0.3	4.6	4.11	14.46	2.58	0.52	1.75	0.31	1.68	0.31	0.86
013J771052 Sediment Pulp	2.53	4.6	0.5	<0.05	1.3	6.85	29.4	<0.02	<1	<0.1	2.5	3.78	12.72	2.04	0.39	1.60	0.24	1.14	0.27	0.70
013J771053 Sediment Pulp	0.67	2.5	0.2	<0.05	0.2	6.18	32.4	<0.02	1	0.1	1.5	4.64	16.52	2.57	0.47	1.59	0.25	1.28	0.21	0.67
013J771054 Sediment Pulp	2.07	9.4	0.4	<0.05	2.0	15.10	76.8	<0.02	<1	0.3	5.9	9.65	33.27	5.42	1.01	3.97	0.61	2.98	0.56	1.55
013J771055 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771056 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771057 Sediment Pulp	0.69	3.5	3.1	<0.05	1.6	11.03	18.3	0.45	17	<0.1	4.3	3.16	12.33	2.38	0.52	2.07	0.35	1.93	0.38	1.01
013J771058 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771059 Sediment Pulp	0.85	6.1	0.4	<0.05	0.4	26.24	67.2	<0.02	1	0.3	3.0	15.53	53.73	8.21	1.58	6.93	0.93	4.36	0.86	2.19
013J771060 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013J771031	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771032	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771033	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771034	Sediment Pulp	0.29	1.57	0.26	<10
013J771035	Sediment Pulp	0.23	1.38	0.19	<10
013J771036	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771037	Sediment Pulp	0.25	1.41	0.20	<10
013J771038	Sediment Pulp	0.08	0.60	0.07	<10
013J771039	Sediment Pulp	0.13	0.81	0.13	<10
013J771040	Sediment Pulp	0.20	1.18	0.16	<10
013J771041	Sediment Pulp	0.23	1.26	0.16	<10
013J771042	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771043	Sediment Pulp	0.41	2.29	0.38	<10
013J771044	Sediment Pulp	0.24	1.33	0.16	<10
013J771045	Sediment Pulp	0.32	1.79	0.29	<10
013J771046	Sediment Pulp	0.11	0.50	0.08	<10
013J771047	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771048	Sediment Pulp	0.20	1.07	0.14	<10
013J771049	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771050	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771051	Sediment Pulp	0.14	0.82	0.12	<10
013J771052	Sediment Pulp	0.10	0.60	0.10	<10
013J771053	Sediment Pulp	0.08	0.46	0.08	<10
013J771054	Sediment Pulp	0.22	1.32	0.21	<10
013J771055	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771056	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771057	Sediment Pulp	0.17	0.89	0.14	<10
013J771058	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771059	Sediment Pulp	0.29	1.62	0.28	<10
013J771060	Sediment Pulp	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771061	Sediment Pulp	13.46	13.76	2.20	58.9	104	11.7	4.4	59	1.12	0.6	5.1	<0.2	0.8	23.7	0.15	0.09	<0.02	31	0.23	0.071
013J771062	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771064	Sediment Pulp	0.79	29.36	22.50	126.3	2459	41.1	25.0	1160	3.00	25.3	3.9	3.0	7.9	31.1	0.53	0.68	3.24	45	0.59	0.093
013J771065	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771067	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771068	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771069	Sediment Pulp	12.10	12.05	2.05	48.4	92	10.0	4.1	58	1.09	0.4	4.7	0.8	0.8	22.2	0.17	0.08	<0.02	30	0.22	0.068
013J771070	Sediment Pulp	21.21	9.48	3.45	30.2	31	4.4	5.3	72	3.09	2.6	5.7	<0.2	8.8	18.3	0.05	0.08	0.02	41	0.25	0.053
013J771071	Sediment Pulp	8.21	9.23	2.49	32.4	29	4.5	4.4	80	1.73	1.6	6.0	0.3	9.9	18.8	0.06	0.06	<0.02	45	0.27	0.055
013J771072	Sediment Pulp	11.90	9.55	3.43	39.3	46	6.0	6.3	196	2.80	1.7	3.3	0.2	6.5	27.0	0.06	0.07	<0.02	37	0.38	0.122
013J771073	Sediment Pulp	3.85	3.06	2.64	20.8	6	2.5	2.8	103	1.49	0.7	1.3	<0.2	3.1	12.4	0.05	0.03	<0.02	20	0.23	0.058
013J771074	Sediment Pulp	7.15	7.92	3.01	42.9	52	4.7	6.0	184	2.14	1.2	3.6	<0.2	3.7	19.8	0.11	0.07	0.03	34	0.27	0.071
013J771075	Sediment Pulp	3.17	10.04	2.56	25.3	85	4.4	1.5	62	0.43	0.3	4.2	0.5	0.5	23.4	0.12	0.08	0.02	20	0.16	0.040
013J771076	Sediment Pulp	3.71	28.78	1.58	48.9	125	7.1	1.9	35	0.31	<0.1	6.3	0.5	0.3	24.7	0.16	0.11	<0.02	20	0.22	0.051
013J771077	Sediment Pulp	3.06	34.76	1.51	89.4	201	9.8	3.9	115	1.38	0.4	9.5	3.6	0.7	26.0	0.25	0.12	<0.02	53	0.29	0.118
013J771078	Sediment Pulp	1.29	21.07	2.72	45.9	134	6.6	1.5	42	0.23	0.2	3.3	0.2	0.2	35.1	0.17	0.06	<0.02	14	0.27	0.046
013J771079	Sediment Pulp	5.78	20.42	2.35	48.4	175	9.7	2.8	47	1.16	0.1	6.3	<0.2	0.4	26.8	0.15	0.06	<0.02	25	0.21	0.066
013J771080	Sediment Pulp	4.80	17.48	1.89	30.5	105	4.4	0.9	30	0.43	0.4	4.6	1.3	0.3	26.4	0.16	0.06	<0.02	13	0.21	0.035
013J771081	Sediment Pulp	4.72	17.31	1.88	29.5	116	4.4	1.0	30	0.42	0.3	4.6	1.9	0.2	25.1	0.14	0.05	<0.02	13	0.21	0.034
013J771082	Sediment Pulp	3.17	12.53	2.50	37.8	58	4.4	3.9	151	1.39	0.8	3.2	1.7	2.9	24.0	0.07	0.05	<0.02	34	0.31	0.076
013J771083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771085	Sediment Pulp	1.29	4.98	2.02	17.7	8	2.3	2.5	78	0.52	0.5	2.2	12.6	2.3	19.3	0.04	0.03	<0.02	12	0.29	0.070
013J771086	Sediment Pulp	17.20	53.83	2.55	66.2	172	5.0	13.7	742	10.72	1.2	19.4	2.0	4.3	14.3	0.12	0.07	0.11	51	0.13	0.125
013J771087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771088	Sediment Pulp	3.48	26.96	2.09	77.8	122	6.4	3.2	74	0.78	0.5	7.4	1.6	0.7	30.8	0.19	0.05	0.10	30	0.23	0.046
013J771089	Sediment Pulp	2.32	7.88	1.89	24.1	17	3.0	4.6	117	1.35	0.7	6.5	0.7	3.5	17.3	0.04	0.03	<0.02	20	0.24	0.062
013J771090	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02	
013J771061	Sediment Pulp	67.7	9.1	0.08	54.9	0.029	<20	0.61	0.012	0.03	4.0	1.5	0.07	0.33	124	1.4	<0.02	1.7	0.33	<0.1	<0.02
013J771062	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771064	Sediment Pulp	43.5	45.6	0.75	158.3	0.098	<20	1.62	0.031	0.25	0.2	5.9	0.26	0.15	269	0.5	0.04	5.6	1.42	<0.1	0.09
013J771065	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771067	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771068	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771069	Sediment Pulp	60.5	8.7	0.07	49.3	0.026	<20	0.58	0.012	0.03	3.6	1.4	0.06	0.32	112	0.7	<0.02	1.6	0.32	<0.1	<0.02
013J771070	Sediment Pulp	72.8	11.5	0.10	50.4	0.067	<20	0.49	0.013	0.06	5.1	3.3	0.07	0.43	61	0.8	<0.02	1.7	0.55	<0.1	0.09
013J771071	Sediment Pulp	79.0	12.8	0.11	54.6	0.068	<20	0.53	0.011	0.06	4.1	3.3	0.09	0.18	42	0.5	<0.02	1.8	0.66	0.1	0.12
013J771072	Sediment Pulp	42.8	13.5	0.21	61.7	0.090	<20	0.68	0.029	0.10	1.6	2.8	0.09	0.09	55	0.6	<0.02	2.6	0.58	0.1	0.06
013J771073	Sediment Pulp	19.0	5.4	0.11	20.2	0.062	<20	0.34	0.012	0.04	0.8	1.2	0.03	<0.02	25	<0.1	<0.02	1.6	0.29	<0.1	0.04
013J771074	Sediment Pulp	43.1	9.5	0.15	44.4	0.077	<20	0.65	0.023	0.05	0.9	2.0	0.06	0.07	64	0.5	<0.02	2.5	0.42	<0.1	0.03
013J771075	Sediment Pulp	40.5	5.8	0.05	60.0	0.026	<20	0.38	0.011	0.02	0.9	0.7	0.04	0.14	130	1.2	<0.02	1.4	0.22	<0.1	<0.02
013J771076	Sediment Pulp	62.7	7.4	0.06	47.4	0.024	<20	0.52	0.014	0.02	1.8	0.7	0.08	0.21	148	1.6	<0.02	1.7	0.25	<0.1	<0.02
013J771077	Sediment Pulp	96.5	12.7	0.15	67.7	0.032	<20	0.99	0.011	0.04	1.6	1.6	0.15	0.21	148	2.9	<0.02	2.1	0.39	<0.1	<0.02
013J771078	Sediment Pulp	50.4	5.2	0.06	55.3	0.018	<20	0.38	0.013	0.02	0.6	0.5	0.04	0.27	171	1.0	<0.02	1.0	0.22	<0.1	<0.02
013J771079	Sediment Pulp	104.3	7.7	0.04	39.1	0.021	<20	1.00	0.009	0.02	0.9	1.1	0.06	0.30	150	1.3	<0.02	1.7	0.19	<0.1	<0.02
013J771080	Sediment Pulp	46.5	4.1	0.04	47.0	0.017	<20	0.32	0.010	0.02	0.3	0.9	0.05	0.18	172	0.8	<0.02	1.2	0.22	<0.1	<0.02
013J771081	Sediment Pulp	46.7	4.1	0.04	46.9	0.018	<20	0.32	0.012	0.02	0.4	0.8	0.05	0.18	156	0.8	<0.02	1.2	0.23	<0.1	<0.02
013J771082	Sediment Pulp	46.0	8.5	0.19	42.8	0.067	<20	0.66	0.027	0.07	0.5	2.4	0.09	0.12	80	0.8	<0.02	2.4	0.52	<0.1	<0.02
013J771083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771085	Sediment Pulp	36.1	4.3	0.10	20.3	0.051	<20	0.30	0.015	0.04	0.6	1.3	0.05	0.10	45	0.2	<0.02	1.2	0.24	<0.1	<0.02
013J771086	Sediment Pulp	239.5	13.4	0.10	33.5	0.037	<20	1.49	0.009	0.04	3.3	4.6	0.08	0.08	126	2.1	<0.02	2.6	0.44	0.3	<0.02
013J771087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771088	Sediment Pulp	106.8	8.6	0.13	43.0	0.033	<20	0.74	0.016	0.04	0.6	1.6	0.08	0.25	118	1.5	<0.02	2.3	0.37	0.1	<0.02
013J771089	Sediment Pulp	34.3	5.3	0.16	33.4	0.048	<20	0.39	0.015	0.06	1.1	1.8	0.05	0.02	102	0.2	<0.02	1.5	0.54	<0.1	<0.02
013J771090	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
013J771061	Sediment Pulp	1.28	3.0	0.3	<0.05	0.4	24.69	96.0	<0.02	1	0.3	2.3	16.35	56.80	8.13	1.43	6.25	0.91	4.22	0.87	
013J771062	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771064	Sediment Pulp	1.93	24.0	1.1	<0.05	5.5	19.42	79.0	0.05	1	1.0	19.3	11.08	38.94	6.71	1.12	4.90	0.68	3.48	0.70	
013J771065	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771067	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771068	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771069	Sediment Pulp	1.14	2.8	0.3	<0.05	0.4	22.95	85.7	<0.02	1	0.3	1.6	14.63	49.00	7.92	1.21	5.65	0.83	3.86	0.87	
013J771070	Sediment Pulp	3.34	5.2	0.5	<0.05	3.2	28.96	110.9	0.02	2	0.3	1.6	17.43	64.90	10.25	1.64	7.19	1.10	5.11	1.08	
013J771071	Sediment Pulp	3.40	6.0	0.5	<0.05	4.3	31.21	118.8	<0.02	<1	0.3	2.8	19.49	70.31	11.69	1.80	8.04	1.21	5.74	1.16	
013J771072	Sediment Pulp	3.74	7.7	0.7	<0.05	2.5	18.80	74.4	0.02	<1	<0.1	5.0	10.20	34.43	5.57	0.97	3.86	0.62	3.23	0.67	
013J771073	Sediment Pulp	2.74	3.1	0.5	<0.05	1.3	8.67	34.2	<0.02	<1	0.2	3.0	4.47	15.41	2.51	0.42	1.88	0.31	1.59	0.33	
013J771074	Sediment Pulp	2.94	3.6	0.5	<0.05	1.4	18.03	73.2	<0.02	<1	0.4	3.9	10.43	35.93	5.61	0.89	3.79	0.63	3.19	0.65	
013J771075	Sediment Pulp	1.09	1.4	0.3	<0.05	0.4	15.43	57.6	<0.02	1	<0.1	1.1	9.26	32.46	4.99	0.79	3.45	0.54	2.89	0.61	
013J771076	Sediment Pulp	1.37	1.7	0.3	<0.05	0.4	27.67	89.8	<0.02	3	0.9	1.2	15.71	56.05	9.52	1.65	6.93	1.05	5.43	1.14	
013J771077	Sediment Pulp	1.57	3.0	0.2	<0.05	0.5	47.76	155.6	<0.02	<1	0.9	3.3	25.57	91.82	15.10	2.15	11.51	1.66	9.08	1.87	
013J771078	Sediment Pulp	0.75	1.8	0.2	<0.05	0.2	14.31	75.9	<0.02	<1	0.3	1.3	11.24	39.14	5.62	0.97	3.97	0.58	2.74	0.59	
013J771079	Sediment Pulp	1.09	1.5	0.2	<0.05	0.2	31.06	140.7	<0.02	<1	0.2	1.2	23.61	84.09	12.35	2.22	9.38	1.22	5.91	1.24	
013J771080	Sediment Pulp	0.78	1.5	0.2	<0.05	0.2	13.13	67.3	<0.02	2	0.2	0.7	10.11	33.58	4.78	0.90	3.37	0.51	2.32	0.50	
013J771081	Sediment Pulp	0.76	1.5	0.2	<0.05	0.2	12.96	68.6	<0.02	3	0.6	0.7	10.30	36.80	4.93	0.99	3.60	0.53	2.21	0.46	
013J771082	Sediment Pulp	2.54	5.4	0.4	<0.05	1.0	15.57	80.0	<0.02	<1	0.3	4.0	10.86	37.44	5.62	0.99	3.56	0.58	2.80	0.59	
013J771083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771085	Sediment Pulp	2.30	2.9	0.4	<0.05	0.8	12.06	60.0	<0.02	1	0.3	2.3	8.03	28.24	4.41	0.84	2.93	0.48	2.38	0.45	
013J771086	Sediment Pulp	0.98	4.0	0.4	<0.05	0.3	71.70	405.1	0.04	<1	1.1	1.8	61.06	218.61	33.12	5.37	20.87	3.01	13.47	2.82	
013J771087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771088	Sediment Pulp	1.58	3.5	0.6	<0.05	0.4	28.74	176.2	0.02	3	0.3	3.2	28.23	100.72	14.62	2.62	8.97	1.32	6.07	1.11	
013J771089	Sediment Pulp	1.40	5.2	0.3	<0.05	0.8	9.18	63.4	<0.02	<1	0.7	3.2	8.70	28.62	4.30	0.87	2.67	0.43	1.75	0.37	
013J771090	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	



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Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J771061	Sediment Pulp	0.32	2.05	0.37	<10	2	
013J771062	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771064	Sediment Pulp	0.29	1.61	0.27	<10	<2	
013J771065	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771067	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771068	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771069	Sediment Pulp	0.32	1.83	0.30	<10	<2	
013J771070	Sediment Pulp	0.43	2.45	0.41	<10	2	
013J771071	Sediment Pulp	0.44	2.74	0.49	<10	<2	
013J771072	Sediment Pulp	0.28	1.67	0.23	<10	<2	
013J771073	Sediment Pulp	0.14	0.82	0.14	<10	<2	
013J771074	Sediment Pulp	0.27	1.62	0.23	<10	<2	
013J771075	Sediment Pulp	0.21	1.18	0.18	<10	<2	
013J771076	Sediment Pulp	0.41	2.21	0.38	<10	<2	
013J771077	Sediment Pulp	0.71	3.79	0.62	<10	3	
013J771078	Sediment Pulp	0.18	1.06	0.17	<10	<2	
013J771079	Sediment Pulp	0.46	2.29	0.38	<10	<2	
013J771080	Sediment Pulp	0.18	0.92	0.15	<10	<2	
013J771081	Sediment Pulp	0.18	0.96	0.13	<10	<2	
013J771082	Sediment Pulp	0.21	1.30	0.22	<10	<2	
013J771083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771085	Sediment Pulp	0.16	1.03	0.18	<10	<2	
013J771086	Sediment Pulp	1.03	5.57	1.03	<10	<2	
013J771087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771088	Sediment Pulp	0.45	2.51	0.38	<10	<2	
013J771089	Sediment Pulp	0.12	0.74	0.13	<10	<2	
013J771090	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771091	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771092	Sediment Pulp	4.87	19.34	1.82	43.5	88	5.6	6.6	155	1.98	0.4	5.1	0.6	2.5	26.0	0.07	0.07	<0.02	35	0.31	0.090
013J771093	Sediment Pulp	9.76	40.70	83.73	305.9	596	12.0	7.2	406	1.74	37.4	10.1	3.2	1.5	73.3	1.28	0.66	1.12	19	6.36	0.066
013J771094	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771095	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771096	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771097	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771098	Sediment Pulp	0.46	25.55	3.72	26.1	105	2.8	0.9	44	0.55	0.7	1.9	1.3	0.6	16.2	0.10	0.06	0.03	17	0.14	0.045
013J771099	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771100	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771101	Sediment Pulp	0.86	18.84	6.68	74.2	73	19.2	11.7	378	2.70	0.8	1.4	0.9	6.4	41.6	0.10	0.04	0.09	62	0.48	0.116
013J771102	Sediment Pulp	17.77	123.10	1.75	53.6	93	7.3	9.9	153	2.36	0.4	28.3	2.6	9.9	26.4	0.18	0.06	0.04	51	0.34	0.115
013J771103	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771104	Sediment Pulp	0.88	18.65	6.25	77.7	50	18.0	10.8	365	2.62	1.0	1.4	1.8	6.5	40.1	0.07	0.04	0.07	60	0.47	0.110
013J771105	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771106	Sediment Pulp	0.82	31.89	25.44	129.1	2511	45.0	27.0	1182	3.10	25.9	3.8	3.2	7.2	28.1	0.53	0.68	3.35	46	0.57	0.089
013J771107	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771108	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771109	Sediment Pulp	3.94	12.58	4.10	94.9	106	4.9	3.8	208	1.84	0.3	2.1	1.4	0.7	30.0	0.40	0.04	<0.02	51	0.22	0.127
013J771110	Sediment Pulp	0.39	7.19	3.02	27.0	40	4.1	1.8	79	0.62	0.4	0.7	1.0	0.5	22.8	0.06	0.04	<0.02	22	0.22	0.040
013J771111	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771112	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771113	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771114	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771115	Sediment Pulp	3.89	44.21	1.78	33.3	231	4.9	2.2	36	0.53	<0.1	8.6	0.7	0.3	32.3	0.17	0.07	0.06	20	0.19	0.069
013J771116	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771117	Sediment Pulp	1.43	28.65	2.23	30.2	189	7.3	2.8	123	1.09	<0.1	2.8	2.2	0.6	28.9	0.12	0.04	<0.02	49	0.23	0.115
013J771118	Sediment Pulp	1.87	10.89	2.37	24.1	50	2.8	4.4	235	1.83	0.5	2.1	2.2	1.6	14.5	0.01	0.03	<0.02	34	0.18	0.045
013J771119	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771120	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	



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Report Date: April 13, 2022

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Part: 2 of 4

CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013J771091	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771092	Sediment Pulp			77.4	8.7	0.18	40.2	0.065	<20	0.70	0.029	0.08	0.4	2.5	0.10	0.14	118	0.7	<0.02	2.4	0.48
013J771093	Sediment Pulp			11.5	11.9	0.55	96.6	0.034	<20	0.40	0.023	0.04	0.5	2.3	0.21	1.47	108	0.7	<0.02	2.0	0.50
013J771094	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771095	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771096	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771097	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771098	Sediment Pulp			74.5	7.3	0.06	54.8	0.028	<20	0.53	0.012	0.03	<0.1	1.5	0.03	0.14	176	0.5	<0.02	2.0	0.28
013J771099	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771100	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771101	Sediment Pulp			46.1	31.6	0.79	202.8	0.171	<20	1.81	0.056	0.38	0.1	5.9	0.20	0.06	87	<0.1	<0.02	7.5	2.18
013J771102	Sediment Pulp			131.9	13.3	0.19	74.2	0.053	<20	0.79	0.027	0.09	1.2	3.5	0.28	0.16	185	0.7	<0.02	1.8	0.51
013J771103	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771104	Sediment Pulp			42.7	31.5	0.76	187.8	0.162	<20	1.75	0.052	0.37	0.1	5.3	0.18	0.05	85	<0.1	<0.02	7.3	2.00
013J771105	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771106	Sediment Pulp			43.5	46.2	0.76	159.9	0.091	<20	1.55	0.028	0.25	0.2	5.5	0.26	0.15	233	0.4	0.04	5.6	1.30
013J771107	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771108	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771109	Sediment Pulp			72.7	11.1	0.07	150.7	0.035	<20	1.16	0.012	0.03	0.1	2.1	0.07	0.16	155	0.8	<0.02	2.6	0.25
013J771110	Sediment Pulp			13.8	7.7	0.16	119.8	0.053	<20	0.57	0.026	0.05	0.1	1.2	0.03	0.11	92	<0.1	<0.02	2.5	0.34
013J771111	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771112	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771113	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771114	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771115	Sediment Pulp			135.3	5.1	0.05	20.7	0.012	<20	0.66	0.009	0.02	0.1	0.6	0.06	0.35	200	1.3	<0.02	1.2	0.21
013J771116	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771117	Sediment Pulp			62.5	12.6	0.14	74.9	0.041	<20	0.74	0.015	0.06	0.4	1.5	0.07	0.13	139	0.8	<0.02	3.0	0.47
013J771118	Sediment Pulp			29.5	6.3	0.19	29.1	0.067	<20	0.53	0.025	0.07	0.2	1.6	0.04	0.02	44	<0.1	<0.02	2.4	0.49
013J771119	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771120	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771091	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771092	Sediment Pulp	2.38	5.2	0.5	<0.05	0.7	23.66	118.8	<0.02	2	0.5	3.3	19.12	69.18	9.89	2.12	7.18	0.98	4.10	0.89	2.12
013J771093	Sediment Pulp	0.63	3.4	3.5	<0.05	1.1	10.48	18.2	0.55	19	0.7	4.1	3.12	12.56	2.76	0.54	2.01	0.32	1.62	0.39	0.92
013J771094	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771095	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771096	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771097	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771098	Sediment Pulp	1.03	2.1	0.5	<0.05	0.3	9.51	123.5	0.03	<1	0.5	1.4	14.51	45.48	5.28	0.94	2.96	0.48	2.15	0.41	0.88
013J771099	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771100	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771101	Sediment Pulp	3.50	31.9	1.1	<0.05	3.7	15.41	88.1	0.04	<1	0.7	17.9	11.11	36.80	5.92	1.22	4.50	0.69	3.09	0.63	1.55
013J771102	Sediment Pulp	1.82	6.8	0.3	<0.05	0.9	44.20	274.6	<0.02	7	0.3	3.7	37.44	136.12	20.96	4.29	15.19	1.99	9.42	1.76	4.16
013J771103	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771104	Sediment Pulp	3.41	30.5	0.8	<0.05	4.6	15.01	81.4	0.03	<1	0.5	15.3	10.21	35.29	5.65	1.02	3.73	0.63	3.16	0.63	1.50
013J771105	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771106	Sediment Pulp	2.02	22.6	1.1	<0.05	5.3	17.72	75.4	0.05	<1	0.6	21.0	10.85	38.74	5.97	1.09	4.73	0.71	3.35	0.78	1.87
013J771107	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771108	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771109	Sediment Pulp	1.19	1.9	0.3	<0.05	0.7	21.43	122.0	0.03	<1	0.1	1.2	18.59	64.40	9.28	1.81	6.18	0.96	4.50	0.97	2.49
013J771110	Sediment Pulp	1.21	2.9	0.4	<0.05	0.7	6.27	26.7	<0.02	<1	0.1	3.3	3.50	11.93	2.21	0.47	1.66	0.26	1.29	0.30	0.74
013J771111	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771112	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771113	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771114	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771115	Sediment Pulp	0.61	2.0	0.3	<0.05	0.2	35.17	154.6	<0.02	<1	0.5	1.3	28.72	102.86	13.46	3.02	10.00	1.40	6.26	1.18	2.58
013J771116	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771117	Sediment Pulp	1.35	4.2	0.3	<0.05	0.3	16.52	102.9	<0.02	1	0.2	3.0	15.07	51.23	7.32	1.55	4.83	0.68	3.29	0.66	1.61
013J771118	Sediment Pulp	1.41	5.1	0.5	<0.05	0.4	9.11	50.3	<0.02	<1	<0.1	3.2	7.04	24.11	3.71	0.72	2.43	0.38	1.81	0.39	0.92
013J771119	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771120	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013J771091	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771092	Sediment Pulp	0.30	1.77	0.30	<10
013J771093	Sediment Pulp	0.14	0.80	0.15	<10
013J771094	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771095	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771096	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771097	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771098	Sediment Pulp	0.13	0.73	0.12	<10
013J771099	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771100	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771101	Sediment Pulp	0.23	1.31	0.20	<10
013J771102	Sediment Pulp	0.56	3.28	0.53	<10
013J771103	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771104	Sediment Pulp	0.21	1.31	0.20	<10
013J771105	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771106	Sediment Pulp	0.29	1.62	0.24	<10
013J771107	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771108	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771109	Sediment Pulp	0.35	2.07	0.33	<10
013J771110	Sediment Pulp	0.11	0.48	0.09	<10
013J771111	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771112	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771113	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771114	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771115	Sediment Pulp	0.35	1.76	0.25	<10
013J771116	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771117	Sediment Pulp	0.22	1.25	0.19	<10
013J771118	Sediment Pulp	0.12	0.70	0.13	<10
013J771119	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771120	Sediment Pulp	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001	
013J771121	Sediment Pulp	4.91	15.40	4.10	25.2	110	5.3	1.3	55	0.66	0.2	7.8	0.9	1.1	23.2	0.10	<0.02	20	0.19	0.038	
013J771122	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771123	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771124	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771125	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771126	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771127	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771128	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771129	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771130	Sediment Pulp	3.15	16.16	1.54	59.0	90	5.3	4.1	91	1.34	0.5	2.9	1.6	2.4	23.4	0.14	0.05	<0.02	34	0.29	0.049
013J771131	Sediment Pulp	4.98	14.74	4.10	24.4	114	5.2	1.4	54	0.65	0.3	7.7	0.6	1.1	22.9	0.08	0.08	<0.02	20	0.19	0.039
013J771132	Sediment Pulp	7.32	40.72	3.32	70.4	109	9.1	15.4	303	5.23	1.7	8.8	1.5	7.9	30.2	0.19	0.07	<0.02	49	0.33	0.120
013J771133	Sediment Pulp	4.36	18.14	1.72	39.0	176	6.9	2.4	90	1.04	0.6	6.3	1.3	0.4	19.4	0.14	0.04	<0.02	32	0.20	0.098
013J771134	Sediment Pulp	31.82	57.63	2.44	153.1	224	15.8	22.6	443	9.65	1.1	17.6	1.3	7.6	25.1	0.39	0.11	<0.02	78	0.25	0.274
013J771135	Sediment Pulp	2.70	19.01	2.22	40.4	83	8.3	2.4	77	0.84	0.4	4.3	0.8	1.7	24.7	0.11	0.04	<0.02	34	0.29	0.045
013J771136	Sediment Pulp	2.61	19.65	2.41	20.8	35	5.9	7.0	128	1.22	1.3	3.1	<0.2	5.7	18.3	0.04	0.04	<0.02	18	0.33	0.104
013J771137	Sediment Pulp	2.39	10.03	4.67	47.5	65	8.5	6.5	317	2.29	1.3	3.3	1.0	8.5	26.6	0.08	0.06	0.04	34	0.41	0.125
013J771138	Sediment Pulp	2.91	10.98	4.97	49.4	66	8.7	7.5	321	2.44	1.4	3.6	0.7	8.9	27.2	0.09	0.06	0.05	34	0.40	0.142
013J771139	Sediment Pulp	8.93	41.16	81.42	293.8	707	12.5	7.7	422	1.83	35.3	9.8	3.8	1.9	73.5	1.41	0.57	1.05	21	6.59	0.069
013J771140	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771141	Sediment Pulp	3.34	16.44	1.56	61.1	88	5.5	3.9	97	1.34	0.4	3.0	1.3	2.7	24.2	0.13	0.05	<0.02	33	0.28	0.048
013J771142	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771143	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771144	Sediment Pulp	2.42	10.61	2.11	35.0	35	5.5	4.9	97	1.47	0.2	1.7	1.8	2.6	23.8	0.11	0.04	<0.02	28	0.35	0.065
013J771145	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771146	Sediment Pulp	1.77	13.81	4.61	41.3	118	6.8	2.8	88	1.18	0.1	2.2	1.4	1.7	22.7	0.12	0.07	0.04	38	0.22	0.043
013J771147	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771148	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771149	Sediment Pulp	0.57	17.32	2.94	19.8	136	5.5	0.9	25	0.50	<0.1	0.9	1.1	0.8	19.1	0.09	0.04	0.11	18	0.14	0.039
013J771150	Sediment Pulp	3.89	35.42	3.52	86.2	115	10.8	13.0	113	2.85	0.2	2.6	<0.2	6.7	22.9	0.17	0.04	0.03	64	0.22	0.038



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02	
013J771121	Sediment Pulp	73.7	6.4	0.09	48.0	0.027	<20	0.47	0.009	0.03	0.2	1.3	0.04	0.27	168	0.8	<0.02	1.8	0.35	<0.1	<0.02
013J771122	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771123	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771124	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771125	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771126	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771127	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771128	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771129	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771130	Sediment Pulp	47.5	9.5	0.15	38.9	0.056	<20	0.62	0.026	0.07	0.7	2.0	0.11	0.14	105	0.2	<0.02	2.2	0.47	<0.1	0.03
013J771131	Sediment Pulp	74.0	6.1	0.09	49.7	0.027	<20	0.48	0.010	0.03	0.3	1.2	0.04	0.28	153	0.6	<0.02	1.9	0.36	<0.1	<0.02
013J771132	Sediment Pulp	98.1	15.8	0.21	61.9	0.083	<20	0.93	0.041	0.13	0.8	4.1	0.22	0.08	103	0.6	<0.02	2.7	0.85	0.1	0.02
013J771133	Sediment Pulp	62.6	9.0	0.08	52.9	0.025	<20	0.69	0.010	0.03	0.7	0.9	0.08	0.18	171	0.9	<0.02	2.1	0.33	<0.1	<0.02
013J771134	Sediment Pulp	148.6	24.1	0.16	68.4	0.055	<20	1.65	0.015	0.05	2.3	5.8	0.46	0.17	155	2.4	<0.02	2.8	0.85	0.2	<0.02
013J771135	Sediment Pulp	84.9	13.0	0.13	50.7	0.048	<20	0.73	0.017	0.04	0.6	2.1	0.07	0.17	110	0.7	<0.02	2.2	0.40	<0.1	0.02
013J771136	Sediment Pulp	39.0	8.1	0.18	35.0	0.058	<20	0.40	0.025	0.08	0.4	1.9	0.06	0.08	32	<0.1	<0.02	1.7	0.42	<0.1	0.04
013J771137	Sediment Pulp	46.1	15.3	0.38	89.1	0.110	<20	0.89	0.027	0.23	0.5	3.1	0.14	0.04	91	<0.1	<0.02	3.1	1.35	<0.1	0.05
013J771138	Sediment Pulp	50.4	15.9	0.38	96.4	0.114	<20	0.89	0.024	0.23	0.5	3.0	0.14	0.04	78	<0.1	<0.02	3.1	1.45	<0.1	0.09
013J771139	Sediment Pulp	11.7	12.4	0.57	98.3	0.039	<20	0.43	0.026	0.05	0.6	2.6	0.22	1.52	111	1.2	0.02	1.9	0.52	0.1	0.03
013J771140	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771141	Sediment Pulp	49.7	9.7	0.16	41.0	0.058	<20	0.61	0.026	0.07	0.7	2.1	0.11	0.13	93	0.4	<0.02	2.3	0.49	<0.1	0.02
013J771142	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771143	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771144	Sediment Pulp	46.6	9.8	0.16	39.7	0.060	<20	0.62	0.027	0.08	1.9	2.2	0.07	0.57	125	0.2	<0.02	1.9	0.53	<0.1	0.03
013J771145	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771146	Sediment Pulp	56.4	13.4	0.17	51.8	0.072	<20	0.80	0.016	0.07	0.2	1.9	0.06	0.19	127	0.6	<0.02	3.5	0.80	<0.1	0.03
013J771147	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771148	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771149	Sediment Pulp	51.4	6.5	0.05	44.2	0.030	<20	0.46	0.008	0.02	<0.1	1.2	0.03	0.18	142	0.5	<0.02	1.7	0.21	<0.1	<0.02
013J771150	Sediment Pulp	109.8	16.3	0.13	55.5	0.058	<20	1.19	0.009	0.04	0.3	2.9	0.11	0.15	188	0.6	<0.02	3.4	0.43	0.1	<0.02



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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771121	Sediment Pulp	1.38	2.5	0.3	<0.05	0.5	22.55	112.0	<0.02	2	0.3	2.0	17.66	64.47	9.68	1.21	6.66	0.99	4.62	0.95
013J771122	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771123	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771124	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771125	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771126	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771127	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771128	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771129	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771130	Sediment Pulp	1.99	4.6	0.3	<0.05	1.0	14.82	81.9	<0.02	1	0.5	3.1	11.18	39.37	5.79	1.09	3.93	0.57	2.89	0.57
013J771131	Sediment Pulp	1.32	2.6	0.3	<0.05	0.4	22.24	115.2	<0.02	<1	<0.1	1.8	17.11	61.65	9.08	1.07	5.87	0.96	4.47	0.89
013J771132	Sediment Pulp	2.99	10.6	0.6	<0.05	1.7	34.91	184.4	0.02	2	0.9	5.7	24.35	83.14	13.03	2.08	8.39	1.32	6.33	1.32
013J771133	Sediment Pulp	1.09	2.3	0.3	<0.05	0.3	22.25	96.0	<0.02	<1	0.8	1.9	15.05	52.32	7.95	1.37	5.29	0.81	3.93	0.83
013J771134	Sediment Pulp	2.50	5.6	0.4	<0.05	0.9	64.92	296.3	<0.02	4	1.8	3.3	41.48	155.61	24.48	3.94	17.96	2.46	12.64	2.57
013J771135	Sediment Pulp	2.48	3.3	0.4	<0.05	1.3	27.43	140.8	<0.02	2	0.2	3.3	21.71	75.90	11.19	1.90	7.84	1.12	5.52	1.04
013J771136	Sediment Pulp	2.24	6.3	0.5	<0.05	1.4	13.34	68.9	<0.02	<1	0.2	3.2	9.25	30.98	4.84	0.80	3.19	0.53	2.53	0.51
013J771137	Sediment Pulp	3.10	18.0	0.6	<0.05	3.0	18.03	87.1	<0.02	<1	0.4	9.4	10.42	36.95	5.85	0.96	4.30	0.71	3.28	0.69
013J771138	Sediment Pulp	3.06	18.8	0.6	<0.05	3.1	18.97	91.8	0.02	1	0.5	10.4	11.39	38.28	5.82	0.99	3.79	0.68	3.62	0.75
013J771139	Sediment Pulp	0.67	3.6	3.1	<0.05	1.4	10.89	18.3	0.52	22	0.4	4.0	3.30	13.30	2.58	0.54	2.05	0.34	1.76	0.44
013J771140	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771141	Sediment Pulp	2.24	4.9	0.4	<0.05	1.2	15.53	85.0	<0.02	2	0.2	3.6	11.01	39.64	6.17	1.00	4.24	0.56	3.08	0.59
013J771142	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771143	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771144	Sediment Pulp	2.01	6.1	0.4	<0.05	1.0	14.24	86.8	<0.02	4	0.3	4.5	11.32	38.64	5.71	0.98	3.24	0.58	2.47	0.58
013J771145	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771146	Sediment Pulp	2.81	5.6	0.6	<0.05	1.2	17.56	100.1	0.02	1	0.3	5.9	13.13	46.50	7.20	1.30	4.68	0.71	3.48	0.65
013J771147	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771148	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771149	Sediment Pulp	1.13	2.0	0.7	<0.05	0.3	7.78	84.3	<0.02	2	0.2	1.3	10.86	37.18	5.08	0.89	2.98	0.44	1.82	0.31
013J771150	Sediment Pulp	2.06	3.2	0.7	<0.05	0.9	21.09	199.7	<0.02	3	0.4	3.4	24.69	88.15	12.48	1.84	6.70	0.98	3.63	0.86



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Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J771121	Sediment Pulp		0.34	1.82	0.28	<10	<2
013J771122	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771123	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771124	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771125	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771126	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771127	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771128	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771129	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771130	Sediment Pulp		0.25	1.18	0.19	<10	<2
013J771131	Sediment Pulp		0.31	1.87	0.27	<10	<2
013J771132	Sediment Pulp		0.57	3.09	0.51	<10	<2
013J771133	Sediment Pulp		0.29	1.82	0.26	<10	<2
013J771134	Sediment Pulp		1.04	5.98	0.95	<10	<2
013J771135	Sediment Pulp		0.40	2.43	0.38	<10	<2
013J771136	Sediment Pulp		0.21	1.25	0.18	<10	<2
013J771137	Sediment Pulp		0.26	1.55	0.25	<10	4
013J771138	Sediment Pulp		0.30	1.69	0.25	<10	<2
013J771139	Sediment Pulp		0.18	0.93	0.14	<10	<2
013J771140	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771141	Sediment Pulp		0.24	1.25	0.19	<10	<2
013J771142	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771143	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771144	Sediment Pulp		0.22	1.27	0.19	<10	<2
013J771145	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771146	Sediment Pulp		0.25	1.39	0.20	<10	3
013J771147	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771148	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771149	Sediment Pulp		0.10	0.55	0.08	<10	<2
013J771150	Sediment Pulp		0.25	1.51	0.25	<10	<2



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771151 Sediment Pulp	0.72	9.99	2.89	27.9	34	4.5	2.4	108	0.84	0.7	1.0	0.8	3.9	24.8	0.03	0.04	<0.02	25	0.34	0.079
013J771152 Sediment Pulp	4.52	13.16	1.58	18.8	94	3.7	4.0	36	2.59	<0.1	1.4	1.3	1.9	57.1	0.09	0.02	<0.02	17	0.29	0.024
013J771153 Sediment Pulp	1.61	11.18	4.59	23.3	63	3.6	2.0	86	0.83	<0.1	1.1	2.2	1.0	24.8	0.11	0.04	0.03	30	0.22	0.054
013J771154 Sediment Pulp	0.79	32.23	25.35	128.6	2754	44.4	26.5	1203	3.03	24.6	4.2	2.2	8.3	29.7	0.57	0.67	3.52	48	0.60	0.090
013J771155 Sediment Pulp	1.19	10.65	2.85	25.8	54	3.8	2.0	89	0.72	0.4	1.1	0.6	1.6	25.3	0.06	0.04	0.03	24	0.29	0.054
013J771156 Sediment Pulp	0.15	3.17	1.62	12.6	11	2.1	1.6	70	0.81	0.6	0.6	0.8	2.9	14.4	0.03	<0.02	<0.02	16	0.26	0.077
013J771157 Sediment Pulp	0.54	20.90	2.59	26.5	39	4.8	3.4	193	0.88	1.0	1.7	0.7	5.4	22.9	0.06	0.03	<0.02	21	0.38	0.106
013J771158 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771159 Sediment Pulp	3.78	15.30	1.92	78.1	136	6.5	21.4	106	3.00	0.1	1.1	1.1	1.2	46.2	0.25	0.04	<0.02	44	0.35	0.078
013J771160 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771161 Sediment Pulp	0.57	21.38	2.61	26.7	39	4.7	3.6	186	0.85	0.7	1.7	0.3	5.6	21.7	0.05	0.04	0.06	20	0.37	0.102
013J771162 Sediment Pulp	0.38	15.94	2.47	51.2	85	6.9	4.0	40	0.59	0.2	1.2	1.0	1.7	24.5	0.13	0.04	0.04	20	0.22	0.035
013J771163 Sediment Pulp	0.43	7.41	3.81	28.7	43	4.9	2.6	72	0.88	0.3	0.7	1.7	1.5	21.6	0.09	0.03	<0.02	24	0.28	0.051
013J771164 Sediment Pulp	0.32	10.76	2.15	15.0	90	3.8	0.6	15	0.22	<0.1	0.6	0.9	0.2	14.1	0.10	<0.02	<0.02	10	0.13	0.033
013J771165 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771166 Sediment Pulp	0.57	20.65	2.72	15.8	72	3.8	1.7	51	0.40	0.1	1.1	2.6	0.2	18.8	0.10	0.02	0.02	31	0.13	0.039
013J771167 Sediment Pulp	0.32	18.27	4.52	16.4	42	4.6	1.2	31	0.23	<0.1	1.3	1.8	0.2	27.3	0.10	0.03	0.04	16	0.12	0.027
013J771168 Sediment Pulp	0.71	17.35	6.05	65.3	108	6.6	5.3	209	2.64	<0.1	1.0	0.7	0.7	19.6	0.42	0.04	<0.02	60	0.17	0.110
013J771169 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771170 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771171 Sediment Pulp	1.03	12.30	1.30	59.2	75	5.6	2.7	52	0.85	<0.1	0.7	0.9	1.0	16.3	0.18	0.02	<0.02	32	0.24	0.055
013J771172 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771173 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771174 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771175 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771176 Sediment Pulp	0.26	3.53	1.69	21.4	11	3.0	2.3	72	0.78	0.7	0.5	0.6	2.2	15.8	0.04	<0.02	<0.02	19	0.30	0.089
013J771177 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771178 Sediment Pulp	0.93	7.12	2.45	19.9	21	4.1	4.5	73	0.68	<0.1	0.6	1.6	1.0	16.2	0.07	0.03	<0.02	21	0.23	0.050
013J771179 Sediment Pulp	8.84	38.93	90.13	292.8	595	11.7	7.5	423	1.72	33.7	9.8	3.2	1.5	72.6	1.38	0.60	1.02	20	6.00	0.068
013J771180 Sediment Pulp	1.65	8.90	2.34	27.0	40	3.7	3.9	117	0.85	0.6	1.0	5.4	2.1	20.2	0.07	0.04	<0.02	30	0.29	0.077



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02	
013J771151	Sediment Pulp	32.0	8.9	0.19	48.6	0.075	<20	0.52	0.024	0.10	0.3	2.0	0.04	0.05	70	0.1	<0.02	2.4	0.57	<0.1	0.04
013J771152	Sediment Pulp	34.9	4.2	0.06	52.5	0.028	<20	0.34	0.014	0.03	0.4	1.2	0.09	2.58	166	0.3	<0.02	1.6	0.29	<0.1	<0.02
013J771153	Sediment Pulp	29.0	7.0	0.13	33.3	0.053	<20	0.44	0.021	0.05	0.5	1.2	0.04	0.14	100	0.4	<0.02	2.3	0.54	<0.1	0.03
013J771154	Sediment Pulp	45.3	47.3	0.78	162.4	0.098	<20	1.61	0.031	0.25	0.2	5.7	0.28	0.15	269	0.4	0.03	5.8	1.36	<0.1	0.10
013J771155	Sediment Pulp	28.4	7.0	0.15	44.4	0.056	<20	0.48	0.025	0.07	0.3	1.4	0.05	0.08	98	0.1	<0.02	2.1	0.47	<0.1	0.02
013J771156	Sediment Pulp	21.2	5.0	0.12	21.6	0.057	<20	0.29	0.009	0.03	0.1	1.2	0.02	0.03	35	<0.1	<0.02	1.5	0.23	<0.1	0.03
013J771157	Sediment Pulp	37.0	8.6	0.19	41.3	0.072	<20	0.50	0.022	0.12	0.3	2.0	0.06	<0.02	13	<0.1	<0.02	2.0	0.58	<0.1	0.03
013J771158	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771159	Sediment Pulp	35.4	8.5	0.08	50.3	0.033	<20	0.87	0.011	0.02	0.8	1.3	0.22	1.94	195	0.1	<0.02	2.2	0.26	<0.1	<0.02
013J771160	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771161	Sediment Pulp	36.3	8.5	0.20	41.6	0.072	<20	0.48	0.021	0.11	0.2	2.1	0.07	<0.02	18	<0.1	<0.02	1.8	0.61	<0.1	0.03
013J771162	Sediment Pulp	54.7	8.2	0.08	43.2	0.026	<20	0.42	0.012	0.03	0.2	1.4	0.05	0.19	173	<0.1	<0.02	1.5	0.23	<0.1	<0.02
013J771163	Sediment Pulp	33.4	7.9	0.19	53.7	0.079	<20	0.56	0.024	0.06	<0.1	1.8	0.04	0.10	74	0.1	<0.02	2.6	0.32	<0.1	0.02
013J771164	Sediment Pulp	27.3	4.0	0.04	46.8	0.019	<20	0.33	0.008	0.02	<0.1	0.3	0.02	0.11	103	0.2	<0.02	1.4	0.16	<0.1	<0.02
013J771165	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771166	Sediment Pulp	26.9	9.2	0.04	149.7	0.017	<20	0.75	0.008	0.01	<0.1	0.6	0.03	0.13	122	<0.1	<0.02	1.9	0.09	<0.1	<0.02
013J771167	Sediment Pulp	22.6	7.2	0.06	715.9	0.013	<20	0.46	0.008	0.02	<0.1	0.6	0.02	0.18	147	0.4	<0.02	1.5	0.11	<0.1	<0.02
013J771168	Sediment Pulp	66.8	13.6	0.06	84.4	0.032	<20	1.75	0.008	0.02	<0.1	2.1	0.03	0.17	159	0.6	<0.02	3.4	0.15	0.1	<0.02
013J771169	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771170	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771171	Sediment Pulp	53.5	8.9	0.10	42.6	0.042	<20	0.48	0.017	0.04	<0.1	1.5	0.08	0.10	106	0.4	<0.02	1.7	0.19	<0.1	<0.02
013J771172	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771173	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771174	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771175	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771176	Sediment Pulp	21.8	5.6	0.17	39.9	0.060	<20	0.36	0.014	0.08	0.3	1.3	0.04	0.02	30	<0.1	<0.02	1.6	0.30	<0.1	0.02
013J771177	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771178	Sediment Pulp	23.2	6.6	0.14	27.1	0.062	<20	0.45	0.016	0.04	0.4	1.4	0.03	0.14	79	0.3	<0.02	2.2	0.32	<0.1	0.02
013J771179	Sediment Pulp	11.3	11.7	0.57	93.6	0.038	<20	0.43	0.029	0.05	0.6	2.5	0.22	1.50	118	0.8	<0.02	1.9	0.51	0.1	0.02
013J771180	Sediment Pulp	31.7	7.6	0.15	42.3	0.065	<20	0.47	0.017	0.07	0.3	1.4	0.08	0.06	61	0.4	<0.02	2.3	0.45	<0.1	0.02



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Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771151	Sediment Pulp	2.29	7.4	0.5	<0.05	1.5	8.98	56.7	<0.02	1	0.2	4.7	7.14	25.38	3.61	0.66	2.68	0.38	1.79	0.36	0.91
013J771152	Sediment Pulp	1.09	2.0	0.2	<0.05	0.4	7.25	58.8	<0.02	9	<0.1	2.0	8.04	28.11	3.90	0.77	2.29	0.33	1.55	0.28	0.71
013J771153	Sediment Pulp	1.80	4.0	0.5	<0.05	0.8	7.77	50.7	<0.02	1	<0.1	3.7	6.71	22.85	3.16	0.55	2.56	0.32	1.53	0.30	0.89
013J771154	Sediment Pulp	2.04	24.4	1.1	<0.05	5.5	19.48	78.1	0.04	3	<0.1	20.0	10.81	39.20	6.66	1.13	4.56	0.69	3.63	0.79	1.92
013J771155	Sediment Pulp	1.73	4.6	0.3	<0.05	0.8	7.34	50.9	<0.02	2	<0.1	3.1	6.42	22.41	3.13	0.59	2.28	0.32	1.51	0.26	0.73
013J771156	Sediment Pulp	1.97	2.3	0.4	<0.05	1.0	7.07	39.2	<0.02	<1	0.2	3.4	4.86	16.63	2.57	0.50	1.60	0.25	1.39	0.27	0.65
013J771157	Sediment Pulp	1.52	8.7	0.4	<0.05	1.5	11.83	69.2	<0.02	<1	0.3	5.3	8.42	28.93	4.71	0.84	3.17	0.50	2.50	0.47	1.10
013J771158	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771159	Sediment Pulp	1.19	1.9	0.2	<0.05	0.3	10.25	66.2	<0.02	1	<0.1	2.5	8.92	31.51	4.64	0.85	3.25	0.44	2.15	0.41	1.05
013J771160	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771161	Sediment Pulp	1.48	8.3	0.4	<0.05	1.5	11.16	70.4	<0.02	<1	0.6	5.4	8.48	27.30	4.65	0.79	3.00	0.48	2.52	0.48	1.16
013J771162	Sediment Pulp	1.00	2.3	0.3	<0.05	0.8	10.19	91.8	<0.02	3	<0.1	1.7	13.41	43.88	5.96	0.91	3.43	0.45	2.09	0.46	0.98
013J771163	Sediment Pulp	2.21	3.9	0.5	<0.05	0.7	7.03	54.8	<0.02	<1	<0.1	3.1	7.65	26.34	3.91	0.58	2.41	0.34	1.32	0.33	0.75
013J771164	Sediment Pulp	0.56	1.5	0.3	<0.05	0.2	4.55	40.8	<0.02	<1	<0.1	0.3	5.82	19.69	2.69	0.38	1.22	0.21	1.01	0.19	0.46
013J771165	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771166	Sediment Pulp	0.74	0.8	0.2	<0.05	0.2	10.70	56.0	<0.02	<1	1.5	0.9	7.44	27.44	5.03	0.99	3.65	0.52	2.71	0.54	1.29
013J771167	Sediment Pulp	0.52	1.2	0.2	<0.05	0.2	8.67	46.5	<0.02	<1	0.5	1.0	6.08	21.95	3.99	0.78	3.14	0.46	2.21	0.37	1.07
013J771168	Sediment Pulp	1.52	1.3	0.2	<0.05	0.2	20.39	128.8	<0.02	<1	1.2	0.9	16.93	59.85	8.58	1.71	5.98	0.89	4.27	0.90	2.26
013J771169	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771170	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771171	Sediment Pulp	1.42	2.5	0.3	<0.05	0.6	8.16	88.3	<0.02	3	0.2	1.8	11.51	37.40	5.36	0.81	3.00	0.44	1.61	0.33	0.70
013J771172	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771173	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771174	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771175	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771176	Sediment Pulp	1.61	4.9	0.4	<0.05	0.7	6.22	41.6	<0.02	<1	0.1	3.3	4.93	17.15	2.65	0.44	1.85	0.27	1.30	0.26	0.63
013J771177	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771178	Sediment Pulp	1.67	2.5	0.3	<0.05	0.7	5.56	43.6	<0.02	3	0.6	2.8	5.11	16.13	2.63	0.41	1.71	0.22	1.03	0.22	0.60
013J771179	Sediment Pulp	0.68	3.4	3.2	<0.05	1.2	10.32	18.1	0.49	20	0.1	4.3	2.95	11.94	2.56	0.53	2.12	0.36	1.92	0.38	0.97
013J771180	Sediment Pulp	1.79	4.9	0.3	<0.05	0.8	8.40	57.8	<0.02	2	<0.1	3.4	7.47	24.73	3.97	0.70	2.15	0.34	1.78	0.37	0.89



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Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013J771151	Sediment Pulp	0.11	0.79	0.11	<10	3	
013J771152	Sediment Pulp	0.09	0.49	0.07	<10	<2	
013J771153	Sediment Pulp	0.12	0.70	0.09	<10	<2	
013J771154	Sediment Pulp	0.27	1.70	0.23	<10	<2	
013J771155	Sediment Pulp	0.10	0.60	0.10	<10	3	
013J771156	Sediment Pulp	0.11	0.65	0.08	<10	<2	
013J771157	Sediment Pulp	0.18	0.97	0.13	<10	<2	
013J771158	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771159	Sediment Pulp	0.17	0.86	0.13	<10	<2	
013J771160	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771161	Sediment Pulp	0.19	0.94	0.15	<10	<2	
013J771162	Sediment Pulp	0.15	0.86	0.12	<10	<2	
013J771163	Sediment Pulp	0.11	0.60	0.08	<10	<2	
013J771164	Sediment Pulp	0.05	0.35	0.04	<10	3	
013J771165	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771166	Sediment Pulp	0.19	1.03	0.15	<10	3	
013J771167	Sediment Pulp	0.14	0.79	0.12	<10	<2	
013J771168	Sediment Pulp	0.33	1.89	0.26	<10	<2	
013J771169	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771170	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771171	Sediment Pulp	0.11	0.75	0.11	<10	<2	
013J771172	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771173	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771174	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771175	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771176	Sediment Pulp	0.08	0.56	0.08	<10	<2	
013J771177	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771178	Sediment Pulp	0.08	0.51	0.06	<10	<2	
013J771179	Sediment Pulp	0.15	0.85	0.15	<10	3	
013J771180	Sediment Pulp	0.15	0.75	0.12	<10	<2	



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771181	Sediment Pulp	1.00	31.84	24.04	123.6	2661	40.7	26.3	1177	2.95	22.8	4.2	3.2	7.7	29.2	0.54	0.70	3.37	46	0.58	0.086
013J771182	Sediment Pulp	1.63	8.22	2.26	26.3	45	3.6	3.8	119	0.86	0.7	1.1	3.1	2.6	20.8	0.09	0.04	<0.02	30	0.30	0.074
013J771183	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771184	Sediment Pulp	0.97	12.02	1.91	37.2	78	5.8	2.2	59	0.71	0.2	1.4	1.6	1.8	19.2	0.11	0.03	<0.02	22	0.24	0.029
013J771185	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771187	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771188	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771189	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771190	Sediment Pulp	1.63	4.50	1.78	13.7	17	1.9	4.8	334	2.32	0.7	1.0	1.1	3.3	13.5	0.03	0.03	<0.02	21	0.20	0.060
013J771191	Sediment Pulp	1.30	5.72	1.66	24.9	22	2.7	2.4	69	0.55	0.6	1.0	0.8	2.2	14.7	0.05	0.03	<0.02	14	0.23	0.060
013J771192	Sediment Pulp	3.31	10.93	2.50	20.7	52	3.9	2.4	80	0.85	0.8	1.7	3.7	1.8	22.6	0.08	0.05	<0.02	25	0.23	0.061
013J771193	Sediment Pulp	4.19	11.72	3.76	27.1	102	5.8	1.4	40	0.64	0.2	3.2	1.2	0.6	19.2	0.12	0.19	<0.02	20	0.16	0.035
013J771194	Sediment Pulp	5.55	11.42	2.75	29.6	123	6.4	1.7	33	1.38	0.2	7.7	3.2	0.9	19.8	0.08	0.04	0.10	33	0.21	0.052
013J771195	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771196	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771197	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771198	Sediment Pulp	9.87	14.38	3.20	88.6	148	7.3	7.6	210	3.57	1.3	7.2	1.0	4.2	17.2	0.21	0.11	0.04	54	0.23	0.114
013J771199	Sediment Pulp	3.27	19.60	2.67	69.2	116	7.1	4.0	84	1.06	0.8	14.0	1.6	2.1	23.4	0.16	0.19	0.04	29	0.32	0.062
013J771200	Sediment Pulp	19.02	11.73	2.44	56.1	38	4.8	7.7	299	8.59	3.7	24.7	0.8	9.4	19.4	0.12	0.08	<0.02	35	0.30	0.089
013J771201	Sediment Pulp	5.62	29.76	1.98	95.1	188	9.0	3.9	130	1.67	0.9	9.9	3.8	1.1	26.4	0.29	0.14	<0.02	53	0.26	0.106
013J771202	Sediment Pulp	5.37	29.57	1.94	92.4	171	8.8	3.7	126	1.62	0.5	9.6	2.2	0.9	26.0	0.27	0.14	<0.02	51	0.25	0.103
013J771203	Sediment Pulp	9.04	39.60	88.56	278.5	603	11.1	6.9	398	1.65	35.4	9.3	3.6	1.6	69.1	1.28	0.60	0.95	19	5.84	0.061
013J771204	Sediment Pulp	9.82	20.61	2.88	80.7	168	6.0	3.9	127	2.03	0.5	16.4	2.5	1.9	17.4	0.20	0.10	0.06	51	0.20	0.118
013J771205	Sediment Pulp	3.04	20.24	3.05	54.0	171	8.4	2.1	47	0.67	0.3	5.4	4.8	0.5	25.2	0.17	0.08	0.07	27	0.23	0.060
013J771206	Sediment Pulp	1.08	5.12	2.10	20.4	21	2.6	2.9	184	1.56	0.9	1.3	0.7	4.1	19.0	0.04	0.04	<0.02	21	0.33	0.083
013J771207	Sediment Pulp	1.46	7.68	2.46	35.2	40	4.2	3.1	154	1.13	0.8	1.6	0.8	3.4	25.9	0.07	0.05	<0.02	25	0.38	0.085
013J771208	Sediment Pulp	2.27	48.98	1.98	67.4	271	17.8	1.9	35	0.27	0.3	10.5	1.8	0.4	36.3	0.26	0.07	0.04	17	0.31	0.096
013J771209	Sediment Pulp	13.80	23.95	3.06	79.0	278	6.7	3.4	109	1.54	0.4	9.7	0.8	0.6	30.7	0.24	0.06	<0.02	33	0.31	0.120
013J771210	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771211	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J771181	Sediment Pulp	44.6	46.3	0.76	163.6	0.097	<20	1.56	0.029	0.25	0.6	5.7	0.27	0.15	269	0.4	0.04	5.2	1.36	<0.1	0.10
013J771182	Sediment Pulp	30.7	7.4	0.15	41.0	0.063	<20	0.48	0.018	0.07	0.4	1.6	0.08	0.06	68	0.4	<0.02	2.0	0.46	<0.1	0.06
013J771183	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771184	Sediment Pulp	59.9	7.8	0.11	45.1	0.035	<20	0.44	0.012	0.04	0.1	1.4	0.05	0.16	198	0.7	<0.02	1.7	0.36	<0.1	<0.02
013J771185	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771187	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771188	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771189	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771190	Sediment Pulp	24.2	5.1	0.10	22.2	0.058	<20	0.31	0.014	0.05	0.2	1.4	0.03	<0.02	14	0.2	<0.02	1.3	0.38	<0.1	<0.02
013J771191	Sediment Pulp	23.8	4.7	0.12	31.0	0.049	<20	0.29	0.012	0.06	0.2	1.0	0.05	0.06	68	0.1	<0.02	1.4	0.41	<0.1	<0.02
013J771192	Sediment Pulp	54.0	7.1	0.10	41.9	0.051	<20	0.45	0.018	0.04	1.3	1.5	0.07	0.11	128	0.3	<0.02	1.9	0.33	<0.1	<0.02
013J771193	Sediment Pulp	38.0	6.6	0.06	56.4	0.020	<20	0.41	0.011	0.02	0.6	1.0	0.04	0.22	141	0.5	<0.02	1.5	0.21	<0.1	<0.02
013J771194	Sediment Pulp	65.4	7.9	0.04	53.1	0.022	<20	0.79	0.013	0.02	1.6	1.6	0.03	0.21	170	0.4	<0.02	1.9	0.16	<0.1	<0.02
013J771195	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771196	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771197	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771198	Sediment Pulp	65.0	14.3	0.17	57.5	0.072	<20	0.98	0.017	0.05	0.5	3.3	0.10	0.16	101	0.7	<0.02	3.2	0.45	0.1	0.03
013J771199	Sediment Pulp	84.9	11.6	0.17	53.6	0.049	<20	0.81	0.018	0.05	0.8	2.3	0.07	0.27	131	1.4	<0.02	2.5	0.40	<0.1	0.04
013J771200	Sediment Pulp	100.8	9.9	0.12	38.9	0.059	<20	0.60	0.018	0.04	0.3	3.2	0.05	0.03	91	<0.1	0.02	1.6	0.32	0.2	0.02
013J771201	Sediment Pulp	96.4	14.2	0.12	54.2	0.035	<20	0.96	0.016	0.04	1.1	1.9	0.15	0.18	166	1.2	<0.02	2.3	0.42	<0.1	<0.02
013J771202	Sediment Pulp	90.3	14.2	0.12	50.2	0.032	<20	0.94	0.013	0.04	1.2	1.9	0.15	0.18	168	1.4	<0.02	2.4	0.39	0.1	<0.02
013J771203	Sediment Pulp	11.0	11.3	0.53	88.4	0.039	<20	0.42	0.025	0.05	0.6	2.3	0.20	1.40	103	0.5	<0.02	2.0	0.49	<0.1	0.03
013J771204	Sediment Pulp	74.9	13.7	0.12	45.7	0.047	<20	0.89	0.016	0.04	0.6	1.9	0.11	0.15	146	0.9	<0.02	2.7	0.40	0.1	<0.02
013J771205	Sediment Pulp	68.4	7.8	0.09	60.3	0.027	<20	0.70	0.010	0.03	0.3	0.9	0.06	0.22	134	0.8	<0.02	2.3	0.29	0.1	<0.02
013J771206	Sediment Pulp	25.8	7.2	0.20	32.5	0.075	<20	0.47	0.026	0.08	0.2	2.3	0.04	<0.02	27	<0.1	<0.02	1.9	0.58	<0.1	0.03
013J771207	Sediment Pulp	30.9	8.9	0.22	47.2	0.091	<20	0.61	0.034	0.11	0.3	2.8	0.07	0.03	65	<0.1	<0.02	2.3	0.79	<0.1	0.04
013J771208	Sediment Pulp	124.1	7.6	0.05	102.6	0.021	<20	1.10	0.011	0.01	0.3	0.8	0.07	0.33	189	0.8	<0.02	2.0	0.15	0.1	<0.02
013J771209	Sediment Pulp	116.1	7.8	0.07	53.4	0.025	<20	1.07	0.015	0.03	1.7	1.5	0.09	0.21	146	1.1	<0.02	2.4	0.28	0.1	<0.02
013J771210	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771211	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771181	Sediment Pulp	2.14	24.1	1.1	<0.05	5.2	18.91	77.9	0.03	<1	0.6	19.3	10.47	38.30	6.69	1.05	4.57	0.70	3.78	0.76	1.90
013J771182	Sediment Pulp	2.00	5.0	0.4	<0.05	2.3	8.94	57.7	<0.02	<1	<0.1	4.3	7.17	24.65	3.83	0.69	2.63	0.36	1.86	0.36	0.85
013J771183	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771184	Sediment Pulp	1.15	3.0	0.3	<0.05	0.9	10.91	94.2	<0.02	<1	0.1	1.8	13.34	43.49	7.14	1.02	4.46	0.52	2.39	0.43	0.93
013J771185	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771187	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771188	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771189	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771190	Sediment Pulp	1.96	3.3	0.4	<0.05	0.7	8.58	44.8	<0.02	<1	0.1	2.8	5.54	19.13	3.23	0.52	2.11	0.34	1.69	0.35	0.88
013J771191	Sediment Pulp	1.74	4.7	0.3	<0.05	0.7	7.98	42.6	<0.02	2	<0.1	3.2	5.40	18.11	2.85	0.50	2.04	0.32	1.81	0.32	0.75
013J771192	Sediment Pulp	1.69	3.0	0.3	<0.05	0.6	15.74	86.9	<0.02	2	0.4	3.0	10.70	33.81	5.17	0.88	3.60	0.56	2.65	0.55	1.40
013J771193	Sediment Pulp	1.06	1.5	0.3	<0.05	0.5	11.91	66.2	<0.02	<1	0.1	1.4	8.37	28.64	4.64	0.61	3.14	0.47	2.47	0.49	1.28
013J771194	Sediment Pulp	0.80	1.3	0.7	<0.05	0.2	25.82	98.7	0.02	<1	<0.1	1.3	15.24	53.42	8.20	1.10	6.21	0.87	4.82	0.97	2.66
013J771195	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771196	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771197	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771198	Sediment Pulp	2.68	3.6	0.6	<0.05	1.1	29.54	96.3	0.02	<1	0.4	4.0	15.79	53.38	8.45	1.31	6.58	1.02	4.83	1.01	2.84
013J771199	Sediment Pulp	2.22	3.5	0.6	<0.05	1.1	52.96	143.3	<0.02	1	0.9	3.9	24.30	88.48	17.05	2.01	13.45	2.00	10.37	2.13	5.37
013J771200	Sediment Pulp	2.50	3.4	0.5	<0.05	1.7	55.02	196.9	<0.02	<1	1.3	2.0	26.47	93.04	14.88	2.02	12.17	1.70	8.67	1.89	5.24
013J771201	Sediment Pulp	1.63	3.2	0.4	<0.05	0.4	40.07	157.7	<0.02	<1	0.5	3.0	25.09	85.00	13.62	2.26	9.48	1.42	6.36	1.41	3.96
013J771202	Sediment Pulp	1.55	3.1	0.3	<0.05	0.3	38.03	150.5	<0.02	<1	0.6	2.7	22.69	79.45	12.30	2.15	9.01	1.29	6.87	1.33	3.74
013J771203	Sediment Pulp	0.67	3.4	3.4	<0.05	1.3	10.46	17.5	0.51	18	<0.1	4.1	2.97	11.23	2.29	0.53	2.09	0.33	1.90	0.40	0.98
013J771204	Sediment Pulp	1.90	3.2	0.4	<0.05	0.6	29.47	110.0	<0.02	<1	0.7	2.6	17.01	59.60	9.46	1.56	6.93	1.00	5.22	1.11	3.08
013J771205	Sediment Pulp	1.23	2.3	0.5	<0.05	0.4	25.07	98.3	<0.02	<1	0.3	2.0	16.64	56.11	8.66	1.75	6.94	0.95	4.95	0.85	2.28
013J771206	Sediment Pulp	2.03	5.8	0.5	<0.05	1.5	9.71	47.2	<0.02	<1	0.1	4.0	6.20	20.58	3.44	0.63	2.78	0.36	1.87	0.37	1.12
013J771207	Sediment Pulp	2.37	8.1	0.5	<0.05	1.3	11.29	54.8	<0.02	<1	<0.1	4.5	7.03	23.88	3.93	0.75	2.79	0.41	2.00	0.42	1.22
013J771208	Sediment Pulp	1.14	1.1	0.6	<0.05	0.3	41.20	181.7	<0.02	2	0.3	0.8	32.13	106.32	16.48	2.90	13.13	1.65	7.83	1.48	3.82
013J771209	Sediment Pulp	1.05	2.4	0.3	<0.05	0.1	39.92	163.8	0.02	<1	0.7	1.6	27.63	94.85	14.03	2.41	9.78	1.45	7.14	1.50	3.89
013J771210	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771211	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given

Report Date: April 13, 2022

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Part: 4 of 4

CERTIFICATE OF ANALYSIS

VAN22000375.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J771181	Sediment Pulp	0.30	1.71	0.24	<10	3
013J771182	Sediment Pulp	0.14	0.72	0.13	<10	<2
013J771183	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771184	Sediment Pulp	0.15	0.82	0.11	<10	<2
013J771185	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771187	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771188	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771189	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771190	Sediment Pulp	0.14	0.74	0.12	<10	<2
013J771191	Sediment Pulp	0.12	0.63	0.09	<10	4
013J771192	Sediment Pulp	0.18	1.08	0.13	<10	4
013J771193	Sediment Pulp	0.15	1.08	0.15	<10	<2
013J771194	Sediment Pulp	0.36	2.12	0.35	<10	<2
013J771195	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771196	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771197	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771198	Sediment Pulp	0.38	2.27	0.37	<10	<2
013J771199	Sediment Pulp	0.74	4.08	0.56	<10	<2
013J771200	Sediment Pulp	0.79	4.33	0.76	<10	<2
013J771201	Sediment Pulp	0.56	3.18	0.49	<10	<2
013J771202	Sediment Pulp	0.55	2.97	0.50	<10	<2
013J771203	Sediment Pulp	0.14	0.87	0.13	<10	<2
013J771204	Sediment Pulp	0.40	2.55	0.43	<10	<2
013J771205	Sediment Pulp	0.28	1.72	0.29	<10	<2
013J771206	Sediment Pulp	0.16	1.05	0.14	<10	<2
013J771207	Sediment Pulp	0.18	1.05	0.14	<10	<2
013J771208	Sediment Pulp	0.55	2.95	0.47	<10	<2
013J771209	Sediment Pulp	0.57	3.16	0.51	<10	<2
013J771210	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771211	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771212	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771213	Sediment Pulp	41.71	44.42	4.03	169.5	431	8.3	18.7	779	12.53	0.8	26.7	0.7	9.4	19.6	0.50	0.07	0.03	103	0.15	0.276
013J771214	Sediment Pulp	5.63	31.06	2.99	61.5	176	6.2	6.1	207	1.91	0.5	7.4	10.9	2.7	33.3	0.15	0.05	<0.02	53	0.36	0.132
013J771215	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771216	Sediment Pulp	3.93	17.32	2.37	40.4	85	3.4	2.3	78	0.89	0.4	5.6	1.0	0.7	25.7	0.11	0.05	<0.02	24	0.20	0.063
013J771217	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771218	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771219	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771220	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771221	Sediment Pulp	14.93	26.65	3.30	89.2	289	7.1	3.7	113	1.61	0.1	11.1	2.0	1.1	32.1	0.30	0.07	<0.02	34	0.27	0.143
013J771222	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771223	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771224	Sediment Pulp	1.97	17.38	2.30	35.0	117	5.2	1.2	53	0.72	<0.1	1.3	5.9	1.1	31.8	0.18	0.04	0.02	15	0.27	0.036
013J771225	Sediment Pulp	5.23	35.05	5.46	134.0	194	8.4	6.2	221	3.43	0.3	13.0	0.3	6.0	15.7	0.29	0.08	<0.02	56	0.20	0.061
013J771226	Sediment Pulp	5.15	34.64	4.72	111.1	206	8.1	4.9	186	3.09	0.4	12.4	0.8	5.3	14.5	0.26	0.07	<0.02	54	0.17	0.060
013J771227	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771228	Sediment Pulp	8.62	23.64	2.74	74.5	60	7.2	28.3	339	3.45	0.6	17.3	0.5	9.3	20.0	0.19	0.04	<0.02	39	0.26	0.088
013J771229	Sediment Pulp	17.00	48.87	2.65	100.3	123	7.4	6.8	254	2.34	0.7	26.6	1.6	4.9	21.5	0.24	0.06	<0.02	39	0.37	0.182
013J771230	Sediment Pulp	7.32	15.82	3.17	33.7	83	5.8	3.0	106	1.07	0.5	11.1	0.9	1.5	20.4	0.09	0.05	<0.02	33	0.23	0.061
013J771231	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771232	Sediment Pulp	9.90	26.87	6.79	125.4	169	7.4	17.2	576	4.77	0.3	7.0	0.5	6.8	20.3	0.28	0.05	<0.02	67	0.23	0.153
013J771233	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771234	Sediment Pulp	0.86	31.55	22.79	129.7	2509	42.6	27.0	1159	2.93	22.7	3.7	2.0	7.8	26.4	0.51	0.58	3.12	44	0.56	0.086
013J771235	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771236	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771237	Sediment Pulp	5.69	20.01	2.34	15.5	212	4.1	1.1	33	0.68	0.3	7.6	1.0	0.3	13.0	0.06	0.06	<0.02	31	0.10	0.071
013J771238	Sediment Pulp	8.43	29.65	2.31	77.8	287	5.8	2.2	70	1.11	0.1	11.7	0.8	0.7	20.9	0.33	0.07	<0.02	50	0.22	0.140
013J771239	Sediment Pulp	3.66	12.90	1.65	35.4	139	4.5	1.5	63	0.38	<0.1	4.3	1.4	0.2	17.0	0.18	0.05	<0.02	25	0.17	0.052
013J771240	Sediment Pulp	9.07	19.85	2.02	81.2	154	9.3	3.9	133	2.49	<0.1	9.5	2.0	0.8	27.1	0.27	0.05	<0.02	36	0.24	0.095
013J771241	Sediment Pulp	8.86	19.92	1.89	86.0	138	8.9	3.8	131	2.46	<0.1	9.2	4.9	0.8	26.7	0.24	0.06	<0.02	35	0.24	0.090



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J771212	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771213	Sediment Pulp	241.1	17.2	0.11	60.3	0.068	<20	1.92	0.009	0.04	0.7	5.9	0.24	0.20	195	3.0	0.02	5.3	0.48	0.3
013J771214	Sediment Pulp	63.3	11.4	0.26	72.4	0.081	<20	1.01	0.034	0.16	0.7	2.8	0.12	0.08	107	0.8	<0.02	3.7	1.03	0.1
013J771215	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771216	Sediment Pulp	67.4	6.4	0.09	32.6	0.032	<20	0.47	0.017	0.04	0.1	1.1	0.05	0.18	154	<0.1	<0.02	1.8	0.44	<0.1
013J771217	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771218	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771219	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771220	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771221	Sediment Pulp	129.4	8.3	0.08	59.3	0.027	<20	0.95	0.014	0.03	1.9	1.7	0.10	0.22	166	1.1	<0.02	2.6	0.30	0.1
013J771222	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771223	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771224	Sediment Pulp	28.0	7.1	0.07	56.5	0.030	<20	0.31	0.014	0.02	0.2	1.8	<0.02	0.36	129	1.4	<0.02	1.2	0.16	0.1
013J771225	Sediment Pulp	209.8	10.6	0.18	61.4	0.077	<20	1.07	0.017	0.07	0.2	7.3	0.17	0.23	185	1.3	<0.02	3.9	1.03	0.3
013J771226	Sediment Pulp	194.3	10.0	0.18	51.9	0.067	<20	1.03	0.015	0.05	0.1	6.0	0.17	0.23	156	1.0	<0.02	3.5	0.87	0.2
013J771227	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771228	Sediment Pulp	115.3	9.8	0.19	57.4	0.076	<20	0.91	0.026	0.06	0.9	3.2	0.20	0.11	82	0.8	<0.02	2.6	0.56	0.1
013J771229	Sediment Pulp	127.8	12.6	0.19	48.1	0.065	<20	1.10	0.027	0.09	1.4	3.6	0.24	0.14	66	0.9	<0.02	2.7	0.52	0.2
013J771230	Sediment Pulp	74.3	9.3	0.20	52.8	0.063	<20	0.68	0.027	0.07	0.5	2.1	0.06	0.11	124	<0.1	<0.02	2.5	0.61	0.1
013J771231	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771232	Sediment Pulp	128.3	11.5	0.23	77.5	0.110	<20	1.14	0.018	0.09	0.2	5.3	0.24	0.21	138	1.0	<0.02	5.2	1.46	0.2
013J771233	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771234	Sediment Pulp	40.5	43.5	0.73	153.3	0.089	<20	1.54	0.028	0.24	0.2	5.1	0.25	0.14	259	<0.1	0.04	5.2	1.24	<0.1
013J771235	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771236	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771237	Sediment Pulp	139.6	8.9	0.04	26.1	0.016	<20	0.91	0.006	0.01	0.8	0.6	0.02	0.16	134	0.6	<0.02	1.8	0.23	0.2
013J771238	Sediment Pulp	123.1	10.9	0.07	45.2	0.031	<20	1.06	0.009	0.02	0.2	1.5	0.09	0.16	170	1.1	<0.02	2.6	0.24	0.2
013J771239	Sediment Pulp	54.7	6.0	0.08	29.8	0.024	<20	0.46	0.011	0.02	<0.1	0.8	0.04	0.13	124	0.6	<0.02	1.7	0.25	<0.1
013J771240	Sediment Pulp	99.7	12.4	0.11	52.6	0.032	<20	1.27	0.013	0.03	0.3	2.2	0.08	0.28	119	1.4	<0.02	2.2	0.32	<0.1
013J771241	Sediment Pulp	95.2	11.7	0.11	52.4	0.030	<20	1.25	0.013	0.03	0.2	2.0	0.08	0.28	158	1.5	<0.02	2.3	0.32	0.1



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
013J771212	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771213	Sediment Pulp	2.44	4.0	0.4	<0.05	0.5	76.78	469.9	0.05	6	1.9	2.7	56.10	193.26	28.95	4.29	22.28	3.08	14.60	3.10	
013J771214	Sediment Pulp	2.06	12.5	0.5	<0.05	0.8	19.73	95.4	0.03	3	0.4	6.0	14.73	48.82	7.63	1.48	5.13	0.77	3.60	0.67	
013J771215	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771216	Sediment Pulp	1.07	4.1	0.3	<0.05	0.2	18.29	96.3	<0.02	<1	<0.1	2.4	15.58	52.61	7.73	1.44	5.54	0.68	3.28	0.70	
013J771217	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771218	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771219	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771220	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771221	Sediment Pulp	1.14	2.6	0.3	<0.05	1.1	45.10	185.1	0.02	<1	1.0	2.2	31.40	105.27	15.37	2.62	12.06	1.65	8.07	1.60	
013J771222	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771223	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771224	Sediment Pulp	1.07	1.0	0.6	<0.05	0.9	7.61	48.6	<0.02	1	<0.1	0.5	6.09	19.67	3.26	0.62	2.41	0.33	1.43	0.31	
013J771225	Sediment Pulp	1.86	12.8	0.4	<0.05	0.9	52.35	374.9	0.05	1	1.1	6.5	48.56	164.83	23.01	3.55	17.21	2.28	9.87	2.09	
013J771226	Sediment Pulp	1.68	10.5	0.3	<0.05	0.8	51.55	354.0	0.04	<1	0.9	5.2	49.29	153.59	22.68	3.47	15.69	2.09	9.82	1.90	
013J771227	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771228	Sediment Pulp	2.56	5.8	0.4	<0.05	1.0	34.49	245.5	<0.02	<1	0.6	4.9	30.64	101.69	15.49	2.48	10.08	1.40	6.62	1.35	
013J771229	Sediment Pulp	2.12	7.1	0.4	<0.05	0.6	46.61	232.0	<0.02	1	1.1	4.9	34.96	122.53	18.30	3.08	14.03	1.82	9.58	1.80	
013J771230	Sediment Pulp	1.82	6.6	0.5	<0.05	0.4	22.63	108.7	<0.02	<1	0.4	5.0	17.47	61.65	9.71	1.56	6.83	0.94	4.45	0.88	
013J771231	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771232	Sediment Pulp	2.54	15.2	0.5	<0.05	0.8	34.06	236.4	0.03	2	0.4	10.0	32.05	106.49	14.34	2.55	10.01	1.47	6.14	1.33	
013J771233	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771234	Sediment Pulp	2.00	22.8	1.1	<0.05	5.0	17.77	70.6	0.06	<1	0.4	18.5	9.96	33.38	6.00	0.96	4.27	0.66	3.42	0.73	
013J771235	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771236	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771237	Sediment Pulp	0.40	1.2	0.2	<0.05	0.1	44.29	178.6	<0.02	1	0.3	1.0	34.56	119.67	16.54	2.78	12.53	1.80	8.52	1.65	
013J771238	Sediment Pulp	1.42	1.7	0.3	<0.05	0.2	43.77	198.9	<0.02	<1	0.7	1.3	31.83	107.64	15.43	2.35	11.92	1.65	8.24	1.63	
013J771239	Sediment Pulp	0.80	1.9	0.2	<0.05	0.1	15.14	76.2	<0.02	2	0.4	1.7	11.49	39.60	5.65	0.94	4.58	0.55	2.68	0.59	
013J771240	Sediment Pulp	1.24	3.0	0.3	<0.05	0.2	39.59	155.4	<0.02	<1	0.6	2.1	24.15	83.32	12.98	2.29	9.95	1.33	6.74	1.49	
013J771241	Sediment Pulp	1.22	3.0	0.2	<0.05	0.2	38.41	154.3	<0.02	1	0.6	2.1	24.06	84.38	12.96	2.17	9.69	1.32	6.26	1.41	



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013J771212	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771213	Sediment Pulp	1.30	6.95	1.22	<10
013J771214	Sediment Pulp	0.27	1.53	0.25	<10
013J771215	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771216	Sediment Pulp	0.25	1.34	0.22	<10
013J771217	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771218	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771219	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771220	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771221	Sediment Pulp	0.58	3.64	0.57	<10
013J771222	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771223	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771224	Sediment Pulp	0.11	0.55	0.10	<10
013J771225	Sediment Pulp	0.79	4.32	0.78	<10
013J771226	Sediment Pulp	0.67	4.20	0.66	<10
013J771227	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771228	Sediment Pulp	0.50	2.87	0.47	<10
013J771229	Sediment Pulp	0.74	4.16	0.70	<10
013J771230	Sediment Pulp	0.32	1.89	0.28	<10
013J771231	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771232	Sediment Pulp	0.51	3.02	0.53	<10
013J771233	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771234	Sediment Pulp	0.28	1.54	0.24	<10
013J771235	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771236	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771237	Sediment Pulp	0.56	3.22	0.49	<10
013J771238	Sediment Pulp	0.69	3.54	0.58	<10
013J771239	Sediment Pulp	0.21	1.30	0.20	<10
013J771240	Sediment Pulp	0.57	3.26	0.56	<10
013J771241	Sediment Pulp	0.53	3.10	0.55	<10



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771242	Sediment Pulp	30.21	35.99	3.13	119.4	304	9.3	14.1	377	7.12	<0.1	33.5	0.6	3.9	24.4	0.45	0.08	0.02	51	0.23	0.204
013J771243	Sediment Pulp	8.60	21.99	6.05	68.9	102	7.7	6.1	140	1.88	0.6	20.4	0.3	3.7	19.7	1.37	0.47	<0.02	34	0.26	0.122
013J771244	Sediment Pulp	2.55	18.10	3.44	44.8	80	10.5	5.9	113	1.22	0.4	5.3	0.3	2.8	21.2	0.15	0.13	<0.02	34	0.23	0.051
013J771245	Sediment Pulp	4.89	41.35	2.56	72.1	286	12.7	3.2	56	0.72	0.2	27.7	2.0	0.7	22.6	0.27	0.07	0.06	24	0.24	0.081
013J771246	Sediment Pulp	10.09	35.17	9.61	88.9	612	9.0	12.8	418	5.18	0.8	39.7	3.8	5.1	26.4	0.70	0.11	0.09	101	0.26	0.248
013J771247	Sediment Pulp	3.60	14.50	8.12	27.7	92	5.1	3.0	69	0.81	0.5	15.0	3.2	2.3	23.6	0.15	0.14	0.03	25	0.28	0.066
013J771248	Sediment Pulp	18.09	30.47	8.76	62.4	315	7.9	112.6	>10000	23.33	1.8	18.9	1.3	5.7	7.3	0.29	0.08	0.04	81	0.08	0.213
013J771249	Sediment Pulp	3.21	30.49	5.35	56.0	128	8.5	10.8	192	5.25	1.1	7.2	2.5	3.3	11.4	0.07	0.07	0.06	73	0.15	0.102
013J771250	Sediment Pulp	9.10	39.49	83.73	281.2	564	12.0	7.5	432	1.72	35.0	8.9	3.2	1.5	65.4	1.25	0.54	3.65	21	6.10	0.067
013J771251	Sediment Pulp	4.59	34.30	4.91	95.1	128	12.4	9.3	219	3.90	0.5	11.0	1.5	2.7	19.8	0.48	0.07	0.06	72	0.27	0.125
013J771252	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771253	Sediment Pulp	3.03	18.19	2.67	65.6	139	10.9	5.1	94	1.59	0.2	5.3	3.1	1.7	20.5	0.23	0.06	<0.02	47	0.29	0.063
013J771254	Sediment Pulp	4.97	30.44	3.38	92.9	162	21.6	14.3	203	5.00	0.9	7.1	0.7	3.5	16.8	0.28	0.06	0.04	93	0.26	0.138
013J771255	Sediment Pulp	4.79	47.17	2.49	66.2	92	12.0	9.3	152	3.69	0.5	16.8	0.9	5.4	17.4	0.14	0.05	0.02	39	0.31	0.128
013J771256	Sediment Pulp	3.74	23.05	2.58	57.5	110	11.2	5.2	115	1.75	0.4	6.3	1.1	1.5	18.9	0.14	0.05	<0.02	64	0.22	0.076
013J771257	Sediment Pulp	12.78	33.24	4.55	74.4	295	10.4	6.4	264	2.19	0.1	32.3	0.6	2.1	29.7	0.38	0.09	0.04	31	0.32	0.105
013J771258	Sediment Pulp	6.30	26.74	2.19	71.7	300	10.9	3.8	73	1.06	0.2	21.2	1.2	0.9	32.1	0.24	0.08	<0.02	31	0.32	0.080
013J771259	Sediment Pulp	6.74	29.03	2.46	76.8	300	11.3	4.8	77	1.19	<0.1	22.7	0.6	1.0	33.7	0.27	0.09	0.02	33	0.33	0.083
013J771260	Sediment Pulp	13.48	22.44	2.53	52.0	206	10.4	4.7	79	1.19	0.3	21.8	0.8	0.9	24.7	0.19	0.12	0.02	26	0.26	0.070
013J771261	Sediment Pulp	5.87	23.60	2.70	43.3	139	7.1	4.1	83	1.17	0.4	8.7	1.1	0.8	21.7	0.14	0.07	<0.02	30	0.25	0.048
013J771262	Sediment Pulp	5.79	23.02	2.67	41.2	128	7.0	4.1	80	1.16	0.5	8.7	0.7	0.7	21.3	0.13	0.07	<0.02	30	0.25	0.048
013J771263	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771264	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771265	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771266	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771267	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771268	Sediment Pulp	1.70	14.34	1.91	36.5	74	5.0	3.1	123	0.87	0.3	1.7	0.6	1.3	18.8	0.12	0.03	<0.02	30	0.27	0.073
013J771269	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771270	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771271	Sediment Pulp	0.39	9.44	2.94	16.0	160	4.8	0.7	17	0.25	0.3	9.0	1.3	0.2	8.2	0.06	0.05	<0.02	6	0.09	0.045



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Project: None Given
Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02	
013J771242	Sediment Pulp	216.3	16.1	0.10	63.0	0.041	<20	1.80	0.013	0.03	0.3	3.5	0.19	0.22	142	3.9	<0.02	3.6	0.36	0.2	<0.02
013J771243	Sediment Pulp	86.3	11.1	0.16	51.2	0.054	<20	0.89	0.022	0.07	0.6	2.4	0.18	0.13	75	0.1	<0.02	2.4	0.41	0.1	<0.02
013J771244	Sediment Pulp	54.8	12.8	0.19	61.3	0.050	<20	0.66	0.015	0.07	0.5	2.0	0.11	0.21	111	0.7	<0.02	2.4	0.97	<0.1	0.02
013J771245	Sediment Pulp	208.4	10.3	0.06	77.7	0.030	<20	1.23	0.012	0.02	0.1	1.7	0.17	0.30	116	1.8	<0.02	2.5	0.24	0.3	<0.02
013J771246	Sediment Pulp	105.9	29.9	0.08	57.2	0.080	<20	2.43	0.015	0.03	0.6	3.8	0.22	0.17	199	3.7	0.03	5.8	0.44	0.2	0.03
013J771247	Sediment Pulp	56.5	11.7	0.13	34.7	0.057	<20	0.91	0.029	0.05	0.5	1.8	0.06	0.19	103	0.4	<0.02	2.5	0.31	0.1	0.02
013J771248	Sediment Pulp	88.8	25.5	0.06	63.5	0.073	<20	2.18	0.007	0.02	0.5	3.3	0.38	0.08	117	3.0	<0.02	4.4	0.28	0.5	0.02
013J771249	Sediment Pulp	103.9	30.5	0.19	34.9	0.077	<20	1.93	0.021	0.07	0.2	3.8	0.07	0.12	90	0.8	<0.02	3.7	0.57	0.2	<0.02
013J771250	Sediment Pulp	10.7	12.4	0.59	92.7	0.042	<20	0.47	0.029	0.05	0.6	2.5	0.21	1.51	94	0.7	0.03	2.0	0.50	<0.1	0.03
013J771251	Sediment Pulp	105.7	28.2	0.21	71.2	0.072	<20	1.81	0.018	0.07	0.4	3.2	0.15	0.23	71	2.8	<0.02	3.4	0.57	0.3	<0.02
013J771252	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771253	Sediment Pulp	63.1	16.0	0.18	87.3	0.058	<20	0.90	0.021	0.06	0.3	1.9	0.17	0.29	125	1.1	<0.02	2.9	0.59	<0.1	<0.02
013J771254	Sediment Pulp	92.0	36.9	0.28	74.1	0.084	<20	1.45	0.015	0.09	0.5	3.5	0.26	0.25	133	1.7	<0.02	3.8	1.17	0.2	0.02
013J771255	Sediment Pulp	78.2	15.4	0.23	45.7	0.081	<20	0.83	0.033	0.09	0.4	3.3	0.13	0.16	44	0.7	<0.02	2.8	0.53	0.2	0.02
013J771256	Sediment Pulp	110.2	15.2	0.17	62.5	0.051	<20	0.89	0.020	0.05	0.5	2.1	0.10	0.21	142	0.8	<0.02	3.1	0.61	0.2	<0.02
013J771257	Sediment Pulp	203.2	16.3	0.11	54.4	0.040	<20	1.61	0.014	0.04	0.7	2.9	0.08	0.33	112	2.7	<0.02	3.8	0.40	0.3	<0.02
013J771258	Sediment Pulp	151.4	9.8	0.08	77.6	0.029	<20	1.16	0.011	0.03	0.4	1.5	0.12	0.32	197	1.2	<0.02	3.1	0.27	0.2	<0.02
013J771259	Sediment Pulp	158.9	10.7	0.09	78.8	0.033	<20	1.19	0.012	0.04	0.4	1.7	0.14	0.34	174	1.3	<0.02	3.0	0.32	0.3	<0.02
013J771260	Sediment Pulp	105.0	9.7	0.12	51.8	0.036	<20	0.81	0.014	0.04	0.8	1.2	0.10	0.28	144	1.0	<0.02	2.6	0.46	0.2	<0.02
013J771261	Sediment Pulp	98.8	8.2	0.11	40.4	0.041	<20	0.71	0.015	0.04	0.8	1.4	0.08	0.25	113	0.9	<0.02	2.7	0.39	0.2	<0.02
013J771262	Sediment Pulp	96.8	7.8	0.11	39.5	0.040	<20	0.70	0.014	0.04	0.7	1.4	0.08	0.24	118	0.9	<0.02	2.7	0.38	0.2	<0.02
013J771263	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771264	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771265	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771266	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771267	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771268	Sediment Pulp	29.9	8.4	0.20	43.0	0.063	<20	0.55	0.017	0.07	0.2	1.5	0.07	0.07	100	0.3	<0.02	2.6	0.55	<0.1	0.02
013J771269	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771270	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771271	Sediment Pulp	51.1	6.8	0.04	40.0	0.021	<20	0.52	0.008	0.02	<0.1	0.5	0.02	0.11	84	0.4	<0.02	1.9	0.21	<0.1	<0.02



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771242	Sediment Pulp	1.62	3.1	0.3	<0.05	0.2	87.57	367.7	0.02	<1	1.9	2.1	48.14	168.27	24.98	4.10	19.75	2.89	14.88	3.15	8.43
013J771243	Sediment Pulp	1.83	5.6	0.6	<0.05	0.6	29.60	137.8	<0.02	<1	0.9	3.7	21.13	75.78	11.53	1.74	8.29	1.11	5.57	1.17	2.91
013J771244	Sediment Pulp	1.28	7.3	0.4	<0.05	0.5	16.40	95.3	<0.02	1	0.4	4.4	12.57	42.18	6.27	1.09	5.10	0.63	3.23	0.63	1.74
013J771245	Sediment Pulp	1.15	2.2	0.6	<0.05	0.2	58.53	272.5	<0.02	<1	0.7	1.4	45.75	161.51	23.68	3.72	17.23	2.16	10.01	1.99	5.69
013J771246	Sediment Pulp	3.59	2.3	0.7	<0.05	0.8	59.72	234.4	0.06	1	2.2	1.6	26.29	92.37	15.77	2.10	13.52	1.96	11.11	2.36	7.09
013J771247	Sediment Pulp	1.91	3.5	0.5	<0.05	0.7	26.96	109.5	<0.02	<1	2.1	3.8	14.62	50.04	8.72	1.12	7.14	0.95	5.63	1.02	3.27
013J771248	Sediment Pulp	1.45	2.2	0.4	<0.05	0.4	44.20	243.4	0.03	<1	1.6	1.7	22.36	77.61	12.38	2.00	10.30	1.45	8.34	1.67	5.53
013J771249	Sediment Pulp	1.71	6.2	0.5	<0.05	0.6	42.93	208.2	0.03	<1	1.4	3.7	25.35	87.03	13.86	2.14	10.71	1.49	8.25	1.57	5.08
013J771250	Sediment Pulp	0.72	3.5	3.2	<0.05	1.4	10.51	17.9	0.50	16	0.1	4.3	2.94	11.96	2.50	0.49	2.50	0.31	1.78	0.37	1.00
013J771251	Sediment Pulp	1.93	6.3	0.4	<0.05	0.6	41.62	221.9	0.02	<1	1.6	4.7	24.50	85.12	13.40	2.05	10.66	1.43	7.61	1.58	4.81
013J771252	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771253	Sediment Pulp	1.65	4.8	0.4	<0.05	0.6	18.62	120.1	<0.02	<1	0.5	4.1	14.68	51.48	7.47	1.22	5.57	0.68	3.59	0.70	1.99
013J771254	Sediment Pulp	1.94	10.2	0.4	<0.05	0.7	28.42	182.4	<0.02	<1	0.7	5.8	20.48	70.30	10.74	1.90	7.88	0.97	5.40	1.04	3.08
013J771255	Sediment Pulp	2.31	6.6	0.4	<0.05	0.9	25.61	137.2	<0.02	1	0.5	4.5	20.07	68.42	11.32	1.67	8.18	1.04	4.94	0.91	2.63
013J771256	Sediment Pulp	1.55	5.5	0.3	<0.05	0.4	28.11	193.8	<0.02	1	0.4	3.8	24.30	85.07	12.76	1.89	8.55	1.04	5.15	0.92	2.85
013J771257	Sediment Pulp	1.99	3.7	0.4	<0.05	0.3	83.06	326.6	<0.02	2	1.3	3.4	45.91	162.44	26.35	3.83	21.38	2.68	14.63	2.71	8.14
013J771258	Sediment Pulp	1.36	2.6	0.3	<0.05	0.2	53.93	229.8	<0.02	2	0.9	2.0	37.05	135.73	20.90	2.81	15.26	1.95	10.09	1.98	5.46
013J771259	Sediment Pulp	1.48	3.1	0.3	<0.05	0.3	57.01	245.1	<0.02	<1	1.0	2.3	38.73	141.24	21.92	2.92	18.16	2.09	10.80	2.03	6.15
013J771260	Sediment Pulp	1.37	4.3	0.3	<0.05	0.3	37.06	141.0	<0.02	2	0.4	3.7	24.98	91.72	13.79	2.01	10.28	1.31	6.79	1.24	3.30
013J771261	Sediment Pulp	1.20	3.4	0.3	<0.05	0.3	29.14	144.4	<0.02	2	0.4	3.0	22.94	82.98	12.83	2.08	9.38	1.03	5.24	1.00	2.81
013J771262	Sediment Pulp	1.21	3.4	0.3	<0.05	0.2	28.64	141.3	<0.02	<1	0.4	3.0	22.09	80.57	12.02	2.08	9.61	1.04	5.34	0.92	2.59
013J771263	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771264	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771265	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771266	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771267	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771268	Sediment Pulp	1.48	6.3	0.3	<0.05	1.3	8.57	55.0	<0.02	<1	0.2	4.3	7.45	26.06	3.88	0.70	2.99	0.32	1.82	0.31	0.91
013J771269	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771270	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771271	Sediment Pulp	0.67	1.6	0.2	<0.05	0.3	18.29	88.2	<0.02	1	0.1	1.3	12.04	43.63	7.07	0.85	5.85	0.70	3.88	0.73	1.88



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Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J771242	Sediment Pulp		1.31	7.33	1.26	<10	<2
013J771243	Sediment Pulp		0.42	2.27	0.35	<10	<2
013J771244	Sediment Pulp		0.25	1.47	0.26	<10	<2
013J771245	Sediment Pulp		0.73	4.62	0.68	<10	<2
013J771246	Sediment Pulp		1.07	6.87	0.92	<10	<2
013J771247	Sediment Pulp		0.43	2.85	0.39	<10	<2
013J771248	Sediment Pulp		0.80	5.13	0.71	14	<2
013J771249	Sediment Pulp		0.71	4.61	0.65	<10	<2
013J771250	Sediment Pulp		0.13	0.92	0.14	<10	<2
013J771251	Sediment Pulp		0.68	4.21	0.64	<10	<2
013J771252	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771253	Sediment Pulp		0.28	1.84	0.27	<10	<2
013J771254	Sediment Pulp		0.42	2.69	0.46	<10	<2
013J771255	Sediment Pulp		0.37	2.44	0.36	<10	3
013J771256	Sediment Pulp		0.35	2.35	0.35	<10	<2
013J771257	Sediment Pulp		1.05	6.68	1.08	<10	<2
013J771258	Sediment Pulp		0.81	4.95	0.73	<10	<2
013J771259	Sediment Pulp		0.76	5.02	0.75	<10	<2
013J771260	Sediment Pulp		0.45	2.73	0.44	<10	<2
013J771261	Sediment Pulp		0.32	1.92	0.28	<10	<2
013J771262	Sediment Pulp		0.33	2.09	0.27	<10	<2
013J771263	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771264	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771265	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771266	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771267	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771268	Sediment Pulp		0.10	0.67	0.10	<10	<2
013J771269	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771270	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771271	Sediment Pulp		0.26	1.59	0.23	<10	<2



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771272 Sediment Pulp	31.34	12.96	2.77	79.8	86	9.8	5.2	76	1.98	0.4	6.7	0.9	2.2	17.6	0.22	0.08	0.02	44	0.20	0.045
013J771273 Sediment Pulp	3.71	10.72	2.04	19.9	107	3.7	1.2	32	0.72	0.2	3.1	0.8	0.4	10.8	0.07	0.04	<0.02	23	0.11	0.035



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J771272 Sediment Pulp	77.0	13.3	0.12	58.1	0.061	<20	0.76	0.010	0.04	0.8	1.9	0.16	0.30	139	0.6	<0.02	2.6	0.43	0.2	0.03
013J771273 Sediment Pulp	33.0	7.7	0.06	28.7	0.025	<20	0.41	0.008	0.02	0.5	1.0	0.03	0.10	110	0.4	<0.02	1.6	0.25	<0.1	<0.02



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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 13, 2022

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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771272	Sediment Pulp	2.81	4.3	0.5	<0.05	1.0	28.09	107.2	<0.02	3	0.5	3.5	16.69	58.71	9.35	1.06	7.13	0.83	4.83	0.89	2.72
013J771273	Sediment Pulp	0.79	2.0	0.2	<0.05	0.3	10.65	54.1	<0.02	<1	0.1	1.4	7.11	25.38	3.93	0.60	2.78	0.36	1.90	0.37	1.11



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CERTIFICATE OF ANALYSIS

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J771272	Sediment Pulp	0.37	2.30	0.35	<10	<2
013J771273	Sediment Pulp	0.15	0.95	0.16	<10	<2



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QUALITY CONTROL REPORT

VAN22000375.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013J771021	Sediment Pulp	0.66	11.32	3.12	117.1	43	9.5	8.2	207	2.84	0.6	1.0	1.7	5.1	42.4	0.34	0.06	<0.02	33	0.32	0.052
REP 013J771021	QC	0.77	11.27	3.24	124.0	45	10.7	8.0	210	2.86	0.3	1.1	1.3	5.2	43.5	0.36	0.06	<0.02	33	0.33	0.053
013J771078	Sediment Pulp	1.29	21.07	2.72	45.9	134	6.6	1.5	42	0.23	0.2	3.3	0.2	0.2	35.1	0.17	0.06	<0.02	14	0.27	0.046
REP 013J771078	QC	1.35	20.92	2.72	49.1	139	6.4	1.6	42	0.23	0.7	3.2	0.7	0.1	33.5	0.16	0.06	<0.02	14	0.26	0.045
013J771139	Sediment Pulp	8.93	41.16	81.42	293.8	707	12.5	7.7	422	1.83	35.3	9.8	3.8	1.9	73.5	1.41	0.57	1.05	21	6.59	0.069
REP 013J771139	QC	9.08	40.01	83.32	296.0	653	12.0	7.7	428	1.85	39.3	9.6	2.9	1.6	78.0	1.38	0.59	1.12	21	6.68	0.072
013J771180	Sediment Pulp	1.65	8.90	2.34	27.0	40	3.7	3.9	117	0.85	0.6	1.0	5.4	2.1	20.2	0.07	0.04	<0.02	30	0.29	0.077
REP 013J771180	QC	1.57	8.22	2.35	27.8	38	3.4	3.7	118	0.86	0.2	1.1	3.7	2.1	20.1	0.07	0.04	<0.02	30	0.29	0.076
013J771239	Sediment Pulp	3.66	12.90	1.65	35.4	139	4.5	1.5	63	0.38	<0.1	4.3	1.4	0.2	17.0	0.18	0.05	<0.02	25	0.17	0.052
REP 013J771239	QC	3.65	12.94	1.66	36.3	140	4.3	1.4	64	0.38	<0.1	4.3	1.5	0.2	16.9	0.20	0.04	<0.02	25	0.17	0.052
Reference Materials																					
STD DS11	Standard	11.72	136.34	132.88	309.8	1597	73.4	13.1	955	2.94	39.5	2.9	69.2	8.4	77.4	2.26	6.66	12.79	43	1.00	0.064
STD DS11	Standard	13.71	134.13	136.10	304.0	1657	71.4	12.2	949	2.90	40.4	2.8	51.2	8.4	75.3	2.23	7.13	12.46	43	0.97	0.066
STD DS11	Standard	12.60	133.87	133.29	318.5	1554	72.9	12.7	973	2.97	43.3	2.8	46.1	8.3	69.9	2.32	7.16	12.80	45	0.96	0.068
STD DS11	Standard	13.54	136.19	138.74	323.7	1732	76.0	13.2	994	2.92	41.3	2.6	93.4	8.7	74.6	2.25	6.56	12.90	47	1.00	0.070
STD DS11	Standard	12.48	132.31	126.52	318.7	1701	73.4	12.4	977	2.94	41.8	2.6	66.5	8.1	65.6	2.29	6.70	11.10	46	1.00	0.068
STD DS11	Standard	13.64	140.45	135.26	325.9	1641	74.8	14.2	982	2.89	42.9	2.6	51.6	8.8	71.9	2.42	6.40	12.04	46	0.99	0.061
STD OREAS262	Standard	0.52	111.76	56.59	148.9	483	59.6	26.4	523	3.10	36.0	1.3	52.3	10.2	40.1	0.60	2.11	1.07	20	2.84	0.037
STD OREAS262	Standard	0.54	105.15	56.87	146.2	465	58.6	24.9	497	3.10	34.5	1.3	50.3	10.1	39.5	0.61	2.19	1.08	20	2.72	0.039
STD OREAS262	Standard	0.62	115.17	58.58	152.0	493	65.0	28.1	544	3.41	38.3	1.3	53.0	10.9	42.4	0.72	2.80	1.16	21	2.92	0.041
STD OREAS262	Standard	0.56	109.25	57.82	144.6	458	57.9	26.5	533	3.12	36.8	1.4	52.0	10.4	38.9	0.67	2.43	1.18	20	2.93	0.039
STD OREAS262	Standard	0.55	107.68	54.90	141.4	473	60.2	27.0	510	3.05	36.2	1.2	48.9	9.3	34.2	0.62	2.21	0.99	21	2.88	0.040
STD OREAS262	Standard	0.58	105.55	55.65	151.0	440	59.0	27.1	518	3.13	35.4	1.3	44.0	10.4	37.6	0.66	2.04	1.04	20	2.78	0.036
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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QUALITY CONTROL REPORT

VAN22000375.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013J771021	Sediment Pulp	39.2	17.2	0.29	116.9	0.072	<20	0.82	0.016	0.08	0.2	3.2	0.10	0.17	82	0.7	<0.02	3.5	0.68	<0.1	0.07
REP 013J771021	QC	41.5	17.9	0.29	125.8	0.075	<20	0.83	0.017	0.08	0.1	3.1	0.12	0.18	90	0.5	<0.02	3.9	0.73	<0.1	0.05
013J771078	Sediment Pulp	50.4	5.2	0.06	55.3	0.018	<20	0.38	0.013	0.02	0.6	0.5	0.04	0.27	171	1.0	<0.02	1.0	0.22	<0.1	<0.02
REP 013J771078	QC	49.0	5.1	0.06	54.7	0.017	<20	0.37	0.012	0.02	0.6	0.5	0.04	0.27	198	1.3	<0.02	1.1	0.21	<0.1	<0.02
013J771139	Sediment Pulp	11.7	12.4	0.57	98.3	0.039	<20	0.43	0.026	0.05	0.6	2.6	0.22	1.52	111	1.2	0.02	1.9	0.52	0.1	0.03
REP 013J771139	QC	11.9	12.5	0.58	95.4	0.038	<20	0.44	0.027	0.05	0.6	2.6	0.22	1.54	93	1.1	<0.02	2.0	0.52	<0.1	0.03
013J771180	Sediment Pulp	31.7	7.6	0.15	42.3	0.065	<20	0.47	0.017	0.07	0.3	1.4	0.08	0.06	61	0.4	<0.02	2.3	0.45	<0.1	0.02
REP 013J771180	QC	30.4	7.5	0.15	41.3	0.063	<20	0.47	0.017	0.07	0.4	1.5	0.08	0.06	46	0.1	<0.02	2.3	0.44	<0.1	0.02
013J771239	Sediment Pulp	54.7	6.0	0.08	29.8	0.024	<20	0.46	0.011	0.02	<0.1	0.8	0.04	0.13	124	0.6	<0.02	1.7	0.25	<0.1	<0.02
REP 013J771239	QC	53.5	5.8	0.08	31.2	0.025	<20	0.45	0.010	0.02	<0.1	0.8	0.04	0.13	126	0.4	<0.02	1.6	0.25	<0.1	<0.02
Reference Materials																					
STD DS11	Standard	19.1	54.4	0.79	406.5	0.086	<20	1.09	0.069	0.38	2.9	3.0	4.60	0.26	267	2.2	4.31	4.9	2.80	<0.1	0.06
STD DS11	Standard	19.6	53.2	0.78	399.9	0.084	<20	1.07	0.068	0.37	2.5	3.0	4.64	0.26	248	2.3	4.37	4.2	2.79	<0.1	0.05
STD DS11	Standard	17.5	52.2	0.79	414.6	0.078	<20	1.02	0.066	0.37	2.2	3.0	4.70	0.27	284	2.2	4.25	4.5	2.77	<0.1	0.05
STD DS11	Standard	19.1	53.2	0.82	410.4	0.086	<20	1.09	0.069	0.38	3.2	3.1	5.03	0.28	227	1.8	4.38	4.7	2.77	<0.1	0.06
STD DS11	Standard	17.0	56.3	0.80	395.0	0.092	<20	1.10	0.070	0.38	2.7	3.1	4.67	0.26	220	2.0	4.36	4.7	2.73	<0.1	0.07
STD DS11	Standard	18.0	53.2	0.78	388.4	0.085	<20	1.08	0.070	0.38	2.8	3.1	4.75	0.26	248	1.5	4.41	4.7	2.67	<0.1	0.07
STD OREAS262	Standard	17.9	38.7	1.11	255.4	0.003	<20	1.20	0.064	0.31	<0.1	3.3	0.46	0.24	160	0.6	0.24	4.0	2.37	<0.1	0.16
STD OREAS262	Standard	19.2	37.6	1.10	243.4	0.003	<20	1.25	0.063	0.31	<0.1	3.3	0.46	0.25	175	0.3	0.18	3.6	2.44	<0.1	0.17
STD OREAS262	Standard	18.0	39.7	1.18	263.2	0.003	<20	1.18	0.069	0.30	0.1	3.5	0.48	0.27	164	0.3	0.25	3.7	2.41	<0.1	0.23
STD OREAS262	Standard	16.9	37.2	1.14	246.8	0.003	<20	1.16	0.066	0.29	0.1	3.1	0.46	0.26	172	0.2	0.21	3.6	2.31	<0.1	0.21
STD OREAS262	Standard	16.6	40.6	1.12	243.0	0.003	<20	1.18	0.064	0.29	<0.1	3.5	0.45	0.24	159	0.2	0.21	3.5	2.35	<0.1	0.19
STD OREAS262	Standard	15.4	37.4	1.12	233.0	0.003	<20	1.17	0.065	0.29	<0.1	3.1	0.43	0.25	161	<0.1	0.20	3.7	2.14	<0.1	0.21
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Project: None Given
Report Date: April 13, 2022

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QUALITY CONTROL REPORT

VAN22000375.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013J771021	Sediment Pulp	2.42	7.2	0.5	<0.05	1.5	12.87	73.0	<0.02	<1	0.4	6.2	9.56	31.96	5.16	0.85	3.88	0.61	2.60	0.51	1.32
REP 013J771021	QC	2.53	7.4	0.5	<0.05	1.8	13.99	77.0	<0.02	<1	0.4	7.0	9.71	34.53	5.74	1.00	3.96	0.57	2.78	0.55	1.45
013J771078	Sediment Pulp	0.75	1.8	0.2	<0.05	0.2	14.31	75.9	<0.02	<1	0.3	1.3	11.24	39.14	5.62	0.97	3.97	0.58	2.74	0.59	1.33
REP 013J771078	QC	0.77	1.8	0.2	<0.05	0.2	14.93	74.2	<0.02	<1	0.1	1.3	11.33	36.20	5.21	0.98	3.67	0.62	2.71	0.52	1.43
013J771139	Sediment Pulp	0.67	3.6	3.1	<0.05	1.4	10.89	18.3	0.52	22	0.4	4.0	3.30	13.30	2.58	0.54	2.05	0.34	1.76	0.44	1.07
REP 013J771139	QC	0.68	3.7	3.5	<0.05	1.3	11.38	18.8	0.51	22	0.2	3.5	2.96	11.87	2.62	0.55	2.24	0.34	1.80	0.38	0.98
013J771180	Sediment Pulp	1.79	4.9	0.3	<0.05	0.8	8.40	57.8	<0.02	2	<0.1	3.4	7.47	24.73	3.97	0.70	2.15	0.34	1.78	0.37	0.89
REP 013J771180	QC	1.95	4.9	0.4	<0.05	0.8	8.61	55.7	<0.02	<1	0.1	3.8	7.11	22.07	3.56	0.66	2.21	0.38	1.83	0.32	0.95
013J771239	Sediment Pulp	0.80	1.9	0.2	<0.05	0.1	15.14	76.2	<0.02	2	0.4	1.7	11.49	39.60	5.65	0.94	4.58	0.55	2.68	0.59	1.48
REP 013J771239	QC	0.83	1.9	0.2	<0.05	0.1	15.58	76.5	<0.02	1	0.3	1.4	11.89	39.60	5.65	0.99	4.30	0.60	3.03	0.57	1.45
Reference Materials																					
STD DS11	Standard	1.37	33.3	1.7	<0.05	2.4	8.04	37.3	0.22	42	0.5	21.6	4.20	14.65	2.63	0.63	1.92	0.31	1.62	0.32	0.84
STD DS11	Standard	1.41	31.9	1.7	<0.05	2.6	8.32	38.4	0.21	35	0.8	20.8	4.14	14.05	2.65	0.52	2.22	0.32	1.53	0.36	0.78
STD DS11	Standard	1.30	31.5	1.7	<0.05	2.4	7.56	34.6	0.25	46	0.6	21.5	3.91	13.79	2.15	0.55	1.65	0.30	1.45	0.29	0.75
STD DS11	Standard	1.31	32.6	1.7	<0.05	2.5	7.93	37.5	0.23	50	1.0	22.0	4.18	14.58	2.55	0.58	1.97	0.32	1.61	0.32	0.84
STD DS11	Standard	1.30	31.6	1.8	<0.05	2.5	7.33	34.8	0.24	47	0.6	21.2	3.89	13.52	2.39	0.55	2.17	0.25	1.50	0.28	0.78
STD DS11	Standard	1.29	32.3	1.9	<0.05	2.5	7.86	35.2	0.27	36	0.5	22.1	3.95	13.06	2.52	0.61	2.01	0.31	1.39	0.30	0.85
STD OREAS262	Standard	<0.02	18.6	0.5	<0.05	6.2	11.16	34.2	0.02	2	0.4	17.8	4.27	15.01	3.33	0.76	2.99	0.47	2.29	0.41	1.13
STD OREAS262	Standard	<0.02	19.1	0.6	<0.05	6.1	11.10	37.5	0.04	<1	1.0	16.7	4.56	16.42	3.91	0.80	3.18	0.45	2.34	0.43	1.16
STD OREAS262	Standard	<0.02	18.8	0.5	<0.05	9.2	11.21	35.2	0.04	3	1.6	17.8	4.25	16.16	3.75	0.78	3.52	0.48	2.44	0.50	1.16
STD OREAS262	Standard	<0.02	17.8	0.5	<0.05	7.5	10.05	32.7	0.03	<1	0.7	18.5	4.21	15.57	3.34	0.85	2.84	0.44	2.20	0.44	1.03
STD OREAS262	Standard	<0.02	18.5	0.5	<0.05	7.3	10.08	33.1	0.03	1	1.0	16.7	3.95	14.92	3.15	0.69	2.91	0.41	1.90	0.42	1.07
STD OREAS262	Standard	<0.02	17.3	0.6	<0.05	7.0	10.19	30.1	0.04	<1	0.6	16.5	3.75	14.15	3.33	0.64	2.90	0.40	2.18	0.42	1.04
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 13, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000375.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013J771021	Sediment Pulp	0.20	1.13	0.16	<10	<2
REP 013J771021	QC	0.21	1.16	0.20	<10	<2
013J771078	Sediment Pulp	0.18	1.06	0.17	<10	<2
REP 013J771078	QC	0.18	1.09	0.16	<10	<2
013J771139	Sediment Pulp	0.18	0.93	0.14	<10	<2
REP 013J771139	QC	0.18	0.94	0.14	<10	<2
013J771180	Sediment Pulp	0.15	0.75	0.12	<10	<2
REP 013J771180	QC	0.12	0.77	0.10	<10	<2
013J771239	Sediment Pulp	0.21	1.30	0.20	<10	<2
REP 013J771239	QC	0.22	1.27	0.20	<10	<2
Reference Materials						
STD DS11	Standard	0.12	0.73	0.11	79	172
STD DS11	Standard	0.11	0.72	0.10	87	172
STD DS11	Standard	0.12	0.67	0.12	90	167
STD DS11	Standard	0.13	0.77	0.12	83	179
STD DS11	Standard	0.11	0.78	0.11	99	167
STD DS11	Standard	0.13	0.71	0.11	85	167
STD OREAS262	Standard	0.15	0.93	0.13	<10	<2
STD OREAS262	Standard	0.18	0.91	0.13	<10	<2
STD OREAS262	Standard	0.16	0.93	0.13	<10	<2
STD OREAS262	Standard	0.14	0.90	0.11	<10	3
STD OREAS262	Standard	0.14	0.84	0.12	<10	2
STD OREAS262	Standard	0.15	1.02	0.13	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 13, 2022

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Part: 1 of 4

QUALITY CONTROL REPORT

VAN22000375.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
BLK	Blank	<0.01	0.05	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.03	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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QUALITY CONTROL REPORT

VAN22000375.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1



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Project: None Given

Report Date: April 13, 2022

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Part: 3 of 4

QUALITY CONTROL REPORT

VAN22000375.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Project: None Given

Report Date: April 13, 2022

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QUALITY CONTROL REPORT

VAN22000375.1

		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 07, 2022
Report Date: April 19, 2022
Page: 1 of 11

CERTIFICATE OF ANALYSIS

VAN22000376.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 013K
P.O. Number: 3000732409
Number of Samples: 272

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	268	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	268	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: None Given
Report Date: April 19, 2022

Page: 2 of 11

Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831000	Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013K831001	Pulp	1.57	120.46	4.32	120.0	300	29.9	6.4	253	1.34	3.4	4.9	1.8	0.6	23.5	1.08	0.28	0.04	34	0.56	0.132
013K831002	Pulp	1.51	121.12	4.43	124.2	282	29.8	6.4	245	1.36	3.4	5.0	2.0	0.6	23.5	1.09	0.28	0.04	33	0.55	0.132
013K831003	Pulp	1.49	37.75	2.90	67.7	168	11.0	4.5	56	0.63	<0.1	2.5	1.0	<0.1	13.8	0.54	0.17	0.03	26	0.47	0.063
013K831004	Pulp	1.34	19.69	2.93	51.9	121	9.4	3.4	55	0.59	<0.1	1.7	0.5	<0.1	13.4	0.40	0.12	0.03	22	0.43	0.061
013K831005	Pulp	1.73	42.69	5.00	106.7	178	28.1	7.9	164	1.16	1.1	3.2	1.0	0.3	25.4	0.61	0.29	0.04	22	0.68	0.064
013K831006	Pulp	1.89	46.83	14.75	87.7	221	24.7	5.0	56	0.69	2.2	4.2	0.7	0.2	18.1	0.64	0.12	0.03	19	0.52	0.058
013K831007	Pulp	2.14	65.22	14.64	186.9	285	49.3	20.7	1880	4.01	16.9	11.6	1.3	0.9	26.6	0.83	0.41	0.06	65	0.74	0.094
013K831008	Pulp	2.75	51.17	9.39	138.1	279	30.3	8.7	200	1.79	6.4	5.4	0.6	0.6	22.0	0.79	0.24	0.04	38	0.67	0.089
013K831009	Pulp	1.93	12.58	2.54	57.6	45	14.3	6.2	126	1.30	1.6	1.6	0.3	1.1	20.2	0.20	0.05	<0.02	71	0.52	0.031
013K831010	Pulp	18.81	85.23	3.39	132.1	375	58.9	9.7	316	3.35	9.5	8.5	1.7	0.8	22.0	0.65	0.11	0.06	40	0.69	0.238
013K831011	Pulp	4.79	40.43	5.18	86.8	198	25.6	14.0	404	2.49	7.5	1.9	1.5	1.5	19.3	0.28	0.08	0.05	38	0.64	0.100
013K831012	Pulp	5.29	134.75	5.56	103.3	129	31.5	10.1	348	2.19	19.8	5.6	1.7	3.3	22.9	0.50	0.64	0.05	49	0.60	0.144
013K831013	Pulp	3.15	39.93	2.78	91.3	141	23.6	6.5	98	0.72	1.2	1.9	1.5	<0.1	18.9	0.41	0.07	0.03	17	0.73	0.075
013K831014	Pulp	2.68	32.23	2.31	72.9	119	19.3	5.6	43	0.31	1.1	2.0	1.1	0.2	35.1	0.32	0.04	0.03	10	0.82	0.030
013K831015	Pulp	3.45	19.77	3.22	32.6	203	9.8	2.3	87	0.56	0.1	5.1	0.3	<0.1	23.6	0.29	0.04	0.03	22	0.78	0.106
013K831016	Pulp	0.69	7.97	4.03	32.8	32	18.0	5.9	120	0.97	<0.1	1.1	<0.2	0.4	11.6	0.10	0.02	0.02	18	0.23	0.037
013K831017	Pulp	8.84	31.39	3.44	73.5	170	21.4	10.5	232	2.80	<0.1	10.3	0.5	0.3	18.1	0.42	0.03	0.03	37	0.44	0.091
013K831018	Pulp	23.02	57.53	5.64	115.3	155	10.6	11.1	267	5.19	0.5	22.1	0.7	1.3	25.7	0.55	0.02	0.05	67	0.65	0.234
013K831019	Pulp	8.42	52.56	4.31	72.0	193	14.6	6.9	151	1.23	<0.1	7.3	0.5	0.4	27.5	0.38	0.03	0.03	27	0.64	0.114
013K831020	Pulp	0.90	33.01	22.41	129.7	2666	45.7	27.2	1213	3.07	23.9	3.4	2.5	6.5	25.0	0.54	0.56	2.73	49	0.60	0.087
013K831021	Pulp	0.88	12.21	2.53	33.0	76	7.9	0.8	19	0.26	<0.1	1.4	1.5	<0.1	11.2	0.11	0.04	<0.02	8	0.21	0.026
013K831022	Pulp	1.02	15.29	2.24	29.1	95	8.7	1.0	20	0.29	<0.1	1.6	0.4	<0.1	12.0	0.12	0.02	<0.02	10	0.24	0.031
013K831023	Pulp	0.94	12.95	2.58	35.2	78	8.4	0.9	20	0.27	<0.1	1.5	0.4	<0.1	11.7	0.11	0.02	<0.02	8	0.22	0.027
013K831024	Pulp	1.20	14.46	13.16	102.9	56	25.5	22.3	1040	2.67	1.2	3.7	0.4	2.0	18.4	0.19	0.05	0.07	38	0.31	0.062
013K831025	Pulp	2.67	22.50	7.45	71.4	206	21.3	7.8	180	1.58	<0.1	9.0	0.7	0.8	21.4	0.18	0.03	0.05	40	0.36	0.141
013K831026	Pulp	2.91	19.10	6.71	81.4	88	28.5	20.5	610	4.32	0.7	6.4	0.3	2.2	19.6	0.05	0.03	0.05	39	0.29	0.051
013K831027	Pulp	8.32	60.90	5.66	73.0	256	13.8	17.8	1229	4.64	<0.1	6.3	0.9	1.5	14.3	0.55	0.04	0.05	49	0.34	0.204
013K831028	Pulp	0.47	19.49	7.70	88.3	49	37.1	14.1	240	2.47	0.1	1.8	<0.2	3.5	26.4	0.12	0.05	0.06	49	0.50	0.047
013K831029	Pulp	1.46	14.40	10.78	86.0	37	26.4	10.7	245	5.17	1.4	0.6	0.2	2.9	17.1	0.16	1.01	0.05	89	0.51	0.069



BUREAU MINERAL LABORATORIES
VERITAS Canada

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Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 19, 2022

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831000	Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013K831001	Pulp	42.4	33.4	0.29	104.0	0.024	<20	1.65	0.015	0.05	0.1	4.3	0.24	0.16	311	2.9	<0.02	1.9	0.48	<0.1
013K831002	Pulp	42.6	33.4	0.29	104.4	0.026	<20	1.60	0.016	0.05	0.1	4.5	0.24	0.16	293	3.0	<0.02	1.8	0.50	<0.1
013K831003	Pulp	62.4	17.2	0.12	144.6	0.012	<20	0.93	0.010	0.02	<0.1	1.3	0.08	0.31	32	2.4	<0.02	1.9	0.40	<0.1
013K831004	Pulp	41.7	14.6	0.11	121.9	0.011	<20	0.78	0.015	0.02	<0.1	0.8	0.05	0.29	25	2.2	<0.02	1.8	0.44	<0.1
013K831005	Pulp	29.7	31.0	0.28	82.9	0.024	<20	1.16	0.013	0.04	<0.1	3.2	0.07	0.41	118	1.9	<0.02	1.9	0.66	<0.1
013K831006	Pulp	50.9	35.3	0.21	106.8	0.021	<20	1.01	0.015	0.02	<0.1	2.3	0.06	0.28	99	3.1	<0.02	2.0	0.79	<0.1
013K831007	Pulp	46.3	57.0	0.46	251.7	0.035	<20	2.08	0.019	0.04	<0.1	5.3	0.15	0.11	111	1.8	<0.02	5.5	2.39	<0.1
013K831008	Pulp	35.3	37.4	0.28	144.2	0.034	<20	1.60	0.018	0.03	<0.1	3.6	0.09	0.20	98	3.0	<0.02	3.5	1.22	<0.1
013K831009	Pulp	20.8	22.2	0.24	155.3	0.041	<20	0.83	0.025	0.04	0.3	3.2	0.06	0.53	35	1.0	<0.02	3.4	0.44	<0.1
013K831010	Pulp	54.3	39.3	0.21	76.2	0.031	<20	2.88	0.016	0.03	0.4	3.3	0.12	0.26	139	3.0	<0.02	2.2	0.33	<0.1
013K831011	Pulp	22.0	28.4	0.56	63.3	0.070	<20	1.78	0.050	0.10	0.1	3.8	0.07	0.10	85	1.5	<0.02	4.0	0.79	<0.1
013K831012	Pulp	43.7	32.3	0.48	77.5	0.082	<20	1.83	0.049	0.10	0.2	4.6	0.14	0.10	64	1.8	<0.02	4.2	0.79	<0.1
013K831013	Pulp	19.7	15.5	0.08	47.8	0.019	<20	1.80	0.008	0.02	<0.1	0.8	0.05	0.42	114	2.0	<0.02	2.2	0.25	<0.1
013K831014	Pulp	20.5	10.4	0.10	34.6	0.024	<20	1.12	0.013	0.01	<0.1	1.2	0.05	0.49	86	1.4	<0.02	1.7	0.18	<0.1
013K831015	Pulp	28.1	12.8	0.06	82.4	0.030	<20	1.65	0.008	0.01	0.1	0.9	0.03	0.28	112	1.7	<0.02	4.5	0.16	<0.1
013K831016	Pulp	10.1	19.4	0.37	21.2	0.058	<20	0.92	0.013	0.02	<0.1	1.2	0.02	0.09	30	0.6	<0.02	3.6	0.53	<0.1
013K831017	Pulp	26.6	24.7	0.07	59.7	0.028	<20	2.65	0.008	0.01	<0.1	2.0	0.03	0.28	86	2.3	<0.02	2.7	0.17	<0.1
013K831018	Pulp	50.2	32.7	0.12	27.4	0.062	<20	3.95	0.008	0.02	0.3	3.1	0.11	0.23	103	4.0	<0.02	6.4	0.19	<0.1
013K831019	Pulp	60.6	17.9	0.17	56.5	0.044	<20	2.49	0.012	0.04	0.1	1.4	0.07	0.31	124	2.6	<0.02	5.7	0.36	<0.1
013K831020	Pulp	38.2	48.9	0.78	142.6	0.100	<20	1.63	0.030	0.26	0.2	5.8	0.27	0.16	259	1.0	0.04	5.5	1.32	<0.1
013K831021	Pulp	9.8	8.5	0.05	67.0	0.021	<20	0.83	0.008	0.01	<0.1	0.9	<0.02	0.22	326	1.1	<0.02	2.5	0.12	<0.1
013K831022	Pulp	11.6	9.4	0.05	76.5	0.024	<20	0.95	0.007	<0.01	<0.1	0.8	<0.02	0.24	72	1.5	<0.02	2.7	0.13	<0.1
013K831023	Pulp	10.4	8.8	0.05	70.6	0.022	<20	0.88	0.007	0.01	<0.1	0.8	<0.02	0.24	70	1.3	<0.02	2.6	0.13	<0.1
013K831024	Pulp	24.6	28.3	0.64	77.1	0.088	<20	1.97	0.051	0.15	<0.1	3.4	0.14	0.09	31	0.9	<0.02	5.6	1.03	<0.1
013K831025	Pulp	26.6	29.5	0.53	63.4	0.077	<20	1.73	0.025	0.12	0.1	2.5	0.07	0.15	91	1.4	<0.02	8.8	0.93	<0.1
013K831026	Pulp	27.7	32.8	0.66	78.3	0.104	<20	2.20	0.031	0.16	<0.1	4.1	0.10	0.04	41	0.6	<0.02	6.8	1.09	<0.1
013K831027	Pulp	60.3	29.3	0.11	52.6	0.061	<20	3.40	0.008	0.03	0.1	3.1	0.21	0.26	114	4.0	<0.02	7.3	0.28	<0.1
013K831028	Pulp	24.3	33.2	0.86	118.2	0.106	<20	2.26	0.051	0.22	<0.1	5.8	0.13	0.11	37	0.7	<0.02	6.9	0.90	<0.1
013K831029	Pulp	16.2	54.2	0.62	134.1	0.113	<20	2.13	0.023	0.06	0.1	5.5	0.05	0.22	53	1.3	<0.02	6.6	0.44	<0.1



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831000	Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013K831001	Pulp	0.77	3.5	0.2	<0.05	1.9	36.65	48.3	<0.02	5	0.8	4.4	10.53	40.70	7.44	1.44	6.81	0.97	5.75	1.12	3.28
013K831002	Pulp	0.72	3.6	0.2	<0.05	1.9	36.95	48.7	<0.02	6	0.8	4.4	10.67	40.79	7.48	1.44	6.91	0.96	5.80	1.12	3.32
013K831003	Pulp	0.24	3.0	0.1	<0.05	0.2	38.93	21.8	<0.02	1	0.5	2.5	14.79	57.35	9.46	1.57	8.29	1.03	5.78	1.11	3.22
013K831004	Pulp	0.20	3.1	0.1	<0.05	0.1	26.87	19.2	<0.02	<1	0.4	2.2	9.89	38.13	6.31	1.06	5.49	0.68	3.86	0.75	2.18
013K831005	Pulp	0.65	3.3	0.2	<0.05	1.0	19.97	35.5	<0.02	1	0.5	5.2	7.18	27.59	4.93	1.03	4.42	0.58	3.38	0.64	1.82
013K831006	Pulp	0.34	2.3	0.1	<0.05	0.4	25.41	22.2	<0.02	2	0.4	4.9	11.88	46.11	7.35	1.40	6.21	0.73	3.98	0.73	2.03
013K831007	Pulp	0.45	6.8	0.3	<0.05	0.8	26.53	45.8	0.03	<1	0.7	17.7	11.31	44.22	7.40	1.55	6.35	0.78	4.35	0.81	2.26
013K831008	Pulp	0.69	4.0	0.2	<0.05	1.1	20.54	33.8	<0.02	1	0.5	8.0	8.49	33.01	5.56	1.13	4.84	0.60	3.26	0.62	1.75
013K831009	Pulp	0.68	4.4	0.2	<0.05	2.5	14.61	28.3	<0.02	1	0.2	3.5	5.06	20.13	3.64	0.68	3.30	0.42	2.42	0.46	1.31
013K831010	Pulp	1.04	2.7	0.2	<0.05	1.1	35.36	95.6	0.02	1	0.7	3.6	14.09	54.08	9.65	1.73	8.22	1.11	6.37	1.16	3.26
013K831011	Pulp	1.01	7.2	0.4	<0.05	2.3	13.53	37.2	0.02	3	0.5	9.2	5.60	21.49	3.92	0.70	3.30	0.44	2.60	0.46	1.29
013K831012	Pulp	1.62	7.7	0.4	<0.05	2.2	27.83	94.0	0.02	3	0.8	9.0	11.34	42.59	7.50	1.06	6.17	0.85	5.01	0.93	2.66
013K831013	Pulp	0.77	1.4	0.1	<0.05	0.4	12.18	39.7	<0.02	1	0.4	1.9	5.01	19.41	3.55	0.71	3.05	0.41	2.33	0.43	1.19
013K831014	Pulp	0.73	1.0	<0.1	<0.05	0.7	9.68	37.2	<0.02	1	0.3	1.9	4.84	18.74	3.33	0.61	2.74	0.35	1.98	0.35	0.94
013K831015	Pulp	1.01	1.1	0.2	<0.05	0.6	13.40	56.6	<0.02	<1	0.5	1.4	6.89	25.88	4.52	0.83	3.71	0.50	2.87	0.50	1.32
013K831016	Pulp	0.87	2.2	0.2	<0.05	1.1	4.47	20.5	<0.02	<1	0.2	5.7	2.49	9.45	1.65	0.32	1.35	0.17	0.96	0.16	0.44
013K831017	Pulp	0.96	1.0	0.1	<0.05	0.4	16.53	59.0	<0.02	<1	0.8	1.2	7.22	28.05	4.99	0.95	4.19	0.56	3.23	0.59	1.61
013K831018	Pulp	1.85	1.6	0.2	<0.05	0.6	21.04	121.2	0.04	<1	1.0	2.3	12.28	45.27	7.80	1.46	6.01	0.81	4.39	0.74	1.97
013K831019	Pulp	1.34	4.0	0.2	<0.05	0.7	13.97	110.5	0.02	1	0.5	4.5	13.94	49.06	7.63	1.08	5.41	0.64	3.17	0.50	1.29
013K831020	Pulp	1.98	24.0	1.1	<0.05	5.8	18.46	71.2	0.04	1	0.6	19.5	9.35	34.55	6.00	0.90	4.54	0.59	3.31	0.61	1.76
013K831021	Pulp	0.43	0.8	0.1	<0.05	0.2	3.29	18.2	<0.02	<1	0.1	0.8	2.23	8.45	1.46	0.31	1.13	0.14	0.78	0.13	0.34
013K831022	Pulp	0.49	0.8	<0.1	<0.05	0.2	3.87	21.4	<0.02	<1	0.2	0.9	2.64	9.98	1.71	0.35	1.31	0.17	0.92	0.15	0.39
013K831023	Pulp	0.44	0.8	0.1	<0.05	0.2	3.50	19.3	<0.02	<1	0.1	0.9	2.35	8.96	1.55	0.33	1.22	0.15	0.82	0.14	0.36
013K831024	Pulp	1.21	13.7	0.6	<0.05	2.4	8.97	52.8	<0.02	<1	0.5	14.8	5.75	20.91	3.43	0.64	2.62	0.34	1.88	0.33	0.90
013K831025	Pulp	1.74	10.1	0.4	<0.05	2.3	9.19	52.5	<0.02	<1	0.4	10.7	6.38	23.43	3.78	0.67	2.91	0.37	2.00	0.34	0.92
013K831026	Pulp	1.13	14.4	0.5	<0.05	1.6	9.78	56.6	0.02	<1	0.5	18.4	6.76	24.77	4.16	0.71	3.20	0.40	2.17	0.37	0.97
013K831027	Pulp	1.40	2.6	0.3	<0.05	0.4	22.97	124.3	0.03	<1	0.6	2.6	14.12	50.99	8.69	1.39	6.82	0.92	5.02	0.83	2.24
013K831028	Pulp	1.98	17.6	0.6	<0.05	7.5	11.77	50.2	0.03	<1	0.6	17.5	6.20	23.58	4.18	0.77	3.30	0.43	2.42	0.43	1.19
013K831029	Pulp	1.46	5.0	2.7	<0.05	6.7	15.80	33.7	0.02	2	0.4	12.9	4.41	18.29	3.52	0.74	3.38	0.44	2.60	0.52	1.51



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Client: Geological Survey of Canada

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Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831000	Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013K831001	Pulp	0.43	2.78	0.43	<10	2
013K831002	Pulp	0.44	2.84	0.43	<10	3
013K831003	Pulp	0.41	2.62	0.42	<10	<2
013K831004	Pulp	0.28	1.78	0.28	<10	<2
013K831005	Pulp	0.23	1.45	0.22	<10	<2
013K831006	Pulp	0.25	1.52	0.24	<10	<2
013K831007	Pulp	0.29	1.81	0.28	<10	<2
013K831008	Pulp	0.22	1.37	0.22	<10	<2
013K831009	Pulp	0.16	1.04	0.17	<10	<2
013K831010	Pulp	0.42	2.65	0.39	<10	<2
013K831011	Pulp	0.16	1.02	0.15	<10	<2
013K831012	Pulp	0.35	2.22	0.32	<10	3
013K831013	Pulp	0.15	0.92	0.13	<10	<2
013K831014	Pulp	0.12	0.69	0.10	<10	<2
013K831015	Pulp	0.16	0.91	0.12	<10	<2
013K831016	Pulp	0.05	0.32	0.04	<10	<2
013K831017	Pulp	0.20	1.23	0.17	<10	<2
013K831018	Pulp	0.25	1.57	0.22	<10	<2
013K831019	Pulp	0.15	0.88	0.12	<10	<2
013K831020	Pulp	0.23	1.51	0.23	<10	<2
013K831021	Pulp	0.04	0.24	0.03	<10	<2
013K831022	Pulp	0.05	0.29	0.04	<10	<2
013K831023	Pulp	0.04	0.24	0.03	<10	<2
013K831024	Pulp	0.11	0.67	0.09	<10	<2
013K831025	Pulp	0.12	0.68	0.09	<10	<2
013K831026	Pulp	0.12	0.73	0.10	<10	<2
013K831027	Pulp	0.28	1.70	0.22	<10	<2
013K831028	Pulp	0.15	0.94	0.13	<10	<2
013K831029	Pulp	0.20	1.30	0.21	<10	<2



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831030	Pulp	0.59	15.73	4.38	48.5	85	17.3	4.1	60	0.67	<0.1	0.6	<0.2	<0.1	18.0	0.18	0.03	0.04	36	0.27	0.084
013K831031	Pulp	0.32	17.07	6.18	44.7	101	15.2	3.7	80	0.80	<0.1	0.5	0.4	0.2	17.6	0.23	0.05	0.06	26	0.26	0.103
013K831032	Pulp	0.63	6.02	3.52	39.7	32	7.0	3.1	50	0.61	<0.1	1.1	0.3	<0.1	15.8	0.15	0.05	0.03	40	0.40	0.046
013K831033	Pulp	0.86	13.44	3.87	62.3	37	19.7	8.5	123	1.37	<0.1	2.0	0.2	1.2	17.9	0.15	0.04	0.03	31	0.40	0.043
013K831034	Pulp	0.94	8.52	1.83	32.5	48	6.9	2.9	27	0.37	<0.1	6.4	<0.2	0.4	31.9	0.19	0.08	<0.02	8	0.54	0.025
013K831035	Pulp	1.49	33.23	6.40	79.4	132	34.3	19.1	904	4.69	2.8	1.2	0.6	3.2	22.0	0.33	0.11	0.06	59	0.50	0.099
013K831036	Pulp	0.35	37.28	4.68	88.4	105	32.1	11.3	181	1.69	0.3	1.4	0.7	2.1	18.9	0.34	0.17	0.04	27	0.54	0.045
013K831037	Pulp	2.72	62.69	4.83	94.1	266	37.7	9.8	152	1.37	2.5	3.0	1.6	0.4	39.7	0.50	0.15	0.04	25	0.96	0.066
013K831038	Pulp	4.35	66.90	2.86	79.0	171	30.6	4.7	70	0.69	1.1	2.8	1.3	0.9	31.9	0.50	0.37	0.02	10	0.74	0.028
013K831039	Pulp	4.23	257.58	10.84	229.8	307	106.2	24.5	311	3.02	17.6	2.3	2.6	4.8	26.0	1.70	0.27	0.07	49	0.95	0.053
013K831040	Pulp	9.26	41.13	74.04	298.0	621	12.3	7.5	434	1.80	32.8	8.2	2.9	1.1	62.0	1.31	0.47	0.92	21	6.08	0.063
013K831041	Pulp	4.87	50.67	6.02	138.5	233	34.3	12.3	242	1.91	3.0	4.7	0.9	0.7	31.0	0.67	0.15	0.05	30	1.08	0.078
013K831042	Pulp	4.89	49.99	5.97	113.0	210	34.2	12.0	229	2.11	3.3	4.7	0.8	0.8	30.0	0.64	0.15	0.04	31	1.07	0.081
013K831043	Pulp	5.00	49.17	5.93	124.2	223	33.5	11.9	236	1.88	2.7	4.6	0.7	0.7	30.3	0.65	0.15	0.04	30	1.07	0.078
013K831044	Pulp	4.00	58.99	1.70	91.6	73	23.8	3.4	50	0.24	2.8	1.9	1.5	0.3	25.0	0.23	0.07	<0.02	8	0.92	0.035
013K831045	Pulp	4.11	39.28	2.27	56.8	97	22.2	4.4	38	0.34	1.4	7.8	0.4	0.2	18.1	0.28	0.07	<0.02	7	0.78	0.036
013K831046	Pulp	1.17	33.72	9.90	115.1	140	53.6	20.1	461	3.64	1.3	1.8	0.6	3.7	31.4	0.24	0.10	0.09	55	0.67	0.085
013K831047	Pulp	3.45	51.84	4.55	116.9	276	30.2	14.5	328	1.41	1.9	3.0	1.2	0.2	38.3	0.62	0.16	0.05	27	1.23	0.132
013K831048	Pulp	2.56	47.41	4.41	140.7	519	13.1	5.0	106	1.23	1.0	3.0	0.7	0.2	19.5	1.17	0.18	0.03	23	0.67	0.085
013K831049	Pulp	3.67	93.60	6.21	189.2	291	28.3	25.9	757	4.28	32.7	4.3	1.3	1.0	27.2	1.08	0.18	0.04	26	0.94	0.113
013K831050	Pulp	7.70	40.53	6.21	101.8	195	32.4	18.0	1155	3.57	1.1	5.9	0.4	1.0	33.2	0.46	0.06	0.06	40	0.59	0.097
013K831051	Pulp	2.48	83.45	9.77	129.1	255	28.2	9.2	119	0.59	2.2	6.7	1.4	0.2	40.5	1.08	0.15	0.04	13	0.95	0.060
013K831052	Pulp	1.41	168.70	10.96	158.6	318	30.0	8.5	268	1.88	18.1	6.1	2.9	0.5	21.0	1.15	0.40	0.05	33	0.68	0.163
013K831053	Pulp	29.52	70.06	13.95	172.2	468	18.7	13.4	541	2.55	1.5	30.2	2.2	0.7	42.4	1.17	0.06	0.10	27	1.10	0.152
013K831054	Pulp	0.32	12.35	4.96	30.8	79	13.0	2.5	49	0.44	<0.1	0.4	0.6	0.4	9.0	0.15	0.04	0.04	21	0.15	0.045
013K831055	Pulp	2.91	30.95	2.93	60.2	183	14.5	4.0	76	0.71	<0.1	3.2	0.4	0.2	17.8	0.27	0.04	0.02	24	0.40	0.054
013K831056	Pulp	9.03	103.90	6.03	116.0	740	23.9	27.6	963	5.21	6.7	10.6	0.9	1.9	21.8	0.74	0.06	0.06	54	0.49	0.317
013K831057	Pulp	3.13	83.28	5.40	127.5	988	23.5	22.2	709	5.04	0.9	10.4	1.2	1.4	33.7	0.61	0.07	0.05	51	0.70	0.306
013K831058	Pulp	5.79	74.83	5.28	148.5	501	28.4	54.0	2792	5.05	3.6	23.0	0.6	2.7	26.5	0.75	0.04	0.04	42	0.55	0.285
013K831059	Pulp	78.66	52.56	8.21	122.8	665	21.8	59.5	6030	11.54	3.3	39.3	0.4	2.8	44.0	0.70	0.05	0.06	73	0.69	0.299



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831030	Pulp	16.4	26.9	0.20	67.1	0.036	<20	1.45	0.016	0.03	<0.1	1.0	0.03	0.28	45	1.6	<0.02	3.9	0.32	<0.1
013K831031	Pulp	12.7	28.5	0.14	84.9	0.051	<20	2.05	0.012	0.03	<0.1	1.9	0.04	0.28	64	1.4	<0.02	5.8	0.36	<0.1
013K831032	Pulp	9.3	18.4	0.17	59.9	0.025	<20	0.95	0.020	0.02	<0.1	0.6	0.03	0.28	26	1.0	<0.02	4.4	0.27	<0.1
013K831033	Pulp	29.7	26.6	0.42	142.0	0.070	<20	1.35	0.025	0.05	<0.1	4.5	0.05	0.16	25	0.7	<0.02	3.7	0.45	<0.1
013K831034	Pulp	13.5	7.2	0.05	62.1	0.015	<20	0.50	0.013	<0.01	<0.1	0.9	0.02	0.46	64	0.9	<0.02	0.8	0.18	<0.1
013K831035	Pulp	24.0	39.7	0.72	116.4	0.089	<20	1.92	0.051	0.10	<0.1	5.2	0.11	0.11	68	0.9	<0.02	5.0	0.73	<0.1
013K831036	Pulp	29.5	30.6	0.51	80.4	0.064	<20	1.31	0.034	0.07	<0.1	5.7	0.10	0.50	89	0.9	<0.02	3.1	0.75	<0.1
013K831037	Pulp	19.4	31.9	0.38	53.2	0.034	<20	1.59	0.019	0.07	0.1	3.0	0.07	0.41	106	2.2	<0.02	2.6	0.61	<0.1
013K831038	Pulp	15.9	19.0	0.26	63.1	0.020	<20	0.61	0.014	0.04	<0.1	3.5	0.06	0.90	146	1.7	<0.02	1.2	0.59	<0.1
013K831039	Pulp	48.3	51.0	0.79	129.3	0.098	<20	2.10	0.033	0.18	0.2	9.4	0.22	0.91	194	2.8	0.02	4.9	1.06	<0.1
013K831040	Pulp	9.9	12.2	0.58	80.0	0.039	<20	0.43	0.025	0.05	0.5	2.2	0.20	1.56	102	1.4	0.03	2.0	0.47	<0.1
013K831041	Pulp	24.5	34.0	0.43	90.3	0.044	<20	1.82	0.027	0.10	0.1	3.8	0.08	0.38	168	2.4	<0.02	3.4	0.85	<0.1
013K831042	Pulp	23.2	33.7	0.42	91.0	0.043	<20	1.80	0.025	0.09	<0.1	3.8	0.08	0.35	102	2.1	<0.02	3.3	0.80	<0.1
013K831043	Pulp	23.9	33.4	0.41	87.0	0.043	<20	1.78	0.026	0.09	<0.1	3.6	0.08	0.36	124	2.2	<0.02	3.3	0.81	<0.1
013K831044	Pulp	12.7	12.2	0.08	70.7	0.013	<20	0.48	0.028	0.01	<0.1	1.6	0.04	0.87	78	1.8	<0.02	0.6	0.26	<0.1
013K831045	Pulp	14.4	13.9	0.09	38.1	0.016	<20	0.67	0.007	0.02	<0.1	1.5	0.04	0.72	71	1.3	<0.02	0.9	0.43	<0.1
013K831046	Pulp	24.1	57.3	1.27	181.5	0.108	<20	2.52	0.042	0.27	<0.1	6.3	0.13	0.08	78	0.8	<0.02	7.7	1.52	<0.1
013K831047	Pulp	24.9	29.5	0.15	61.2	0.021	<20	2.45	0.010	0.02	<0.1	1.9	0.07	0.69	133	2.7	0.03	2.3	0.33	<0.1
013K831048	Pulp	52.6	17.2	0.10	92.6	0.014	<20	1.30	0.009	0.02	<0.1	2.0	0.08	0.33	93	3.9	<0.02	1.9	0.27	<0.1
013K831049	Pulp	29.8	23.9	0.20	164.5	0.020	<20	2.05	0.013	0.03	0.1	4.4	0.15	0.35	124	2.7	0.02	1.7	0.37	<0.1
013K831050	Pulp	26.2	35.9	0.47	228.1	0.055	<20	2.34	0.038	0.10	<0.1	4.4	0.11	0.27	76	2.4	<0.02	4.1	0.63	<0.1
013K831051	Pulp	30.6	21.7	0.19	78.2	0.019	<20	1.37	0.013	0.02	<0.1	2.6	0.07	0.58	209	2.2	<0.02	1.4	0.38	<0.1
013K831052	Pulp	32.7	28.3	0.31	67.9	0.035	<20	2.08	0.026	0.05	<0.1	3.8	0.11	0.26	128	3.1	0.02	2.7	0.48	<0.1
013K831053	Pulp	41.9	28.5	0.15	114.1	0.024	<20	2.68	0.012	0.03	0.2	3.6	0.16	0.47	258	4.0	<0.02	2.2	0.34	<0.1
013K831054	Pulp	7.5	21.2	0.16	42.0	0.076	<20	1.25	0.011	0.03	<0.1	2.2	0.03	0.23	56	1.6	<0.02	5.0	0.38	<0.1
013K831055	Pulp	34.2	19.1	0.12	52.4	0.029	<20	1.71	0.006	0.02	<0.1	1.1	0.05	0.28	66	1.6	<0.02	2.6	0.22	<0.1
013K831056	Pulp	86.8	50.4	0.22	61.6	0.066	<20	4.61	0.011	0.05	0.1	5.1	0.32	0.31	180	5.3	<0.02	6.0	0.41	<0.1
013K831057	Pulp	92.7	54.3	0.18	87.3	0.051	<20	4.45	0.013	0.04	0.1	5.9	0.10	0.35	250	5.5	0.02	4.7	0.37	<0.1
013K831058	Pulp	108.9	38.3	0.14	75.3	0.053	<20	4.27	0.010	0.04	<0.1	4.5	0.46	0.26	162	4.8	<0.02	3.6	0.30	<0.1
013K831059	Pulp	99.0	36.0	0.12	144.7	0.074	<20	3.38	0.011	0.03	0.1	4.3	0.39	0.37	236	4.5	<0.02	9.3	0.31	<0.1



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831030	Pulp	0.71	3.4	0.3	<0.05	1.4	10.60	33.8	<0.02	<1	0.3	3.9	4.23	16.76	3.18	0.63	2.81	0.37	2.13	0.38	1.03
013K831031	Pulp	1.17	3.1	0.4	<0.05	2.0	8.42	27.5	<0.02	<1	0.3	3.3	3.19	12.61	2.54	0.62	2.28	0.32	1.81	0.32	0.84
013K831032	Pulp	0.29	2.7	0.2	<0.05	0.3	6.26	16.2	<0.02	<1	0.2	4.8	2.18	8.40	1.51	0.29	1.36	0.18	1.06	0.20	0.54
013K831033	Pulp	0.75	5.7	0.3	<0.05	2.1	21.06	26.9	<0.02	<1	0.4	7.2	8.22	33.89	5.66	1.05	4.84	0.58	3.29	0.64	1.82
013K831034	Pulp	0.28	0.7	<0.1	<0.05	0.5	5.28	19.1	<0.02	<1	<0.1	0.9	3.22	12.54	2.03	0.45	1.59	0.19	1.05	0.18	0.49
013K831035	Pulp	1.09	6.9	0.4	<0.05	3.2	14.17	47.1	<0.02	2	0.5	11.9	6.06	23.21	4.18	0.82	3.53	0.47	2.71	0.50	1.38
013K831036	Pulp	1.07	6.3	0.4	<0.05	3.4	19.21	38.8	<0.02	1	0.4	9.4	7.47	29.06	5.28	1.04	4.58	0.60	3.46	0.65	1.82
013K831037	Pulp	0.88	5.4	0.2	<0.05	1.3	11.91	32.6	<0.02	4	0.4	6.8	4.59	17.55	3.17	0.67	2.74	0.37	2.15	0.41	1.14
013K831038	Pulp	0.51	3.7	0.1	<0.05	2.5	11.70	18.2	<0.02	4	0.2	4.6	3.84	15.31	2.82	0.63	2.64	0.34	2.06	0.39	1.08
013K831039	Pulp	2.86	13.6	0.5	<0.05	12.1	32.31	63.9	0.02	5	1.0	15.1	11.46	43.12	7.44	1.41	6.46	0.88	5.28	1.03	3.00
013K831040	Pulp	0.65	3.4	3.1	<0.05	1.2	10.18	16.1	0.45	18	0.1	3.9	2.59	10.78	2.26	0.43	1.99	0.27	1.65	0.32	0.91
013K831041	Pulp	1.27	7.8	0.3	<0.05	2.0	14.47	43.5	<0.02	3	0.5	9.4	5.78	21.75	3.87	0.77	3.34	0.45	2.65	0.49	1.40
013K831042	Pulp	1.31	7.4	0.3	<0.05	2.3	14.37	42.3	<0.02	3	0.5	9.3	5.65	21.24	3.75	0.75	3.25	0.44	2.58	0.48	1.37
013K831043	Pulp	1.26	7.3	0.3	<0.05	2.0	14.23	42.4	<0.02	3	0.5	9.1	5.62	21.29	3.79	0.76	3.26	0.44	2.58	0.48	1.37
013K831044	Pulp	0.35	1.0	<0.1	<0.05	1.2	8.62	18.6	<0.02	4	0.1	1.4	3.06	11.88	2.12	0.41	1.88	0.25	1.48	0.29	0.82
013K831045	Pulp	0.45	1.7	<0.1	<0.05	0.9	9.48	25.4	<0.02	3	0.2	2.2	3.69	14.67	2.69	0.54	2.37	0.32	1.79	0.34	0.93
013K831046	Pulp	1.86	20.0	0.6	<0.05	7.4	13.22	46.2	0.03	<1	0.8	22.8	5.90	22.08	3.99	0.78	3.28	0.45	2.61	0.48	1.32
013K831047	Pulp	0.73	2.1	0.1	<0.05	0.9	13.78	44.3	<0.02	4	0.5	3.1	5.80	21.75	3.78	0.80	3.19	0.43	2.53	0.47	1.32
013K831048	Pulp	0.43	1.8	0.1	<0.05	0.3	27.00	24.8	<0.02	2	0.5	2.5	11.91	45.63	7.04	1.35	5.91	0.72	4.06	0.78	2.19
013K831049	Pulp	0.55	2.2	0.1	<0.05	1.9	20.18	42.0	<0.02	3	0.6	2.8	7.22	27.29	4.80	1.10	4.24	0.57	3.35	0.64	1.79
013K831050	Pulp	0.95	7.3	0.3	<0.05	1.0	15.98	46.1	<0.02	2	0.6	9.4	6.37	24.32	4.31	0.95	3.70	0.50	2.94	0.55	1.52
013K831051	Pulp	0.50	2.0	0.1	<0.05	0.8	19.22	37.9	<0.02	3	0.4	2.9	7.33	28.17	5.02	1.23	4.41	0.57	3.23	0.60	1.67
013K831052	Pulp	0.83	4.0	0.2	<0.05	1.0	27.46	50.2	<0.02	6	0.7	5.6	8.32	32.40	5.93	1.29	5.39	0.73	4.36	0.84	2.38
013K831053	Pulp	0.72	2.4	0.1	<0.05	1.4	23.63	56.2	<0.02	6	0.7	4.0	10.05	38.22	6.49	1.40	5.46	0.71	4.04	0.75	2.12
013K831054	Pulp	1.18	3.0	0.4	<0.05	3.5	4.56	16.5	<0.02	<1	0.2	3.1	1.93	7.61	1.51	0.34	1.27	0.18	1.05	0.18	0.49
013K831055	Pulp	0.69	2.0	0.1	<0.05	0.4	11.30	62.1	<0.02	<1	0.5	2.7	8.21	29.99	4.85	0.83	3.73	0.46	2.46	0.42	1.09
013K831056	Pulp	1.63	3.7	0.3	<0.05	1.3	39.37	171.9	0.04	1	1.2	4.5	20.27	73.10	12.54	2.27	10.17	1.42	7.98	1.37	3.65
013K831057	Pulp	1.70	3.4	0.2	<0.05	1.3	43.94	173.4	0.04	<1	1.5	3.8	21.56	78.33	13.27	2.54	11.00	1.51	8.65	1.52	4.09
013K831058	Pulp	0.97	3.1	0.2	<0.05	1.0	35.36	250.4	0.03	<1	1.2	3.9	23.50	82.11	12.93	2.45	9.82	1.32	7.28	1.24	3.35
013K831059	Pulp	1.23	2.6	0.3	<0.05	0.7	31.67	199.3	0.05	3	1.1	2.9	21.11	74.43	11.31	2.31	8.61	1.15	6.48	1.14	3.10



BUREAU MINERAL LABORATORIES
VERITAS Canada

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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831030	Pulp	0.13	0.73	0.10	<10	<2
013K831031	Pulp	0.10	0.63	0.09	<10	<2
013K831032	Pulp	0.07	0.41	0.06	<10	<2
013K831033	Pulp	0.24	1.51	0.24	<10	<2
013K831034	Pulp	0.06	0.35	0.05	<10	<2
013K831035	Pulp	0.18	1.11	0.16	<10	<2
013K831036	Pulp	0.23	1.44	0.21	<10	<2
013K831037	Pulp	0.15	0.93	0.13	<10	<2
013K831038	Pulp	0.13	0.85	0.12	<10	<2
013K831039	Pulp	0.40	2.61	0.40	<10	<2
013K831040	Pulp	0.12	0.80	0.12	<10	<2
013K831041	Pulp	0.18	1.16	0.16	<10	<2
013K831042	Pulp	0.18	1.13	0.16	<10	<2
013K831043	Pulp	0.18	1.13	0.16	<10	<2
013K831044	Pulp	0.11	0.68	0.11	<10	<2
013K831045	Pulp	0.11	0.74	0.11	<10	<2
013K831046	Pulp	0.17	1.10	0.15	<10	<2
013K831047	Pulp	0.17	1.08	0.16	<10	<2
013K831048	Pulp	0.28	1.72	0.27	<10	<2
013K831049	Pulp	0.24	1.45	0.22	<10	<2
013K831050	Pulp	0.20	1.25	0.18	<10	<2
013K831051	Pulp	0.21	1.35	0.20	<10	<2
013K831052	Pulp	0.31	1.98	0.30	<10	2
013K831053	Pulp	0.27	1.78	0.27	<10	<2
013K831054	Pulp	0.06	0.39	0.05	<10	<2
013K831055	Pulp	0.13	0.76	0.10	<10	<2
013K831056	Pulp	0.46	2.79	0.36	<10	<2
013K831057	Pulp	0.52	3.05	0.40	<10	<2
013K831058	Pulp	0.43	2.58	0.33	<10	<2
013K831059	Pulp	0.40	2.36	0.31	<10	<2



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831060	Pulp	0.81	33.13	23.86	129.2	2634	45.6	27.3	1210	3.05	23.7	3.5	2.1	6.6	24.9	0.53	0.52	2.62	50	0.60	0.087
013K831061	Pulp	15.19	34.03	4.77	92.4	275	21.3	20.4	425	3.39	<0.1	9.1	0.4	1.5	22.5	0.35	0.05	0.04	40	0.33	0.106
013K831062	Pulp	9.07	42.27	76.49	300.3	597	12.6	7.6	434	1.78	33.1	8.4	3.2	1.1	60.8	1.27	0.49	0.82	21	6.13	0.063
013K831063	Pulp	15.14	33.92	4.78	93.0	273	21.2	20.5	420	3.35	0.2	9.1	<0.2	1.5	22.5	0.36	0.04	0.04	40	0.33	0.104
013K831064	Pulp	12.07	34.16	4.82	89.2	285	20.2	12.9	308	2.64	<0.1	8.6	0.4	1.1	22.7	0.32	0.05	0.04	39	0.34	0.113
013K831065	Pulp	5.00	62.31	8.43	136.3	492	30.2	47.8	2815	6.80	2.7	19.0	0.4	3.7	29.3	0.60	0.06	0.06	62	0.45	0.230
013K831066	Pulp	3.85	45.93	7.29	122.7	391	22.5	26.4	693	6.24	<0.1	15.8	0.4	3.8	42.9	0.50	0.04	0.05	67	0.57	0.231
013K831067	Pulp	6.41	34.61	7.99	106.0	582	12.8	27.9	1279	5.69	<0.1	21.6	0.8	1.8	33.1	0.47	0.04	0.06	59	0.57	0.324
013K831068	Pulp	22.06	41.58	9.68	155.8	511	19.2	128.9	4776	8.60	<0.1	72.0	0.7	2.3	26.7	0.64	0.03	0.05	56	0.46	0.290
013K831069	Pulp	2.76	22.36	2.87	71.9	159	12.8	4.8	136	1.05	<0.1	9.9	<0.2	0.4	20.7	0.29	0.03	0.02	22	0.41	0.076
013K831070	Pulp	3.00	24.66	2.70	34.7	199	9.3	3.3	91	0.67	<0.1	5.4	0.5	0.1	17.7	0.33	0.02	0.02	24	0.45	0.084
013K831071	Pulp	1.92	48.56	2.72	46.2	433	21.2	5.3	88	0.76	<0.1	1.6	0.5	<0.1	22.5	0.43	0.04	0.04	25	0.73	0.107
013K831072	Pulp	7.22	110.99	4.89	183.9	464	38.5	53.2	1558	5.35	0.8	10.0	3.2	1.6	25.5	0.95	0.05	0.11	44	0.54	0.245
013K831073	Pulp	7.05	150.67	17.03	141.4	695	26.7	22.3	1082	3.99	6.4	6.9	3.0	0.9	14.3	1.15	0.05	0.07	36	0.52	0.242
013K831074	Pulp	5.32	84.27	6.19	115.7	485	27.2	16.0	354	3.33	25.3	4.0	2.3	1.0	28.2	0.52	0.11	0.07	53	0.68	0.286
013K831075	Pulp	7.60	118.43	4.71	119.9	238	40.5	15.1	163	1.42	51.3	6.2	4.2	2.1	20.4	0.97	0.34	0.06	31	0.86	0.047
013K831076	Pulp	7.74	66.35	3.49	70.8	394	20.0	14.1	228	1.39	10.3	6.6	1.2	0.4	28.0	0.41	0.33	0.06	36	1.07	0.137
013K831077	Pulp	22.98	71.96	20.31	112.2	1206	22.7	7.8	217	3.14	2.5	359.6	1.4	4.5	35.4	0.69	0.06	0.19	34	0.74	0.410
013K831078	Pulp	9.52	72.40	20.91	144.8	787	30.7	62.0	2882	6.45	2.9	68.2	1.5	6.3	23.2	0.83	0.07	0.16	42	0.38	0.290
013K831079	Pulp	15.22	47.04	14.68	177.7	1467	12.6	43.5	1806	7.73	1.3	34.9	1.4	3.9	28.1	0.72	0.28	0.07	67	0.46	0.256
013K831080	Pulp	8.27	32.30	10.44	118.0	889	10.1	11.8	440	2.58	1.3	18.3	1.5	1.1	25.9	0.77	0.20	0.07	42	0.57	0.200
013K831081	Pulp	6.21	44.94	20.43	117.1	890	17.2	29.4	1350	5.86	2.5	23.0	1.0	4.5	29.4	0.70	0.10	0.18	60	0.42	0.344
013K831082	Pulp	2.98	22.97	10.06	113.5	606	12.6	66.4	1974	8.12	3.1	6.8	4.4	3.8	20.1	0.59	0.07	0.08	47	0.25	0.241
013K831083	Pulp	3.53	32.42	13.49	101.6	748	12.0	17.2	615	6.26	3.0	10.3	0.9	4.6	29.7	0.49	0.08	0.12	63	0.42	0.277
013K831084	Pulp	6.19	43.05	20.87	114.3	919	16.2	28.9	1394	5.99	3.0	24.0	0.5	5.1	29.9	0.65	0.09	0.18	62	0.43	0.337
013K831085	Pulp	3.65	32.78	13.85	87.3	640	14.2	6.7	202	1.62	1.7	10.0	0.4	0.6	31.1	0.65	0.30	0.09	40	0.53	0.296
013K831086	Pulp	1.66	22.00	7.05	64.4	275	17.7	3.3	68	0.46	0.9	6.7	<0.2	0.3	27.4	0.34	0.08	0.04	12	0.41	0.066
013K831087	Pulp	6.02	40.29	18.18	94.8	724	17.4	22.3	981	3.91	5.1	30.1	1.2	1.8	17.2	0.83	0.09	0.05	25	0.29	0.184
013K831088	Pulp	11.56	48.63	21.53	118.5	1084	21.2	40.2	1963	8.32	9.3	27.7	1.3	4.3	29.6	0.77	0.12	0.18	57	0.57	0.343
013K831089	Pulp	2.37	28.41	4.17	81.4	287	18.8	3.0	32	0.44	1.0	12.2	1.2	0.4	27.3	0.31	0.13	0.10	10	0.39	0.061



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831060	Pulp	36.6	49.1	0.78	138.0	0.102	<20	1.65	0.031	0.26	0.2	5.8	0.26	0.16	270	1.0	0.05	5.4	1.31	<0.1
013K831061	Pulp	57.4	29.0	0.33	78.9	0.054	<20	2.35	0.014	0.09	<0.1	2.7	0.22	0.20	98	2.1	<0.02	4.5	0.55	<0.1
013K831062	Pulp	9.9	12.1	0.58	78.5	0.038	<20	0.43	0.025	0.05	0.4	2.1	0.20	1.57	109	1.4	0.02	1.9	0.46	<0.1
013K831063	Pulp	57.8	29.0	0.32	78.5	0.053	<20	2.32	0.013	0.08	<0.1	2.7	0.22	0.20	109	2.2	<0.02	4.5	0.53	<0.1
013K831064	Pulp	55.1	28.2	0.33	79.7	0.055	<20	2.26	0.013	0.09	<0.1	2.4	0.13	0.20	102	1.9	<0.02	4.7	0.55	<0.1
013K831065	Pulp	109.4	45.3	0.61	99.1	0.102	<20	4.17	0.021	0.18	0.1	4.8	0.44	0.21	143	3.9	<0.02	8.4	1.02	<0.1
013K831066	Pulp	94.0	37.9	0.45	79.6	0.099	<20	3.85	0.038	0.14	0.1	4.2	0.29	0.21	163	3.5	<0.02	8.9	0.75	<0.1
013K831067	Pulp	83.3	26.9	0.12	74.0	0.063	<20	3.97	0.010	0.05	0.1	3.0	0.16	0.31	249	5.0	<0.02	12.0	0.39	<0.1
013K831068	Pulp	91.2	27.6	0.12	128.8	0.061	<20	4.19	0.011	0.04	0.3	3.4	0.55	0.27	197	4.7	<0.02	11.5	0.36	<0.1
013K831069	Pulp	58.7	15.6	0.12	48.7	0.031	<20	2.04	0.007	0.03	<0.1	1.1	0.06	0.31	79	1.7	<0.02	2.4	0.22	<0.1
013K831070	Pulp	33.3	11.8	0.04	49.9	0.022	<20	1.51	0.005	0.01	<0.1	0.6	0.02	0.24	103	1.7	<0.02	2.5	0.12	<0.1
013K831071	Pulp	25.7	27.8	0.15	79.4	0.030	<20	1.66	0.006	0.03	0.1	1.0	0.06	0.35	128	2.2	<0.02	2.7	0.20	<0.1
013K831072	Pulp	114.0	47.2	0.18	85.6	0.055	<20	4.18	0.007	0.04	0.4	3.8	0.76	0.27	111	4.4	<0.02	4.1	0.34	0.1
013K831073	Pulp	83.7	36.7	0.12	62.7	0.036	<20	2.99	0.005	0.03	0.3	3.7	0.45	0.23	154	3.8	0.02	2.5	0.25	<0.1
013K831074	Pulp	52.8	45.4	0.53	108.5	0.072	<20	2.71	0.044	0.15	0.6	3.2	0.24	0.14	129	3.2	<0.02	4.6	1.02	<0.1
013K831075	Pulp	69.9	42.1	0.35	95.0	0.053	<20	1.14	0.017	0.07	0.2	4.7	0.19	1.05	98	3.2	<0.02	2.8	0.55	<0.1
013K831076	Pulp	45.2	33.2	0.12	102.3	0.034	<20	2.09	0.012	0.02	1.3	1.8	0.11	0.40	207	3.2	<0.02	2.8	0.25	<0.1
013K831077	Pulp	384.8	58.0	0.08	106.7	0.056	<20	4.65	0.008	0.03	2.9	5.1	0.20	0.37	192	4.5	<0.02	5.8	0.45	0.4
013K831078	Pulp	263.4	49.9	0.22	111.4	0.080	<20	4.05	0.005	0.11	0.8	4.8	1.00	0.21	145	4.3	<0.02	7.1	1.26	0.3
013K831079	Pulp	143.1	28.7	0.14	358.1	0.047	<20	2.79	0.005	0.05	0.8	4.7	0.63	0.17	210	9.3	<0.02	4.4	0.61	0.2
013K831080	Pulp	105.4	24.5	0.14	269.6	0.043	<20	2.42	0.006	0.03	0.6	2.5	0.15	0.22	166	5.7	<0.02	4.3	0.32	0.1
013K831081	Pulp	151.7	40.1	0.13	135.1	0.083	<20	3.46	0.007	0.06	0.8	4.1	0.40	0.24	196	2.6	0.04	7.4	0.84	0.1
013K831082	Pulp	82.4	26.6	0.08	116.1	0.055	<20	2.27	0.005	0.05	0.5	3.1	0.51	0.14	141	1.9	0.04	4.2	0.66	0.2
013K831083	Pulp	103.4	32.6	0.11	110.9	0.069	<20	2.68	0.008	0.07	0.7	3.6	0.22	0.16	162	2.1	0.05	5.1	0.85	0.1
013K831084	Pulp	153.6	40.4	0.13	133.7	0.082	<20	3.58	0.008	0.07	0.7	4.1	0.40	0.25	212	2.7	0.04	7.1	0.86	0.2
013K831085	Pulp	100.1	34.5	0.10	146.3	0.044	<20	2.43	0.006	0.04	0.9	2.0	0.12	0.29	151	1.5	<0.02	4.1	0.45	<0.1
013K831086	Pulp	49.8	22.1	0.13	109.2	0.030	<20	1.35	0.007	0.05	0.1	1.0	0.07	0.30	105	0.8	<0.02	2.2	0.57	<0.1
013K831087	Pulp	96.6	29.4	0.12	83.3	0.041	<20	2.61	0.008	0.04	0.2	2.8	0.48	0.13	178	1.9	0.03	3.4	0.66	<0.1
013K831088	Pulp	193.5	45.0	0.16	134.6	0.074	<20	3.53	0.008	0.06	1.0	4.1	0.49	0.26	279	3.1	<0.02	7.6	0.83	0.2
013K831089	Pulp	88.0	17.7	0.05	79.0	0.015	<20	1.43	0.006	0.01	<0.1	1.1	0.07	0.38	97	0.9	<0.02	2.0	0.26	<0.1



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831060	Pulp	1.92	23.7	1.0	<0.05	5.7	18.05	68.0	0.04	1	0.7	20.5	9.14	33.95	5.92	0.88	4.45	0.58	3.27	0.60	1.72
013K831061	Pulp	1.12	6.5	0.3	<0.05	0.9	14.54	119.4	<0.02	<1	0.8	7.3	13.33	47.62	6.90	1.37	4.73	0.59	3.12	0.53	1.43
013K831062	Pulp	0.60	3.3	3.0	<0.05	1.0	9.88	16.0	0.47	16	0.1	3.9	2.57	10.80	2.26	0.42	1.96	0.27	1.58	0.31	0.89
013K831063	Pulp	1.15	6.4	0.2	<0.05	1.0	14.68	118.5	<0.02	<1	0.7	7.1	13.27	47.48	6.91	1.37	4.81	0.59	3.13	0.54	1.43
013K831064	Pulp	1.21	6.6	0.3	<0.05	1.0	14.07	107.4	<0.02	<1	0.7	7.5	12.84	46.02	6.71	1.32	4.69	0.58	3.02	0.50	1.37
013K831065	Pulp	1.45	13.9	0.5	<0.05	1.5	33.38	277.6	0.04	<1	1.3	16.9	23.38	81.41	12.50	2.57	9.32	1.24	6.82	1.14	3.11
013K831066	Pulp	2.05	10.9	0.4	<0.05	1.5	24.45	195.0	0.04	<1	1.1	11.4	19.65	67.68	9.87	2.07	7.09	0.92	5.08	0.85	2.35
013K831067	Pulp	1.52	3.6	0.3	<0.05	0.5	25.53	163.6	0.04	<1	1.1	3.0	17.87	62.54	9.31	1.97	6.90	0.92	5.13	0.89	2.45
013K831068	Pulp	1.02	2.9	0.3	<0.05	0.6	30.86	199.5	0.04	<1	1.2	2.9	19.92	70.53	10.91	2.24	8.32	1.10	6.06	1.05	2.86
013K831069	Pulp	1.05	2.7	0.2	<0.05	0.4	15.10	101.5	<0.02	<1	0.5	3.4	13.73	49.65	7.15	1.35	5.08	0.59	3.07	0.52	1.39
013K831070	Pulp	0.65	1.1	<0.1	<0.05	0.2	8.69	61.9	<0.02	<1	0.4	0.9	7.53	27.29	4.09	0.80	2.96	0.35	1.84	0.31	0.83
013K831071	Pulp	0.75	1.6	0.1	<0.05	0.4	9.64	48.4	<0.02	<1	0.2	2.4	6.36	24.53	4.06	0.88	3.15	0.38	2.06	0.35	0.90
013K831072	Pulp	1.34	3.2	0.3	<0.05	0.4	30.34	243.0	0.04	<1	0.7	5.3	26.78	93.06	13.78	2.78	9.90	1.26	6.10	1.12	2.91
013K831073	Pulp	0.81	2.1	0.2	<0.05	0.4	26.36	126.2	0.02	2	0.2	3.0	20.74	74.12	12.23	2.72	9.69	1.18	5.74	1.00	2.38
013K831074	Pulp	1.49	13.0	0.4	<0.05	1.1	18.89	102.7	0.03	11	0.8	15.2	13.48	46.99	7.30	1.53	5.45	0.75	3.82	0.71	1.88
013K831075	Pulp	1.11	6.7	0.3	<0.05	1.9	28.32	77.9	<0.02	11	0.3	7.9	16.54	62.31	9.50	2.03	8.31	0.94	4.98	0.94	2.50
013K831076	Pulp	1.07	1.8	0.3	<0.05	0.7	14.37	75.7	<0.02	6	0.5	2.7	10.85	38.46	6.00	1.24	4.13	0.52	2.79	0.56	1.49
013K831077	Pulp	3.98	3.0	0.6	<0.05	1.6	107.23	552.4	0.06	2	3.0	2.3	87.17	286.71	42.83	5.35	28.53	3.98	21.72	4.14	11.25
013K831078	Pulp	2.78	13.4	0.5	<0.05	0.8	81.94	628.3	0.05	<1	2.0	10.8	62.45	216.54	30.73	4.42	22.20	3.11	16.61	3.20	9.01
013K831079	Pulp	1.71	5.0	0.3	<0.05	0.8	58.49	265.2	0.05	11	1.9	2.8	36.11	126.10	20.48	2.55	15.25	2.12	11.44	2.22	6.43
013K831080	Pulp	2.36	3.1	0.3	<0.05	1.0	57.85	201.2	0.05	6	2.3	2.4	28.37	105.53	16.85	2.31	14.64	2.09	11.14	2.33	6.08
013K831081	Pulp	3.83	6.5	0.6	<0.05	1.6	59.15	337.7	0.06	<1	1.7	3.8	36.18	133.30	21.35	2.78	16.80	2.47	13.67	2.58	6.69
013K831082	Pulp	1.96	4.4	0.3	<0.05	0.7	35.20	191.8	0.04	<1	0.8	2.2	20.29	69.65	10.75	1.59	8.65	1.31	7.23	1.48	4.14
013K831083	Pulp	2.93	5.7	0.4	<0.05	1.2	37.59	220.7	0.03	<1	1.4	3.1	26.27	85.03	14.28	2.07	10.11	1.60	8.90	1.68	4.76
013K831084	Pulp	3.76	6.6	0.5	<0.05	1.5	60.24	339.7	0.04	1	1.6	3.6	38.32	128.93	20.15	2.78	17.80	2.40	13.16	2.57	6.58
013K831085	Pulp	2.34	4.3	0.4	<0.05	1.2	34.96	199.3	<0.02	1	1.0	2.3	25.10	88.84	13.40	2.04	10.81	1.43	7.58	1.47	3.95
013K831086	Pulp	1.16	5.1	0.3	<0.05	1.1	18.20	88.2	<0.02	<1	0.6	3.0	12.15	43.59	7.18	1.12	5.34	0.79	4.19	0.82	1.95
013K831087	Pulp	1.21	4.9	0.2	<0.05	0.7	66.35	203.3	<0.02	1	1.9	3.5	24.38	85.75	15.25	1.88	14.82	2.40	13.48	2.56	7.24
013K831088	Pulp	2.82	5.6	0.5	<0.05	1.0	74.94	362.4	0.06	2	2.5	4.0	47.25	158.15	26.38	3.67	21.03	2.93	16.89	3.06	8.35
013K831089	Pulp	0.86	1.6	0.4	<0.05	0.4	26.79	156.3	<0.02	<1	0.8	1.3	21.79	75.42	12.70	1.68	8.98	1.16	5.68	1.01	2.60



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Project: None Given

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831060	Pulp	0.22	1.50	0.22	<10	<2
013K831061	Pulp	0.18	1.08	0.14	<10	<2
013K831062	Pulp	0.11	0.77	0.12	<10	<2
013K831063	Pulp	0.18	1.05	0.14	<10	<2
013K831064	Pulp	0.17	1.01	0.13	<10	<2
013K831065	Pulp	0.40	2.39	0.31	<10	<2
013K831066	Pulp	0.30	1.82	0.23	<10	<2
013K831067	Pulp	0.32	1.88	0.24	<10	<2
013K831068	Pulp	0.36	2.14	0.28	<10	<2
013K831069	Pulp	0.17	1.01	0.14	<10	<2
013K831070	Pulp	0.10	0.60	0.08	<10	<2
013K831071	Pulp	0.11	0.65	0.09	<10	<2
013K831072	Pulp	0.40	2.47	0.37	<10	4
013K831073	Pulp	0.34	2.09	0.32	<10	3
013K831074	Pulp	0.27	1.59	0.25	<10	3
013K831075	Pulp	0.36	2.17	0.34	<10	3
013K831076	Pulp	0.19	1.24	0.19	<10	3
013K831077	Pulp	1.58	10.67	1.49	<10	2
013K831078	Pulp	1.35	8.84	1.30	<10	<2
013K831079	Pulp	0.89	5.76	0.87	<10	2
013K831080	Pulp	0.87	5.35	0.78	<10	2
013K831081	Pulp	1.00	5.86	0.77	<10	<2
013K831082	Pulp	0.63	3.75	0.56	<10	<2
013K831083	Pulp	0.70	4.17	0.62	<10	2
013K831084	Pulp	0.98	6.35	0.85	<10	2
013K831085	Pulp	0.60	3.39	0.49	<10	<2
013K831086	Pulp	0.28	1.55	0.22	<10	<2
013K831087	Pulp	1.06	6.05	0.78	<10	<2
013K831088	Pulp	1.18	6.99	1.01	<10	3
013K831089	Pulp	0.33	2.04	0.30	<10	<2



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831090	Pulp	9.65	50.74	10.56	104.5	823	21.4	10.3	355	2.58	4.0	27.2	2.2	1.0	53.7	0.36	0.12	0.08	47	0.92	0.285
013K831091	Pulp	18.59	66.26	6.21	72.2	695	21.5	62.9	306	5.92	12.5	16.3	1.6	2.7	96.9	0.32	0.10	0.03	88	1.67	0.150
013K831092	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831093	Pulp	0.51	20.75	9.97	68.5	45	29.4	15.4	429	3.04	2.6	1.6	0.7	8.6	39.9	0.08	0.07	0.08	46	0.66	0.097
013K831094	Pulp	4.06	17.25	2.63	29.3	107	15.7	2.2	46	0.20	0.6	22.4	<0.2	0.4	26.8	0.17	0.04	<0.02	10	0.61	0.032
013K831095	Pulp	13.06	33.12	8.18	106.4	253	22.9	108.0	4220	5.50	1.3	10.0	1.0	1.6	21.6	0.64	0.05	0.05	45	0.31	0.157
013K831096	Pulp	24.21	58.11	4.14	65.6	503	18.6	11.1	236	2.15	0.6	14.2	1.3	0.5	25.8	0.44	0.04	0.03	41	0.60	0.175
013K831097	Pulp	0.92	33.00	24.38	129.1	2582	46.4	29.1	1210	3.04	26.6	3.9	3.0	7.4	26.3	0.57	0.65	3.27	45	0.60	0.091
013K831098	Pulp	15.15	93.77	7.50	102.3	894	25.3	50.3	1397	3.92	2.3	12.4	1.9	1.2	37.4	0.65	0.06	0.07	60	0.91	0.322
013K831099	Pulp	2.80	43.77	2.84	56.0	244	21.1	4.3	73	1.04	0.5	4.3	0.9	0.3	24.4	0.29	0.04	0.02	19	0.53	0.089
013K831100	Pulp	2.95	51.76	4.17	68.4	231	27.2	3.6	72	0.34	0.3	4.4	0.8	0.2	20.5	0.31	0.05	0.03	16	0.59	0.054
013K831101	Pulp	13.10	95.11	7.33	106.2	692	29.9	58.1	1833	8.59	2.9	10.4	1.4	2.2	21.4	0.88	0.05	0.05	64	0.53	0.267
013K831102	Pulp	3.21	46.83	2.06	54.6	279	17.7	10.1	156	0.88	0.4	12.1	1.1	0.2	19.4	0.35	0.04	<0.02	20	0.55	0.080
013K831103	Pulp	3.34	51.80	2.22	54.1	266	18.0	7.4	99	0.87	0.1	13.1	1.0	0.2	22.7	0.35	0.06	<0.02	20	0.62	0.068
013K831104	Pulp	12.76	73.33	6.74	121.3	366	25.9	31.5	534	4.03	2.2	8.7	0.6	1.2	24.1	0.61	0.04	0.03	55	0.48	0.202
013K831105	Pulp	12.26	87.20	6.89	105.4	655	29.9	56.9	1770	8.05	2.7	9.6	1.2	1.9	20.6	0.82	0.05	0.04	61	0.50	0.256
013K831106	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831107	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831108	Pulp	7.09	33.50	2.76	50.5	192	15.2	4.1	48	0.36	0.3	17.9	0.8	0.1	27.3	0.31	0.03	0.02	13	0.72	0.051
013K831109	Pulp	7.54	74.45	6.68	82.5	619	14.7	15.5	490	4.14	1.8	19.7	1.5	1.5	32.4	0.51	0.04	0.03	52	0.60	0.268
013K831110	Pulp	0.87	16.53	3.53	31.6	143	12.5	3.0	73	0.74	0.4	6.2	0.9	0.3	20.7	0.15	<0.02	<0.02	22	0.35	0.068
013K831111	Pulp	4.74	72.80	7.89	96.2	756	21.6	14.6	469	3.14	1.9	17.3	1.8	1.5	31.7	0.60	0.06	0.09	55	0.60	0.305
013K831112	Pulp	0.82	31.10	2.75	46.5	423	15.2	5.8	95	0.61	0.1	9.2	1.0	0.4	26.3	0.29	0.03	0.07	20	0.46	0.080
013K831113	Pulp	1.94	20.47	3.10	34.8	176	11.3	3.8	75	0.80	0.6	16.4	0.8	0.3	25.3	0.30	0.04	0.04	27	0.54	0.084
013K831114	Pulp	10.15	44.14	88.76	319.1	643	13.3	8.1	455	1.87	36.9	10.2	4.4	1.7	66.0	1.37	0.63	1.10	22	6.74	0.070
013K831115	Pulp	3.99	80.42	6.67	122.3	486	19.4	23.2	1062	5.18	2.6	36.8	1.4	3.5	21.3	0.74	0.05	0.06	52	0.55	0.337
013K831116	Pulp	4.44	55.72	6.33	57.1	652	14.7	4.8	137	1.63	0.3	13.8	1.0	0.7	43.0	0.29	0.05	0.06	50	1.02	0.178
013K831117	Pulp	14.98	30.55	4.75	85.7	347	9.1	11.0	578	5.08	<0.1	23.9	1.0	1.8	25.8	0.42	0.03	0.03	37	0.66	0.176
013K831118	Pulp	10.25	89.51	6.71	156.2	416	24.7	47.5	1939	8.44	3.1	28.5	1.1	6.2	28.8	0.65	0.02	0.05	68	0.58	0.273
013K831119	Pulp	7.36	21.25	1.15	58.2	97	21.7	2.3	17	0.25	1.1	3.7	0.9	0.9	13.0	0.33	0.03	<0.02	8	0.46	0.026



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831090	Pulp	122.0	62.2	0.09	259.7	0.041	<20	3.16	0.008	0.03	0.3	2.8	0.17	0.65	174	3.0	<0.02	4.5	0.24	0.2
013K831091	Pulp	102.6	37.4	0.07	139.5	0.055	<20	3.56	0.009	0.02	20.6	3.0	0.19	3.30	263	1.7	0.02	4.9	0.25	0.1
013K831092	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831093	Pulp	38.1	39.9	1.03	112.7	0.172	<20	1.79	0.067	0.34	0.1	4.9	0.17	0.02	26	<0.1	<0.02	5.9	1.85	<0.1
013K831094	Pulp	26.7	11.7	0.05	66.8	0.026	<20	0.97	0.008	0.01	0.1	0.8	0.03	0.26	60	0.2	<0.02	2.4	0.15	<0.1
013K831095	Pulp	51.7	34.4	0.28	225.2	0.058	<20	2.59	0.015	0.06	0.2	2.9	0.49	0.21	148	1.7	<0.02	5.9	0.65	<0.1
013K831096	Pulp	60.9	37.5	0.16	91.2	0.036	<20	2.60	0.010	0.04	0.2	2.1	0.10	0.26	140	1.5	<0.02	4.0	0.32	0.1
013K831097	Pulp	42.8	52.8	0.77	165.0	0.107	<20	1.66	0.030	0.26	0.7	5.7	0.28	0.14	283	0.4	0.03	5.6	1.36	<0.1
013K831098	Pulp	79.0	57.5	0.21	142.8	0.065	<20	4.07	0.010	0.05	0.2	4.3	0.19	0.28	367	3.1	0.02	7.3	0.50	0.1
013K831099	Pulp	33.3	23.2	0.12	90.3	0.026	<20	1.49	0.009	0.03	0.2	1.4	0.09	0.30	116	0.8	<0.02	2.9	0.30	<0.1
013K831100	Pulp	41.9	24.1	0.11	114.0	0.038	<20	1.44	0.007	0.03	<0.1	1.1	0.07	0.33	118	1.2	<0.02	2.8	0.38	<0.1
013K831101	Pulp	86.5	51.7	0.17	97.4	0.077	<20	4.32	0.009	0.04	0.1	4.8	0.46	0.24	224	3.8	<0.02	8.1	0.42	0.2
013K831102	Pulp	47.4	24.4	0.09	80.9	0.022	<20	1.86	0.007	0.02	<0.1	1.1	0.12	0.29	116	1.0	<0.02	2.3	0.18	<0.1
013K831103	Pulp	52.4	25.3	0.09	84.3	0.022	<20	1.88	0.009	0.02	<0.1	1.2	0.12	0.30	123	1.1	<0.02	2.2	0.18	<0.1
013K831104	Pulp	68.9	43.6	0.30	92.2	0.062	<20	3.30	0.014	0.06	0.2	3.7	0.28	0.19	126	2.0	<0.02	5.3	0.48	<0.1
013K831105	Pulp	82.1	50.6	0.15	93.8	0.073	<20	4.15	0.008	0.03	0.1	4.3	0.40	0.23	192	3.6	<0.02	8.0	0.40	0.1
013K831106	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831107	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831108	Pulp	49.6	15.1	0.09	58.9	0.030	<20	1.65	0.008	0.02	<0.1	1.0	0.10	0.36	127	0.9	<0.02	3.0	0.25	<0.1
013K831109	Pulp	116.5	39.2	0.10	94.7	0.058	<20	3.57	0.007	0.02	0.1	3.8	0.19	0.24	260	2.9	<0.02	6.1	0.27	0.2
013K831110	Pulp	34.4	15.7	0.16	73.5	0.042	<20	1.50	0.010	0.03	<0.1	1.1	0.05	0.23	105	1.0	<0.02	3.7	0.30	<0.1
013K831111	Pulp	106.3	48.9	0.29	102.0	0.081	<20	4.39	0.007	0.06	0.1	3.6	0.25	0.28	253	3.4	0.02	8.2	0.57	<0.1
013K831112	Pulp	69.6	21.5	0.12	88.1	0.026	<20	2.37	0.009	0.04	<0.1	1.2	0.09	0.53	119	2.3	<0.02	2.6	0.28	<0.1
013K831113	Pulp	41.6	13.5	0.07	67.5	0.030	<20	1.97	0.007	0.02	<0.1	1.1	0.04	0.25	110	1.1	<0.02	3.8	0.20	<0.1
013K831114	Pulp	11.5	14.4	0.63	103.6	0.049	<20	0.49	0.031	0.05	1.0	2.9	0.23	1.62	97	0.8	0.02	2.2	0.54	<0.1
013K831115	Pulp	175.1	50.7	0.13	42.2	0.083	<20	6.20	<0.001	0.04	0.2	4.6	0.35	0.35	208	6.3	<0.02	8.3	0.43	0.2
013K831116	Pulp	92.1	35.2	0.14	165.0	0.072	<20	3.66	0.010	0.04	0.1	2.6	0.12	0.43	254	2.8	<0.02	9.6	0.47	0.1
013K831117	Pulp	139.4	20.9	0.08	32.5	0.045	<20	3.67	0.007	0.03	<0.1	2.5	0.09	0.29	123	3.7	<0.02	5.6	0.19	0.2
013K831118	Pulp	182.2	45.8	0.28	60.7	0.086	<20	5.21	0.009	0.06	0.3	5.1	0.58	0.21	209	2.9	0.03	6.2	0.36	0.2
013K831119	Pulp	24.3	12.4	0.04	54.9	0.012	<20	0.36	0.007	0.02	<0.1	1.4	0.08	0.62	57	1.2	<0.02	0.5	0.07	<0.1



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831090	Pulp	2.52	2.0	0.3	<0.05	2.7	49.70	207.6	0.03	<1	1.8	1.1	29.21	101.16	16.25	2.18	12.65	1.82	10.03	1.93	5.31
013K831091	Pulp	1.66	1.5	0.2	<0.05	0.8	23.41	163.8	<0.02	2	0.8	1.3	20.04	63.79	8.76	1.78	7.05	0.82	4.25	0.80	2.28
013K831092	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831093	Pulp	1.49	24.9	0.8	<0.05	13.6	14.89	70.6	<0.02	<1	0.5	19.1	8.86	32.37	5.24	0.99	4.17	0.57	3.01	0.59	1.64
013K831094	Pulp	0.74	1.0	0.2	<0.05	1.3	7.09	44.4	<0.02	2	0.2	1.3	5.67	19.04	3.10	0.68	2.42	0.32	1.62	0.32	0.74
013K831095	Pulp	1.29	6.4	0.3	<0.05	0.9	15.53	112.6	0.02	<1	0.6	7.4	11.76	41.15	6.30	1.23	4.89	0.65	3.54	0.61	1.76
013K831096	Pulp	1.11	3.1	0.2	<0.05	0.7	20.18	110.3	<0.02	1	0.8	3.0	15.17	52.16	8.71	1.62	6.29	0.86	4.56	0.84	2.10
013K831097	Pulp	2.06	23.4	1.2	<0.05	5.0	17.34	72.1	0.04	<1	0.8	19.9	10.25	37.17	6.40	1.05	5.16	0.58	3.43	0.69	1.89
013K831098	Pulp	1.91	4.1	0.3	<0.05	1.4	43.52	154.4	0.04	2	1.2	4.1	20.95	77.74	13.65	2.62	11.56	1.71	9.20	1.74	4.91
013K831099	Pulp	0.63	2.7	0.1	<0.05	0.6	11.69	57.2	<0.02	2	0.5	2.1	8.22	29.30	5.10	0.94	4.26	0.48	2.58	0.53	1.28
013K831100	Pulp	1.16	2.5	0.2	<0.05	1.3	11.35	72.0	0.02	3	0.4	2.7	9.52	32.48	5.83	1.01	4.19	0.56	2.79	0.57	1.29
013K831101	Pulp	1.52	3.5	0.3	<0.05	0.6	35.72	178.8	0.02	1	1.3	3.5	21.41	76.29	12.35	2.28	10.04	1.42	7.25	1.43	3.88
013K831102	Pulp	0.51	1.6	<0.1	<0.05	0.3	13.09	82.8	<0.02	2	0.4	1.8	12.79	47.95	7.47	1.40	5.13	0.59	3.16	0.53	1.35
013K831103	Pulp	0.54	1.7	0.1	<0.05	0.3	13.86	87.8	<0.02	2	0.4	2.0	13.53	51.24	7.45	1.44	5.98	0.62	3.46	0.60	1.51
013K831104	Pulp	1.35	5.4	0.3	<0.05	0.7	23.52	152.3	0.03	2	1.1	8.7	17.47	63.18	10.30	1.79	8.24	1.07	5.64	1.00	2.47
013K831105	Pulp	1.43	3.4	0.3	<0.05	0.6	33.15	171.9	0.04	<1	1.0	3.3	20.39	71.81	12.19	2.12	10.13	1.43	7.53	1.37	3.64
013K831106	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831107	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831108	Pulp	0.82	2.0	0.2	<0.05	0.4	10.37	84.1	<0.02	5	0.3	2.2	10.49	35.21	5.13	1.01	3.97	0.50	2.65	0.48	1.16
013K831109	Pulp	1.83	2.0	0.2	<0.05	0.7	32.35	203.4	0.04	3	1.0	1.6	26.22	95.78	15.48	3.03	12.58	1.47	7.80	1.32	3.44
013K831110	Pulp	1.00	2.8	0.2	<0.05	0.7	7.12	61.5	<0.02	<1	0.4	3.9	7.06	26.09	4.06	0.82	2.52	0.31	1.69	0.31	0.77
013K831111	Pulp	2.25	6.0	0.5	<0.05	1.2	33.82	221.7	0.06	<1	1.5	7.0	23.26	77.43	12.95	2.66	10.13	1.40	7.40	1.29	3.49
013K831112	Pulp	0.90	3.5	0.3	<0.05	0.4	14.82	125.3	<0.02	<1	0.6	3.0	15.10	51.08	7.04	1.50	5.33	0.62	3.03	0.60	1.46
013K831113	Pulp	0.87	1.7	0.3	<0.05	0.3	8.36	71.5	<0.02	2	0.5	1.5	8.66	31.47	4.47	1.01	3.29	0.37	2.13	0.37	0.83
013K831114	Pulp	0.83	3.7	3.4	<0.05	1.4	11.00	19.3	0.51	26	0.2	4.8	2.98	13.23	2.76	0.60	2.25	0.34	1.97	0.42	1.18
013K831115	Pulp	2.35	3.6	0.3	<0.05	1.1	38.42	334.4	0.05	2	1.7	3.8	34.31	115.73	16.73	3.40	12.17	1.66	8.66	1.59	4.07
013K831116	Pulp	2.46	3.9	0.4	<0.05	1.9	23.05	168.9	0.04	<1	1.0	3.3	20.83	73.13	10.92	2.23	7.96	1.08	5.14	0.97	2.46
013K831117	Pulp	1.44	2.0	0.2	<0.05	0.2	35.39	272.0	0.02	6	1.4	2.6	29.75	99.57	13.79	3.05	10.14	1.21	6.46	1.18	2.92
013K831118	Pulp	2.34	5.1	0.3	<0.05	1.1	42.85	395.6	0.03	<1	1.5	6.5	39.74	132.08	19.62	3.67	14.21	1.76	8.98	1.51	4.28
013K831119	Pulp	0.25	0.9	0.1	<0.05	0.5	24.06	21.9	<0.02	2	<0.1	0.9	5.58	21.28	3.78	0.72	4.04	0.51	3.43	0.70	2.07



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Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831090	Pulp	0.79	4.71	0.63	<10	3
013K831091	Pulp	0.29	1.99	0.29	<10	<2
013K831092	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013K831093	Pulp	0.23	1.33	0.18	<10	<2
013K831094	Pulp	0.11	0.67	0.09	<10	<2
013K831095	Pulp	0.23	1.33	0.17	<10	<2
013K831096	Pulp	0.32	1.76	0.25	<10	<2
013K831097	Pulp	0.27	1.74	0.24	<10	<2
013K831098	Pulp	0.64	3.69	0.48	<10	3
013K831099	Pulp	0.17	1.06	0.15	<10	<2
013K831100	Pulp	0.18	0.97	0.12	<10	2
013K831101	Pulp	0.56	3.23	0.40	<10	3
013K831102	Pulp	0.19	0.99	0.14	<10	<2
013K831103	Pulp	0.21	1.15	0.16	<10	<2
013K831104	Pulp	0.35	1.87	0.26	<10	2
013K831105	Pulp	0.48	2.86	0.35	<10	<2
013K831106	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013K831107	Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013K831108	Pulp	0.15	0.85	0.12	<10	<2
013K831109	Pulp	0.44	2.85	0.37	<10	<2
013K831110	Pulp	0.12	0.58	0.08	<10	<2
013K831111	Pulp	0.50	2.95	0.32	<10	<2
013K831112	Pulp	0.21	1.21	0.15	<10	<2
013K831113	Pulp	0.11	0.72	0.10	<10	2
013K831114	Pulp	0.16	0.99	0.15	<10	3
013K831115	Pulp	0.53	3.16	0.39	<10	3
013K831116	Pulp	0.34	2.05	0.25	<10	<2
013K831117	Pulp	0.45	2.57	0.35	<10	<2
013K831118	Pulp	0.60	3.74	0.50	<10	<2
013K831119	Pulp	0.28	1.67	0.24	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831120	Pulp	4.89	10.53	5.48	57.4	69	11.6	2.9	53	0.56	0.9	20.4	0.7	2.3	16.2	0.13	0.05	0.03	10	0.28	0.027
013K831121	Pulp	4.92	100.15	11.53	104.5	829	25.4	24.0	2532	4.70	7.5	6.9	1.0	1.8	48.2	0.57	0.10	0.05	61	0.69	0.285
013K831122	Pulp	7.90	18.88	13.49	71.2	181	16.0	12.1	250	1.68	1.0	30.1	1.0	1.8	22.5	0.33	0.04	0.12	23	0.33	0.077
013K831123	Pulp	6.25	21.40	12.98	67.3	207	15.9	7.8	182	1.34	0.8	30.3	0.9	1.5	23.3	0.33	0.07	0.12	22	0.34	0.082
013K831124	Pulp	2.95	21.15	10.22	69.6	131	20.1	7.6	192	1.46	1.2	27.0	<0.2	2.6	27.2	0.30	0.06	0.10	29	0.43	0.091
013K831125	Pulp	5.12	101.89	11.68	101.1	864	27.0	24.3	2668	4.90	7.3	7.0	0.8	1.8	49.5	0.56	0.09	0.05	62	0.72	0.316
013K831126	Pulp	5.32	34.63	9.20	74.4	671	11.7	29.9	1433	6.76	10.3	7.2	0.9	3.4	18.2	0.66	0.07	0.05	34	0.32	0.263
013K831127	Pulp	18.94	39.68	11.33	89.5	542	15.2	40.2	991	7.81	14.3	14.6	0.9	6.2	24.6	0.39	0.17	0.08	78	0.38	0.186
013K831128	Pulp	18.87	28.47	6.22	89.5	347	9.5	33.4	614	5.03	2.8	10.6	0.4	2.2	20.7	0.31	0.13	0.03	50	0.24	0.201
013K831129	Pulp	12.26	77.60	10.83	188.0	651	25.4	41.1	1965	8.75	15.5	17.6	0.3	9.3	23.4	0.76	0.20	0.08	62	0.30	0.284
013K831130	Pulp	7.08	42.01	12.50	440.3	255	26.9	27.9	489	2.15	5.6	14.0	1.1	6.2	32.5	1.04	0.14	0.05	31	0.45	0.108
013K831131	Pulp	20.96	49.43	45.81	587.2	896	21.7	57.6	4008	8.43	7.3	17.6	1.5	10.2	26.0	1.97	0.17	0.20	21	0.29	0.184
013K831132	Pulp	8.54	28.10	7.51	121.9	262	18.7	27.8	2142	7.43	5.0	7.5	0.9	6.6	24.6	0.56	0.11	0.06	50	0.31	0.185
013K831133	Pulp	6.49	17.22	2.33	41.8	179	6.3	3.1	73	0.82	0.9	26.1	0.2	0.9	27.2	0.18	0.13	<0.02	13	0.41	0.048
013K831134	Pulp	1.06	35.31	30.07	143.2	2951	48.8	29.7	1242	3.36	27.2	4.5	3.0	8.9	31.4	0.59	0.65	3.55	50	0.65	0.101
013K831135	Pulp	4.45	16.11	5.03	75.0	133	16.8	7.8	207	1.96	1.2	8.7	0.9	3.5	25.7	0.16	0.07	0.04	24	0.41	0.086
013K831136	Pulp	5.21	20.07	5.13	83.0	207	11.1	10.6	669	2.93	1.9	6.1	0.3	2.5	17.5	0.35	0.07	0.04	34	0.24	0.163
013K831137	Pulp	9.89	31.80	4.28	62.7	412	7.4	14.9	556	3.98	1.2	8.1	0.9	2.0	21.3	0.22	0.06	0.02	47	0.28	0.201
013K831138	Pulp	1.38	13.58	1.45	19.4	226	3.5	2.0	59	0.58	0.5	2.8	0.3	0.3	10.9	0.17	0.04	<0.02	23	0.15	0.085
013K831139	Pulp	2.80	20.81	2.67	57.4	159	9.4	4.3	85	1.04	0.5	3.2	0.4	0.6	19.7	0.15	0.04	<0.02	17	0.25	0.069
013K831140	Pulp	1.01	16.70	3.60	12.9	138	8.6	1.0	22	0.58	0.6	1.1	<0.2	0.3	19.6	0.15	0.07	<0.02	18	0.12	0.036
013K831141	Pulp	3.85	17.76	2.55	41.8	212	6.3	3.2	116	1.05	0.9	2.1	0.5	0.4	21.6	0.15	0.04	<0.02	25	0.26	0.112
013K831142	Pulp	2.71	15.31	2.07	47.2	292	7.4	2.3	51	0.89	0.6	2.2	0.7	0.2	18.3	0.16	0.03	<0.02	25	0.21	0.057
013K831143	Pulp	1.56	53.33	3.46	50.5	946	10.9	2.3	59	0.70	0.5	10.0	1.8	0.2	24.1	0.38	0.15	0.05	38	0.22	0.186
013K831144	Pulp	2.90	13.56	2.81	37.6	143	4.8	3.9	148	0.83	0.6	2.1	<0.2	0.3	18.7	0.12	0.04	<0.02	19	0.23	0.074
013K831145	Pulp	3.82	18.00	2.56	39.9	202	5.9	3.2	116	1.05	0.8	2.0	0.2	0.5	21.1	0.15	0.05	0.04	25	0.26	0.113
013K831146	Pulp	2.15	28.50	1.88	33.8	241	6.1	1.9	38	0.29	0.4	4.3	<0.2	0.1	24.5	0.20	0.07	<0.02	17	0.22	0.053
013K831147	Pulp	1.31	18.03	1.77	28.1	171	6.5	1.6	42	0.34	<0.1	1.7	1.1	<0.1	18.0	0.17	0.06	0.02	15	0.18	0.042
013K831148	Pulp	1.23	8.76	2.44	30.2	91	3.8	1.7	62	0.39	0.1	1.4	0.8	0.4	17.2	0.08	0.05	0.02	10	0.21	0.036
013K831149	Pulp	2.39	16.01	1.94	30.1	150	4.2	1.5	44	0.39	0.3	2.3	0.2	0.1	16.3	0.11	0.05	<0.02	11	0.19	0.035



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.02	0.02	0.1	0.02	0.1
013K831120	Pulp	85.3	11.9	0.14	55.9	0.028	<20	1.19	0.009	0.07	0.2	1.4	0.06	0.23	52	0.4	<0.02	2.6	0.71	0.1
013K831121	Pulp	81.7	89.9	0.43	183.6	0.069	<20	3.67	0.007	0.07	0.3	4.0	0.21	0.16	274	2.5	<0.02	6.3	1.27	0.2
013K831122	Pulp	92.8	24.0	0.18	95.9	0.064	<20	1.86	0.010	0.07	1.0	2.3	0.28	0.21	89	0.8	<0.02	4.2	1.22	0.1
013K831123	Pulp	90.8	23.0	0.19	90.6	0.062	<20	1.77	0.010	0.07	1.0	2.0	0.18	0.21	88	0.9	<0.02	4.2	1.22	0.2
013K831124	Pulp	88.4	35.9	0.34	104.5	0.094	<20	1.65	0.013	0.12	0.7	2.5	0.18	0.19	59	0.8	<0.02	4.3	1.27	<0.1
013K831125	Pulp	82.3	95.5	0.45	186.0	0.071	<20	3.80	0.008	0.07	0.3	4.4	0.22	0.16	304	2.6	<0.02	6.4	1.29	0.2
013K831126	Pulp	146.7	23.1	0.03	96.0	0.037	<20	3.00	0.005	0.01	0.2	3.3	0.25	0.16	164	2.2	<0.02	4.6	0.25	0.2
013K831127	Pulp	143.3	39.7	0.24	215.9	0.071	<20	2.20	0.009	0.08	1.3	4.3	0.47	0.17	143	1.7	0.03	4.1	1.27	0.3
013K831128	Pulp	72.2	19.0	0.19	130.8	0.063	<20	1.79	0.007	0.09	0.6	2.4	0.42	0.13	83	1.0	0.02	2.9	1.00	0.1
013K831129	Pulp	165.9	32.0	0.17	131.2	0.082	<20	3.61	0.009	0.07	0.5	5.7	0.55	0.14	135	2.0	<0.02	4.4	1.01	0.2
013K831130	Pulp	145.8	18.6	0.43	133.4	0.110	<20	1.33	0.026	0.17	0.5	3.7	0.46	0.40	27	0.1	0.08	3.8	1.67	0.2
013K831131	Pulp	451.2	15.6	0.08	312.6	0.034	<20	2.53	0.008	0.04	0.7	5.7	1.07	0.36	93	2.2	0.22	4.1	0.88	0.5
013K831132	Pulp	99.9	23.2	0.29	187.7	0.085	<20	1.85	0.022	0.08	0.3	4.2	0.38	0.08	72	0.7	0.03	4.4	0.93	0.2
013K831133	Pulp	185.9	7.8	0.02	67.8	0.012	<20	1.41	0.005	0.01	0.2	1.3	0.05	0.29	54	0.3	<0.02	1.6	0.35	0.1
013K831134	Pulp	46.7	53.8	0.86	178.2	0.122	<20	1.80	0.034	0.29	0.2	6.2	0.31	0.15	298	0.1	0.05	6.5	1.54	<0.1
013K831135	Pulp	87.9	18.0	0.38	99.4	0.070	<20	1.48	0.027	0.08	0.1	2.9	0.12	0.10	59	<0.1	<0.02	3.4	1.24	<0.1
013K831136	Pulp	74.8	17.4	0.22	96.1	0.060	<20	1.47	0.015	0.07	0.3	2.8	0.15	0.07	64	0.3	<0.02	3.1	0.93	0.1
013K831137	Pulp	127.7	15.2	0.13	101.4	0.063	<20	1.89	0.006	0.05	1.1	2.5	0.25	0.15	115	0.9	0.03	4.4	1.02	0.2
013K831138	Pulp	54.6	6.1	0.02	62.2	0.021	<20	0.64	0.004	0.01	<0.1	0.8	0.06	0.10	48	<0.1	<0.02	1.7	0.27	<0.1
013K831139	Pulp	51.2	10.9	0.13	75.6	0.048	<20	0.75	0.009	0.05	0.2	1.4	0.14	0.13	72	<0.1	<0.02	2.4	0.64	<0.1
013K831140	Pulp	22.8	8.7	0.03	78.0	0.025	<20	0.59	0.005	0.02	<0.1	1.1	0.03	0.18	80	0.4	<0.02	1.5	0.27	<0.1
013K831141	Pulp	46.6	11.7	0.15	55.7	0.052	<20	0.72	0.008	0.07	1.1	1.2	0.10	0.10	55	0.3	<0.02	2.7	0.62	<0.1
013K831142	Pulp	46.1	9.6	0.07	64.9	0.027	<20	0.69	0.007	0.04	0.2	0.7	0.09	0.17	57	0.3	<0.02	1.9	0.39	0.1
013K831143	Pulp	129.4	22.1	0.05	106.1	0.023	<20	1.15	0.005	0.02	0.3	0.8	0.13	0.24	176	1.0	0.03	3.3	0.41	0.2
013K831144	Pulp	39.8	8.8	0.13	50.2	0.048	<20	0.69	0.009	0.07	0.8	0.9	0.10	0.10	45	0.1	<0.02	2.5	0.60	<0.1
013K831145	Pulp	44.9	11.7	0.14	55.6	0.051	<20	0.72	0.009	0.07	1.1	1.0	0.10	0.10	49	0.4	<0.02	2.9	0.61	<0.1
013K831146	Pulp	46.7	6.4	0.04	45.5	0.021	<20	0.53	0.006	0.02	0.2	0.6	0.07	0.17	74	0.4	<0.02	1.8	0.24	0.1
013K831147	Pulp	24.8	8.2	0.07	35.5	0.022	<20	0.45	0.006	0.03	0.1	0.4	0.04	0.15	59	0.8	<0.02	1.2	0.26	<0.1
013K831148	Pulp	16.7	6.1	0.11	32.0	0.040	<20	0.41	0.009	0.06	0.5	0.8	0.04	0.10	33	0.5	<0.02	1.5	0.49	<0.1
013K831149	Pulp	23.7	5.2	0.05	34.4	0.023	<20	0.37	0.007	0.03	0.3	0.5	0.05	0.13	40	0.7	<0.02	1.3	0.33	<0.1



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831120	Pulp	1.25	6.1	0.3	<0.05	0.8	22.90	139.5	<0.02	<1	1.1	5.9	24.62	90.66	15.41	1.56	10.87	1.34	6.11	1.00	2.52
013K831121	Pulp	1.57	6.6	0.4	<0.05	1.5	39.84	144.6	0.02	2	2.5	7.1	20.47	76.38	12.56	1.83	10.35	1.48	8.15	1.56	4.32
013K831122	Pulp	2.83	11.2	0.6	<0.05	0.8	34.73	180.9	<0.02	<1	1.1	10.4	24.60	83.62	12.29	1.70	8.53	1.28	6.78	1.37	4.08
013K831123	Pulp	2.81	11.4	0.6	<0.05	0.8	33.87	171.4	0.03	<1	1.1	11.0	23.41	83.35	12.44	1.75	8.92	1.28	6.79	1.40	3.87
013K831124	Pulp	2.91	14.6	0.6	<0.05	1.4	34.52	159.8	0.03	<1	1.2	12.6	21.80	76.38	12.58	1.68	9.42	1.25	7.06	1.39	4.11
013K831125	Pulp	1.63	6.9	0.4	<0.05	1.6	41.79	143.3	0.03	<1	2.7	7.1	20.49	73.84	12.77	1.89	9.91	1.34	8.39	1.56	4.34
013K831126	Pulp	1.33	1.4	0.2	<0.05	0.7	66.01	335.0	0.03	2	8.6	0.8	37.04	128.53	21.59	2.27	17.81	2.41	13.85	2.69	7.48
013K831127	Pulp	2.10	8.7	0.4	<0.05	1.8	56.46	262.2	<0.02	2	2.0	6.1	33.61	120.98	18.84	2.71	15.09	1.86	10.69	2.16	6.23
013K831128	Pulp	1.75	8.4	0.3	<0.05	0.7	34.06	138.5	0.02	7	0.8	4.1	18.00	65.61	10.46	1.76	8.22	1.08	6.20	1.30	3.82
013K831129	Pulp	2.83	7.6	0.5	<0.05	2.8	83.51	414.0	0.04	3	2.6	4.5	40.88	143.95	24.79	3.61	20.03	2.89	16.17	3.28	9.53
013K831130	Pulp	2.11	15.5	0.5	<0.05	3.5	44.49	239.9	0.02	1	2.0	10.2	31.47	104.25	15.71	2.31	12.88	1.71	8.75	1.52	3.78
013K831131	Pulp	1.32	5.3	0.4	<0.05	1.6	129.24	967.6	0.04	3	3.7	2.3	98.16	348.17	54.07	7.15	44.12	5.34	26.85	4.97	12.63
013K831132	Pulp	1.77	7.5	0.5	<0.05	1.9	45.25	294.5	0.03	<1	1.4	6.2	24.24	84.38	14.15	2.27	11.58	1.56	8.64	1.79	5.10
013K831133	Pulp	0.85	1.0	0.2	<0.05	0.7	58.21	247.3	<0.02	<1	1.7	0.5	39.63	133.31	20.91	2.89	16.75	2.16	11.26	2.16	5.66
013K831134	Pulp	2.26	26.8	1.3	<0.05	5.5	20.21	81.7	0.05	1	0.6	23.0	11.45	40.05	7.08	1.21	5.41	0.68	3.91	0.79	2.29
013K831135	Pulp	1.98	7.7	0.4	<0.05	2.8	32.96	143.1	<0.02	<1	1.1	7.3	20.99	76.42	12.52	1.93	10.28	1.25	6.48	1.24	3.49
013K831136	Pulp	1.34	7.3	0.4	<0.05	0.8	33.20	184.3	<0.02	2	2.0	5.0	19.03	66.40	11.31	1.67	8.63	1.19	6.37	1.30	3.49
013K831137	Pulp	2.55	5.4	0.4	<0.05	1.1	50.00	217.1	<0.02	2	1.6	3.5	29.27	101.71	16.31	2.82	13.45	1.65	9.38	1.89	5.21
013K831138	Pulp	0.77	1.3	0.1	<0.05	0.4	18.05	88.5	<0.02	<1	0.4	0.5	12.47	43.89	6.65	1.09	5.91	0.67	3.66	0.67	1.69
013K831139	Pulp	1.56	5.1	0.3	<0.05	1.1	19.42	89.7	<0.02	1	0.5	3.3	12.51	46.66	7.62	1.16	5.70	0.75	4.16	0.77	1.99
013K831140	Pulp	1.15	1.4	0.2	<0.05	1.4	9.92	44.1	<0.02	1	0.3	0.9	5.62	20.00	3.22	0.60	2.51	0.36	2.20	0.42	1.18
013K831141	Pulp	1.64	6.5	0.4	<0.05	0.3	16.27	78.2	<0.02	2	0.3	3.5	10.47	39.00	6.13	1.11	4.83	0.60	3.32	0.56	1.54
013K831142	Pulp	1.02	3.1	0.2	<0.05	0.5	14.28	78.9	<0.02	2	0.2	1.5	10.59	37.73	5.78	0.99	4.48	0.50	3.08	0.60	1.70
013K831143	Pulp	1.46	2.0	0.3	<0.05	0.4	49.70	217.8	<0.02	<1	0.9	1.0	30.68	109.49	19.08	2.76	16.12	2.14	11.26	2.04	5.07
013K831144	Pulp	1.28	5.1	0.3	<0.05	0.3	12.58	67.4	<0.02	<1	0.4	3.4	9.12	32.22	5.29	0.95	4.42	0.53	2.67	0.45	1.32
013K831145	Pulp	1.61	6.4	0.4	<0.05	0.5	15.47	73.1	<0.02	1	0.4	3.2	10.43	36.31	5.49	1.05	4.46	0.56	2.94	0.58	1.54
013K831146	Pulp	0.91	1.8	0.2	<0.05	0.4	13.56	75.1	<0.02	2	0.2	1.2	10.97	38.95	6.52	1.37	4.86	0.55	3.04	0.55	1.38
013K831147	Pulp	0.88	2.3	0.1	<0.05	0.2	7.64	44.0	0.02	<1	0.2	1.6	5.34	20.01	3.10	0.57	2.27	0.28	1.49	0.26	0.71
013K831148	Pulp	1.10	4.9	0.2	<0.05	0.4	6.24	27.2	<0.02	<1	0.1	2.8	3.42	12.66	1.96	0.33	1.50	0.20	1.08	0.20	0.57
013K831149	Pulp	0.79	2.7	0.2	<0.05	0.2	7.75	34.7	<0.02	1	0.1	1.4	4.60	16.91	2.48	0.39	1.93	0.25	1.33	0.25	0.68



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Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831120	Pulp	0.35	2.04	0.26	<10	<2
013K831121	Pulp	0.59	3.63	0.44	<10	<2
013K831122	Pulp	0.64	3.62	0.55	<10	<2
013K831123	Pulp	0.61	3.81	0.54	<10	<2
013K831124	Pulp	0.56	3.46	0.52	<10	<2
013K831125	Pulp	0.61	3.38	0.50	<10	2
013K831126	Pulp	1.07	6.12	0.75	<10	<2
013K831127	Pulp	0.89	5.78	0.86	<10	<2
013K831128	Pulp	0.57	3.68	0.54	<10	<2
013K831129	Pulp	1.39	8.56	1.36	<10	<2
013K831130	Pulp	0.52	3.03	0.44	<10	<2
013K831131	Pulp	1.74	9.71	1.43	<10	2
013K831132	Pulp	0.69	4.36	0.65	<10	<2
013K831133	Pulp	0.82	4.85	0.70	<10	<2
013K831134	Pulp	0.32	1.85	0.29	<10	<2
013K831135	Pulp	0.49	2.75	0.43	<10	<2
013K831136	Pulp	0.52	3.24	0.48	<10	<2
013K831137	Pulp	0.72	4.41	0.61	<10	<2
013K831138	Pulp	0.25	1.41	0.21	<10	<2
013K831139	Pulp	0.28	1.82	0.24	<10	<2
013K831140	Pulp	0.16	1.01	0.15	<10	<2
013K831141	Pulp	0.23	1.28	0.19	<10	<2
013K831142	Pulp	0.20	1.32	0.17	<10	<2
013K831143	Pulp	0.63	3.56	0.44	<10	<2
013K831144	Pulp	0.16	0.97	0.13	<10	<2
013K831145	Pulp	0.21	1.24	0.16	<10	<2
013K831146	Pulp	0.18	1.11	0.15	<10	<2
013K831147	Pulp	0.09	0.54	0.08	<10	<2
013K831148	Pulp	0.07	0.46	0.06	<10	<2
013K831149	Pulp	0.09	0.55	0.08	<10	<2



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831150	Pulp	8.58	40.66	76.31	283.2	634	11.2	7.2	406	1.67	32.3	7.7	2.9	1.0	60.1	1.18	0.53	0.79	19	5.91	0.064
013K831151	Pulp	2.21	15.67	2.03	27.5	146	4.2	1.4	41	0.35	<0.1	2.3	0.6	0.1	16.9	0.10	0.05	<0.02	11	0.20	0.036
013K831152	Pulp	3.23	11.34	1.98	42.8	95	5.1	3.1	134	0.89	0.6	1.5	0.3	1.5	19.4	0.06	0.06	<0.02	17	0.29	0.052
013K831153	Pulp	1.95	6.69	1.84	37.3	80	5.3	2.1	68	0.58	0.5	1.2	<0.2	0.6	15.5	0.11	0.06	<0.02	12	0.22	0.032
013K831154	Pulp	7.58	33.50	3.11	71.1	315	9.1	4.8	272	2.16	0.5	6.5	0.7	1.5	27.1	0.34	0.10	0.04	46	0.43	0.186
013K831155	Pulp	3.31	6.83	2.47	41.3	65	4.7	5.3	115	2.30	1.7	2.6	<0.2	4.2	15.3	0.09	0.04	0.02	24	0.26	0.064
013K831156	Pulp	5.72	12.56	1.62	49.7	152	6.0	5.1	62	0.69	0.2	1.7	0.2	0.4	27.9	0.18	0.07	<0.02	15	0.31	0.031
013K831157	Pulp	1.21	3.49	1.35	31.6	23	2.8	2.2	90	0.54	1.1	1.2	1.5	2.3	10.5	0.06	0.04	<0.02	11	0.20	0.052
013K831158	Pulp	2.71	11.56	2.04	50.2	162	5.7	1.3	49	0.61	0.2	3.6	<0.2	0.3	15.8	0.19	0.07	0.02	16	0.18	0.040
013K831159	Pulp	10.59	24.37	3.05	86.8	356	8.9	8.9	217	2.49	0.7	11.5	0.8	2.7	24.3	0.30	0.06	0.03	43	0.39	0.159
013K831160	Pulp	9.33	23.36	5.65	74.7	216	14.8	8.8	355	2.34	1.1	9.6	0.3	2.4	23.9	0.22	0.08	0.06	33	0.28	0.140
013K831161	Pulp	1.93	9.44	3.04	49.0	21	10.0	5.4	194	0.98	0.6	5.8	<0.2	6.4	15.2	0.09	0.05	0.02	19	0.24	0.054
013K831162	Pulp	1.72	8.40	2.88	44.1	15	8.9	4.9	181	0.91	0.6	5.4	<0.2	5.0	14.1	0.08	0.05	0.02	17	0.23	0.052
013K831163	Pulp	32.36	33.25	6.09	100.0	338	15.1	16.5	346	5.56	2.7	29.3	0.4	3.9	28.9	0.36	0.11	0.06	62	0.34	0.210
013K831164	Pulp	17.99	31.48	6.70	91.0	274	14.9	8.8	338	2.20	0.4	29.3	0.5	2.4	24.0	0.34	0.11	0.06	45	0.29	0.191
013K831165	Pulp	0.89	32.84	24.02	130.8	2710	44.0	27.9	1193	3.09	23.9	3.5	2.7	6.4	26.7	0.52	0.78	2.93	46	0.62	0.094
013K831166	Pulp	6.26	25.73	2.90	17.8	256	19.0	1.8	31	0.21	<0.1	18.0	0.6	0.2	33.9	0.19	0.08	0.02	11	0.38	0.062
013K831167	Pulp	33.65	24.05	4.66	54.6	384	10.0	8.0	168	1.99	<0.1	15.5	0.3	0.9	18.6	0.29	0.09	0.04	31	0.24	0.141
013K831168	Pulp	5.71	17.89	2.16	31.2	305	9.6	4.5	97	0.69	<0.1	24.9	0.5	0.2	21.1	0.25	0.07	<0.02	18	0.37	0.078
013K831169	Pulp	7.03	24.17	5.54	40.1	483	10.1	4.8	158	0.98	0.3	7.8	0.5	0.3	28.0	0.23	0.06	0.05	38	0.31	0.226
013K831170	Pulp	1.46	15.15	6.33	39.5	203	14.0	2.1	60	0.39	<0.1	11.9	<0.2	0.2	20.4	0.21	0.04	0.03	13	0.30	0.060
013K831171	Pulp	29.71	20.38	3.51	102.3	346	11.4	15.0	532	3.48	0.3	14.9	0.4	0.7	24.5	0.38	0.07	0.04	32	0.38	0.154
013K831172	Pulp	17.85	23.16	2.98	72.0	343	12.0	8.9	216	1.14	<0.1	13.3	<0.2	0.2	24.0	0.30	0.10	0.04	22	0.33	0.103
013K831173	Pulp	12.54	54.04	7.80	116.7	113	27.5	15.2	392	2.41	1.3	42.4	0.5	9.3	29.7	0.21	0.11	0.08	45	0.45	0.100
013K831174	Pulp	14.69	23.26	4.31	41.1	358	9.6	4.2	84	0.98	<0.1	11.9	0.6	0.4	21.8	0.42	0.09	0.03	24	0.26	0.092
013K831175	Pulp	19.98	17.52	4.61	111.5	152	10.5	12.9	377	3.31	1.4	10.5	0.4	3.1	16.6	0.30	0.09	0.04	47	0.23	0.099
013K831176	Pulp	4.41	22.86	3.68	37.2	171	6.9	3.6	90	0.93	0.2	5.4	<0.2	1.5	15.6	0.09	0.05	0.03	27	0.19	0.053
013K831177	Pulp	1.87	18.63	2.43	19.3	168	7.3	1.5	37	0.36	<0.1	4.4	<0.2	0.3	14.2	0.08	0.03	0.02	10	0.12	0.043
013K831178	Pulp	2.80	14.14	2.05	37.4	147	6.3	1.6	49	0.54	<0.1	2.4	0.2	0.6	15.5	0.13	0.06	<0.02	20	0.19	0.036
013K831179	Pulp	1.55	13.99	1.79	13.4	179	6.9	0.9	31	0.18	<0.1	3.9	0.4	0.1	21.3	0.11	0.05	<0.02	9	0.21	0.035



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831150	Pulp	9.2	11.6	0.55	83.7	0.036	<20	0.42	0.027	0.05	0.4	2.0	0.19	1.48	91	1.3	0.03	1.8	0.45	<0.1
013K831151	Pulp	23.4	5.2	0.05	34.1	0.022	<20	0.37	0.007	0.03	0.3	0.5	0.05	0.13	49	0.7	<0.02	1.3	0.33	<0.1
013K831152	Pulp	22.8	8.5	0.22	48.5	0.066	<20	0.57	0.013	0.11	0.4	1.5	0.08	0.07	31	0.4	<0.02	2.1	0.93	<0.1
013K831153	Pulp	20.0	5.6	0.12	40.1	0.031	<20	0.41	0.007	0.04	0.2	0.9	0.07	0.17	34	0.8	<0.02	1.3	0.49	<0.1
013K831154	Pulp	104.2	20.2	0.09	86.9	0.052	<20	1.78	0.008	0.04	1.2	2.9	0.07	0.21	81	2.1	<0.02	1.9	0.40	<0.1
013K831155	Pulp	36.4	9.0	0.11	47.8	0.053	<20	0.70	0.009	0.04	1.0	2.1	0.05	0.06	34	0.6	<0.02	1.3	0.59	<0.1
013K831156	Pulp	42.5	6.2	0.05	62.4	0.018	<20	0.57	0.005	0.02	0.5	1.2	0.09	0.42	54	1.2	<0.02	0.5	0.25	<0.1
013K831157	Pulp	18.8	4.2	0.13	31.0	0.048	<20	0.34	0.007	0.07	0.2	1.3	0.05	0.03	12	0.2	<0.02	1.1	0.54	<0.1
013K831158	Pulp	50.3	6.5	0.06	71.2	0.018	<20	0.50	0.007	0.03	0.1	1.1	0.05	0.16	75	0.9	<0.02	0.8	0.40	<0.1
013K831159	Pulp	93.8	18.3	0.16	81.6	0.051	<20	1.51	0.009	0.07	0.6	2.8	0.17	0.12	87	1.2	<0.02	1.5	0.71	<0.1
013K831160	Pulp	65.1	22.4	0.46	125.2	0.076	<20	1.61	0.014	0.25	0.6	2.9	0.17	0.13	30	1.3	<0.02	2.9	2.20	<0.1
013K831161	Pulp	26.7	11.4	0.32	60.3	0.084	<20	0.65	0.010	0.19	0.4	1.7	0.12	0.03	7	0.3	<0.02	1.7	1.49	<0.1
013K831162	Pulp	25.0	10.2	0.30	55.2	0.083	<20	0.60	0.008	0.18	0.6	1.6	0.12	0.02	<5	0.2	<0.02	1.6	1.40	<0.1
013K831163	Pulp	134.5	23.9	0.27	108.4	0.053	<20	2.11	0.007	0.14	1.8	4.3	0.21	0.29	59	2.5	<0.02	1.9	1.47	<0.1
013K831164	Pulp	112.2	22.1	0.34	110.4	0.063	<20	1.94	0.011	0.18	1.5	3.3	0.17	0.18	55	2.0	<0.02	2.6	1.90	<0.1
013K831165	Pulp	40.0	51.2	0.77	158.8	0.102	<20	1.67	0.030	0.26	0.2	5.7	0.27	0.14	250	0.7	0.04	5.3	1.38	<0.1
013K831166	Pulp	71.9	10.0	0.04	101.8	0.018	<20	1.05	0.005	0.02	0.3	0.5	0.04	0.33	75	1.7	<0.02	0.5	0.31	<0.1
013K831167	Pulp	73.4	13.1	0.08	80.1	0.028	<20	1.77	0.006	0.04	0.4	1.6	0.10	0.17	81	1.5	<0.02	1.6	0.59	<0.1
013K831168	Pulp	55.7	14.2	0.07	86.0	0.016	<20	1.36	0.007	0.02	0.1	0.9	0.04	0.22	65	1.3	<0.02	0.6	0.29	<0.1
013K831169	Pulp	42.3	20.3	0.20	146.2	0.051	<20	1.47	0.011	0.10	1.0	1.1	0.08	0.17	133	1.1	<0.02	4.1	1.35	<0.1
013K831170	Pulp	60.2	11.3	0.07	120.2	0.025	<20	1.01	0.007	0.03	0.1	0.7	0.04	0.31	74	1.6	<0.02	1.4	0.38	<0.1
013K831171	Pulp	78.2	18.6	0.13	114.5	0.026	<20	2.08	0.009	0.06	0.5	2.0	0.13	0.24	69	2.2	<0.02	1.5	0.61	<0.1
013K831172	Pulp	99.5	15.6	0.07	84.3	0.015	<20	1.70	0.006	0.04	0.4	0.9	0.09	0.38	80	1.8	<0.02	0.6	0.44	<0.1
013K831173	Pulp	85.8	32.4	0.67	143.7	0.116	<20	1.97	0.031	0.31	0.7	4.8	0.51	0.07	42	0.8	<0.02	3.9	2.12	<0.1
013K831174	Pulp	66.5	9.8	0.04	72.6	0.026	<20	1.73	0.007	0.02	0.7	1.1	0.05	0.24	78	1.3	<0.02	1.5	0.35	<0.1
013K831175	Pulp	64.5	16.5	0.27	86.1	0.072	<20	1.44	0.010	0.14	1.1	2.8	0.26	0.11	44	1.0	<0.02	2.3	1.54	<0.1
013K831176	Pulp	51.4	10.5	0.16	62.2	0.055	<20	0.98	0.008	0.08	0.3	1.7	0.10	0.10	48	0.7	<0.02	2.2	1.03	<0.1
013K831177	Pulp	45.0	11.7	0.07	66.3	0.029	<20	0.68	0.007	0.03	0.3	0.8	0.04	0.15	62	0.8	<0.02	1.3	0.45	<0.1
013K831178	Pulp	54.4	8.1	0.07	66.1	0.029	<20	0.55	0.009	0.03	0.2	1.4	0.04	0.18	58	1.0	<0.02	1.0	0.38	<0.1
013K831179	Pulp	37.7	5.4	0.04	56.9	0.020	<20	0.43	0.006	0.02	<0.1	0.5	<0.02	0.22	68	0.8	<0.02	1.0	0.31	<0.1



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831150	Pulp	0.60	3.2	2.9	<0.05	1.0	9.58	15.0	0.44	18	0.1	3.9	2.41	10.10	2.13	0.39	1.89	0.27	1.50	0.30	0.84
013K831151	Pulp	0.74	2.7	0.2	<0.05	0.1	7.54	33.9	<0.02	<1	0.1	1.4	4.52	16.50	2.44	0.38	1.86	0.24	1.30	0.24	0.68
013K831152	Pulp	1.76	9.4	0.3	<0.05	1.0	9.41	39.6	<0.02	2	0.2	5.6	4.96	18.59	2.94	0.48	2.24	0.29	1.63	0.30	0.84
013K831153	Pulp	1.01	4.0	0.2	<0.05	0.4	7.99	34.3	<0.02	1	0.2	2.7	4.34	16.11	2.58	0.36	1.95	0.25	1.39	0.26	0.74
013K831154	Pulp	2.61	3.2	0.4	<0.05	0.7	49.39	189.5	0.02	2	1.1	2.9	26.22	101.34	16.18	2.38	12.43	1.63	9.03	1.70	4.73
013K831155	Pulp	1.89	3.8	0.3	<0.05	1.0	16.65	71.2	<0.02	<1	0.3	3.8	8.88	32.61	5.36	0.78	4.10	0.53	2.91	0.54	1.53
013K831156	Pulp	0.75	1.5	0.1	<0.05	0.3	16.77	76.3	<0.02	2	0.2	1.2	9.97	36.71	5.68	0.86	4.27	0.53	2.85	0.53	1.48
013K831157	Pulp	1.59	5.8	0.3	<0.05	0.9	9.01	37.5	<0.02	<1	0.2	5.0	4.50	17.05	2.82	0.41	2.17	0.28	1.58	0.29	0.85
013K831158	Pulp	0.81	2.6	0.2	<0.05	0.3	17.40	80.7	<0.02	<1	0.3	1.8	11.34	41.27	6.51	0.81	4.88	0.60	3.13	0.57	1.55
013K831159	Pulp	1.94	6.6	0.3	<0.05	1.1	38.30	187.5	<0.02	<1	1.0	4.2	23.22	84.20	14.09	1.91	10.51	1.34	7.20	1.31	3.59
013K831160	Pulp	1.58	23.4	0.4	<0.05	1.1	26.90	117.0	<0.02	<1	1.0	12.6	15.13	55.09	8.78	1.16	6.69	0.88	4.88	0.91	2.59
013K831161	Pulp	1.55	18.9	0.4	<0.05	1.7	12.03	47.4	<0.02	<1	0.4	10.9	6.62	23.70	3.86	0.51	2.95	0.39	2.10	0.40	1.14
013K831162	Pulp	1.66	17.7	0.4	<0.05	1.8	11.25	44.2	<0.02	<1	0.3	10.1	5.87	21.61	3.58	0.48	2.68	0.36	1.98	0.37	1.08
013K831163	Pulp	1.71	13.7	0.4	<0.05	0.8	58.45	253.7	<0.02	2	1.4	7.5	31.77	118.72	18.85	2.48	14.47	1.81	9.88	1.87	5.39
013K831164	Pulp	1.66	18.3	0.4	<0.05	0.9	49.70	189.8	<0.02	2	1.3	9.9	27.36	104.64	16.93	2.22	12.78	1.62	8.81	1.65	4.69
013K831165	Pulp	1.95	24.3	1.2	<0.05	4.9	18.40	73.9	0.04	<1	0.7	20.3	9.72	35.97	6.24	0.90	4.59	0.61	3.36	0.62	1.76
013K831166	Pulp	1.13	1.8	0.1	<0.05	0.4	33.12	131.3	<0.02	2	0.4	1.1	17.47	64.02	10.30	1.36	7.99	1.07	6.06	1.14	3.27
013K831167	Pulp	1.32	4.5	0.2	<0.05	0.3	32.47	131.7	<0.02	3	1.0	1.9	17.12	61.10	9.33	1.20	7.12	0.97	5.53	1.06	3.18
013K831168	Pulp	0.80	2.0	0.1	<0.05	0.2	27.61	107.1	<0.02	<1	1.0	1.5	14.37	51.15	8.38	1.06	6.34	0.87	5.04	0.97	2.82
013K831169	Pulp	2.03	8.8	0.4	<0.05	1.0	17.34	79.6	<0.02	<1	0.6	6.6	9.84	35.13	5.65	0.78	4.32	0.60	3.41	0.64	1.79
013K831170	Pulp	1.31	3.2	0.2	<0.05	0.5	21.89	115.3	<0.02	<1	0.5	1.9	14.43	52.00	8.06	0.91	5.98	0.79	4.34	0.80	2.17
013K831171	Pulp	0.88	5.5	0.2	<0.05	0.2	37.54	142.4	<0.02	<1	1.1	4.2	17.97	64.19	10.09	1.41	7.78	1.06	6.11	1.18	3.53
013K831172	Pulp	0.96	3.6	0.1	<0.05	0.2	40.20	165.1	<0.02	2	0.9	1.9	21.40	76.34	11.39	1.45	8.58	1.14	6.59	1.29	3.89
013K831173	Pulp	2.46	28.3	0.5	<0.05	3.6	35.60	150.2	<0.02	2	1.0	17.9	19.14	69.43	11.14	1.55	8.67	1.17	6.56	1.24	3.58
013K831174	Pulp	1.52	1.9	0.2	<0.05	0.3	29.81	131.8	<0.02	1	0.9	1.1	16.78	63.31	9.89	1.30	7.52	0.98	5.48	1.03	2.97
013K831175	Pulp	2.00	16.3	0.5	<0.05	0.8	27.78	140.5	<0.02	2	0.9	9.4	15.74	58.51	9.44	1.25	7.09	0.92	5.00	0.93	2.71
013K831176	Pulp	1.78	7.1	0.3	<0.05	0.7	18.97	105.2	<0.02	<1	0.4	5.3	13.59	51.91	8.41	1.20	6.28	0.75	3.96	0.69	1.86
013K831177	Pulp	1.01	3.1	0.2	<0.05	0.4	14.91	94.2	<0.02	<1	0.3	2.4	12.01	44.79	7.38	0.93	5.27	0.65	3.21	0.56	1.46
013K831178	Pulp	1.19	2.5	0.2	<0.05	0.9	18.53	105.1	<0.02	<1	0.2	2.1	12.48	47.65	7.42	1.03	5.45	0.66	3.47	0.63	1.72
013K831179	Pulp	0.91	1.8	0.1	<0.05	0.3	13.67	63.3	<0.02	<1	0.2	1.2	8.74	31.25	5.12	0.76	3.78	0.49	2.65	0.47	1.31



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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831150	Pulp	0.11	0.75	0.11	<10	<2
013K831151	Pulp	0.08	0.54	0.07	<10	<2
013K831152	Pulp	0.11	0.72	0.10	<10	<2
013K831153	Pulp	0.10	0.60	0.09	<10	<2
013K831154	Pulp	0.63	4.01	0.58	<10	<2
013K831155	Pulp	0.20	1.27	0.19	<10	<2
013K831156	Pulp	0.19	1.23	0.19	<10	<2
013K831157	Pulp	0.11	0.74	0.11	<10	<2
013K831158	Pulp	0.19	1.22	0.18	<10	<2
013K831159	Pulp	0.48	3.02	0.43	<10	<2
013K831160	Pulp	0.35	2.28	0.33	<10	<2
013K831161	Pulp	0.15	1.05	0.15	<10	<2
013K831162	Pulp	0.14	0.99	0.14	<10	<2
013K831163	Pulp	0.73	4.73	0.74	<10	<2
013K831164	Pulp	0.64	4.19	0.65	<10	<2
013K831165	Pulp	0.23	1.55	0.22	<10	<2
013K831166	Pulp	0.44	2.78	0.40	<10	<2
013K831167	Pulp	0.45	2.97	0.44	<10	<2
013K831168	Pulp	0.39	2.51	0.35	<10	<2
013K831169	Pulp	0.25	1.56	0.21	<10	<2
013K831170	Pulp	0.28	1.75	0.23	<10	<2
013K831171	Pulp	0.50	3.30	0.49	<10	<2
013K831172	Pulp	0.56	3.70	0.57	<10	<2
013K831173	Pulp	0.49	3.20	0.49	<10	<2
013K831174	Pulp	0.40	2.58	0.36	<10	<2
013K831175	Pulp	0.37	2.40	0.35	<10	<2
013K831176	Pulp	0.24	1.49	0.21	<10	<2
013K831177	Pulp	0.18	1.12	0.16	<10	<2
013K831178	Pulp	0.21	1.37	0.20	<10	<2
013K831179	Pulp	0.16	1.03	0.15	<10	<2



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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831180	Pulp	1.55	10.33	1.93	45.7	86	6.7	3.4	80	0.84	0.2	2.4	<0.2	1.7	18.0	0.11	0.15	<0.02	18	0.26	0.038
013K831181	Pulp	1.76	6.61	1.43	28.4	63	2.8	2.2	59	1.16	0.3	1.2	0.4	0.7	9.9	0.08	0.03	<0.02	17	0.17	0.066
013K831182	Pulp	6.80	30.91	2.58	103.7	144	9.6	8.8	88	2.21	0.6	4.7	0.9	1.9	16.8	0.14	0.10	0.03	32	0.25	0.073
013K831183	Pulp	1.37	4.68	1.32	22.2	41	2.2	1.7	44	0.95	1.0	1.0	0.7	1.1	9.0	0.07	0.02	0.05	13	0.17	0.068
013K831184	Pulp	1.74	16.97	3.26	44.2	191	6.0	2.3	81	0.79	1.0	2.2	0.3	0.7	15.5	0.14	0.05	0.06	21	0.21	0.075
013K831185	Pulp	1.54	14.30	2.90	37.2	165	5.5	2.0	74	0.81	1.0	2.0	0.4	0.7	14.6	0.12	0.04	0.04	18	0.20	0.073
013K831186	Pulp	0.73	11.68	1.34	7.7	107	2.6	0.5	11	0.12	0.3	1.6	<0.2	0.1	10.8	0.08	0.04	0.02	7	0.09	0.031
013K831187	Pulp	1.22	6.95	1.96	9.2	71	2.8	0.6	19	0.25	0.1	1.8	<0.2	0.3	17.9	0.08	0.02	<0.02	7	0.15	0.024
013K831188	Pulp	1.06	5.76	1.91	19.1	49	3.0	1.7	64	0.50	0.6	1.0	<0.2	1.4	16.4	0.05	0.03	<0.02	13	0.25	0.061
013K831189	Pulp	0.81	9.01	3.58	17.6	82	3.7	1.1	30	0.29	0.4	3.9	0.3	0.3	19.3	0.08	0.04	0.02	7	0.16	0.035
013K831190	Pulp	0.87	13.07	2.05	25.7	33	4.2	3.6	87	0.70	1.2	2.1	0.4	2.0	14.7	0.04	0.04	<0.02	15	0.27	0.072
013K831191	Pulp	2.61	22.33	2.86	51.0	187	8.4	4.5	127	1.82	0.5	3.1	0.7	0.6	14.8	0.17	0.04	0.03	28	0.18	0.087
013K831192	Pulp	1.62	12.52	2.27	27.6	84	4.3	1.4	38	0.30	0.5	2.4	1.4	0.3	19.9	0.09	0.08	<0.02	12	0.19	0.037
013K831193	Pulp	0.73	7.97	3.10	29.4	46	5.3	3.1	117	0.84	1.3	1.4	<0.2	4.6	19.5	0.08	0.03	0.02	19	0.31	0.058
013K831194	Pulp	0.27	2.08	2.08	11.5	10	1.6	1.1	53	0.37	1.4	0.9	0.7	2.8	11.8	0.03	0.05	<0.02	9	0.25	0.072
013K831195	Pulp	2.27	14.51	2.44	40.0	74	8.0	5.4	122	1.27	1.9	4.3	0.6	4.3	16.9	0.08	0.05	<0.02	19	0.31	0.065
013K831196	Pulp	1.56	8.82	1.51	32.5	68	6.0	5.5	62	0.84	0.9	2.4	<0.2	1.9	16.5	0.09	0.03	<0.02	14	0.27	0.045
013K831197	Pulp	1.33	11.70	1.35	29.4	138	5.4	1.3	72	0.51	0.4	1.9	0.3	0.5	16.8	0.11	0.02	<0.02	10	0.21	0.031
013K831198	Pulp	8.44	40.61	80.72	284.6	548	11.0	7.2	410	1.67	33.8	9.3	1.9	1.4	61.2	1.37	0.52	0.92	19	5.95	0.070
013K831199	Pulp	3.26	9.41	2.22	48.7	151	5.1	2.5	110	1.12	1.1	3.0	0.3	1.7	15.3	0.16	0.05	<0.02	26	0.19	0.050
013K831200	Pulp	5.04	11.94	4.76	49.0	170	6.5	5.8	191	2.49	2.0	3.3	<0.2	3.6	15.0	0.14	0.06	0.03	30	0.20	0.094
013K831201	Pulp	3.66	13.08	2.78	35.8	55	11.8	3.7	25	0.57	0.4	1.8	0.6	0.5	15.9	0.14	0.24	<0.02	15	0.45	0.027
013K831202	Pulp	5.16	29.75	7.51	84.3	69	21.3	11.9	397	2.11	2.3	18.5	0.9	9.3	32.8	0.17	0.08	0.06	43	0.48	0.094
013K831203	Pulp	16.37	32.55	7.04	147.3	164	25.3	16.0	563	3.14	1.6	21.4	<0.2	5.4	26.3	0.47	0.09	0.06	50	0.31	0.112
013K831204	Pulp	2.13	24.61	3.53	85.3	223	11.1	13.6	818	2.21	0.6	1.6	0.5	0.7	12.2	0.48	0.02	0.03	31	0.36	0.125
013K831205	Pulp	0.92	31.13	23.62	129.6	2539	44.3	28.1	1192	2.98	24.0	3.8	2.6	8.0	26.0	0.51	0.59	3.05	48	0.59	0.090
013K831206	Pulp	1.53	14.67	2.93	60.7	77	13.7	7.2	117	1.17	0.8	3.7	0.4	0.9	16.1	0.17	0.04	0.02	47	0.44	0.049
013K831207	Pulp	3.48	12.50	2.28	37.4	55	11.2	3.8	24	0.57	0.6	1.7	0.2	0.5	15.7	0.16	0.03	<0.02	14	0.44	0.025
013K831208	Pulp	6.38	14.46	3.17	75.1	147	15.0	5.0	74	0.94	0.2	10.9	<0.2	0.2	18.7	0.28	0.02	0.03	22	0.45	0.051
013K831209	Pulp	20.26	31.25	6.36	109.0	264	16.0	12.6	298	3.07	1.4	22.0	0.8	1.4	27.5	0.54	0.02	0.06	47	0.57	0.152



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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831180	Pulp	44.2	8.5	0.14	45.6	0.039	<20	0.52	0.010	0.06	0.2	1.5	0.11	0.18	43	0.7	<0.02	1.1	0.60	<0.1
013K831181	Pulp	24.5	5.9	0.07	18.7	0.034	<20	0.39	0.006	0.03	0.3	0.9	0.06	0.06	32	0.4	<0.02	1.1	0.28	<0.1
013K831182	Pulp	48.3	14.7	0.12	37.7	0.046	<20	0.79	0.010	0.05	1.9	2.1	0.26	0.18	72	1.0	<0.02	1.8	0.56	<0.1
013K831183	Pulp	19.4	4.0	0.05	16.8	0.032	<20	0.30	0.005	0.03	0.2	0.9	0.05	0.05	23	<0.1	<0.02	1.2	0.23	<0.1
013K831184	Pulp	43.9	10.1	0.14	51.3	0.040	<20	0.58	0.009	0.07	0.3	1.2	0.07	0.11	56	0.2	<0.02	2.4	0.67	<0.1
013K831185	Pulp	40.6	9.0	0.13	44.6	0.040	<20	0.54	0.008	0.07	0.3	1.0	0.06	0.10	60	<0.1	<0.02	2.1	0.63	<0.1
013K831186	Pulp	19.1	3.4	0.02	23.4	0.014	<20	0.28	0.003	0.01	0.1	0.3	<0.02	0.08	27	<0.1	<0.02	1.0	0.14	<0.1
013K831187	Pulp	14.8	3.3	0.02	23.7	0.014	<20	0.21	0.004	0.01	0.3	0.6	<0.02	0.13	38	0.3	<0.02	0.8	0.16	<0.1
013K831188	Pulp	15.3	6.4	0.12	30.0	0.046	<20	0.33	0.010	0.06	0.3	0.9	0.04	0.05	28	<0.1	<0.02	1.5	0.41	<0.1
013K831189	Pulp	33.6	5.4	0.06	32.4	0.019	<20	0.32	0.006	0.03	0.1	0.6	0.02	0.16	41	0.5	<0.02	1.2	0.33	<0.1
013K831190	Pulp	20.7	7.5	0.18	32.7	0.056	<20	0.42	0.012	0.10	0.4	1.2	0.08	0.12	20	<0.1	<0.02	1.8	0.60	<0.1
013K831191	Pulp	69.2	13.6	0.15	37.2	0.036	<20	1.00	0.006	0.07	0.2	1.4	0.07	0.20	70	0.5	<0.02	2.4	0.72	0.1
013K831192	Pulp	23.8	4.8	0.06	44.3	0.035	<20	0.35	0.007	0.03	0.3	0.7	0.05	0.14	42	0.1	<0.02	1.6	0.33	<0.1
013K831193	Pulp	25.1	10.8	0.19	53.8	0.063	<20	0.50	0.013	0.10	0.9	1.9	0.06	0.14	27	0.2	<0.02	2.1	0.86	<0.1
013K831194	Pulp	16.2	3.5	0.08	19.2	0.042	<20	0.24	0.008	0.04	0.3	1.0	0.02	0.02	10	<0.1	<0.02	0.9	0.33	<0.1
013K831195	Pulp	37.9	9.5	0.19	52.7	0.063	<20	0.61	0.017	0.10	0.5	2.0	0.10	0.22	30	0.2	<0.02	2.0	0.78	<0.1
013K831196	Pulp	43.6	6.2	0.06	42.5	0.025	<20	0.40	0.008	0.03	0.6	1.5	0.07	0.38	38	<0.1	<0.02	1.1	0.34	0.1
013K831197	Pulp	34.6	6.3	0.06	58.1	0.021	<20	0.48	0.006	0.03	0.3	0.9	0.05	0.16	64	0.3	<0.02	1.4	0.42	<0.1
013K831198	Pulp	9.6	12.4	0.55	87.0	0.039	<20	0.42	0.026	0.05	0.5	2.3	0.19	1.45	102	0.5	0.03	1.8	0.48	<0.1
013K831199	Pulp	56.7	7.2	0.14	80.2	0.045	<20	0.59	0.008	0.07	0.3	1.8	0.07	0.10	59	0.3	<0.02	2.5	0.81	0.1
013K831200	Pulp	52.8	10.0	0.20	75.6	0.057	<20	0.81	0.010	0.10	0.5	2.3	0.10	0.12	89	0.2	<0.02	2.8	1.11	<0.1
013K831201	Pulp	23.5	13.0	0.08	37.7	0.022	<20	0.70	0.018	0.01	<0.1	1.6	0.04	0.61	42	0.9	<0.02	1.5	0.20	<0.1
013K831202	Pulp	61.1	25.9	0.65	150.5	0.145	<20	1.41	0.034	0.34	0.5	4.3	0.23	0.05	25	0.1	0.02	4.7	2.38	0.1
013K831203	Pulp	111.0	26.8	0.44	145.3	0.088	<20	2.06	0.016	0.23	0.7	4.6	0.26	0.15	44	0.7	0.02	4.0	2.23	0.1
013K831204	Pulp	41.1	17.2	0.07	87.7	0.028	<20	2.37	0.007	0.01	<0.1	2.4	0.13	0.16	100	1.1	<0.02	2.5	0.20	<0.1
013K831205	Pulp	41.3	48.5	0.78	163.1	0.103	<20	1.62	0.030	0.25	0.2	5.6	0.28	0.15	261	0.2	0.04	5.9	1.35	<0.1
013K831206	Pulp	36.5	22.3	0.25	63.8	0.047	<20	1.07	0.025	0.03	<0.1	2.3	0.05	0.21	35	0.6	<0.02	3.1	0.32	<0.1
013K831207	Pulp	22.8	12.4	0.08	36.8	0.021	<20	0.69	0.016	0.01	<0.1	1.5	0.03	0.61	42	0.7	<0.02	1.3	0.20	<0.1
013K831208	Pulp	24.3	15.0	0.06	56.0	0.015	<20	1.36	0.009	0.01	<0.1	1.0	0.04	0.38	67	0.7	<0.02	1.5	0.19	<0.1
013K831209	Pulp	57.7	27.2	0.22	72.4	0.048	<20	2.20	0.027	0.03	0.2	2.9	0.13	0.87	59	0.9	<0.02	3.3	0.37	<0.1



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831180	Pulp	1.26	5.2	0.2	<0.05	1.0	16.74	78.1	<0.02	2	0.2	3.8	9.85	37.49	5.94	0.86	4.48	0.54	2.90	0.54	1.51
013K831181	Pulp	1.18	2.5	0.2	<0.05	0.2	10.72	43.6	<0.02	<1	0.2	1.7	5.47	21.21	3.39	0.55	2.63	0.34	1.87	0.34	0.98
013K831182	Pulp	1.72	4.6	0.3	<0.05	0.7	23.87	83.5	<0.02	2	0.3	3.1	11.91	46.58	7.83	1.26	6.13	0.77	4.25	0.80	2.28
013K831183	Pulp	1.05	2.0	0.3	<0.05	0.2	8.51	35.0	<0.02	<1	0.1	1.6	4.53	16.47	3.02	0.53	2.48	0.31	1.70	0.33	0.82
013K831184	Pulp	1.35	6.3	0.5	<0.05	0.4	13.80	75.8	<0.02	3	0.3	3.4	10.38	36.20	6.05	1.05	4.84	0.57	2.84	0.59	1.43
013K831185	Pulp	1.30	5.9	0.4	<0.05	0.4	12.69	67.9	<0.02	<1	0.2	3.3	9.25	33.24	5.31	0.93	4.18	0.49	2.48	0.47	1.26
013K831186	Pulp	0.38	1.0	0.2	<0.05	<0.1	4.94	32.0	<0.02	<1	0.2	0.5	4.03	14.83	2.51	0.46	1.64	0.20	1.05	0.21	0.54
013K831187	Pulp	0.47	1.1	0.2	<0.05	<0.1	4.04	22.3	<0.02	1	<0.1	0.5	3.31	11.85	1.74	0.38	1.33	0.16	0.83	0.17	0.43
013K831188	Pulp	1.16	4.4	0.3	<0.05	0.6	5.54	26.8	<0.02	<1	0.2	3.2	3.44	12.68	2.08	0.41	1.51	0.20	1.11	0.20	0.64
013K831189	Pulp	0.54	2.4	0.2	<0.05	0.2	11.60	44.6	<0.02	2	<0.1	1.7	7.09	25.47	3.99	0.69	3.39	0.49	2.54	0.49	1.16
013K831190	Pulp	1.30	7.5	0.4	<0.05	0.7	7.62	38.0	<0.02	<1	0.2	4.7	4.98	17.54	2.88	0.53	2.36	0.29	1.46	0.30	0.78
013K831191	Pulp	1.04	6.5	0.3	<0.05	0.2	26.93	113.3	<0.02	<1	0.5	3.3	16.78	61.71	9.25	1.69	7.33	0.98	5.08	0.92	2.63
013K831192	Pulp	1.19	2.8	0.3	<0.05	0.2	8.16	37.8	<0.02	1	<0.1	1.9	5.39	18.57	3.03	0.47	2.39	0.30	1.66	0.34	0.90
013K831193	Pulp	1.79	8.2	0.4	<0.05	3.0	9.59	48.0	<0.02	<1	0.4	5.5	5.89	21.20	3.46	0.59	2.61	0.35	2.01	0.37	1.08
013K831194	Pulp	1.37	3.2	0.3	<0.05	0.8	6.78	32.4	<0.02	<1	<0.1	3.1	3.89	13.52	2.22	0.42	1.72	0.23	1.41	0.28	0.72
013K831195	Pulp	1.88	8.3	0.4	<0.05	1.4	14.69	67.1	<0.02	<1	0.3	6.0	8.71	31.86	5.23	0.78	4.44	0.58	2.68	0.58	1.56
013K831196	Pulp	0.91	2.7	0.2	<0.05	0.5	16.41	74.4	<0.02	<1	0.2	2.0	10.46	38.93	6.85	1.10	5.71	0.60	3.15	0.65	1.79
013K831197	Pulp	0.62	2.8	<0.1	<0.05	0.4	10.82	62.4	<0.02	1	<0.1	2.0	8.14	30.13	5.09	0.82	3.67	0.45	2.36	0.45	1.32
013K831198	Pulp	0.56	3.2	3.3	<0.05	1.1	9.58	16.0	0.47	20	0.1	3.8	2.71	11.16	2.54	0.45	2.09	0.28	1.72	0.34	0.99
013K831199	Pulp	1.35	7.2	0.3	<0.05	0.7	16.58	97.2	<0.02	<1	0.3	4.9	13.04	44.91	6.79	1.09	5.46	0.65	3.36	0.70	1.76
013K831200	Pulp	1.70	9.4	0.4	<0.05	1.1	17.04	85.3	<0.02	<1	0.3	6.7	11.77	40.74	6.62	0.90	5.16	0.65	3.45	0.65	1.76
013K831201	Pulp	0.38	1.1	0.2	<0.05	0.5	9.51	31.1	<0.02	1	0.2	2.6	6.07	23.12	3.90	0.75	3.10	0.38	1.92	0.33	1.00
013K831202	Pulp	2.04	28.4	0.7	<0.05	3.7	25.71	111.6	0.02	<1	1.1	17.3	14.87	52.57	8.97	1.42	7.41	0.98	5.18	0.99	2.81
013K831203	Pulp	2.00	21.5	0.4	<0.05	2.1	45.51	234.3	<0.02	1	1.9	14.0	28.29	97.92	17.53	2.89	15.03	1.79	9.72	1.82	5.11
013K831204	Pulp	0.75	1.4	0.1	<0.05	0.6	21.79	109.2	<0.02	<1	0.9	1.5	11.02	39.54	6.79	1.39	6.08	0.84	4.53	0.91	2.55
013K831205	Pulp	2.04	23.5	1.2	<0.05	5.3	17.75	70.9	0.04	<1	1.0	20.9	10.08	34.85	6.68	1.02	5.10	0.65	3.34	0.67	2.01
013K831206	Pulp	0.61	2.7	0.2	<0.05	1.0	14.46	43.3	<0.02	1	0.5	6.8	8.29	29.73	4.83	0.92	4.06	0.48	2.64	0.51	1.55
013K831207	Pulp	0.37	1.1	<0.1	<0.05	0.5	9.31	31.5	<0.02	2	0.2	2.4	6.01	23.19	3.77	0.80	3.40	0.38	2.09	0.35	1.01
013K831208	Pulp	0.48	0.9	<0.1	<0.05	0.3	11.68	38.4	<0.02	<1	0.3	1.5	5.97	22.15	4.01	0.77	3.57	0.43	2.12	0.46	1.22
013K831209	Pulp	0.87	2.5	0.3	<0.05	0.7	25.56	90.1	<0.02	2	0.7	6.1	15.02	53.17	9.04	1.45	7.79	0.93	5.01	1.01	2.74



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Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831180	Pulp	0.19	1.19	0.18	<10	<2
013K831181	Pulp	0.12	0.80	0.11	<10	<2
013K831182	Pulp	0.29	1.85	0.28	<10	<2
013K831183	Pulp	0.12	0.74	0.09	<10	<2
013K831184	Pulp	0.20	1.21	0.16	<10	<2
013K831185	Pulp	0.17	0.97	0.12	<10	<2
013K831186	Pulp	0.05	0.36	0.05	<10	<2
013K831187	Pulp	0.05	0.30	0.05	<10	<2
013K831188	Pulp	0.08	0.46	0.07	<10	<2
013K831189	Pulp	0.13	0.72	0.11	<10	<2
013K831190	Pulp	0.10	0.73	0.09	<10	<2
013K831191	Pulp	0.33	1.90	0.27	<10	<2
013K831192	Pulp	0.11	0.70	0.13	<10	<2
013K831193	Pulp	0.15	0.88	0.13	<10	<2
013K831194	Pulp	0.12	0.67	0.09	<10	<2
013K831195	Pulp	0.22	1.31	0.19	<10	<2
013K831196	Pulp	0.23	1.38	0.21	<10	<2
013K831197	Pulp	0.15	0.99	0.16	<10	<2
013K831198	Pulp	0.13	0.85	0.12	<10	<2
013K831199	Pulp	0.22	1.37	0.21	<10	<2
013K831200	Pulp	0.25	1.42	0.22	<10	<2
013K831201	Pulp	0.11	0.67	0.10	<10	<2
013K831202	Pulp	0.38	2.46	0.38	<10	<2
013K831203	Pulp	0.71	4.53	0.70	<10	<2
013K831204	Pulp	0.34	1.89	0.25	<10	<2
013K831205	Pulp	0.26	1.65	0.24	<10	<2
013K831206	Pulp	0.19	1.12	0.14	<10	<2
013K831207	Pulp	0.11	0.70	0.09	<10	2
013K831208	Pulp	0.18	0.89	0.12	<10	<2
013K831209	Pulp	0.34	2.19	0.27	<10	<2



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831210	Pulp	12.48	11.58	5.95	63.0	67	9.3	3.6	43	0.80	0.3	16.5	<0.2	0.2	16.5	0.31	0.02	<0.02	22	0.34	0.036
013K831211	Pulp	12.52	49.04	5.08	104.4	337	14.2	18.3	648	3.50	2.0	7.3	0.6	0.9	12.9	0.67	<0.02	0.02	39	0.37	0.173
013K831212	Pulp	9.38	219.27	5.66	150.5	448	56.5	16.2	717	3.70	20.8	7.4	1.6	1.7	31.5	0.98	0.11	0.11	71	1.10	0.409
013K831213	Pulp	2.62	20.36	4.12	74.6	163	8.7	3.4	60	0.68	0.2	7.2	<0.2	0.2	19.6	0.35	<0.02	<0.02	25	0.37	0.084
013K831214	Pulp	3.29	37.33	6.13	120.0	476	14.1	8.1	206	2.82	0.3	13.3	<0.2	0.7	43.2	0.62	0.03	0.05	53	0.70	0.256
013K831215	Pulp	1.35	20.62	4.27	57.0	33	20.0	15.1	954	2.92	1.3	11.3	0.3	4.6	44.9	0.14	<0.02	0.03	52	0.53	0.111
013K831216	Pulp	3.16	18.69	5.28	73.6	237	13.1	17.2	542	3.12	0.2	9.1	0.5	0.6	32.7	0.40	<0.02	0.04	64	0.53	0.164
013K831217	Pulp	0.78	13.58	3.66	38.0	24	16.4	8.4	215	1.65	0.6	2.8	<0.2	3.7	45.8	0.05	<0.02	<0.02	40	0.71	0.065
013K831218	Pulp	3.49	17.58	6.12	68.7	72	24.3	13.3	333	2.85	1.3	8.6	0.6	5.5	53.0	0.14	<0.02	0.03	51	0.79	0.103
013K831219	Pulp	0.84	7.86	2.55	34.0	17	13.2	7.0	126	1.37	0.2	1.8	<0.2	1.9	43.3	0.05	<0.02	<0.02	30	0.69	0.051
013K831220	Pulp	1.89	14.05	4.28	52.9	42	19.7	11.2	226	2.16	0.6	3.0	0.5	3.1	55.9	0.09	0.02	0.03	42	0.88	0.073
013K831221	Pulp	4.41	16.59	2.44	73.7	67	13.2	4.0	29	0.29	0.8	2.0	0.7	1.0	31.8	0.23	0.04	0.12	14	0.52	0.032
013K831222	Pulp	4.25	18.69	2.12	73.9	56	13.1	4.2	29	0.29	0.4	1.9	1.4	0.9	30.5	0.22	0.02	0.07	14	0.52	0.030
013K831223	Pulp	4.37	15.42	2.37	59.2	60	13.0	4.5	36	0.28	0.5	2.0	1.1	0.6	31.6	0.27	0.02	0.05	13	0.53	0.031
013K831224	Pulp	8.68	26.58	2.60	98.7	130	14.4	7.5	74	1.72	<0.1	3.9	0.5	0.6	43.2	0.46	<0.02	0.02	58	0.87	0.049
013K831225	Pulp	3.50	22.13	0.98	41.6	81	14.3	7.8	50	0.85	<0.1	0.7	0.6	0.4	29.2	0.18	<0.02	<0.02	30	0.62	0.042
013K831226	Pulp	1.11	25.85	3.77	75.9	82	42.4	28.5	3854	4.82	1.5	0.9	0.6	3.2	109.7	0.20	<0.02	0.08	40	1.37	0.104
013K831227	Pulp	1.99	73.77	1.63	139.0	163	70.5	75.5	3035	4.91	0.5	0.3	0.3	1.3	108.4	0.42	<0.02	0.03	21	0.88	0.129
013K831228	Pulp	1.23	26.92	1.34	63.9	64	23.5	10.9	94	1.50	0.4	0.2	1.3	0.3	28.8	0.34	<0.02	0.04	19	0.63	0.087
013K831229	Pulp	1.14	20.48	1.97	51.2	45	30.9	17.0	246	2.27	0.9	0.3	<0.2	0.8	118.2	0.15	<0.02	0.02	23	1.28	0.103
013K831230	Pulp	0.56	18.66	1.20	63.5	46	27.7	11.2	68	1.27	0.4	0.2	0.9	0.2	33.7	0.21	<0.02	<0.02	13	0.54	0.053
013K831231	Pulp	0.46	18.55	1.61	72.0	68	32.6	13.6	122	0.99	0.4	0.2	1.3	0.2	44.9	0.32	<0.02	0.02	13	0.61	0.060
013K831232	Pulp	0.46	12.68	1.72	52.2	25	29.4	9.8	73	1.12	0.2	0.2	3.0	0.3	58.6	0.17	<0.02	<0.02	20	0.92	0.043
013K831233	Pulp	1.09	21.95	2.42	56.4	34	39.8	15.8	92	5.93	0.7	0.4	1.1	1.4	44.8	0.19	<0.02	<0.02	32	0.60	0.065
013K831234	Pulp	0.84	16.37	1.89	37.9	33	29.7	21.2	340	2.23	0.2	0.4	0.5	1.1	64.1	0.15	<0.02	<0.02	23	0.79	0.075
013K831235	Pulp	8.40	37.30	82.12	276.9	601	11.4	6.8	406	1.67	35.1	9.4	7.7	1.4	69.1	1.28	0.66	1.00	19	6.07	0.062
013K831236	Pulp	4.00	22.16	1.35	52.8	39	37.1	22.2	387	3.42	0.1	0.3	0.7	0.6	50.0	0.20	<0.02	<0.02	27	0.80	0.062
013K831237	Pulp	0.94	24.63	1.67	62.9	97	14.7	15.9	796	1.92	0.5	0.2	1.0	0.5	24.4	0.33	<0.02	0.02	13	0.43	0.147
013K831238	Pulp	0.88	21.85	0.84	71.6	37	19.2	7.6	93	1.13	0.2	0.2	0.8	0.3	33.6	0.25	<0.02	<0.02	12	0.61	0.051
013K831239	Pulp	19.45	17.05	2.17	78.5	173	11.4	12.7	139	1.94	0.4	3.8	0.3	0.3	26.0	0.34	<0.02	0.02	44	0.82	0.108



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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831210	Pulp	26.5	11.9	0.06	39.0	0.018	<20	1.30	0.011	0.01	0.1	0.9	0.04	0.31	69	0.3	<0.02	2.0	0.25	<0.1
013K831211	Pulp	41.6	20.2	0.05	55.9	0.028	<20	2.53	0.007	0.01	<0.1	2.9	0.19	0.13	124	2.1	<0.02	2.7	0.17	<0.1
013K831212	Pulp	74.3	41.0	0.19	110.4	0.043	<20	3.50	0.018	0.04	0.8	4.0	0.22	0.30	274	3.7	0.02	3.6	0.45	0.1
013K831213	Pulp	25.8	14.6	0.07	73.3	0.020	<20	1.56	0.011	0.01	<0.1	1.0	0.02	0.22	88	0.9	<0.02	2.3	0.17	<0.1
013K831214	Pulp	60.6	25.7	0.13	119.8	0.039	<20	3.60	0.019	0.03	0.1	3.0	0.07	0.30	162	2.8	0.03	4.7	0.32	<0.1
013K831215	Pulp	28.3	24.7	0.43	134.1	0.092	<20	1.94	0.080	0.08	<0.1	4.7	0.09	0.02	8	<0.1	<0.02	5.4	0.38	<0.1
013K831216	Pulp	24.9	20.2	0.22	102.3	0.041	<20	2.29	0.039	0.04	0.1	2.2	0.08	0.16	118	1.5	<0.02	5.1	0.40	<0.1
013K831217	Pulp	20.5	25.9	0.42	67.1	0.077	<20	1.73	0.149	0.07	<0.1	2.6	0.05	<0.02	11	<0.1	<0.02	4.8	0.36	<0.1
013K831218	Pulp	33.4	33.4	0.61	114.7	0.102	<20	2.73	0.166	0.15	0.1	4.0	0.12	0.05	44	0.2	<0.02	7.1	0.74	<0.1
013K831219	Pulp	12.8	17.0	0.32	53.4	0.056	<20	1.66	0.147	0.05	<0.1	2.0	0.03	<0.02	7	0.2	<0.02	3.9	0.22	<0.1
013K831220	Pulp	22.2	25.8	0.50	93.6	0.079	<20	2.36	0.194	0.10	<0.1	3.4	0.07	0.04	17	0.4	<0.02	5.6	0.39	<0.1
013K831221	Pulp	31.5	8.6	0.07	19.4	0.013	<20	1.03	0.036	0.01	<0.1	1.0	0.04	0.39	73	0.3	0.02	1.7	0.08	<0.1
013K831222	Pulp	30.7	8.3	0.07	18.7	0.013	<20	1.02	0.036	0.01	<0.1	1.0	0.05	0.41	74	0.3	<0.02	1.6	0.07	<0.1
013K831223	Pulp	31.1	8.3	0.07	20.2	0.013	<20	1.00	0.034	0.01	<0.1	0.9	0.05	0.40	88	0.2	<0.02	1.5	0.08	<0.1
013K831224	Pulp	49.6	16.8	0.08	36.0	0.017	<20	2.41	0.057	0.01	0.2	1.2	0.12	0.29	122	0.9	<0.02	3.1	0.07	<0.1
013K831225	Pulp	15.5	9.4	0.07	9.1	0.012	<20	1.76	0.040	0.01	<0.1	1.1	0.04	0.25	84	1.0	<0.02	2.0	0.06	<0.1
013K831226	Pulp	23.5	26.2	0.77	131.1	0.057	<20	4.61	0.357	0.12	<0.1	4.0	0.08	0.05	54	0.3	<0.02	9.0	0.37	<0.1
013K831227	Pulp	23.6	15.1	0.18	253.5	0.016	<20	3.71	0.081	0.02	<0.1	3.7	0.13	0.74	136	1.6	<0.02	4.5	0.09	0.1
013K831228	Pulp	11.4	10.7	0.13	31.1	0.010	<20	3.50	0.051	0.02	<0.1	1.0	0.03	0.41	66	1.2	<0.02	3.3	0.10	<0.1
013K831229	Pulp	8.2	14.7	0.45	51.3	0.024	<20	4.39	0.262	0.03	<0.1	2.4	0.03	0.11	87	0.3	<0.02	7.1	0.09	<0.1
013K831230	Pulp	6.8	7.3	0.20	11.5	0.011	<20	2.55	0.069	0.01	<0.1	0.9	<0.02	0.24	64	0.3	<0.02	3.6	0.07	<0.1
013K831231	Pulp	8.0	10.1	0.24	30.6	0.011	<20	3.22	0.100	0.02	<0.1	0.7	0.03	0.42	36	1.4	<0.02	4.0	0.11	<0.1
013K831232	Pulp	7.1	14.5	0.38	30.2	0.022	<20	3.34	0.206	0.03	<0.1	1.1	<0.02	0.14	29	0.6	<0.02	5.7	0.11	<0.1
013K831233	Pulp	11.6	16.9	0.34	28.8	0.024	<20	3.31	0.128	0.03	<0.1	2.7	0.03	0.24	79	0.1	<0.02	5.8	0.15	<0.1
013K831234	Pulp	6.6	12.6	0.34	46.9	0.022	<20	3.70	0.157	0.03	<0.1	1.9	0.03	0.12	57	0.5	<0.02	6.0	0.10	<0.1
013K831235	Pulp	11.4	11.0	0.55	88.6	0.037	<20	0.41	0.025	0.05	0.5	2.1	0.20	1.42	118	0.7	0.03	1.8	0.47	<0.1
013K831236	Pulp	7.5	12.3	0.29	63.6	0.016	<20	3.07	0.144	0.02	<0.1	1.9	0.04	0.16	60	0.7	<0.02	4.6	0.09	<0.1
013K831237	Pulp	10.7	8.7	0.12	27.2	0.011	<20	3.56	0.037	0.02	<0.1	1.9	0.05	0.26	76	1.6	<0.02	2.7	0.13	<0.1
013K831238	Pulp	7.5	9.2	0.14	16.2	0.008	<20	2.39	0.051	0.01	<0.1	1.6	0.05	0.28	80	0.2	<0.02	2.0	0.06	<0.1
013K831239	Pulp	21.9	12.5	0.10	36.9	0.020	<20	2.11	0.021	0.02	0.2	0.9	0.07	1.12	93	0.9	<0.02	3.0	0.09	<0.1



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831210	Pulp	0.49	0.9	0.1	<0.05	0.2	13.62	45.4	<0.02	2	0.6	1.7	7.02	26.47	5.02	0.75	4.13	0.49	2.85	0.55	1.47
013K831211	Pulp	0.63	0.9	0.1	<0.05	0.6	22.46	88.5	0.02	5	0.8	1.2	10.66	38.94	6.46	1.13	6.50	0.76	4.27	0.86	2.62
013K831212	Pulp	1.70	3.0	0.3	<0.05	1.5	40.59	123.5	0.02	8	0.9	4.7	18.77	68.54	11.62	1.95	9.93	1.34	7.18	1.48	4.66
013K831213	Pulp	0.53	0.9	0.1	<0.05	0.2	10.33	42.9	<0.02	<1	0.4	1.7	6.85	25.06	4.25	0.86	3.36	0.38	2.17	0.38	1.11
013K831214	Pulp	1.34	2.2	0.2	<0.05	0.8	29.73	106.7	0.02	<1	0.7	3.2	15.12	54.53	9.48	2.00	8.25	1.08	5.92	1.14	3.20
013K831215	Pulp	0.73	6.1	0.4	<0.05	1.3	15.10	59.0	<0.02	<1	0.3	9.6	7.10	27.72	4.89	0.73	3.91	0.55	2.88	0.59	1.72
013K831216	Pulp	1.04	2.8	0.3	<0.05	0.6	12.65	48.4	<0.02	2	0.3	5.0	6.38	25.53	4.38	0.87	3.53	0.46	2.34	0.49	1.51
013K831217	Pulp	1.08	6.1	0.3	<0.05	1.1	7.60	39.9	<0.02	<1	0.2	8.2	4.86	16.58	2.74	0.49	2.34	0.27	1.55	0.31	0.84
013K831218	Pulp	1.94	13.5	0.5	<0.05	1.7	11.01	63.7	<0.02	<1	0.5	14.4	8.22	27.81	4.46	0.69	3.47	0.42	2.29	0.45	1.30
013K831219	Pulp	0.62	3.8	0.2	<0.05	0.9	5.92	25.1	<0.02	<1	0.2	6.3	3.18	12.14	2.00	0.32	1.61	0.20	1.16	0.21	0.56
013K831220	Pulp	1.16	8.5	0.4	<0.05	1.6	9.46	44.6	<0.02	<1	0.3	9.4	5.42	19.95	3.26	0.50	2.53	0.33	1.85	0.34	0.93
013K831221	Pulp	0.41	0.8	1.0	<0.05	0.6	6.01	32.3	<0.02	<1	<0.1	1.2	7.04	23.68	3.12	0.55	2.00	0.26	1.26	0.23	0.57
013K831222	Pulp	0.34	0.8	0.7	<0.05	0.5	5.59	31.8	<0.02	1	<0.1	1.2	7.09	21.53	3.09	0.61	1.79	0.24	1.19	0.19	0.54
013K831223	Pulp	0.32	0.8	0.5	<0.05	0.5	5.66	32.1	<0.02	1	0.2	1.4	7.27	23.73	3.04	0.67	1.93	0.27	1.15	0.23	0.51
013K831224	Pulp	0.52	0.8	0.3	<0.05	0.3	8.94	50.7	<0.02	6	0.3	1.6	12.33	36.96	5.02	0.91	2.53	0.42	1.78	0.34	0.77
013K831225	Pulp	0.30	0.7	<0.1	<0.05	0.6	4.64	16.3	<0.02	1	<0.1	1.0	3.74	13.61	1.80	0.37	1.25	0.14	0.79	0.15	0.40
013K831226	Pulp	0.87	7.9	0.3	<0.05	2.7	10.61	48.9	<0.02	<1	<0.1	10.1	5.57	18.85	3.23	0.91	2.48	0.40	2.05	0.42	1.09
013K831227	Pulp	0.21	0.9	<0.1	<0.05	2.2	9.64	30.9	<0.02	<1	<0.1	1.5	5.57	17.98	3.01	0.87	2.13	0.31	1.65	0.37	0.83
013K831228	Pulp	0.36	0.8	<0.1	<0.05	1.1	9.75	20.8	<0.02	3	<0.1	0.9	3.29	11.30	2.45	0.74	1.71	0.30	1.56	0.33	0.89
013K831229	Pulp	0.32	0.9	<0.1	<0.05	1.0	5.81	14.9	<0.02	<1	0.1	2.5	2.22	7.84	1.49	0.53	1.31	0.20	1.04	0.23	0.53
013K831230	Pulp	0.26	0.7	<0.1	<0.05	0.4	4.50	10.6	<0.02	<1	<0.1	1.1	1.76	6.22	1.22	0.45	0.99	0.16	0.84	0.19	0.46
013K831231	Pulp	0.31	1.0	<0.1	<0.05	0.4	4.85	13.5	<0.02	<1	0.1	1.9	1.96	6.81	1.32	0.54	1.20	0.15	0.86	0.19	0.50
013K831232	Pulp	0.39	1.2	0.1	<0.05	0.5	4.74	14.3	<0.02	<1	0.2	3.4	1.90	7.80	1.39	0.44	1.18	0.15	0.88	0.16	0.45
013K831233	Pulp	0.48	1.5	0.1	<0.05	1.4	7.07	20.7	<0.02	<1	0.3	2.8	2.93	11.15	1.99	0.66	1.54	0.24	1.29	0.27	0.70
013K831234	Pulp	0.51	1.2	<0.1	<0.05	0.9	4.24	12.9	<0.02	<1	0.3	3.2	1.74	6.15	1.23	0.53	0.96	0.14	0.79	0.17	0.48
013K831235	Pulp	0.68	3.3	3.3	<0.05	1.2	10.56	17.0	0.50	19	<0.1	3.6	2.87	10.63	2.36	0.51	1.93	0.32	1.63	0.37	0.94
013K831236	Pulp	0.22	0.9	<0.1	<0.05	0.8	5.97	12.5	<0.02	<1	<0.1	2.0	1.98	6.74	1.39	0.52	1.18	0.18	0.93	0.23	0.61
013K831237	Pulp	0.18	1.0	<0.1	<0.05	0.7	8.14	14.2	<0.02	<1	0.5	1.2	2.83	9.44	1.75	0.70	1.55	0.25	1.32	0.28	0.88
013K831238	Pulp	0.13	0.6	<0.1	<0.05	0.5	8.84	9.2	<0.02	1	0.2	0.7	2.06	7.68	1.53	0.51	1.46	0.22	1.30	0.26	0.79
013K831239	Pulp	0.46	1.1	<0.1	<0.05	0.2	7.45	37.4	<0.02	4	<0.1	2.3	5.52	17.49	2.67	0.65	1.80	0.26	1.31	0.27	0.67



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Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831210	Pulp	0.20	1.05	0.17	<10	<2
013K831211	Pulp	0.33	1.99	0.29	<10	<2
013K831212	Pulp	0.60	3.54	0.53	<10	<2
013K831213	Pulp	0.13	0.85	0.12	<10	<2
013K831214	Pulp	0.44	2.39	0.33	<10	<2
013K831215	Pulp	0.21	1.28	0.17	<10	<2
013K831216	Pulp	0.18	1.06	0.15	<10	<2
013K831217	Pulp	0.11	0.65	0.09	<10	<2
013K831218	Pulp	0.16	0.94	0.13	<10	<2
013K831219	Pulp	0.07	0.43	0.06	<10	<2
013K831220	Pulp	0.12	0.74	0.10	<10	<2
013K831221	Pulp	0.06	0.36	0.07	<10	<2
013K831222	Pulp	0.08	0.42	0.05	<10	2
013K831223	Pulp	0.07	0.39	0.05	<10	<2
013K831224	Pulp	0.12	0.68	0.09	<10	3
013K831225	Pulp	0.05	0.31	0.04	<10	<2
013K831226	Pulp	0.18	0.80	0.13	<10	<2
013K831227	Pulp	0.11	0.68	0.11	<10	<2
013K831228	Pulp	0.13	0.66	0.11	<10	2
013K831229	Pulp	0.08	0.46	0.07	<10	<2
013K831230	Pulp	0.06	0.40	0.05	<10	<2
013K831231	Pulp	0.08	0.38	0.06	<10	<2
013K831232	Pulp	0.06	0.37	0.05	<10	<2
013K831233	Pulp	0.11	0.64	0.10	<10	<2
013K831234	Pulp	0.05	0.28	0.05	<10	<2
013K831235	Pulp	0.13	0.83	0.13	<10	<2
013K831236	Pulp	0.08	0.51	0.07	<10	<2
013K831237	Pulp	0.10	0.63	0.09	<10	3
013K831238	Pulp	0.10	0.63	0.10	<10	<2
013K831239	Pulp	0.10	0.56	0.08	<10	3



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831240	Pulp	6.65	27.77	2.52	76.4	231	14.7	8.1	113	1.18	0.1	2.6	3.8	0.2	30.1	0.35	<0.02	0.02	39	0.76	0.078
013K831241	Pulp	1.04	20.74	2.07	68.9	55	13.0	6.6	123	0.89	0.8	3.5	0.3	0.5	30.4	0.29	<0.02	<0.02	40	0.48	0.097
013K831242	Pulp	11.35	41.51	2.45	85.3	176	24.3	9.5	86	0.88	0.2	2.0	3.4	0.3	28.1	0.50	0.03	<0.02	37	0.54	0.050
013K831243	Pulp	11.33	43.37	1.70	102.7	184	22.6	9.7	74	0.85	0.3	2.0	1.6	0.1	28.1	0.45	<0.02	<0.02	36	0.55	0.050
013K831244	Pulp	12.22	29.25	2.90	125.6	231	18.9	15.3	297	2.62	0.3	2.9	0.7	0.3	29.4	0.53	<0.02	<0.02	45	0.57	0.070
013K831245	Pulp	1.07	21.07	2.08	68.3	54	12.7	6.4	100	0.87	0.9	3.4	<0.2	0.5	28.9	0.32	<0.02	<0.02	40	0.46	0.092
013K831246	Pulp	3.89	31.27	2.73	110.4	181	22.2	60.5	8440	6.16	1.4	2.9	0.8	1.1	55.5	0.51	0.03	0.02	58	0.64	0.166
013K831247	Pulp	1.19	30.22	2.37	104.5	91	45.8	30.8	1641	3.42	0.5	0.4	0.8	0.8	54.2	0.46	<0.02	0.02	28	0.89	0.165
013K831248	Pulp	1.66	22.24	1.99	84.9	109	24.7	25.0	1388	3.29	0.4	0.4	<0.2	0.6	33.2	0.40	<0.02	<0.02	25	0.59	0.144
013K831249	Pulp	0.13	9.22	1.89	31.2	14	25.2	10.0	97	1.33	0.3	0.2	0.3	1.0	133.1	0.12	<0.02	<0.02	16	2.21	0.046
013K831250	Pulp	0.85	15.74	2.73	48.2	77	25.8	13.9	789	2.26	<0.1	0.4	0.9	1.2	57.6	0.17	<0.02	<0.02	29	0.73	0.079
013K831251	Pulp	1.01	19.02	1.87	57.5	55	47.8	23.5	139	4.41	0.3	0.3	0.5	1.2	78.5	0.14	<0.02	<0.02	21	1.07	0.046
013K831252	Pulp	0.63	15.10	3.23	42.4	61	26.4	12.4	192	1.67	<0.1	0.4	1.0	0.5	52.7	0.44	<0.02	<0.02	30	0.75	0.071
013K831253	Pulp	0.91	30.25	24.23	123.5	2763	41.5	28.2	1173	2.95	24.1	4.2	23.8	7.7	29.0	0.51	0.74	3.46	46	0.58	0.085
013K831254	Pulp	1.27	24.28	2.32	42.9	227	31.0	17.0	639	2.44	0.1	0.6	0.9	2.1	92.4	0.09	0.03	<0.02	38	0.83	0.063
013K831255	Pulp	1.09	20.04	61.00	70.6	239	23.4	8.9	96	0.88	<0.1	0.8	1.7	0.9	50.2	0.30	0.06	0.16	33	0.69	0.062
013K831256	Pulp	5.04	21.65	1.82	84.3	96	27.8	17.5	144	5.80	0.3	0.7	1.1	1.2	32.3	0.29	<0.02	<0.02	44	0.53	0.065
013K831257	Pulp	1.37	25.61	2.51	51.9	88	31.3	14.5	319	3.96	0.2	0.4	7.9	1.5	36.5	0.26	<0.02	<0.02	48	0.61	0.088
013K831258	Pulp	0.51	22.57	5.42	49.2	54	27.0	9.6	55	1.10	0.5	0.4	1.2	1.1	42.2	0.21	0.04	0.04	24	0.66	0.058
013K831259	Pulp	1.15	17.53	5.95	91.4	71	25.6	10.4	240	2.05	0.8	0.6	0.9	0.8	39.2	0.40	0.04	<0.02	56	0.61	0.098
013K831260	Pulp	2.37	17.42	0.91	55.6	101	11.9	5.7	102	1.69	<0.1	1.1	<0.2	0.6	20.6	0.33	<0.02	<0.02	34	0.49	0.105
013K831261	Pulp	2.16	25.55	1.41	72.5	98	30.2	12.9	299	2.01	<0.1	1.2	0.9	0.9	39.1	0.30	<0.02	<0.02	71	0.86	0.191
013K831262	Pulp	0.80	25.36	2.44	65.8	79	29.7	11.4	107	1.50	0.2	0.5	0.8	0.8	42.7	0.30	<0.02	0.03	48	0.67	0.091
013K831263	Pulp	1.56	15.07	1.13	34.6	61	11.4	4.3	48	0.33	0.2	0.7	1.2	0.5	18.9	0.18	<0.02	0.02	31	0.51	0.051
013K831264	Pulp	1.32	14.93	1.01	37.2	54	9.5	3.9	43	0.35	<0.1	0.7	0.3	0.4	17.8	0.14	<0.02	<0.02	34	0.49	0.049
013K831265	Pulp	1.36	20.22	1.49	78.9	49	22.1	8.6	77	0.82	<0.1	0.9	1.3	0.7	33.3	0.18	<0.02	<0.02	37	0.67	0.055
013K831266	Pulp	1.99	23.41	1.42	69.1	89	29.6	11.6	319	2.01	<0.1	1.3	0.7	1.4	39.4	0.30	<0.02	<0.02	70	0.86	0.191
013K831267	Pulp	1.21	33.90	2.05	89.9	155	33.3	14.6	764	2.16	<0.1	0.4	0.6	1.3	40.2	0.47	<0.02	<0.02	31	0.57	0.174
013K831268	Pulp	1.80	19.41	1.64	52.1	73	20.3	6.8	54	1.38	0.1	0.8	0.6	0.8	37.2	0.22	<0.02	<0.02	54	0.75	0.067
013K831269	Pulp	0.62	17.52	2.75	51.4	50	25.9	9.1	134	1.48	0.1	0.6	0.3	1.5	60.4	0.18	<0.02	<0.02	34	0.92	0.085



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831240	Pulp	37.8	12.2	0.08	53.2	0.022	<20	2.59	0.016	0.01	0.1	0.9	0.16	0.31	90	2.7	<0.02	3.3	0.08	<0.1
013K831241	Pulp	25.3	13.3	0.21	64.7	0.024	<20	1.63	0.066	0.05	<0.1	1.9	0.07	0.13	36	0.2	<0.02	2.6	0.21	<0.1
013K831242	Pulp	28.6	13.3	0.08	15.7	0.015	<20	1.65	0.021	0.01	<0.1	0.6	0.15	0.36	224	1.0	<0.02	2.4	0.08	<0.1
013K831243	Pulp	28.2	12.7	0.08	15.3	0.014	<20	1.62	0.018	0.01	<0.1	0.7	0.14	0.37	123	1.5	<0.02	2.4	0.08	<0.1
013K831244	Pulp	36.1	19.0	0.15	62.3	0.031	<20	2.41	0.023	0.02	<0.1	1.4	0.21	0.27	85	1.0	<0.02	3.7	0.10	<0.1
013K831245	Pulp	24.4	13.7	0.21	60.0	0.023	<20	1.58	0.061	0.04	<0.1	1.9	0.07	0.12	44	0.8	<0.02	2.7	0.21	<0.1
013K831246	Pulp	28.6	24.7	0.28	122.1	0.034	<20	3.91	0.134	0.04	<0.1	3.8	0.17	0.14	97	1.4	<0.02	6.0	0.29	<0.1
013K831247	Pulp	14.5	13.2	0.31	63.6	0.022	<20	4.74	0.161	0.03	<0.1	2.3	0.11	0.18	123	1.0	<0.02	4.8	0.12	<0.1
013K831248	Pulp	11.3	10.6	0.20	49.5	0.016	<20	3.58	0.060	0.02	<0.1	2.0	0.06	0.23	115	0.9	<0.02	3.9	0.11	<0.1
013K831249	Pulp	6.0	13.0	0.49	45.5	0.024	<20	5.77	0.468	0.05	<0.1	1.6	<0.02	0.06	30	<0.1	<0.02	8.4	0.12	<0.1
013K831250	Pulp	11.5	17.2	0.35	89.9	0.028	<20	3.22	0.162	0.04	<0.1	2.3	0.04	0.08	44	0.3	<0.02	5.3	0.15	<0.1
013K831251	Pulp	8.1	14.6	0.57	38.3	0.021	<20	4.10	0.263	0.03	<0.1	2.2	0.03	0.13	67	0.2	<0.02	7.0	0.09	<0.1
013K831252	Pulp	13.4	18.6	0.35	54.6	0.027	<20	4.02	0.149	0.03	<0.1	1.4	0.03	0.10	59	0.3	<0.02	6.7	0.18	<0.1
013K831253	Pulp	44.4	45.5	0.75	161.9	0.096	<20	1.56	0.029	0.24	0.2	5.1	0.27	0.14	297	0.4	0.03	5.7	1.36	0.1
013K831254	Pulp	13.4	23.5	0.51	105.3	0.032	<20	3.18	0.172	0.06	<0.1	3.8	0.04	0.04	27	<0.1	0.02	5.5	1.05	<0.1
013K831255	Pulp	19.2	18.7	0.25	79.1	0.019	<20	3.03	0.089	0.03	<0.1	3.0	0.04	0.25	43	0.5	0.02	4.1	0.11	<0.1
013K831256	Pulp	10.5	16.0	0.22	38.1	0.019	<20	3.33	0.076	0.02	<0.1	2.8	0.05	0.24	56	1.2	<0.02	5.2	0.11	<0.1
013K831257	Pulp	13.3	26.2	0.30	83.3	0.030	<20	4.32	0.108	0.04	<0.1	3.3	0.04	0.15	52	1.2	<0.02	7.2	0.18	<0.1
013K831258	Pulp	9.6	23.6	0.28	28.2	0.026	<20	2.64	0.105	0.02	<0.1	2.7	0.03	0.26	57	0.8	<0.02	4.7	0.14	<0.1
013K831259	Pulp	19.3	28.9	0.39	124.6	0.041	<20	2.60	0.111	0.05	<0.1	3.3	0.06	0.12	57	0.6	<0.02	5.0	0.24	<0.1
013K831260	Pulp	13.2	12.8	0.10	29.9	0.011	<20	2.15	0.020	0.01	0.3	2.2	0.02	0.20	70	1.2	<0.02	2.0	0.07	<0.1
013K831261	Pulp	11.1	21.0	0.25	63.7	0.018	<20	2.99	0.100	0.02	<0.1	2.4	0.05	0.35	63	2.7	0.03	5.6	0.12	<0.1
013K831262	Pulp	17.5	27.3	0.37	73.6	0.033	<20	3.18	0.090	0.03	<0.1	3.4	0.05	0.18	71	0.6	<0.02	5.8	0.23	<0.1
013K831263	Pulp	10.6	12.5	0.11	12.5	0.012	<20	1.11	0.031	0.01	<0.1	1.4	0.02	0.31	60	0.7	<0.02	1.6	0.10	<0.1
013K831264	Pulp	9.8	12.3	0.10	12.0	0.012	<20	1.10	0.031	0.01	<0.1	1.4	<0.02	0.31	32	0.5	<0.02	1.7	0.10	<0.1
013K831265	Pulp	11.5	21.3	0.23	29.9	0.019	<20	2.08	0.089	0.02	<0.1	2.8	0.03	0.37	118	1.0	<0.02	4.0	0.15	<0.1
013K831266	Pulp	11.0	19.2	0.25	62.9	0.016	<20	2.99	0.100	0.03	<0.1	2.8	0.05	0.35	79	2.9	<0.02	5.2	0.13	<0.1
013K831267	Pulp	13.0	18.5	0.21	57.2	0.021	<20	4.44	0.089	0.03	<0.1	2.6	0.09	0.24	74	2.0	<0.02	5.7	0.16	<0.1
013K831268	Pulp	9.5	20.9	0.20	25.2	0.016	<20	2.69	0.095	0.02	<0.1	2.1	<0.02	0.26	85	1.3	<0.02	4.2	0.11	<0.1
013K831269	Pulp	11.0	19.8	0.36	72.7	0.030	<20	4.67	0.189	0.04	<0.1	2.7	0.03	0.11	58	1.1	<0.02	7.8	0.20	<0.1



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831240	Pulp	0.79	0.9	0.1	<0.05	0.2	13.03	55.5	<0.02	6	0.5	2.1	9.33	30.06	4.63	0.89	2.98	0.54	2.37	0.49	1.17
013K831241	Pulp	0.40	3.0	<0.1	<0.05	0.4	15.91	37.1	<0.02	1	<0.1	3.9	6.41	21.36	4.08	0.89	3.43	0.51	2.51	0.58	1.46
013K831242	Pulp	0.38	1.0	<0.1	<0.05	0.2	10.08	36.0	<0.02	6	0.2	1.8	7.37	23.88	3.83	0.60	2.85	0.42	1.70	0.39	1.03
013K831243	Pulp	0.36	0.9	<0.1	<0.05	0.2	9.62	34.5	<0.02	3	<0.1	1.0	7.16	22.50	3.69	0.52	2.39	0.34	1.79	0.39	0.95
013K831244	Pulp	0.63	1.4	<0.1	<0.05	0.1	9.62	55.5	<0.02	3	0.2	2.9	8.58	27.71	4.24	0.80	2.38	0.38	1.82	0.40	0.92
013K831245	Pulp	0.36	2.9	<0.1	<0.05	0.4	15.93	36.5	<0.02	1	<0.1	4.8	6.12	21.18	4.33	0.82	3.06	0.50	2.69	0.60	1.47
013K831246	Pulp	0.32	2.7	0.1	<0.05	0.8	18.91	52.2	<0.02	<1	<0.1	5.1	7.65	26.15	4.62	1.08	4.07	0.65	3.09	0.71	1.95
013K831247	Pulp	0.26	1.4	<0.1	<0.05	0.9	11.00	25.9	<0.02	<1	0.3	2.7	3.89	13.16	2.67	0.79	2.01	0.33	1.98	0.43	1.11
013K831248	Pulp	0.30	1.0	<0.1	<0.05	0.8	8.20	17.2	<0.02	<1	<0.1	1.0	3.00	10.01	2.29	0.67	1.73	0.27	1.38	0.30	0.85
013K831249	Pulp	0.27	1.2	<0.1	<0.05	0.7	3.30	11.4	<0.02	<1	<0.1	3.0	1.58	5.55	1.13	0.50	0.91	0.12	0.68	0.14	0.29
013K831250	Pulp	0.35	2.2	<0.1	<0.05	1.1	7.44	19.5	<0.02	<1	0.4	3.4	3.21	10.86	1.95	0.67	1.71	0.26	1.41	0.29	0.76
013K831251	Pulp	0.48	1.2	<0.1	<0.05	0.9	6.74	14.5	<0.02	<1	0.3	2.8	2.28	7.59	1.69	0.56	1.35	0.22	1.19	0.28	0.71
013K831252	Pulp	0.61	1.6	0.1	<0.05	0.4	7.71	24.5	<0.02	<1	0.3	3.0	3.66	11.50	2.52	0.72	1.83	0.28	1.32	0.31	0.79
013K831253	Pulp	1.95	23.6	1.1	<0.05	4.9	18.95	75.2	0.04	2	0.4	20.1	11.16	35.43	6.43	1.07	4.40	0.70	3.56	0.72	1.96
013K831254	Pulp	0.41	3.1	0.1	<0.05	1.4	8.78	25.4	<0.02	<1	0.1	3.5	3.69	12.36	2.46	0.66	1.75	0.32	1.57	0.34	0.87
013K831255	Pulp	0.44	1.4	0.7	<0.05	1.1	13.44	24.6	<0.02	1	0.5	2.1	5.13	19.49	3.76	1.12	3.49	0.44	2.28	0.50	1.22
013K831256	Pulp	0.46	1.2	0.3	<0.05	1.0	7.19	16.7	<0.02	<1	<0.1	1.8	2.86	11.80	1.89	0.62	1.61	0.26	1.40	0.24	0.76
013K831257	Pulp	0.67	1.9	0.3	<0.05	1.3	7.11	25.6	<0.02	1	0.2	3.5	3.46	13.76	2.32	0.69	2.14	0.27	1.45	0.30	0.75
013K831258	Pulp	0.63	1.3	0.4	<0.05	1.1	5.45	16.6	<0.02	1	<0.1	2.4	2.37	8.96	1.61	0.49	1.38	0.19	1.06	0.18	0.50
013K831259	Pulp	0.71	3.3	0.4	<0.05	0.5	11.36	33.5	<0.02	<1	0.3	4.1	5.13	18.95	3.38	0.81	2.99	0.42	2.29	0.44	1.24
013K831260	Pulp	0.25	0.8	<0.1	<0.05	0.8	8.59	19.1	<0.02	3	<0.1	0.9	3.47	13.88	2.45	0.59	1.90	0.29	1.48	0.28	0.90
013K831261	Pulp	0.30	1.3	0.2	<0.05	0.8	8.45	17.0	<0.02	4	0.2	2.3	3.24	12.09	2.19	0.68	1.69	0.31	1.51	0.30	0.83
013K831262	Pulp	0.77	2.1	0.3	<0.05	1.1	9.56	30.6	<0.02	2	0.2	4.5	4.67	18.64	3.25	0.78	2.78	0.39	1.88	0.38	1.03
013K831263	Pulp	0.28	0.9	0.3	<0.05	1.0	6.41	13.5	<0.02	2	0.1	1.4	2.87	11.30	1.79	0.43	1.35	0.19	1.20	0.25	0.70
013K831264	Pulp	0.25	0.9	0.3	<0.05	0.6	6.02	12.4	<0.02	2	<0.1	1.5	2.60	9.96	1.67	0.41	1.38	0.19	1.04	0.23	0.60
013K831265	Pulp	0.41	1.4	0.2	<0.05	0.9	8.07	16.7	<0.02	1	0.4	2.3	3.02	12.32	1.89	0.69	1.81	0.28	1.54	0.29	0.88
013K831266	Pulp	0.32	1.2	<0.1	<0.05	1.9	8.61	16.5	<0.02	5	0.1	2.2	3.02	11.45	2.15	0.75	2.05	0.28	1.46	0.32	0.90
013K831267	Pulp	0.40	1.5	<0.1	<0.05	1.4	9.64	19.6	<0.02	<1	<0.1	2.2	3.49	12.97	2.50	0.85	2.27	0.30	1.85	0.33	1.01
013K831268	Pulp	0.37	1.2	0.2	<0.05	1.4	7.21	14.3	<0.02	<1	<0.1	1.8	2.59	9.87	1.71	0.64	1.57	0.25	1.46	0.26	0.71
013K831269	Pulp	0.62	1.9	0.2	<0.05	1.7	6.89	20.1	<0.02	<1	0.3	4.3	2.80	11.24	1.95	0.69	1.67	0.26	1.60	0.30	0.73



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Project: None Given

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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831240	Pulp	0.17	1.07	0.17	<10	<2
013K831241	Pulp	0.22	1.15	0.20	<10	<2
013K831242	Pulp	0.15	0.75	0.12	<10	<2
013K831243	Pulp	0.14	0.69	0.13	<10	<2
013K831244	Pulp	0.13	0.70	0.10	<10	<2
013K831245	Pulp	0.22	1.14	0.21	<10	<2
013K831246	Pulp	0.27	1.43	0.22	<10	<2
013K831247	Pulp	0.15	0.89	0.15	<10	<2
013K831248	Pulp	0.10	0.68	0.12	<10	4
013K831249	Pulp	0.04	0.31	0.04	<10	<2
013K831250	Pulp	0.10	0.57	0.12	<10	<2
013K831251	Pulp	0.10	0.55	0.09	<10	3
013K831252	Pulp	0.11	0.57	0.08	<10	<2
013K831253	Pulp	0.29	1.74	0.26	<10	3
013K831254	Pulp	0.13	0.76	0.11	<10	3
013K831255	Pulp	0.20	1.03	0.17	<10	<2
013K831256	Pulp	0.09	0.56	0.09	<10	<2
013K831257	Pulp	0.10	0.63	0.11	<10	<2
013K831258	Pulp	0.07	0.46	0.07	<10	3
013K831259	Pulp	0.16	1.04	0.17	<10	<2
013K831260	Pulp	0.12	0.69	0.11	<10	<2
013K831261	Pulp	0.11	0.66	0.09	<10	4
013K831262	Pulp	0.13	0.81	0.11	<10	<2
013K831263	Pulp	0.08	0.51	0.08	<10	<2
013K831264	Pulp	0.07	0.52	0.09	<10	<2
013K831265	Pulp	0.11	0.68	0.12	<10	<2
013K831266	Pulp	0.11	0.70	0.12	<10	<2
013K831267	Pulp	0.12	0.65	0.14	<10	<2
013K831268	Pulp	0.10	0.62	0.08	<10	<2
013K831269	Pulp	0.09	0.66	0.08	<10	<2



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831270	Pulp	0.45	10.33	4.68	47.1	82	17.2	6.4	92	1.13	<0.1	0.6	1.1	1.0	46.0	0.20	<0.02	<0.02	30	0.73	0.056
013K831271	Pulp	9.71	39.16	85.78	311.2	598	12.8	7.7	441	1.84	37.1	9.2	3.3	1.6	70.6	1.35	0.57	0.98	20	6.38	0.067



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831270	Pulp	12.6	18.2	0.31	53.9	0.041	<20	3.19	0.125	0.04	<0.1	2.8	0.04	0.12	48	0.8	<0.02	6.1	0.22	<0.1	<0.02
013K831271	Pulp	10.7	12.1	0.60	97.3	0.040	<20	0.45	0.028	0.05	0.5	2.5	0.22	1.55	106	1.0	0.02	2.0	0.53	<0.1	0.04



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Project: None Given
Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831270	Pulp	0.86	2.2	0.3	<0.05	0.9	6.67	22.7	<0.02	<1	0.2	5.6	2.99	11.22	2.02	0.54	2.05	0.25	1.43	0.25	0.77
013K831271	Pulp	0.70	3.6	3.3	<0.05	1.2	10.61	17.6	0.44	26	<0.1	3.9	2.87	12.07	2.50	0.52	2.39	0.32	1.79	0.39	0.95



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Client: **Geological Survey of Canada**

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Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 19, 2022

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CERTIFICATE OF ANALYSIS

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831270	Pulp	0.09	0.57	0.08	<10	<2
013K831271	Pulp	0.13	0.87	0.13	<10	<2



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QUALITY CONTROL REPORT

VAN22000376.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013K831019	Pulp	8.42	52.56	4.31	72.0	193	14.6	6.9	151	1.23	<0.1	7.3	0.5	0.4	27.5	0.38	0.03	0.03	27	0.64	0.114
REP 013K831019	QC	8.68	54.40	4.48	74.3	216	15.2	7.2	158	1.27	<0.1	7.5	0.6	0.4	28.4	0.37	0.03	0.03	28	0.66	0.117
013K831055	Pulp	2.91	30.95	2.93	60.2	183	14.5	4.0	76	0.71	<0.1	3.2	0.4	0.2	17.8	0.27	0.04	0.02	24	0.40	0.054
REP 013K831055	QC	3.00	31.69	2.99	61.3	183	14.8	4.1	81	0.72	<0.1	3.3	0.4	0.1	18.4	0.25	0.04	0.02	24	0.40	0.055
013K831088	Pulp	11.56	48.63	21.53	118.5	1084	21.2	40.2	1963	8.32	9.3	27.7	1.3	4.3	29.6	0.77	0.12	0.18	57	0.57	0.343
REP 013K831088	QC	12.00	49.05	22.11	120.2	1107	21.0	41.6	1970	7.91	9.1	28.8	1.6	4.9	29.9	0.76	0.11	0.17	55	0.58	0.340
013K831127	Pulp	18.94	39.68	11.33	89.5	542	15.2	40.2	991	7.81	14.3	14.6	0.9	6.2	24.6	0.39	0.17	0.08	78	0.38	0.186
REP 013K831127	QC	18.60	39.07	11.53	88.8	539	14.8	41.2	1002	7.79	13.7	15.7	0.8	6.6	24.1	0.40	0.15	0.08	78	0.37	0.187
013K831163	Pulp	32.36	33.25	6.09	100.0	338	15.1	16.5	346	5.56	2.7	29.3	0.4	3.9	28.9	0.36	0.11	0.06	62	0.34	0.210
REP 013K831163	QC	31.72	32.75	6.00	99.5	326	14.9	16.1	342	5.48	2.5	30.2	0.6	4.0	28.2	0.34	0.11	0.06	61	0.34	0.207
013K831199	Pulp	3.26	9.41	2.22	48.7	151	5.1	2.5	110	1.12	1.1	3.0	0.3	1.7	15.3	0.16	0.05	<0.02	26	0.19	0.050
REP 013K831199	QC	3.12	9.24	2.18	45.0	157	4.9	2.3	108	1.12	1.2	3.1	<0.2	1.6	14.7	0.15	0.05	<0.02	26	0.19	0.049
013K831225	Pulp	3.50	22.13	0.98	41.6	81	14.3	7.8	50	0.85	<0.1	0.7	0.6	0.4	29.2	0.18	<0.02	<0.02	30	0.62	0.042
REP 013K831225	QC	3.48	21.24	0.94	41.2	53	14.0	7.6	48	0.84	<0.1	0.7	0.5	0.5	28.2	0.18	<0.02	<0.02	30	0.61	0.042
013K831235	Pulp	8.40	37.30	82.12	276.9	601	11.4	6.8	406	1.67	35.1	9.4	7.7	1.4	69.1	1.28	0.66	1.00	19	6.07	0.062
REP 013K831235	QC	8.28	39.69	79.92	290.0	609	11.9	7.6	425	1.75	35.5	9.8	2.7	1.5	71.0	1.28	0.64	1.13	20	6.44	0.067
013K831263	Pulp	1.56	15.07	1.13	34.6	61	11.4	4.3	48	0.33	0.2	0.7	1.2	0.5	18.9	0.18	<0.02	0.02	31	0.51	0.051
REP 013K831263	QC	1.48	14.87	0.85	35.6	56	10.1	3.9	47	0.33	0.2	0.7	1.3	0.5	18.2	0.17	<0.02	<0.02	30	0.49	0.049
Reference Materials																					
STD BVGEO01	Standard	10.56	4479.29	194.40	1816.1	2673	161.9	25.3	740	3.77	125.0	4.5	228.7	17.8	60.8	6.92	2.71	26.16	73	1.35	0.080
STD BVGEO01	Standard	10.00	4268.57	174.19	1746.3	2480	150.5	24.3	689	3.56	117.7	3.7	203.8	13.1	53.5	6.07	2.56	22.91	68	1.28	0.072
STD BVGEO01	Standard	10.88	4307.94	194.58	1795.2	2670	156.9	24.3	717	3.63	122.9	3.7	230.1	17.4	62.2	6.57	2.20	26.49	70	1.31	0.074
STD BVGEO01	Standard	10.79	4427.69	204.00	1846.5	2768	160.3	25.4	736	3.72	122.2	4.2	229.1	17.2	59.7	6.87	2.45	27.90	71	1.34	0.077
STD BVGEO01	Standard	9.91	4270.98	186.03	1633.2	2565	156.4	24.6	693	3.48	113.8	3.6	212.7	16.4	55.0	6.44	2.24	24.93	71	1.25	0.073
STD BVGEO01	Standard	9.64	4174.67	182.31	1643.8	2582	153.7	23.2	687	3.50	115.6	4.0	223.3	16.7	62.8	6.41	2.55	28.30	70	1.24	0.071
STD BVGEO01	Standard	10.22	4268.96	173.07	1660.7	2556	160.4	23.7	711	3.58	115.7	3.4	213.7	12.9	52.0	6.38	1.90	21.30	71	1.25	0.067
STD BVGEO01	Standard	10.38	4369.66	176.80	1687.5	2651	163.8	24.3	719	3.64	116.8	3.4	213.1	13.5	56.1	6.46	2.01	22.11	73	1.29	0.070
STD BVGEO01	Standard	9.98	4333.48	170.26	1756.8	2450	155.9	23.5	727	3.72	116.2	3.2	186.3	12.8	54.5	6.01	1.99	22.13	71	1.29	0.074



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QUALITY CONTROL REPORT

VAN22000376.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K831019	Pulp	60.6	17.9	0.17	56.5	0.044	<20	2.49	0.012	0.04	0.1	1.4	0.07	0.31	124	2.6	<0.02	5.7	0.36	<0.1	<0.02
REP 013K831019	QC	63.1	18.4	0.18	58.3	0.046	<20	2.59	0.013	0.04	0.1	1.5	0.07	0.32	109	2.8	<0.02	6.0	0.38	<0.1	<0.02
013K831055	Pulp	34.2	19.1	0.12	52.4	0.029	<20	1.71	0.006	0.02	<0.1	1.1	0.05	0.28	66	1.6	<0.02	2.6	0.22	<0.1	<0.02
REP 013K831055	QC	35.4	19.5	0.12	53.5	0.030	<20	1.74	0.006	0.02	<0.1	1.2	0.05	0.28	84	1.7	<0.02	2.6	0.23	<0.1	<0.02
013K831088	Pulp	193.5	45.0	0.16	134.6	0.074	<20	3.53	0.008	0.06	1.0	4.1	0.49	0.26	279	3.1	<0.02	7.6	0.83	0.2	<0.02
REP 013K831088	QC	194.0	44.1	0.16	134.4	0.073	<20	3.54	0.009	0.05	1.1	4.0	0.51	0.25	296	3.3	<0.02	7.6	0.83	0.2	<0.02
013K831127	Pulp	143.3	39.7	0.24	215.9	0.071	<20	2.20	0.009	0.08	1.3	4.3	0.47	0.17	143	1.7	0.03	4.1	1.27	0.3	<0.02
REP 013K831127	QC	141.0	40.9	0.24	225.9	0.073	<20	2.22	0.009	0.08	1.3	4.1	0.46	0.17	143	1.9	0.03	4.0	1.28	0.2	0.03
013K831163	Pulp	134.5	23.9	0.27	108.4	0.053	<20	2.11	0.007	0.14	1.8	4.3	0.21	0.29	59	2.5	<0.02	1.9	1.47	<0.1	<0.02
REP 013K831163	QC	135.0	23.3	0.26	107.4	0.051	<20	2.08	0.007	0.14	1.8	4.2	0.21	0.28	53	2.5	0.02	1.9	1.46	<0.1	<0.02
013K831199	Pulp	56.7	7.2	0.14	80.2	0.045	<20	0.59	0.008	0.07	0.3	1.8	0.07	0.10	59	0.3	<0.02	2.5	0.81	0.1	0.03
REP 013K831199	QC	55.7	7.0	0.13	82.0	0.044	<20	0.59	0.008	0.07	0.3	1.6	0.07	0.10	56	<0.1	<0.02	2.5	0.77	0.2	0.02
013K831225	Pulp	15.5	9.4	0.07	9.1	0.012	<20	1.76	0.040	0.01	<0.1	1.1	0.04	0.25	84	1.0	<0.02	2.0	0.06	<0.1	0.02
REP 013K831225	QC	15.3	9.4	0.07	8.8	0.012	<20	1.72	0.037	0.01	<0.1	1.1	0.04	0.25	83	1.1	<0.02	2.0	0.06	<0.1	<0.02
013K831235	Pulp	11.4	11.0	0.55	88.6	0.037	<20	0.41	0.025	0.05	0.5	2.1	0.20	1.42	118	0.7	0.03	1.8	0.47	<0.1	0.05
REP 013K831235	QC	11.8	11.9	0.58	91.5	0.038	<20	0.44	0.027	0.05	0.5	2.5	0.22	1.52	100	0.6	<0.02	2.1	0.49	<0.1	0.02
013K831263	Pulp	10.6	12.5	0.11	12.5	0.012	<20	1.11	0.031	0.01	<0.1	1.4	0.02	0.31	60	0.7	<0.02	1.6	0.10	<0.1	<0.02
REP 013K831263	QC	9.7	12.3	0.10	12.0	0.012	<20	1.09	0.031	0.01	<0.1	1.4	0.02	0.30	44	0.6	<0.02	1.5	0.10	<0.1	<0.02
Reference Materials																					
STD BVGEO01	Standard	28.2	170.0	1.32	350.7	0.252	<20	2.33	0.192	0.90	4.0	6.4	0.65	0.66	93	5.5	1.00	7.2	7.62	<0.1	0.32
STD BVGEO01	Standard	24.1	163.9	1.24	310.8	0.228	<20	2.20	0.178	0.84	3.7	5.5	0.59	0.60	74	5.0	0.99	6.7	6.66	<0.1	0.34
STD BVGEO01	Standard	28.2	180.2	1.31	349.2	0.249	<20	2.31	0.195	0.86	3.6	5.7	0.64	0.62	101	4.3	0.97	8.1	7.52	<0.1	0.28
STD BVGEO01	Standard	28.4	176.9	1.33	360.3	0.254	<20	2.33	0.196	0.90	4.0	6.0	0.67	0.64	102	4.1	0.97	7.5	7.38	0.1	0.29
STD BVGEO01	Standard	26.2	158.2	1.24	327.3	0.232	<20	2.17	0.177	0.81	3.8	5.5	0.63	0.66	104	4.2	0.99	7.2	6.96	0.2	0.26
STD BVGEO01	Standard	28.9	147.6	1.21	334.7	0.220	<20	2.13	0.174	0.80	3.9	5.5	0.61	0.66	88	4.5	1.00	7.5	6.93	0.1	0.30
STD BVGEO01	Standard	24.3	155.7	1.25	310.4	0.226	<20	2.13	0.173	0.86	3.6	5.7	0.60	0.67	90	4.9	1.10	6.9	6.79	<0.1	0.34
STD BVGEO01	Standard	24.8	168.0	1.28	298.9	0.234	<20	2.22	0.184	0.87	3.6	5.9	0.62	0.68	100	5.3	1.10	7.2	6.74	<0.1	0.35
STD BVGEO01	Standard	23.5	160.0	1.27	298.6	0.230	<20	2.21	0.181	0.86	3.2	5.6	0.56	0.64	94	4.8	1.02	6.7	6.42	<0.1	0.32



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QUALITY CONTROL REPORT

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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K831019	Pulp	1.34	4.0	0.2	<0.05	0.7	13.97	110.5	0.02	1	0.5	4.5	13.94	49.06	7.63	1.08	5.41	0.64	3.17	0.50	1.29
REP 013K831019	QC	1.32	4.2	0.2	<0.05	0.7	14.41	113.6	0.02	1	0.5	4.7	14.39	50.62	7.87	1.11	5.56	0.66	3.29	0.51	1.32
013K831055	Pulp	0.69	2.0	0.1	<0.05	0.4	11.30	62.1	<0.02	<1	0.5	2.7	8.21	29.99	4.85	0.83	3.73	0.46	2.46	0.42	1.09
REP 013K831055	QC	0.71	2.1	0.1	<0.05	0.4	11.60	62.9	<0.02	<1	0.4	2.7	8.37	30.61	4.99	0.86	3.77	0.48	2.46	0.43	1.12
013K831088	Pulp	2.82	5.6	0.5	<0.05	1.0	74.94	362.4	0.06	2	2.5	4.0	47.25	158.15	26.38	3.67	21.03	2.93	16.89	3.06	8.35
REP 013K831088	QC	2.84	5.7	0.5	<0.05	1.0	77.18	362.3	0.04	2	1.8	4.7	47.94	163.91	26.44	3.89	21.78	3.01	16.69	3.14	8.80
013K831127	Pulp	2.10	8.7	0.4	<0.05	1.8	56.46	262.2	<0.02	2	2.0	6.1	33.61	120.98	18.84	2.71	15.09	1.86	10.69	2.16	6.23
REP 013K831127	QC	2.13	8.6	0.4	<0.05	2.0	56.68	265.3	0.02	2	2.5	6.0	34.84	120.02	18.23	2.70	14.94	1.94	10.45	2.13	5.94
013K831163	Pulp	1.71	13.7	0.4	<0.05	0.8	58.45	253.7	<0.02	2	1.4	7.5	31.77	118.72	18.85	2.48	14.47	1.81	9.88	1.87	5.39
REP 013K831163	QC	1.68	13.5	0.4	<0.05	0.8	58.14	249.5	<0.02	3	1.4	7.4	31.94	120.45	18.83	2.50	14.34	1.79	9.81	1.88	5.37
013K831199	Pulp	1.35	7.2	0.3	<0.05	0.7	16.58	97.2	<0.02	<1	0.3	4.9	13.04	44.91	6.79	1.09	5.46	0.65	3.36	0.70	1.76
REP 013K831199	QC	1.25	7.0	0.3	<0.05	0.7	16.09	96.9	<0.02	<1	0.3	5.3	12.84	45.01	6.87	1.02	5.21	0.64	2.98	0.61	1.78
013K831225	Pulp	0.30	0.7	<0.1	<0.05	0.6	4.64	16.3	<0.02	1	<0.1	1.0	3.74	13.61	1.80	0.37	1.25	0.14	0.79	0.15	0.40
REP 013K831225	QC	0.28	0.7	<0.1	<0.05	0.6	4.65	15.9	<0.02	2	<0.1	1.0	3.83	13.60	1.77	0.37	1.24	0.14	0.80	0.15	0.40
013K831235	Pulp	0.68	3.3	3.3	<0.05	1.2	10.56	17.0	0.50	19	<0.1	3.6	2.87	10.63	2.36	0.51	1.93	0.32	1.63	0.37	0.94
REP 013K831235	QC	0.63	3.4	3.3	<0.05	1.2	11.05	18.0	0.50	18	0.2	3.6	3.22	11.63	2.40	0.57	1.95	0.32	1.83	0.39	1.02
013K831263	Pulp	0.28	0.9	0.3	<0.05	1.0	6.41	13.5	<0.02	2	0.1	1.4	2.87	11.30	1.79	0.43	1.35	0.19	1.20	0.25	0.70
REP 013K831263	QC	0.27	0.9	0.3	<0.05	0.6	6.12	12.9	<0.02	2	<0.1	1.7	2.51	10.02	1.67	0.43	1.48	0.21	1.05	0.25	0.72
Reference Materials																					
STD BVGE001	Standard	0.18	97.1	5.8	<0.05	7.5	15.09	56.6	0.47	5	0.9	20.8	6.72	24.85	4.17	0.58	3.72	0.55	2.99	0.56	1.71
STD BVGE001	Standard	0.20	91.3	5.2	<0.05	9.8	14.24	48.2	0.41	3	0.7	19.6	5.45	20.33	3.70	0.39	3.08	0.44	2.49	0.46	1.34
STD BVGE001	Standard	0.11	95.4	6.2	<0.05	8.0	15.41	56.0	0.52	2	1.0	21.0	6.64	22.17	4.56	0.52	3.64	0.51	3.01	0.51	1.59
STD BVGE001	Standard	0.14	95.4	5.7	<0.05	7.8	14.85	55.2	0.43	6	0.6	20.6	6.83	23.80	4.60	0.49	3.24	0.54	2.84	0.57	1.61
STD BVGE001	Standard	0.11	87.5	5.5	<0.05	7.2	13.76	51.4	0.45	3	0.5	20.3	6.31	22.01	3.88	0.49	3.38	0.47	2.48	0.55	1.48
STD BVGE001	Standard	0.12	91.5	5.6	<0.05	7.7	14.94	55.3	0.51	3	0.8	21.1	6.43	20.62	4.00	0.54	3.05	0.53	2.61	0.62	1.53
STD BVGE001	Standard	0.13	92.3	5.2	<0.05	10.3	14.17	47.9	0.43	4	0.6	18.5	5.53	20.27	3.70	0.44	3.09	0.44	2.56	0.47	1.37
STD BVGE001	Standard	0.17	93.7	5.4	<0.05	10.3	14.53	48.3	0.44	3	0.7	20.0	5.66	20.74	3.78	0.45	3.21	0.45	2.63	0.50	1.40
STD BVGE001	Standard	0.13	90.7	5.2	<0.05	10.4	14.33	48.1	0.42	3	0.7	20.0	5.61	20.08	3.60	0.40	3.04	0.42	2.47	0.47	1.30



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 19, 2022

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QUALITY CONTROL REPORT

VAN22000376.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
Pulp Duplicates							
013K831019	Pulp	0.15	0.88	0.12	<10	<2	
REP 013K831019	QC	0.15	0.90	0.12	<10	<2	
013K831055	Pulp	0.13	0.76	0.10	<10	<2	
REP 013K831055	QC	0.14	0.79	0.10	<10	<2	
013K831088	Pulp	1.18	6.99	1.01	<10	3	
REP 013K831088	QC	1.21	6.93	0.96	<10	3	
013K831127	Pulp	0.89	5.78	0.86	<10	<2	
REP 013K831127	QC	0.93	5.60	0.91	<10	<2	
013K831163	Pulp	0.73	4.73	0.74	<10	<2	
REP 013K831163	QC	0.73	4.80	0.74	<10	<2	
013K831199	Pulp	0.22	1.37	0.21	<10	<2	
REP 013K831199	QC	0.21	1.28	0.20	<10	<2	
013K831225	Pulp	0.05	0.31	0.04	<10	<2	
REP 013K831225	QC	0.05	0.32	0.04	<10	<2	
013K831235	Pulp	0.13	0.83	0.13	<10	<2	
REP 013K831235	QC	0.14	0.97	0.16	<10	<2	
013K831263	Pulp	0.08	0.51	0.08	<10	<2	
REP 013K831263	QC	0.07	0.50	0.08	<10	<2	
Reference Materials							
STD BVGEO01	Standard	0.23	1.42	0.22	126	190	
STD BVGEO01	Standard	0.17	1.13	0.15	130	168	
STD BVGEO01	Standard	0.21	1.41	0.20	121	188	
STD BVGEO01	Standard	0.21	1.31	0.21	118	199	
STD BVGEO01	Standard	0.22	1.26	0.20	102	173	
STD BVGEO01	Standard	0.22	1.26	0.21	79	184	
STD BVGEO01	Standard	0.18	1.15	0.17	115	172	
STD BVGEO01	Standard	0.18	1.20	0.17	124	178	
STD BVGEO01	Standard	0.18	1.12	0.16	132	162	



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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 19, 2022

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Part: 1 of 4

QUALITY CONTROL REPORT

VAN22000376.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.60	113.34	59.82	162.9	474	63.2	27.3	558	3.30	38.3	1.3	55.4	10.3	38.2	0.64	2.70	0.98	21	3.11	0.043
STD OREAS262	Standard	0.58	108.51	49.33	143.4	438	58.0	25.8	513	3.15	33.8	1.0	51.7	7.8	32.3	0.60	3.05	0.86	20	2.90	0.036
STD OREAS262	Standard	0.60	112.87	58.15	146.5	474	60.5	26.5	534	3.23	36.7	1.3	57.5	10.7	34.5	0.62	2.38	1.04	21	3.04	0.036
STD OREAS262	Standard	0.70	114.49	58.75	152.2	491	65.4	26.9	548	3.27	37.1	1.3	56.9	10.0	36.7	0.68	2.18	1.05	21	3.05	0.042
STD OREAS262	Standard	0.58	109.69	57.65	146.9	458	60.4	26.8	530	3.15	36.0	1.2	51.1	10.5	35.5	0.61	2.44	1.03	20	2.96	0.037
STD OREAS262	Standard	0.57	108.95	59.61	151.7	478	62.8	26.7	526	3.17	37.2	1.4	56.6	10.7	39.1	0.67	2.70	1.20	21	2.95	0.038
STD OREAS262	Standard	0.71	117.25	52.29	153.1	473	67.4	27.5	551	3.28	36.0	1.1	52.4	8.5	33.3	0.65	2.15	0.89	21	2.87	0.037
STD OREAS262	Standard	0.57	116.24	51.72	151.9	472	64.6	27.2	547	3.23	35.2	1.1	50.2	8.5	32.7	0.64	1.67	0.88	22	2.84	0.037
STD OREAS262	Standard	0.62	113.79	50.47	152.6	466	64.3	26.6	546	3.25	35.3	1.0	49.1	8.2	34.0	0.61	2.32	0.88	21	2.92	0.040
STD BVGE001 Expected		10.8	4415	187	1741	2530	163	25	733	3.7	121	3.77	219	14.4	55	6.5	2.2	25.6	73	1.3219	0.0727
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	0.19	<0.01	0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.05	0.03	<0.1	<2	<0.1	<0.1	<1	<0.01	0.3	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.03	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	0.2	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.02	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 19, 2022

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Part: 2 of 4

QUALITY CONTROL REPORT

VAN22000376.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	16.8	40.9	1.21	259.1	0.003	<20	1.23	0.069	0.31	0.1	3.5	0.48	0.25	185	0.3	0.27	4.1	2.51	<0.1	0.16
STD OREAS262	Standard	15.4	39.4	1.12	225.0	0.003	<20	1.14	0.067	0.30	0.1	2.8	0.42	0.24	147	0.6	0.23	3.4	2.23	<0.1	0.23
STD OREAS262	Standard	18.5	41.0	1.17	255.6	0.004	<20	1.24	0.066	0.31	0.1	3.5	0.49	0.25	169	0.2	0.22	3.6	2.50	<0.1	0.21
STD OREAS262	Standard	17.9	42.9	1.20	267.4	0.004	<20	1.24	0.071	0.32	0.1	3.3	0.48	0.25	149	0.3	0.21	3.9	2.45	<0.1	0.16
STD OREAS262	Standard	15.5	40.0	1.15	247.8	0.003	<20	1.15	0.066	0.28	<0.1	3.3	0.46	0.24	176	0.2	0.21	3.7	2.34	<0.1	0.17
STD OREAS262	Standard	17.7	41.2	1.14	242.1	0.003	<20	1.18	0.065	0.29	0.1	3.3	0.46	0.26	175	0.1	0.26	4.0	2.29	<0.1	0.20
STD OREAS262	Standard	15.3	46.2	1.19	226.0	0.003	<20	1.17	0.067	0.30	0.1	3.1	0.45	0.27	155	0.8	0.22	3.7	2.24	<0.1	0.25
STD OREAS262	Standard	15.2	41.7	1.18	223.8	0.003	<20	1.26	0.069	0.31	<0.1	3.2	0.44	0.27	165	0.8	0.24	3.8	2.22	<0.1	0.20
STD OREAS262	Standard	15.4	40.8	1.16	224.6	0.003	<20	1.27	0.066	0.30	<0.1	3.0	0.42	0.25	162	0.6	0.22	3.6	2.19	<0.1	0.24
STD BVGE001 Expected		25.9	171	1.2963	340	0.233		2.347	0.1924	0.89	3.5	5.97	0.62	0.6655	100	4.84	1.02	7.37	7.36	0.15	0.32
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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QUALITY CONTROL REPORT

VAN22000376.1

		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	18.7	0.6	<0.05	5.8	11.16	32.8	0.03	1	0.6	18.4	3.99	15.81	3.39	0.72	3.23	0.45	2.40	0.46	1.21
STD OREAS262	Standard	<0.02	17.4	0.5	<0.05	9.8	10.14	30.3	0.03	<1	1.1	16.3	3.54	14.02	3.00	0.56	2.63	0.35	1.90	0.34	0.93
STD OREAS262	Standard	<0.02	18.9	0.6	<0.05	6.8	10.25	36.3	0.03	<1	1.1	19.9	4.51	16.98	3.47	0.70	3.32	0.43	2.29	0.43	1.04
STD OREAS262	Standard	<0.02	18.7	0.6	<0.05	5.9	10.84	34.8	0.05	<1	1.3	16.8	4.13	16.40	3.48	0.68	3.44	0.43	2.20	0.39	1.11
STD OREAS262	Standard	<0.02	16.6	0.6	<0.05	6.8	10.24	29.9	0.03	<1	1.1	16.8	3.77	14.04	3.14	0.74	2.94	0.37	2.01	0.39	1.10
STD OREAS262	Standard	<0.02	18.2	0.5	<0.05	7.7	10.86	33.8	0.03	1	0.7	16.9	4.27	14.92	3.29	0.79	2.47	0.43	1.94	0.47	1.16
STD OREAS262	Standard	<0.02	17.5	0.5	<0.05	10.5	10.54	29.6	0.03	<1	1.0	16.3	3.58	13.94	3.07	0.61	2.74	0.36	2.03	0.37	1.00
STD OREAS262	Standard	<0.02	18.0	0.5	<0.05	8.9	10.57	29.2	0.03	1	1.1	16.6	3.52	13.96	3.06	0.61	2.76	0.36	2.03	0.36	1.01
STD OREAS262	Standard	<0.02	18.0	0.5	<0.05	11.0	10.54	31.4	0.03	<1	1.1	17.1	3.75	14.31	3.08	0.58	2.68	0.35	1.97	0.36	0.96
STD BVGE001 Expected		0.17	95	5.64		9.1	14.5	53	0.47	4	0.69	21.4	6.19	22.4	4.08	0.48	3.53	0.48	2.85	0.54	1.5
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.2	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Canada

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 19, 2022

Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000376.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.16	0.92	0.13	<10	<2
STD OREAS262	Standard	0.12	0.73	0.10	<10	<2
STD OREAS262	Standard	0.18	0.92	0.13	<10	<2
STD OREAS262	Standard	0.16	0.88	0.12	<10	<2
STD OREAS262	Standard	0.14	0.93	0.11	<10	<2
STD OREAS262	Standard	0.14	0.85	0.14	<10	<2
STD OREAS262	Standard	0.13	0.79	0.12	<10	<2
STD OREAS262	Standard	0.13	0.80	0.11	<10	<2
STD OREAS262	Standard	0.12	0.78	0.11	<10	<2
STD BVGEO01 Expected		0.21	1.32	0.18	134	182
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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PHONE (604) 253-3158

Client:

Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 07, 2022
Report Date: April 14, 2022
Page: 1 of 10

CERTIFICATE OF ANALYSIS

VAN22000377.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 013K
P.O. Number: 3000732409
Number of Samples: 269

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	267	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	267	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831272	Sediment Pulp	1.78	9.49	1.26	36.8	90	6.3	3.9	33	0.48	0.4	1.0	0.2	0.1	23.1	0.23	<0.02	<0.02	63	0.56	0.073
013K831273	Sediment Pulp	0.81	12.38	4.06	94.8	55	20.8	9.6	220	1.83	0.6	0.6	0.4	0.7	34.3	0.36	0.02	<0.02	55	0.53	0.079
013K831274	Sediment Pulp	2.02	16.81	1.67	82.7	114	13.5	13.9	240	2.48	0.4	0.7	0.3	0.3	23.3	0.35	0.02	<0.02	55	0.45	0.103
013K831275	Sediment Pulp	1.01	13.05	2.87	95.7	54	21.9	10.2	284	1.85	0.3	0.7	0.7	0.7	33.9	0.34	<0.02	<0.02	58	0.53	0.075
013K831276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831277	Sediment Pulp	0.94	12.12	1.50	53.6	99	9.6	5.2	126	1.31	0.2	0.7	0.2	0.3	21.7	0.30	<0.02	0.03	45	0.42	0.058
013K831278	Sediment Pulp	0.89	9.32	1.47	48.6	40	10.9	5.7	81	0.62	0.2	0.4	0.4	0.3	29.3	0.17	<0.02	<0.02	29	0.56	0.035
013K831279	Sediment Pulp	1.31	11.26	1.51	83.5	79	13.3	8.3	740	2.06	1.0	1.0	0.3	0.5	29.1	0.40	<0.02	<0.02	41	0.54	0.130
013K831280	Sediment Pulp	0.79	12.78	2.35	66.5	43	14.8	6.5	63	0.80	0.1	0.4	0.9	0.1	31.8	0.36	0.02	<0.02	24	0.56	0.066
013K831281	Sediment Pulp	0.77	11.94	2.32	66.0	45	14.2	6.1	61	0.82	0.2	0.4	0.5	0.1	30.0	0.38	0.02	<0.02	25	0.57	0.060
013K831282	Sediment Pulp	0.51	12.43	1.65	50.4	36	11.5	6.6	64	1.10	0.1	0.3	0.4	0.2	44.7	0.33	<0.02	<0.02	20	0.79	0.044
013K831283	Sediment Pulp	0.84	30.43	22.20	124.1	2630	42.2	27.1	1210	3.02	23.9	3.7	2.8	7.5	26.6	0.53	0.60	3.01	47	0.61	0.090
013K831284	Sediment Pulp	0.48	12.76	1.72	53.7	38	12.3	6.6	62	1.03	0.2	0.3	0.7	0.3	41.3	0.33	<0.02	<0.02	20	0.72	0.045
013K831285	Sediment Pulp	0.59	12.83	1.51	57.6	39	18.0	8.7	64	0.78	0.2	0.3	<0.2	0.5	45.9	0.26	<0.02	<0.02	11	0.77	0.039
013K831286	Sediment Pulp	0.86	12.31	1.76	42.9	45	12.5	5.3	249	0.86	0.3	0.6	1.0	<0.1	32.7	0.28	<0.02	<0.02	29	0.61	0.075
013K831287	Sediment Pulp	0.65	25.60	1.11	51.7	74	10.1	5.4	86	0.23	<0.1	0.2	0.5	0.4	25.0	0.37	<0.02	<0.02	22	0.51	0.105
013K831288	Sediment Pulp	1.73	47.35	5.24	94.3	167	23.1	11.2	530	2.09	1.3	5.5	1.4	2.3	22.6	0.38	0.06	0.04	41	0.50	0.154
013K831289	Sediment Pulp	2.79	25.70	3.93	121.9	274	10.8	3.4	66	0.63	0.2	5.2	1.3	0.3	22.1	0.98	0.03	<0.02	31	0.59	0.138
013K831290	Sediment Pulp	8.31	27.70	6.71	161.8	192	13.4	17.3	485	2.45	0.4	12.4	0.6	0.5	23.3	1.03	0.05	<0.02	45	0.58	0.077
013K831291	Sediment Pulp	5.82	19.71	6.18	142.6	132	12.1	7.7	177	0.95	0.3	17.8	0.4	0.2	19.6	0.68	0.03	<0.02	33	0.48	0.051
013K831292	Sediment Pulp	3.00	16.73	3.93	102.2	119	14.1	4.5	83	0.89	0.4	13.5	0.2	0.3	19.4	0.38	0.02	<0.02	21	0.47	0.071
013K831293	Sediment Pulp	61.23	19.40	9.26	109.1	251	10.8	10.1	215	2.80	<0.1	40.0	0.8	0.4	20.4	0.75	0.04	0.02	39	0.48	0.147
013K831294	Sediment Pulp	11.31	31.46	15.15	156.9	419	14.0	16.4	678	4.60	0.5	21.5	<0.2	1.1	26.1	0.83	0.03	0.05	62	0.54	0.274
013K831295	Sediment Pulp	16.39	26.93	5.38	113.6	227	23.8	33.9	1608	6.96	3.5	21.7	<0.2	4.6	32.9	0.51	<0.02	0.08	80	0.57	0.134
013K831296	Sediment Pulp	2.83	43.10	3.73	155.6	443	14.5	28.5	1458	6.25	<0.1	12.6	5.6	1.4	25.4	0.71	0.03	0.03	72	0.56	0.299
013K831297	Sediment Pulp	3.28	18.65	3.21	88.7	252	10.7	10.9	361	2.02	0.3	8.5	<0.2	0.3	34.5	0.53	0.03	<0.02	66	0.52	0.237
013K831298	Sediment Pulp	1.06	15.27	1.82	72.2	33	11.9	5.7	95	0.75	0.1	5.7	0.3	0.7	37.5	0.19	0.02	<0.02	25	0.63	0.066
013K831299	Sediment Pulp	4.32	21.50	4.50	93.1	131	9.7	2.4	40	0.44	<0.1	119.3	0.2	0.2	29.0	0.32	0.02	<0.02	16	0.84	0.053
013K831300	Sediment Pulp	34.43	17.70	2.60	69.8	199	8.3	7.0	153	1.99	<0.1	7.4	<0.2	0.7	30.1	0.37	0.03	<0.02	31	0.60	0.108
013K831301	Sediment Pulp	2.32	21.70	3.45	67.7	83	11.2	5.5	78	0.90	<0.1	14.9	<0.2	0.4	32.6	0.25	<0.02	<0.02	28	0.64	0.056



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Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831272	Sediment Pulp	13.8	10.1	0.12	54.2	0.012	<20	1.49	0.032	0.02	<0.1	0.7	0.02	0.27	76	0.5	<0.02	2.0	0.11	<0.1	<0.02
013K831273	Sediment Pulp	18.2	29.7	0.42	145.0	0.054	<20	2.41	0.094	0.05	<0.1	3.4	0.07	0.10	34	0.1	<0.02	5.0	0.27	<0.1	0.03
013K831274	Sediment Pulp	14.5	20.6	0.14	28.9	0.018	<20	2.29	0.027	0.02	0.1	2.4	0.05	0.28	80	0.6	<0.02	2.5	0.13	<0.1	<0.02
013K831275	Sediment Pulp	20.2	30.0	0.42	151.8	0.055	<20	2.45	0.088	0.05	<0.1	3.2	0.07	0.10	41	0.2	<0.02	5.0	0.30	<0.1	0.02
013K831276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831277	Sediment Pulp	17.3	12.4	0.11	26.3	0.015	<20	1.87	0.023	0.02	<0.1	1.1	<0.02	0.24	58	0.7	<0.02	2.3	0.18	<0.1	0.02
013K831278	Sediment Pulp	11.6	11.7	0.18	27.2	0.022	<20	1.85	0.064	0.03	<0.1	1.4	0.04	0.28	34	0.4	<0.02	2.9	0.19	<0.1	<0.02
013K831279	Sediment Pulp	10.6	14.8	0.17	74.6	0.017	<20	2.60	0.059	0.03	<0.1	1.8	0.05	0.13	68	0.9	<0.02	4.2	0.18	<0.1	0.02
013K831280	Sediment Pulp	21.7	15.5	0.19	61.9	0.023	<20	2.35	0.066	0.03	<0.1	1.4	0.05	0.26	59	0.3	<0.02	3.6	0.22	<0.1	<0.02
013K831281	Sediment Pulp	21.4	14.5	0.18	61.4	0.021	<20	2.47	0.067	0.03	<0.1	1.2	0.05	0.28	45	0.4	<0.02	3.6	0.23	<0.1	<0.02
013K831282	Sediment Pulp	10.8	9.3	0.16	23.3	0.018	<20	3.44	0.125	0.03	<0.1	1.1	0.03	0.27	37	0.6	<0.02	5.2	0.20	<0.1	<0.02
013K831283	Sediment Pulp	39.9	49.6	0.77	156.3	0.101	<20	1.68	0.029	0.26	0.2	5.7	0.26	0.14	308	0.6	0.03	5.5	1.31	0.1	0.11
013K831284	Sediment Pulp	10.7	9.8	0.16	24.5	0.019	<20	3.55	0.110	0.03	<0.1	1.0	0.03	0.27	25	0.6	<0.02	5.6	0.21	<0.1	<0.02
013K831285	Sediment Pulp	21.3	9.3	0.17	43.1	0.016	<20	2.63	0.107	0.03	<0.1	1.7	0.05	0.41	39	0.4	<0.02	3.2	0.17	<0.1	<0.02
013K831286	Sediment Pulp	9.8	8.0	0.12	16.1	0.010	<20	3.25	0.077	0.02	<0.1	0.4	<0.02	0.29	36	0.7	<0.02	4.6	0.16	<0.1	<0.02
013K831287	Sediment Pulp	6.5	7.5	0.06	25.0	0.012	<20	3.34	0.040	0.01	<0.1	1.1	0.02	0.28	78	1.5	<0.02	3.4	0.07	<0.1	<0.02
013K831288	Sediment Pulp	69.0	21.6	0.43	126.4	0.060	<20	2.21	0.028	0.08	0.1	4.7	0.21	0.09	75	0.7	<0.02	3.0	0.53	<0.1	0.03
013K831289	Sediment Pulp	22.3	14.0	0.07	68.8	0.021	<20	1.59	0.010	0.01	0.1	1.0	0.02	0.21	101	1.1	<0.02	2.8	0.17	<0.1	<0.02
013K831290	Sediment Pulp	33.3	18.4	0.10	114.3	0.023	<20	2.12	0.013	0.02	<0.1	2.4	0.10	0.20	94	1.9	<0.02	2.5	0.19	<0.1	<0.02
013K831291	Sediment Pulp	23.2	14.7	0.10	71.4	0.024	<20	1.87	0.012	0.02	<0.1	1.4	0.06	0.28	74	1.0	<0.02	2.4	0.20	<0.1	<0.02
013K831292	Sediment Pulp	38.6	16.2	0.18	54.7	0.031	<20	1.54	0.018	0.03	0.1	1.4	0.05	0.23	50	0.7	<0.02	2.4	0.38	<0.1	<0.02
013K831293	Sediment Pulp	31.3	22.1	0.07	65.2	0.023	<20	2.19	0.007	0.01	0.1	2.5	0.04	0.23	93	1.9	<0.02	3.1	0.18	<0.1	<0.02
013K831294	Sediment Pulp	53.0	34.1	0.11	78.9	0.051	<20	3.92	0.006	0.02	0.2	4.3	0.11	0.25	172	2.8	<0.02	6.4	0.39	<0.1	<0.02
013K831295	Sediment Pulp	110.1	30.2	0.32	162.2	0.045	<20	2.25	0.048	0.05	0.3	5.3	0.29	0.17	64	1.8	<0.02	3.8	0.56	0.1	0.03
013K831296	Sediment Pulp	53.9	23.8	0.12	63.9	0.043	<20	4.70	0.010	0.03	0.1	4.5	0.15	0.27	162	4.1	<0.02	5.1	0.30	0.1	<0.02
013K831297	Sediment Pulp	27.4	16.1	0.10	75.6	0.031	<20	2.86	0.016	0.02	0.2	1.9	0.06	0.27	103	2.3	<0.02	5.1	0.21	<0.1	<0.02
013K831298	Sediment Pulp	23.0	13.6	0.20	55.9	0.045	<20	1.37	0.076	0.04	<0.1	2.2	0.05	0.15	42	0.5	<0.02	2.4	0.17	<0.1	<0.02
013K831299	Sediment Pulp	27.3	10.5	0.07	49.8	0.022	<20	2.51	0.013	0.01	0.6	1.0	0.03	0.37	80	1.6	<0.02	3.1	0.15	<0.1	<0.02
013K831300	Sediment Pulp	33.5	12.0	0.10	38.3	0.022	<20	2.11	0.033	0.02	0.2	1.7	0.06	0.25	74	1.5	<0.02	3.4	0.12	<0.1	<0.02
013K831301	Sediment Pulp	36.5	14.9	0.14	58.3	0.027	<20	2.63	0.075	0.02	<0.1	1.6	0.04	0.19	51	1.8	<0.02	3.3	0.17	<0.1	<0.02



Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831272	Sediment Pulp	0.28	1.1	<0.1	<0.05	0.2	8.83	20.0	<0.02	1	0.2	1.4	3.89	14.46	2.74	0.68	2.19	0.27	1.59	0.32	0.92
013K831273	Sediment Pulp	0.78	3.7	0.3	<0.05	0.9	10.92	33.8	<0.02	<1	0.3	6.2	5.01	19.67	3.41	0.82	2.87	0.38	2.31	0.44	1.18
013K831274	Sediment Pulp	0.38	1.2	0.1	<0.05	0.4	10.02	23.7	<0.02	<1	0.2	1.8	3.90	15.32	2.72	0.74	2.22	0.33	1.78	0.35	0.95
013K831275	Sediment Pulp	0.77	3.9	0.3	<0.05	0.8	11.25	36.5	<0.02	<1	0.3	6.8	5.46	20.70	3.80	0.89	3.25	0.42	2.40	0.44	1.30
013K831276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831277	Sediment Pulp	0.34	1.3	0.1	<0.05	0.3	11.42	25.1	<0.02	<1	0.2	1.7	4.68	18.14	3.15	0.97	2.75	0.36	2.09	0.39	1.12
013K831278	Sediment Pulp	0.40	2.1	0.2	<0.05	0.5	7.30	17.5	<0.02	<1	<0.1	2.5	3.11	12.04	2.14	0.63	1.94	0.23	1.23	0.28	0.73
013K831279	Sediment Pulp	0.26	1.8	0.1	<0.05	0.6	7.78	15.0	<0.02	<1	<0.1	2.2	2.85	11.40	2.16	0.69	1.90	0.23	1.36	0.29	0.84
013K831280	Sediment Pulp	0.45	2.2	0.2	<0.05	0.3	15.20	33.0	<0.02	<1	0.3	2.9	6.14	24.05	4.45	1.12	3.62	0.50	2.94	0.51	1.60
013K831281	Sediment Pulp	0.44	2.1	0.2	<0.05	0.2	13.93	31.3	<0.02	<1	0.2	2.4	5.85	23.30	4.03	1.06	3.71	0.46	2.60	0.49	1.50
013K831282	Sediment Pulp	0.48	1.8	0.1	<0.05	0.2	6.74	18.3	<0.02	1	0.2	2.4	2.79	10.72	2.08	0.59	1.88	0.22	1.24	0.24	0.69
013K831283	Sediment Pulp	1.99	23.9	1.1	<0.05	5.3	17.38	69.3	0.04	1	0.6	20.1	9.53	36.12	6.37	0.99	4.97	0.62	3.36	0.65	1.72
013K831284	Sediment Pulp	0.51	1.8	0.1	<0.05	0.3	6.71	18.7	<0.02	<1	0.1	2.4	2.86	11.29	1.97	0.63	1.64	0.22	1.20	0.25	0.70
013K831285	Sediment Pulp	0.35	1.4	<0.1	<0.05	0.6	12.39	33.0	<0.02	<1	<0.1	1.8	5.88	21.62	3.56	0.94	3.00	0.38	2.35	0.47	1.25
013K831286	Sediment Pulp	0.32	1.2	0.1	<0.05	0.1	8.40	16.1	<0.02	<1	0.1	1.8	2.68	11.12	1.80	0.64	1.83	0.23	1.37	0.28	0.83
013K831287	Sediment Pulp	0.22	0.5	<0.1	<0.05	0.6	4.75	9.4	<0.02	1	<0.1	0.7	1.73	7.00	1.34	0.48	1.20	0.14	0.92	0.17	0.46
013K831288	Sediment Pulp	1.26	5.8	0.4	<0.05	1.9	33.83	111.8	0.04	<1	1.1	8.4	17.57	62.67	10.94	2.08	8.69	1.32	6.89	1.26	3.21
013K831289	Sediment Pulp	0.59	0.9	0.3	<0.05	0.3	10.98	42.7	<0.02	1	0.4	1.4	5.96	21.36	3.50	0.76	3.40	0.46	2.16	0.45	1.08
013K831290	Sediment Pulp	0.56	1.2	0.1	<0.05	0.3	15.93	64.7	<0.02	<1	0.5	2.3	8.59	30.09	5.90	1.08	5.01	0.62	3.08	0.60	1.52
013K831291	Sediment Pulp	0.68	1.1	0.2	<0.05	0.3	11.28	44.5	<0.02	2	0.3	2.5	5.91	20.53	3.83	0.87	3.50	0.45	2.35	0.45	1.21
013K831292	Sediment Pulp	0.69	2.3	0.2	<0.05	0.5	14.57	57.5	<0.02	<1	0.5	5.1	9.41	33.55	5.62	0.96	4.56	0.59	2.84	0.58	1.50
013K831293	Sediment Pulp	0.74	0.8	0.1	<0.05	0.2	18.25	58.4	<0.02	4	0.5	1.5	8.07	28.82	5.21	0.94	4.75	0.66	3.39	0.73	1.81
013K831294	Sediment Pulp	1.55	1.6	0.2	<0.05	0.7	33.36	100.7	0.04	3	0.6	2.9	14.56	50.36	8.57	1.82	8.49	1.23	6.17	1.31	3.41
013K831295	Sediment Pulp	0.65	4.3	0.2	<0.05	1.2	33.05	209.8	<0.02	1	0.4	8.5	28.25	96.50	13.72	2.38	10.80	1.37	6.25	1.28	3.13
013K831296	Sediment Pulp	0.96	1.7	0.2	<0.05	0.8	34.32	91.7	0.03	<1	0.5	2.6	14.07	45.98	8.57	1.92	8.04	1.27	6.59	1.35	3.40
013K831297	Sediment Pulp	0.82	1.3	0.2	<0.05	0.4	17.07	53.6	<0.02	<1	0.2	2.1	7.58	28.50	4.96	1.27	4.83	0.66	3.52	0.74	1.82
013K831298	Sediment Pulp	0.70	2.0	0.2	<0.05	0.8	12.55	40.9	<0.02	<1	0.3	3.8	6.03	21.41	3.82	0.69	3.64	0.47	2.57	0.50	1.26
013K831299	Sediment Pulp	0.83	0.8	0.2	<0.05	0.3	8.75	43.6	<0.02	<1	0.2	1.5	5.77	19.80	3.15	0.77	2.61	0.34	1.79	0.36	0.87
013K831300	Sediment Pulp	0.60	1.1	0.2	<0.05	0.2	7.81	42.4	<0.02	2	0.1	2.0	8.09	26.38	3.86	0.64	2.47	0.32	1.60	0.30	0.72
013K831301	Sediment Pulp	0.57	1.2	0.2	<0.05	0.3	9.84	44.2	<0.02	4	0.6	3.2	8.49	28.99	4.16	0.83	2.93	0.37	1.88	0.37	1.02



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K831272	Sediment Pulp	0.12	0.79	0.12	<10	<2	
013K831273	Sediment Pulp	0.16	1.01	0.15	<10	<2	
013K831274	Sediment Pulp	0.14	0.88	0.13	<10	<2	
013K831275	Sediment Pulp	0.16	1.12	0.16	<10	2	
013K831276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831277	Sediment Pulp	0.14	0.91	0.14	<10	3	
013K831278	Sediment Pulp	0.10	0.61	0.09	<10	<2	
013K831279	Sediment Pulp	0.12	0.71	0.10	<10	<2	
013K831280	Sediment Pulp	0.19	1.33	0.19	<10	<2	
013K831281	Sediment Pulp	0.20	1.11	0.17	<10	<2	
013K831282	Sediment Pulp	0.09	0.58	0.08	<10	<2	
013K831283	Sediment Pulp	0.27	1.53	0.26	<10	<2	
013K831284	Sediment Pulp	0.09	0.58	0.10	<10	<2	
013K831285	Sediment Pulp	0.16	1.02	0.14	<10	<2	
013K831286	Sediment Pulp	0.11	0.75	0.11	<10	<2	
013K831287	Sediment Pulp	0.06	0.43	0.07	<10	<2	
013K831288	Sediment Pulp	0.47	2.78	0.38	<10	<2	
013K831289	Sediment Pulp	0.14	0.78	0.12	<10	<2	
013K831290	Sediment Pulp	0.22	1.25	0.18	<10	<2	
013K831291	Sediment Pulp	0.19	0.95	0.13	<10	<2	
013K831292	Sediment Pulp	0.18	1.13	0.15	<10	<2	
013K831293	Sediment Pulp	0.28	1.54	0.24	<10	<2	
013K831294	Sediment Pulp	0.48	2.66	0.36	<10	<2	
013K831295	Sediment Pulp	0.47	2.40	0.43	<10	<2	
013K831296	Sediment Pulp	0.49	2.83	0.40	<10	<2	
013K831297	Sediment Pulp	0.26	1.48	0.20	<10	<2	
013K831298	Sediment Pulp	0.16	0.91	0.16	<10	<2	
013K831299	Sediment Pulp	0.12	0.63	0.10	<10	<2	
013K831300	Sediment Pulp	0.11	0.62	0.09	<10	<2	
013K831301	Sediment Pulp	0.12	0.79	0.12	<10	<2	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831302	Sediment Pulp	3.46	12.21	1.47	81.8	59	9.0	2.5	26	0.27	<0.1	1.9	0.8	0.3	25.7	0.21	<0.02	<0.02	9	0.49	0.029
013K831303	Sediment Pulp	3.33	12.42	1.33	82.3	54	9.2	2.4	25	0.29	<0.1	1.8	<0.2	0.4	25.0	0.21	<0.02	<0.02	9	0.47	0.032
013K831304	Sediment Pulp	13.58	23.17	2.91	100.5	236	7.4	20.7	41	2.06	<0.1	5.7	0.4	0.7	55.8	0.37	<0.02	<0.02	27	1.13	0.090
013K831305	Sediment Pulp	3.22	20.71	2.64	124.6	123	10.2	6.8	194	1.12	<0.1	5.8	<0.2	0.3	35.9	0.42	0.03	<0.02	32	0.78	0.073
013K831306	Sediment Pulp	2.38	21.64	3.30	61.2	82	10.1	5.5	77	0.88	<0.1	13.9	<0.2	0.4	30.9	0.22	<0.02	<0.02	27	0.61	0.051
013K831307	Sediment Pulp	12.47	23.29	3.56	107.3	112	13.3	12.6	745	2.94	3.0	20.0	0.3	0.8	49.5	0.44	<0.02	<0.02	96	0.91	0.128
013K831308	Sediment Pulp	13.70	50.93	6.04	169.5	288	20.0	26.4	828	5.13	2.3	21.8	0.7	0.8	28.8	0.97	0.03	0.03	87	0.68	0.214
013K831309	Sediment Pulp	8.63	37.93	81.22	301.2	588	11.3	7.1	422	1.73	33.3	9.3	4.1	2.2	68.4	1.33	0.55	1.00	21	6.04	0.062
013K831310	Sediment Pulp	7.67	23.00	3.70	136.2	352	15.7	43.6	2017	8.92	1.6	8.8	0.3	1.1	49.3	0.67	0.04	<0.02	95	0.82	0.297
013K831311	Sediment Pulp	13.25	10.49	1.93	81.5	83	10.8	19.8	177	5.70	2.3	12.9	0.9	0.5	28.3	0.29	0.03	<0.02	69	0.52	0.088
013K831312	Sediment Pulp	8.32	33.19	4.04	135.3	160	14.3	9.7	305	2.02	0.7	26.6	0.4	0.8	34.1	0.61	<0.02	<0.02	73	0.70	0.127
013K831313	Sediment Pulp	9.65	22.38	1.41	72.8	86	10.4	2.5	21	0.30	<0.1	25.5	0.4	0.8	24.9	0.29	<0.02	<0.02	9	0.59	0.029
013K831314	Sediment Pulp	3.28	10.66	2.42	58.2	37	9.5	5.9	52	1.01	0.1	22.9	0.2	0.7	29.8	0.16	0.15	<0.02	28	0.51	0.031
013K831315	Sediment Pulp	3.88	11.45	1.47	90.6	95	7.6	5.0	89	0.94	0.4	3.2	<0.2	0.2	18.2	0.36	<0.02	<0.02	28	0.39	0.064
013K831316	Sediment Pulp	1.72	36.35	1.80	74.7	67	17.8	6.7	137	0.93	0.4	3.6	<0.2	0.7	36.2	0.27	<0.02	<0.02	30	0.64	0.067
013K831317	Sediment Pulp	10.64	26.53	2.89	108.0	399	9.7	10.3	320	1.96	<0.1	33.8	0.2	0.3	38.0	0.54	0.02	<0.02	70	0.80	0.202
013K831318	Sediment Pulp	24.72	19.59	5.19	86.8	243	11.6	9.2	185	1.51	0.1	56.7	<0.2	0.2	27.6	0.45	0.04	0.03	45	0.54	0.144
013K831319	Sediment Pulp	33.04	51.22	11.07	144.6	490	13.4	26.0	723	6.53	0.5	56.3	0.6	1.9	20.7	1.01	0.02	0.18	84	0.44	0.262
013K831320	Sediment Pulp	25.51	40.71	5.56	108.9	269	22.5	30.2	5473	4.52	1.7	32.0	0.7	2.8	43.9	0.51	0.02	0.06	67	0.79	0.160
013K831321	Sediment Pulp	3.98	25.15	4.21	96.3	101	22.0	24.7	462	2.97	2.9	12.3	0.3	2.0	60.9	0.33	<0.02	<0.02	76	0.94	0.154
013K831322	Sediment Pulp	45.35	26.34	3.40	149.6	375	16.1	46.5	1905	7.19	5.7	16.0	0.5	1.1	37.2	0.76	0.04	0.04	93	1.00	0.301
013K831323	Sediment Pulp	14.34	16.65	2.77	176.9	261	18.1	60.3	>10000	9.16	3.7	6.2	<0.2	1.1	31.1	0.90	<0.02	0.02	70	0.43	0.216
013K831324	Sediment Pulp	23.23	21.74	3.02	185.4	318	21.3	60.1	>10000	6.98	4.3	6.4	1.5	1.1	35.3	1.04	0.04	0.07	77	0.54	0.276
013K831325	Sediment Pulp	1.96	43.78	5.52	78.2	102	26.5	20.3	1005	3.05	1.1	16.8	1.2	5.2	58.0	0.25	0.03	0.06	60	0.95	0.104
013K831326	Sediment Pulp	1.33	23.93	4.49	71.4	246	10.5	2.2	93	0.63	<0.1	5.6	0.7	0.7	33.9	0.42	0.04	0.09	36	0.65	0.150
013K831327	Sediment Pulp	3.76	24.83	4.02	94.4	112	21.1	24.7	432	2.95	2.8	11.7	1.9	1.7	60.7	0.38	0.04	0.02	72	0.86	0.158
013K831328	Sediment Pulp	2.72	7.05	2.88	64.3	30	11.5	16.8	936	4.51	1.0	4.0	0.2	1.3	33.2	0.13	0.02	0.03	47	0.47	0.071
013K831329	Sediment Pulp	2.88	29.85	2.90	124.2	178	21.6	26.8	1936	4.47	0.9	3.3	0.8	1.3	42.2	0.63	0.03	0.02	75	0.65	0.208
013K831330	Sediment Pulp	0.88	32.35	23.06	127.2	2425	44.2	27.3	1181	3.04	25.0	4.0	7.2	8.3	25.5	0.55	0.66	3.25	46	0.57	0.086
013K831331	Sediment Pulp	3.07	65.19	2.32	123.9	336	17.1	13.5	320	4.47	0.6	1.7	0.5	1.8	44.7	0.61	0.02	0.02	92	0.88	0.413



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831302	Sediment Pulp	28.4	9.1	0.09	26.4	0.017	<20	0.91	0.036	0.02	<0.1	1.0	0.03	0.35	62	1.0	<0.02	1.3	0.09	<0.1	<0.02
013K831303	Sediment Pulp	28.7	9.1	0.09	24.6	0.016	<20	0.89	0.034	0.01	<0.1	1.1	0.03	0.37	55	0.9	<0.02	1.4	0.09	<0.1	<0.02
013K831304	Sediment Pulp	42.4	11.2	0.10	52.9	0.020	<20	2.24	0.040	0.03	<0.1	1.5	0.09	2.06	99	1.6	<0.02	2.8	0.10	<0.1	<0.02
013K831305	Sediment Pulp	30.4	14.4	0.15	50.6	0.027	<20	2.14	0.058	0.02	<0.1	1.3	0.07	0.20	71	1.0	<0.02	3.2	0.12	<0.1	<0.02
013K831306	Sediment Pulp	34.6	14.2	0.13	55.3	0.026	<20	2.54	0.068	0.02	<0.1	1.4	0.04	0.18	55	1.4	<0.02	3.2	0.16	<0.1	<0.02
013K831307	Sediment Pulp	28.3	26.2	0.21	56.0	0.035	<20	2.74	0.128	0.03	0.3	2.0	0.08	0.13	46	2.5	<0.02	5.9	0.16	<0.1	<0.02
013K831308	Sediment Pulp	33.0	22.1	0.16	81.5	0.032	<20	3.40	0.043	0.03	0.2	2.5	0.21	0.18	132	4.3	<0.02	4.6	0.26	<0.1	<0.02
013K831309	Sediment Pulp	11.2	12.2	0.58	90.7	0.043	<20	0.46	0.032	0.05	0.5	2.5	0.21	1.53	81	1.1	0.02	2.1	0.51	<0.1	0.06
013K831310	Sediment Pulp	33.3	19.8	0.15	88.8	0.044	<20	3.92	0.028	0.03	0.3	3.7	0.16	0.28	163	2.8	<0.02	6.3	0.26	<0.1	<0.02
013K831311	Sediment Pulp	14.0	14.9	0.14	36.5	0.025	<20	1.77	0.036	0.02	0.3	1.9	0.07	0.24	56	1.5	<0.02	2.7	0.24	<0.1	<0.02
013K831312	Sediment Pulp	38.2	21.8	0.20	53.1	0.036	<20	2.92	0.061	0.03	0.2	2.4	0.14	0.22	82	2.4	<0.02	4.6	0.18	<0.1	<0.02
013K831313	Sediment Pulp	28.7	7.9	0.05	16.3	0.012	<20	0.47	0.017	0.01	0.2	1.1	0.09	0.71	65	1.0	<0.02	0.6	0.12	<0.1	<0.02
013K831314	Sediment Pulp	22.5	15.9	0.16	37.5	0.026	<20	1.04	0.057	0.02	<0.1	1.7	0.06	0.82	33	1.3	<0.02	2.8	0.11	<0.1	<0.02
013K831315	Sediment Pulp	11.5	9.3	0.04	16.4	0.010	<20	1.54	0.009	0.01	<0.1	0.7	0.02	0.33	41	1.0	<0.02	1.5	0.12	<0.1	<0.02
013K831316	Sediment Pulp	40.4	14.3	0.14	59.7	0.025	<20	2.10	0.040	0.03	<0.1	2.9	0.10	0.32	88	0.8	<0.02	1.8	0.17	0.1	0.03
013K831317	Sediment Pulp	32.0	16.2	0.10	73.2	0.029	<20	3.22	0.016	0.02	0.3	2.2	0.06	0.26	171	2.5	<0.02	4.7	0.24	<0.1	<0.02
013K831318	Sediment Pulp	31.6	17.9	0.12	71.3	0.026	<20	2.14	0.012	0.03	0.2	1.6	0.06	0.24	84	1.8	<0.02	3.4	0.38	<0.1	<0.02
013K831319	Sediment Pulp	60.9	33.8	0.14	51.6	0.062	<20	4.30	0.009	0.03	0.2	4.4	0.14	0.22	179	3.0	<0.02	7.1	0.41	<0.1	0.03
013K831320	Sediment Pulp	45.9	33.3	0.49	129.8	0.077	<20	2.53	0.095	0.07	0.1	4.9	0.20	0.09	65	0.7	<0.02	5.1	0.67	<0.1	<0.02
013K831321	Sediment Pulp	24.6	23.8	0.44	94.3	0.069	<20	2.64	0.158	0.09	0.3	4.3	0.28	0.59	61	1.0	<0.02	5.1	0.39	<0.1	0.02
013K831322	Sediment Pulp	30.6	19.9	0.13	107.4	0.034	40	3.27	0.021	0.03	0.4	7.2	0.20	1.18	148	3.1	<0.02	5.0	0.28	0.1	<0.02
013K831323	Sediment Pulp	19.4	14.6	0.10	756.6	0.027	<20	2.74	0.033	0.02	0.1	3.1	0.29	0.18	102	2.0	0.02	4.4	0.26	<0.1	0.03
013K831324	Sediment Pulp	25.1	15.9	0.11	442.7	0.031	<20	2.78	0.026	0.02	0.2	3.2	0.33	0.24	134	1.6	0.02	4.2	0.28	<0.1	<0.02
013K831325	Sediment Pulp	44.1	27.6	0.64	106.8	0.098	<20	2.14	0.160	0.12	<0.1	5.8	0.19	0.03	13	<0.1	<0.02	5.7	0.75	<0.1	0.04
013K831326	Sediment Pulp	25.2	16.8	0.09	101.0	0.034	<20	2.67	0.007	0.01	<0.1	1.4	0.03	0.30	141	0.9	<0.02	7.4	0.19	<0.1	0.03
013K831327	Sediment Pulp	24.3	23.6	0.44	97.2	0.060	<20	2.48	0.145	0.08	0.3	3.8	0.27	0.57	54	0.2	<0.02	4.9	0.38	<0.1	0.03
013K831328	Sediment Pulp	13.1	14.2	0.22	61.5	0.042	<20	1.60	0.086	0.03	0.1	2.3	0.05	0.06	32	<0.1	<0.02	3.4	0.37	<0.1	0.03
013K831329	Sediment Pulp	33.4	23.8	0.35	108.0	0.044	<20	3.60	0.085	0.06	0.1	4.2	0.21	0.24	85	0.8	<0.02	4.7	0.38	0.1	0.03
013K831330	Sediment Pulp	41.7	48.3	0.75	154.4	0.099	<20	1.57	0.024	0.24	0.2	5.7	0.26	0.14	256	<0.1	0.05	5.6	1.37	<0.1	0.12
013K831331	Sediment Pulp	42.4	19.0	0.19	63.4	0.035	<20	5.04	0.028	0.02	0.2	8.4	0.16	0.28	260	1.8	<0.02	4.8	0.16	0.1	0.03



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831302	Sediment Pulp	0.33	1.1	0.1	<0.05	0.2	5.87	36.5	<0.02	1	<0.1	1.9	6.95	24.33	3.48	0.56	2.37	0.27	1.45	0.24	0.63
013K831303	Sediment Pulp	0.32	1.1	<0.1	<0.05	0.2	5.68	35.1	<0.02	1	<0.1	1.6	6.93	23.66	3.26	0.57	2.48	0.27	1.30	0.25	0.61
013K831304	Sediment Pulp	0.44	2.5	<0.1	<0.05	0.2	9.34	47.4	<0.02	14	0.1	3.8	9.94	32.72	4.41	0.81	2.74	0.35	1.66	0.32	0.83
013K831305	Sediment Pulp	0.52	1.2	0.1	<0.05	0.2	8.59	39.9	<0.02	3	<0.1	4.2	7.22	26.57	3.58	0.69	2.66	0.33	1.60	0.36	0.83
013K831306	Sediment Pulp	0.52	1.1	0.1	<0.05	0.2	9.77	41.6	<0.02	4	0.3	3.1	7.75	26.93	3.95	0.83	2.92	0.39	2.01	0.40	0.94
013K831307	Sediment Pulp	0.37	1.8	0.1	<0.05	0.3	10.39	40.0	<0.02	2	0.4	5.7	6.71	22.01	3.51	0.73	2.56	0.40	1.99	0.39	1.07
013K831308	Sediment Pulp	0.65	1.8	0.1	<0.05	0.4	17.81	56.1	0.03	3	0.1	3.2	8.33	29.75	5.11	1.16	4.40	0.62	3.18	0.67	1.69
013K831309	Sediment Pulp	0.74	3.5	3.2	<0.05	2.4	10.77	18.6	0.52	19	0.1	4.0	2.95	11.98	2.36	0.58	2.38	0.32	1.85	0.39	1.05
013K831310	Sediment Pulp	0.74	1.7	0.1	<0.05	0.5	21.35	67.1	0.03	2	0.7	2.8	8.93	32.91	5.91	1.32	5.52	0.77	3.90	0.85	2.21
013K831311	Sediment Pulp	0.48	1.3	<0.1	<0.05	0.3	8.22	26.8	<0.02	<1	0.2	2.9	3.86	14.29	2.40	0.62	1.91	0.32	1.60	0.33	0.86
013K831312	Sediment Pulp	0.68	2.0	0.1	<0.05	0.5	15.10	48.8	<0.02	3	0.4	5.0	9.29	33.05	5.12	1.01	3.77	0.60	3.06	0.57	1.45
013K831313	Sediment Pulp	0.37	0.7	<0.1	<0.05	0.6	6.49	34.0	<0.02	5	<0.1	1.8	6.59	22.21	2.95	0.52	2.00	0.28	1.25	0.26	0.71
013K831314	Sediment Pulp	0.34	1.6	0.4	<0.05	0.3	7.21	28.1	<0.02	4	<0.1	3.5	6.04	21.63	3.11	0.47	2.50	0.30	1.50	0.29	0.70
013K831315	Sediment Pulp	0.28	0.7	0.1	<0.05	0.2	7.41	19.2	<0.02	<1	0.2	0.5	3.06	11.34	2.18	0.50	1.65	0.25	1.15	0.26	0.75
013K831316	Sediment Pulp	0.74	1.6	0.1	<0.05	0.6	26.73	63.0	<0.02	<1	0.2	2.5	10.73	39.24	6.91	1.45	6.26	0.94	4.57	1.02	2.67
013K831317	Sediment Pulp	0.69	1.2	0.1	<0.05	0.4	20.77	50.8	0.02	2	0.2	2.4	8.48	32.65	5.44	1.33	5.17	0.75	3.99	0.81	2.11
013K831318	Sediment Pulp	0.72	1.9	0.2	<0.05	0.3	17.22	58.2	<0.02	4	0.7	3.1	8.51	30.77	5.51	1.06	4.04	0.64	3.31	0.66	1.82
013K831319	Sediment Pulp	1.47	2.0	0.2	<0.05	0.7	41.87	116.4	0.04	3	1.2	3.5	16.68	59.71	10.87	2.17	9.56	1.53	8.04	1.64	4.33
013K831320	Sediment Pulp	0.52	6.3	0.4	<0.05	0.6	24.67	83.0	0.03	<1	0.3	16.2	11.88	40.63	7.29	1.26	6.04	0.92	4.53	0.88	2.30
013K831321	Sediment Pulp	0.88	5.4	0.3	<0.05	1.0	15.73	45.8	0.03	5	0.3	5.8	6.64	24.64	4.47	0.98	3.93	0.58	3.16	0.60	1.68
013K831322	Sediment Pulp	0.59	1.8	<0.1	<0.05	0.4	19.46	56.6	<0.02	11	0.4	2.8	8.21	31.36	5.52	1.18	4.43	0.69	3.47	0.78	2.04
013K831323	Sediment Pulp	0.30	1.7	0.2	<0.05	0.7	12.42	38.3	<0.02	<1	0.1	2.3	5.19	19.85	3.34	0.84	2.96	0.42	2.27	0.47	1.32
013K831324	Sediment Pulp	0.39	1.7	0.4	<0.05	0.4	16.85	50.8	0.04	1	0.4	2.1	7.04	24.14	4.54	1.02	3.86	0.58	2.92	0.67	1.76
013K831325	Sediment Pulp	0.74	9.3	0.6	<0.05	1.3	23.72	75.8	0.02	<1	0.2	14.7	10.95	38.94	6.70	1.12	5.70	0.81	3.99	0.84	2.29
013K831326	Sediment Pulp	1.01	1.1	0.8	<0.05	0.6	10.21	46.5	0.02	<1	0.4	1.4	6.38	22.17	3.67	0.86	2.91	0.46	2.18	0.42	1.07
013K831327	Sediment Pulp	0.86	5.1	0.4	<0.05	1.2	16.07	46.1	<0.02	4	0.3	6.9	6.68	24.31	4.26	0.86	3.95	0.56	2.63	0.59	1.51
013K831328	Sediment Pulp	0.36	2.4	0.3	<0.05	0.5	7.51	24.1	<0.02	<1	0.2	4.9	3.28	13.03	2.08	0.51	1.85	0.25	1.39	0.30	0.76
013K831329	Sediment Pulp	0.49	4.0	0.3	<0.05	0.7	23.05	64.6	0.02	<1	0.5	6.5	9.08	32.42	6.04	1.20	4.77	0.80	3.95	0.81	2.25
013K831330	Sediment Pulp	2.09	22.9	1.2	<0.05	5.3	17.27	73.8	0.06	<1	0.4	19.4	10.21	35.48	6.15	1.01	4.50	0.69	3.42	0.71	1.86
013K831331	Sediment Pulp	0.96	1.6	0.2	<0.05	1.3	36.68	72.0	0.03	3	0.1	1.8	12.15	44.32	8.41	1.97	7.24	1.22	6.52	1.33	3.78



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Project: None Given
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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831302	Sediment Pulp	0.08	0.43	0.07	<10	<2
013K831303	Sediment Pulp	0.07	0.43	0.07	<10	<2
013K831304	Sediment Pulp	0.11	0.68	0.12	<10	<2
013K831305	Sediment Pulp	0.12	0.66	0.11	<10	<2
013K831306	Sediment Pulp	0.14	0.69	0.11	<10	<2
013K831307	Sediment Pulp	0.14	0.82	0.12	<10	<2
013K831308	Sediment Pulp	0.26	1.37	0.21	<10	<2
013K831309	Sediment Pulp	0.15	0.85	0.14	<10	<2
013K831310	Sediment Pulp	0.33	1.77	0.26	<10	<2
013K831311	Sediment Pulp	0.12	0.78	0.10	<10	<2
013K831312	Sediment Pulp	0.20	1.36	0.20	<10	<2
013K831313	Sediment Pulp	0.09	0.48	0.07	<10	<2
013K831314	Sediment Pulp	0.10	0.58	0.09	<10	<2
013K831315	Sediment Pulp	0.10	0.61	0.10	<10	<2
013K831316	Sediment Pulp	0.38	2.04	0.29	<10	<2
013K831317	Sediment Pulp	0.30	1.71	0.24	<10	<2
013K831318	Sediment Pulp	0.24	1.57	0.21	<10	<2
013K831319	Sediment Pulp	0.62	3.72	0.49	<10	<2
013K831320	Sediment Pulp	0.37	2.06	0.31	<10	<2
013K831321	Sediment Pulp	0.22	1.50	0.20	<10	<2
013K831322	Sediment Pulp	0.29	1.67	0.26	<10	<2
013K831323	Sediment Pulp	0.19	1.10	0.15	<10	<2
013K831324	Sediment Pulp	0.27	1.36	0.23	<10	<2
013K831325	Sediment Pulp	0.33	1.97	0.30	<10	<2
013K831326	Sediment Pulp	0.17	0.78	0.12	<10	<2
013K831327	Sediment Pulp	0.24	1.28	0.17	<10	<2
013K831328	Sediment Pulp	0.11	0.58	0.08	<10	2
013K831329	Sediment Pulp	0.32	1.94	0.28	<10	<2
013K831330	Sediment Pulp	0.26	1.49	0.26	<10	<2
013K831331	Sediment Pulp	0.55	3.31	0.52	<10	2



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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013K831332	Sediment Pulp	0.81	28.95	1.15	74.5	71	13.1	5.4	68	0.73	<0.1	0.6	0.4	0.3	26.4	0.42	<0.02	<0.02	35	0.45	0.106
013K831333	Sediment Pulp	1.78	55.63	2.43	132.7	282	19.1	18.6	354	4.03	0.1	1.0	1.4	0.9	41.7	0.74	0.03	<0.02	70	0.76	0.365
013K831334	Sediment Pulp	0.60	15.07	2.39	67.5	65	17.4	13.0	283	1.64	0.3	0.6	<0.2	0.4	61.7	0.32	<0.02	<0.02	34	0.83	0.088
013K831335	Sediment Pulp	0.90	17.35	2.04	85.8	83	15.4	15.4	606	2.14	0.2	0.5	<0.2	0.5	45.6	0.51	<0.02	<0.02	38	0.63	0.112
013K831336	Sediment Pulp	1.96	23.58	2.52	121.8	182	21.5	36.0	3273	5.47	0.4	0.6	0.4	1.2	32.1	0.78	0.03	<0.02	55	0.62	0.249
013K831337	Sediment Pulp	0.66	37.83	4.37	75.9	53	25.6	9.3	139	0.88	0.3	0.8	0.7	1.0	35.5	0.39	0.04	<0.02	21	0.52	0.066
013K831338	Sediment Pulp	1.84	11.72	2.45	99.4	74	13.2	8.4	385	2.24	0.3	0.5	<0.2	0.4	27.0	0.59	<0.02	<0.02	54	0.41	0.070
013K831339	Sediment Pulp	1.23	17.61	2.94	93.6	182	18.7	12.9	370	2.84	0.3	0.8	<0.2	0.5	27.7	0.49	<0.02	<0.02	42	0.47	0.133
013K831340	Sediment Pulp	1.38	15.09	2.47	126.2	124	22.0	45.9	6049	5.31	<0.1	0.7	1.8	1.0	26.1	0.67	<0.02	<0.02	42	0.35	0.117
013K831341	Sediment Pulp	6.00	36.07	8.59	116.4	232	35.3	12.2	197	1.43	2.0	6.4	0.7	0.9	25.8	0.57	0.18	0.04	47	0.50	0.170
013K831342	Sediment Pulp	1.49	17.73	3.48	96.2	182	17.9	25.9	6805	6.16	0.4	0.6	<0.2	1.4	34.3	0.54	0.03	<0.02	51	0.47	0.213
013K831343	Sediment Pulp	1.13	16.62	1.10	48.9	68	14.0	3.2	63	0.22	0.4	0.6	0.3	0.2	28.1	0.32	0.02	<0.02	6	0.60	0.037
013K831344	Sediment Pulp	1.12	16.69	0.97	46.3	64	14.1	3.6	78	0.23	0.1	0.6	0.3	0.2	28.0	0.34	0.03	<0.02	6	0.63	0.035
013K831345	Sediment Pulp	0.69	14.51	3.09	71.1	41	19.2	30.5	4889	3.08	0.5	0.5	0.4	0.9	43.3	0.17	<0.02	<0.02	41	0.55	0.064
013K831346	Sediment Pulp	1.55	36.73	1.95	78.4	294	12.6	9.5	288	3.57	0.3	1.0	0.7	0.6	43.3	0.56	0.03	<0.02	55	0.78	0.284
013K831347	Sediment Pulp	2.38	8.28	3.58	72.5	27	16.5	9.8	268	2.12	0.6	3.0	<0.2	1.7	23.4	0.20	0.11	<0.02	34	0.45	0.060
013K831348	Sediment Pulp	4.91	11.64	1.88	72.2	88	9.9	3.8	46	0.54	0.2	10.7	<0.2	0.4	25.1	0.53	0.03	<0.02	21	0.45	0.040
013K831349	Sediment Pulp	7.05	34.24	4.68	166.6	264	16.1	39.9	6422	8.97	1.5	5.7	<0.2	3.1	28.3	0.99	0.04	<0.02	60	0.50	0.280
013K831350	Sediment Pulp	2.10	18.63	1.68	71.1	132	6.8	5.9	191	1.90	<0.1	1.0	<0.2	1.1	20.9	0.41	<0.02	<0.02	32	0.36	0.126
013K831351	Sediment Pulp	0.31	11.85	2.48	61.4	25	18.2	15.5	199	1.68	0.2	0.3	<0.2	0.7	46.9	0.14	<0.02	<0.02	34	0.74	0.089
013K831352	Sediment Pulp	9.39	40.88	80.27	305.1	616	11.8	7.2	421	1.73	36.3	9.9	5.5	1.8	67.2	1.39	0.60	1.05	20	6.01	0.063
013K831353	Sediment Pulp	15.53	19.43	4.36	95.5	297	9.7	8.3	293	2.41	<0.1	13.8	1.2	1.1	32.6	0.91	0.04	<0.02	41	0.65	0.144
013K831354	Sediment Pulp	22.74	13.75	3.70	90.3	151	15.0	10.3	92	1.60	1.9	19.6	0.6	0.8	47.4	0.84	0.04	<0.02	14	1.17	0.073
013K831355	Sediment Pulp	3.17	23.60	5.13	79.5	134	26.9	14.6	539	3.69	2.1	2.7	0.4	3.2	42.1	0.36	0.04	0.03	149	0.72	0.120
013K831356	Sediment Pulp	5.78	35.56	8.72	119.0	233	36.2	11.6	182	1.44	1.8	6.3	1.4	1.0	26.5	0.58	0.07	0.04	46	0.51	0.161
013K831357	Sediment Pulp	15.09	13.78	4.87	110.6	159	10.2	20.1	633	4.24	1.1	11.5	<0.2	2.2	24.7	0.56	0.02	<0.02	47	0.50	0.104
013K831358	Sediment Pulp	19.18	38.35	6.92	139.8	371	27.5	37.4	4873	9.04	19.5	14.1	1.7	4.2	34.5	1.06	0.07	0.03	104	0.52	0.276
013K831359	Sediment Pulp	10.69	75.09	6.64	122.2	547	43.0	8.9	240	1.52	2.5	9.7	0.6	0.6	28.7	1.35	0.04	<0.02	72	0.61	0.206
013K831360	Sediment Pulp	2.39	18.84	4.55	61.1	75	23.5	6.4	78	0.55	0.7	3.5	0.8	0.8	23.4	0.49	0.03	0.13	28	0.51	0.041
013K831361	Sediment Pulp	13.99	51.34	5.45	190.6	632	30.8	43.6	>10000	5.99	3.7	8.3	1.7	1.6	32.6	1.37	0.07	0.04	49	0.82	0.249



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Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831332	Sediment Pulp	19.7	9.3	0.13	36.3	0.015	<20	2.44	0.020	0.02	<0.1	1.7	0.05	0.23	64	<0.1	<0.02	1.9	0.09	<0.1	<0.02
013K831333	Sediment Pulp	29.1	20.6	0.19	64.4	0.029	<20	5.03	0.037	0.03	0.1	6.6	0.12	0.31	188	2.2	<0.02	4.5	0.19	<0.1	0.03
013K831334	Sediment Pulp	13.4	13.6	0.29	50.1	0.032	<20	3.78	0.184	0.04	<0.1	1.9	0.05	0.11	46	<0.1	<0.02	6.1	0.22	<0.1	<0.02
013K831335	Sediment Pulp	17.3	13.0	0.20	62.1	0.025	<20	3.18	0.106	0.04	<0.1	2.1	0.05	0.16	67	<0.1	<0.02	4.3	0.19	<0.1	<0.02
013K831336	Sediment Pulp	23.5	17.4	0.21	110.7	0.030	<20	4.46	0.071	0.04	<0.1	3.8	0.15	0.19	134	1.0	<0.02	5.7	0.23	<0.1	0.04
013K831337	Sediment Pulp	28.6	16.2	0.22	89.1	0.034	<20	1.65	0.038	0.05	<0.1	4.2	0.09	0.28	49	<0.1	<0.02	2.6	0.36	<0.1	0.03
013K831338	Sediment Pulp	22.7	20.1	0.22	72.5	0.027	<20	2.12	0.039	0.03	<0.1	2.5	0.05	0.17	41	<0.1	<0.02	3.3	0.24	<0.1	<0.02
013K831339	Sediment Pulp	27.7	17.1	0.27	90.6	0.034	<20	2.62	0.030	0.05	<0.1	2.3	0.07	0.18	102	<0.1	<0.02	4.2	0.37	<0.1	<0.02
013K831340	Sediment Pulp	32.7	15.4	0.19	335.6	0.029	<20	2.38	0.033	0.04	<0.1	3.4	0.26	0.15	75	<0.1	<0.02	3.4	0.30	0.1	<0.02
013K831341	Sediment Pulp	41.2	29.3	0.41	161.3	0.062	<20	2.48	0.038	0.06	0.1	2.4	0.11	0.13	91	0.8	<0.02	6.8	0.80	<0.1	0.05
013K831342	Sediment Pulp	23.4	23.5	0.35	136.8	0.043	<20	3.25	0.074	0.07	<0.1	3.8	0.12	0.12	111	0.3	<0.02	5.3	0.43	<0.1	0.02
013K831343	Sediment Pulp	13.1	5.4	0.06	40.1	0.013	<20	1.32	0.009	0.01	<0.1	0.8	0.03	0.39	72	<0.1	<0.02	1.3	0.10	<0.1	<0.02
013K831344	Sediment Pulp	14.6	5.2	0.06	47.0	0.013	<20	1.31	0.010	0.01	<0.1	1.1	0.03	0.36	69	<0.1	<0.02	1.2	0.10	<0.1	<0.02
013K831345	Sediment Pulp	15.6	18.1	0.44	82.1	0.051	<20	2.66	0.133	0.07	<0.1	3.0	0.09	0.07	25	<0.1	<0.02	5.4	0.34	<0.1	<0.02
013K831346	Sediment Pulp	28.7	14.1	0.14	89.6	0.028	<20	4.76	0.027	0.03	0.1	3.5	0.07	0.28	197	1.2	<0.02	4.9	0.20	<0.1	<0.02
013K831347	Sediment Pulp	18.5	18.0	0.34	65.9	0.062	<20	1.56	0.059	0.05	0.1	3.0	0.07	0.09	23	<0.1	<0.02	3.0	0.35	<0.1	0.03
013K831348	Sediment Pulp	58.0	10.7	0.04	228.5	0.014	<20	1.79	0.007	0.01	<0.1	1.4	0.03	0.31	60	0.4	<0.02	1.5	0.14	<0.1	<0.02
013K831349	Sediment Pulp	59.8	18.1	0.09	132.3	0.039	<20	4.51	0.008	0.02	0.1	5.8	0.32	0.21	152	1.2	<0.02	4.7	0.19	0.1	0.05
013K831350	Sediment Pulp	19.7	8.9	0.10	56.8	0.019	<20	2.34	0.010	0.02	<0.1	2.2	0.04	0.17	68	0.3	<0.02	2.5	0.15	<0.1	0.03
013K831351	Sediment Pulp	9.4	9.9	0.43	42.1	0.050	<20	2.05	0.156	0.04	<0.1	2.1	0.04	0.04	20	<0.1	<0.02	3.9	0.19	<0.1	<0.02
013K831352	Sediment Pulp	11.2	12.6	0.57	91.3	0.042	<20	0.45	0.027	0.05	0.7	2.6	0.21	1.53	99	0.6	<0.02	2.1	0.52	<0.1	0.03
013K831353	Sediment Pulp	73.1	14.4	0.08	202.9	0.036	<20	3.11	0.008	0.02	0.2	2.5	0.05	0.23	171	1.2	<0.02	4.2	0.20	<0.1	<0.02
013K831354	Sediment Pulp	70.8	13.3	0.12	111.2	0.027	<20	2.51	0.027	0.02	0.7	1.8	0.11	1.54	84	1.7	<0.02	2.9	0.30	<0.1	0.02
013K831355	Sediment Pulp	31.2	31.2	0.65	235.4	0.070	<20	2.25	0.063	0.13	0.2	5.9	0.10	0.10	77	<0.1	<0.02	4.5	0.49	<0.1	0.06
013K831356	Sediment Pulp	40.7	30.0	0.42	150.8	0.068	<20	2.42	0.040	0.06	0.2	2.6	0.13	0.13	90	0.8	<0.02	6.5	0.78	<0.1	0.05
013K831357	Sediment Pulp	57.6	20.1	0.13	110.8	0.049	<20	3.11	0.024	0.03	0.2	3.3	0.15	0.12	86	0.8	<0.02	4.2	0.31	<0.1	0.03
013K831358	Sediment Pulp	92.2	51.9	0.37	186.4	0.063	<20	3.55	0.024	0.09	0.6	5.5	0.31	0.18	115	2.8	<0.02	5.4	0.89	0.1	0.04
013K831359	Sediment Pulp	75.0	27.2	0.12	248.0	0.032	<20	2.80	0.007	0.02	0.5	2.0	0.14	0.24	154	3.3	<0.02	3.9	0.26	<0.1	<0.02
013K831360	Sediment Pulp	34.9	12.3	0.14	140.1	0.027	<20	1.05	0.023	0.02	<0.1	1.1	0.07	0.16	41	1.1	<0.02	2.3	0.34	<0.1	0.04
013K831361	Sediment Pulp	82.3	21.1	0.16	856.1	0.025	<20	3.07	0.010	0.03	0.2	5.6	0.45	0.27	241	3.3	0.02	2.5	0.36	0.2	0.06



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Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831332	Sediment Pulp	0.33	1.0	0.1	<0.05	0.3	16.83	35.0	<0.02	<1	0.1	1.8	5.20	19.85	3.78	0.91	3.41	0.55	3.19	0.61	1.57
013K831333	Sediment Pulp	0.61	1.8	0.2	<0.05	0.6	29.29	49.9	<0.02	<1	0.4	3.0	7.95	31.14	6.19	1.50	5.41	0.93	5.19	1.05	3.04
013K831334	Sediment Pulp	0.54	2.1	0.2	<0.05	0.5	7.63	25.2	<0.02	<1	0.3	4.0	3.76	13.34	2.49	0.73	2.11	0.30	1.57	0.29	0.84
013K831335	Sediment Pulp	0.42	2.0	0.2	<0.05	0.4	9.82	31.6	<0.02	<1	0.2	3.2	4.95	18.27	3.24	0.80	2.54	0.38	2.04	0.40	1.02
013K831336	Sediment Pulp	0.46	2.0	0.2	<0.05	1.2	15.66	46.1	0.02	<1	0.2	2.7	6.60	24.75	4.40	1.30	3.79	0.56	3.04	0.58	1.72
013K831337	Sediment Pulp	0.94	4.3	0.3	<0.05	1.1	20.87	51.8	<0.02	<1	0.4	4.8	7.58	28.66	5.59	1.13	4.45	0.68	3.54	0.72	2.02
013K831338	Sediment Pulp	0.45	2.4	0.2	<0.05	0.3	14.37	36.9	<0.02	<1	<0.1	3.6	6.41	24.48	4.22	1.12	3.26	0.51	2.70	0.47	1.43
013K831339	Sediment Pulp	0.83	3.8	0.3	<0.05	0.4	15.17	48.7	<0.02	<1	0.4	5.9	7.60	27.01	5.01	1.07	3.42	0.58	2.83	0.54	1.48
013K831340	Sediment Pulp	0.35	3.0	0.2	<0.05	0.3	15.16	66.4	<0.02	<1	0.3	4.1	8.97	34.02	5.31	1.18	4.42	0.60	2.98	0.62	1.75
013K831341	Sediment Pulp	1.20	5.8	0.7	<0.05	1.8	24.53	78.3	0.03	4	0.6	12.0	11.18	41.39	7.67	1.06	6.67	0.94	5.11	0.99	2.63
013K831342	Sediment Pulp	0.54	5.0	0.3	<0.05	0.7	14.03	45.0	<0.02	1	0.4	5.7	6.32	24.09	4.44	1.08	4.11	0.54	2.75	0.54	1.38
013K831343	Sediment Pulp	0.29	0.8	0.2	<0.05	0.4	6.47	22.9	<0.02	1	<0.1	0.8	3.22	11.32	1.85	0.53	1.70	0.24	1.25	0.25	0.62
013K831344	Sediment Pulp	0.32	0.7	0.2	<0.05	0.5	7.17	25.8	<0.02	<1	<0.1	0.8	3.60	13.39	2.24	0.56	1.86	0.27	1.38	0.28	0.73
013K831345	Sediment Pulp	0.34	4.3	0.3	<0.05	0.3	8.93	32.7	<0.02	<1	<0.1	5.5	4.15	15.07	2.99	0.70	2.37	0.37	1.73	0.35	0.92
013K831346	Sediment Pulp	0.70	1.7	0.2	<0.05	0.6	25.49	49.5	0.02	<1	0.2	1.9	7.77	29.88	5.84	1.40	5.48	0.83	4.64	0.96	2.72
013K831347	Sediment Pulp	0.65	3.7	0.5	<0.05	1.1	10.88	36.6	<0.02	<1	0.1	7.4	4.99	18.94	3.48	0.70	2.79	0.41	2.04	0.37	1.14
013K831348	Sediment Pulp	0.50	0.9	0.2	<0.05	0.4	42.48	89.7	<0.02	9	0.9	1.0	15.72	57.93	9.71	1.31	8.62	1.30	7.00	1.52	4.00
013K831349	Sediment Pulp	0.68	1.7	0.2	<0.05	0.9	47.16	128.9	0.04	<1	1.1	2.2	16.11	59.33	11.20	1.76	10.47	1.66	9.13	1.80	5.20
013K831350	Sediment Pulp	0.37	1.4	0.2	<0.05	1.6	13.88	35.5	<0.02	<1	<0.1	1.7	4.97	18.47	3.33	0.70	2.90	0.49	2.54	0.54	1.49
013K831351	Sediment Pulp	0.32	2.3	0.2	<0.05	0.7	6.56	20.1	<0.02	<1	<0.1	4.6	2.67	10.10	2.09	0.39	1.66	0.24	1.26	0.26	0.66
013K831352	Sediment Pulp	0.69	3.5	3.8	<0.05	1.4	10.52	17.8	0.50	16	<0.1	4.6	3.01	11.74	2.26	0.51	1.91	0.33	1.73	0.37	0.99
013K831353	Sediment Pulp	1.24	1.3	0.3	<0.05	0.8	51.37	127.0	0.03	2	1.0	1.7	18.29	70.06	12.30	1.67	11.85	1.75	9.28	1.85	5.24
013K831354	Sediment Pulp	0.74	1.5	0.2	<0.05	0.8	50.23	110.5	<0.02	5	0.9	6.9	17.62	70.06	12.27	1.41	10.18	1.61	8.20	1.74	4.60
013K831355	Sediment Pulp	1.13	8.2	0.5	<0.05	2.6	21.46	64.1	0.03	2	0.5	10.9	9.20	35.82	6.65	1.43	5.97	0.84	4.50	0.81	2.31
013K831356	Sediment Pulp	1.17	6.2	0.6	<0.05	2.0	23.63	75.4	0.03	3	0.6	12.6	10.53	39.04	7.24	1.16	6.31	0.93	4.72	0.95	2.52
013K831357	Sediment Pulp	1.19	1.8	0.2	<0.05	0.9	38.42	110.8	0.03	10	1.2	3.1	15.33	60.57	10.85	1.55	9.38	1.40	7.34	1.55	3.95
013K831358	Sediment Pulp	0.97	7.2	0.5	<0.05	1.0	63.78	215.3	0.04	5	1.6	10.3	26.58	102.50	18.23	2.44	15.90	2.33	11.76	2.43	7.01
013K831359	Sediment Pulp	0.92	1.8	0.2	<0.05	0.6	39.18	123.8	0.03	9	1.3	2.9	19.63	73.04	12.07	1.93	10.57	1.52	7.08	1.44	3.79
013K831360	Sediment Pulp	0.63	1.7	0.4	<0.05	1.8	15.29	56.9	0.02	2	0.2	4.3	8.83	30.35	4.93	0.80	4.51	0.63	3.08	0.59	1.60
013K831361	Sediment Pulp	0.66	2.9	0.3	<0.05	2.0	52.59	137.4	0.03	3	1.2	3.2	21.98	74.86	13.70	3.04	11.78	1.93	10.29	2.10	5.20



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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831332	Sediment Pulp	0.24	1.41	0.23	<10	<2
013K831333	Sediment Pulp	0.47	2.80	0.46	<10	<2
013K831334	Sediment Pulp	0.11	0.63	0.08	<10	<2
013K831335	Sediment Pulp	0.14	0.86	0.14	<10	<2
013K831336	Sediment Pulp	0.22	1.36	0.19	<10	<2
013K831337	Sediment Pulp	0.29	1.79	0.28	<10	<2
013K831338	Sediment Pulp	0.21	1.28	0.20	<10	<2
013K831339	Sediment Pulp	0.22	1.31	0.20	<10	<2
013K831340	Sediment Pulp	0.23	1.33	0.22	<10	<2
013K831341	Sediment Pulp	0.35	1.90	0.28	<10	<2
013K831342	Sediment Pulp	0.21	1.32	0.17	<10	<2
013K831343	Sediment Pulp	0.09	0.46	0.06	<10	<2
013K831344	Sediment Pulp	0.10	0.52	0.07	<10	<2
013K831345	Sediment Pulp	0.12	0.78	0.11	<10	<2
013K831346	Sediment Pulp	0.36	2.24	0.33	<10	<2
013K831347	Sediment Pulp	0.16	0.89	0.16	<10	<2
013K831348	Sediment Pulp	0.57	3.34	0.52	<10	<2
013K831349	Sediment Pulp	0.80	4.51	0.65	<10	<2
013K831350	Sediment Pulp	0.20	1.27	0.17	<10	<2
013K831351	Sediment Pulp	0.09	0.47	0.07	<10	<2
013K831352	Sediment Pulp	0.15	0.91	0.15	<10	<2
013K831353	Sediment Pulp	0.67	4.19	0.56	<10	<2
013K831354	Sediment Pulp	0.66	3.96	0.55	<10	<2
013K831355	Sediment Pulp	0.30	1.92	0.27	<10	3
013K831356	Sediment Pulp	0.31	2.01	0.25	<10	<2
013K831357	Sediment Pulp	0.52	3.26	0.46	<10	<2
013K831358	Sediment Pulp	0.98	5.81	0.92	<10	<2
013K831359	Sediment Pulp	0.50	3.23	0.48	<10	<2
013K831360	Sediment Pulp	0.20	1.11	0.16	<10	<2
013K831361	Sediment Pulp	0.76	4.30	0.57	<10	<2



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831362	Sediment Pulp	0.80	32.52	5.94	66.3	70	28.2	13.6	365	2.51	1.3	1.5	1.1	3.2	26.9	0.24	0.05	0.04	59	0.50	0.095
013K831363	Sediment Pulp	0.82	32.72	6.13	64.1	72	28.3	13.6	383	2.53	1.3	1.5	0.9	2.9	25.5	0.20	0.04	0.03	60	0.50	0.092
013K831364	Sediment Pulp	12.15	47.89	1.95	98.1	245	14.0	8.6	545	2.18	0.8	18.0	1.1	0.5	20.5	0.68	0.05	<0.02	65	0.52	0.101
013K831365	Sediment Pulp	2.16	55.71	5.81	71.7	134	21.3	8.9	140	1.28	2.5	8.1	1.2	1.7	23.0	0.55	0.23	0.04	46	0.68	0.056
013K831366	Sediment Pulp	1.68	61.20	6.04	111.1	218	25.1	8.8	135	1.32	1.6	36.2	1.1	1.1	36.5	0.77	0.16	0.03	42	0.94	0.072
013K831367	Sediment Pulp	3.63	24.16	5.83	78.6	231	15.4	5.6	162	0.97	0.6	7.7	0.5	0.4	48.6	0.42	0.04	0.04	22	1.06	0.099
013K831368	Sediment Pulp	14.49	53.67	5.61	203.1	625	32.4	43.8	>10000	5.89	3.6	8.4	1.2	1.5	32.9	1.33	0.07	<0.02	47	0.79	0.250
013K831369	Sediment Pulp	1.81	56.46	5.02	60.6	372	52.7	7.2	632	1.26	2.2	3.0	1.1	0.7	66.7	0.69	0.12	<0.02	36	0.61	0.182
013K831370	Sediment Pulp	2.43	62.63	3.22	96.6	394	16.5	7.1	497	1.40	2.3	40.1	1.9	0.4	57.6	0.43	0.16	<0.02	61	0.99	0.154
013K831371	Sediment Pulp	0.89	31.45	24.95	119.4	2529	43.4	27.1	1180	3.00	26.5	3.8	2.7	8.3	28.1	0.47	0.64	3.33	46	0.59	0.094
013K831372	Sediment Pulp	4.13	54.98	8.13	108.2	246	26.1	13.2	623	3.10	4.9	16.4	0.4	3.6	31.7	0.58	0.05	0.02	48	0.49	0.253
013K831373	Sediment Pulp	1.54	17.84	3.51	40.1	177	15.2	2.2	57	0.20	0.6	2.0	0.2	0.4	25.5	0.25	0.06	<0.02	8	0.37	0.058
013K831374	Sediment Pulp	5.00	52.44	1.79	40.6	151	13.3	2.2	22	0.20	2.7	4.4	0.4	0.7	19.5	0.42	0.23	<0.02	6	0.37	0.017
013K831375	Sediment Pulp	5.43	28.91	4.43	64.1	322	10.0	5.8	155	1.40	1.2	4.8	0.5	1.3	19.2	0.41	0.12	<0.02	29	0.33	0.131
013K831376	Sediment Pulp	17.21	83.90	8.30	170.8	681	24.0	17.3	816	5.31	2.9	15.8	0.8	3.6	36.8	0.72	0.15	<0.02	49	0.74	0.295
013K831377	Sediment Pulp	6.46	34.34	7.14	100.6	246	11.6	14.9	417	2.60	1.5	7.8	0.6	2.1	24.2	0.35	0.04	<0.02	32	0.32	0.123
013K831378	Sediment Pulp	9.18	27.09	8.01	105.3	268	11.2	22.9	1461	10.08	15.4	23.4	<0.2	4.9	23.8	0.44	0.08	<0.02	77	0.24	0.206
013K831379	Sediment Pulp	1.58	23.25	3.49	86.8	259	11.7	8.5	309	2.69	1.0	1.7	<0.2	1.3	22.8	0.21	<0.02	<0.02	41	0.22	0.154
013K831380	Sediment Pulp	0.85	19.29	3.72	52.5	150	14.5	4.0	130	0.79	1.1	7.9	0.3	0.5	21.0	0.21	0.08	<0.02	20	0.29	0.056
013K831381	Sediment Pulp	1.10	32.31	3.12	29.6	126	7.4	2.4	60	0.36	0.3	1.3	0.3	0.2	45.9	0.12	0.06	<0.02	9	0.24	0.041
013K831382	Sediment Pulp	0.93	22.97	2.05	80.3	96	16.4	8.3	220	1.75	<0.1	0.8	0.6	0.5	15.5	0.16	<0.02	<0.02	28	0.25	0.052
013K831383	Sediment Pulp	0.97	31.99	2.97	28.0	119	6.9	2.5	58	0.35	0.3	1.3	0.5	0.2	45.4	0.12	0.06	<0.02	9	0.24	0.040
013K831384	Sediment Pulp	4.24	16.80	4.66	56.6	251	7.7	6.1	134	2.39	0.5	2.3	<0.2	0.8	45.1	0.25	0.03	<0.02	42	0.26	0.166
013K831385	Sediment Pulp	1.29	32.61	6.61	56.4	385	10.0	3.7	121	1.41	0.4	1.9	<0.2	0.5	78.5	0.24	<0.02	<0.02	47	0.45	0.192
013K831386	Sediment Pulp	1.11	31.18	6.11	74.0	357	9.4	3.3	111	1.15	0.3	1.9	0.6	0.5	81.8	0.21	0.02	<0.02	39	0.42	0.178
013K831387	Sediment Pulp	1.61	16.70	3.03	55.7	160	6.5	2.7	39	0.54	0.3	1.3	0.4	0.1	35.4	0.29	0.03	<0.02	22	0.34	0.065
013K831388	Sediment Pulp	14.41	31.52	6.23	95.3	254	9.8	31.4	1005	2.87	0.7	5.4	<0.2	1.4	48.2	0.40	0.09	<0.02	73	0.36	0.154
013K831389	Sediment Pulp	0.61	21.06	2.94	24.9	168	3.0	1.2	27	0.20	0.2	0.9	0.4	0.1	20.0	0.17	<0.02	<0.02	12	0.13	0.034
013K831390	Sediment Pulp	1.36	30.16	3.36	29.5	404	4.9	1.5	35	0.51	0.4	1.8	<0.2	0.1	61.0	0.20	0.03	<0.02	25	0.35	0.123
013K831391	Sediment Pulp	11.20	27.71	4.11	67.2	302	6.6	6.4	156	1.45	0.8	4.6	0.6	0.7	45.3	0.40	0.10	<0.02	67	0.50	0.160



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831362	Sediment Pulp	31.7	31.4	0.68	185.3	0.098	<20	1.88	0.055	0.11	<0.1	6.2	0.11	0.14	15	0.3	<0.02	5.9	0.64	<0.1	0.08
013K831363	Sediment Pulp	31.1	31.1	0.68	191.5	0.092	<20	1.92	0.055	0.11	<0.1	6.9	0.11	0.13	15	0.2	<0.02	6.0	0.61	<0.1	0.06
013K831364	Sediment Pulp	30.4	21.4	0.16	127.6	0.017	<20	1.65	0.016	0.02	0.2	2.5	0.13	0.31	75	1.3	<0.02	2.0	0.29	<0.1	<0.02
013K831365	Sediment Pulp	48.0	27.2	0.45	185.6	0.052	<20	0.99	0.017	0.08	0.1	7.2	0.10	0.31	56	1.3	<0.02	2.3	0.73	<0.1	0.06
013K831366	Sediment Pulp	72.3	32.4	0.37	187.3	0.038	<20	1.64	0.022	0.07	0.2	5.2	0.13	0.50	109	3.0	<0.02	3.4	0.88	<0.1	0.03
013K831367	Sediment Pulp	30.1	16.5	0.13	173.5	0.022	<20	2.30	0.009	0.02	<0.1	1.7	0.04	0.38	108	1.0	<0.02	2.5	0.26	<0.1	<0.02
013K831368	Sediment Pulp	82.8	20.9	0.16	829.9	0.024	<20	3.01	0.010	0.03	0.2	5.5	0.45	0.26	238	3.3	<0.02	2.9	0.33	0.1	0.07
013K831369	Sediment Pulp	44.8	131.4	0.51	187.6	0.022	<20	2.64	0.008	0.05	0.2	2.6	0.07	0.23	180	1.2	<0.02	1.9	1.37	<0.1	0.06
013K831370	Sediment Pulp	48.8	51.6	0.11	119.0	0.026	<20	3.12	0.009	0.02	1.8	2.4	0.06	0.34	198	4.3	<0.02	2.3	0.38	<0.1	0.03
013K831371	Sediment Pulp	43.3	47.6	0.77	159.7	0.100	<20	1.60	0.029	0.25	0.4	6.2	0.26	0.15	255	0.6	0.04	5.5	1.37	<0.1	0.12
013K831372	Sediment Pulp	93.9	33.3	0.37	85.2	0.068	<20	3.04	0.031	0.08	0.3	5.2	0.18	0.12	94	1.0	<0.02	4.2	0.76	0.1	<0.02
013K831373	Sediment Pulp	45.0	10.6	0.05	135.7	0.016	<20	1.36	0.004	0.01	<0.1	1.1	<0.02	0.27	73	0.6	<0.02	1.4	0.28	<0.1	<0.02
013K831374	Sediment Pulp	73.7	12.8	0.06	89.4	0.010	<20	0.45	0.006	0.02	<0.1	3.8	0.05	0.45	64	1.1	<0.02	0.7	0.43	<0.1	<0.02
013K831375	Sediment Pulp	58.9	17.2	0.06	85.3	0.020	<20	1.63	0.006	0.01	<0.1	2.1	0.05	0.18	91	0.9	<0.02	1.7	0.19	<0.1	0.03
013K831376	Sediment Pulp	177.1	36.4	0.18	248.8	0.039	<20	3.72	0.009	0.04	0.4	6.6	0.34	0.26	159	2.1	<0.02	3.2	0.40	0.2	0.07
013K831377	Sediment Pulp	76.4	18.4	0.16	174.1	0.045	<20	1.74	0.006	0.03	0.3	2.4	0.21	0.11	94	0.4	<0.02	2.8	0.45	<0.1	<0.02
013K831378	Sediment Pulp	84.1	31.6	0.13	148.3	0.082	<20	2.97	0.005	0.03	0.2	4.1	0.14	0.10	113	1.0	<0.02	5.3	0.50	<0.1	0.04
013K831379	Sediment Pulp	35.9	18.3	0.36	253.8	0.054	<20	1.19	0.006	0.08	<0.1	2.0	0.12	0.11	76	0.5	<0.02	3.5	1.35	<0.1	0.03
013K831380	Sediment Pulp	30.5	12.9	0.21	217.4	0.034	<20	0.84	0.005	0.05	<0.1	1.3	0.05	0.23	74	0.8	<0.02	2.5	0.83	<0.1	0.05
013K831381	Sediment Pulp	17.2	7.1	0.11	124.9	0.016	<20	0.51	0.008	0.02	<0.1	0.8	0.07	0.18	103	<0.1	<0.02	1.2	0.46	<0.1	<0.02
013K831382	Sediment Pulp	21.9	14.7	0.45	168.7	0.021	<20	0.88	0.003	0.02	<0.1	1.3	0.06	0.18	107	<0.1	<0.02	2.6	0.26	<0.1	<0.02
013K831383	Sediment Pulp	16.3	7.0	0.11	120.1	0.015	<20	0.49	0.007	0.02	<0.1	0.7	0.06	0.18	103	<0.1	<0.02	1.2	0.44	<0.1	<0.02
013K831384	Sediment Pulp	38.7	13.8	0.10	317.6	0.041	<20	1.20	0.011	0.03	0.4	1.6	0.11	0.18	93	0.8	<0.02	4.0	0.48	<0.1	0.02
013K831385	Sediment Pulp	48.0	16.8	0.15	318.5	0.042	<20	1.55	0.006	0.03	0.1	1.6	0.07	0.22	143	0.6	<0.02	3.8	0.37	<0.1	0.06
013K831386	Sediment Pulp	45.9	15.9	0.15	285.9	0.039	<20	1.39	0.005	0.03	0.1	1.4	0.07	0.20	143	0.3	<0.02	3.6	0.36	<0.1	0.05
013K831387	Sediment Pulp	30.2	8.6	0.08	54.7	0.021	<20	0.71	0.007	0.03	0.2	0.7	0.09	0.53	57	0.2	<0.02	1.8	0.30	<0.1	<0.02
013K831388	Sediment Pulp	60.3	17.9	0.18	142.2	0.058	<20	1.47	0.010	0.06	1.0	1.7	0.57	0.19	98	1.1	<0.02	3.8	0.78	0.1	0.03
013K831389	Sediment Pulp	13.0	5.6	0.07	49.0	0.027	<20	0.43	0.006	0.04	<0.1	0.5	0.04	0.10	78	<0.1	<0.02	1.7	0.40	<0.1	0.02
013K831390	Sediment Pulp	35.6	10.2	0.06	80.8	0.028	<20	0.77	0.006	0.03	0.2	0.7	0.06	0.16	148	0.3	<0.02	2.7	0.47	<0.1	<0.02
013K831391	Sediment Pulp	56.7	14.6	0.09	79.5	0.039	<20	1.25	0.009	0.04	1.0	1.4	0.21	0.16	103	0.5	<0.02	2.9	0.38	<0.1	0.03



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831362	Sediment Pulp	1.25	10.7	0.6	<0.05	2.9	18.17	64.5	0.03	<1	0.4	11.7	8.14	28.52	5.32	1.11	4.62	0.73	3.99	0.73
013K831363	Sediment Pulp	1.24	10.3	0.6	<0.05	2.9	18.06	61.6	0.03	2	0.3	12.2	8.11	27.92	5.19	1.11	4.51	0.70	3.40	0.73
013K831364	Sediment Pulp	0.39	2.2	0.2	<0.05	0.5	19.25	40.6	<0.02	5	0.4	3.7	8.06	30.58	5.28	1.36	4.58	0.65	3.47	0.68
013K831365	Sediment Pulp	0.97	7.5	0.4	<0.05	3.4	31.65	45.3	<0.02	5	0.3	7.1	11.71	42.98	7.66	1.67	5.95	0.99	5.34	0.99
013K831366	Sediment Pulp	1.07	7.5	0.4	<0.05	2.6	43.47	71.5	<0.02	5	0.9	7.6	18.32	65.85	11.03	2.52	9.31	1.37	7.26	1.45
013K831367	Sediment Pulp	0.91	1.8	0.3	<0.05	0.9	16.56	55.3	0.02	<1	0.6	2.9	7.73	27.60	5.05	1.16	3.87	0.66	3.46	0.66
013K831368	Sediment Pulp	0.72	2.8	0.3	<0.05	2.4	54.06	132.5	0.03	4	1.6	3.7	21.25	73.60	13.70	2.81	11.32	1.99	10.54	2.06
013K831369	Sediment Pulp	0.74	4.0	0.1	<0.05	2.3	23.42	58.1	<0.02	3	1.4	5.0	11.03	39.30	7.00	1.50	5.32	0.90	4.66	0.85
013K831370	Sediment Pulp	1.22	1.5	0.2	<0.05	1.4	27.91	83.9	<0.02	1	1.2	1.9	13.16	45.23	7.89	1.37	6.63	1.07	5.24	1.10
013K831371	Sediment Pulp	2.07	24.4	1.1	<0.05	5.3	18.26	75.2	0.04	1	0.5	20.4	10.83	34.86	6.01	1.00	4.52	0.72	3.65	0.71
013K831372	Sediment Pulp	1.90	6.7	0.4	<0.05	2.4	43.50	188.6	0.02	<1	2.9	8.1	23.10	80.67	13.52	2.24	11.34	1.69	9.09	1.60
013K831373	Sediment Pulp	0.89	1.3	0.3	<0.05	1.1	20.43	79.4	<0.02	<1	0.6	1.6	11.09	38.36	7.07	1.21	5.28	0.84	4.47	0.83
013K831374	Sediment Pulp	0.29	1.6	0.1	<0.05	1.0	47.84	34.3	<0.02	4	0.4	1.4	18.96	73.41	12.23	2.09	10.29	1.51	7.89	1.64
013K831375	Sediment Pulp	1.00	1.4	0.2	<0.05	2.2	32.55	102.6	<0.02	1	1.6	1.2	16.42	56.46	10.26	1.55	8.36	1.31	6.35	1.34
013K831376	Sediment Pulp	2.10	4.3	0.4	<0.05	3.1	91.34	330.1	0.03	5	6.1	3.8	49.94	168.02	29.46	4.24	21.68	3.60	18.30	3.72
013K831377	Sediment Pulp	1.86	3.7	0.2	<0.05	2.3	39.07	141.9	<0.02	1	2.5	3.0	18.66	66.90	11.79	1.80	9.76	1.46	7.66	1.50
013K831378	Sediment Pulp	2.84	3.0	0.5	<0.05	3.0	56.08	155.3	0.04	3	5.2	2.6	23.27	78.09	14.16	2.09	11.70	1.99	10.87	2.27
013K831379	Sediment Pulp	1.44	6.6	0.3	<0.05	2.4	19.23	65.9	<0.02	1	0.5	4.8	8.94	31.96	5.50	1.01	4.51	0.73	3.81	0.84
013K831380	Sediment Pulp	1.09	4.2	0.3	<0.05	2.8	14.96	56.5	<0.02	<1	0.5	4.1	7.67	26.47	4.35	0.91	4.04	0.58	3.06	0.57
013K831381	Sediment Pulp	0.66	2.5	0.3	<0.05	1.0	7.19	31.7	<0.02	<1	<0.1	1.8	4.08	14.81	2.28	0.40	1.81	0.30	1.66	0.31
013K831382	Sediment Pulp	0.53	1.4	0.2	<0.05	1.1	10.97	41.7	<0.02	1	<0.1	2.8	5.68	19.92	3.09	0.54	2.80	0.44	2.38	0.47
013K831383	Sediment Pulp	0.63	2.4	0.2	<0.05	1.0	6.90	30.7	<0.02	2	<0.1	1.6	3.99	13.67	2.38	0.40	1.86	0.30	1.35	0.29
013K831384	Sediment Pulp	1.86	3.6	0.4	<0.05	2.1	23.06	69.0	0.02	1	1.1	2.3	10.02	34.89	6.72	1.05	5.41	0.86	4.68	0.91
013K831385	Sediment Pulp	2.35	2.5	0.3	<0.05	4.2	25.26	91.0	<0.02	1	1.0	2.0	11.84	41.37	7.50	1.30	6.36	1.01	5.68	1.00
013K831386	Sediment Pulp	2.20	2.5	0.3	<0.05	3.8	23.14	85.0	<0.02	<1	1.1	2.0	11.06	39.63	7.00	1.25	5.92	0.96	5.45	0.95
013K831387	Sediment Pulp	0.99	2.4	0.2	<0.05	1.1	16.48	54.8	<0.02	3	0.3	1.8	7.50	25.74	4.58	0.71	4.27	0.58	3.42	0.68
013K831388	Sediment Pulp	2.31	5.0	0.4	<0.05	3.3	30.09	126.6	<0.02	6	1.4	4.8	15.38	53.80	9.21	1.40	7.13	1.14	6.52	1.33
013K831389	Sediment Pulp	1.13	2.7	0.3	<0.05	1.3	5.71	25.0	<0.02	<1	0.2	1.7	3.07	9.79	1.83	0.27	1.43	0.20	1.18	0.23
013K831390	Sediment Pulp	1.48	2.4	0.2	<0.05	1.5	14.70	65.8	<0.02	2	0.5	1.3	8.31	26.63	4.37	0.75	3.60	0.56	3.07	0.59
013K831391	Sediment Pulp	2.37	2.9	0.3	<0.05	3.9	32.45	109.0	0.02	5	0.9	2.1	14.79	52.72	9.01	1.32	7.65	1.19	6.83	1.33



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K831362	Sediment Pulp		0.26	1.53	0.25	<10	<2
013K831363	Sediment Pulp		0.23	1.49	0.23	<10	<2
013K831364	Sediment Pulp		0.27	1.50	0.24	<10	<2
013K831365	Sediment Pulp		0.36	2.51	0.33	<10	<2
013K831366	Sediment Pulp		0.56	3.16	0.49	<10	<2
013K831367	Sediment Pulp		0.24	1.36	0.18	<10	<2
013K831368	Sediment Pulp		0.75	4.26	0.57	<10	2
013K831369	Sediment Pulp		0.31	1.87	0.30	<10	3
013K831370	Sediment Pulp		0.38	2.15	0.33	12	9
013K831371	Sediment Pulp		0.28	1.67	0.24	<10	<2
013K831372	Sediment Pulp		0.63	3.49	0.48	<10	<2
013K831373	Sediment Pulp		0.24	1.35	0.17	<10	<2
013K831374	Sediment Pulp		0.64	3.62	0.61	<10	<2
013K831375	Sediment Pulp		0.52	2.55	0.37	<10	<2
013K831376	Sediment Pulp		1.45	8.19	1.17	<10	<2
013K831377	Sediment Pulp		0.64	3.15	0.45	<10	<2
013K831378	Sediment Pulp		0.98	5.29	0.84	<10	<2
013K831379	Sediment Pulp		0.33	1.59	0.26	<10	<2
013K831380	Sediment Pulp		0.22	1.23	0.18	<10	<2
013K831381	Sediment Pulp		0.10	0.62	0.08	<10	<2
013K831382	Sediment Pulp		0.18	0.98	0.13	<10	<2
013K831383	Sediment Pulp		0.10	0.59	0.09	<10	<2
013K831384	Sediment Pulp		0.41	2.04	0.30	<10	<2
013K831385	Sediment Pulp		0.46	2.11	0.27	<10	<2
013K831386	Sediment Pulp		0.36	1.86	0.29	<10	<2
013K831387	Sediment Pulp		0.29	1.36	0.20	<10	<2
013K831388	Sediment Pulp		0.53	2.76	0.37	<10	<2
013K831389	Sediment Pulp		0.09	0.44	0.08	<10	<2
013K831390	Sediment Pulp		0.24	1.16	0.16	<10	<2
013K831391	Sediment Pulp		0.52	2.92	0.40	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831392	Sediment Pulp	1.75	35.20	4.70	53.4	259	7.3	16.9	379	3.42	0.5	2.5	0.8	2.2	36.3	0.42	<0.02	0.05	57	0.30	0.156
013K831393	Sediment Pulp	1.02	18.19	4.51	36.7	149	7.7	5.0	166	1.19	0.5	1.5	<0.2	1.0	41.2	0.16	<0.02	0.02	31	0.28	0.119
013K831394	Sediment Pulp	1.54	38.92	2.82	81.0	87	8.2	4.1	83	0.73	0.2	1.6	0.5	0.7	24.2	0.34	0.02	<0.02	17	0.31	0.045
013K831395	Sediment Pulp	0.96	36.43	3.06	49.3	184	9.8	5.2	142	1.15	0.3	1.2	<0.2	0.6	17.6	0.34	<0.02	<0.02	27	0.27	0.087
013K831396	Sediment Pulp	7.34	37.99	3.70	112.2	161	14.9	19.6	528	3.59	0.6	6.6	1.3	1.8	24.6	0.45	0.04	0.04	46	0.30	0.108
013K831397	Sediment Pulp	0.89	31.30	1.45	52.6	114	12.8	7.6	172	1.49	0.3	0.6	0.4	0.5	17.1	0.14	0.02	<0.02	23	0.27	0.073
013K831398	Sediment Pulp	2.80	31.63	5.17	67.0	341	9.3	6.1	227	2.15	0.4	4.8	0.2	0.6	25.7	0.30	0.04	0.04	36	0.30	0.203
013K831399	Sediment Pulp	8.51	37.26	76.16	277.7	615	11.5	7.1	413	1.76	36.7	8.1	2.0	1.1	66.9	1.39	0.61	0.98	20	6.07	0.068
013K831400	Sediment Pulp	5.19	88.24	7.96	135.9	386	18.6	26.4	1003	7.80	1.8	12.2	<0.2	3.7	26.8	0.65	0.09	0.05	61	0.36	0.253
013K831401	Sediment Pulp	1.64	19.72	2.45	51.4	120	14.3	4.5	40	0.30	1.0	4.5	0.4	0.3	24.8	0.28	0.21	<0.02	10	0.44	0.044
013K831402	Sediment Pulp	7.07	60.40	8.65	137.5	301	15.1	25.8	903	4.27	0.9	9.1	0.3	2.8	21.6	0.60	0.04	0.03	46	0.32	0.131
013K831403	Sediment Pulp	6.45	48.98	7.23	131.4	261	13.3	20.4	785	3.74	0.8	7.5	0.5	2.3	19.1	0.54	0.04	<0.02	39	0.29	0.119
013K831404	Sediment Pulp	0.76	19.25	4.25	37.5	215	8.4	3.0	97	0.55	0.3	3.2	<0.2	0.2	26.3	0.25	0.07	<0.02	15	0.43	0.103
013K831405	Sediment Pulp	1.61	18.44	2.31	49.2	124	13.8	4.3	39	0.32	0.9	4.0	<0.2	0.2	25.7	0.27	0.24	<0.02	10	0.46	0.038
013K831406	Sediment Pulp	1.97	18.38	2.51	51.1	37	9.7	4.3	110	0.52	7.5	2.1	<0.2	0.4	17.3	0.18	0.11	<0.02	23	0.54	0.043
013K831407	Sediment Pulp	7.67	42.56	5.50	89.0	546	13.3	9.7	843	4.79	4.1	8.5	0.8	2.2	41.4	0.53	0.09	0.03	46	0.69	0.338
013K831408	Sediment Pulp	7.59	61.03	5.06	177.3	476	47.3	33.9	5010	5.36	4.5	12.0	0.5	2.8	32.3	1.07	0.11	0.04	47	0.47	0.343
013K831409	Sediment Pulp	1.49	46.62	4.81	48.5	56	27.2	9.1	195	1.69	5.0	6.8	0.4	2.8	26.7	0.21	0.08	0.03	44	0.54	0.090
013K831410	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831411	Sediment Pulp	3.63	40.17	3.92	80.0	385	21.2	6.4	206	1.32	2.4	18.0	<0.2	0.5	30.7	0.45	0.10	0.03	37	0.66	0.130
013K831412	Sediment Pulp	6.15	36.23	3.04	113.7	380	18.8	12.2	883	3.00	4.4	9.6	0.7	0.9	26.0	0.72	0.08	<0.02	34	0.44	0.233
013K831413	Sediment Pulp	1.10	25.85	4.32	80.0	66	15.7	8.3	224	1.10	1.0	5.4	1.3	0.7	24.7	0.31	0.06	<0.02	24	0.42	0.066
013K831414	Sediment Pulp	1.50	76.56	1.71	64.0	200	14.2	5.6	74	0.46	<0.1	0.7	<0.2	<0.1	22.0	0.46	0.03	<0.02	18	0.64	0.064
013K831415	Sediment Pulp	7.37	116.36	5.70	148.7	547	22.3	27.6	1503	3.75	4.1	8.9	0.4	1.1	37.1	0.86	0.06	0.04	57	0.57	0.240
013K831416	Sediment Pulp	3.49	50.48	5.71	83.5	700	12.5	5.7	458	1.63	0.5	10.7	<0.2	0.7	31.4	0.47	0.20	0.03	26	0.56	0.225
013K831417	Sediment Pulp	10.93	58.78	7.44	103.0	369	12.5	14.2	313	4.17	0.4	1.5	<0.2	1.5	52.1	0.38	0.02	0.02	49	0.69	0.209
013K831418	Sediment Pulp	1.85	67.91	2.87	90.6	167	22.4	9.2	153	1.32	0.2	2.0	<0.2	0.7	35.7	0.35	0.03	<0.02	23	0.52	0.066
013K831419	Sediment Pulp	0.98	28.49	5.30	62.0	102	12.9	7.7	226	1.31	<0.1	1.3	<0.2	0.6	24.8	0.24	0.02	<0.02	28	0.35	0.071
013K831420	Sediment Pulp	0.88	32.43	22.41	126.2	2545	44.6	27.8	1188	3.01	25.5	3.4	2.4	6.8	26.5	0.55	0.65	3.03	47	0.59	0.091
013K831421	Sediment Pulp	12.95	29.24	8.47	101.1	81	14.8	12.3	145	1.79	1.5	4.2	1.2	2.0	31.5	0.31	0.07	0.04	33	0.52	0.072



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K831392	Sediment Pulp	52.4	19.4	0.11	131.1	0.051	<20	1.71	0.006	0.02	0.1	2.4	0.26	0.11	87	0.5	<0.02	3.8	0.51	0.1	0.05
013K831393	Sediment Pulp	31.5	11.8	0.20	198.1	0.046	<20	0.98	0.007	0.03	<0.1	1.4	0.09	0.07	65	<0.1	<0.02	3.4	0.57	<0.1	0.05
013K831394	Sediment Pulp	48.3	11.0	0.09	117.7	0.027	<20	0.98	0.011	0.02	0.3	1.3	0.18	0.16	62	0.3	<0.02	1.6	0.24	<0.1	0.04
013K831395	Sediment Pulp	39.5	15.9	0.15	90.7	0.032	<20	1.25	0.003	0.02	<0.1	1.3	0.10	0.13	109	0.3	<0.02	2.3	0.29	<0.1	0.03
013K831396	Sediment Pulp	61.4	21.8	0.28	153.2	0.040	<20	2.21	0.006	0.03	0.2	2.7	0.35	0.10	77	0.2	<0.02	2.9	0.27	0.1	0.04
013K831397	Sediment Pulp	26.8	14.9	0.35	107.8	0.031	<20	1.16	0.005	0.02	<0.1	1.5	0.08	0.08	64	0.1	<0.02	2.5	0.17	<0.1	0.03
013K831398	Sediment Pulp	59.6	20.8	0.12	183.0	0.044	<20	1.64	0.006	0.03	0.2	2.0	0.09	0.16	130	0.6	<0.02	3.5	0.61	<0.1	0.04
013K831399	Sediment Pulp	10.2	11.6	0.56	91.4	0.034	<20	0.41	0.023	0.05	0.5	2.5	0.20	1.47	95	0.8	<0.02	2.0	0.48	<0.1	0.02
013K831400	Sediment Pulp	114.3	37.2	0.19	247.1	0.060	<20	3.74	0.009	0.05	0.2	4.8	0.34	0.18	112	1.7	0.03	4.3	0.62	0.1	0.02
013K831401	Sediment Pulp	42.4	13.3	0.06	92.0	0.015	<20	0.58	0.007	<0.01	<0.1	1.3	0.04	0.38	71	0.4	<0.02	0.9	0.35	<0.1	<0.02
013K831402	Sediment Pulp	90.6	22.2	0.20	179.6	0.047	<20	2.58	0.009	0.04	0.3	3.3	0.42	0.11	96	0.4	0.02	3.0	0.34	0.1	0.03
013K831403	Sediment Pulp	75.2	19.4	0.18	152.4	0.044	<20	2.26	0.007	0.04	0.2	2.9	0.39	0.09	92	0.4	<0.02	2.7	0.33	0.1	<0.02
013K831404	Sediment Pulp	40.1	9.0	0.06	225.9	0.029	<20	1.14	0.007	0.02	<0.1	0.9	0.05	0.17	108	0.2	<0.02	2.6	0.48	<0.1	0.02
013K831405	Sediment Pulp	42.9	13.2	0.05	92.4	0.014	<20	0.61	0.006	0.01	<0.1	1.6	0.04	0.40	67	0.4	<0.02	1.0	0.36	<0.1	<0.02
013K831406	Sediment Pulp	17.0	17.5	0.14	127.0	0.018	22	0.51	0.013	0.02	0.3	1.8	0.04	0.46	39	1.1	<0.02	2.1	0.57	<0.1	<0.02
013K831407	Sediment Pulp	112.1	31.6	0.19	128.5	0.043	<20	3.17	0.021	0.04	0.2	4.5	0.09	0.17	178	1.7	<0.02	3.9	0.92	0.2	0.02
013K831408	Sediment Pulp	124.5	35.8	0.15	301.6	0.046	<20	4.22	0.015	0.03	0.2	6.6	0.44	0.25	190	2.5	<0.02	3.9	0.50	0.1	0.11
013K831409	Sediment Pulp	42.0	37.1	0.56	99.3	0.078	<20	1.18	0.046	0.09	0.2	4.4	0.11	0.06	25	0.2	<0.02	3.7	0.78	<0.1	0.07
013K831410	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831411	Sediment Pulp	58.9	44.4	0.28	126.2	0.029	<20	2.16	0.013	0.04	0.2	2.8	0.08	0.28	121	4.0	<0.02	2.4	0.55	<0.1	0.04
013K831412	Sediment Pulp	73.7	26.1	0.10	111.9	0.023	<20	2.45	0.008	0.02	0.2	3.4	0.14	0.21	123	2.0	<0.02	2.3	0.45	<0.1	0.04
013K831413	Sediment Pulp	79.6	25.3	0.18	90.7	0.035	<20	1.37	0.015	0.03	<0.1	3.7	0.11	0.27	50	0.4	<0.02	2.2	0.66	0.1	<0.02
013K831414	Sediment Pulp	20.4	16.0	0.11	342.1	0.014	<20	0.62	0.008	0.01	<0.1	1.6	0.06	0.47	91	0.8	<0.02	1.2	1.20	<0.1	<0.02
013K831415	Sediment Pulp	73.2	24.3	0.25	426.1	0.040	<20	2.66	0.014	0.04	0.3	3.7	0.29	0.19	202	3.1	<0.02	3.5	0.53	0.1	0.03
013K831416	Sediment Pulp	132.3	22.9	0.06	403.0	0.027	<20	2.58	0.006	0.02	0.3	2.7	0.09	0.37	152	2.5	0.02	2.7	0.23	0.2	0.03
013K831417	Sediment Pulp	59.3	23.2	0.21	113.0	0.063	<20	2.12	0.008	0.04	0.1	2.5	0.09	0.16	142	0.9	<0.02	4.6	0.41	<0.1	0.06
013K831418	Sediment Pulp	62.6	19.2	0.26	154.9	0.032	<20	1.77	0.007	0.02	<0.1	2.0	0.14	0.24	111	0.8	<0.02	2.6	0.29	0.1	0.07
013K831419	Sediment Pulp	35.0	15.1	0.34	123.2	0.047	<20	1.22	0.008	0.03	<0.1	1.6	0.07	0.15	63	0.1	<0.02	3.4	0.61	<0.1	0.04
013K831420	Sediment Pulp	41.0	47.7	0.76	159.2	0.103	<20	1.61	0.030	0.25	0.2	5.9	0.27	0.15	247	<0.1	0.05	5.5	1.37	<0.1	0.12
013K831421	Sediment Pulp	50.1	17.6	0.28	91.2	0.065	<20	1.09	0.027	0.13	0.7	2.3	0.22	1.15	35	<0.1	<0.02	3.1	0.73	<0.1	0.10



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831392	Sediment Pulp	2.48	3.3	0.3	<0.05	3.8	29.91	103.9	0.02	<1	1.9	1.6	13.52	46.55	8.10	1.39	7.64	1.17	6.53	1.21	3.48
013K831393	Sediment Pulp	1.85	4.6	0.3	<0.05	2.8	17.07	60.2	<0.02	<1	0.9	3.5	8.15	28.65	4.53	0.85	3.93	0.68	3.70	0.71	1.86
013K831394	Sediment Pulp	1.63	2.4	0.2	<0.05	3.7	30.46	87.1	<0.02	<1	1.5	2.3	12.92	46.49	8.64	1.34	7.66	1.23	6.54	1.24	3.51
013K831395	Sediment Pulp	1.62	2.4	0.2	<0.05	2.5	22.35	77.7	<0.02	1	1.1	2.0	10.48	38.66	6.93	1.10	5.82	0.93	4.97	0.93	2.49
013K831396	Sediment Pulp	2.08	2.7	0.3	<0.05	3.2	39.62	144.9	0.03	1	2.4	3.2	17.36	70.90	12.22	1.80	10.77	1.44	8.34	1.60	4.36
013K831397	Sediment Pulp	1.25	1.7	0.3	<0.05	1.8	15.87	59.7	<0.02	<1	0.8	2.5	7.89	33.26	5.84	0.88	5.03	0.62	3.85	0.66	1.62
013K831398	Sediment Pulp	2.32	2.9	0.3	<0.05	2.4	33.73	122.1	<0.02	<1	1.6	2.4	16.70	64.96	10.94	1.53	8.61	1.14	6.88	1.36	3.62
013K831399	Sediment Pulp	0.65	3.4	3.4	<0.05	1.1	10.56	16.7	0.49	18	0.2	4.2	2.92	12.59	2.39	0.49	2.18	0.26	1.84	0.36	1.03
013K831400	Sediment Pulp	3.18	4.7	0.3	<0.05	4.4	83.16	291.9	0.03	2	5.8	4.3	31.37	119.37	22.56	3.01	19.41	2.78	17.43	3.27	9.36
013K831401	Sediment Pulp	0.68	1.4	0.2	<0.05	1.4	29.56	66.4	<0.02	1	0.7	1.4	12.64	49.14	8.64	1.33	7.45	1.04	5.86	1.16	3.25
013K831402	Sediment Pulp	2.43	3.8	0.3	<0.05	3.0	50.91	218.5	0.03	6	2.6	2.9	24.16	91.74	16.40	2.39	12.85	1.78	10.52	1.95	5.46
013K831403	Sediment Pulp	2.17	3.6	0.3	<0.05	2.3	40.99	179.1	<0.02	4	2.8	2.5	20.49	80.19	13.44	2.00	11.17	1.48	8.92	1.64	4.69
013K831404	Sediment Pulp	1.40	3.0	0.2	<0.05	1.3	17.35	76.1	<0.02	<1	1.2	1.8	10.85	40.82	6.96	1.10	5.26	0.68	3.86	0.72	1.97
013K831405	Sediment Pulp	0.71	1.3	0.3	<0.05	1.4	31.12	67.6	<0.02	<1	0.6	1.2	12.56	52.49	8.79	1.43	7.42	0.97	6.08	1.24	3.48
013K831406	Sediment Pulp	0.43	2.4	0.2	<0.05	1.2	13.41	28.3	<0.02	<1	0.4	2.4	4.36	17.15	2.83	0.50	2.65	0.33	2.13	0.45	1.28
013K831407	Sediment Pulp	1.84	4.1	0.3	<0.05	1.8	58.21	217.7	0.03	3	3.4	4.4	31.30	114.56	19.61	2.71	16.69	2.16	12.19	2.18	6.08
013K831408	Sediment Pulp	1.75	3.0	0.2	<0.05	3.9	57.52	216.8	0.03	2	1.8	3.9	31.31	114.93	18.26	3.33	15.64	1.99	12.03	2.19	5.67
013K831409	Sediment Pulp	1.52	7.6	0.4	<0.05	3.8	23.62	65.0	<0.02	<1	0.6	8.1	10.91	40.92	7.02	1.19	5.95	0.76	4.62	0.86	2.51
013K831410	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831411	Sediment Pulp	1.31	3.6	0.2	<0.05	1.8	32.37	78.8	<0.02	4	1.1	4.5	16.68	64.07	10.99	1.83	9.44	1.16	6.25	1.18	3.12
013K831412	Sediment Pulp	0.95	2.0	0.1	<0.05	1.6	36.32	120.1	<0.02	2	1.4	2.2	19.89	75.78	12.09	2.20	10.07	1.22	7.03	1.26	3.58
013K831413	Sediment Pulp	1.10	3.2	0.3	<0.05	1.4	36.77	110.4	<0.02	<1	1.2	4.9	21.52	82.11	13.00	2.34	9.94	1.29	7.17	1.31	3.97
013K831414	Sediment Pulp	0.43	1.6	0.1	<0.05	0.6	25.35	26.3	<0.02	<1	0.6	1.6	6.36	25.67	5.04	1.07	4.83	0.66	4.06	0.86	2.63
013K831415	Sediment Pulp	1.78	3.8	0.3	<0.05	2.5	54.37	142.0	<0.02	10	2.2	4.5	21.13	80.67	14.67	2.44	12.51	1.77	10.58	2.00	5.86
013K831416	Sediment Pulp	1.91	1.6	0.2	<0.05	2.3	58.63	243.8	<0.02	<1	4.0	1.1	34.65	130.00	21.43	2.84	16.70	2.05	11.78	2.23	5.94
013K831417	Sediment Pulp	3.03	3.5	0.3	<0.05	4.2	40.20	127.3	0.02	2	2.5	2.9	16.83	62.36	11.55	1.68	10.31	1.44	8.36	1.56	4.30
013K831418	Sediment Pulp	1.87	2.0	0.2	<0.05	4.7	36.79	133.7	<0.02	<1	1.4	2.7	17.40	66.75	11.66	1.73	10.14	1.43	7.89	1.52	3.87
013K831419	Sediment Pulp	2.02	4.1	0.4	<0.05	3.3	18.73	70.6	<0.02	1	1.1	4.3	9.33	36.79	6.40	0.95	5.52	0.68	4.30	0.79	2.07
013K831420	Sediment Pulp	2.11	24.2	1.2	<0.05	5.4	18.10	71.7	0.03	<1	0.5	20.9	10.34	37.10	6.82	1.04	4.98	0.65	3.53	0.68	1.92
013K831421	Sediment Pulp	2.95	11.5	0.7	<0.05	6.2	29.54	97.7	0.02	19	1.5	8.3	12.59	46.78	8.42	1.07	6.95	1.03	6.03	1.11	3.19



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K831392	Sediment Pulp	0.51	2.61	0.34	<10	<2	
013K831393	Sediment Pulp	0.28	1.43	0.20	<10	<2	
013K831394	Sediment Pulp	0.51	2.74	0.36	<10	<2	
013K831395	Sediment Pulp	0.35	1.87	0.24	<10	<2	
013K831396	Sediment Pulp	0.60	3.66	0.46	<10	<2	
013K831397	Sediment Pulp	0.22	1.40	0.16	<10	<2	
013K831398	Sediment Pulp	0.49	3.04	0.40	<10	<2	
013K831399	Sediment Pulp	0.13	0.88	0.14	<10	<2	
013K831400	Sediment Pulp	1.34	8.08	1.10	<10	<2	
013K831401	Sediment Pulp	0.46	2.73	0.39	<10	<2	
013K831402	Sediment Pulp	0.76	4.58	0.60	<10	<2	
013K831403	Sediment Pulp	0.59	3.98	0.53	<10	<2	
013K831404	Sediment Pulp	0.25	1.49	0.18	<10	<2	
013K831405	Sediment Pulp	0.50	2.84	0.39	<10	<2	
013K831406	Sediment Pulp	0.16	1.13	0.16	<10	<2	
013K831407	Sediment Pulp	0.89	4.88	0.69	<10	<2	
013K831408	Sediment Pulp	0.79	4.75	0.65	<10	<2	
013K831409	Sediment Pulp	0.35	2.08	0.31	<10	3	
013K831410	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831411	Sediment Pulp	0.42	2.57	0.36	<10	<2	
013K831412	Sediment Pulp	0.49	3.08	0.42	<10	<2	
013K831413	Sediment Pulp	0.53	3.28	0.47	<10	3	
013K831414	Sediment Pulp	0.36	2.28	0.35	<10	<2	
013K831415	Sediment Pulp	0.82	4.84	0.65	<10	<2	
013K831416	Sediment Pulp	0.85	4.72	0.62	<10	<2	
013K831417	Sediment Pulp	0.59	3.53	0.46	<10	<2	
013K831418	Sediment Pulp	0.52	3.13	0.40	<10	<2	
013K831419	Sediment Pulp	0.30	1.68	0.20	<10	2	
013K831420	Sediment Pulp	0.27	1.76	0.26	<10	<2	
013K831421	Sediment Pulp	0.43	2.48	0.33	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831422	Sediment Pulp	2.03	43.04	5.71	105.7	246	11.5	8.9	190	1.97	<0.1	2.9	0.2	0.7	33.1	0.38	0.04	<0.02	34	0.64	0.130
013K831423	Sediment Pulp	1.93	39.58	5.12	72.2	199	10.1	6.8	178	1.58	<0.1	2.7	0.4	0.5	25.5	0.33	0.03	<0.02	33	0.47	0.115
013K831424	Sediment Pulp	16.12	90.40	8.71	223.0	343	19.6	52.2	2177	5.23	1.0	9.4	0.5	4.2	47.1	0.78	0.06	0.03	49	1.02	0.162
013K831425	Sediment Pulp	17.71	31.55	10.07	155.3	199	8.4	30.6	217	2.17	1.1	4.0	<0.2	1.5	31.0	0.75	0.05	<0.02	47	0.59	0.135
013K831426	Sediment Pulp	13.36	30.82	8.84	105.1	87	15.0	12.2	144	1.77	1.9	4.3	2.5	2.2	31.1	0.31	0.08	0.04	32	0.52	0.072
013K831427	Sediment Pulp	4.14	18.23	5.57	45.1	144	7.1	3.4	85	0.99	0.4	2.2	0.4	0.2	37.0	0.20	0.04	<0.02	30	0.26	0.067
013K831428	Sediment Pulp	11.01	43.75	6.69	94.9	430	9.8	14.3	458	2.63	0.3	5.5	1.2	0.9	41.7	0.41	0.07	0.03	56	0.56	0.212
013K831429	Sediment Pulp	3.11	27.72	4.05	152.7	159	12.3	4.8	79	1.08	0.2	2.8	0.2	0.7	29.5	0.41	0.06	<0.02	32	0.32	0.054
013K831430	Sediment Pulp	9.52	35.37	2.51	164.1	113	15.9	11.8	98	5.63	0.2	3.8	0.3	1.5	33.7	0.40	0.09	<0.02	46	0.45	0.075
013K831431	Sediment Pulp	12.96	23.19	3.28	69.1	112	9.2	7.7	43	1.33	0.6	14.8	0.4	0.4	72.3	0.23	0.19	<0.02	18	0.54	0.045
013K831432	Sediment Pulp	4.89	16.11	2.94	42.0	82	5.8	5.0	35	0.99	0.2	2.1	0.6	0.7	48.5	0.12	0.05	<0.02	13	0.63	0.034
013K831433	Sediment Pulp	3.28	7.73	4.78	37.0	43	5.4	13.0	1454	3.35	0.7	2.2	0.7	3.3	16.9	0.03	0.05	0.09	32	0.17	0.060
013K831434	Sediment Pulp	2.38	47.72	4.15	77.8	78	12.7	6.6	102	0.99	0.6	4.9	1.3	3.0	28.1	0.22	0.11	0.11	31	0.33	0.078
013K831435	Sediment Pulp	3.03	16.36	3.87	56.5	135	6.9	2.1	60	0.53	0.1	2.2	0.3	0.6	30.2	0.22	0.06	0.10	19	0.32	0.058
013K831436	Sediment Pulp	4.21	20.79	5.36	47.4	212	6.5	3.2	80	0.58	0.1	4.2	0.9	0.4	29.9	0.26	0.05	0.06	34	0.36	0.107
013K831437	Sediment Pulp	1.70	15.80	4.82	25.0	138	3.6	1.5	41	0.24	0.1	1.4	<0.2	0.2	26.6	0.11	0.03	0.02	9	0.23	0.076
013K831438	Sediment Pulp	8.95	40.97	84.01	291.7	611	11.1	7.5	414	1.75	35.3	9.8	2.6	1.5	74.5	1.30	0.58	1.17	18	6.21	0.069
013K831439	Sediment Pulp	0.50	11.27	4.01	25.7	165	3.0	1.1	60	0.21	<0.1	1.1	<0.2	0.2	21.0	0.12	<0.02	<0.02	12	0.18	0.070
013K831440	Sediment Pulp	4.13	72.50	15.38	95.5	785	10.6	17.5	489	1.71	0.3	4.0	0.4	1.3	57.5	0.61	0.05	0.04	48	1.09	0.231
013K831441	Sediment Pulp	4.00	78.33	15.73	99.7	802	11.4	18.2	495	1.73	0.5	4.1	0.9	1.2	59.0	0.59	0.05	0.03	47	1.11	0.213
013K831442	Sediment Pulp	14.27	83.79	11.82	166.4	733	39.0	101.0	3318	9.10	0.8	5.1	0.4	5.2	70.0	0.66	0.05	<0.02	54	0.85	0.290
013K831443	Sediment Pulp	0.90	29.88	3.82	34.4	168	9.9	3.5	87	0.75	<0.1	1.4	<0.2	0.4	25.1	0.19	0.02	<0.02	20	0.41	0.091
013K831444	Sediment Pulp	0.96	30.09	3.87	36.0	186	10.1	3.4	94	0.92	0.2	1.4	<0.2	0.3	28.6	0.21	<0.02	<0.02	21	0.50	0.103
013K831445	Sediment Pulp	5.24	51.06	8.64	163.0	270	14.1	28.1	1188	6.22	0.7	3.4	<0.2	5.0	31.4	0.46	0.02	<0.02	55	0.44	0.185
013K831446	Sediment Pulp	6.51	244.68	10.55	165.2	711	32.9	44.9	463	7.71	1.8	6.6	0.7	6.6	41.4	0.78	0.05	<0.02	63	0.54	0.412
013K831447	Sediment Pulp	8.21	304.77	7.10	182.1	760	37.8	27.9	1434	4.21	3.1	6.2	1.4	3.9	33.9	0.98	0.08	<0.02	42	0.57	0.297
013K831448	Sediment Pulp	6.52	84.94	9.05	112.8	309	28.2	69.8	2905	5.36	0.7	2.6	0.2	2.2	22.9	0.60	0.06	<0.02	37	0.38	0.161
013K831449	Sediment Pulp	1.31	49.86	7.71	52.3	126	19.1	11.1	265	1.89	0.9	1.3	0.3	1.0	18.2	0.20	0.03	<0.02	38	0.39	0.122
013K831450	Sediment Pulp	1.17	15.97	4.14	61.1	36	20.5	10.4	207	1.59	5.6	2.3	0.4	3.3	23.1	0.16	0.05	<0.02	31	0.52	0.078
013K831451	Sediment Pulp	4.22	69.22	3.92	55.0	135	18.0	7.4	166	0.93	1.6	4.8	1.0	1.1	25.9	0.36	0.11	<0.02	24	0.67	0.080



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Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831422	Sediment Pulp	59.1	18.8	0.16	152.2	0.042	<20	1.70	0.008	0.03	0.1	2.0	0.14	0.19	130	0.9	<0.02	3.5	0.44	0.1	0.06
013K831423	Sediment Pulp	53.1	16.1	0.15	141.5	0.037	<20	1.55	0.006	0.03	<0.1	1.4	0.09	0.17	102	0.7	<0.02	3.1	0.42	0.1	0.05
013K831424	Sediment Pulp	162.4	26.2	0.14	522.8	0.048	<20	3.11	0.013	0.05	0.3	4.0	0.65	0.23	154	2.4	<0.02	3.9	0.52	0.3	0.07
013K831425	Sediment Pulp	65.9	13.9	0.09	80.2	0.039	<20	1.63	0.011	0.05	1.9	1.7	0.50	1.35	79	0.4	<0.02	2.7	0.30	0.1	0.06
013K831426	Sediment Pulp	48.5	18.4	0.28	89.6	0.065	<20	1.09	0.026	0.13	0.7	2.4	0.21	1.15	40	<0.1	<0.02	3.2	0.72	<0.1	0.10
013K831427	Sediment Pulp	61.0	10.8	0.04	77.3	0.019	<20	1.30	0.006	0.02	0.2	1.0	0.06	0.17	58	0.1	<0.02	2.0	0.19	0.1	<0.02
013K831428	Sediment Pulp	67.9	18.6	0.11	122.1	0.050	<20	1.84	0.007	0.05	3.1	2.0	0.22	0.22	139	0.8	<0.02	4.2	0.44	0.1	0.04
013K831429	Sediment Pulp	58.5	15.8	0.12	69.8	0.041	<20	1.04	0.008	0.04	0.5	1.3	0.19	0.18	69	0.5	<0.02	2.4	0.53	0.1	0.11
013K831430	Sediment Pulp	74.0	21.7	0.07	64.5	0.025	<20	1.48	0.006	0.02	1.2	2.2	0.42	0.35	65	1.0	<0.02	1.7	0.30	0.2	0.06
013K831431	Sediment Pulp	43.6	9.2	0.08	57.6	0.030	<20	0.79	0.008	0.04	1.9	0.9	0.20	1.49	70	0.8	<0.02	2.0	0.43	0.1	0.04
013K831432	Sediment Pulp	26.9	6.7	0.09	73.3	0.033	<20	0.59	0.015	0.06	0.3	0.9	0.15	1.10	52	<0.1	<0.02	1.6	0.48	<0.1	0.05
013K831433	Sediment Pulp	38.9	12.7	0.17	36.2	0.071	<20	0.82	0.009	0.05	0.3	1.8	0.09	0.04	20	0.1	<0.02	2.3	0.86	<0.1	0.05
013K831434	Sediment Pulp	76.3	16.3	0.19	82.5	0.050	<20	0.90	0.015	0.06	0.3	2.2	0.23	0.21	30	0.3	<0.02	2.0	0.42	<0.1	0.12
013K831435	Sediment Pulp	43.2	8.6	0.08	71.3	0.029	<20	0.82	0.010	0.03	0.5	0.9	0.08	0.20	72	0.2	<0.02	2.0	0.31	<0.1	0.06
013K831436	Sediment Pulp	35.0	12.4	0.19	66.1	0.034	<20	1.04	0.008	0.06	0.6	0.8	0.06	0.17	72	0.4	<0.02	2.7	0.55	<0.1	0.05
013K831437	Sediment Pulp	22.6	5.0	0.07	66.3	0.022	<20	0.57	0.008	0.03	0.2	0.5	0.06	0.13	73	<0.1	<0.02	1.7	0.49	<0.1	0.02
013K831438	Sediment Pulp	10.7	11.3	0.55	91.5	0.035	<20	0.39	0.022	0.04	0.5	2.4	0.21	1.53	94	0.8	<0.02	2.0	0.48	<0.1	0.03
013K831439	Sediment Pulp	17.5	4.6	0.06	117.9	0.018	<20	0.50	0.009	0.02	<0.1	0.4	0.03	0.09	61	0.1	<0.02	1.4	0.46	<0.1	<0.02
013K831440	Sediment Pulp	109.1	17.9	0.20	210.1	0.063	<20	3.14	0.014	0.06	0.2	2.6	0.17	0.25	270	1.0	<0.02	6.0	0.83	0.1	0.08
013K831441	Sediment Pulp	108.2	18.4	0.19	215.3	0.064	<20	3.15	0.013	0.06	0.2	2.6	0.19	0.25	258	1.1	<0.02	6.1	0.85	<0.1	0.10
013K831442	Sediment Pulp	138.7	25.0	0.08	316.9	0.057	<20	3.87	0.007	0.03	0.2	5.0	0.52	1.11	229	2.0	<0.02	5.1	0.26	0.2	0.13
013K831443	Sediment Pulp	45.6	11.5	0.16	168.1	0.024	<20	1.36	0.006	0.02	<0.1	0.9	0.07	0.22	109	0.5	<0.02	2.2	0.27	<0.1	<0.02
013K831444	Sediment Pulp	47.0	11.1	0.16	174.7	0.023	<20	1.45	0.006	0.02	<0.1	1.1	0.07	0.23	97	0.7	<0.02	2.2	0.27	<0.1	0.02
013K831445	Sediment Pulp	105.9	25.6	0.19	219.3	0.062	<20	3.04	0.010	0.05	0.2	3.6	0.35	0.13	138	0.9	<0.02	4.1	0.56	0.1	0.06
013K831446	Sediment Pulp	211.6	33.7	0.13	235.5	0.077	<20	6.21	0.009	0.03	0.2	7.4	0.61	0.28	354	3.4	<0.02	5.5	0.31	0.2	0.20
013K831447	Sediment Pulp	135.0	32.8	0.23	268.6	0.047	<20	3.74	0.014	0.05	0.4	6.3	0.43	0.26	302	3.5	<0.02	3.4	0.46	0.1	0.13
013K831448	Sediment Pulp	63.7	21.3	0.24	651.9	0.053	<20	2.16	0.009	0.04	<0.1	3.4	0.33	0.15	137	1.5	<0.02	4.1	0.83	<0.1	0.04
013K831449	Sediment Pulp	21.9	17.9	0.53	153.8	0.076	<20	1.67	0.010	0.05	<0.1	2.1	0.08	0.07	81	0.1	<0.02	4.7	0.63	<0.1	0.07
013K831450	Sediment Pulp	32.7	20.0	0.38	108.1	0.065	<20	1.08	0.029	0.04	0.2	2.6	0.07	0.07	21	0.1	<0.02	2.9	0.62	<0.1	0.05
013K831451	Sediment Pulp	34.3	20.8	0.31	73.9	0.038	<20	0.86	0.019	0.05	0.1	3.5	0.12	0.29	84	0.7	<0.02	2.0	0.58	<0.1	0.05



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831422	Sediment Pulp	2.53	3.8	0.3	<0.05	3.7	35.98	121.8	<0.02	1	2.3	3.5	16.13	61.30	11.23	1.67	9.24	1.33	7.43	1.43	3.96
013K831423	Sediment Pulp	2.22	3.5	0.3	<0.05	3.0	30.61	111.3	<0.02	<1	2.0	3.4	14.56	55.91	9.87	1.45	8.88	1.14	6.46	1.29	3.54
013K831424	Sediment Pulp	3.67	5.3	0.3	<0.05	8.5	94.58	369.7	0.03	9	6.5	5.3	43.45	154.76	27.65	3.66	26.13	3.58	19.99	3.90	10.68
013K831425	Sediment Pulp	2.77	4.0	0.3	<0.05	4.2	37.64	191.5	0.02	61	3.3	3.6	18.33	70.08	12.69	1.55	10.39	1.47	8.49	1.55	4.14
013K831426	Sediment Pulp	3.07	11.5	0.7	<0.05	6.6	30.10	98.7	<0.02	17	1.4	8.8	13.22	50.06	8.66	1.18	7.47	1.02	5.56	1.14	3.14
013K831427	Sediment Pulp	0.97	1.7	0.3	<0.05	0.5	34.68	124.9	<0.02	<1	2.3	1.0	15.74	55.77	9.63	1.42	8.18	1.12	6.93	1.34	3.86
013K831428	Sediment Pulp	2.93	3.8	0.3	<0.05	3.3	41.84	146.0	<0.02	2	1.9	2.3	18.94	70.18	12.27	1.68	10.60	1.48	8.69	1.69	4.97
013K831429	Sediment Pulp	2.74	4.0	0.3	<0.05	8.2	40.69	120.3	<0.02	1	1.2	3.2	15.90	59.77	10.23	1.47	10.06	1.42	8.45	1.66	4.68
013K831430	Sediment Pulp	2.08	2.2	0.3	<0.05	5.9	58.65	146.1	<0.02	2	2.0	2.0	19.05	69.05	12.80	1.78	11.32	1.57	9.90	2.00	5.93
013K831431	Sediment Pulp	1.58	3.1	0.3	<0.05	2.9	24.79	85.1	<0.02	13	0.9	3.7	11.64	45.61	7.92	1.15	6.40	0.91	5.22	1.01	2.84
013K831432	Sediment Pulp	1.40	4.5	0.3	<0.05	2.9	12.63	52.5	<0.02	4	0.4	4.6	6.57	23.60	4.29	0.60	3.47	0.47	2.78	0.46	1.37
013K831433	Sediment Pulp	1.92	5.3	0.9	<0.05	2.9	20.96	76.4	0.02	<1	0.9	4.9	9.82	32.87	5.72	0.94	4.17	0.76	3.97	0.87	2.35
013K831434	Sediment Pulp	2.59	5.6	1.0	<0.05	7.5	47.37	135.5	<0.02	2	1.4	4.0	20.67	67.69	12.27	1.88	11.26	1.70	9.11	1.99	5.39
013K831435	Sediment Pulp	1.76	2.7	1.2	<0.05	2.7	25.39	82.5	<0.02	1	1.4	1.9	11.57	40.15	7.40	1.11	7.30	0.95	5.22	1.13	2.71
013K831436	Sediment Pulp	1.74	4.2	0.8	<0.05	2.4	18.58	69.8	<0.02	2	0.7	3.6	9.40	31.85	5.64	0.82	4.18	0.75	3.79	0.82	2.20
013K831437	Sediment Pulp	0.97	3.4	0.7	<0.05	0.7	9.58	44.4	<0.02	1	0.7	2.0	5.74	18.32	3.28	0.54	2.52	0.38	2.25	0.45	1.02
013K831438	Sediment Pulp	0.54	3.3	3.7	<0.05	1.0	9.94	17.0	0.50	21	<0.1	3.4	2.94	10.90	2.15	0.49	2.11	0.32	1.61	0.34	0.98
013K831439	Sediment Pulp	0.82	3.6	0.4	<0.05	0.6	8.30	34.5	<0.02	<1	0.6	1.9	4.41	14.58	2.48	0.42	1.92	0.35	1.84	0.39	0.99
013K831440	Sediment Pulp	5.27	7.2	0.7	<0.05	6.7	62.77	217.9	0.04	4	3.8	5.2	31.57	104.25	18.36	2.94	15.35	2.59	12.65	2.75	7.37
013K831441	Sediment Pulp	5.25	7.4	0.7	<0.05	6.0	63.56	210.9	0.04	4	4.7	4.8	30.29	102.04	17.91	2.82	13.72	2.55	13.77	2.88	7.26
013K831442	Sediment Pulp	3.46	2.9	0.4	<0.05	6.0	88.74	329.3	0.04	3	6.3	1.9	38.40	125.57	22.69	3.73	20.37	3.54	18.95	3.92	10.16
013K831443	Sediment Pulp	1.53	2.0	0.3	<0.05	1.9	24.20	92.1	<0.02	1	1.1	2.0	13.04	42.60	7.41	1.36	6.72	1.08	5.63	1.06	2.62
013K831444	Sediment Pulp	1.52	2.0	0.3	<0.05	1.7	24.74	92.0	<0.02	<1	1.4	2.1	12.94	42.53	7.76	1.33	6.80	1.09	5.16	1.07	2.78
013K831445	Sediment Pulp	3.54	6.0	0.5	<0.05	5.8	71.56	227.5	0.02	3	5.2	4.9	30.83	100.45	18.64	2.97	16.46	2.83	14.87	3.04	8.30
013K831446	Sediment Pulp	4.81	3.3	0.3	<0.05	11.3	131.63	444.7	0.04	4	7.4	2.7	55.26	194.44	37.37	6.04	31.36	5.57	30.08	6.32	16.06
013K831447	Sediment Pulp	2.07	5.3	0.3	<0.05	6.3	105.93	226.9	<0.02	7	4.1	5.4	40.25	138.46	25.75	4.33	21.87	4.13	21.23	4.59	12.42
013K831448	Sediment Pulp	1.68	5.9	0.4	<0.05	2.2	37.35	109.7	<0.02	<1	1.9	6.2	17.52	60.44	11.35	2.19	9.60	1.41	7.24	1.52	4.17
013K831449	Sediment Pulp	1.37	5.3	0.4	<0.05	2.5	13.80	41.2	<0.02	<1	0.4	6.1	6.07	20.17	4.29	0.90	3.31	0.55	2.72	0.58	1.57
013K831450	Sediment Pulp	1.24	3.3	0.4	<0.05	3.1	17.52	58.4	<0.02	1	0.5	7.4	8.41	27.48	4.93	0.94	4.16	0.66	3.59	0.73	1.79
013K831451	Sediment Pulp	1.12	4.0	0.3	<0.05	2.9	26.83	40.3	<0.02	4	0.7	4.9	8.45	29.87	5.16	1.13	4.82	0.85	4.56	0.97	2.64



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			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K831422	Sediment Pulp	0.53	2.95	0.40	<10	<2	
013K831423	Sediment Pulp	0.46	2.62	0.33	<10	<2	
013K831424	Sediment Pulp	1.44	8.85	1.11	<10	3	
013K831425	Sediment Pulp	0.55	3.35	0.42	<10	<2	
013K831426	Sediment Pulp	0.46	2.62	0.34	<10	<2	
013K831427	Sediment Pulp	0.54	3.19	0.41	<10	2	
013K831428	Sediment Pulp	0.73	4.10	0.54	<10	<2	
013K831429	Sediment Pulp	0.64	3.81	0.50	<10	<2	
013K831430	Sediment Pulp	0.87	5.26	0.75	<10	<2	
013K831431	Sediment Pulp	0.37	2.32	0.30	<10	<2	
013K831432	Sediment Pulp	0.18	1.20	0.17	<10	<2	
013K831433	Sediment Pulp	0.36	1.86	0.26	<10	<2	
013K831434	Sediment Pulp	0.75	4.33	0.62	<10	<2	
013K831435	Sediment Pulp	0.40	2.20	0.32	<10	<2	
013K831436	Sediment Pulp	0.31	1.52	0.20	<10	<2	
013K831437	Sediment Pulp	0.16	0.81	0.11	<10	<2	
013K831438	Sediment Pulp	0.13	0.85	0.14	<10	<2	
013K831439	Sediment Pulp	0.14	0.66	0.08	<10	<2	
013K831440	Sediment Pulp	1.05	5.36	0.71	<10	<2	
013K831441	Sediment Pulp	1.05	5.27	0.75	<10	<2	
013K831442	Sediment Pulp	1.49	7.68	1.02	11	<2	
013K831443	Sediment Pulp	0.37	1.89	0.23	<10	<2	
013K831444	Sediment Pulp	0.40	1.96	0.26	<10	<2	
013K831445	Sediment Pulp	1.18	6.03	0.85	<10	<2	
013K831446	Sediment Pulp	2.22	12.40	1.64	12	<2	
013K831447	Sediment Pulp	1.77	9.94	1.43	<10	<2	
013K831448	Sediment Pulp	0.64	3.26	0.50	<10	<2	
013K831449	Sediment Pulp	0.21	1.19	0.15	<10	<2	
013K831450	Sediment Pulp	0.24	1.41	0.22	<10	<2	
013K831451	Sediment Pulp	0.40	2.07	0.34	<10	<2	



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Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

	Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250				
					Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
					ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
					0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001	
013K831452	Sediment Pulp	3.01	109.77	5.93	96.4	392	23.8	9.6	873	2.13	3.2	6.5	1.6	3.3	43.8	0.57	0.07	0.02	49	0.60	0.204				
013K831453	Sediment Pulp	7.71	77.60	6.38	173.0	750	32.1	9.2	564	1.89	12.6	61.3	1.9	1.6	82.9	1.25	0.72	0.03	24	1.19	0.183				
013K831454	Sediment Pulp	3.50	52.04	7.71	102.6	162	37.6	9.0	269	2.65	8.0	6.3	1.1	1.8	38.4	0.46	0.19	0.05	37	0.58	0.154				
013K831455	Sediment Pulp	5.73	63.10	6.29	163.8	849	35.3	20.2	4354	5.62	8.8	13.9	1.1	1.7	60.9	1.20	0.41	0.03	27	0.70	0.357				
013K831456	Sediment Pulp	0.90	33.96	27.42	128.9	2888	47.0	27.9	1275	3.25	26.6	4.1	2.5	9.9	29.5	0.60	0.68	3.80	49	0.63	0.099				
013K831457	Sediment Pulp	1.29	32.80	8.27	137.6	78	30.0	12.2	298	1.90	2.3	3.5	0.6	3.0	22.5	0.48	0.10	0.06	32	0.52	0.078				
013K831458	Sediment Pulp	5.20	156.81	9.05	193.0	857	63.8	14.6	773	3.41	8.3	3.6	2.9	1.7	33.7	1.94	0.24	0.04	39	0.97	0.181				
013K831459	Sediment Pulp	1.41	57.53	4.26	74.5	891	13.4	7.9	326	1.92	0.6	2.2	0.7	1.0	17.5	0.79	0.02	<0.02	24	0.43	0.229				
013K831460	Sediment Pulp	5.86	108.55	9.74	166.2	1329	24.0	18.3	1899	5.40	6.5	7.1	0.8	2.5	30.2	1.35	0.07	0.06	48	0.80	0.476				
013K831461	Sediment Pulp	2.60	19.86	3.89	63.5	78	10.2	4.1	110	0.72	0.4	25.5	<0.2	0.4	33.8	0.38	0.05	<0.02	37	0.80	0.051				
013K831462	Sediment Pulp	4.08	40.63	10.67	139.1	866	17.0	43.6	1455	3.59	2.1	8.0	0.9	1.0	33.4	1.14	0.04	0.05	58	0.89	0.297				
013K831463	Sediment Pulp	5.23	37.75	6.27	212.8	330	33.7	14.0	1298	3.35	1.9	40.2	0.4	1.4	23.1	1.45	0.04	<0.02	35	0.63	0.140				
013K831464	Sediment Pulp	4.93	37.59	6.19	196.4	323	32.9	14.0	1230	3.34	1.9	39.7	0.5	1.5	25.7	1.53	0.04	<0.02	35	0.66	0.147				
013K831465	Sediment Pulp	9.32	41.82	86.91	289.1	603	12.7	7.3	419	1.77	36.8	10.5	3.8	1.6	69.9	1.46	0.61	1.07	19	6.24	0.068				
013K831466	Sediment Pulp	3.90	19.37	1.70	39.4	114	10.4	4.3	21	0.43	0.3	34.0	<0.2	0.2	21.6	0.37	<0.02	<0.02	14	0.76	0.051				
013K831467	Sediment Pulp	33.61	81.38	2.04	97.2	324	11.8	9.7	1090	2.68	1.1	49.2	0.9	0.9	22.8	0.79	0.04	<0.02	47	0.62	0.120				
013K831468	Sediment Pulp	2.72	21.95	4.23	67.5	94	10.8	4.2	110	0.71	0.4	26.6	0.3	0.3	37.7	0.42	0.04	<0.02	37	0.82	0.058				
013K831469	Sediment Pulp	10.00	66.74	3.68	115.9	570	18.9	13.4	576	4.90	1.4	81.7	1.2	1.9	43.8	0.85	0.04	0.05	58	1.18	0.333				
013K831470	Sediment Pulp	11.61	20.15	2.24	68.0	192	16.7	9.5	315	1.57	0.5	41.0	1.3	0.6	43.9	0.42	0.02	0.03	44	0.74	0.089				
013K831471	Sediment Pulp	6.88	43.19	3.37	105.4	237	17.1	14.2	1296	2.37	0.6	13.0	0.7	1.0	13.7	0.80	0.03	0.04	36	0.32	0.206				
013K831472	Sediment Pulp	3.66	25.93	2.40	68.9	332	10.7	3.2	123	0.56	0.3	10.8	1.0	0.2	23.8	0.49	0.05	0.03	33	0.68	0.115				
013K831473	Sediment Pulp	7.29	54.82	4.44	142.3	519	14.6	17.3	1231	5.21	0.8	9.2	0.9	2.4	30.3	0.85	0.03	0.04	78	0.55	0.245				
013K831474	Sediment Pulp	6.44	60.20	4.28	89.4	208	15.3	6.7	468	2.08	1.1	28.6	1.1	1.2	21.4	0.59	0.04	0.04	52	0.45	0.207				
013K831475	Sediment Pulp	5.07	15.47	3.53	116.3	154	16.0	13.3	311	1.83	0.3	32.4	<0.2	0.8	23.5	0.51	0.03	<0.02	45	0.60	0.107				
013K831476	Sediment Pulp	7.10	51.49	12.08	188.1	673	18.2	26.7	1308	5.95	0.4	22.2	0.8	1.4	27.4	1.33	0.03	0.06	72	0.64	0.260				
013K831477	Sediment Pulp	5.71	19.48	2.66	70.2	194	10.9	5.9	189	1.11	0.3	9.9	1.2	0.5	19.1	0.66	0.02	<0.02	39	0.43	0.104				
013K831478	Sediment Pulp	5.42	22.67	4.36	72.2	481	11.8	7.6	198	2.39	0.3	5.3	0.3	0.5	36.8	0.48	0.04	0.04	55	0.69	0.224				
013K831479	Sediment Pulp	34.24	29.08	4.03	141.2	343	24.1	45.2	2196	6.63	6.8	12.9	0.6	2.2	23.1	1.12	0.05	0.03	88	0.41	0.247				
013K831480	Sediment Pulp	2.67	25.84	4.45	129.2	128	20.3	35.4	995	4.03	0.8	2.4	0.6	2.4	31.7	0.53	0.02	0.03	96	0.64	0.188				
013K831481	Sediment Pulp	6.16	20.82	3.02	75.9	211	11.5	6.4	197	1.18	<0.1	10.9	0.7	0.3	21.8	0.67	0.03	<0.02	41	0.45	0.112				



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831452	Sediment Pulp	58.4	32.5	0.42	216.6	0.045	<20	1.94	0.029	0.09	0.2	5.3	0.22	0.14	143	1.9	<0.02	3.0	0.81	<0.1	0.08
013K831453	Sediment Pulp	49.1	31.8	0.24	318.7	0.019	<20	2.45	0.010	0.04	0.2	4.9	0.16	0.48	258	7.5	0.03	2.0	0.90	<0.1	0.11
013K831454	Sediment Pulp	41.7	54.2	0.59	127.8	0.045	<20	2.34	0.017	0.09	0.1	4.7	0.11	0.19	89	0.9	<0.02	3.3	0.88	<0.1	0.05
013K831455	Sediment Pulp	48.2	46.3	0.22	314.8	0.031	<20	4.03	0.011	0.04	<0.1	4.7	0.20	0.33	266	5.9	<0.02	3.0	0.83	<0.1	0.09
013K831456	Sediment Pulp	47.5	51.4	0.82	177.5	0.108	<20	1.71	0.031	0.27	0.2	6.5	0.28	0.16	274	0.5	<0.02	5.9	1.45	<0.1	0.13
013K831457	Sediment Pulp	49.0	34.2	0.70	116.3	0.068	<20	1.73	0.020	0.09	<0.1	4.6	0.11	0.11	50	0.1	<0.02	4.5	0.81	<0.1	0.04
013K831458	Sediment Pulp	50.3	58.3	0.55	143.3	0.039	<20	2.35	0.023	0.08	0.1	7.6	0.24	0.18	398	2.7	<0.02	3.8	0.80	<0.1	0.06
013K831459	Sediment Pulp	66.5	24.7	0.14	137.7	0.020	<20	2.51	0.008	0.03	<0.1	3.0	0.08	0.19	223	1.4	<0.02	2.3	0.30	<0.1	0.05
013K831460	Sediment Pulp	98.7	33.8	0.19	138.7	0.040	<20	4.75	0.011	0.03	0.2	5.2	0.16	0.28	434	4.1	<0.02	4.2	0.34	0.1	0.12
013K831461	Sediment Pulp	28.2	10.5	0.09	97.7	0.019	<20	1.58	0.011	0.01	0.2	1.7	0.06	0.25	84	0.9	<0.02	1.6	0.14	<0.1	<0.02
013K831462	Sediment Pulp	63.7	25.6	0.15	238.1	0.043	<20	3.76	0.015	0.02	0.1	3.7	0.11	0.25	273	2.8	<0.02	5.6	0.26	<0.1	0.03
013K831463	Sediment Pulp	65.5	20.1	0.18	155.6	0.028	<20	2.89	0.015	0.03	<0.1	4.3	0.13	0.23	150	1.3	<0.02	2.6	0.37	<0.1	0.06
013K831464	Sediment Pulp	68.6	21.4	0.20	161.8	0.029	<20	2.94	0.014	0.03	<0.1	4.5	0.16	0.22	142	1.5	<0.02	2.6	0.35	<0.1	0.06
013K831465	Sediment Pulp	11.8	12.5	0.56	96.2	0.038	<20	0.42	0.025	0.05	0.7	2.3	0.21	1.51	114	1.1	0.02	1.9	0.50	<0.1	0.03
013K831466	Sediment Pulp	24.6	10.0	0.06	89.3	0.010	<20	0.73	0.010	0.01	<0.1	1.0	0.04	0.75	109	1.3	<0.02	1.2	0.18	<0.1	<0.02
013K831467	Sediment Pulp	41.9	21.1	0.09	234.0	0.015	<20	1.85	0.009	0.02	<0.1	3.6	0.14	0.26	115	4.0	<0.02	1.7	0.17	<0.1	0.05
013K831468	Sediment Pulp	29.9	11.4	0.09	106.7	0.020	<20	1.62	0.011	0.01	0.2	1.5	0.06	0.26	91	0.7	<0.02	1.6	0.14	<0.1	<0.02
013K831469	Sediment Pulp	84.8	27.1	0.21	252.7	0.034	<20	3.62	0.019	0.04	0.5	6.1	0.18	0.86	255	2.2	<0.02	3.2	0.37	0.1	0.05
013K831470	Sediment Pulp	31.3	18.3	0.13	124.5	0.033	<20	2.11	0.030	0.02	0.5	2.1	0.12	0.16	96	0.9	<0.02	2.5	0.21	<0.1	<0.02
013K831471	Sediment Pulp	58.2	20.4	0.08	60.3	0.026	<20	2.61	0.011	0.02	0.2	2.7	0.40	0.17	95	1.4	<0.02	2.6	0.23	0.1	0.02
013K831472	Sediment Pulp	25.3	22.3	0.12	97.6	0.017	<20	1.43	0.017	0.02	0.2	0.9	0.05	0.31	70	1.8	<0.02	2.1	0.23	<0.1	<0.02
013K831473	Sediment Pulp	111.8	30.9	0.12	192.5	0.035	<20	3.21	0.013	0.03	0.2	5.3	0.25	0.22	176	2.7	<0.02	3.8	0.31	0.2	0.04
013K831474	Sediment Pulp	60.0	25.1	0.20	66.7	0.039	<20	2.15	0.028	0.05	0.4	3.1	0.19	0.14	82	1.5	<0.02	3.0	0.35	0.1	<0.02
013K831475	Sediment Pulp	41.8	19.9	0.17	72.3	0.050	<20	2.60	0.025	0.03	0.1	2.5	0.14	0.29	87	0.5	<0.02	3.3	0.31	0.1	<0.02
013K831476	Sediment Pulp	62.7	26.8	0.08	87.9	0.052	<20	4.08	0.017	0.02	0.2	3.7	0.22	0.24	218	2.4	<0.02	6.0	0.25	0.1	<0.02
013K831477	Sediment Pulp	40.5	17.7	0.13	72.3	0.022	<20	1.70	0.018	0.03	0.1	1.5	0.05	0.17	49	0.9	<0.02	2.2	0.21	<0.1	<0.02
013K831478	Sediment Pulp	50.1	23.5	0.10	146.4	0.038	<20	2.17	0.016	0.02	0.2	2.1	0.07	0.22	159	1.3	<0.02	5.6	0.32	<0.1	<0.02
013K831479	Sediment Pulp	72.6	33.3	0.15	333.9	0.028	<20	2.15	0.021	0.05	0.4	5.5	0.31	0.21	75	4.3	<0.02	3.5	0.44	0.2	<0.02
013K831480	Sediment Pulp	32.9	23.0	0.45	138.2	0.082	<20	2.56	0.078	0.07	0.6	4.8	0.17	0.11	74	0.9	<0.02	5.7	0.52	0.1	<0.02
013K831481	Sediment Pulp	43.5	18.7	0.14	77.5	0.025	<20	1.75	0.020	0.03	0.2	1.7	0.06	0.18	47	1.0	<0.02	2.5	0.23	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831452	Sediment Pulp	1.35	7.0	0.3	<0.05	4.8	43.30	71.5	0.03	2	0.8	6.7	15.88	53.70	9.47	1.85	8.00	1.31	7.15	1.60	4.36
013K831453	Sediment Pulp	0.97	3.7	0.2	<0.05	3.9	37.44	67.7	<0.02	19	0.9	4.7	13.01	43.71	8.46	2.11	6.96	1.25	6.66	1.42	3.73
013K831454	Sediment Pulp	1.25	7.2	0.3	<0.05	2.6	29.99	81.4	0.03	3	0.7	9.4	11.21	38.73	7.36	1.60	6.42	1.08	5.78	1.17	3.22
013K831455	Sediment Pulp	0.83	3.7	0.2	<0.05	2.6	36.73	85.2	0.03	3	1.2	5.4	12.01	39.67	8.02	1.84	7.37	1.29	7.22	1.49	3.85
013K831456	Sediment Pulp	2.03	25.8	1.2	<0.05	6.0	18.94	80.7	0.04	<1	0.8	21.3	11.81	38.02	6.84	1.20	4.46	0.78	3.72	0.72	2.11
013K831457	Sediment Pulp	1.19	7.7	0.4	<0.05	2.5	21.06	76.5	<0.02	<1	0.6	14.6	12.03	41.45	6.58	1.52	5.20	0.81	3.92	0.79	2.07
013K831458	Sediment Pulp	1.09	5.9	0.3	<0.05	2.7	33.88	61.5	0.02	12	0.9	9.1	12.29	41.24	7.59	2.38	7.22	1.23	6.08	1.24	3.37
013K831459	Sediment Pulp	0.79	2.8	0.1	<0.05	1.3	31.46	89.0	0.02	<1	0.9	2.4	16.61	57.49	9.28	2.19	7.65	1.19	5.83	1.14	3.14
013K831460	Sediment Pulp	1.36	3.2	0.2	<0.05	3.7	54.05	174.5	0.04	3	2.6	4.5	25.75	85.67	14.91	3.24	12.32	1.98	10.55	2.14	5.50
013K831461	Sediment Pulp	0.65	0.9	0.1	<0.05	0.8	15.69	52.4	<0.02	3	0.3	1.3	7.55	26.87	4.88	1.15	3.99	0.61	3.09	0.60	1.46
013K831462	Sediment Pulp	1.32	2.3	0.2	<0.05	1.4	31.91	118.0	0.04	<1	1.2	3.4	15.92	54.52	9.82	2.28	7.29	1.34	6.88	1.31	3.17
013K831463	Sediment Pulp	0.79	2.5	0.2	<0.05	2.0	36.91	86.1	<0.02	<1	1.1	3.9	17.16	58.77	10.56	2.44	9.10	1.43	7.09	1.40	3.46
013K831464	Sediment Pulp	0.83	2.3	0.2	<0.05	2.2	37.08	91.2	<0.02	2	0.7	4.2	18.37	63.86	11.43	2.69	9.37	1.44	7.53	1.50	3.91
013K831465	Sediment Pulp	0.63	3.5	3.7	<0.05	1.2	10.36	18.8	0.55	19	<0.1	4.5	3.16	12.48	2.49	0.53	2.21	0.33	1.75	0.39	1.06
013K831466	Sediment Pulp	0.30	1.0	0.2	<0.05	0.6	12.92	36.2	<0.02	<1	<0.1	1.7	6.36	23.02	4.11	1.03	3.24	0.48	2.36	0.45	1.14
013K831467	Sediment Pulp	0.44	1.5	0.1	<0.05	1.5	25.20	44.4	<0.02	10	0.4	2.2	11.05	35.96	6.67	1.71	5.45	0.88	4.57	0.87	2.29
013K831468	Sediment Pulp	0.67	0.9	0.2	<0.05	0.7	17.22	54.4	<0.02	3	0.1	1.3	8.12	28.40	5.01	1.17	4.35	0.68	3.27	0.59	1.58
013K831469	Sediment Pulp	1.01	2.9	0.2	<0.05	1.9	52.87	114.0	0.03	11	1.5	5.3	22.38	85.12	15.91	3.34	13.20	1.85	9.54	1.87	4.71
013K831470	Sediment Pulp	0.63	1.4	0.3	<0.05	0.5	18.93	57.5	<0.02	2	0.6	2.8	9.09	34.40	6.13	1.19	5.13	0.68	3.58	0.69	1.80
013K831471	Sediment Pulp	0.57	1.8	0.1	<0.05	0.8	33.25	138.7	0.02	1	0.5	2.1	15.75	58.29	10.56	1.77	8.79	1.13	5.89	1.13	3.03
013K831472	Sediment Pulp	0.43	1.9	0.2	<0.05	0.3	15.94	38.6	<0.02	5	0.4	2.6	6.80	26.64	4.63	0.86	3.83	0.51	2.84	0.53	1.49
013K831473	Sediment Pulp	1.16	2.8	0.2	<0.05	1.3	65.23	193.5	0.03	3	1.0	2.8	30.85	118.81	20.05	3.28	16.96	2.19	11.85	2.34	6.47
013K831474	Sediment Pulp	0.86	3.8	0.3	<0.05	0.8	35.02	101.2	0.02	1	0.7	4.4	15.92	59.10	10.54	1.89	8.83	1.19	6.59	1.22	3.27
013K831475	Sediment Pulp	1.06	2.4	0.2	<0.05	0.7	20.47	85.4	<0.02	4	0.8	5.2	11.55	44.22	7.62	1.45	6.15	0.77	4.29	0.76	1.99
013K831476	Sediment Pulp	1.33	1.4	0.2	<0.05	0.9	35.32	129.3	0.04	<1	0.9	2.1	15.76	59.04	10.23	2.16	9.11	1.19	6.88	1.23	3.42
013K831477	Sediment Pulp	0.44	1.8	0.2	<0.05	1.1	17.48	67.7	<0.02	1	0.7	3.7	10.60	39.00	6.77	1.14	5.05	0.61	3.25	0.62	1.79
013K831478	Sediment Pulp	1.50	2.1	0.3	<0.05	0.7	24.81	97.4	0.03	2	0.9	2.3	13.09	46.88	8.27	1.32	5.89	0.88	4.96	0.92	2.66
013K831479	Sediment Pulp	0.42	4.0	0.3	<0.05	0.9	44.36	103.5	0.03	3	0.7	4.1	19.15	71.54	12.63	1.69	11.06	1.41	8.18	1.55	4.36
013K831480	Sediment Pulp	0.70	7.3	0.4	<0.05	1.2	21.42	66.3	0.03	<1	0.4	8.6	8.87	34.32	6.20	0.93	5.03	0.70	4.37	0.82	2.35
013K831481	Sediment Pulp	0.46	2.1	0.2	<0.05	0.3	18.95	74.3	<0.02	2	0.5	4.2	11.34	41.71	6.90	1.31	5.81	0.67	3.84	0.69	1.97



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K831452	Sediment Pulp		0.67	3.58	0.57	<10	<2
013K831453	Sediment Pulp		0.54	3.07	0.47	<10	3
013K831454	Sediment Pulp		0.46	2.49	0.41	<10	2
013K831455	Sediment Pulp		0.59	3.13	0.49	<10	2
013K831456	Sediment Pulp		0.30	1.73	0.26	<10	<2
013K831457	Sediment Pulp		0.30	1.70	0.24	<10	<2
013K831458	Sediment Pulp		0.49	2.53	0.41	<10	5
013K831459	Sediment Pulp		0.43	2.30	0.36	<10	<2
013K831460	Sediment Pulp		0.79	4.56	0.61	<10	<2
013K831461	Sediment Pulp		0.22	1.12	0.18	<10	<2
013K831462	Sediment Pulp		0.45	2.44	0.31	<10	<2
013K831463	Sediment Pulp		0.51	2.74	0.40	<10	<2
013K831464	Sediment Pulp		0.51	2.97	0.40	<10	<2
013K831465	Sediment Pulp		0.15	0.89	0.14	<10	<2
013K831466	Sediment Pulp		0.16	0.91	0.13	<10	<2
013K831467	Sediment Pulp		0.32	1.96	0.33	<10	<2
013K831468	Sediment Pulp		0.21	1.26	0.18	<10	<2
013K831469	Sediment Pulp		0.71	4.14	0.56	<10	<2
013K831470	Sediment Pulp		0.28	1.42	0.21	<10	<2
013K831471	Sediment Pulp		0.45	2.68	0.40	<10	<2
013K831472	Sediment Pulp		0.21	1.27	0.17	<10	<2
013K831473	Sediment Pulp		0.93	5.74	0.82	<10	<2
013K831474	Sediment Pulp		0.47	2.89	0.42	<10	<2
013K831475	Sediment Pulp		0.28	1.65	0.20	<10	<2
013K831476	Sediment Pulp		0.45	2.75	0.35	<10	<2
013K831477	Sediment Pulp		0.23	1.44	0.20	<10	<2
013K831478	Sediment Pulp		0.37	2.12	0.28	<10	<2
013K831479	Sediment Pulp		0.62	3.80	0.57	<10	3
013K831480	Sediment Pulp		0.31	1.87	0.25	<10	<2
013K831481	Sediment Pulp		0.26	1.53	0.21	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831482	Sediment Pulp	0.89	33.01	28.99	134.5	2823	46.0	29.1	1269	3.19	25.1	4.0	13.7	8.3	29.6	0.59	0.72	3.32	51	0.64	0.097
013K831483	Sediment Pulp	2.48	34.18	4.45	118.4	281	23.6	53.9	5445	6.82	1.0	3.5	0.9	2.5	34.8	0.68	<0.02	0.03	91	0.55	0.244
013K831484	Sediment Pulp	2.62	13.30	2.11	42.3	199	8.3	2.7	68	0.72	<0.1	2.2	0.8	0.2	19.9	0.25	0.02	<0.02	25	0.42	0.073
013K831485	Sediment Pulp	1.99	13.49	2.10	45.5	190	9.4	2.5	68	0.71	<0.1	2.2	1.0	0.4	16.3	0.28	<0.02	0.05	23	0.35	0.060
013K831486	Sediment Pulp	6.12	25.32	4.93	84.6	372	12.7	20.4	591	5.77	<0.1	3.8	0.7	1.1	24.2	0.68	<0.02	0.04	99	0.50	0.213
013K831487	Sediment Pulp	6.74	19.35	8.73	103.1	122	20.0	16.6	467	3.34	0.6	9.9	1.0	1.3	16.1	0.61	0.04	0.05	59	0.34	0.077
013K831488	Sediment Pulp	2.90	36.91	7.21	77.7	171	23.3	19.2	1617	3.71	2.1	26.0	0.7	5.2	29.5	0.43	0.04	0.06	51	0.57	0.121
013K831489	Sediment Pulp	11.59	41.51	5.88	120.0	430	18.2	29.4	689	6.04	0.5	4.5	0.9	1.7	16.7	0.80	0.02	0.03	57	0.38	0.125
013K831490	Sediment Pulp	3.15	37.26	8.88	133.9	434	9.5	15.6	719	2.33	0.2	8.9	1.0	1.4	22.1	0.78	0.03	0.02	32	0.68	0.166
013K831491	Sediment Pulp	22.70	43.66	4.74	77.1	339	13.6	22.7	413	3.26	<0.1	12.1	1.2	0.6	20.5	0.62	<0.02	<0.02	60	0.55	0.171
013K831492	Sediment Pulp	2.62	45.06	3.94	121.2	157	26.1	24.3	473	2.93	1.0	6.4	0.8	2.6	47.7	0.47	0.03	0.03	63	0.76	0.196
013K831493	Sediment Pulp	4.14	32.88	3.52	122.2	319	19.2	85.7	>10000	13.03	3.8	3.4	1.2	2.0	34.0	0.62	0.03	0.02	68	0.47	0.224
013K831494	Sediment Pulp	4.58	22.15	2.83	109.5	171	19.5	20.7	1790	2.96	<0.1	0.8	0.6	1.2	62.2	0.73	<0.02	0.02	37	1.04	0.240
013K831495	Sediment Pulp	0.40	16.12	3.74	58.5	22	31.9	11.6	205	1.88	0.2	0.5	8.6	1.6	65.8	0.19	0.02	<0.02	35	0.92	0.076
013K831496	Sediment Pulp	1.19	14.92	1.63	68.8	66	13.4	6.0	98	0.85	0.2	1.5	<0.2	0.2	28.2	0.41	<0.02	<0.02	54	0.52	0.088
013K831497	Sediment Pulp	1.12	13.73	2.88	58.4	62	13.1	7.5	81	0.82	<0.1	0.8	0.6	0.2	29.4	0.32	0.09	<0.02	25	0.44	0.074
013K831498	Sediment Pulp	2.70	14.11	1.78	73.2	100	9.5	6.9	183	1.45	<0.1	1.4	0.4	0.2	27.6	0.41	0.03	<0.02	33	0.41	0.132
013K831499	Sediment Pulp	0.97	9.77	1.48	83.4	76	9.6	4.7	183	0.59	<0.1	0.3	0.6	0.1	20.3	0.35	<0.02	<0.02	20	0.39	0.135
013K831500	Sediment Pulp	0.52	12.37	5.85	89.9	48	19.2	12.2	479	1.82	0.3	0.5	0.7	0.7	35.2	0.53	0.03	0.03	38	0.45	0.081
013K831501	Sediment Pulp	3.30	17.76	2.64	101.4	119	19.2	8.7	306	3.07	0.4	0.9	0.9	0.6	22.3	0.41	0.02	<0.02	73	0.47	0.150
013K831502	Sediment Pulp	1.07	10.96	1.82	50.1	84	11.7	5.7	98	1.47	<0.1	0.4	0.6	0.2	23.6	0.30	<0.02	<0.02	58	0.44	0.074
013K831503	Sediment Pulp	1.06	11.33	1.79	54.9	82	11.5	5.2	91	1.35	<0.1	0.4	0.6	0.2	22.6	0.23	0.03	<0.02	57	0.43	0.070
013K831504	Sediment Pulp	0.77	18.71	9.02	89.0	61	25.1	11.3	257	2.27	0.5	0.9	0.6	0.9	34.6	0.42	0.05	0.04	66	0.52	0.078
013K831505	Sediment Pulp	1.88	15.87	2.16	76.5	81	18.7	9.5	188	1.87	<0.1	2.7	1.0	0.8	27.9	0.27	<0.02	0.03	83	0.52	0.096
013K831506	Sediment Pulp	2.58	17.75	1.54	91.8	154	13.6	11.6	308	3.41	<0.1	1.0	0.6	0.5	18.3	0.50	<0.02	<0.02	89	0.39	0.133
013K831507	Sediment Pulp	2.48	22.45	2.41	130.4	296	24.3	32.0	4700	4.79	0.2	0.9	1.1	0.8	25.3	0.70	<0.02	0.02	81	0.39	0.259
013K831508	Sediment Pulp	3.24	16.69	2.50	98.2	109	19.0	7.9	292	2.96	0.1	0.8	0.9	0.6	20.7	0.47	0.02	0.02	70	0.44	0.145
013K831509	Sediment Pulp	0.80	10.36	2.11	74.9	50	14.8	8.5	102	4.09	<0.1	0.3	0.6	0.8	22.7	0.26	0.06	<0.02	55	0.36	0.068
013K831510	Sediment Pulp	0.76	14.87	3.22	75.8	64	18.3	8.8	244	1.92	0.2	0.5	0.8	0.8	27.9	0.31	0.03	<0.02	63	0.50	0.112
013K831511	Sediment Pulp	1.07	14.26	1.39	47.5	80	12.4	6.6	79	0.56	0.2	0.7	0.7	0.2	22.6	0.29	0.02	<0.02	26	0.50	0.056



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831482	Sediment Pulp	44.1	51.6	0.83	179.0	0.109	<20	1.72	0.033	0.27	0.2	6.2	0.29	0.15	291	0.7	0.03	6.2	1.50	<0.1	0.13
013K831483	Sediment Pulp	37.5	26.4	0.39	177.3	0.064	<20	3.66	0.086	0.08	0.1	5.7	0.24	0.14	123	1.1	<0.02	6.2	0.55	0.1	0.02
013K831484	Sediment Pulp	32.6	12.4	0.06	81.7	0.016	<20	1.64	0.009	0.01	<0.1	1.6	0.03	0.28	74	0.5	<0.02	2.2	0.20	<0.1	<0.02
013K831485	Sediment Pulp	32.8	11.6	0.06	79.6	0.015	<20	1.55	0.008	0.01	<0.1	1.4	0.03	0.29	66	0.7	<0.02	2.0	0.21	<0.1	<0.02
013K831486	Sediment Pulp	56.1	22.2	0.07	107.9	0.036	<20	2.39	0.009	0.02	0.1	3.8	0.16	0.19	123	1.5	<0.02	5.4	0.26	0.1	<0.02
013K831487	Sediment Pulp	47.2	33.2	0.23	80.3	0.047	<20	1.68	0.017	0.03	0.1	2.9	0.12	0.18	88	1.3	<0.02	4.5	0.54	0.1	<0.02
013K831488	Sediment Pulp	51.6	35.1	0.55	113.0	0.104	<20	1.79	0.058	0.11	<0.1	4.6	0.15	0.07	49	0.2	<0.02	4.9	0.76	0.1	0.04
013K831489	Sediment Pulp	46.1	23.9	0.05	71.7	0.030	<20	3.01	0.007	0.01	0.1	3.3	0.22	0.22	91	1.4	<0.02	3.1	0.19	0.2	<0.02
013K831490	Sediment Pulp	88.3	18.3	0.04	104.4	0.027	<20	3.33	0.007	0.01	<0.1	3.0	0.08	0.34	174	2.0	<0.02	2.7	0.15	0.1	0.04
013K831491	Sediment Pulp	37.4	18.5	0.11	83.2	0.034	<20	2.54	0.008	0.02	0.2	3.0	0.26	0.18	141	1.3	<0.02	4.5	0.28	0.1	<0.02
013K831492	Sediment Pulp	46.5	25.1	0.48	138.1	0.067	<20	2.88	0.083	0.12	0.1	6.5	0.24	0.24	78	0.9	<0.02	4.7	0.59	<0.1	<0.02
013K831493	Sediment Pulp	36.0	20.1	0.26	155.8	0.041	<20	4.26	0.071	0.05	0.1	4.8	0.23	0.15	140	1.8	0.02	5.3	0.40	0.2	0.03
013K831494	Sediment Pulp	19.3	16.4	0.24	74.5	0.031	<20	5.50	0.189	0.04	<0.1	2.5	0.12	0.37	96	2.2	<0.02	7.9	0.28	<0.1	0.05
013K831495	Sediment Pulp	14.4	21.6	0.42	99.7	0.041	<20	3.26	0.201	0.05	<0.1	3.1	0.04	0.07	24	<0.1	<0.02	5.7	0.21	<0.1	0.04
013K831496	Sediment Pulp	21.8	18.9	0.18	52.5	0.016	<20	2.26	0.052	0.03	<0.1	1.4	0.04	0.24	75	0.5	<0.02	3.3	0.20	<0.1	<0.02
013K831497	Sediment Pulp	18.6	20.2	0.20	36.4	0.018	<20	1.71	0.036	0.03	<0.1	1.9	0.04	0.36	93	0.6	<0.02	3.2	0.27	<0.1	<0.02
013K831498	Sediment Pulp	24.9	13.8	0.14	49.0	0.018	<20	2.70	0.033	0.02	<0.1	2.1	0.04	0.24	85	0.9	<0.02	3.4	0.19	<0.1	<0.02
013K831499	Sediment Pulp	12.6	11.8	0.14	32.7	0.016	<20	1.74	0.029	0.02	<0.1	0.9	0.04	0.21	45	0.8	<0.02	2.6	0.21	<0.1	<0.02
013K831500	Sediment Pulp	15.0	24.3	0.39	121.7	0.043	<20	2.76	0.069	0.05	<0.1	3.0	0.08	0.10	41	0.3	<0.02	5.6	0.31	<0.1	<0.02
013K831501	Sediment Pulp	27.9	25.9	0.31	147.7	0.039	<20	2.09	0.032	0.05	<0.1	3.8	0.07	0.15	80	0.4	<0.02	3.8	0.34	<0.1	<0.02
013K831502	Sediment Pulp	16.2	15.0	0.17	43.2	0.022	<20	1.92	0.027	0.03	<0.1	1.9	0.03	0.21	68	0.5	<0.02	2.9	0.23	<0.1	<0.02
013K831503	Sediment Pulp	16.1	14.4	0.16	40.4	0.021	<20	1.83	0.024	0.02	<0.1	1.7	0.03	0.20	53	0.1	<0.02	2.7	0.22	<0.1	<0.02
013K831504	Sediment Pulp	21.3	33.8	0.44	146.6	0.057	<20	2.73	0.087	0.05	<0.1	3.5	0.07	0.13	56	0.4	0.02	6.1	0.32	<0.1	0.03
013K831505	Sediment Pulp	19.5	26.1	0.32	66.6	0.035	<20	1.95	0.059	0.05	0.1	3.2	0.05	0.17	37	0.3	<0.02	3.6	0.28	<0.1	<0.02
013K831506	Sediment Pulp	28.4	23.4	0.16	73.2	0.020	<20	2.47	0.021	0.02	0.1	3.4	0.07	0.18	64	0.8	<0.02	2.9	0.15	<0.1	<0.02
013K831507	Sediment Pulp	31.5	26.4	0.23	262.2	0.031	<20	2.82	0.038	0.04	0.1	4.2	0.19	0.18	132	1.2	<0.02	4.6	0.28	<0.1	0.03
013K831508	Sediment Pulp	26.4	26.0	0.30	142.0	0.037	<20	2.02	0.033	0.05	<0.1	3.6	0.07	0.14	72	0.2	<0.02	3.6	0.32	<0.1	<0.02
013K831509	Sediment Pulp	14.1	22.1	0.21	47.2	0.032	<20	1.89	0.035	0.03	<0.1	2.7	0.06	0.26	63	<0.1	<0.02	3.3	0.28	<0.1	<0.02
013K831510	Sediment Pulp	18.3	35.0	0.38	79.2	0.056	<20	1.78	0.054	0.06	<0.1	2.8	0.07	0.16	44	<0.1	<0.02	4.3	0.35	<0.1	0.03
013K831511	Sediment Pulp	25.9	13.9	0.14	56.9	0.018	<20	1.24	0.020	0.03	<0.1	1.3	0.05	0.32	64	<0.1	<0.02	1.8	0.25	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831482	Sediment Pulp	2.00	26.6	1.3	<0.05	6.3	19.04	78.1	0.04	1	0.7	22.6	10.68	39.13	7.24	1.18	5.22	0.68	3.72	0.72	1.91
013K831483	Sediment Pulp	0.53	6.3	0.4	<0.05	1.0	27.79	79.4	0.04	<1	0.6	8.1	10.00	37.97	7.34	1.30	6.50	0.85	5.53	1.02	2.86
013K831484	Sediment Pulp	0.58	1.1	0.1	<0.05	0.3	17.55	61.5	0.02	<1	0.5	1.4	8.44	31.70	5.82	0.89	5.09	0.68	3.74	0.74	2.10
013K831485	Sediment Pulp	0.58	1.0	0.2	<0.05	0.4	18.20	62.4	<0.02	<1	0.4	1.5	8.51	32.09	5.78	0.94	4.98	0.67	3.58	0.73	1.93
013K831486	Sediment Pulp	1.08	1.5	0.2	<0.05	0.4	32.07	123.4	0.02	<1	0.5	1.7	14.39	55.12	9.90	1.54	8.60	1.10	6.64	1.29	3.61
013K831487	Sediment Pulp	1.11	2.8	0.4	<0.05	0.8	23.12	88.1	<0.02	<1	0.6	6.5	12.01	45.04	7.88	1.15	6.04	0.77	4.65	0.85	2.50
013K831488	Sediment Pulp	1.07	8.5	0.6	<0.05	2.0	25.62	96.9	0.03	<1	0.5	12.8	12.97	45.30	8.33	1.24	6.87	0.88	5.17	0.87	2.60
013K831489	Sediment Pulp	0.74	1.0	<0.1	<0.05	0.8	19.61	97.8	<0.02	<1	0.7	1.3	11.15	39.87	6.33	1.16	5.54	0.68	4.25	0.74	1.98
013K831490	Sediment Pulp	0.80	0.8	0.1	<0.05	1.1	29.77	131.7	0.02	1	0.8	1.0	20.89	73.71	12.12	1.94	9.28	1.17	6.06	1.08	3.03
013K831491	Sediment Pulp	0.93	1.5	0.2	<0.05	0.3	17.18	71.3	<0.02	8	0.4	3.6	10.03	37.74	6.52	1.27	5.17	0.63	3.62	0.67	1.79
013K831492	Sediment Pulp	0.91	8.0	0.4	<0.05	1.3	32.52	91.2	0.03	2	0.5	9.1	12.22	45.91	8.91	1.49	7.90	1.05	6.49	1.20	3.39
013K831493	Sediment Pulp	0.44	3.9	0.2	<0.05	1.4	26.00	66.1	0.03	<1	0.4	5.3	9.29	34.20	6.22	1.36	5.82	0.77	4.71	0.86	2.44
013K831494	Sediment Pulp	0.56	2.5	0.2	<0.05	1.7	12.75	32.7	<0.02	2	0.3	3.5	4.97	18.35	3.64	1.03	3.29	0.41	2.40	0.49	1.22
013K831495	Sediment Pulp	0.52	3.0	0.3	<0.05	1.6	9.24	28.5	<0.02	<1	0.2	4.4	4.23	16.25	2.87	0.66	2.58	0.30	1.82	0.36	1.03
013K831496	Sediment Pulp	0.36	2.0	0.1	<0.05	0.2	17.35	28.2	<0.02	<1	0.2	2.3	6.52	25.38	4.78	1.30	3.91	0.54	3.24	0.62	1.69
013K831497	Sediment Pulp	0.42	2.6	0.3	<0.05	0.3	12.55	28.7	<0.02	<1	0.2	2.6	5.02	19.44	3.48	1.08	2.98	0.37	2.56	0.45	1.27
013K831498	Sediment Pulp	0.55	1.6	0.2	<0.05	0.3	22.29	33.7	<0.02	<1	0.4	2.2	7.17	27.81	5.54	1.44	5.11	0.69	4.45	0.87	2.44
013K831499	Sediment Pulp	0.28	1.7	0.2	<0.05	0.2	8.38	17.6	<0.02	<1	0.2	2.1	3.29	13.10	2.37	0.66	2.05	0.24	1.47	0.28	0.81
013K831500	Sediment Pulp	0.69	3.8	0.3	<0.05	0.6	9.06	29.6	0.02	<1	0.2	5.5	4.20	15.34	2.77	0.82	2.38	0.29	1.96	0.35	1.02
013K831501	Sediment Pulp	0.63	4.4	0.3	<0.05	0.6	16.74	44.2	0.02	<1	0.4	4.9	7.57	27.35	4.88	1.04	4.07	0.53	3.41	0.62	1.83
013K831502	Sediment Pulp	0.44	2.2	0.2	<0.05	0.3	10.50	26.2	<0.02	<1	0.1	2.6	4.66	17.66	3.09	0.99	2.73	0.33	2.13	0.40	1.12
013K831503	Sediment Pulp	0.40	2.0	0.2	<0.05	0.3	10.10	25.5	<0.02	<1	0.3	2.3	4.30	17.29	3.26	0.94	2.81	0.33	2.19	0.40	1.14
013K831504	Sediment Pulp	1.01	4.0	0.6	<0.05	1.0	11.55	39.7	0.02	<1	0.3	6.4	5.61	20.44	3.93	0.87	3.16	0.38	2.52	0.46	1.21
013K831505	Sediment Pulp	0.57	3.7	0.3	<0.05	0.4	12.62	33.8	<0.02	<1	0.4	4.0	5.50	21.04	3.69	0.90	3.23	0.43	2.45	0.49	1.36
013K831506	Sediment Pulp	0.47	1.8	0.2	<0.05	0.6	18.32	40.9	<0.02	<1	0.2	1.9	8.30	29.89	5.37	1.35	4.38	0.58	3.40	0.66	1.92
013K831507	Sediment Pulp	0.39	3.0	0.3	<0.05	0.7	20.08	49.8	<0.02	<1	0.3	3.5	8.84	32.44	5.91	1.52	4.92	0.65	3.68	0.72	2.04
013K831508	Sediment Pulp	0.64	4.1	0.3	<0.05	0.7	15.68	42.1	<0.02	<1	0.3	5.0	7.46	27.26	4.54	1.09	4.26	0.55	3.08	0.60	1.65
013K831509	Sediment Pulp	0.58	2.5	0.3	<0.05	0.6	9.00	23.4	<0.02	<1	0.2	3.2	4.03	15.07	2.64	0.73	2.16	0.28	1.64	0.31	0.98
013K831510	Sediment Pulp	0.96	5.1	0.3	<0.05	1.2	9.64	36.4	<0.02	<1	0.2	5.6	5.12	18.83	3.16	0.70	2.69	0.35	1.96	0.37	0.98
013K831511	Sediment Pulp	0.43	2.4	0.2	<0.05	0.3	13.00	37.7	<0.02	<1	<0.1	2.7	7.05	27.71	4.72	1.20	3.69	0.47	2.79	0.50	1.33



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Project: None Given
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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831482	Sediment Pulp	0.32	1.76	0.26	<10	<2
013K831483	Sediment Pulp	0.39	2.56	0.36	<10	2
013K831484	Sediment Pulp	0.27	1.68	0.21	<10	<2
013K831485	Sediment Pulp	0.26	1.64	0.20	<10	<2
013K831486	Sediment Pulp	0.48	3.22	0.43	<10	<2
013K831487	Sediment Pulp	0.36	2.05	0.28	<10	<2
013K831488	Sediment Pulp	0.39	2.36	0.31	<10	<2
013K831489	Sediment Pulp	0.29	1.73	0.23	<10	<2
013K831490	Sediment Pulp	0.40	2.43	0.35	<10	<2
013K831491	Sediment Pulp	0.25	1.46	0.19	<10	<2
013K831492	Sediment Pulp	0.50	3.04	0.45	<10	<2
013K831493	Sediment Pulp	0.37	2.14	0.30	<10	<2
013K831494	Sediment Pulp	0.18	1.18	0.15	<10	<2
013K831495	Sediment Pulp	0.14	0.84	0.11	<10	<2
013K831496	Sediment Pulp	0.26	1.56	0.23	<10	<2
013K831497	Sediment Pulp	0.18	1.12	0.18	<10	<2
013K831498	Sediment Pulp	0.33	2.02	0.28	<10	<2
013K831499	Sediment Pulp	0.10	0.69	0.10	<10	<2
013K831500	Sediment Pulp	0.15	0.85	0.13	<10	<2
013K831501	Sediment Pulp	0.25	1.52	0.23	<10	<2
013K831502	Sediment Pulp	0.16	0.94	0.13	<10	<2
013K831503	Sediment Pulp	0.15	0.99	0.15	<10	<2
013K831504	Sediment Pulp	0.18	1.06	0.14	<10	<2
013K831505	Sediment Pulp	0.19	1.19	0.17	<10	<2
013K831506	Sediment Pulp	0.27	1.74	0.25	<10	<2
013K831507	Sediment Pulp	0.29	1.77	0.27	<10	<2
013K831508	Sediment Pulp	0.23	1.46	0.23	<10	<2
013K831509	Sediment Pulp	0.11	0.80	0.11	<10	<2
013K831510	Sediment Pulp	0.14	0.84	0.13	<10	<2
013K831511	Sediment Pulp	0.17	1.07	0.16	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831512	Sediment Pulp	1.36	9.76	1.04	63.7	57	8.5	8.2	62	0.55	0.1	0.4	0.5	0.3	26.2	0.69	<0.02	<0.02	27	0.45	0.048
013K831513	Sediment Pulp	0.94	13.57	2.12	98.3	61	16.4	7.1	131	1.13	<0.1	0.7	0.4	0.4	25.6	0.33	0.02	<0.02	46	0.52	0.060
013K831514	Sediment Pulp	1.86	19.49	2.91	82.0	231	14.4	7.9	417	1.69	0.5	0.7	0.8	0.2	25.5	0.56	0.04	0.02	35	0.44	0.112
013K831515	Sediment Pulp	1.60	19.71	2.68	69.5	91	18.7	8.6	149	1.09	0.3	1.3	0.6	0.6	28.9	0.30	0.05	0.02	41	0.52	0.046
013K831516	Sediment Pulp	9.49	41.05	86.60	287.6	710	11.3	7.4	431	1.75	34.7	8.9	2.5	1.3	63.1	1.33	0.58	0.92	21	6.14	0.068
013K831517	Sediment Pulp	0.42	7.56	2.56	124.5	45	12.5	10.8	338	1.87	0.9	0.9	0.3	0.5	25.9	0.61	0.04	<0.02	58	0.49	0.121
013K831518	Sediment Pulp	1.30	12.35	2.28	85.9	150	12.4	6.2	473	1.83	0.3	0.6	0.7	0.2	30.9	0.39	0.05	0.02	95	0.49	0.295
013K831519	Sediment Pulp	1.16	23.09	2.36	91.0	110	21.7	9.0	285	1.42	0.6	0.9	1.0	0.9	55.7	0.48	0.03	<0.02	54	0.73	0.151
013K831520	Sediment Pulp	0.95	10.33	1.22	44.5	43	14.1	5.9	40	0.44	<0.1	0.3	0.5	0.2	32.0	0.25	0.02	<0.02	21	0.49	0.046
013K831521	Sediment Pulp	0.42	9.68	3.66	65.8	29	16.3	9.3	117	1.38	0.1	0.3	<0.2	0.6	32.7	0.19	0.05	<0.02	27	0.47	0.080
013K831522	Sediment Pulp	1.26	12.23	1.59	72.1	122	10.8	5.7	255	1.56	0.3	1.1	0.6	0.3	35.0	0.34	0.02	<0.02	73	0.60	0.246
013K831523	Sediment Pulp	0.94	32.46	23.95	128.7	2709	44.8	27.4	1222	3.06	24.8	3.8	3.0	7.5	26.1	0.50	0.63	3.14	48	0.59	0.089
013K831524	Sediment Pulp	0.68	9.67	2.72	72.5	51	11.5	5.0	79	0.70	<0.1	0.3	0.5	0.2	27.5	0.35	0.02	<0.02	22	0.44	0.081
013K831525	Sediment Pulp	0.64	7.64	1.53	53.2	45	9.6	4.5	70	0.60	<0.1	0.3	0.4	0.2	26.2	0.28	<0.02	0.02	19	0.46	0.071
013K831526	Sediment Pulp	0.75	12.57	1.47	55.6	35	9.5	5.0	94	0.60	0.2	0.5	0.2	0.4	22.3	0.21	<0.02	<0.02	27	0.37	0.065
013K831527	Sediment Pulp	2.24	12.70	2.27	93.0	105	14.1	21.4	4212	5.77	0.3	0.4	0.7	1.2	36.0	0.50	<0.02	0.02	45	0.42	0.340
013K831528	Sediment Pulp	3.06	20.13	2.45	117.3	159	12.5	17.6	819	3.80	<0.1	0.4	<0.2	0.9	23.8	0.86	0.02	0.03	46	0.31	0.335
013K831529	Sediment Pulp	1.74	16.26	2.77	83.5	114	15.6	8.2	225	1.67	<0.1	0.5	0.5	0.2	26.5	0.42	0.03	0.02	55	0.44	0.146
013K831530	Sediment Pulp	0.47	10.40	4.06	69.2	28	16.5	9.2	126	1.48	0.3	0.4	0.3	0.6	31.6	0.18	0.06	<0.02	30	0.45	0.081
013K831531	Sediment Pulp	0.82	19.51	2.28	67.2	195	11.9	7.0	162	1.10	<0.1	0.6	0.6	0.2	33.6	0.49	0.03	0.02	28	0.63	0.154
013K831532	Sediment Pulp	3.87	25.27	2.24	72.6	183	14.1	7.3	216	2.53	<0.1	0.7	0.6	0.3	36.7	0.57	0.03	<0.02	48	0.63	0.253
013K831533	Sediment Pulp	1.27	21.32	3.62	99.6	251	16.0	18.7	1227	2.80	<0.1	0.5	0.7	0.5	34.6	0.91	0.04	0.03	46	0.53	0.234
013K831534	Sediment Pulp	1.24	28.48	2.58	84.4	121	21.6	25.4	606	2.67	0.1	0.8	0.4	1.0	59.0	0.54	<0.02	<0.02	104	0.93	0.184
013K831535	Sediment Pulp	3.87	209.94	8.04	192.5	482	55.0	11.7	323	1.39	0.9	20.8	3.3	1.9	29.9	1.78	0.26	0.04	35	0.92	0.054
013K831536	Sediment Pulp	13.10	93.27	8.27	185.0	901	30.7	22.9	5572	5.44	5.8	77.6	1.5	1.5	29.4	1.62	0.13	0.06	37	0.61	0.293
013K831537	Sediment Pulp	1.57	60.59	24.34	136.4	447	16.3	5.4	425	1.10	1.2	16.5	1.3	0.6	55.6	1.50	0.07	0.04	39	0.93	0.220
013K831538	Sediment Pulp	4.18	47.34	3.54	51.3	111	9.9	4.9	89	0.86	4.1	11.7	1.0	1.2	32.1	0.27	0.19	0.02	32	0.74	0.052
013K831539	Sediment Pulp	2.37	31.76	4.06	121.0	110	20.5	9.3	241	1.35	6.5	6.4	0.5	0.5	28.4	0.60	0.11	0.03	112	0.66	0.075
013K831540	Sediment Pulp	4.68	52.77	3.87	136.2	254	21.7	10.1	419	2.69	18.1	9.3	0.7	0.9	42.1	0.79	0.11	0.02	141	0.76	0.180



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Project: None Given
Report Date: April 14, 2022

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CERTIFICATE OF ANALYSIS

VAN22000377.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831512	Sediment Pulp	16.6	12.0	0.08	25.7	0.013	<20	0.67	0.014	0.02	<0.1	1.6	0.05	0.41	68	<0.1	<0.02	1.0	0.20	<0.1	<0.02
013K831513	Sediment Pulp	31.5	20.8	0.26	84.6	0.037	<20	1.68	0.030	0.04	<0.1	2.7	0.08	0.21	55	<0.1	<0.02	3.3	0.42	<0.1	<0.02
013K831514	Sediment Pulp	20.3	19.3	0.20	120.3	0.024	<20	1.70	0.015	0.05	<0.1	1.9	0.05	0.25	76	<0.1	<0.02	2.7	0.36	<0.1	<0.02
013K831515	Sediment Pulp	27.4	22.5	0.27	253.3	0.032	<20	1.47	0.022	0.08	<0.1	3.4	0.12	0.25	72	<0.1	<0.02	2.5	0.36	<0.1	0.03
013K831516	Sediment Pulp	10.9	12.1	0.59	94.9	0.040	<20	0.44	0.029	0.05	0.6	2.4	0.21	1.53	99	0.5	<0.02	1.9	0.50	<0.1	0.03
013K831517	Sediment Pulp	17.5	25.4	0.26	102.4	0.043	<20	1.28	0.042	0.04	<0.1	2.1	0.10	0.16	45	<0.1	<0.02	3.1	0.38	<0.1	<0.02
013K831518	Sediment Pulp	16.0	35.6	0.22	109.6	0.025	<20	1.91	0.030	0.04	<0.1	2.0	0.05	0.21	88	0.3	<0.02	3.5	0.30	<0.1	<0.02
013K831519	Sediment Pulp	24.6	28.6	0.43	213.1	0.038	<20	2.37	0.070	0.08	<0.1	4.5	0.10	0.14	75	0.3	<0.02	3.6	0.29	<0.1	0.04
013K831520	Sediment Pulp	14.8	13.2	0.11	38.6	0.016	<20	0.94	0.022	0.02	<0.1	1.6	0.03	0.37	54	<0.1	<0.02	1.5	0.20	<0.1	<0.02
013K831521	Sediment Pulp	11.8	18.2	0.31	59.8	0.034	<20	2.74	0.098	0.03	<0.1	2.5	0.04	0.09	24	<0.1	<0.02	5.5	0.28	<0.1	0.02
013K831522	Sediment Pulp	15.6	20.7	0.16	85.6	0.019	<20	1.98	0.029	0.03	0.2	1.9	0.03	0.24	85	0.3	<0.02	2.5	0.20	<0.1	<0.02
013K831523	Sediment Pulp	43.2	48.6	0.79	165.6	0.100	<20	1.61	0.031	0.26	0.2	5.6	0.28	0.16	244	0.2	0.04	5.8	1.41	<0.1	0.14
013K831524	Sediment Pulp	15.9	18.3	0.20	46.6	0.022	<20	1.27	0.028	0.03	<0.1	1.7	0.04	0.32	52	<0.1	<0.02	2.7	0.30	<0.1	<0.02
013K831525	Sediment Pulp	14.1	14.7	0.16	34.5	0.018	<20	1.13	0.028	0.03	<0.1	1.4	0.03	0.32	40	<0.1	<0.02	2.1	0.26	<0.1	<0.02
013K831526	Sediment Pulp	18.2	14.4	0.16	67.7	0.021	<20	1.04	0.046	0.03	<0.1	2.8	0.05	0.11	33	<0.1	<0.02	1.8	0.15	<0.1	<0.02
013K831527	Sediment Pulp	17.4	22.3	0.23	201.7	0.030	<20	2.39	0.056	0.04	<0.1	4.2	0.08	0.14	65	0.3	<0.02	4.2	0.30	<0.1	0.03
013K831528	Sediment Pulp	30.4	17.3	0.18	88.8	0.023	<20	3.32	0.032	0.03	<0.1	5.4	0.09	0.26	100	1.2	<0.02	4.3	0.27	0.1	0.05
013K831529	Sediment Pulp	20.1	21.3	0.21	85.7	0.019	<20	3.17	0.039	0.03	<0.1	1.8	0.04	0.26	79	0.8	<0.02	5.3	0.25	<0.1	<0.02
013K831530	Sediment Pulp	12.8	19.5	0.33	63.5	0.032	<20	2.95	0.095	0.03	<0.1	2.3	0.04	0.10	33	<0.1	<0.02	5.9	0.29	<0.1	<0.02
013K831531	Sediment Pulp	18.0	12.7	0.12	62.7	0.018	<20	4.36	0.034	0.02	<0.1	1.1	0.04	0.43	135	1.1	<0.02	4.4	0.17	<0.1	<0.02
013K831532	Sediment Pulp	17.5	14.1	0.14	38.1	0.020	<20	4.25	0.061	0.02	0.1	1.7	0.05	0.24	153	1.8	<0.02	6.1	0.22	<0.1	<0.02
013K831533	Sediment Pulp	21.0	15.8	0.19	77.6	0.031	<20	4.27	0.048	0.04	<0.1	2.2	0.08	0.30	170	1.7	<0.02	6.3	0.27	<0.1	0.03
013K831534	Sediment Pulp	22.2	22.2	0.32	71.0	0.039	<20	4.25	0.145	0.04	<0.1	4.5	0.11	0.12	110	0.7	<0.02	7.3	0.24	<0.1	0.05
013K831535	Sediment Pulp	149.4	42.6	0.34	464.7	0.027	<20	2.18	0.016	0.11	<0.1	10.0	0.49	0.45	224	2.0	<0.02	2.9	0.70	0.1	0.09
013K831536	Sediment Pulp	64.9	31.7	0.33	371.3	0.029	<20	2.55	0.018	0.09	0.2	5.8	0.30	0.30	200	4.3	<0.02	3.5	0.83	0.1	0.04
013K831537	Sediment Pulp	88.6	24.2	0.21	395.8	0.016	22	2.03	0.023	0.05	0.2	3.8	0.13	0.43	122	2.0	<0.02	2.4	0.52	0.1	0.04
013K831538	Sediment Pulp	27.9	21.4	0.25	173.5	0.034	23	0.48	0.022	0.05	<0.1	3.1	0.07	0.88	61	2.5	<0.02	1.6	0.75	<0.1	0.08
013K831539	Sediment Pulp	38.8	27.1	0.29	209.0	0.032	<20	1.40	0.016	0.04	0.2	3.5	0.11	0.24	68	1.4	<0.02	2.8	0.63	<0.1	<0.02
013K831540	Sediment Pulp	45.3	29.5	0.21	348.1	0.022	<20	1.99	0.014	0.04	0.3	3.9	0.17	0.24	118	2.9	<0.02	2.5	0.47	<0.1	0.05



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831512	Sediment Pulp	0.32	1.2	0.2	<0.05	0.4	10.44	23.5	<0.02	<1	0.2	1.5	4.78	18.36	3.31	0.85	2.63	0.34	1.82	0.37
013K831513	Sediment Pulp	0.75	3.4	0.3	<0.05	0.8	15.43	40.4	<0.02	<1	0.2	5.6	8.76	31.24	5.38	1.26	4.53	0.58	3.27	0.58
013K831514	Sediment Pulp	0.47	3.8	0.3	<0.05	0.4	12.69	43.1	<0.02	1	0.3	4.6	5.95	22.02	4.18	0.98	3.24	0.45	2.54	0.46
013K831515	Sediment Pulp	0.71	5.6	0.2	<0.05	1.2	18.67	46.9	<0.02	2	0.4	7.7	7.93	30.43	5.92	1.21	4.89	0.65	3.48	0.68
013K831516	Sediment Pulp	0.70	3.4	3.4	<0.05	1.2	10.44	17.5	0.52	19	<0.1	3.9	2.91	11.54	2.53	0.51	1.98	0.30	1.78	0.35
013K831517	Sediment Pulp	0.72	3.2	0.3	<0.05	0.6	10.35	31.8	<0.02	<1	0.1	4.5	4.87	17.27	3.21	0.62	2.60	0.30	1.84	0.38
013K831518	Sediment Pulp	0.45	3.2	0.3	<0.05	0.3	10.79	27.2	<0.02	<1	0.2	3.1	4.53	17.26	3.09	0.83	2.60	0.36	1.97	0.44
013K831519	Sediment Pulp	0.77	5.3	0.3	<0.05	1.2	18.68	39.9	<0.02	<1	0.4	4.8	7.27	27.45	5.07	1.30	4.36	0.60	3.55	0.71
013K831520	Sediment Pulp	0.36	1.4	0.2	<0.05	0.5	9.19	22.2	<0.02	<1	<0.1	1.8	4.04	16.30	3.02	0.87	2.30	0.30	1.77	0.34
013K831521	Sediment Pulp	0.54	2.1	0.3	<0.05	0.6	7.10	22.7	<0.02	<1	0.1	4.6	3.28	12.95	2.43	0.56	1.92	0.25	1.51	0.28
013K831522	Sediment Pulp	0.39	1.9	0.1	<0.05	0.5	10.22	24.2	<0.02	1	0.2	1.9	4.23	15.92	2.74	0.82	2.51	0.32	1.79	0.41
013K831523	Sediment Pulp	2.03	24.8	1.2	<0.05	5.7	18.55	74.3	0.05	3	0.7	20.1	10.45	36.45	6.35	0.93	5.22	0.64	3.47	0.68
013K831524	Sediment Pulp	0.41	2.8	0.2	<0.05	0.4	10.73	23.8	<0.02	<1	0.1	2.8	4.56	18.10	3.02	0.89	2.76	0.34	1.93	0.38
013K831525	Sediment Pulp	0.38	2.1	0.1	<0.05	0.5	9.35	20.2	<0.02	<1	0.2	2.4	3.90	15.73	2.76	0.88	2.46	0.31	1.74	0.36
013K831526	Sediment Pulp	0.34	2.1	0.2	<0.05	0.4	15.83	24.6	<0.02	<1	0.2	2.2	5.21	19.47	4.05	0.89	3.47	0.45	2.64	0.54
013K831527	Sediment Pulp	0.36	3.4	0.2	<0.05	1.2	13.03	31.4	<0.02	<1	0.3	4.0	4.90	17.98	3.36	0.89	2.91	0.41	2.29	0.49
013K831528	Sediment Pulp	0.49	2.5	0.2	<0.05	1.9	24.57	50.8	<0.02	<1	0.2	3.4	8.62	32.67	6.64	1.45	6.02	0.83	4.85	0.90
013K831529	Sediment Pulp	0.52	2.3	0.2	<0.05	0.8	13.72	32.5	<0.02	<1	0.3	3.5	5.54	22.07	3.95	0.97	3.41	0.44	2.75	0.51
013K831530	Sediment Pulp	0.56	2.2	0.3	<0.05	0.7	7.45	24.7	<0.02	<1	0.2	4.4	3.66	13.94	2.61	0.62	2.14	0.31	1.57	0.29
013K831531	Sediment Pulp	0.62	1.2	0.1	<0.05	0.7	10.65	34.0	<0.02	<1	0.2	1.8	4.91	19.27	3.42	1.01	2.79	0.36	2.10	0.38
013K831532	Sediment Pulp	0.57	1.6	0.1	<0.05	0.5	11.57	31.0	<0.02	3	0.2	2.4	5.00	19.06	3.35	0.99	2.72	0.38	2.17	0.42
013K831533	Sediment Pulp	0.77	2.7	0.2	<0.05	0.7	10.93	42.5	0.02	<1	0.2	3.5	5.51	20.53	3.69	0.98	3.07	0.39	2.09	0.40
013K831534	Sediment Pulp	0.72	2.2	0.2	<0.05	1.3	14.74	42.6	0.02	<1	0.2	4.5	6.26	24.58	4.61	1.06	3.71	0.48	2.81	0.57
013K831535	Sediment Pulp	1.47	8.3	0.2	<0.05	7.7	102.88	69.8	<0.02	7	1.6	8.4	35.28	132.24	24.57	5.40	21.00	2.94	17.17	3.64
013K831536	Sediment Pulp	0.69	7.8	0.2	<0.05	2.2	55.48	78.7	0.03	6	1.1	8.5	16.67	65.73	11.87	2.43	10.57	1.62	8.96	1.85
013K831537	Sediment Pulp	0.61	3.6	0.2	<0.05	1.8	51.05	73.4	<0.02	4	1.1	4.7	22.21	83.98	14.01	3.25	11.97	1.57	8.92	1.70
013K831538	Sediment Pulp	0.78	5.3	0.2	<0.05	4.0	17.07	26.3	<0.02	2	0.3	3.8	6.57	25.04	4.54	0.87	3.87	0.46	2.62	0.51
013K831539	Sediment Pulp	0.89	4.1	0.2	<0.05	1.4	30.43	57.9	<0.02	3	1.2	6.2	10.14	39.61	7.49	1.49	6.29	0.89	5.13	1.00
013K831540	Sediment Pulp	0.81	3.3	0.2	<0.05	2.1	36.96	74.3	<0.02	3	0.9	3.9	12.10	48.13	9.25	1.77	8.45	1.10	6.24	1.28



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K831512	Sediment Pulp	0.15	0.91	0.14	<10	<2
013K831513	Sediment Pulp	0.23	1.32	0.19	<10	<2
013K831514	Sediment Pulp	0.18	1.08	0.16	<10	<2
013K831515	Sediment Pulp	0.25	1.58	0.24	<10	<2
013K831516	Sediment Pulp	0.14	0.83	0.14	<10	<2
013K831517	Sediment Pulp	0.13	0.84	0.13	<10	<2
013K831518	Sediment Pulp	0.16	0.99	0.17	<10	<2
013K831519	Sediment Pulp	0.25	1.69	0.28	<10	<2
013K831520	Sediment Pulp	0.14	0.84	0.13	<10	<2
013K831521	Sediment Pulp	0.11	0.60	0.08	<10	<2
013K831522	Sediment Pulp	0.13	0.92	0.13	<10	<2
013K831523	Sediment Pulp	0.25	1.70	0.24	<10	<2
013K831524	Sediment Pulp	0.15	0.98	0.15	<10	<2
013K831525	Sediment Pulp	0.14	0.80	0.13	<10	<2
013K831526	Sediment Pulp	0.21	1.46	0.22	<10	<2
013K831527	Sediment Pulp	0.18	1.16	0.19	<10	<2
013K831528	Sediment Pulp	0.37	2.28	0.35	<10	<2
013K831529	Sediment Pulp	0.20	1.27	0.17	<10	<2
013K831530	Sediment Pulp	0.11	0.71	0.09	<10	<2
013K831531	Sediment Pulp	0.14	0.94	0.11	<10	<2
013K831532	Sediment Pulp	0.17	1.04	0.12	<10	<2
013K831533	Sediment Pulp	0.14	0.97	0.12	<10	<2
013K831534	Sediment Pulp	0.22	1.34	0.19	<10	<2
013K831535	Sediment Pulp	1.42	9.05	1.46	<10	3
013K831536	Sediment Pulp	0.74	4.55	0.62	<10	<2
013K831537	Sediment Pulp	0.65	3.81	0.60	<10	<2
013K831538	Sediment Pulp	0.16	1.21	0.17	<10	<2
013K831539	Sediment Pulp	0.36	2.33	0.33	<10	<2
013K831540	Sediment Pulp	0.50	3.13	0.42	<10	<2



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
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QUALITY CONTROL REPORT

VAN22000377.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013K831282	Sediment Pulp	0.51	12.43	1.65	50.4	36	11.5	6.6	64	1.10	0.1	0.3	0.4	0.2	44.7	0.33	<0.02	<0.02	20	0.79	0.044
REP 013K831282	QC	0.50	11.95	1.67	53.1	35	11.7	6.6	61	1.09	<0.1	0.3	0.4	0.2	43.5	0.32	<0.02	<0.02	19	0.77	0.044
013K831318	Sediment Pulp	24.72	19.59	5.19	86.8	243	11.6	9.2	185	1.51	0.1	56.7	<0.2	0.2	27.6	0.45	0.04	0.03	45	0.54	0.144
REP 013K831318	QC	24.85	19.19	5.00	79.9	239	10.9	10.1	187	1.53	<0.1	54.8	<0.2	0.2	27.3	0.48	0.03	0.04	46	0.55	0.122
013K831354	Sediment Pulp	22.74	13.75	3.70	90.3	151	15.0	10.3	92	1.60	1.9	19.6	0.6	0.8	47.4	0.84	0.04	<0.02	14	1.17	0.073
REP 013K831354	QC	21.46	13.22	3.40	88.4	136	13.6	9.6	87	1.54	2.1	19.7	0.2	0.9	46.8	0.76	0.03	<0.02	14	1.12	0.076
013K831390	Sediment Pulp	1.36	30.16	3.36	29.5	404	4.9	1.5	35	0.51	0.4	1.8	<0.2	0.1	61.0	0.20	0.03	<0.02	25	0.35	0.123
REP 013K831390	QC	1.40	29.57	3.22	27.8	430	4.8	1.6	34	0.49	0.3	1.8	0.7	0.2	59.6	0.18	0.02	<0.02	24	0.35	0.118
013K831427	Sediment Pulp	4.14	18.23	5.57	45.1	144	7.1	3.4	85	0.99	0.4	2.2	0.4	0.2	37.0	0.20	0.04	<0.02	30	0.26	0.067
REP 013K831427	QC	4.08	17.30	5.51	44.6	140	7.0	3.5	83	0.98	0.3	2.2	0.8	0.2	35.6	0.21	0.03	<0.02	29	0.26	0.063
013K831463	Sediment Pulp	5.23	37.75	6.27	212.8	330	33.7	14.0	1298	3.35	1.9	40.2	0.4	1.4	23.1	1.45	0.04	<0.02	35	0.63	0.140
REP 013K831463	QC	5.16	35.58	6.11	200.1	319	30.7	13.4	1263	3.29	2.0	38.8	0.8	1.4	22.3	1.51	0.06	<0.02	35	0.61	0.139
013K831499	Sediment Pulp	0.97	9.77	1.48	83.4	76	9.6	4.7	183	0.59	<0.1	0.3	0.6	0.1	20.3	0.35	<0.02	<0.02	20	0.39	0.135
REP 013K831499	QC	1.02	10.57	1.57	86.4	76	9.8	4.9	177	0.59	<0.1	0.3	0.5	0.1	21.0	0.38	<0.02	<0.02	20	0.38	0.138
013K831535	Sediment Pulp	3.87	209.94	8.04	192.5	482	55.0	11.7	323	1.39	0.9	20.8	3.3	1.9	29.9	1.78	0.26	0.04	35	0.92	0.054
REP 013K831535	QC	3.90	215.25	8.48	189.7	482	57.2	11.9	323	1.38	0.7	21.5	3.3	2.0	31.7	1.94	0.26	0.05	36	0.92	0.058
Reference Materials																					
STD DS11	Standard	13.24	143.16	129.24	339.2	1484	76.8	13.0	1013	3.00	42.8	2.4	92.6	7.9	64.4	2.44	6.84	11.83	47	1.00	0.072
STD DS11	Standard	13.15	139.64	121.57	335.0	1669	74.1	13.6	998	3.03	45.7	2.3	61.6	6.7	68.3	2.44	7.06	11.42	48	1.01	0.072
STD DS11	Standard	14.21	140.89	130.44	332.7	1582	71.4	13.2	1021	2.96	42.7	2.6	63.3	7.9	66.6	2.44	6.42	12.49	48	1.02	0.070
STD DS11	Standard	12.48	132.31	126.52	318.7	1701	73.4	12.4	977	2.94	41.8	2.6	66.5	8.1	65.6	2.29	6.70	11.10	46	1.00	0.068
STD DS11	Standard	13.96	147.17	141.61	338.3	1820	80.9	13.4	1039	3.14	43.8	3.7	50.7	7.3	76.5	2.52	7.17	13.85	48	1.05	0.076
STD DS11	Standard	14.79	142.20	138.38	328.0	1629	73.4	13.8	989	3.00	43.4	2.8	68.4	9.4	72.7	2.48	6.70	12.76	46	1.01	0.068
STD DS11	Standard	12.35	138.20	130.84	318.4	1609	75.6	12.7	1010	2.95	41.7	2.5	50.5	8.3	65.2	2.23	6.59	12.29	46	1.01	0.069
STD DS11	Standard	11.87	131.02	128.90	319.0	1853	74.9	12.9	983	2.99	40.1	2.6	74.4	8.5	66.3	2.29	6.94	12.33	47	1.02	0.065
STD OREAS262	Standard	0.63	114.84	55.25	146.2	482	62.1	27.1	542	3.21	38.0	1.2	57.2	9.5	35.9	0.72	2.37	1.01	21	3.03	0.038
STD OREAS262	Standard	0.62	107.13	53.37	142.8	455	61.8	27.0	518	3.14	37.2	1.1	49.3	8.7	36.3	0.62	2.08	1.00	19	2.81	0.039
STD OREAS262	Standard	0.59	115.30	56.08	149.0	495	62.0	27.9	550	3.22	38.3	1.2	54.7	9.5	38.3	0.65	2.20	1.05	21	3.05	0.042



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 14, 2022

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QUALITY CONTROL REPORT

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K831282	Sediment Pulp	10.8	9.3	0.16	23.3	0.018	<20	3.44	0.125	0.03	<0.1	1.1	0.03	0.27	37	0.6	<0.02	5.2	0.20	<0.1	<0.02
REP 013K831282	QC	10.8	9.6	0.16	23.3	0.019	<20	3.38	0.122	0.03	<0.1	1.0	0.04	0.27	45	0.4	<0.02	5.1	0.21	<0.1	<0.02
013K831318	Sediment Pulp	31.6	17.9	0.12	71.3	0.026	<20	2.14	0.012	0.03	0.2	1.6	0.06	0.24	84	1.8	<0.02	3.4	0.38	<0.1	<0.02
REP 013K831318	QC	31.2	18.5	0.12	73.5	0.025	<20	2.19	0.012	0.03	0.2	1.5	0.06	0.25	78	1.3	<0.02	3.2	0.38	<0.1	<0.02
013K831354	Sediment Pulp	70.8	13.3	0.12	111.2	0.027	<20	2.51	0.027	0.02	0.7	1.8	0.11	1.54	84	1.7	<0.02	2.9	0.30	<0.1	0.02
REP 013K831354	QC	65.1	12.9	0.11	104.8	0.026	<20	2.41	0.027	0.02	0.6	2.0	0.10	1.51	72	1.2	<0.02	2.7	0.29	<0.1	0.02
013K831390	Sediment Pulp	35.6	10.2	0.06	80.8	0.028	<20	0.77	0.006	0.03	0.2	0.7	0.06	0.16	148	0.3	<0.02	2.7	0.47	<0.1	<0.02
REP 013K831390	QC	35.2	10.3	0.06	79.9	0.029	<20	0.76	0.007	0.03	0.1	0.7	0.06	0.16	145	0.1	<0.02	2.7	0.46	<0.1	0.02
013K831427	Sediment Pulp	61.0	10.8	0.04	77.3	0.019	<20	1.30	0.006	0.02	0.2	1.0	0.06	0.17	58	0.1	<0.02	2.0	0.19	0.1	<0.02
REP 013K831427	QC	59.0	10.4	0.04	75.3	0.018	<20	1.31	0.005	0.02	0.2	1.0	0.05	0.17	65	0.1	<0.02	1.9	0.18	<0.1	<0.02
013K831463	Sediment Pulp	65.5	20.1	0.18	155.6	0.028	<20	2.89	0.015	0.03	<0.1	4.3	0.13	0.23	150	1.3	<0.02	2.6	0.37	<0.1	0.06
REP 013K831463	QC	64.3	20.6	0.19	149.7	0.029	<20	2.82	0.014	0.03	<0.1	4.4	0.13	0.22	132	1.3	<0.02	2.3	0.34	0.1	0.05
013K831499	Sediment Pulp	12.6	11.8	0.14	32.7	0.016	<20	1.74	0.029	0.02	<0.1	0.9	0.04	0.21	45	0.8	<0.02	2.6	0.21	<0.1	<0.02
REP 013K831499	QC	13.5	12.2	0.14	32.4	0.016	<20	1.73	0.029	0.02	<0.1	0.9	0.04	0.21	50	0.8	<0.02	2.6	0.20	<0.1	<0.02
013K831535	Sediment Pulp	149.4	42.6	0.34	464.7	0.027	<20	2.18	0.016	0.11	<0.1	10.0	0.49	0.45	224	2.0	<0.02	2.9	0.70	0.1	0.09
REP 013K831535	QC	148.1	45.2	0.35	476.4	0.028	<20	2.18	0.017	0.11	<0.1	10.5	0.52	0.45	217	2.2	<0.02	3.0	0.76	0.2	0.09
Reference Materials																					
STD DS11	Standard	17.8	55.3	0.83	411.1	0.089	<20	1.07	0.067	0.38	2.7	3.1	4.78	0.29	254	1.5	4.28	4.8	2.83	<0.1	0.05
STD DS11	Standard	17.4	56.9	0.81	432.8	0.086	<20	1.06	0.069	0.38	2.8	3.4	4.75	0.28	245	1.5	4.29	4.8	2.85	<0.1	0.07
STD DS11	Standard	17.7	53.5	0.84	421.4	0.088	<20	1.10	0.069	0.38	2.3	3.1	4.96	0.28	288	1.9	4.34	5.1	2.92	<0.1	0.05
STD DS11	Standard	17.0	56.3	0.80	395.0	0.092	<20	1.10	0.070	0.38	2.7	3.1	4.67	0.26	220	2.0	4.36	4.7	2.73	<0.1	0.07
STD DS11	Standard	20.5	59.0	0.85	452.3	0.094	<20	1.13	0.073	0.40	2.5	3.3	5.05	0.29	285	2.0	4.68	4.9	3.03	<0.1	0.06
STD DS11	Standard	19.3	55.8	0.82	415.7	0.088	<20	1.08	0.069	0.38	2.2	3.3	4.81	0.28	250	2.2	4.50	4.8	2.85	<0.1	0.05
STD DS11	Standard	17.4	53.3	0.80	399.2	0.086	<20	1.07	0.067	0.37	2.9	3.0	4.66	0.26	269	1.7	4.30	4.9	2.77	<0.1	0.06
STD DS11	Standard	18.2	52.1	0.81	393.5	0.096	<20	1.12	0.073	0.38	3.3	3.6	4.64	0.26	230	1.9	4.23	4.6	2.75	<0.1	0.06
STD OREAS262	Standard	17.6	41.8	1.18	256.0	0.003	<20	1.22	0.068	0.30	<0.1	3.3	0.46	0.28	160	<0.1	0.24	3.9	2.50	<0.1	0.21
STD OREAS262	Standard	15.4	39.4	1.14	250.5	0.003	<20	1.16	0.066	0.29	0.1	3.4	0.43	0.26	151	0.2	0.23	3.9	2.30	<0.1	0.19
STD OREAS262	Standard	16.7	40.8	1.19	257.1	0.003	<20	1.19	0.066	0.30	<0.1	3.5	0.47	0.26	167	0.2	0.22	4.0	2.46	<0.1	0.24



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Project: None Given

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K831282	Sediment Pulp	0.48	1.8	0.1	<0.05	0.2	6.74	18.3	<0.02	1	0.2	2.4	2.79	10.72	2.08	0.59	1.88	0.22	1.24	0.24	0.69
REP 013K831282	QC	0.46	1.7	0.2	<0.05	0.2	6.57	18.9	<0.02	<1	0.2	2.3	2.96	10.65	2.00	0.65	1.80	0.21	1.43	0.25	0.69
013K831318	Sediment Pulp	0.72	1.9	0.2	<0.05	0.3	17.22	58.2	<0.02	4	0.7	3.1	8.51	30.77	5.51	1.06	4.04	0.64	3.31	0.66	1.82
REP 013K831318	QC	0.75	1.8	0.1	<0.05	0.2	17.34	59.6	<0.02	3	0.6	2.9	8.54	32.66	5.73	1.07	3.98	0.70	3.54	0.66	1.80
013K831354	Sediment Pulp	0.74	1.5	0.2	<0.05	0.8	50.23	110.5	<0.02	5	0.9	6.9	17.62	70.06	12.27	1.41	10.18	1.61	8.20	1.74	4.60
REP 013K831354	QC	0.74	1.5	0.2	<0.05	0.7	49.46	104.2	<0.02	4	0.5	6.6	17.12	67.46	11.38	1.37	10.63	1.55	8.54	1.75	4.74
013K831390	Sediment Pulp	1.48	2.4	0.2	<0.05	1.5	14.70	65.8	<0.02	2	0.5	1.3	8.31	26.63	4.37	0.75	3.60	0.56	3.07	0.59	1.57
REP 013K831390	QC	1.44	2.3	0.3	<0.05	1.5	15.07	63.1	<0.02	2	0.5	1.3	7.86	25.62	4.11	0.79	3.26	0.60	2.96	0.59	1.68
013K831427	Sediment Pulp	0.97	1.7	0.3	<0.05	0.5	34.68	124.9	<0.02	<1	2.3	1.0	15.74	55.77	9.63	1.42	8.18	1.12	6.93	1.34	3.86
REP 013K831427	QC	0.89	1.5	0.3	<0.05	0.5	32.60	118.3	<0.02	<1	2.0	1.0	14.38	51.41	8.98	1.28	7.93	1.14	6.88	1.34	3.40
013K831463	Sediment Pulp	0.79	2.5	0.2	<0.05	2.0	36.91	86.1	<0.02	<1	1.1	3.9	17.16	58.77	10.56	2.44	9.10	1.43	7.09	1.40	3.46
REP 013K831463	QC	0.76	2.4	0.2	<0.05	1.9	36.37	86.8	0.02	1	1.0	3.6	17.00	59.24	10.26	2.42	9.11	1.36	7.31	1.36	3.54
013K831499	Sediment Pulp	0.28	1.7	0.2	<0.05	0.2	8.38	17.6	<0.02	<1	0.2	2.1	3.29	13.10	2.37	0.66	2.05	0.24	1.47	0.28	0.81
REP 013K831499	QC	0.31	1.8	0.2	<0.05	0.2	8.24	18.0	<0.02	<1	0.2	2.0	3.63	13.75	2.41	0.66	2.12	0.26	1.69	0.30	0.87
013K831535	Sediment Pulp	1.47	8.3	0.2	<0.05	7.7	102.88	69.8	<0.02	7	1.6	8.4	35.28	132.24	24.57	5.40	21.00	2.94	17.17	3.64	10.22
REP 013K831535	QC	1.52	8.7	0.3	<0.05	8.4	110.64	72.0	<0.02	8	1.5	8.7	35.58	140.54	26.07	5.62	21.25	3.11	17.51	3.58	10.23
Reference Materials																					
STD DS11	Standard	1.30	33.0	1.8	<0.05	2.6	7.42	35.2	0.23	43	0.8	22.5	3.93	14.42	2.85	0.53	1.95	0.27	1.52	0.27	0.71
STD DS11	Standard	1.66	33.8	1.8	<0.05	2.5	7.96	36.1	0.24	46	0.7	24.8	4.04	15.51	2.67	0.58	2.36	0.25	1.59	0.29	0.84
STD DS11	Standard	1.24	33.4	1.8	<0.05	2.6	7.76	35.5	0.24	56	0.6	23.4	3.81	13.86	2.72	0.55	2.10	0.26	1.62	0.28	0.71
STD DS11	Standard	1.30	31.6	1.8	<0.05	2.5	7.33	34.8	0.24	47	0.6	21.2	3.89	13.52	2.39	0.55	2.17	0.25	1.50	0.28	0.78
STD DS11	Standard	1.35	35.7	2.0	<0.05	2.8	8.18	39.4	0.27	47	1.1	24.9	4.41	14.62	2.65	0.60	1.95	0.33	1.73	0.30	0.90
STD DS11	Standard	1.44	34.6	2.1	<0.05	2.6	8.11	36.9	0.28	44	0.5	23.0	4.19	14.03	2.80	0.53	2.12	0.33	1.78	0.32	0.88
STD DS11	Standard	1.24	32.5	1.9	<0.05	2.4	7.41	34.7	0.24	39	1.1	24.5	3.72	13.87	2.29	0.59	2.03	0.31	1.49	0.31	0.78
STD DS11	Standard	1.44	30.9	1.9	<0.05	2.4	7.88	37.1	0.24	41	1.0	22.8	4.09	13.77	2.48	0.56	2.10	0.30	1.61	0.32	0.88
STD OREAS262	Standard	<0.02	18.8	0.5	<0.05	8.2	10.70	33.4	0.04	<1	0.9	16.9	4.15	15.10	3.32	0.76	2.97	0.40	2.10	0.43	1.13
STD OREAS262	Standard	<0.02	17.8	0.6	<0.05	7.3	10.38	30.9	0.04	1	1.0	17.2	3.73	15.37	3.02	0.70	3.12	0.40	2.30	0.41	1.11
STD OREAS262	Standard	<0.02	18.9	0.6	<0.05	8.8	10.89	33.4	0.03	2	1.3	17.1	3.99	14.90	3.39	0.79	3.22	0.40	2.18	0.39	1.05



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 14, 2022

Page: 1 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000377.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013K831282	Sediment Pulp	0.09	0.58	0.08	<10	<2
REP 013K831282	QC	0.08	0.57	0.10	<10	<2
013K831318	Sediment Pulp	0.24	1.57	0.21	<10	<2
REP 013K831318	QC	0.27	1.54	0.22	<10	<2
013K831354	Sediment Pulp	0.66	3.96	0.55	<10	<2
REP 013K831354	QC	0.64	3.46	0.51	<10	<2
013K831390	Sediment Pulp	0.24	1.16	0.16	<10	<2
REP 013K831390	QC	0.23	1.25	0.15	<10	<2
013K831427	Sediment Pulp	0.54	3.19	0.41	<10	2
REP 013K831427	QC	0.52	2.93	0.39	<10	<2
013K831463	Sediment Pulp	0.51	2.74	0.40	<10	<2
REP 013K831463	QC	0.50	2.90	0.39	<10	<2
013K831499	Sediment Pulp	0.10	0.69	0.10	<10	<2
REP 013K831499	QC	0.12	0.73	0.09	<10	<2
013K831535	Sediment Pulp	1.42	9.05	1.46	<10	3
REP 013K831535	QC	1.48	9.22	1.42	<10	3
Reference Materials						
STD DS11	Standard	0.11	0.72	0.11	79	159
STD DS11	Standard	0.11	0.77	0.10	92	164
STD DS11	Standard	0.13	0.74	0.11	78	175
STD DS11	Standard	0.11	0.78	0.11	99	167
STD DS11	Standard	0.11	0.73	0.11	100	174
STD DS11	Standard	0.12	0.71	0.10	93	165
STD DS11	Standard	0.10	0.67	0.12	105	168
STD DS11	Standard	0.12	0.67	0.11	77	161
STD OREAS262	Standard	0.14	0.93	0.12	<10	<2
STD OREAS262	Standard	0.14	0.94	0.13	<10	<2
STD OREAS262	Standard	0.14	0.90	0.12	<10	<2



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QUALITY CONTROL REPORT

VAN22000377.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.55	107.68	54.90	141.4	473	60.2	27.0	510	3.05	36.2	1.2	48.9	9.3	34.2	0.62	2.21	0.99	21	2.88	0.040
STD OREAS262	Standard	0.59	117.19	58.13	151.0	496	61.9	25.0	552	3.35	38.6	1.3	55.9	10.8	40.8	0.66	2.56	1.10	20	2.93	0.040
STD OREAS262	Standard	0.59	109.23	57.83	143.9	476	61.7	25.8	527	3.19	37.5	1.3	50.7	10.4	38.6	0.66	2.32	1.12	20	2.82	0.039
STD OREAS262	Standard	0.55	105.07	53.82	150.7	417	59.0	24.6	526	3.09	35.5	1.2	48.1	9.9	34.1	0.62	1.96	1.00	21	2.92	0.039
STD OREAS262	Standard	0.57	112.29	61.09	158.2	461	59.8	26.2	532	3.23	38.1	1.4	57.4	11.2	40.3	0.62	2.37	1.13	22	3.04	0.038
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.3	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 14, 2022

Bureau Veritas Commodities Canada Ltd.

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Page: 2 of 2

Part: 2 of 4

QUALITY CONTROL REPORT

VAN22000377.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	16.6	40.6	1.12	243.0	0.003	<20	1.18	0.064	0.29	<0.1	3.5	0.45	0.24	159	0.2	0.21	3.5	2.35	<0.1	0.19
STD OREAS262	Standard	15.7	37.1	1.18	259.4	0.003	<20	1.14	0.068	0.29	<0.1	3.1	0.44	0.28	160	0.2	0.22	3.9	2.23	<0.1	0.26
STD OREAS262	Standard	18.2	41.8	1.13	253.0	0.003	<20	1.19	0.065	0.30	<0.1	3.4	0.45	0.26	171	0.3	0.24	3.7	2.44	<0.1	0.23
STD OREAS262	Standard	15.4	38.6	1.13	224.4	0.003	<20	1.14	0.064	0.29	<0.1	3.2	0.44	0.24	150	<0.1	0.22	3.9	2.16	<0.1	0.19
STD OREAS262	Standard	20.2	43.6	1.17	269.9	0.004	<20	1.27	0.070	0.32	<0.1	3.8	0.50	0.25	170	0.5	0.23	4.0	2.70	<0.1	0.18
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 14, 2022

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Page: 2 of 2

Part: 3 of 4

QUALITY CONTROL REPORT

VAN22000377.1

		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	18.5	0.5	<0.05	7.3	10.08	33.1	0.03	1	1.0	16.7	3.95	14.92	3.15	0.69	2.91	0.41	1.90	0.42	1.07
STD OREAS262	Standard	<0.02	17.4	0.5	<0.05	8.1	10.56	30.3	0.03	<1	1.2	17.1	3.68	13.54	3.01	0.72	2.82	0.44	2.27	0.41	1.04
STD OREAS262	Standard	<0.02	18.8	0.6	<0.05	7.5	10.85	35.0	0.03	<1	0.8	18.5	4.29	15.16	3.42	0.77	2.99	0.44	2.27	0.41	1.07
STD OREAS262	Standard	<0.02	17.0	0.5	<0.05	6.6	10.01	30.7	0.03	2	1.2	16.2	3.78	13.60	3.00	0.67	2.63	0.42	1.84	0.36	0.97
STD OREAS262	Standard	<0.02	21.3	0.5	<0.05	7.2	12.05	41.4	0.03	<1	1.2	18.1	4.98	17.84	3.79	0.77	3.16	0.46	2.23	0.45	1.09
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 14, 2022

Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000377.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.14	0.84	0.12	<10	2
STD OREAS262	Standard	0.17	0.93	0.13	<10	<2
STD OREAS262	Standard	0.14	0.84	0.12	<10	<2
STD OREAS262	Standard	0.14	0.82	0.10	<10	<2
STD OREAS262	Standard	0.15	0.91	0.15	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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PHONE (604) 253-3158

Client: **Geological Survey of Canada**

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 25, 2022
Report Date: April 05, 2022
Page: 1 of 8

CERTIFICATE OF ANALYSIS

VAN22000380.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 193

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	174	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	174	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 05, 2022

Page: 2 of 8

Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22000380.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013O773001 Sediment Pulp	5.69	19.81	6.19	95.7	232	15.8	18.8	752	3.64	0.6	13.4	1.0	3.1	29.2	0.34	0.02	0.06	41	0.37	0.134
013O773002 Sediment Pulp	9.26	41.00	86.42	291.8	631	12.2	7.6	421	1.75	37.0	9.2	6.7	1.5	69.0	1.33	0.68	1.03	18	6.15	0.067
013O773003 Sediment Pulp	9.35	31.44	7.67	108.1	290	15.0	18.5	733	4.20	0.7	12.4	1.4	3.7	35.7	0.47	<0.02	0.06	55	0.51	0.206
013O773004 Sediment Pulp	5.78	18.65	6.35	84.8	191	15.2	16.2	510	3.17	0.5	13.7	0.7	2.8	29.0	0.32	0.03	0.02	39	0.37	0.128
013O773005 Sediment Pulp	5.97	21.04	6.78	96.8	229	16.9	19.2	773	3.72	0.6	14.4	0.6	3.4	31.1	0.34	<0.02	0.03	42	0.40	0.137
013O773006 Sediment Pulp	6.69	30.82	8.62	124.6	367	18.3	31.1	1984	8.84	1.0	16.5	0.3	5.3	36.2	0.45	0.03	0.04	56	0.42	0.232
013O773007 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773008 Sediment Pulp	8.02	23.23	5.75	91.2	287	12.5	13.2	669	3.57	<0.1	57.3	1.0	2.3	35.3	0.41	0.04	0.02	34	0.59	0.188
013O773009 Sediment Pulp	2.00	23.08	10.43	44.0	281	16.3	2.6	77	0.67	<0.1	22.0	1.4	0.4	51.7	0.27	<0.02	0.05	22	0.54	0.208
013O773010 Sediment Pulp	4.49	23.16	6.31	75.2	266	9.5	4.4	206	2.73	<0.1	38.8	0.8	1.1	78.4	0.40	0.02	0.03	37	1.71	0.197
013O773011 Sediment Pulp	1.62	16.82	6.19	67.9	276	15.7	6.4	146	1.30	0.2	9.4	0.6	1.3	35.4	0.26	0.03	0.08	29	0.50	0.152
013O773012 Sediment Pulp	5.33	24.72	6.95	78.3	194	19.7	9.0	201	1.52	0.4	22.9	0.6	1.5	33.4	0.23	<0.02	0.06	36	0.48	0.156
013O773013 Sediment Pulp	0.53	13.94	3.91	44.9	92	14.9	4.1	82	0.71	0.3	6.9	0.5	1.0	26.6	0.13	<0.02	0.03	19	0.37	0.058
013O773014 Sediment Pulp	5.05	31.23	7.66	98.4	89	32.7	17.2	316	2.61	1.4	59.5	0.4	5.7	34.8	0.17	0.06	0.05	52	0.56	0.095
013O773015 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773016 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773017 Sediment Pulp	2.20	27.62	9.38	112.2	163	29.0	23.7	1046	5.12	2.1	12.4	0.5	4.8	36.4	0.32	0.06	0.07	67	0.51	0.198
013O773018 Sediment Pulp	2.13	21.00	7.09	96.9	201	14.3	8.1	215	1.62	0.2	35.6	0.6	1.6	31.3	0.38	0.04	0.03	34	0.61	0.114
013O773019 Sediment Pulp	3.93	18.18	6.23	76.7	106	17.0	9.5	211	1.95	1.1	5.0	0.3	3.0	30.7	0.39	0.03	0.03	46	0.48	0.118
013O773020 Sediment Pulp	10.28	25.47	8.38	91.1	180	20.5	13.3	377	3.26	8.8	8.6	2.4	5.4	57.2	0.45	0.26	0.14	71	0.74	0.196
013O773021 Sediment Pulp	2.21	22.22	7.66	101.8	192	14.6	8.0	218	1.65	0.3	38.1	1.3	1.6	32.0	0.45	0.04	0.08	36	0.63	0.118
013O773022 Sediment Pulp	4.23	31.50	10.13	79.5	326	11.2	5.2	172	1.33	0.3	47.1	5.7	1.4	42.3	0.46	0.04	0.11	81	0.69	0.217
013O773023 Sediment Pulp	3.75	17.54	5.95	101.8	129	13.9	10.3	191	2.16	0.6	19.4	1.0	1.7	22.2	0.39	<0.02	0.05	53	0.35	0.112
013O773024 Sediment Pulp	3.59	18.24	6.49	94.1	110	15.7	10.1	227	2.35	0.7	22.9	1.5	2.2	24.3	0.32	0.03	0.05	50	0.38	0.101
013O773025 Sediment Pulp	6.97	33.95	9.27	98.3	284	14.8	67.4	5992	11.01	2.0	33.8	0.9	5.2	23.3	0.52	0.03	0.06	74	0.33	0.210
013O773026 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773027 Sediment Pulp	12.70	57.94	5.62	86.5	150	19.1	10.6	151	1.86	<0.1	99.8	0.8	3.4	23.1	0.49	0.04	0.04	45	0.42	0.122
013O773028 Sediment Pulp	13.84	40.21	5.95	107.8	218	15.9	22.8	405	3.53	0.4	11.8	0.8	1.9	27.7	0.60	<0.02	0.03	78	0.70	0.125
013O773029 Sediment Pulp	7.06	31.30	8.45	88.1	187	20.4	28.5	663	4.91	1.4	14.4	0.8	4.0	44.6	0.35	0.02	0.06	66	0.52	0.165
013O773030 Sediment Pulp	5.02	21.35	6.69	88.3	149	15.2	9.2	280	3.07	1.0	16.7	0.7	3.0	33.2	0.32	0.03	0.04	55	0.48	0.153



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013O773001	Sediment Pulp	62.3	23.1	0.36	109.1	0.083	<20	2.26	0.017	0.11	<0.1	2.7	0.30	0.15	147	1.8	<0.02	7.1	0.86	<0.1	0.03
013O773002	Sediment Pulp	11.3	11.8	0.55	95.8	0.038	<20	0.43	0.027	0.05	0.5	2.3	0.21	1.47	87	1.2	<0.02	1.9	0.52	<0.1	0.03
013O773003	Sediment Pulp	104.0	26.8	0.34	116.1	0.103	<20	3.31	0.017	0.11	<0.1	3.0	0.21	0.17	194	2.8	<0.02	8.4	0.72	<0.1	0.02
013O773004	Sediment Pulp	57.9	22.2	0.37	101.8	0.083	<20	2.18	0.020	0.11	<0.1	2.7	0.26	0.14	140	1.6	<0.02	6.8	0.88	<0.1	0.02
013O773005	Sediment Pulp	65.5	23.4	0.37	116.1	0.088	<20	2.39	0.019	0.11	<0.1	3.0	0.32	0.15	144	2.3	<0.02	7.9	0.93	<0.1	0.04
013O773006	Sediment Pulp	101.5	29.1	0.39	117.7	0.111	<20	3.51	0.026	0.14	<0.1	3.7	0.37	0.21	174	3.2	<0.02	11.2	0.83	<0.1	<0.02
013O773007	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013O773008	Sediment Pulp	87.7	18.4	0.15	106.0	0.060	<20	2.75	0.011	0.04	<0.1	2.7	0.18	0.22	198	3.0	<0.02	7.0	0.43	<0.1	<0.02
013O773009	Sediment Pulp	38.3	25.7	0.24	165.1	0.074	<20	1.31	0.024	0.05	<0.1	1.0	0.06	0.26	182	2.2	<0.02	8.3	0.63	<0.1	0.11
013O773010	Sediment Pulp	62.5	15.8	0.13	64.3	0.058	<20	2.36	0.223	0.04	0.1	1.9	0.07	0.22	156	2.7	<0.02	9.8	0.26	<0.1	0.03
013O773011	Sediment Pulp	34.1	20.0	0.43	81.3	0.080	<20	1.70	0.028	0.14	<0.1	2.4	0.10	0.15	199	1.2	<0.02	10.6	0.94	<0.1	0.05
013O773012	Sediment Pulp	42.4	25.6	0.49	104.0	0.088	<20	1.94	0.049	0.13	<0.1	2.7	0.10	0.16	153	1.3	<0.02	9.1	1.14	<0.1	0.06
013O773013	Sediment Pulp	20.5	15.8	0.33	63.5	0.053	<20	1.12	0.034	0.09	<0.1	2.0	0.05	0.16	120	0.8	<0.02	5.0	0.60	<0.1	0.05
013O773014	Sediment Pulp	39.9	35.5	0.87	78.0	0.123	<20	2.09	0.065	0.25	0.1	4.8	0.24	0.26	72	1.0	<0.02	7.1	1.13	<0.1	0.11
013O773015	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013O773016	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013O773017	Sediment Pulp	52.9	38.1	0.83	89.2	0.123	<20	2.92	0.068	0.27	0.2	4.9	0.19	0.11	96	1.5	<0.02	8.3	1.19	<0.1	0.03
013O773018	Sediment Pulp	56.0	19.4	0.36	56.2	0.077	<20	1.98	0.025	0.09	0.2	2.1	0.09	0.19	133	1.4	<0.02	7.0	0.63	<0.1	0.04
013O773019	Sediment Pulp	39.1	25.2	0.54	57.9	0.105	<20	1.67	0.045	0.17	0.1	3.3	0.17	0.14	95	0.8	<0.02	5.7	0.92	<0.1	0.06
013O773020	Sediment Pulp	71.4	32.3	0.66	67.5	0.110	<20	2.05	0.082	0.26	0.3	3.9	0.21	1.22	81	1.9	<0.02	6.3	1.10	<0.1	0.05
013O773021	Sediment Pulp	57.3	20.0	0.37	59.7	0.084	<20	2.01	0.026	0.10	0.1	2.2	0.11	0.20	129	1.5	<0.02	7.5	0.68	<0.1	0.03
013O773022	Sediment Pulp	86.9	19.6	0.26	77.8	0.096	<20	2.07	0.114	0.06	0.4	2.4	0.08	0.20	199	2.6	<0.02	8.8	0.43	<0.1	0.02
013O773023	Sediment Pulp	41.2	22.6	0.36	49.0	0.088	<20	1.95	0.028	0.10	0.1	2.7	0.11	0.10	104	1.1	<0.02	6.1	0.68	<0.1	<0.02
013O773024	Sediment Pulp	45.8	23.0	0.42	56.8	0.089	<20	2.02	0.033	0.13	0.1	2.9	0.10	0.10	95	1.1	<0.02	5.4	0.82	<0.1	0.03
013O773025	Sediment Pulp	85.8	28.6	0.30	64.6	0.116	<20	2.65	0.021	0.08	0.2	4.0	0.24	0.12	150	2.4	<0.02	9.8	0.73	<0.1	<0.02
013O773026	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013O773027	Sediment Pulp	94.8	27.0	0.30	50.0	0.076	<20	2.01	0.031	0.08	0.2	3.6	0.23	0.17	82	2.2	<0.02	4.0	0.45	<0.1	0.03
013O773028	Sediment Pulp	53.6	28.0	0.27	53.2	0.089	<20	2.31	0.035	0.05	0.3	2.6	0.28	0.14	125	2.2	<0.02	6.4	0.42	<0.1	<0.02
013O773029	Sediment Pulp	57.9	33.5	0.59	64.0	0.108	<20	2.19	0.144	0.17	0.6	3.6	0.21	0.58	102	1.4	<0.02	7.9	0.99	<0.1	0.03
013O773030	Sediment Pulp	63.5	25.9	0.45	57.2	0.089	<20	2.07	0.067	0.13	0.3	3.4	0.14	0.12	106	1.1	<0.02	6.0	0.78	<0.1	0.03



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VERITAS Canada

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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250			
					Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
					ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
					0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0130773001	Sediment Pulp	2.29	11.4	0.5	<0.05	1.4	14.62	127.2	<0.02	<1	0.8	11.6	13.69	46.42	6.32	1.38	4.19	0.62	3.33	0.56	1.53			
0130773002	Sediment Pulp	0.67	3.4	3.5	<0.05	1.2	10.57	18.9	0.50	22	<0.1	4.3	3.10	12.18	2.44	0.58	2.33	0.34	1.96	0.36	1.04			
0130773003	Sediment Pulp	3.39	9.9	0.6	<0.05	1.4	29.47	192.6	0.04	1	0.7	11.1	23.46	80.36	11.66	2.54	8.51	1.25	5.90	1.10	2.99			
0130773004	Sediment Pulp	2.33	11.0	0.4	<0.05	1.3	13.88	114.5	<0.02	<1	0.5	12.1	13.37	45.10	6.69	1.39	4.15	0.56	2.98	0.49	1.50			
0130773005	Sediment Pulp	2.35	11.8	0.5	<0.05	1.4	15.15	130.9	<0.02	<1	0.5	11.8	14.06	47.77	7.04	1.54	5.12	0.64	3.14	0.53	1.66			
0130773006	Sediment Pulp	2.57	11.8	0.6	<0.05	1.3	31.46	214.0	0.05	<1	1.2	10.4	22.36	78.67	11.77	2.52	8.85	1.22	6.81	1.23	3.12			
0130773007	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.			
0130773008	Sediment Pulp	1.56	4.0	0.4	<0.05	0.8	19.57	164.6	<0.02	1	0.8	4.2	20.04	64.63	9.44	2.01	6.37	0.87	4.14	0.72	1.93			
0130773009	Sediment Pulp	3.98	5.3	0.4	<0.05	6.5	7.63	66.9	0.02	<1	0.4	7.3	7.83	26.86	4.25	0.96	2.82	0.39	1.83	0.31	0.84			
0130773010	Sediment Pulp	1.96	2.0	0.4	<0.05	1.5	15.23	105.3	0.03	1	0.8	2.5	13.52	47.78	6.92	1.55	5.56	0.62	3.19	0.54	1.45			
0130773011	Sediment Pulp	1.76	10.0	0.5	<0.05	2.4	7.51	58.7	0.02	<1	0.6	10.9	6.82	24.24	3.34	0.78	2.50	0.33	1.68	0.30	0.77			
0130773012	Sediment Pulp	2.07	10.9	0.5	<0.05	2.5	9.34	75.3	0.02	<1	0.3	13.7	9.39	32.52	5.09	1.07	3.42	0.42	2.20	0.36	0.93			
0130773013	Sediment Pulp	1.23	6.4	0.4	<0.05	2.5	5.15	37.0	<0.02	<1	0.2	6.8	4.48	14.40	2.28	0.48	1.71	0.24	1.17	0.21	0.52			
0130773014	Sediment Pulp	2.15	18.3	0.6	<0.05	5.5	15.02	70.5	0.03	<1	0.7	19.0	9.39	33.12	5.77	0.93	4.31	0.64	3.17	0.56	1.59			
0130773015	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.			
0130773016	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.			
0130773017	Sediment Pulp	1.65	17.5	0.8	<0.05	2.2	18.35	121.7	0.03	1	0.9	21.8	12.57	42.74	6.88	1.43	5.41	0.76	4.18	0.75	2.04			
0130773018	Sediment Pulp	1.98	7.6	0.4	<0.05	2.1	13.45	96.4	0.02	<1	0.9	10.6	12.04	42.72	6.71	1.34	5.01	0.64	3.11	0.53	1.32			
0130773019	Sediment Pulp	2.24	13.5	0.5	<0.05	2.7	9.79	75.0	<0.02	<1	0.6	14.4	8.97	30.02	4.20	0.94	3.21	0.44	1.78	0.38	1.06			
0130773020	Sediment Pulp	2.79	17.5	0.7	<0.05	3.2	17.52	132.3	0.04	9	0.6	17.0	15.92	52.54	7.64	1.47	5.15	0.75	3.44	0.65	1.72			
0130773021	Sediment Pulp	2.16	7.9	0.5	<0.05	2.0	14.04	101.9	0.03	<1	0.7	11.9	13.10	46.05	6.76	1.43	4.95	0.60	3.20	0.52	1.44			
0130773022	Sediment Pulp	2.79	4.6	0.6	<0.05	1.8	16.20	159.9	0.03	<1	1.2	6.1	18.83	63.15	9.38	1.71	6.70	0.81	4.05	0.70	1.84			
0130773023	Sediment Pulp	1.65	8.7	0.5	<0.05	1.1	12.75	90.2	0.02	<1	1.0	11.9	9.80	34.94	5.34	1.08	3.94	0.59	2.81	0.49	1.40			
0130773024	Sediment Pulp	1.69	10.4	0.6	<0.05	1.4	13.65	101.1	0.02	<1	1.1	14.2	10.63	36.99	5.67	1.19	4.30	0.63	2.86	0.55	1.47			
0130773025	Sediment Pulp	1.19	7.8	0.6	<0.05	1.0	25.22	188.9	0.05	<1	1.0	9.9	19.25	66.88	10.36	2.06	7.58	1.08	5.40	0.97	2.75			
0130773026	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.			
0130773027	Sediment Pulp	2.00	6.6	0.4	<0.05	2.2	32.38	170.2	<0.02	1	0.6	8.3	22.87	77.92	12.78	2.18	10.11	1.36	6.45	1.26	3.12			
0130773028	Sediment Pulp	1.63	4.1	0.3	<0.05	0.9	17.15	115.4	0.03	3	0.5	8.1	12.97	45.71	6.73	1.39	4.76	0.68	3.84	0.64	1.79			
0130773029	Sediment Pulp	1.83	12.1	0.5	<0.05	1.8	20.13	120.6	0.04	2	1.1	17.1	14.36	49.73	7.86	1.51	5.73	0.82	4.44	0.80	2.30			
0130773030	Sediment Pulp	2.07	10.5	0.5	<0.05	1.6	15.05	120.5	0.03	2	0.7	12.3	13.90	48.23	6.92	1.41	5.23	0.69	3.47	0.56	1.62			



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013O773001	Sediment Pulp	0.19	1.05	0.18	<10	<2
013O773002	Sediment Pulp	0.15	0.92	0.14	<10	<2
013O773003	Sediment Pulp	0.37	2.35	0.29	<10	<2
013O773004	Sediment Pulp	0.21	1.11	0.16	<10	<2
013O773005	Sediment Pulp	0.25	1.28	0.16	<10	<2
013O773006	Sediment Pulp	0.46	2.68	0.33	<10	<2
013O773007	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773008	Sediment Pulp	0.27	1.62	0.19	<10	<2
013O773009	Sediment Pulp	0.10	0.57	0.06	<10	<2
013O773010	Sediment Pulp	0.21	1.12	0.18	<10	<2
013O773011	Sediment Pulp	0.11	0.58	0.07	<10	<2
013O773012	Sediment Pulp	0.12	0.77	0.10	<10	<2
013O773013	Sediment Pulp	0.08	0.41	0.06	<10	<2
013O773014	Sediment Pulp	0.22	1.34	0.16	<10	2
013O773015	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773016	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773017	Sediment Pulp	0.26	1.59	0.21	<10	<2
013O773018	Sediment Pulp	0.16	1.09	0.14	<10	<2
013O773019	Sediment Pulp	0.15	0.81	0.13	<10	<2
013O773020	Sediment Pulp	0.23	1.62	0.21	<10	<2
013O773021	Sediment Pulp	0.18	1.05	0.15	<10	<2
013O773022	Sediment Pulp	0.22	1.41	0.19	<10	3
013O773023	Sediment Pulp	0.19	1.17	0.17	<10	<2
013O773024	Sediment Pulp	0.19	1.20	0.17	<10	<2
013O773025	Sediment Pulp	0.34	2.29	0.29	<10	<2
013O773026	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773027	Sediment Pulp	0.40	2.66	0.34	<10	<2
013O773028	Sediment Pulp	0.21	1.43	0.18	<10	<2
013O773029	Sediment Pulp	0.31	1.99	0.29	<10	<2
013O773030	Sediment Pulp	0.21	1.37	0.18	<10	<2



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
0130773031	Sediment Pulp	1.35	12.23	5.13	51.0	68	12.4	5.9	128	1.19	0.5	8.4	0.3	2.6	28.9	0.17	0.02	0.03	31	0.47	0.091
0130773032	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773033	Sediment Pulp	3.73	38.97	9.18	92.1	145	21.8	15.1	287	3.74	4.5	11.5	0.8	5.5	36.8	0.44	0.14	0.06	59	0.56	0.175
0130773034	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773035	Sediment Pulp	14.87	19.74	7.69	75.8	103	20.8	11.5	397	2.85	7.2	13.3	1.3	7.4	60.6	0.33	0.19	0.07	59	0.68	0.176
0130773036	Sediment Pulp	0.87	32.60	26.09	136.2	2782	46.2	28.5	1189	3.06	24.2	4.1	59.6	8.7	29.5	0.48	0.68	3.53	44	0.62	0.090
0130773037	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773038	Sediment Pulp	3.72	14.29	6.62	55.1	53	18.8	8.0	221	2.16	9.6	3.8	0.8	8.5	64.3	0.13	0.22	0.06	54	0.73	0.088
0130773039	Sediment Pulp	2.33	17.57	7.66	66.7	56	24.1	9.5	264	2.78	8.6	3.4	1.6	9.2	79.4	0.09	0.28	0.07	72	0.82	0.112
0130773040	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773041	Sediment Pulp	14.41	19.20	7.80	74.8	93	20.3	11.4	400	2.87	7.2	12.8	1.0	7.6	61.3	0.37	0.18	0.08	61	0.68	0.179
0130773042	Sediment Pulp	0.77	5.95	5.84	36.9	13	10.5	4.9	131	1.07	0.7	1.8	0.7	3.1	25.5	0.06	0.02	0.03	23	0.40	0.076
0130773043	Sediment Pulp	0.91	21.48	4.25	19.4	89	3.1	1.2	19	0.22	0.2	2.7	0.8	1.1	34.6	0.16	0.07	0.05	9	0.32	0.048
0130773044	Sediment Pulp	11.96	27.06	7.14	69.7	133	11.3	5.5	117	1.59	2.1	25.9	2.9	4.7	21.3	0.39	0.15	0.05	35	0.39	0.115
0130773045	Sediment Pulp	5.82	11.84	10.26	64.2	53	9.6	4.9	151	1.38	1.0	8.6	16.7	5.0	31.5	0.23	0.08	0.04	30	0.41	0.067
0130773046	Sediment Pulp	18.36	45.73	18.19	75.8	592	7.8	3.9	235	2.86	0.9	37.3	6.7	4.0	41.1	0.41	0.07	0.18	67	0.51	0.232
0130773047	Sediment Pulp	19.23	30.87	13.36	59.5	348	6.7	3.4	161	1.49	0.6	39.1	1.0	2.9	42.9	0.37	0.06	0.07	50	0.53	0.147
0130773048	Sediment Pulp	26.44	31.46	14.51	58.8	385	7.1	3.5	160	1.72	0.7	29.9	4.3	3.3	62.5	0.37	0.06	0.08	60	0.81	0.175
0130773049	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773050	Sediment Pulp	7.85	22.00	7.75	66.9	151	19.7	16.9	442	3.47	10.5	11.1	2.1	5.1	85.6	0.30	0.18	0.15	64	1.48	0.171
0130773051	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773052	Sediment Pulp	9.27	39.03	81.30	286.4	605	12.6	7.4	416	1.73	36.0	9.0	2.9	1.4	65.0	1.37	0.59	1.09	18	6.01	0.064
0130773053	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773054	Sediment Pulp	2.52	20.07	5.09	35.8	241	9.1	4.4	125	0.96	0.4	18.1	0.9	1.0	37.7	0.31	0.02	0.05	46	0.36	0.149
0130773055	Sediment Pulp	7.90	45.45	11.05	95.1	301	23.6	38.9	1137	5.69	7.2	14.7	0.4	3.4	36.3	0.39	0.05	0.30	67	0.56	0.169
0130773056	Sediment Pulp	4.74	35.31	8.34	67.1	98	19.2	14.0	197	2.41	6.5	8.1	0.5	6.7	33.4	0.24	0.17	0.06	55	0.61	0.132
0130773057	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773058	Sediment Pulp	11.70	105.92	22.22	138.7	410	34.7	64.5	2317	9.97	5.3	40.5	0.4	11.7	52.8	0.89	0.09	0.17	96	0.69	0.276
0130773059	Sediment Pulp	13.46	19.08	23.50	51.8	312	7.7	3.7	149	1.26	0.1	98.6	1.1	3.9	26.7	0.46	0.03	0.09	28	0.51	0.143
0130773060	Sediment Pulp	3.24	20.73	7.83	20.6	248	5.9	1.4	44	0.35	<0.1	12.8	1.1	0.3	17.4	0.25	<0.02	0.04	25	0.22	0.128



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
0130773031	Sediment Pulp	35.4	19.0	0.42	53.6	0.094	<20	1.26	0.069	0.11	<0.1	2.4	0.11	0.09	73	0.6	<0.02	5.0	0.70	<0.1	0.05
0130773032	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773033	Sediment Pulp	103.3	29.3	0.64	69.9	0.112	<20	2.36	0.070	0.24	0.2	4.9	0.21	0.51	91	1.8	<0.02	7.3	0.92	<0.1	0.06
0130773034	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773035	Sediment Pulp	64.0	34.7	0.74	78.3	0.122	<20	1.71	0.130	0.29	0.4	4.3	0.23	0.78	56	1.2	<0.02	5.8	1.22	<0.1	0.07
0130773036	Sediment Pulp	46.0	49.5	0.76	173.8	0.104	<20	1.69	0.030	0.26	0.2	5.9	0.29	0.14	275	0.6	0.02	5.6	1.51	<0.1	0.09
0130773037	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773038	Sediment Pulp	50.7	33.2	0.84	54.2	0.125	33	1.47	0.840	0.39	0.3	4.4	0.17	0.62	55	0.8	<0.02	5.1	1.24	<0.1	0.16
0130773039	Sediment Pulp	58.5	39.3	1.10	64.0	0.134	62	1.77	1.567	0.50	0.2	5.2	0.18	0.43	69	1.5	<0.02	6.1	1.42	<0.1	0.15
0130773040	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773041	Sediment Pulp	63.9	35.1	0.74	76.3	0.121	<20	1.71	0.131	0.29	0.5	4.3	0.24	0.79	52	1.2	<0.02	5.5	1.24	<0.1	0.11
0130773042	Sediment Pulp	20.9	18.3	0.41	42.9	0.095	<20	0.90	0.043	0.11	0.2	2.4	0.09	0.04	51	0.2	<0.02	4.3	0.98	<0.1	0.07
0130773043	Sediment Pulp	63.4	4.5	0.08	36.8	0.043	<20	0.61	0.027	0.01	<0.1	1.7	<0.02	0.45	199	2.1	<0.02	1.7	0.12	0.1	0.03
0130773044	Sediment Pulp	117.2	20.3	0.22	53.0	0.081	<20	1.13	0.036	0.07	0.6	2.8	0.12	0.12	49	1.8	<0.02	3.0	0.71	<0.1	0.03
0130773045	Sediment Pulp	57.5	16.6	0.27	75.4	0.117	<20	0.98	0.036	0.11	0.5	2.6	0.11	0.11	95	0.8	<0.02	4.4	1.03	<0.1	0.07
0130773046	Sediment Pulp	137.5	20.7	0.21	113.0	0.106	<20	1.67	0.218	0.04	0.5	3.7	0.11	0.24	202	3.1	<0.02	8.4	0.46	<0.1	0.05
0130773047	Sediment Pulp	103.7	15.3	0.17	129.3	0.086	<20	1.30	0.042	0.04	0.7	2.7	0.07	0.15	158	1.9	<0.02	5.8	0.39	<0.1	0.04
0130773048	Sediment Pulp	113.8	15.9	0.18	178.4	0.094	<20	1.41	0.028	0.04	1.0	3.2	0.08	0.16	174	2.0	<0.02	6.2	0.42	0.1	0.05
0130773049	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773050	Sediment Pulp	65.6	29.1	0.57	72.6	0.101	<20	1.79	0.078	0.24	0.6	3.7	0.19	1.18	76	1.5	<0.02	5.9	1.23	<0.1	0.06
0130773051	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773052	Sediment Pulp	10.2	11.3	0.54	93.1	0.038	<20	0.43	0.027	0.05	0.6	2.4	0.22	1.49	82	0.9	<0.02	2.0	0.52	<0.1	0.04
0130773053	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773054	Sediment Pulp	44.0	16.0	0.21	64.8	0.066	<20	1.12	0.049	0.05	0.7	1.8	0.08	0.15	207	1.3	<0.02	5.7	0.67	<0.1	0.03
0130773055	Sediment Pulp	63.8	31.3	0.44	102.4	0.095	<20	2.80	0.038	0.16	6.0	4.0	0.28	0.17	166	2.2	<0.02	8.3	1.75	<0.1	0.03
0130773056	Sediment Pulp	68.5	30.3	0.47	58.9	0.096	<20	1.72	0.043	0.19	0.9	3.2	0.22	0.47	54	1.6	<0.02	4.5	0.89	<0.1	0.04
0130773057	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773058	Sediment Pulp	160.4	49.6	0.35	68.9	0.141	<20	4.26	0.039	0.13	1.7	5.3	0.71	0.27	186	4.2	0.03	10.3	0.95	0.1	<0.02
0130773059	Sediment Pulp	90.4	11.7	0.17	57.4	0.054	<20	1.75	0.019	0.05	0.2	1.8	0.11	0.23	172	2.9	<0.02	8.4	0.54	<0.1	0.03
0130773060	Sediment Pulp	31.9	10.1	0.08	43.9	0.032	<20	1.08	0.017	0.02	0.1	0.7	0.04	0.15	158	1.7	<0.02	4.4	0.30	<0.1	<0.02



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0130773031	Sediment Pulp	2.26	8.7	0.5	<0.05	2.4	8.36	64.9	<0.02	<1	0.5	11.1	7.71	27.67	4.21	0.77	3.34	0.37	1.68	0.33	0.82
0130773032	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773033	Sediment Pulp	2.80	18.2	0.7	<0.05	3.2	22.70	197.2	0.04	2	0.9	14.9	23.92	80.90	11.61	2.07	7.73	1.02	4.93	0.84	2.44
0130773034	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773035	Sediment Pulp	2.58	21.9	0.8	<0.05	3.6	18.69	124.3	0.03	8	0.2	17.1	14.52	49.48	7.67	1.23	5.23	0.72	3.87	0.71	2.01
0130773036	Sediment Pulp	1.96	25.0	1.1	<0.05	5.3	18.84	78.8	0.03	<1	0.7	21.1	10.71	39.10	6.51	1.18	5.30	0.69	3.60	0.67	2.06
0130773037	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773038	Sediment Pulp	2.53	23.7	0.7	<0.05	6.5	15.76	96.3	0.02	10	0.5	16.8	11.85	39.63	5.92	1.06	4.06	0.61	3.27	0.58	1.62
0130773039	Sediment Pulp	2.64	28.6	0.8	<0.05	6.9	18.70	108.7	0.02	7	0.6	21.0	13.34	46.35	6.94	1.11	4.89	0.69	3.38	0.68	1.88
0130773040	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773041	Sediment Pulp	2.59	21.8	0.7	<0.05	4.4	18.52	124.3	<0.02	10	0.6	16.3	15.12	50.04	7.44	1.20	5.57	0.77	3.85	0.71	1.94
0130773042	Sediment Pulp	2.28	10.5	0.6	<0.05	3.3	10.39	39.9	<0.02	<1	1.5	10.9	4.84	16.75	2.89	0.56	2.50	0.34	2.05	0.39	1.04
0130773043	Sediment Pulp	1.35	0.6	0.4	<0.05	1.3	23.10	102.4	<0.02	<1	0.4	0.3	12.13	40.16	6.07	1.20	4.92	0.80	4.49	0.89	2.71
0130773044	Sediment Pulp	3.15	6.7	0.7	<0.05	1.7	41.72	226.8	0.02	<1	0.9	6.0	27.66	100.66	14.31	1.99	11.56	1.48	7.91	1.52	4.39
0130773045	Sediment Pulp	4.89	11.9	0.9	<0.05	2.7	24.83	104.3	0.03	<1	0.8	10.6	13.22	46.99	7.62	1.11	6.12	0.87	5.01	0.95	2.85
0130773046	Sediment Pulp	6.20	3.1	1.0	<0.05	2.1	55.69	263.7	0.08	<1	1.8	5.1	31.58	114.41	17.20	2.82	13.81	2.01	11.16	2.33	6.93
0130773047	Sediment Pulp	4.66	3.5	0.9	<0.05	2.0	41.28	204.7	0.06	<1	1.0	5.1	24.29	86.89	13.52	2.14	10.75	1.60	8.70	1.70	4.80
0130773048	Sediment Pulp	4.92	3.8	0.8	<0.05	2.1	43.73	224.8	0.04	<1	1.0	5.0	26.93	93.81	15.11	2.36	11.43	1.68	9.06	1.86	5.28
0130773049	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773050	Sediment Pulp	2.54	17.2	0.6	<0.05	2.5	17.50	128.9	0.03	8	0.5	13.5	15.21	51.96	7.31	1.21	5.08	0.68	3.75	0.67	1.78
0130773051	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773052	Sediment Pulp	0.70	3.4	3.7	<0.05	1.2	10.37	17.4	0.50	22	0.2	3.4	2.78	11.51	2.62	0.51	2.27	0.30	1.53	0.38	0.99
0130773053	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773054	Sediment Pulp	1.95	4.4	0.4	<0.05	1.1	9.04	82.0	<0.02	<1	0.2	4.7	9.94	34.76	4.59	0.95	3.38	0.40	2.05	0.34	0.93
0130773055	Sediment Pulp	2.66	13.4	0.7	<0.05	1.6	25.51	135.3	0.03	<1	1.5	12.2	15.38	54.32	8.06	1.37	5.91	0.88	4.95	0.96	2.57
0130773056	Sediment Pulp	2.20	16.4	0.6	<0.05	2.1	33.03	161.5	0.03	6	0.7	13.2	16.70	57.04	9.27	1.47	7.18	1.07	5.96	1.16	3.73
0130773057	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
0130773058	Sediment Pulp	2.88	12.7	0.9	<0.05	1.2	106.93	416.8	0.07	2	3.1	11.4	41.72	143.89	23.20	3.86	20.25	3.29	18.71	4.00	12.23
0130773059	Sediment Pulp	5.99	6.2	1.3	<0.05	1.5	203.89	162.0	0.02	<1	10.0	7.6	27.49	105.90	26.59	1.42	30.81	5.86	38.36	8.79	27.70
0130773060	Sediment Pulp	1.18	2.4	0.4	<0.05	0.3	35.72	61.0	<0.02	1	1.6	2.8	8.28	30.09	6.04	0.70	5.60	1.06	6.91	1.51	4.50



BUREAU MINERAL LABORATORIES
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Project: None Given

Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
0130773031	Sediment Pulp		0.11	0.70	0.10	<10	2
0130773032	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773033	Sediment Pulp		0.30	1.85	0.23	<10	<2
0130773034	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773035	Sediment Pulp		0.26	1.59	0.21	<10	<2
0130773036	Sediment Pulp		0.29	1.81	0.25	<10	<2
0130773037	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773038	Sediment Pulp		0.21	1.40	0.20	<10	<2
0130773039	Sediment Pulp		0.26	1.46	0.21	<10	3
0130773040	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773041	Sediment Pulp		0.27	1.84	0.21	<10	<2
0130773042	Sediment Pulp		0.15	0.90	0.14	<10	<2
0130773043	Sediment Pulp		0.35	2.16	0.30	<10	<2
0130773044	Sediment Pulp		0.62	3.94	0.64	<10	3
0130773045	Sediment Pulp		0.40	2.49	0.38	<10	<2
0130773046	Sediment Pulp		0.94	6.05	0.77	<10	<2
0130773047	Sediment Pulp		0.69	4.41	0.61	<10	<2
0130773048	Sediment Pulp		0.78	4.55	0.67	<10	<2
0130773049	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773050	Sediment Pulp		0.26	1.55	0.21	<10	<2
0130773051	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773052	Sediment Pulp		0.13	1.01	0.13	<10	<2
0130773053	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773054	Sediment Pulp		0.13	0.86	0.09	<10	<2
0130773055	Sediment Pulp		0.42	2.49	0.33	<10	<2
0130773056	Sediment Pulp		0.56	3.68	0.52	<10	<2
0130773057	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
0130773058	Sediment Pulp		2.01	13.19	1.82	12	<2
0130773059	Sediment Pulp		4.41	27.66	4.24	<10	<2
0130773060	Sediment Pulp		0.77	4.97	0.68	<10	<2



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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013O773061	Sediment Pulp	11.84	28.86	7.37	72.4	144	11.7	5.5	121	1.63	2.2	25.9	3.2	3.9	22.5	0.38	0.15	0.04	36	0.41	0.121
013O773062	Sediment Pulp	6.77	43.66	13.50	53.2	552	9.5	13.7	892	4.41	0.2	17.4	5.6	3.3	34.1	0.40	0.02	0.13	51	0.42	0.248
013O773063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773064	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773065	Sediment Pulp	1.91	34.91	3.88	60.3	179	10.3	4.2	59	0.77	<0.1	27.7	1.0	0.5	31.5	0.32	0.02	0.05	19	0.61	0.067
013O773066	Sediment Pulp	4.54	39.72	6.27	109.0	269	15.4	44.8	603	3.72	1.0	7.9	4.5	2.5	46.7	0.59	0.03	<0.02	70	0.53	0.210
013O773067	Sediment Pulp	5.52	65.65	11.69	104.4	181	35.4	20.9	425	3.38	2.9	15.6	2.4	9.3	34.4	0.20	0.09	0.09	65	0.59	0.115
013O773068	Sediment Pulp	16.34	36.51	4.25	55.8	124	12.0	10.0	203	1.65	<0.1	6.3	1.0	0.8	19.4	0.33	<0.02	0.02	44	0.33	0.089
013O773069	Sediment Pulp	5.10	35.22	5.41	43.2	191	16.2	7.5	131	1.12	<0.1	5.3	0.9	0.4	24.4	0.21	0.02	0.03	29	0.43	0.126
013O773070	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773071	Sediment Pulp	1.00	34.51	21.56	128.9	2449	46.3	28.4	1134	2.93	23.0	3.4	2.7	6.8	23.8	0.46	0.58	2.55	42	0.60	0.081
013O773072	Sediment Pulp	7.65	120.83	7.78	99.1	266	34.5	57.5	956	6.63	2.3	6.7	1.5	4.5	35.8	0.42	0.06	0.09	85	0.64	0.245
013O773073	Sediment Pulp	8.14	165.72	7.44	121.2	299	35.3	31.9	494	4.62	1.7	6.1	3.1	5.5	44.0	0.39	0.06	0.11	97	0.81	0.340
013O773074	Sediment Pulp	11.53	57.35	9.99	88.9	320	25.0	14.0	259	2.36	0.3	4.6	1.3	1.7	30.0	0.32	0.11	0.08	56	0.54	0.164
013O773075	Sediment Pulp	7.06	59.71	3.84	30.6	201	12.3	4.3	183	1.26	<0.1	5.1	31.0	0.8	26.3	0.30	0.03	0.07	49	0.47	0.170
013O773076	Sediment Pulp	2.38	15.97	4.84	52.5	64	15.0	12.2	193	1.69	1.6	2.3	<0.2	2.6	24.9	0.10	0.04	0.04	37	0.41	0.089
013O773077	Sediment Pulp	1.75	20.49	5.62	60.9	94	18.5	8.1	190	1.55	0.8	3.5	0.8	1.9	33.5	0.15	0.04	0.05	40	0.49	0.150
013O773078	Sediment Pulp	1.79	6.00	7.21	31.4	45	6.7	2.7	89	0.71	0.3	1.9	0.8	1.3	17.0	0.09	0.05	0.04	16	0.29	0.041
013O773079	Sediment Pulp	3.74	17.54	9.98	76.1	274	13.0	7.9	293	2.94	1.1	10.9	1.5	4.2	36.9	0.25	0.06	0.08	59	0.49	0.184
013O773080	Sediment Pulp	2.42	7.94	7.93	45.9	105	7.0	1.8	70	2.19	0.7	44.2	0.5	2.5	15.4	0.11	0.07	0.05	43	0.23	0.054
013O773081	Sediment Pulp	6.84	108.66	7.02	89.4	245	31.3	53.5	876	6.05	2.0	6.1	0.9	4.1	33.0	0.38	0.04	0.08	77	0.59	0.226
013O773082	Sediment Pulp	9.93	10.77	11.83	107.7	67	5.9	3.4	132	1.53	0.8	60.0	6.5	5.4	18.1	0.34	0.11	0.05	31	0.36	0.056
013O773083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773085	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773086	Sediment Pulp	6.09	13.82	9.49	144.7	99	10.5	5.6	115	1.76	<0.1	24.4	9.3	3.5	23.4	0.45	0.10	0.07	44	0.36	0.056
013O773087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773088	Sediment Pulp	4.21	12.91	10.81	78.3	85	9.2	3.7	78	0.98	<0.1	8.1	0.5	2.5	25.2	0.26	0.08	0.05	26	0.33	0.049
013O773089	Sediment Pulp	1.40	11.68	9.96	61.0	85	9.0	4.5	116	0.89	3.0	2.7	9.7	2.0	31.0	0.20	0.18	0.05	28	0.54	0.058
013O773090	Sediment Pulp	6.48	28.84	9.04	133.7	118	19.5	6.5	155	1.42	1.0	9.3	5.9	1.9	38.0	0.29	0.07	0.06	26	0.52	0.080



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013O773061	Sediment Pulp	121.3	20.1	0.22	55.4	0.084	<20	1.16	0.038	0.08	0.5	3.1	0.12	0.13	55	1.7	<0.02	3.1	0.73	0.1	0.03
013O773062	Sediment Pulp	88.5	20.2	0.13	87.4	0.063	<20	2.61	0.016	0.03	0.7	2.8	0.18	0.24	204	3.4	<0.02	11.4	0.37	<0.1	<0.02
013O773063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773064	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773065	Sediment Pulp	78.7	11.6	0.14	61.0	0.034	<20	2.13	0.016	0.03	<0.1	1.3	0.06	0.34	131	2.4	<0.02	4.8	0.26	<0.1	<0.02
013O773066	Sediment Pulp	100.9	21.7	0.24	88.2	0.089	<20	2.51	0.018	0.05	0.2	3.0	0.49	0.19	199	2.8	<0.02	7.0	0.38	<0.1	<0.02
013O773067	Sediment Pulp	80.1	47.7	1.28	107.9	0.175	<20	2.56	0.049	0.43	0.1	6.4	0.30	0.30	54	1.1	<0.02	8.3	1.77	<0.1	0.10
013O773068	Sediment Pulp	48.6	20.3	0.14	45.4	0.055	<20	2.33	0.009	0.04	0.2	1.6	0.16	0.21	137	2.2	<0.02	3.9	0.32	<0.1	<0.02
013O773069	Sediment Pulp	43.7	20.5	0.27	85.8	0.057	<20	1.70	0.013	0.06	0.2	1.3	0.12	0.22	143	1.8	<0.02	5.2	0.66	<0.1	0.02
013O773070	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773071	Sediment Pulp	39.8	49.6	0.75	134.6	0.103	<20	1.63	0.029	0.25	0.3	5.7	0.27	0.14	221	0.7	0.04	5.0	1.33	<0.1	0.09
013O773072	Sediment Pulp	131.7	50.9	0.38	52.9	0.109	<20	3.61	0.028	0.13	0.7	4.3	0.54	0.27	156	3.5	<0.02	4.6	0.86	<0.1	<0.02
013O773073	Sediment Pulp	184.8	51.0	0.45	70.2	0.110	<20	3.73	0.036	0.18	1.5	4.7	0.51	0.37	179	3.5	0.03	3.5	1.05	<0.1	0.03
013O773074	Sediment Pulp	76.1	39.7	0.41	88.5	0.096	<20	2.67	0.039	0.14	1.9	3.2	0.19	0.28	175	2.1	<0.02	8.0	1.05	<0.1	0.05
013O773075	Sediment Pulp	104.0	30.9	0.08	64.7	0.069	<20	2.03	0.011	0.03	0.3	1.9	0.13	0.23	154	3.2	<0.02	5.3	0.25	<0.1	<0.02
013O773076	Sediment Pulp	36.9	24.1	0.44	43.1	0.086	<20	1.29	0.038	0.14	0.4	2.5	0.15	0.18	74	0.6	<0.02	3.6	0.92	<0.1	0.05
013O773077	Sediment Pulp	42.4	29.8	0.56	80.8	0.093	<20	1.63	0.053	0.21	0.4	2.9	0.12	0.12	80	0.7	<0.02	4.9	1.47	<0.1	0.05
013O773078	Sediment Pulp	23.0	13.3	0.24	34.5	0.086	<20	0.69	0.030	0.08	0.6	1.7	0.06	0.09	64	0.6	<0.02	3.8	1.11	<0.1	0.05
013O773079	Sediment Pulp	124.6	26.3	0.43	92.4	0.122	<20	1.91	0.073	0.16	1.0	3.9	0.13	0.18	121	1.8	<0.02	6.7	1.15	<0.1	0.06
013O773080	Sediment Pulp	93.5	13.7	0.10	38.6	0.051	<20	1.13	0.018	0.03	0.3	1.8	0.03	0.12	76	2.0	<0.02	1.6	0.43	<0.1	<0.02
013O773081	Sediment Pulp	118.7	46.3	0.34	48.4	0.098	<20	3.31	0.025	0.12	0.6	3.9	0.47	0.24	126	3.1	<0.02	4.3	0.77	<0.1	<0.02
013O773082	Sediment Pulp	76.7	14.6	0.17	36.3	0.093	<20	1.03	0.021	0.04	0.4	2.2	0.07	0.10	52	1.7	<0.02	2.3	0.44	<0.1	0.08
013O773083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773085	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773086	Sediment Pulp	110.3	17.9	0.15	50.2	0.080	<20	1.42	0.018	0.04	0.3	2.6	0.16	0.25	95	2.4	<0.02	1.4	0.44	<0.1	0.06
013O773087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773088	Sediment Pulp	99.3	15.1	0.18	40.4	0.067	<20	1.01	0.019	0.04	0.5	1.8	0.09	0.25	136	1.4	<0.02	2.4	0.50	<0.1	0.04
013O773089	Sediment Pulp	35.7	16.6	0.27	59.9	0.096	<20	0.78	0.037	0.07	1.5	1.9	0.12	0.23	79	0.8	<0.02	4.0	0.64	<0.1	0.06
013O773090	Sediment Pulp	52.0	25.1	0.48	94.9	0.097	<20	1.35	0.062	0.18	0.7	2.6	0.15	0.18	103	1.1	<0.02	4.4	1.22	<0.1	0.06



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Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013O773061	Sediment Pulp	3.36	6.9	0.7	<0.05	1.5	41.34	237.9	0.03	<1	0.8	6.5	28.80	101.44	14.88	1.98	11.33	1.59	8.19	1.62	4.77
013O773062	Sediment Pulp	2.51	3.1	0.5	<0.05	0.9	97.53	171.4	0.04	<1	2.4	2.8	21.24	78.73	16.05	2.09	14.98	2.83	19.41	4.26	13.28
013O773063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773064	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773065	Sediment Pulp	1.06	2.3	0.3	<0.05	0.7	17.70	117.8	<0.02	<1	1.0	3.5	17.36	66.45	10.53	2.29	7.25	0.82	4.07	0.64	1.48
013O773066	Sediment Pulp	2.27	4.3	0.4	<0.05	1.3	15.33	226.4	0.03	<1	0.6	5.6	22.47	78.64	10.32	2.05	6.40	0.78	3.68	0.62	1.69
013O773067	Sediment Pulp	1.98	36.2	0.7	<0.05	5.5	18.28	147.0	0.04	2	0.7	29.5	16.72	58.41	8.30	1.40	5.82	0.69	3.81	0.67	1.81
013O773068	Sediment Pulp	1.49	3.4	0.2	<0.05	0.6	10.17	95.4	<0.02	<1	0.7	3.3	10.34	37.63	5.44	1.12	3.84	0.45	2.43	0.41	1.09
013O773069	Sediment Pulp	1.61	5.9	0.3	<0.05	0.8	8.80	79.5	<0.02	<1	0.3	6.8	9.15	33.75	4.82	0.93	3.31	0.37	2.00	0.34	0.89
013O773070	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773071	Sediment Pulp	1.79	23.0	1.0	<0.05	4.7	17.46	70.5	0.04	<1	0.6	18.8	9.34	35.89	6.22	0.92	4.62	0.57	3.31	0.62	1.76
013O773072	Sediment Pulp	2.07	10.8	0.4	<0.05	0.9	30.82	310.1	0.03	2	1.0	9.9	30.79	107.31	15.14	2.61	10.19	1.22	6.60	1.11	3.01
013O773073	Sediment Pulp	2.73	14.4	0.4	<0.05	1.7	31.91	386.4	0.03	3	0.9	12.3	42.38	146.12	19.82	3.09	12.44	1.38	7.10	1.16	3.07
013O773074	Sediment Pulp	2.76	12.3	0.5	<0.05	2.0	17.14	137.2	0.03	1	0.6	10.4	17.43	63.01	9.26	1.58	6.41	0.75	3.95	0.66	1.73
013O773075	Sediment Pulp	1.95	1.8	0.2	<0.05	0.8	12.98	177.9	0.02	<1	0.4	1.1	21.57	72.90	9.73	1.52	5.93	0.65	3.26	0.51	1.28
013O773076	Sediment Pulp	2.01	11.1	0.4	<0.05	2.1	9.77	73.0	<0.02	1	0.4	10.8	7.97	29.26	4.39	0.69	3.09	0.37	2.11	0.37	1.03
013O773077	Sediment Pulp	2.33	15.8	0.5	<0.05	2.3	10.58	81.6	<0.02	<1	0.5	13.7	9.21	34.00	4.99	0.80	3.50	0.42	2.36	0.41	1.14
013O773078	Sediment Pulp	2.89	7.4	0.6	<0.05	1.9	8.84	43.7	<0.02	<1	0.3	5.4	4.87	18.08	2.86	0.42	2.23	0.30	1.84	0.34	0.98
013O773079	Sediment Pulp	4.95	12.3	0.8	<0.05	2.6	50.56	225.4	0.06	<1	1.5	10.1	26.84	89.09	13.65	1.59	10.62	1.48	9.07	1.73	5.21
013O773080	Sediment Pulp	2.85	2.7	0.7	<0.05	0.7	52.55	173.1	0.03	<1	2.8	4.7	21.41	76.98	12.60	1.26	10.48	1.44	9.01	1.80	5.49
013O773081	Sediment Pulp	1.87	9.9	0.4	<0.05	0.9	28.31	282.5	0.03	2	0.9	9.3	27.51	96.30	13.63	2.35	9.28	1.09	5.93	1.00	2.72
013O773082	Sediment Pulp	5.96	4.1	1.2	<0.05	2.6	53.63	139.2	0.03	<1	3.2	6.2	18.12	65.16	11.17	1.08	9.58	1.40	8.97	1.82	5.61
013O773083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773085	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773086	Sediment Pulp	4.12	4.5	0.7	<0.05	2.1	56.15	217.1	0.03	<1	1.6	5.9	26.88	97.27	16.29	1.37	13.32	1.80	10.74	2.03	5.87
013O773087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013O773088	Sediment Pulp	3.10	5.0	0.5	<0.05	1.7	31.57	185.5	0.03	<1	0.7	5.9	23.39	83.08	13.37	1.02	10.12	1.28	7.11	1.24	3.33
013O773089	Sediment Pulp	3.25	5.8	0.6	<0.05	2.4	14.00	68.6	<0.02	<1	0.5	7.1	7.62	28.13	4.55	0.69	3.53	0.46	2.82	0.53	1.53
013O773090	Sediment Pulp	3.08	15.6	0.7	<0.05	2.5	26.87	87.0	0.03	2	0.8	14.0	12.34	48.80	8.58	1.02	7.35	0.96	5.61	1.02	2.77



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Project: None Given

Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013O773061	Sediment Pulp	0.68	4.35	0.61	<10	3
013O773062	Sediment Pulp	2.27	15.49	2.28	<10	<2
013O773063	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773064	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773065	Sediment Pulp	0.19	1.15	0.16	<10	<2
013O773066	Sediment Pulp	0.20	1.39	0.17	<10	<2
013O773067	Sediment Pulp	0.23	1.48	0.20	<10	<2
013O773068	Sediment Pulp	0.13	0.80	0.10	<10	<2
013O773069	Sediment Pulp	0.11	0.64	0.08	<10	<2
013O773070	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773071	Sediment Pulp	0.23	1.54	0.22	<10	<2
013O773072	Sediment Pulp	0.39	2.40	0.32	<10	<2
013O773073	Sediment Pulp	0.38	2.31	0.31	<10	<2
013O773074	Sediment Pulp	0.21	1.30	0.17	<10	<2
013O773075	Sediment Pulp	0.15	0.89	0.11	<10	<2
013O773076	Sediment Pulp	0.13	0.84	0.11	<10	<2
013O773077	Sediment Pulp	0.15	0.93	0.12	<10	<2
013O773078	Sediment Pulp	0.13	0.87	0.12	<10	<2
013O773079	Sediment Pulp	0.73	4.66	0.62	<10	<2
013O773080	Sediment Pulp	0.77	4.96	0.71	<10	<2
013O773081	Sediment Pulp	0.35	2.18	0.29	<10	<2
013O773082	Sediment Pulp	0.81	5.41	0.77	<10	<2
013O773083	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773084	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773085	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773086	Sediment Pulp	0.77	4.96	0.68	<10	<2
013O773087	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013O773088	Sediment Pulp	0.42	2.58	0.35	<10	<2
013O773089	Sediment Pulp	0.21	1.40	0.19	<10	<2
013O773090	Sediment Pulp	0.34	2.06	0.28	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013O773091	Sediment Pulp	6.93	24.44	8.70	134.7	91	17.5	6.2	164	1.33	1.1	8.2	6.6	1.9	35.2	0.25	0.08	0.05	26	0.51	0.072
013O773092	Sediment Pulp	26.99	27.03	23.01	311.6	255	14.1	17.0	2231	4.71	3.4	28.9	3.4	10.6	33.8	1.15	0.10	0.16	38	0.49	0.107
013O773093	Sediment Pulp	26.03	26.34	23.22	307.8	234	13.9	17.7	1764	4.45	3.6	28.2	5.0	10.1	36.2	1.12	0.11	0.17	38	0.52	0.105
013O773094	Sediment Pulp	5.07	19.65	5.72	58.7	54	15.4	6.2	208	1.42	1.6	4.7	0.7	2.6	37.9	0.57	0.10	0.04	32	0.50	0.092
013O871000	Sediment Pulp	9.48	40.07	70.81	279.3	556	12.3	7.7	408	1.72	31.2	8.3	2.4	1.2	57.8	1.14	0.47	0.75	18	5.89	0.059
013O871001	Sediment Pulp	4.73	12.69	13.04	99.9	86	8.4	3.3	77	1.01	0.3	7.9	0.7	2.3	26.5	0.26	0.31	0.05	28	0.36	0.047
013O871002	Sediment Pulp	10.36	16.54	9.96	136.9	167	9.3	5.0	161	2.02	0.7	28.3	0.3	3.3	22.2	0.40	0.18	0.07	56	0.36	0.118
013O871003	Sediment Pulp	0.95	8.37	8.00	73.3	54	8.6	5.2	117	0.74	1.2	6.0	<0.2	4.3	23.1	0.24	0.08	0.07	16	0.37	0.043
013O871004	Sediment Pulp	4.69	12.52	11.68	100.4	88	8.4	3.2	77	1.01	0.2	7.9	<0.2	2.2	26.2	0.27	0.11	0.05	28	0.36	0.048
013O871005	Sediment Pulp	5.76	19.21	10.14	147.4	85	14.2	8.3	155	1.41	2.7	10.7	<0.2	5.6	31.2	0.37	0.13	0.06	33	0.49	0.049
013O871006	Sediment Pulp	1.28	9.93	8.57	79.7	60	8.5	4.9	118	0.95	3.0	2.3	1.2	2.0	29.9	0.19	0.17	0.05	27	0.53	0.059
013O871007	Sediment Pulp	1.83	13.37	4.66	69.5	50	18.1	9.9	123	1.72	1.7	6.3	1.3	3.2	31.3	0.20	0.09	0.03	35	0.91	0.052
013O871008	Sediment Pulp	2.78	16.24	7.90	52.0	36	12.0	8.0	159	1.51	2.3	3.2	0.2	4.2	28.5	0.11	0.08	0.05	26	0.51	0.063
013O871009	Sediment Pulp	3.71	40.24	23.24	153.8	273	23.9	8.5	188	3.14	1.9	10.7	1.1	3.4	80.8	0.42	0.29	0.06	41	0.99	0.091
013O871010	Sediment Pulp	3.57	39.50	22.87	150.4	281	24.0	8.4	185	3.16	1.7	10.2	1.3	3.5	79.8	0.40	0.29	0.06	40	0.98	0.081
013O871011	Sediment Pulp	22.38	66.75	10.84	355.2	128	47.0	21.9	319	2.37	2.6	24.1	0.7	2.7	65.7	0.75	0.15	0.05	40	0.72	0.079
013O871012	Sediment Pulp	1.69	37.65	9.58	105.2	201	13.3	3.3	97	0.88	0.3	9.2	1.4	1.7	42.8	0.80	0.11	0.04	9	0.77	0.065
013O871013	Sediment Pulp	5.27	25.61	8.77	120.0	123	16.8	5.9	147	1.42	1.5	9.7	1.6	2.1	42.5	0.24	0.07	0.14	26	0.44	0.085
013O871014	Sediment Pulp	101.80	60.92	20.10	463.1	447	12.9	9.5	405	4.98	1.3	34.1	1.3	3.6	96.9	1.56	0.08	0.28	83	0.77	0.193
013O871015	Sediment Pulp	5.43	21.90	9.52	120.2	91	15.6	5.6	151	1.40	1.8	8.0	0.9	2.2	38.1	0.30	0.08	0.08	28	0.46	0.087
013O871016	Sediment Pulp	2.55	9.84	14.38	111.2	62	8.6	5.7	183	1.47	2.1	5.9	1.3	5.3	21.9	0.16	0.08	0.06	28	0.36	0.060
013O871017	Sediment Pulp	0.87	30.61	25.69	123.0	3073	43.2	27.2	1200	3.00	25.7	3.9	4.0	8.2	26.5	0.56	0.75	3.38	42	0.60	0.085
013O871018	Sediment Pulp	7.46	9.38	10.42	175.9	61	9.9	6.4	163	1.33	2.1	7.1	0.8	3.0	35.2	0.45	0.12	0.05	28	0.41	0.070
013O871019	Sediment Pulp	1.20	14.49	2.85	71.7	53	6.9	2.2	71	0.57	0.3	4.9	0.3	2.5	48.9	0.31	0.03	0.06	23	0.64	0.031
013O871020	Sediment Pulp	20.20	43.37	9.75	292.5	242	8.0	4.4	52	0.66	1.4	49.2	1.2	3.2	109.5	1.32	0.15	0.15	12	0.77	0.042
013O871021	Sediment Pulp	3.40	38.53	24.51	150.3	294	22.8	7.7	187	3.18	2.9	11.7	1.6	4.7	90.9	0.50	0.33	0.07	42	0.95	0.092
013O871022	Sediment Pulp	2.48	8.82	10.20	53.6	53	6.3	2.8	130	0.91	2.2	5.3	0.6	3.9	29.3	0.21	0.66	0.05	14	0.43	0.048
013O871023	Sediment Pulp	32.20	18.88	17.96	183.0	211	7.5	4.6	163	4.42	2.4	56.7	0.3	8.6	23.5	0.68	0.18	0.10	43	0.35	0.082
013O871024	Sediment Pulp	32.09	17.82	17.64	155.7	223	7.0	5.0	165	4.66	2.7	56.0	0.5	8.4	23.0	0.75	0.15	0.09	42	0.33	0.069
013O871025	Sediment Pulp	18.68	19.80	12.72	427.7	90	5.1	7.2	692	3.27	2.5	79.7	<0.2	8.2	16.7	0.98	0.23	0.05	26	0.30	0.042



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013O773091	Sediment Pulp	46.4	24.3	0.46	90.3	0.099	<20	1.29	0.056	0.17	0.6	2.6	0.14	0.17	74	1.1	<0.02	4.1	1.17	<0.1	0.05
013O773092	Sediment Pulp	107.8	26.4	0.48	181.0	0.129	<20	1.61	0.053	0.19	0.7	4.0	0.25	0.07	62	2.3	<0.02	3.2	1.40	<0.1	0.08
013O773093	Sediment Pulp	104.6	25.8	0.47	163.4	0.133	<20	1.58	0.060	0.19	0.8	3.9	0.25	0.07	57	2.3	<0.02	3.2	1.39	<0.1	0.07
013O773094	Sediment Pulp	40.3	21.3	0.45	33.5	0.069	<20	0.84	0.154	0.14	0.3	2.1	0.14	0.71	35	1.1	<0.02	2.2	0.77	<0.1	0.05
013O871000	Sediment Pulp	9.9	12.7	0.54	77.4	0.042	<20	0.44	0.027	0.05	0.5	2.3	0.21	1.47	90	1.2	0.02	1.9	0.47	<0.1	0.03
013O871001	Sediment Pulp	93.3	14.8	0.17	40.7	0.065	<20	1.00	0.021	0.05	0.6	1.7	0.08	0.24	66	1.2	<0.02	2.4	0.50	<0.1	0.04
013O871002	Sediment Pulp	91.3	19.6	0.17	56.9	0.086	<20	1.25	0.020	0.05	0.4	2.5	0.09	0.13	56	2.4	<0.02	2.2	0.50	<0.1	0.04
013O871003	Sediment Pulp	57.5	10.5	0.23	54.2	0.087	<20	0.60	0.024	0.06	0.2	1.7	0.10	0.16	27	0.9	<0.02	1.6	0.38	<0.1	0.07
013O871004	Sediment Pulp	92.1	14.9	0.17	40.1	0.065	<20	1.00	0.020	0.05	0.6	1.7	0.08	0.24	71	1.4	<0.02	2.4	0.49	<0.1	0.03
013O871005	Sediment Pulp	52.8	19.1	0.34	50.7	0.088	<20	1.00	0.033	0.13	1.2	2.5	0.26	0.29	29	1.6	<0.02	2.6	0.69	<0.1	0.08
013O871006	Sediment Pulp	32.3	16.3	0.27	56.8	0.106	<20	0.76	0.035	0.07	1.5	1.9	0.19	0.24	29	0.7	<0.02	3.9	0.62	<0.1	0.06
013O871007	Sediment Pulp	33.7	19.1	0.32	71.0	0.077	<20	1.02	0.038	0.09	1.3	2.6	0.14	1.02	39	1.2	<0.02	3.1	0.66	<0.1	0.09
013O871008	Sediment Pulp	52.6	17.7	0.40	48.7	0.089	<20	0.93	0.044	0.13	0.6	2.3	0.12	0.44	14	0.6	<0.02	2.2	0.76	<0.1	0.07
013O871009	Sediment Pulp	189.7	23.8	0.30	255.5	0.087	<20	1.87	0.042	0.06	3.0	3.4	0.19	0.28	57	2.3	<0.02	1.2	0.41	<0.1	0.07
013O871010	Sediment Pulp	194.7	24.0	0.30	250.8	0.089	<20	1.92	0.043	0.06	2.6	3.5	0.15	0.28	70	2.3	0.02	1.2	0.42	<0.1	0.08
013O871011	Sediment Pulp	128.2	25.9	0.62	142.9	0.094	<20	1.46	0.040	0.10	0.2	3.1	0.52	0.78	68	2.9	<0.02	2.2	0.96	<0.1	0.10
013O871012	Sediment Pulp	138.8	7.2	0.10	52.2	0.018	<20	0.66	0.029	0.01	0.1	1.4	0.07	0.78	121	2.9	<0.02	1.4	0.14	<0.1	<0.02
013O871013	Sediment Pulp	54.7	22.3	0.49	87.4	0.087	<20	1.23	0.121	0.16	0.8	2.7	0.13	0.15	47	0.8	<0.02	4.4	1.21	<0.1	0.04
013O871014	Sediment Pulp	164.3	26.0	0.26	126.6	0.088	<20	2.25	0.019	0.05	0.5	3.8	0.13	0.17	123	4.8	<0.02	6.0	1.12	0.1	<0.02
013O871015	Sediment Pulp	51.5	22.2	0.42	102.6	0.084	<20	1.19	0.046	0.15	0.6	2.7	0.13	0.14	50	0.6	<0.02	4.2	1.23	<0.1	0.06
013O871016	Sediment Pulp	37.0	15.2	0.31	74.0	0.102	30	0.75	0.030	0.08	0.8	2.4	0.09	0.04	18	0.6	<0.02	3.6	0.97	<0.1	0.06
013O871017	Sediment Pulp	43.6	45.0	0.74	164.4	0.095	29	1.56	0.029	0.24	0.5	5.9	0.27	0.14	272	0.5	0.04	5.0	1.38	<0.1	0.11
013O871018	Sediment Pulp	58.6	16.9	0.26	86.2	0.073	47	0.85	0.048	0.07	0.7	2.4	0.13	0.14	23	0.7	<0.02	3.2	0.72	<0.1	0.04
013O871019	Sediment Pulp	108.0	9.8	0.09	174.0	0.017	38	0.60	0.016	<0.01	0.2	2.0	0.04	0.57	75	2.1	<0.02	0.7	0.06	<0.1	0.04
013O871020	Sediment Pulp	167.7	7.4	0.07	89.6	0.025	33	0.71	0.016	0.02	0.2	2.1	0.08	1.03	141	1.5	<0.02	1.3	0.25	<0.1	<0.02
013O871021	Sediment Pulp	192.0	22.2	0.29	284.2	0.079	38	1.80	0.045	0.06	3.2	4.0	0.20	0.28	83	1.7	<0.02	3.8	0.43	0.1	0.06
013O871022	Sediment Pulp	53.6	9.0	0.20	47.8	0.049	28	0.52	0.031	0.07	1.7	1.8	0.07	0.21	41	0.4	<0.02	1.9	0.37	<0.1	0.04
013O871023	Sediment Pulp	144.8	15.0	0.16	69.9	0.076	27	1.41	0.023	0.03	0.6	3.3	0.10	0.12	79	1.9	<0.02	3.8	0.41	<0.1	0.08
013O871024	Sediment Pulp	138.8	14.6	0.15	66.1	0.073	32	1.38	0.024	0.03	0.7	3.2	0.09	0.12	80	1.9	<0.02	3.6	0.39	0.1	0.04
013O871025	Sediment Pulp	89.3	11.5	0.12	85.3	0.053	<20	1.00	0.017	0.03	0.6	2.6	0.17	0.12	40	1.1	<0.02	2.1	0.30	<0.1	<0.02



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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0130773091	Sediment Pulp	3.00	14.9	0.7	<0.05	2.4	24.08	78.9	0.03	2	0.8	14.1	10.98	43.48	7.69	0.93	6.57	0.87	5.12	0.93	2.54
0130773092	Sediment Pulp	3.94	17.9	1.2	<0.05	3.5	80.91	221.7	0.05	1	4.4	16.1	24.76	90.50	15.66	1.48	14.02	2.06	13.41	2.67	8.20
0130773093	Sediment Pulp	4.02	17.7	1.2	<0.05	3.0	79.31	221.3	0.05	2	4.4	15.9	24.43	88.96	15.56	1.47	13.77	2.05	13.28	2.65	8.15
0130773094	Sediment Pulp	2.21	10.2	0.5	<0.05	2.5	15.12	71.7	<0.02	1	0.4	10.2	8.23	30.19	4.67	0.69	3.58	0.46	2.81	0.53	1.56
0130871000	Sediment Pulp	0.74	3.2	2.8	<0.05	1.2	9.72	15.5	0.43	17	0.1	3.8	2.56	10.96	2.33	0.44	2.05	0.27	1.67	0.32	0.93
0130871001	Sediment Pulp	2.90	4.9	0.6	<0.05	1.7	30.22	179.1	0.03	<1	0.7	5.6	22.14	79.23	12.83	0.97	9.68	1.22	6.67	1.18	3.17
0130871002	Sediment Pulp	3.86	5.2	0.8	<0.05	1.7	42.29	180.0	0.04	<1	1.3	6.1	22.09	78.92	13.07	1.21	10.36	1.41	8.33	1.55	4.49
0130871003	Sediment Pulp	2.79	5.6	0.5	<0.05	2.7	24.03	110.0	<0.02	<1	0.5	7.1	12.72	46.97	7.62	0.68	6.02	0.79	4.71	0.87	2.46
0130871004	Sediment Pulp	2.79	4.9	0.5	<0.05	1.4	29.76	180.8	0.03	<1	0.7	5.8	21.94	78.08	12.65	0.96	9.40	1.19	6.56	1.15	3.08
0130871005	Sediment Pulp	3.16	10.6	0.6	<0.05	3.1	32.68	104.7	0.02	<1	1.2	11.3	12.39	46.76	8.39	0.75	7.17	1.00	6.05	1.15	3.28
0130871006	Sediment Pulp	3.36	5.8	0.6	<0.05	2.4	13.89	63.1	<0.02	<1	0.5	7.6	7.08	26.50	4.35	0.68	3.44	0.45	2.76	0.52	1.51
0130871007	Sediment Pulp	2.50	7.4	0.4	<0.05	4.0	12.94	63.8	<0.02	2	0.4	8.4	7.48	28.62	4.58	0.76	3.48	0.44	2.60	0.49	1.38
0130871008	Sediment Pulp	2.57	9.4	0.5	<0.05	2.8	17.91	94.1	<0.02	<1	0.5	10.2	11.06	40.68	6.34	1.02	4.73	0.59	3.38	0.62	1.77
0130871009	Sediment Pulp	2.98	5.0	0.4	<0.05	4.0	52.61	296.5	0.03	<1	1.3	6.9	40.88	139.68	19.78	2.68	14.36	1.77	9.88	1.78	4.95
0130871010	Sediment Pulp	3.01	5.1	0.4	<0.05	4.2	54.73	300.4	0.03	<1	1.2	7.0	41.64	143.18	20.37	2.77	14.82	1.82	10.16	1.85	5.13
0130871011	Sediment Pulp	2.44	8.7	0.4	<0.05	6.5	67.11	171.6	0.03	11	0.9	17.8	32.70	124.66	22.64	2.92	19.53	2.40	12.96	2.26	5.91
0130871012	Sediment Pulp	2.21	0.9	0.3	<0.05	1.1	93.92	256.2	0.04	3	1.3	0.5	34.58	133.33	26.27	2.33	23.54	3.29	19.32	3.48	9.41
0130871013	Sediment Pulp	2.79	14.6	1.0	<0.05	2.1	27.15	91.1	0.03	<1	0.5	13.2	13.62	52.61	9.02	1.19	7.18	1.06	5.74	1.15	3.02
0130871014	Sediment Pulp	3.63	5.3	1.1	<0.05	2.2	93.61	410.8	0.10	12	4.3	13.3	44.56	171.03	29.29	3.67	25.16	3.69	19.75	4.10	10.86
0130871015	Sediment Pulp	2.65	14.6	0.9	<0.05	2.2	23.98	83.4	0.04	3	0.7	14.2	12.32	45.47	8.08	0.96	6.71	0.98	5.05	0.96	2.78
0130871016	Sediment Pulp	3.44	8.4	1.0	<0.05	3.0	20.09	72.2	<0.02	<1	0.5	12.9	9.11	33.97	6.19	0.72	4.56	0.72	4.07	0.82	2.16
0130871017	Sediment Pulp	2.02	24.2	1.4	<0.05	4.9	18.45	76.2	0.05	1	0.9	20.4	10.48	38.91	6.66	1.02	4.86	0.67	3.31	0.71	1.93
0130871018	Sediment Pulp	2.99	6.8	0.7	<0.05	2.1	28.82	106.3	0.03	3	0.5	10.2	13.98	52.72	8.65	1.20	7.81	1.04	5.49	1.07	2.99
0130871019	Sediment Pulp	1.32	0.4	0.5	<0.05	1.4	40.36	187.7	<0.02	1	0.6	0.3	23.38	83.88	12.79	1.56	10.17	1.40	7.77	1.53	4.32
0130871020	Sediment Pulp	2.25	1.6	0.5	<0.05	1.3	86.73	244.7	0.05	2	2.3	2.1	38.13	138.80	23.27	2.14	19.56	2.89	16.54	3.23	9.22
0130871021	Sediment Pulp	2.91	5.2	0.5	<0.05	3.7	53.96	300.3	0.03	<1	1.3	7.2	42.20	153.24	21.46	2.99	14.25	2.11	10.90	2.00	5.38
0130871022	Sediment Pulp	2.92	5.3	1.1	<0.05	2.1	22.34	90.6	<0.02	<1	0.5	6.8	11.38	40.52	6.19	0.70	5.22	0.76	4.58	0.87	2.51
0130871023	Sediment Pulp	5.40	3.6	1.3	<0.05	3.0	77.79	259.7	0.05	1	6.7	6.9	35.85	127.97	21.66	1.91	18.05	2.77	15.50	3.31	9.40
0130871024	Sediment Pulp	5.07	3.4	1.3	<0.05	2.7	73.70	249.3	0.06	<1	3.5	6.3	33.42	124.70	21.00	1.93	16.66	2.56	14.37	3.11	8.36
0130871025	Sediment Pulp	3.81	2.9	0.8	<0.05	1.8	99.87	183.3	0.04	<1	5.9	4.1	22.89	84.28	15.82	1.60	15.97	2.51	16.53	3.67	11.55



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Project: None Given

Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013O773091	Sediment Pulp	0.32	1.96	0.26	<10	<2
013O773092	Sediment Pulp	1.14	7.53	1.04	<10	<2
013O773093	Sediment Pulp	1.13	7.47	1.03	<10	<2
013O773094	Sediment Pulp	0.21	1.39	0.20	<10	<2
013O871000	Sediment Pulp	0.12	0.83	0.12	<10	<2
013O871001	Sediment Pulp	0.39	2.45	0.33	<10	<2
013O871002	Sediment Pulp	0.60	3.82	0.52	<10	<2
013O871003	Sediment Pulp	0.33	2.08	0.28	<10	<2
013O871004	Sediment Pulp	0.39	2.41	0.33	<10	<2
013O871005	Sediment Pulp	0.44	2.88	0.40	<10	<2
013O871006	Sediment Pulp	0.21	1.39	0.19	<10	<2
013O871007	Sediment Pulp	0.19	1.22	0.18	<10	<2
013O871008	Sediment Pulp	0.24	1.54	0.22	<10	<2
013O871009	Sediment Pulp	0.64	4.02	0.56	<10	<2
013O871010	Sediment Pulp	0.66	4.15	0.57	<10	<2
013O871011	Sediment Pulp	0.72	4.46	0.64	<10	<2
013O871012	Sediment Pulp	1.18	7.13	0.96	<10	<2
013O871013	Sediment Pulp	0.41	2.35	0.32	<10	<2
013O871014	Sediment Pulp	1.51	9.00	1.42	11	<2
013O871015	Sediment Pulp	0.35	2.07	0.27	<10	<2
013O871016	Sediment Pulp	0.30	2.02	0.26	<10	<2
013O871017	Sediment Pulp	0.25	1.81	0.26	<10	<2
013O871018	Sediment Pulp	0.43	2.63	0.38	<10	<2
013O871019	Sediment Pulp	0.57	3.65	0.52	<10	<2
013O871020	Sediment Pulp	1.35	8.66	1.45	11	<2
013O871021	Sediment Pulp	0.78	4.50	0.67	<10	<2
013O871022	Sediment Pulp	0.36	2.17	0.32	<10	<2
013O871023	Sediment Pulp	1.41	8.81	1.28	<10	<2
013O871024	Sediment Pulp	1.32	8.19	1.18	<10	<2
013O871025	Sediment Pulp	1.82	10.99	1.66	<10	<2



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Project: None Given

Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013O871026	Sediment Pulp	117.84	62.98	51.53	917.3	798	13.3	25.1	8600	11.00	5.8	113.7	<0.2	20.8	43.0	3.64	0.37	0.13	47	0.54	0.169
013O871027	Sediment Pulp	4.10	63.97	10.05	97.8	596	16.9	8.0	222	1.87	4.5	17.1	5.7	7.2	32.5	0.36	0.36	0.07	38	0.57	0.061
013O871028	Sediment Pulp	13.33	34.12	14.09	89.1	178	14.7	11.2	448	2.97	6.4	31.9	1.7	7.8	42.2	0.34	0.36	0.05	54	0.54	0.072
013O871029	Sediment Pulp	4.70	28.01	18.04	368.4	117	11.4	6.3	177	1.57	5.7	50.7	1.4	3.6	35.9	1.39	0.71	0.07	38	0.65	0.064
013O871030	Sediment Pulp	43.25	20.34	29.78	375.9	304	13.8	8.0	504	3.41	3.7	69.5	0.9	4.5	48.3	1.21	0.25	0.05	51	0.46	0.115
013O871031	Sediment Pulp	15.20	35.93	37.14	1121.5	136	24.6	17.7	246	3.20	5.1	24.2	0.6	7.2	33.0	3.44	0.48	0.05	55	0.45	0.056
013O871032	Sediment Pulp	13.15	37.40	30.75	273.6	332	22.3	37.9	1976	7.14	18.1	92.3	1.5	5.4	26.1	1.60	0.39	0.10	51	0.32	0.150
013O871033	Sediment Pulp	6.43	21.62	14.88	192.7	191	14.8	5.4	168	1.62	5.6	39.6	0.4	2.3	31.3	0.60	0.45	0.05	40	0.44	0.085
013O871034	Sediment Pulp	23.94	27.07	20.37	287.3	139	45.9	13.5	308	3.95	34.0	72.5	0.9	4.7	27.2	0.47	0.86	0.09	53	0.34	0.075
013O871035	Sediment Pulp	25.85	44.01	14.18	898.0	562	13.9	11.4	305	4.43	1.7	40.7	1.3	2.6	21.6	2.55	0.47	0.08	36	0.29	0.153
013O871036	Sediment Pulp	81.92	49.88	63.12	1191.5	1572	9.1	8.8	964	6.46	0.2	162.2	0.9	5.5	44.3	4.90	0.36	0.14	51	0.70	0.282
013O871037	Sediment Pulp	9.64	41.63	83.55	298.7	676	12.3	7.5	432	1.77	38.3	9.8	3.1	1.8	68.9	1.38	0.58	1.04	20	6.65	0.074
013O871038	Sediment Pulp	44.23	43.92	24.33	832.9	199	11.9	13.7	2071	2.03	14.4	64.8	0.6	5.3	35.1	3.06	0.53	0.05	36	0.51	0.063
013O871039	Sediment Pulp	33.33	62.26	24.46	725.6	465	11.4	2.9	86	0.60	2.5	44.5	0.9	1.4	52.9	2.27	0.20	0.09	27	0.57	0.051
013O871040	Sediment Pulp	71.60	25.63	42.21	517.6	715	10.6	3.2	143	2.81	0.3	30.7	1.2	3.2	27.6	2.18	0.12	0.08	31	0.41	0.089
013O871041	Sediment Pulp	24.14	42.16	14.26	843.2	520	13.8	11.5	296	4.30	1.7	40.3	1.1	2.8	20.6	2.69	0.49	0.07	35	0.28	0.149
013O871042	Sediment Pulp	1.61	48.42	19.87	326.0	289	11.4	1.5	41	0.36	1.3	7.2	<0.2	0.5	53.4	0.48	0.13	0.04	14	0.56	0.071
013O871043	Sediment Pulp	0.99	19.71	4.64	26.1	88	4.9	1.5	68	0.52	0.1	6.4	0.9	0.9	45.1	0.37	0.13	<0.02	6	1.00	0.095
013O871044	Sediment Pulp	0.93	32.45	24.97	125.8	2636	43.5	27.7	1178	2.98	24.0	4.0	2.8	8.1	27.2	0.49	0.63	3.15	42	0.61	0.088
013O871045	Sediment Pulp	18.08	22.56	31.60	71.7	459	7.9	13.3	180	3.73	4.3	14.0	2.0	5.1	242.4	0.43	0.13	0.13	59	1.12	0.199
013O871046	Sediment Pulp	3.58	23.51	31.44	63.5	474	7.1	3.3	115	1.64	1.5	12.0	2.3	2.6	67.2	0.40	0.15	0.12	67	0.53	0.191
013O871047	Sediment Pulp	5.12	22.12	11.06	80.8	235	7.7	4.3	182	2.18	2.6	21.3	3.6	2.3	29.8	0.56	0.23	0.09	52	0.53	0.123
013O871048	Sediment Pulp	6.24	19.34	21.22	73.4	131	7.4	5.7	191	1.93	1.7	17.4	1.4	3.5	34.5	0.53	0.15	0.06	40	0.48	0.055
013O871049	Sediment Pulp	4.78	12.58	9.80	60.6	76	8.4	8.5	190	1.94	2.2	18.8	1.5	3.1	41.0	0.27	0.10	0.05	40	0.61	0.068
013O871050	Sediment Pulp	0.55	5.48	2.31	27.0	66	2.8	0.9	51	0.34	0.1	2.3	1.0	0.4	36.5	0.21	0.09	<0.02	5	0.99	0.035
013O871051	Sediment Pulp	1.52	23.06	8.13	100.3	177	7.7	1.8	64	0.39	<0.1	74.4	1.3	1.8	46.0	0.59	0.14	0.04	7	0.66	0.058
013O871052	Sediment Pulp	2.22	9.16	7.50	71.4	45	10.3	5.8	160	1.55	1.5	4.4	1.0	4.0	23.3	0.13	0.08	0.05	32	0.42	0.065
013O871053	Sediment Pulp	0.75	4.72	6.77	39.0	20	6.8	4.4	146	1.24	1.0	1.7	0.5	3.6	18.8	0.07	0.06	0.04	20	0.33	0.044
013O871054	Sediment Pulp	1.44	30.24	4.11	40.2	88	4.1	1.4	34	0.36	<0.1	9.2	0.9	0.3	44.3	0.29	0.04	0.03	8	0.54	0.063
013O871055	Sediment Pulp	1.74	7.44	10.06	28.4	24	5.0	3.0	102	0.96	1.0	1.8	0.7	3.1	22.1	0.07	1.06	0.04	17	0.36	0.054



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013O871026	Sediment Pulp	325.1	24.3	0.14	179.9	0.078	33	2.48	0.022	0.04	0.9	4.2	0.58	0.37	211	5.6	0.04	6.0	0.48	0.2	<0.02
013O871027	Sediment Pulp	67.3	27.8	0.58	67.2	0.101	35	1.18	0.065	0.24	0.3	4.4	0.27	0.97	32	1.7	<0.02	5.0	1.85	<0.1	0.13
013O871028	Sediment Pulp	53.6	30.7	0.43	80.4	0.104	<20	1.12	0.050	0.15	2.3	3.6	0.18	0.33	30	1.1	<0.02	4.3	1.09	<0.1	0.10
013O871029	Sediment Pulp	62.5	25.7	0.26	60.9	0.066	49	1.05	0.033	0.04	5.7	2.6	0.12	0.29	83	1.4	<0.02	3.6	0.73	<0.1	0.07
013O871030	Sediment Pulp	94.5	44.7	0.24	55.6	0.064	32	1.67	0.023	0.03	0.9	2.5	0.10	0.12	133	5.4	<0.02	3.4	0.40	<0.1	<0.02
013O871031	Sediment Pulp	106.0	49.9	0.35	93.1	0.070	<20	1.71	0.029	0.07	1.4	3.5	0.18	0.36	110	1.3	<0.02	3.2	1.18	<0.1	0.05
013O871032	Sediment Pulp	129.1	54.7	0.34	66.2	0.067	33	2.31	0.024	0.05	0.9	3.8	0.49	0.15	89	7.6	<0.02	4.5	0.67	0.1	<0.02
013O871033	Sediment Pulp	105.1	30.7	0.26	64.3	0.058	<20	1.50	0.030	0.04	0.9	2.3	0.07	0.23	80	2.4	<0.02	3.4	0.55	0.1	0.02
013O871034	Sediment Pulp	111.0	96.9	0.72	72.8	0.097	35	1.92	0.027	0.08	1.4	2.7	0.11	0.13	73	2.7	<0.02	5.5	1.94	0.1	0.03
013O871035	Sediment Pulp	232.0	29.5	0.15	85.7	0.039	35	2.82	0.018	0.03	0.4	3.1	0.21	0.37	173	13.5	<0.02	3.7	0.46	0.2	<0.02
013O871036	Sediment Pulp	281.6	31.2	0.15	198.3	0.054	<20	3.20	0.014	0.03	1.0	4.0	0.19	0.28	496	24.4	<0.02	5.9	0.48	0.2	<0.02
013O871037	Sediment Pulp	11.5	12.3	0.56	102.4	0.038	38	0.43	0.031	0.05	0.5	2.3	0.22	1.50	96	1.0	0.02	2.0	0.52	<0.1	0.03
013O871038	Sediment Pulp	177.1	17.6	0.19	107.0	0.050	29	1.19	0.030	0.05	1.3	2.7	0.22	0.39	97	6.5	<0.02	2.8	0.40	0.1	<0.02
013O871039	Sediment Pulp	141.6	13.8	0.08	133.8	0.040	<20	1.15	0.017	0.02	0.3	2.0	0.15	0.32	98	2.2	<0.02	2.6	0.30	<0.1	0.03
013O871040	Sediment Pulp	162.5	20.4	0.07	123.5	0.045	29	2.06	0.017	0.02	0.3	3.7	0.04	0.33	112	4.6	<0.02	4.0	0.25	0.1	<0.02
013O871041	Sediment Pulp	211.0	28.7	0.14	78.1	0.041	<20	2.74	0.017	0.03	0.4	3.0	0.21	0.36	168	11.8	<0.02	3.7	0.45	<0.1	<0.02
013O871042	Sediment Pulp	105.8	13.8	0.13	122.8	0.029	<20	0.70	0.031	0.03	<0.1	1.2	0.15	0.41	134	1.7	<0.02	1.5	0.30	0.1	0.03
013O871043	Sediment Pulp	74.2	7.4	0.12	103.7	0.015	43	0.65	0.024	0.02	0.1	1.5	0.03	0.71	113	2.5	<0.02	1.1	0.16	0.1	<0.02
013O871044	Sediment Pulp	41.0	46.0	0.74	164.6	0.096	37	1.57	0.031	0.24	0.2	5.6	0.28	0.14	273	0.5	0.04	5.5	1.35	<0.1	0.11
013O871045	Sediment Pulp	98.1	20.0	0.11	224.3	0.086	41	1.20	0.024	0.04	11.1	3.1	0.17	1.89	105	3.2	<0.02	8.2	0.40	0.1	0.02
013O871046	Sediment Pulp	85.6	19.4	0.12	160.1	0.080	39	1.14	0.021	0.03	1.4	2.3	0.06	0.18	134	3.2	0.03	7.5	0.41	<0.1	0.04
013O871047	Sediment Pulp	98.2	17.8	0.13	96.8	0.074	32	1.64	0.015	0.03	0.7	2.4	0.09	0.25	95	3.3	<0.02	5.7	0.60	<0.1	0.02
013O871048	Sediment Pulp	72.1	15.4	0.16	151.4	0.075	33	1.03	0.024	0.04	1.4	2.6	0.11	0.25	85	1.7	0.02	3.9	0.69	<0.1	0.05
013O871049	Sediment Pulp	47.4	20.2	0.24	144.5	0.078	<20	0.99	0.024	0.09	3.9	2.2	0.12	0.23	53	1.7	<0.02	4.0	0.99	<0.1	0.06
013O871050	Sediment Pulp	18.6	4.3	0.09	34.4	0.017	<20	0.41	0.012	<0.01	<0.1	1.2	<0.02	0.53	82	2.3	<0.02	0.9	0.10	<0.1	<0.02
013O871051	Sediment Pulp	214.4	6.6	0.15	484.5	0.046	<20	0.61	0.030	0.04	0.2	2.1	0.10	0.51	90	2.3	<0.02	2.3	0.33	<0.1	0.04
013O871052	Sediment Pulp	36.4	19.2	0.33	78.9	0.100	<20	0.90	0.040	0.09	0.9	2.2	0.11	0.07	27	0.6	<0.02	3.6	0.96	<0.1	0.07
013O871053	Sediment Pulp	26.8	11.0	0.28	31.0	0.077	<20	0.59	0.028	0.08	0.5	1.6	0.07	0.05	19	0.4	<0.02	2.9	0.67	<0.1	0.07
013O871054	Sediment Pulp	123.8	4.7	0.10	56.8	0.032	<20	0.86	0.014	0.02	0.1	1.2	0.04	0.75	137	3.4	<0.02	1.8	0.22	0.1	<0.02
013O871055	Sediment Pulp	37.4	9.0	0.24	22.9	0.080	<20	0.59	0.026	0.06	0.8	1.5	0.06	0.16	30	0.6	<0.02	2.7	0.53	<0.1	0.05



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013O871026	Sediment Pulp	3.71	3.7	1.2	<0.05	2.2	448.19	915.5	0.20	3	13.8	6.9	84.70	359.72	75.69	7.35	81.85	13.80	84.50	18.31	52.78
013O871027	Sediment Pulp	2.97	22.7	0.7	<0.05	5.4	23.18	107.6	0.03	1	0.7	19.6	15.86	56.80	8.21	1.15	6.37	0.85	4.75	0.86	2.45
013O871028	Sediment Pulp	3.60	14.3	0.9	<0.05	4.2	24.91	97.0	0.03	3	1.0	13.4	12.65	48.03	7.31	0.98	6.84	0.85	4.70	0.97	2.66
013O871029	Sediment Pulp	2.95	3.6	1.0	<0.05	3.9	31.09	101.0	0.04	1	1.2	11.9	15.07	55.41	8.31	1.06	6.61	1.03	5.55	1.12	3.32
013O871030	Sediment Pulp	3.33	3.0	0.6	<0.05	1.8	68.79	196.7	0.05	67	2.0	7.3	26.03	101.70	17.71	1.99	15.82	2.48	13.56	2.61	7.47
013O871031	Sediment Pulp	3.22	7.2	0.7	<0.05	2.0	71.65	187.3	0.03	5	3.0	18.2	27.45	101.38	17.67	2.15	16.45	2.45	13.76	2.83	7.62
013O871032	Sediment Pulp	2.21	4.7	0.9	<0.05	1.0	108.49	364.9	0.07	1	3.7	10.4	34.36	133.53	24.14	2.99	23.06	3.62	20.78	4.40	12.58
013O871033	Sediment Pulp	3.42	4.0	0.7	<0.05	1.7	89.47	194.6	0.05	1	4.5	6.8	29.86	120.00	23.65	2.54	22.75	3.14	16.99	3.38	9.50
013O871034	Sediment Pulp	4.02	6.7	1.0	<0.05	1.8	103.93	251.2	0.05	<1	3.3	35.4	29.79	118.19	23.31	2.57	23.42	3.55	19.71	3.81	10.82
013O871035	Sediment Pulp	2.81	3.1	0.5	<0.05	0.6	330.97	463.3	0.05	<1	8.5	4.0	63.00	282.25	61.68	5.99	64.00	10.26	59.92	12.78	35.61
013O871036	Sediment Pulp	4.24	3.2	1.0	<0.05	1.1	353.31	508.9	0.17	12	13.0	4.9	73.15	309.73	64.77	7.32	69.61	11.26	68.74	14.14	38.94
013O871037	Sediment Pulp	0.68	3.5	3.9	<0.05	1.2	10.62	18.9	0.49	24	0.3	4.3	3.17	12.34	2.63	0.46	2.27	0.35	1.86	0.38	1.03
013O871038	Sediment Pulp	2.60	4.0	0.6	<0.05	1.6	188.12	283.3	0.05	9	5.7	5.9	48.25	196.98	39.51	4.22	42.54	6.32	35.28	7.08	19.77
013O871039	Sediment Pulp	3.69	2.0	0.8	<0.05	1.5	94.52	261.5	0.04	6	2.9	2.8	35.41	133.32	23.50	1.92	21.55	3.08	16.98	3.54	10.39
013O871040	Sediment Pulp	4.34	1.7	0.9	<0.05	1.1	121.98	318.3	0.10	3	3.4	2.0	39.86	150.70	26.54	2.55	24.56	4.00	22.13	4.71	13.23
013O871041	Sediment Pulp	2.83	2.9	0.5	<0.05	0.5	320.01	436.0	0.08	1	10.0	4.2	59.86	270.90	61.61	6.19	66.80	9.75	60.09	12.16	36.49
013O871042	Sediment Pulp	2.06	1.8	0.3	<0.05	1.9	62.90	191.3	0.04	2	1.4	2.8	25.78	96.90	16.93	1.67	14.29	2.15	12.95	2.68	7.36
013O871043	Sediment Pulp	2.02	1.1	0.4	<0.05	0.6	42.66	129.2	0.02	1	0.4	0.5	17.76	62.83	11.37	0.79	10.14	1.64	8.17	1.61	4.52
013O871044	Sediment Pulp	1.81	23.4	1.2	<0.05	5.1	17.94	73.3	0.05	<1	0.6	20.0	10.27	36.60	5.96	0.97	4.70	0.62	3.40	0.70	1.93
013O871045	Sediment Pulp	3.55	3.1	0.7	<0.05	1.8	30.18	177.1	0.05	3	1.2	2.9	19.31	63.81	9.18	1.40	7.20	1.10	6.21	1.26	3.60
013O871046	Sediment Pulp	3.60	3.0	0.7	<0.05	1.6	26.60	159.7	0.05	<1	0.7	2.5	17.43	56.27	8.21	1.32	6.81	1.02	5.58	1.16	3.35
013O871047	Sediment Pulp	3.99	3.5	0.7	<0.05	1.5	38.50	232.7	0.04	1	1.6	4.4	22.09	77.76	12.00	1.75	9.30	1.39	7.26	1.49	4.19
013O871048	Sediment Pulp	4.02	3.4	0.9	<0.05	1.9	28.79	135.3	0.02	1	0.5	5.9	16.14	55.79	8.67	1.41	7.74	1.04	5.72	1.20	3.46
013O871049	Sediment Pulp	3.39	8.3	0.6	<0.05	2.1	18.71	96.6	0.03	<1	0.5	10.9	10.43	38.81	6.04	0.87	4.60	0.59	3.56	0.69	1.96
013O871050	Sediment Pulp	0.68	0.3	0.1	<0.05	0.5	8.02	33.9	<0.02	<1	0.2	0.2	3.64	13.57	2.20	0.36	1.74	0.23	1.46	0.28	0.83
013O871051	Sediment Pulp	3.57	3.1	0.4	<0.05	1.8	80.56	318.5	0.03	<1	1.3	5.1	44.12	150.88	24.09	3.99	19.36	2.54	15.10	2.86	7.97
013O871052	Sediment Pulp	3.36	9.0	0.7	<0.05	2.7	16.49	72.8	<0.02	<1	0.5	11.1	8.17	30.75	5.04	0.67	3.94	0.52	3.18	0.60	1.72
013O871053	Sediment Pulp	2.80	7.5	0.6	<0.05	2.6	12.85	55.0	<0.02	<1	0.4	8.6	6.11	22.82	3.91	0.43	3.20	0.42	2.57	0.48	1.35
013O871054	Sediment Pulp	1.03	1.2	0.2	<0.05	0.7	52.67	177.0	<0.02	<1	0.5	0.9	22.20	77.78	11.87	2.24	10.24	1.33	8.08	1.61	4.69
013O871055	Sediment Pulp	2.82	5.6	0.9	<0.05	1.9	15.45	69.5	<0.02	<1	0.3	6.6	7.74	28.60	4.55	0.77	3.69	0.48	2.96	0.56	1.63



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Project: None Given

Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013O871026	Sediment Pulp	7.39	42.34	5.77	51	2
013O871027	Sediment Pulp	0.33	2.07	0.30	12	<2
013O871028	Sediment Pulp	0.37	2.46	0.36	<10	<2
013O871029	Sediment Pulp	0.40	2.77	0.40	<10	<2
013O871030	Sediment Pulp	1.01	6.23	0.86	<10	<2
013O871031	Sediment Pulp	1.09	6.66	0.98	18	<2
013O871032	Sediment Pulp	1.64	9.67	1.40	14	<2
013O871033	Sediment Pulp	1.30	7.19	1.03	<10	<2
013O871034	Sediment Pulp	1.51	8.83	1.27	<10	<2
013O871035	Sediment Pulp	4.83	26.90	3.83	15	<2
013O871036	Sediment Pulp	5.43	32.62	4.50	29	<2
013O871037	Sediment Pulp	0.14	1.00	0.15	<10	<2
013O871038	Sediment Pulp	2.60	15.45	2.33	15	<2
013O871039	Sediment Pulp	1.47	9.02	1.34	13	<2
013O871040	Sediment Pulp	1.91	10.46	1.56	13	<2
013O871041	Sediment Pulp	4.92	26.29	3.82	<10	3
013O871042	Sediment Pulp	1.03	6.01	0.87	<10	<2
013O871043	Sediment Pulp	0.63	4.19	0.59	<10	<2
013O871044	Sediment Pulp	0.28	1.66	0.25	<10	<2
013O871045	Sediment Pulp	0.55	3.51	0.47	<10	3
013O871046	Sediment Pulp	0.48	3.01	0.41	<10	<2
013O871047	Sediment Pulp	0.63	4.01	0.57	<10	<2
013O871048	Sediment Pulp	0.46	2.72	0.40	<10	<2
013O871049	Sediment Pulp	0.27	1.73	0.25	<10	<2
013O871050	Sediment Pulp	0.12	0.76	0.11	<10	<2
013O871051	Sediment Pulp	1.04	6.48	0.86	<10	<2
013O871052	Sediment Pulp	0.24	1.58	0.22	<10	<2
013O871053	Sediment Pulp	0.18	1.19	0.16	<10	<2
013O871054	Sediment Pulp	0.64	4.22	0.61	<10	<2
013O871055	Sediment Pulp	0.22	1.47	0.20	<10	<2



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013O871056	Sediment Pulp	1.12	18.18	2.75	27.3	45	3.5	1.4	46	0.39	1.1	2.2	<0.2	3.6	45.4	0.10	0.06	0.18	7	0.37	0.045
013O871057	Sediment Pulp	0.89	23.29	5.05	32.3	138	3.4	1.1	20	0.20	<0.1	2.6	0.8	0.6	32.9	0.16	0.06	0.03	8	0.30	0.048
013O871058	Sediment Pulp	1.58	9.04	9.03	67.1	39	18.2	8.6	226	2.00	1.4	1.3	0.7	4.5	36.5	0.11	0.07	0.06	38	0.52	0.065
013O871059	Sediment Pulp	0.58	4.11	3.55	32.9	16	6.3	3.3	96	0.69	1.1	1.0	0.6	2.8	15.1	0.05	0.05	0.03	15	0.29	0.054
013O871060	Sediment Pulp	1.26	9.47	3.39	14.7	69	2.5	1.4	28	0.45	0.5	2.6	0.7	0.5	31.1	0.16	0.04	0.02	5	0.36	0.047
013O871061	Sediment Pulp	5.35	92.24	7.87	122.9	221	22.1	10.1	125	2.15	5.1	4.0	1.6	1.3	14.0	0.52	0.10	0.06	43	0.60	0.045
013O871062	Sediment Pulp	1.42	12.25	8.83	55.2	104	15.0	7.9	205	1.56	1.6	2.8	0.8	4.7	29.1	0.13	0.06	0.09	35	0.44	0.092
013O871063	Sediment Pulp	4.98	35.42	27.93	75.4	339	15.6	3.6	80	0.63	2.5	10.7	1.3	0.4	26.4	0.50	0.06	0.11	46	0.59	0.104
013O871064	Sediment Pulp	4.44	35.77	20.80	85.4	235	21.3	5.5	79	0.88	3.6	10.5	2.0	0.7	27.1	0.47	0.06	0.11	39	0.56	0.065
013O871065	Sediment Pulp	5.28	88.41	7.46	119.3	201	21.6	9.8	123	2.10	5.2	3.6	1.1	1.2	13.6	0.50	0.10	0.05	42	0.58	0.043
013O871066	Sediment Pulp	1.76	11.26	6.74	34.5	63	7.1	2.8	87	0.63	0.2	1.4	0.6	1.1	16.8	0.07	0.04	0.03	15	0.22	0.033
013O871067	Sediment Pulp	1.88	5.76	8.72	28.7	49	6.1	2.6	100	0.71	0.5	2.0	0.5	1.5	19.5	0.08	0.06	0.05	15	0.30	0.041
013O871068	Sediment Pulp	3.78	16.50	10.41	97.6	303	13.6	9.7	390	3.20	0.9	11.7	0.5	4.4	35.5	0.23	0.06	0.09	60	0.45	0.166
013O871069	Sediment Pulp	2.21	17.52	9.88	59.4	189	6.2	2.2	123	0.97	<0.1	9.1	0.5	1.2	37.1	0.26	0.05	0.03	25	0.65	0.094
013O871070	Sediment Pulp	0.40	7.86	3.45	25.3	104	3.3	0.8	44	0.21	<0.1	9.4	0.6	0.6	33.1	0.22	0.07	0.02	5	0.37	0.045
013O871071	Sediment Pulp	1.09	4.51	2.52	37.6	47	2.9	1.1	36	0.51	<0.1	1.7	0.5	0.2	51.1	0.13	0.04	<0.02	3	0.54	0.028
013O871072	Sediment Pulp	10.83	36.04	12.21	63.6	480	6.3	2.1	95	1.64	<0.1	56.6	3.9	1.3	25.5	0.28	0.06	0.04	58	0.38	0.146
013O871073	Sediment Pulp	3.76	23.53	6.52	32.6	100	5.5	2.2	65	1.15	<0.1	8.0	0.5	1.0	27.1	0.23	0.05	0.04	17	0.43	0.050
013O871074	Sediment Pulp	24.18	58.86	50.89	177.4	480	12.6	21.5	379	8.27	1.6	34.5	1.3	7.4	37.2	0.78	0.09	0.19	71	0.38	0.183
013O871075	Sediment Pulp	28.00	22.79	12.39	100.7	216	7.9	10.1	344	3.56	0.6	25.4	0.6	4.7	23.8	0.33	0.06	0.08	53	0.35	0.099
013O871076	Sediment Pulp	5.01	12.67	10.19	55.5	79	8.1	2.3	85	0.69	<0.1	11.0	0.6	3.1	22.9	0.18	0.06	0.05	18	0.28	0.052
013O871077	Sediment Pulp	6.38	13.63	9.63	81.4	83	11.1	5.4	157	1.59	0.4	8.9	0.6	4.2	26.1	0.18	0.07	0.06	34	0.38	0.054
013O871078	Sediment Pulp	9.67	42.01	75.43	286.5	588	12.6	7.9	424	1.73	33.7	8.5	3.6	1.1	59.8	1.18	0.53	0.88	20	6.25	0.062
013O871079	Sediment Pulp	22.28	23.30	8.25	64.8	118	9.8	6.3	198	1.19	0.1	18.2	0.5	3.0	45.9	0.45	0.08	0.03	27	0.69	0.037
013O871080	Sediment Pulp	18.79	20.58	22.73	267.8	364	9.4	11.2	347	4.94	0.4	536.2	1.0	2.5	41.1	1.68	0.51	0.06	26	0.65	0.097
013O871081	Sediment Pulp	24.36	57.64	242.68	2233.1	408	13.4	4.8	100	0.70	0.6	95.5	0.7	1.7	29.8	9.37	0.24	0.06	43	0.43	0.040
013O871082	Sediment Pulp	2.68	38.63	16.82	175.5	269	7.2	4.4	151	1.12	1.3	27.6	1.1	3.3	19.8	0.38	0.16	0.07	27	0.34	0.085
013O871083	Sediment Pulp	22.18	55.59	41.95	481.0	659	11.9	13.9	467	3.65	1.3	195.1	1.1	3.2	16.9	2.41	0.17	0.15	36	0.28	0.161
013O871084	Sediment Pulp	27.98	60.59	333.88	1618.2	451	12.7	4.6	67	1.18	1.5	118.5	0.7	1.9	23.3	7.80	0.25	0.09	55	0.37	0.042
013O871085	Sediment Pulp	24.02	55.76	237.37	1527.2	480	11.9	4.4	71	1.14	1.9	100.8	1.1	2.2	30.0	8.83	0.24	0.24	51	0.40	0.045



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013O871056	Sediment Pulp	52.4	7.2	0.14	33.5	0.042	<20	0.66	0.028	0.03	0.1	1.6	0.03	0.52	100	1.4	0.03	1.7	0.20	0.1	0.07
013O871057	Sediment Pulp	67.4	4.4	0.08	32.7	0.043	<20	0.61	0.019	0.01	<0.1	1.5	<0.02	0.44	125	2.3	<0.02	1.8	0.14	<0.1	<0.02
013O871058	Sediment Pulp	34.0	33.9	0.74	54.9	0.127	<20	1.34	0.052	0.22	1.1	3.4	0.15	0.23	42	0.5	<0.02	7.0	1.75	<0.1	0.10
013O871059	Sediment Pulp	18.8	12.6	0.27	19.3	0.073	<20	0.49	0.019	0.08	0.4	1.4	0.06	0.05	12	0.2	<0.02	2.6	0.53	<0.1	0.04
013O871060	Sediment Pulp	32.1	4.5	0.08	27.1	0.022	<20	0.50	0.012	<0.01	<0.1	1.6	<0.02	0.44	98	1.8	<0.02	1.0	0.06	<0.1	<0.02
013O871061	Sediment Pulp	39.9	19.3	0.20	15.8	0.056	<20	1.57	0.011	0.03	0.3	2.4	0.16	0.46	80	2.9	<0.02	3.7	0.56	<0.1	0.02
013O871062	Sediment Pulp	28.3	26.5	0.59	53.6	0.121	<20	1.16	0.062	0.19	0.5	3.0	0.13	0.03	23	0.6	<0.02	5.2	1.51	<0.1	0.08
013O871063	Sediment Pulp	46.2	23.0	0.14	53.0	0.059	<20	1.24	0.013	0.04	0.4	1.7	0.06	0.26	105	2.5	<0.02	6.0	0.47	<0.1	0.03
013O871064	Sediment Pulp	54.6	23.8	0.16	47.7	0.057	<20	1.43	0.010	0.05	0.5	2.3	0.08	0.31	77	2.4	<0.02	4.5	0.48	<0.1	0.02
013O871065	Sediment Pulp	39.0	18.6	0.19	15.1	0.055	<20	1.52	0.009	0.03	0.3	2.3	0.16	0.45	83	2.9	<0.02	3.8	0.54	<0.1	0.02
013O871066	Sediment Pulp	19.3	13.6	0.19	34.5	0.072	<20	0.64	0.028	0.07	0.4	1.5	0.06	0.09	49	0.7	<0.02	4.5	1.32	<0.1	0.03
013O871067	Sediment Pulp	26.4	13.5	0.21	33.1	0.099	<20	0.61	0.034	0.08	0.7	2.0	0.06	0.10	51	0.6	<0.02	4.1	1.20	<0.1	0.07
013O871068	Sediment Pulp	117.2	27.0	0.44	103.2	0.115	<20	1.84	0.070	0.16	1.0	4.1	0.18	0.16	92	1.9	<0.02	9.5	1.24	<0.1	0.06
013O871069	Sediment Pulp	89.7	11.1	0.10	158.6	0.044	<20	0.91	0.018	0.03	0.4	1.9	0.05	0.17	100	1.6	<0.02	3.9	0.31	<0.1	<0.02
013O871070	Sediment Pulp	120.7	4.4	0.07	187.4	0.018	<20	0.66	0.019	<0.01	<0.1	2.3	<0.02	0.48	112	3.0	<0.02	1.2	0.07	0.1	<0.02
013O871071	Sediment Pulp	18.5	3.2	0.12	51.6	0.007	<20	0.20	0.019	<0.01	<0.1	0.5	<0.02	0.46	55	1.8	<0.02	0.4	0.03	<0.1	<0.02
013O871072	Sediment Pulp	122.8	15.8	0.08	169.2	0.072	<20	1.40	0.014	0.02	0.3	2.3	<0.02	0.23	139	3.1	<0.02	6.9	0.22	<0.1	0.03
013O871073	Sediment Pulp	78.9	8.9	0.07	47.8	0.031	<20	0.74	0.012	0.01	0.1	2.0	0.05	0.48	109	2.5	<0.02	1.4	0.14	<0.1	0.03
013O871074	Sediment Pulp	163.6	34.4	0.12	72.9	0.104	<20	2.65	0.013	0.03	0.7	4.5	0.31	0.20	103	6.6	<0.02	7.1	0.43	<0.1	0.03
013O871075	Sediment Pulp	101.9	16.8	0.16	64.9	0.078	<20	1.33	0.024	0.04	0.6	2.7	0.20	0.12	59	2.3	<0.02	4.6	0.43	<0.1	0.04
013O871076	Sediment Pulp	63.5	11.4	0.13	56.6	0.078	<20	0.71	0.025	0.04	0.3	2.0	0.07	0.16	45	1.6	<0.02	3.1	0.40	<0.1	0.05
013O871077	Sediment Pulp	57.1	18.7	0.30	68.5	0.107	<20	1.09	0.027	0.12	0.5	2.6	0.13	0.14	41	1.2	<0.02	4.9	1.09	<0.1	0.06
013O871078	Sediment Pulp	10.1	12.6	0.55	78.2	0.037	<20	0.43	0.025	0.05	0.5	2.2	0.22	1.48	85	1.3	0.02	2.0	0.48	<0.1	0.03
013O871079	Sediment Pulp	74.1	12.3	0.06	206.6	0.030	<20	0.87	0.012	0.01	0.5	2.4	0.05	0.55	109	5.8	<0.02	1.8	0.30	<0.1	0.04
013O871080	Sediment Pulp	148.5	18.5	0.09	338.6	0.039	<20	2.22	0.007	0.02	0.8	3.7	0.18	0.26	101	4.8	<0.02	4.1	0.39	<0.1	<0.02
013O871081	Sediment Pulp	157.4	15.8	0.07	101.6	0.026	<20	0.90	0.014	0.02	0.3	2.2	0.17	0.60	119	3.7	<0.02	1.4	0.22	<0.1	0.02
013O871082	Sediment Pulp	73.5	15.4	0.22	37.4	0.064	<20	1.11	0.020	0.06	0.4	2.0	0.06	0.07	53	1.5	<0.02	3.2	0.45	<0.1	0.03
013O871083	Sediment Pulp	163.5	27.7	0.32	44.3	0.045	<20	2.41	0.012	0.05	0.4	2.9	0.20	0.21	96	7.6	<0.02	5.2	0.76	<0.1	<0.02
013O871084	Sediment Pulp	171.9	16.4	0.07	94.7	0.025	<20	0.97	0.011	0.02	0.3	2.2	0.17	0.58	140	3.9	0.02	1.4	0.23	<0.1	0.02
013O871085	Sediment Pulp	171.7	15.1	0.07	126.6	0.024	21	0.91	0.012	0.01	0.3	2.4	0.15	0.60	160	3.5	<0.02	1.5	0.21	<0.1	<0.02



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Project: None Given

Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0130871056	Sediment Pulp	1.69	2.4	1.3	<0.05	2.1	17.51	82.0	0.02	<1	0.1	1.2	9.51	31.67	5.08	1.00	4.32	0.63	3.65	0.66	1.96
0130871057	Sediment Pulp	1.23	0.7	0.3	<0.05	0.7	24.71	115.1	<0.02	<1	0.3	0.2	12.15	43.59	6.69	1.24	5.55	0.74	4.56	0.87	2.47
0130871058	Sediment Pulp	3.33	18.9	0.7	<0.05	3.8	12.34	65.8	<0.02	1	0.5	17.5	7.29	27.00	4.25	0.68	3.20	0.41	2.48	0.47	1.32
0130871059	Sediment Pulp	1.93	6.6	0.5	<0.05	1.5	7.55	38.3	<0.02	<1	0.2	8.3	4.14	15.33	2.53	0.39	1.92	0.25	1.50	0.28	0.80
0130871060	Sediment Pulp	0.85	0.4	0.2	<0.05	0.5	12.75	59.7	<0.02	<1	0.3	<0.1	6.27	22.65	3.51	0.57	2.82	0.37	2.30	0.45	1.29
0130871061	Sediment Pulp	2.30	2.7	0.4	<0.05	0.9	21.92	79.0	<0.02	3	0.6	7.0	9.12	35.00	5.89	0.94	4.86	0.64	4.01	0.77	2.25
0130871062	Sediment Pulp	2.79	16.5	0.7	<0.05	3.3	17.23	58.8	<0.02	<1	0.7	13.6	6.61	24.82	4.39	0.60	3.70	0.54	3.49	0.67	2.02
0130871063	Sediment Pulp	2.89	3.3	0.5	<0.05	1.1	17.40	92.4	0.03	<1	0.7	4.0	10.06	37.23	6.20	0.98	4.90	0.64	3.75	0.67	1.88
0130871064	Sediment Pulp	2.43	3.8	0.4	<0.05	1.1	22.22	104.7	<0.02	1	0.7	5.1	11.90	45.11	7.65	1.21	6.17	0.78	4.37	0.79	2.18
0130871065	Sediment Pulp	2.04	2.7	0.4	<0.05	0.9	21.11	76.7	<0.02	3	0.6	6.7	8.88	33.64	5.70	0.90	4.66	0.62	3.82	0.73	2.14
0130871066	Sediment Pulp	2.29	6.9	0.6	<0.05	1.2	7.55	38.7	<0.02	<1	0.2	6.5	4.21	15.85	2.56	0.36	1.95	0.25	1.54	0.29	0.84
0130871067	Sediment Pulp	3.71	7.6	0.8	<0.05	2.5	10.79	50.0	<0.02	<1	0.3	5.0	5.50	20.51	3.35	0.49	2.63	0.35	2.22	0.41	1.20
0130871068	Sediment Pulp	4.94	13.1	0.9	<0.05	2.7	48.65	220.4	0.06	<1	1.6	10.7	25.72	91.77	14.09	1.64	11.04	1.52	9.34	1.81	5.32
0130871069	Sediment Pulp	2.43	2.5	0.4	<0.05	0.8	32.25	154.5	0.03	<1	1.0	2.7	18.98	67.31	10.21	1.46	7.90	1.02	6.08	1.15	3.31
0130871070	Sediment Pulp	1.12	0.5	0.2	<0.05	0.7	47.87	188.4	<0.02	<1	0.8	0.2	22.51	77.77	11.73	1.82	9.87	1.28	7.75	1.49	4.27
0130871071	Sediment Pulp	0.34	0.3	<0.1	<0.05	0.7	6.62	34.0	<0.02	<1	0.2	<0.1	3.52	12.65	1.89	0.26	1.52	0.19	1.19	0.23	0.68
0130871072	Sediment Pulp	4.08	1.7	0.5	<0.05	1.3	45.64	220.5	0.05	<1	0.8	1.9	26.12	92.68	14.18	2.54	11.22	1.50	9.04	1.71	4.97
0130871073	Sediment Pulp	1.91	1.0	0.4	<0.05	1.1	24.84	145.3	<0.02	<1	0.7	0.8	16.21	57.34	8.30	1.24	6.17	0.77	4.50	0.85	2.45
0130871074	Sediment Pulp	5.04	3.0	0.7	<0.05	1.3	101.25	394.9	0.08	<1	2.4	3.3	37.70	137.13	22.93	3.18	19.18	2.90	18.74	3.66	11.09
0130871075	Sediment Pulp	3.60	3.7	0.7	<0.05	1.6	39.59	209.9	0.04	<1	1.4	5.2	23.22	83.70	12.99	1.80	9.98	1.32	8.02	1.51	4.42
0130871076	Sediment Pulp	3.92	4.2	0.7	<0.05	1.7	24.48	116.7	<0.02	<1	0.7	4.3	14.16	53.26	8.42	1.09	6.51	0.85	5.00	0.91	2.60
0130871077	Sediment Pulp	4.28	12.6	0.8	<0.05	2.4	24.50	105.2	0.02	<1	0.8	10.3	12.64	47.29	7.59	0.99	6.03	0.79	4.83	0.90	2.61
0130871078	Sediment Pulp	0.64	3.3	2.9	<0.05	1.1	9.77	15.9	0.45	16	0.1	3.8	2.59	11.27	2.33	0.44	2.07	0.27	1.67	0.32	0.93
0130871079	Sediment Pulp	2.39	1.1	0.3	<0.05	1.6	43.94	140.5	<0.02	4	1.8	1.1	16.06	61.05	9.73	1.32	8.24	1.09	6.77	1.37	4.31
0130871080	Sediment Pulp	2.45	1.8	0.4	<0.05	0.6	108.20	290.7	0.07	<1	5.2	3.4	37.25	139.22	25.76	3.71	22.47	3.16	19.67	3.83	11.36
0130871081	Sediment Pulp	2.55	1.5	0.4	<0.05	1.4	95.65	281.9	0.03	1	2.7	2.1	34.66	126.62	20.68	1.61	18.16	2.45	15.19	3.07	9.32
0130871082	Sediment Pulp	3.20	5.0	0.8	<0.05	1.3	51.34	154.1	0.04	<1	1.7	6.0	20.12	79.22	14.87	1.48	12.79	1.73	10.31	1.92	5.52
0130871083	Sediment Pulp	3.08	5.0	1.0	<0.05	1.1	186.86	389.1	0.07	2	6.9	10.6	42.56	162.62	33.87	3.41	33.38	4.96	31.27	6.10	18.04
0130871084	Sediment Pulp	2.50	1.5	0.5	<0.05	1.4	104.05	306.0	0.03	<1	2.7	2.0	37.79	134.96	22.18	1.73	19.25	2.61	16.21	3.28	9.96
0130871085	Sediment Pulp	2.60	1.4	0.9	<0.05	1.4	98.63	301.6	0.04	1	2.8	2.3	37.49	138.20	21.17	1.75	19.37	2.88	16.57	3.41	10.22



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013O871056	Sediment Pulp		0.24	1.73	0.20	<10	2
013O871057	Sediment Pulp		0.33	2.12	0.28	<10	<2
013O871058	Sediment Pulp		0.18	1.15	0.16	<10	<2
013O871059	Sediment Pulp		0.11	0.71	0.10	<10	<2
013O871060	Sediment Pulp		0.18	1.19	0.16	<10	<2
013O871061	Sediment Pulp		0.31	2.06	0.29	<10	<2
013O871062	Sediment Pulp		0.29	1.92	0.26	<10	<2
013O871063	Sediment Pulp		0.25	1.55	0.20	<10	<2
013O871064	Sediment Pulp		0.28	1.73	0.23	<10	<2
013O871065	Sediment Pulp		0.29	1.95	0.28	<10	<2
013O871066	Sediment Pulp		0.11	0.73	0.10	<10	<2
013O871067	Sediment Pulp		0.16	1.08	0.15	<10	<2
013O871068	Sediment Pulp		0.75	4.78	0.65	<10	<2
013O871069	Sediment Pulp		0.44	2.81	0.39	<10	<2
013O871070	Sediment Pulp		0.56	3.57	0.49	<10	<2
013O871071	Sediment Pulp		0.09	0.62	0.09	<10	<2
013O871072	Sediment Pulp		0.68	4.31	0.59	<10	<2
013O871073	Sediment Pulp		0.33	2.16	0.31	<10	<2
013O871074	Sediment Pulp		1.56	10.19	1.39	<10	<2
013O871075	Sediment Pulp		0.60	3.80	0.53	<10	<2
013O871076	Sediment Pulp		0.35	2.19	0.31	<10	<2
013O871077	Sediment Pulp		0.36	2.29	0.31	<10	<2
013O871078	Sediment Pulp		0.12	0.81	0.12	<10	<2
013O871079	Sediment Pulp		0.61	4.23	0.66	<10	<2
013O871080	Sediment Pulp		1.51	9.40	1.25	<10	<2
013O871081	Sediment Pulp		1.25	8.14	1.18	<10	<2
013O871082	Sediment Pulp		0.75	4.78	0.65	<10	<2
013O871083	Sediment Pulp		2.48	16.49	2.33	<10	<2
013O871084	Sediment Pulp		1.33	8.63	1.26	<10	<2
013O871085	Sediment Pulp		1.43	8.90	1.42	52	<2



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Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013O871086	Sediment Pulp	9.99	22.22	15.16	190.0	164	17.7	14.1	787	3.74	2.3	17.2	0.9	10.6	40.6	0.44	0.09	0.12	48	0.53
013O871087	Sediment Pulp	6.53	26.17	7.74	108.0	195	5.9	0.9	31	0.17	<0.1	23.9	0.6	0.7	33.7	0.54	0.09	0.08	8	0.38
013O871088	Sediment Pulp	16.99	23.74	11.21	115.4	120	5.3	6.8	527	3.46	2.3	65.5	1.0	11.2	15.2	0.38	0.12	0.22	45	0.24
013O871089	Sediment Pulp	3.67	12.13	9.73	133.0	146	7.8	6.2	213	6.16	3.1	31.0	<0.2	7.0	18.8	0.39	0.10	0.10	50	0.31
013O871090	Sediment Pulp	2.78	7.66	7.86	50.0	91	5.0	2.1	79	1.47	1.2	36.8	0.3	3.5	16.2	0.13	0.07	0.04	40	0.22
013O871091	Sediment Pulp	19.10	19.27	14.84	153.6	109	7.3	4.6	189	1.85	1.3	39.2	0.8	6.5	21.5	0.50	0.13	0.14	25	0.32
013O871092	Sediment Pulp	27.89	30.42	7.77	120.2	194	8.2	2.8	75	0.49	1.1	25.4	0.9	2.8	17.5	0.64	0.11	0.08	12	0.37
013O871093	Sediment Pulp	41.59	30.94	28.94	368.9	345	14.2	18.2	6029	5.55	5.0	39.9	<0.2	13.5	29.8	1.56	0.14	0.21	46	0.45
013O871094	Sediment Pulp	24.22	57.63	252.00	2335.1	439	13.4	4.8	107	0.77	1.7	98.1	0.7	2.2	36.4	11.00	0.31	0.08	44	0.45
013O871095	Sediment Pulp	4.35	6.78	6.68	78.4	72	2.6	0.8	45	0.34	0.4	4.2	<0.2	0.6	16.9	0.23	0.09	<0.02	6	0.22
013O871096	Sediment Pulp	183.32	181.47	10.59	354.5	359	15.8	5.1	79	2.23	2.3	153.0	1.4	4.0	24.2	1.26	0.24	0.04	40	0.48
013O871097	Sediment Pulp	0.94	31.83	23.16	129.4	2804	43.4	27.8	1217	3.10	25.2	4.0	48.4	8.1	27.6	0.55	0.65	3.11	46	0.60
013O871098	Sediment Pulp	94.72	50.17	24.90	395.2	219	9.3	4.2	137	1.16	0.8	27.8	0.5	3.8	39.0	2.82	0.13	0.13	20	0.51



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Project: None Given
Report Date: April 05, 2022

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CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013O871086	Sediment Pulp	75.9	30.4	0.79	222.3	0.162	<20	1.79	0.051	0.37	0.5	4.5	0.32	0.06	45	0.7	<0.02	6.9	2.82	<0.1
013O871087	Sediment Pulp	48.5	6.2	0.05	135.8	0.023	<20	0.68	0.014	0.01	0.2	1.0	0.03	0.28	109	2.5	<0.02	2.1	0.26	<0.1
013O871088	Sediment Pulp	87.1	17.6	0.18	51.1	0.082	<20	1.26	0.014	0.06	0.8	3.3	0.08	0.06	37	1.5	0.03	3.9	0.50	<0.1
013O871089	Sediment Pulp	98.5	19.1	0.13	66.0	0.055	<20	1.79	0.012	0.04	0.6	3.1	0.07	0.19	64	3.7	0.02	3.7	0.47	<0.1
013O871090	Sediment Pulp	81.9	12.5	0.12	40.3	0.064	<20	0.97	0.019	0.04	0.4	2.2	0.04	0.10	71	0.8	<0.02	3.7	0.45	<0.1
013O871091	Sediment Pulp	88.3	15.4	0.20	77.0	0.091	<20	0.91	0.022	0.04	0.7	2.4	0.13	0.11	42	0.9	<0.02	3.8	0.82	<0.1
013O871092	Sediment Pulp	112.6	9.5	0.09	83.8	0.044	<20	0.98	0.017	0.03	0.2	2.1	0.08	0.45	113	1.2	<0.02	2.6	0.38	<0.1
013O871093	Sediment Pulp	123.4	25.0	0.49	368.9	0.124	<20	1.65	0.046	0.19	1.0	4.2	0.29	0.10	81	1.9	0.03	5.4	1.56	0.1
013O871094	Sediment Pulp	166.0	15.3	0.08	127.9	0.026	<20	0.95	0.015	0.02	0.7	2.4	0.17	0.62	147	2.7	<0.02	1.6	0.24	0.1
013O871095	Sediment Pulp	21.0	5.4	0.07	74.2	0.020	<20	0.30	0.020	0.02	0.2	0.8	<0.02	0.34	74	1.3	<0.02	1.1	0.07	<0.1
013O871096	Sediment Pulp	213.6	22.9	0.08	74.1	0.052	<20	2.04	0.011	0.02	0.3	3.0	0.21	0.30	133	3.8	<0.02	2.8	0.30	0.1
013O871097	Sediment Pulp	42.7	48.2	0.79	166.9	0.100	<20	1.64	0.029	0.26	0.3	6.0	0.28	0.14	286	0.5	0.05	5.7	1.40	<0.1
013O871098	Sediment Pulp	229.5	16.3	0.19	63.9	0.071	<20	0.94	0.025	0.05	0.3	2.5	0.12	0.70	121	2.4	<0.02	3.1	0.80	<0.1



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013O871086	Sediment Pulp	3.45	37.4	1.4	<0.05	3.6	47.63	144.0	0.04	<1	1.8	21.4	17.13	62.38	10.52	1.30	9.25	1.44	8.27	1.65	4.97
013O871087	Sediment Pulp	2.10	1.1	0.6	<0.05	0.6	30.58	82.8	<0.02	3	1.7	1.2	10.89	38.67	6.55	0.86	5.71	0.91	5.23	1.12	3.24
013O871088	Sediment Pulp	4.49	5.8	1.1	<0.05	1.8	65.29	198.6	0.05	<1	2.6	6.8	23.42	85.29	13.86	1.36	12.54	2.01	12.03	2.61	8.33
013O871089	Sediment Pulp	4.30	4.2	0.9	<0.05	1.1	75.13	208.7	0.05	<1	2.3	4.5	23.34	85.97	14.11	1.37	12.78	2.10	12.81	2.77	8.69
013O871090	Sediment Pulp	3.68	3.5	0.9	<0.05	1.2	46.29	156.2	0.04	<1	2.0	4.9	19.27	69.21	10.83	1.13	9.23	1.47	8.79	1.71	5.32
013O871091	Sediment Pulp	5.96	6.4	1.7	<0.05	3.3	64.53	135.4	0.03	<1	3.4	13.0	21.90	77.80	13.19	1.38	11.36	1.81	10.61	2.33	7.15
013O871092	Sediment Pulp	3.63	2.8	0.6	<0.05	1.5	59.88	206.1	0.03	2	0.8	2.7	27.78	103.29	17.17	1.34	15.04	2.24	12.22	2.43	6.68
013O871093	Sediment Pulp	4.16	20.4	1.4	<0.05	3.2	95.68	241.2	0.06	1	4.2	18.2	29.30	99.90	17.39	1.62	15.82	2.63	15.96	3.46	10.41
013O871094	Sediment Pulp	2.59	1.6	0.6	<0.05	1.5	98.97	315.2	0.04	3	2.6	2.1	37.98	136.74	22.61	1.90	20.67	2.92	17.22	3.59	10.45
013O871095	Sediment Pulp	1.65	0.8	0.6	<0.05	1.1	11.72	32.8	<0.02	<1	0.4	0.7	4.39	16.45	2.66	0.27	2.13	0.34	2.00	0.43	1.20
013O871096	Sediment Pulp	4.35	2.4	0.7	<0.05	1.8	99.41	398.6	0.04	4	3.3	3.9	50.09	170.40	26.32	2.59	22.65	3.34	18.80	3.85	11.73
013O871097	Sediment Pulp	1.91	24.0	1.2	<0.05	5.0	18.89	74.5	0.04	<1	0.8	20.4	10.39	36.68	6.31	0.90	4.86	0.67	3.61	0.67	2.03
013O871098	Sediment Pulp	4.07	4.5	1.1	<0.05	6.7	111.33	321.2	0.06	10	1.5	7.5	58.80	221.38	36.91	4.10	31.88	4.44	21.77	4.10	11.05



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Part: 4 of 4

CERTIFICATE OF ANALYSIS

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013O871086	Sediment Pulp	0.75	4.73	0.67	<10	<2
013O871087	Sediment Pulp	0.48	2.89	0.43	<10	<2
013O871088	Sediment Pulp	1.30	7.90	1.23	<10	<2
013O871089	Sediment Pulp	1.36	8.27	1.22	<10	<2
013O871090	Sediment Pulp	0.75	4.70	0.71	<10	<2
013O871091	Sediment Pulp	1.08	6.85	1.05	<10	<2
013O871092	Sediment Pulp	0.98	5.65	0.87	<10	<2
013O871093	Sediment Pulp	1.53	9.13	1.38	12	<2
013O871094	Sediment Pulp	1.49	9.09	1.43	81	<2
013O871095	Sediment Pulp	0.17	1.07	0.16	<10	<2
013O871096	Sediment Pulp	1.71	10.33	1.49	25	<2
013O871097	Sediment Pulp	0.26	1.66	0.28	<10	<2
013O871098	Sediment Pulp	1.34	7.91	1.08	19	<2



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Part: 1 of 4

QUALITY CONTROL REPORT

VAN22000380.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013O773045	Sediment Pulp	5.82	11.84	10.26	64.2	53	9.6	4.9	151	1.38	1.0	8.6	16.7	5.0	31.5	0.23	0.08	0.04	30	0.41	0.067
REP 013O773045	QC	5.60	12.52	10.50	66.9	67	9.5	4.8	152	1.38	1.2	9.0	1.4	5.2	32.8	0.22	0.08	0.05	30	0.41	0.064
013O773092	Sediment Pulp	26.99	27.03	23.01	311.6	255	14.1	17.0	2231	4.71	3.4	28.9	3.4	10.6	33.8	1.15	0.10	0.16	38	0.49	0.107
REP 013O773092	QC	27.29	27.30	23.73	315.1	261	14.4	17.2	2244	4.79	3.6	30.1	3.8	11.0	33.9	1.14	0.10	0.17	38	0.50	0.109
013O871033	Sediment Pulp	6.43	21.62	14.88	192.7	191	14.8	5.4	168	1.62	5.6	39.6	0.4	2.3	31.3	0.60	0.45	0.05	40	0.44	0.085
REP 013O871033	QC	6.20	22.33	15.26	190.5	171	14.2	5.5	168	1.62	5.5	39.0	0.9	2.4	30.9	0.55	0.45	0.04	40	0.44	0.079
013O871069	Sediment Pulp	2.21	17.52	9.88	59.4	189	6.2	2.2	123	0.97	<0.1	9.1	0.5	1.2	37.1	0.26	0.05	0.03	25	0.65	0.094
REP 013O871069	QC	2.35	18.42	10.31	62.9	200	6.6	2.3	124	0.98	<0.1	9.4	0.5	1.3	39.1	0.28	0.05	0.03	26	0.66	0.099
Reference Materials																					
STD DS11	Standard	12.81	134.69	131.18	317.7	1719	73.4	12.1	978	2.90	44.1	2.4	61.4	8.7	62.2	2.31	7.31	11.40	44	0.99	0.068
STD DS11	Standard	13.51	144.66	127.09	328.0	1578	79.4	13.8	994	3.02	41.3	2.6	53.7	6.8	60.9	2.10	5.78	9.63	45	1.01	0.063
STD DS11	Standard	13.23	139.81	128.62	314.8	1958	73.6	13.0	1003	2.99	41.8	2.4	71.8	7.8	65.6	2.46	6.50	10.93	45	1.01	0.067
STD DS11	Standard	12.73	138.22	135.78	328.3	1773	73.1	12.8	990	2.97	43.6	2.4	43.4	8.0	66.9	2.46	7.11	11.65	42	0.98	0.070
STD DS11	Standard	13.35	133.69	127.50	325.8	1715	71.3	13.2	959	2.89	43.5	2.4	52.1	8.0	69.4	2.42	6.91	11.36	42	0.99	0.065
STD DS11	Standard	14.55	147.53	138.45	340.0	1838	77.7	13.1	992	2.97	42.0	2.7	75.9	8.7	69.7	2.43	7.08	11.75	41	1.01	0.070
STD DS11	Standard	14.84	145.79	126.83	315.2	1620	78.2	13.7	979	2.94	40.7	2.5	54.3	7.0	59.9	2.07	5.69	9.37	42	1.01	0.061
STD OREAS262	Standard	0.65	107.54	57.61	146.3	454	62.8	26.6	525	3.12	36.5	1.2	61.5	10.9	34.8	0.62	3.40	1.06	19	2.87	0.038
STD OREAS262	Standard	0.63	114.81	52.63	150.5	460	64.5	28.2	534	3.25	35.4	1.2	52.7	8.8	32.7	0.58	2.13	0.87	21	2.91	0.036
STD OREAS262	Standard	0.67	114.99	58.80	151.3	474	64.0	28.1	537	3.24	38.1	1.4	59.7	10.5	38.3	0.73	2.44	1.00	20	2.94	0.037
STD OREAS262	Standard	0.57	109.10	55.32	146.2	478	61.2	25.8	529	3.20	36.7	1.2	53.2	9.8	37.3	0.63	2.34	1.02	20	2.88	0.038
STD OREAS262	Standard	0.73	113.00	54.70	147.2	474	64.7	27.0	514	3.13	36.0	1.2	55.0	9.8	35.7	0.62	2.36	0.97	17	2.83	0.038
STD OREAS262	Standard	0.63	109.65	57.64	145.6	477	59.8	27.0	535	3.24	35.1	1.2	57.6	9.7	36.0	0.68	2.42	1.00	17	2.92	0.037
STD OREAS262	Standard	0.75	115.73	54.28	150.8	441	65.9	28.5	533	3.23	34.3	1.2	49.6	8.8	31.6	0.58	2.00	0.86	23	2.91	0.035
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	0.1	<0.1	<1	<0.01	0.3	<0.1	<0.2	0.3	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	0.01	0.03	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Project: None Given
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QUALITY CONTROL REPORT

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
0130773045	Sediment Pulp	57.5	16.6	0.27	75.4	0.117	<20	0.98	0.036	0.11	0.5	2.6	0.11	0.11	95	0.8	<0.02	4.4	1.03	<0.1	0.07
REP 0130773045	QC	57.6	16.8	0.28	76.2	0.118	<20	0.99	0.035	0.11	0.5	2.8	0.12	0.12	92	0.8	<0.02	4.6	1.07	<0.1	0.07
0130773092	Sediment Pulp	107.8	26.4	0.48	181.0	0.129	<20	1.61	0.053	0.19	0.7	4.0	0.25	0.07	62	2.3	<0.02	3.2	1.40	<0.1	0.08
REP 0130773092	QC	111.2	26.4	0.49	187.0	0.133	<20	1.61	0.055	0.19	1.3	4.1	0.26	0.07	71	2.4	<0.02	3.2	1.45	<0.1	0.08
0130871033	Sediment Pulp	105.1	30.7	0.26	64.3	0.058	<20	1.50	0.030	0.04	0.9	2.3	0.07	0.23	80	2.4	<0.02	3.4	0.55	0.1	0.02
REP 0130871033	QC	105.2	31.4	0.26	64.6	0.059	<20	1.50	0.029	0.04	0.9	2.3	0.07	0.23	86	2.8	<0.02	3.5	0.54	<0.1	<0.02
0130871069	Sediment Pulp	89.7	11.1	0.10	158.6	0.044	<20	0.91	0.018	0.03	0.4	1.9	0.05	0.17	100	1.6	<0.02	3.9	0.31	<0.1	<0.02
REP 0130871069	QC	91.9	11.8	0.11	166.8	0.048	<20	0.91	0.019	0.03	0.4	2.1	0.06	0.18	109	1.7	<0.02	4.2	0.33	<0.1	<0.02
Reference Materials																					
STD DS11	Standard	16.9	53.9	0.79	394.6	0.087	<20	1.04	0.068	0.38	2.6	2.9	4.75	0.25	267	2.0	4.17	4.5	2.72	<0.1	0.04
STD DS11	Standard	16.2	57.7	0.81	372.3	0.088	<20	1.08	0.066	0.37	2.4	3.0	4.85	0.27	233	2.2	4.44	4.7	2.62	<0.1	0.06
STD DS11	Standard	17.3	53.5	0.82	408.3	0.085	<20	1.07	0.068	0.38	2.4	3.1	4.81	0.27	261	2.0	4.25	4.8	2.71	<0.1	0.06
STD DS11	Standard	16.6	53.0	0.78	393.5	0.085	35	0.99	0.068	0.36	2.8	3.1	5.06	0.26	300	2.2	4.38	4.6	2.69	<0.1	0.07
STD DS11	Standard	18.2	54.6	0.80	417.9	0.087	<20	1.08	0.068	0.37	2.3	3.2	4.69	0.26	259	2.1	4.44	4.6	2.89	<0.1	0.05
STD DS11	Standard	17.6	54.0	0.81	408.7	0.087	<20	1.08	0.069	0.39	2.8	2.9	5.04	0.25	258	2.1	4.53	4.9	2.79	<0.1	0.04
STD DS11	Standard	16.3	58.0	0.79	371.1	0.090	<20	1.11	0.068	0.38	2.4	3.0	4.80	0.26	239	2.1	4.42	4.5	2.60	<0.1	0.05
STD OREAS262	Standard	15.2	40.0	1.11	240.8	0.003	<20	1.11	0.064	0.29	0.1	3.2	0.47	0.24	155	0.5	0.21	3.8	2.42	<0.1	0.17
STD OREAS262	Standard	15.2	40.9	1.14	222.3	0.003	<20	1.17	0.066	0.30	<0.1	3.0	0.47	0.25	157	0.6	0.24	3.8	2.20	<0.1	0.20
STD OREAS262	Standard	18.1	39.9	1.15	254.5	0.003	<20	1.22	0.067	0.31	<0.1	3.3	0.49	0.25	207	0.3	0.20	3.9	2.41	<0.1	0.21
STD OREAS262	Standard	15.1	39.1	1.12	254.2	0.003	24	1.15	0.068	0.28	0.1	3.3	0.46	0.23	175	0.5	0.24	3.5	2.17	<0.1	0.18
STD OREAS262	Standard	17.7	49.0	1.11	245.6	0.003	<20	1.20	0.065	0.30	0.1	3.2	0.45	0.24	175	0.4	0.20	4.1	2.39	<0.1	0.16
STD OREAS262	Standard	16.1	40.3	1.15	247.9	0.003	<20	1.18	0.067	0.30	<0.1	3.1	0.48	0.25	156	0.4	0.21	3.5	2.29	<0.1	0.17
STD OREAS262	Standard	17.2	42.5	1.15	220.5	0.003	<20	1.22	0.067	0.32	<0.1	3.1	0.44	0.25	153	0.6	0.22	3.7	2.32	<0.1	0.17
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Project: None Given

Report Date: April 05, 2022

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QUALITY CONTROL REPORT

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013O773045	Sediment Pulp	4.89	11.9	0.9	<0.05	2.7	24.83	104.3	0.03	<1	0.8	10.6	13.22	46.99	7.62	1.11	6.12	0.87	5.01	0.95	2.85
REP 013O773045	QC	4.90	12.2	1.0	<0.05	2.9	25.23	104.0	0.03	<1	1.2	10.9	13.04	47.06	7.72	1.15	6.53	0.94	5.15	0.99	2.79
013O773092	Sediment Pulp	3.94	17.9	1.2	<0.05	3.5	80.91	221.7	0.05	1	4.4	16.1	24.76	90.50	15.66	1.48	14.02	2.06	13.41	2.67	8.20
REP 013O773092	QC	4.22	18.1	1.2	<0.05	3.5	81.76	227.1	0.05	1	4.5	16.2	25.15	93.03	16.17	1.52	14.55	2.16	13.96	2.80	8.53
013O871033	Sediment Pulp	3.42	4.0	0.7	<0.05	1.7	89.47	194.6	0.05	1	4.5	6.8	29.86	120.00	23.65	2.54	22.75	3.14	16.99	3.38	9.50
REP 013O871033	QC	3.35	3.9	0.7	<0.05	1.6	86.65	192.1	0.06	1	2.9	7.6	30.54	120.28	23.59	2.49	22.13	3.07	18.01	3.65	9.73
013O871069	Sediment Pulp	2.43	2.5	0.4	<0.05	0.8	32.25	154.5	0.03	<1	1.0	2.7	18.98	67.31	10.21	1.46	7.90	1.02	6.08	1.15	3.31
REP 013O871069	QC	2.55	2.7	0.4	<0.05	0.8	34.49	161.8	0.03	<1	1.0	2.9	19.72	69.36	10.47	1.52	8.14	1.06	6.34	1.19	3.41
Reference Materials																					
STD DS11	Standard	1.06	30.7	1.8	<0.05	2.6	7.08	33.4	0.26	41	0.3	23.4	3.74	13.46	2.35	0.48	1.86	0.27	1.53	0.26	0.83
STD DS11	Standard	1.08	31.7	1.5	<0.05	2.5	7.21	33.1	0.22	39	0.7	21.1	3.44	13.56	2.41	0.45	1.97	0.25	1.44	0.26	0.74
STD DS11	Standard	1.13	32.3	1.8	<0.05	2.3	7.61	35.1	0.23	43	1.1	21.5	3.71	13.42	2.27	0.45	2.02	0.27	1.53	0.26	0.81
STD DS11	Standard	1.36	32.0	2.1	<0.05	2.5	7.52	34.0	0.22	47	0.7	23.1	3.73	13.75	2.40	0.50	2.03	0.27	1.47	0.26	0.77
STD DS11	Standard	1.25	32.3	1.8	<0.05	2.4	7.68	36.0	0.22	50	0.7	23.0	3.95	14.31	2.37	0.52	2.04	0.28	1.40	0.29	0.81
STD DS11	Standard	1.25	32.9	1.9	<0.05	2.5	7.65	34.5	0.23	44	0.4	22.2	3.99	13.05	2.46	0.52	1.85	0.28	1.52	0.27	0.81
STD DS11	Standard	1.16	31.6	1.6	<0.05	2.4	7.25	33.1	0.21	41	0.7	21.3	3.46	13.51	2.45	0.45	1.97	0.24	1.44	0.26	0.74
STD OREAS262	Standard	<0.02	16.7	0.6	<0.05	6.6	9.82	30.2	0.03	<1	0.9	16.5	3.76	13.67	2.95	0.71	2.66	0.43	2.18	0.39	1.08
STD OREAS262	Standard	<0.02	17.3	0.5	<0.05	7.9	10.21	30.2	0.03	1	1.1	16.3	3.54	14.50	3.18	0.62	2.87	0.36	2.06	0.37	1.02
STD OREAS262	Standard	<0.02	19.2	0.6	<0.05	7.5	11.20	36.5	0.04	<1	0.6	16.5	4.30	16.01	3.46	0.70	2.86	0.44	2.21	0.42	1.14
STD OREAS262	Standard	<0.02	17.6	0.6	<0.05	7.4	10.73	30.6	0.03	2	1.8	15.5	3.71	14.06	2.93	0.70	2.87	0.39	1.92	0.40	1.03
STD OREAS262	Standard	<0.02	18.5	0.5	<0.05	6.1	10.23	33.5	0.04	1	1.7	16.1	4.00	14.66	3.14	0.70	3.25	0.43	2.14	0.39	1.05
STD OREAS262	Standard	<0.02	16.6	0.6	<0.05	6.8	10.05	32.4	0.03	<1	1.3	16.3	3.92	14.67	3.22	0.68	2.76	0.40	2.18	0.39	1.06
STD OREAS262	Standard	<0.02	18.3	0.5	<0.05	6.8	10.36	33.5	0.03	<1	1.1	15.8	3.92	15.91	3.38	0.64	2.95	0.37	2.14	0.38	1.05
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Project: None Given

Report Date: April 05, 2022

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QUALITY CONTROL REPORT

VAN22000380.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013O773045	Sediment Pulp	0.40	2.49	0.38	<10	<2
REP 013O773045	QC	0.38	2.47	0.37	<10	<2
013O773092	Sediment Pulp	1.14	7.53	1.04	<10	<2
REP 013O773092	QC	1.19	7.77	1.08	<10	<2
013O871033	Sediment Pulp	1.30	7.19	1.03	<10	<2
REP 013O871033	QC	1.32	7.05	1.02	<10	<2
013O871069	Sediment Pulp	0.44	2.81	0.39	<10	<2
REP 013O871069	QC	0.45	2.92	0.40	<10	<2
Reference Materials						
STD DS11	Standard	0.09	0.66	0.11	91	171
STD DS11	Standard	0.10	0.67	0.09	93	148
STD DS11	Standard	0.11	0.68	0.10	99	178
STD DS11	Standard	0.11	0.69	0.09	108	168
STD DS11	Standard	0.11	0.68	0.10	110	193
STD DS11	Standard	0.12	0.73	0.10	110	176
STD DS11	Standard	0.10	0.67	0.09	91	148
STD OREAS262	Standard	0.14	0.96	0.12	<10	<2
STD OREAS262	Standard	0.13	0.82	0.11	<10	<2
STD OREAS262	Standard	0.13	0.89	0.13	13	3
STD OREAS262	Standard	0.13	0.89	0.11	<10	<2
STD OREAS262	Standard	0.15	0.87	0.13	<10	3
STD OREAS262	Standard	0.13	0.87	0.12	<10	<2
STD OREAS262	Standard	0.13	0.84	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Project: None Given

Report Date: April 05, 2022

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QUALITY CONTROL REPORT

VAN22000380.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	0.03	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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QUALITY CONTROL REPORT

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		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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QUALITY CONTROL REPORT

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		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Geological Survey of Canada**

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 05, 2022

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QUALITY CONTROL REPORT

VAN22000380.1

		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 25, 2022
Report Date: April 18, 2022
Page: 1 of 6

CERTIFICATE OF ANALYSIS

VAN22000381.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 136

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	114	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	114	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771274	Sediment Pulp	43.19	20.49	3.12	100.0	202	11.4	12.4	161	5.87	0.5	9.1	1.1	3.3	19.5	0.33	0.08	0.02	80	0.22	0.153
013J771275	Sediment Pulp	58.13	23.87	3.28	132.7	224	16.5	32.7	372	8.27	0.6	11.1	0.5	4.8	24.7	0.50	0.07	0.02	85	0.25	0.144
013J771276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771277	Sediment Pulp	6.15	13.37	2.62	62.2	172	7.0	3.3	98	1.67	0.2	6.2	0.5	1.2	16.3	0.18	0.07	<0.02	45	0.19	0.074
013J771278	Sediment Pulp	0.95	31.55	24.30	123.1	2742	42.8	27.3	1193	3.02	25.1	3.9	2.8	7.9	27.6	0.57	0.66	3.20	45	0.61	0.093
013J771279	Sediment Pulp	6.52	14.26	2.44	65.4	174	6.9	3.4	99	1.69	0.4	6.2	0.3	1.1	16.0	0.19	0.07	<0.02	45	0.19	0.079
013J771280	Sediment Pulp	4.45	6.73	2.89	34.1	24	3.7	5.6	190	3.00	1.2	3.3	<0.2	3.4	11.8	0.09	0.16	<0.02	25	0.22	0.074
013J771281	Sediment Pulp	6.46	13.69	2.59	69.3	182	7.3	3.6	101	1.71	0.2	6.6	0.8	1.2	16.4	0.19	0.07	<0.02	44	0.19	0.074
013J771282	Sediment Pulp	2.32	6.75	3.15	37.7	60	5.0	2.3	93	0.85	1.2	4.0	1.0	2.1	15.0	0.10	0.05	<0.02	18	0.27	0.071
013J771283	Sediment Pulp	3.66	22.37	2.74	93.1	264	13.2	2.9	90	1.06	<0.1	7.6	1.3	0.4	17.8	0.19	0.04	<0.02	27	0.19	0.095
013J771284	Sediment Pulp	5.41	17.49	4.77	71.9	211	6.8	3.8	109	1.03	<0.1	7.9	1.2	0.6	19.9	0.27	0.08	<0.02	32	0.26	0.116
013J771285	Sediment Pulp	5.71	14.38	2.90	71.0	132	6.7	3.1	71	0.94	0.1	6.0	0.2	0.5	17.1	0.20	0.07	<0.02	28	0.19	0.059
013J771286	Sediment Pulp	5.55	14.59	2.91	69.5	141	6.8	3.1	64	0.85	<0.1	6.3	0.8	0.5	16.3	0.15	0.06	<0.02	27	0.18	0.063
013J771287	Sediment Pulp	4.24	12.93	4.14	46.7	37	6.1	5.0	146	2.09	1.5	7.5	0.2	6.0	16.4	0.08	0.09	0.03	30	0.32	0.098
013J771288	Sediment Pulp	27.00	69.55	4.38	217.7	403	11.7	11.7	589	8.33	1.8	83.2	0.8	7.6	21.5	0.58	0.24	0.06	78	0.31	0.258
013J771289	Sediment Pulp	31.15	53.67	7.35	127.1	464	9.4	4.8	92	2.63	5.6	41.3	1.0	1.5	18.3	0.50	0.28	0.15	33	0.17	0.072
013J771290	Sediment Pulp	35.24	71.90	3.71	107.6	561	9.9	7.5	465	3.25	<0.1	88.3	0.9	2.2	20.6	0.58	0.15	0.04	56	0.22	0.328
013J771291	Sediment Pulp	10.10	44.19	86.40	317.9	667	12.8	8.0	444	1.82	39.3	9.8	4.1	1.7	74.6	1.39	0.58	1.02	20	6.56	0.073
013J771292	Sediment Pulp	9.94	16.23	1.64	46.2	244	4.9	2.2	50	0.88	<0.1	16.8	1.0	0.2	17.4	0.21	0.05	<0.02	28	0.19	0.121
013J771293	Sediment Pulp	12.48	31.14	3.27	87.7	277	8.9	7.1	133	2.99	<0.1	12.7	2.3	1.0	21.1	0.26	0.07	<0.02	45	0.20	0.135
013J771294	Sediment Pulp	5.05	19.99	2.97	44.2	115	6.6	5.4	97	1.22	<0.1	7.8	0.8	1.5	18.9	0.13	0.06	<0.02	31	0.17	0.050
013J771295	Sediment Pulp	60.20	42.25	4.15	134.0	515	7.3	33.7	1488	15.44	0.5	27.2	1.3	8.5	29.2	0.56	0.08	0.04	122	0.29	0.340
013J771296	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771297	Sediment Pulp	1.60	8.01	3.25	24.8	34	3.2	3.6	154	1.42	0.8	2.6	0.5	5.2	22.3	0.06	0.04	<0.02	23	0.39	0.114
013J771298	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771299	Sediment Pulp	2.87	17.31	1.20	47.1	197	7.5	1.5	29	0.18	<0.1	6.4	1.6	0.3	21.4	0.13	0.04	0.09	8	0.18	0.068
013J771300	Sediment Pulp	9.24	28.15	1.97	63.3	94	10.8	7.1	130	1.32	0.3	22.1	<0.2	4.3	19.8	0.14	0.09	0.03	26	0.37	0.140
013J771301	Sediment Pulp	7.95	27.24	1.79	60.6	82	10.4	7.2	132	1.35	0.3	19.8	0.4	4.3	16.9	0.10	0.07	0.02	26	0.37	0.122
013J771302	Sediment Pulp	4.65	35.34	2.33	94.8	315	14.0	4.4	82	1.25	<0.1	10.1	0.4	1.5	28.2	0.21	0.06	<0.02	37	0.27	0.083
013J771303	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J771274	Sediment Pulp	110.7	18.9	0.10	78.2	0.047	<20	1.28	0.010	0.03	1.4	2.8	0.32	0.26	136	1.4	<0.02	2.7	0.37	0.1	<0.02
013J771275	Sediment Pulp	134.6	20.3	0.10	105.5	0.046	<20	1.38	0.012	0.04	1.4	3.5	0.59	0.27	156	1.9	<0.02	2.8	0.40	0.1	<0.02
013J771276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771277	Sediment Pulp	52.5	11.9	0.16	47.1	0.047	<20	0.67	0.014	0.05	0.5	1.9	0.11	0.17	122	0.8	<0.02	2.2	0.44	<0.1	<0.02
013J771278	Sediment Pulp	41.8	46.2	0.77	162.9	0.097	<20	1.63	0.027	0.25	0.4	5.8	0.28	0.14	300	0.4	0.04	5.6	1.38	<0.1	0.11
013J771279	Sediment Pulp	53.6	12.7	0.17	50.5	0.049	<20	0.67	0.014	0.06	0.5	1.9	0.11	0.17	152	0.9	<0.02	2.4	0.47	0.1	<0.02
013J771280	Sediment Pulp	34.7	7.9	0.10	32.6	0.065	<20	0.52	0.012	0.03	0.2	2.0	0.03	0.03	50	0.3	<0.02	1.8	0.24	<0.1	0.03
013J771281	Sediment Pulp	54.3	13.1	0.17	50.7	0.051	<20	0.68	0.014	0.06	0.6	1.9	0.12	0.17	141	0.8	<0.02	2.5	0.47	<0.1	<0.02
013J771282	Sediment Pulp	46.8	10.6	0.16	42.2	0.068	<20	0.55	0.022	0.06	0.6	2.1	0.04	0.05	99	0.2	<0.02	2.1	0.40	<0.1	<0.02
013J771283	Sediment Pulp	75.3	13.0	0.15	109.4	0.040	<20	0.81	0.012	0.04	<0.1	1.6	0.10	0.22	222	1.7	<0.02	2.4	0.48	<0.1	<0.02
013J771284	Sediment Pulp	69.5	11.0	0.14	98.2	0.060	<20	0.79	0.025	0.04	0.2	1.8	0.11	0.14	165	1.1	<0.02	3.3	0.36	<0.1	<0.02
013J771285	Sediment Pulp	56.7	8.9	0.09	58.9	0.039	<20	0.65	0.017	0.03	0.3	1.3	0.12	0.15	135	1.0	<0.02	2.1	0.28	<0.1	<0.02
013J771286	Sediment Pulp	57.6	8.9	0.09	57.2	0.037	<20	0.63	0.014	0.03	0.3	1.3	0.11	0.15	156	0.9	<0.02	2.1	0.27	<0.1	<0.02
013J771287	Sediment Pulp	54.4	12.7	0.20	42.9	0.072	<20	0.64	0.021	0.06	0.4	2.3	0.07	0.06	53	0.4	<0.02	2.2	0.43	<0.1	0.02
013J771288	Sediment Pulp	184.8	27.9	0.17	55.5	0.058	<20	2.09	0.015	0.07	1.4	5.0	0.31	0.15	119	3.9	0.02	3.5	0.56	0.2	<0.02
013J771289	Sediment Pulp	134.4	13.1	0.08	17.5	0.021	<20	1.16	0.009	0.03	0.6	1.8	0.09	0.35	141	2.1	<0.02	1.9	0.32	<0.1	<0.02
013J771290	Sediment Pulp	205.0	23.6	0.09	52.5	0.035	<20	2.06	0.010	0.04	1.6	3.2	0.24	0.22	201	5.0	<0.02	3.4	0.36	<0.1	<0.02
013J771291	Sediment Pulp	11.3	12.4	0.58	98.6	0.041	<20	0.46	0.028	0.05	0.7	2.6	0.24	1.56	124	1.0	<0.02	2.1	0.54	<0.1	0.02
013J771292	Sediment Pulp	94.4	5.3	0.03	52.4	0.016	<20	0.76	0.009	0.01	0.5	1.0	0.06	0.13	113	1.0	<0.02	1.2	0.15	<0.1	<0.02
013J771293	Sediment Pulp	122.6	11.2	0.08	53.1	0.035	<20	1.31	0.012	0.03	0.7	2.0	0.12	0.24	189	1.6	<0.02	2.8	0.34	0.1	<0.02
013J771294	Sediment Pulp	79.1	8.6	0.15	41.5	0.051	<20	0.67	0.014	0.04	0.5	2.1	0.08	0.22	155	1.0	<0.02	2.5	0.46	<0.1	0.05
013J771295	Sediment Pulp	299.4	15.4	0.07	63.3	0.070	<20	2.03	0.009	0.03	0.7	4.5	0.24	0.24	206	3.0	<0.02	5.8	0.36	0.2	<0.02
013J771296	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771297	Sediment Pulp	38.0	7.2	0.18	35.5	0.074	<20	0.47	0.026	0.07	0.3	2.4	0.06	0.03	56	<0.1	<0.02	2.2	0.45	<0.1	0.02
013J771298	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771299	Sediment Pulp	117.1	5.5	0.04	41.5	0.015	<20	0.54	0.008	0.02	<0.1	0.3	0.04	0.20	123	0.8	<0.02	1.8	0.20	0.2	<0.02
013J771300	Sediment Pulp	82.3	10.3	0.20	46.8	0.077	<20	0.65	0.014	0.08	0.6	2.6	0.19	0.11	57	<0.1	0.02	2.5	0.62	0.1	<0.02
013J771301	Sediment Pulp	76.9	9.8	0.17	42.4	0.069	<20	0.66	0.015	0.08	0.5	2.3	0.18	0.11	62	0.2	<0.02	2.1	0.56	0.2	<0.02
013J771302	Sediment Pulp	134.5	15.9	0.10	95.9	0.045	<20	0.95	0.012	0.03	0.2	2.0	0.17	0.26	167	1.1	<0.02	2.4	0.32	0.1	<0.02
013J771303	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771274	Sediment Pulp	2.32	3.5	0.4	<0.05	0.4	41.32	168.3	<0.02	1	0.8	1.8	23.06	80.02	11.69	1.50	9.80	1.31	7.12	1.38	4.36
013J771275	Sediment Pulp	2.34	3.9	0.4	<0.05	0.5	51.14	237.6	<0.02	4	1.0	2.6	29.02	103.73	14.08	1.81	11.97	1.45	8.21	1.72	5.12
013J771276	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771277	Sediment Pulp	1.77	4.6	0.3	<0.05	0.6	19.10	93.5	<0.02	<1	0.3	3.1	11.87	45.77	6.54	0.94	5.08	0.65	3.51	0.66	2.04
013J771278	Sediment Pulp	1.83	24.3	1.2	<0.05	5.0	18.11	75.4	0.04	<1	1.0	19.9	10.12	34.52	6.36	0.85	4.13	0.62	3.35	0.64	1.84
013J771279	Sediment Pulp	1.71	4.7	0.3	<0.05	0.6	19.71	95.8	<0.02	<1	0.5	2.8	12.01	42.80	6.23	0.93	4.66	0.65	3.37	0.68	1.92
013J771280	Sediment Pulp	2.60	2.5	0.6	<0.05	0.7	14.61	62.5	0.02	<1	0.3	2.7	7.98	28.80	4.09	0.71	3.27	0.47	2.71	0.50	1.54
013J771281	Sediment Pulp	1.75	4.8	0.3	<0.05	0.5	20.28	97.8	<0.02	<1	0.3	3.8	12.45	45.90	6.87	0.99	5.47	0.69	3.77	0.70	2.23
013J771282	Sediment Pulp	2.07	4.4	0.5	<0.05	0.6	17.33	83.4	<0.02	<1	0.1	4.3	11.57	41.36	6.28	0.94	5.03	0.64	3.64	0.64	1.89
013J771283	Sediment Pulp	0.98	3.4	0.2	<0.05	0.3	26.27	113.0	<0.02	<1	0.4	3.6	16.30	58.35	8.74	1.33	6.41	0.87	4.93	0.96	2.77
013J771284	Sediment Pulp	1.95	3.2	0.4	<0.05	0.6	22.85	112.8	<0.02	<1	0.6	3.1	16.25	58.98	8.38	1.06	5.93	0.79	4.36	0.84	2.51
013J771285	Sediment Pulp	1.42	2.4	0.4	<0.05	0.4	20.03	87.6	<0.02	1	0.7	2.0	12.84	46.20	7.00	0.92	4.76	0.68	3.85	0.66	2.08
013J771286	Sediment Pulp	1.30	2.3	1.6	<0.05	0.3	20.76	88.5	<0.02	<1	0.4	2.1	12.72	46.52	6.62	0.95	5.28	0.67	3.85	0.76	2.18
013J771287	Sediment Pulp	2.87	4.9	0.6	<0.05	1.2	22.58	99.4	0.02	<1	0.3	4.3	12.48	46.79	6.97	0.95	5.41	0.76	4.50	0.87	2.38
013J771288	Sediment Pulp	2.72	5.6	0.5	<0.05	0.6	119.16	342.8	0.02	3	4.0	4.4	46.59	180.12	31.06	3.34	25.41	3.61	21.47	4.23	12.94
013J771289	Sediment Pulp	1.14	2.8	0.4	<0.05	0.1	66.08	207.3	0.02	2	1.7	2.0	30.89	114.53	18.05	2.37	14.52	1.80	10.13	2.12	6.46
013J771290	Sediment Pulp	1.48	3.2	0.3	<0.05	0.1	94.98	349.4	<0.02	5	2.0	1.9	50.97	197.03	32.38	4.58	25.59	3.34	17.97	3.40	9.90
013J771291	Sediment Pulp	0.77	3.8	3.5	<0.05	1.3	11.40	18.7	0.51	18	0.3	4.9	3.02	12.44	2.53	0.52	2.31	0.33	2.06	0.39	1.13
013J771292	Sediment Pulp	0.55	1.0	0.1	<0.05	<0.1	30.28	110.3	<0.02	1	0.3	0.6	19.96	73.88	9.96	1.60	7.97	0.91	4.99	0.96	2.91
013J771293	Sediment Pulp	1.40	2.4	0.3	<0.05	0.2	43.50	183.0	<0.02	1	1.0	2.0	26.47	102.75	14.77	2.37	11.17	1.34	7.35	1.44	4.08
013J771294	Sediment Pulp	1.36	3.8	0.3	<0.05	1.6	22.63	125.7	<0.02	<1	0.4	3.5	17.17	61.44	9.26	1.53	7.08	0.82	4.50	0.84	2.31
013J771295	Sediment Pulp	2.35	2.6	0.5	<0.05	0.3	92.56	559.4	0.04	6	1.7	1.2	64.68	253.15	35.84	5.23	27.54	3.22	17.86	3.27	9.46
013J771296	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771297	Sediment Pulp	2.37	5.3	0.5	<0.05	1.1	14.14	69.1	<0.02	<1	0.3	3.1	8.51	31.84	4.81	0.85	3.36	0.49	2.86	0.50	1.47
013J771298	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771299	Sediment Pulp	0.66	1.5	0.7	<0.05	<0.1	25.12	111.8	<0.02	4	0.1	1.1	22.02	76.91	10.36	1.71	8.07	1.06	5.25	0.91	2.35
013J771300	Sediment Pulp	2.61	8.0	0.7	<0.05	0.6	31.35	145.3	<0.02	2	<0.1	6.2	21.89	79.03	13.56	1.93	9.74	1.20	6.38	1.15	3.22
013J771301	Sediment Pulp	2.22	7.1	0.5	<0.05	0.5	27.42	137.9	<0.02	1	0.3	3.7	20.93	74.10	11.81	1.70	7.73	1.14	5.68	1.06	3.00
013J771302	Sediment Pulp	1.41	3.1	0.3	<0.05	0.4	35.16	224.3	<0.02	2	0.4	1.9	30.49	110.38	17.03	2.51	12.02	1.41	7.59	1.30	3.79
013J771303	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000381.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J771274	Sediment Pulp		0.61	3.45	0.53	<10	<2
013J771275	Sediment Pulp		0.74	4.28	0.65	<10	<2
013J771276	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771277	Sediment Pulp		0.30	1.77	0.28	<10	<2
013J771278	Sediment Pulp		0.27	1.69	0.24	<10	<2
013J771279	Sediment Pulp		0.29	1.78	0.27	<10	<2
013J771280	Sediment Pulp		0.23	1.47	0.19	<10	<2
013J771281	Sediment Pulp		0.29	1.83	0.29	<10	<2
013J771282	Sediment Pulp		0.26	1.75	0.27	<10	<2
013J771283	Sediment Pulp		0.37	2.24	0.36	<10	<2
013J771284	Sediment Pulp		0.33	2.09	0.33	<10	<2
013J771285	Sediment Pulp		0.28	1.78	0.25	<10	<2
013J771286	Sediment Pulp		0.27	1.73	0.26	<10	<2
013J771287	Sediment Pulp		0.35	2.12	0.32	<10	<2
013J771288	Sediment Pulp		1.96	11.53	1.84	<10	<2
013J771289	Sediment Pulp		0.93	5.84	0.94	<10	<2
013J771290	Sediment Pulp		1.39	8.25	1.32	<10	2
013J771291	Sediment Pulp		0.16	0.90	0.16	<10	<2
013J771292	Sediment Pulp		0.37	2.13	0.36	<10	<2
013J771293	Sediment Pulp		0.56	3.42	0.51	<10	2
013J771294	Sediment Pulp		0.31	1.81	0.28	<10	<2
013J771295	Sediment Pulp		1.33	7.99	1.26	19	<2
013J771296	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771297	Sediment Pulp		0.17	1.19	0.17	<10	<2
013J771298	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771299	Sediment Pulp		0.32	1.91	0.23	<10	<2
013J771300	Sediment Pulp		0.42	2.91	0.46	<10	2
013J771301	Sediment Pulp		0.43	2.74	0.40	<10	<2
013J771302	Sediment Pulp		0.47	3.33	0.46	<10	3
013J771303	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771304	Sediment Pulp	2.44	20.49	1.77	48.0	104	13.3	6.0	116	1.58	<0.1	3.9	0.4	2.5	21.9	0.15	0.06	<0.02	48	0.27	0.052
013J771305	Sediment Pulp	2.07	11.29	2.65	27.8	21	7.0	4.6	143	1.30	0.7	2.4	<0.2	5.0	21.7	0.04	0.04	0.02	26	0.43	0.113
013J771306	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771307	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771308	Sediment Pulp	0.93	33.44	26.47	129.6	2578	48.1	30.2	1235	3.17	26.2	3.9	14.9	7.9	27.6	0.57	0.62	3.23	48	0.60	0.095
013J771309	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771310	Sediment Pulp	6.48	55.91	7.17	69.8	195	14.4	6.8	158	1.81	<0.1	22.7	0.4	4.3	24.0	0.23	0.18	0.06	47	0.32	0.147
013J771311	Sediment Pulp	8.61	22.45	6.00	30.1	133	5.3	4.2	115	1.58	0.3	24.4	3.3	2.3	13.4	0.21	0.05	0.04	41	0.20	0.158
013J771312	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771313	Sediment Pulp	5.04	14.41	6.07	34.7	23	8.0	6.2	122	1.73	0.9	17.9	0.3	3.5	18.7	0.09	0.05	0.02	32	0.32	0.093
013J771314	Sediment Pulp	4.33	51.05	5.90	115.3	316	16.3	34.0	396	5.79	<0.1	12.0	0.6	2.3	22.4	0.56	0.06	<0.02	51	0.17	0.193
013J771315	Sediment Pulp	22.89	36.87	5.34	85.7	287	11.1	40.5	1577	13.60	0.8	20.7	2.6	5.0	21.5	0.49	0.06	0.03	88	0.20	0.252
013J771316	Sediment Pulp	3.10	9.97	6.26	45.7	20	6.6	5.8	186	1.42	0.9	10.3	0.5	5.6	24.1	0.10	0.07	<0.02	29	0.42	0.123
013J771317	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771318	Sediment Pulp	0.75	5.55	4.52	32.7	16	5.7	3.5	105	1.09	0.4	2.4	<0.2	6.2	16.8	0.04	0.07	<0.02	23	0.28	0.086
013J771319	Sediment Pulp	2.76	8.51	4.24	53.5	32	8.9	7.4	159	2.41	0.6	3.1	<0.2	7.5	26.9	0.09	0.08	0.02	44	0.40	0.084
013J771320	Sediment Pulp	3.67	17.96	5.55	92.1	85	10.3	8.0	141	1.76	1.0	12.6	9.2	6.4	27.0	0.36	0.13	0.05	51	0.34	0.073
013J771321	Sediment Pulp	3.96	19.72	6.11	100.6	81	10.7	8.9	147	1.83	1.0	13.9	2.3	6.9	28.3	0.37	0.17	0.05	53	0.35	0.081
013J771322	Sediment Pulp	2.60	12.35	5.49	70.3	64	12.2	7.0	186	1.94	0.7	6.8	17.2	6.4	28.7	0.13	0.05	0.02	48	0.40	0.084
013J771323	Sediment Pulp	3.58	14.73	8.77	74.3	80	11.7	8.0	178	2.13	1.6	13.3	2.9	6.9	28.3	0.21	0.15	0.07	43	0.38	0.089
013J771324	Sediment Pulp	9.33	42.61	85.10	332.7	648	13.9	8.5	435	1.85	36.1	9.5	2.8	1.8	69.5	1.40	0.58	1.04	21	6.43	0.073
013J771325	Sediment Pulp	6.34	28.33	11.29	136.6	311	11.4	49.6	1192	13.24	1.9	34.3	<0.2	11.1	23.6	0.71	0.32	0.11	125	0.28	0.227
013J771326	Sediment Pulp	3.75	18.84	8.79	78.7	110	8.8	7.8	192	2.52	1.3	18.7	0.4	8.0	32.1	0.29	0.20	0.10	71	0.38	0.116
013J771327	Sediment Pulp	3.99	14.10	6.98	74.9	75	10.9	7.8	217	3.06	1.1	11.5	1.2	8.4	29.6	0.17	0.11	0.04	57	0.42	0.101
013J771328	Sediment Pulp	4.57	14.71	7.47	94.8	55	11.1	9.0	354	4.79	1.4	7.9	2.4	10.0	27.7	0.21	0.13	0.05	57	0.38	0.094
013J771329	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771330	Sediment Pulp	3.06	8.46	6.46	43.7	21	5.8	5.2	188	1.26	1.0	19.9	<0.2	5.3	24.9	0.10	0.10	<0.02	28	0.39	0.097
013J771331	Sediment Pulp	9.67	18.29	6.73	71.5	92	8.4	8.8	270	2.13	0.6	46.0	<0.2	5.2	31.1	0.26	0.07	<0.02	44	0.41	0.126
013J771332	Sediment Pulp	16.57	31.01	4.90	88.7	138	11.7	8.4	135	3.39	0.1	39.3	<0.2	3.7	25.5	0.34	0.07	<0.02	62	0.31	0.156
013J771333	Sediment Pulp	23.38	46.93	6.74	74.7	271	11.8	17.6	239	6.36	<0.1	46.4	<0.2	4.2	28.2	0.36	0.06	0.05	65	0.30	0.228



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J771304	Sediment Pulp	60.8	22.1	0.20	72.5	0.074	<20	0.66	0.024	0.07	0.2	2.1	0.12	0.24	143	0.5	<0.02	2.6	0.59	<0.1	0.02
013J771305	Sediment Pulp	35.3	15.0	0.24	46.6	0.092	<20	0.53	0.036	0.10	0.4	2.5	0.07	0.04	33	<0.1	<0.02	2.1	0.55	<0.1	0.03
013J771306	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771307	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771308	Sediment Pulp	42.4	53.4	0.80	167.3	0.107	<20	1.63	0.029	0.26	0.4	5.9	0.27	0.16	278	0.2	0.07	5.9	1.44	0.1	0.15
013J771309	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771310	Sediment Pulp	83.9	22.6	0.33	74.6	0.085	<20	1.47	0.037	0.15	0.3	3.6	0.16	0.15	80	1.5	<0.02	3.7	1.05	0.1	0.03
013J771311	Sediment Pulp	47.3	16.1	0.15	34.4	0.066	<20	1.23	0.016	0.06	0.4	1.6	0.06	0.07	102	1.5	<0.02	2.8	0.80	<0.1	<0.02
013J771312	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771313	Sediment Pulp	36.3	14.6	0.25	37.6	0.096	<20	0.80	0.023	0.07	0.6	1.6	0.06	0.06	47	<0.1	<0.02	2.7	0.76	<0.1	0.04
013J771314	Sediment Pulp	127.8	34.2	0.07	63.7	0.041	<20	2.99	0.013	0.02	0.2	3.9	0.39	0.27	185	7.5	<0.02	4.1	0.28	0.2	<0.02
013J771315	Sediment Pulp	89.2	31.4	0.08	48.9	0.068	<20	1.99	0.015	0.03	0.7	3.4	0.21	0.22	153	4.7	0.02	4.8	0.40	0.2	<0.02
013J771316	Sediment Pulp	44.5	14.2	0.27	52.8	0.126	<20	0.75	0.029	0.11	0.6	2.3	0.11	0.06	82	<0.1	<0.02	3.6	1.12	<0.1	0.05
013J771317	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771318	Sediment Pulp	27.8	13.3	0.22	32.9	0.107	<20	0.60	0.020	0.09	0.8	2.1	0.07	0.03	47	<0.1	<0.02	2.5	0.97	<0.1	0.06
013J771319	Sediment Pulp	41.1	19.0	0.30	44.5	0.123	<20	0.86	0.036	0.10	1.3	2.8	0.14	0.21	68	0.2	<0.02	3.3	1.16	<0.1	0.08
013J771320	Sediment Pulp	65.5	19.1	0.28	51.3	0.103	<20	1.13	0.031	0.11	1.0	2.6	0.31	0.27	79	0.6	<0.02	3.6	1.27	0.1	0.06
013J771321	Sediment Pulp	72.0	21.4	0.29	59.7	0.111	<20	1.18	0.030	0.12	1.6	2.8	0.34	0.28	88	0.8	<0.02	4.0	1.48	0.1	0.09
013J771322	Sediment Pulp	51.6	25.2	0.45	71.8	0.126	<20	1.35	0.048	0.19	0.9	3.5	0.17	0.12	278	<0.1	<0.02	4.3	1.99	<0.1	0.08
013J771323	Sediment Pulp	61.2	24.3	0.36	59.0	0.116	<20	1.20	0.045	0.15	3.5	2.9	0.19	0.18	91	<0.1	<0.02	3.6	1.59	<0.1	0.06
013J771324	Sediment Pulp	12.3	13.2	0.59	102.9	0.042	<20	0.43	0.025	0.05	0.6	2.3	0.22	1.58	118	0.4	0.03	2.1	0.56	<0.1	0.04
013J771325	Sediment Pulp	144.1	33.1	0.14	54.1	0.089	<20	2.24	0.027	0.05	0.6	3.7	0.46	0.46	171	4.9	0.02	4.7	0.90	0.2	0.02
013J771326	Sediment Pulp	85.1	20.4	0.31	90.4	0.112	<20	1.37	0.037	0.12	0.7	2.9	0.21	0.16	113	0.8	<0.02	4.0	1.56	0.1	0.10
013J771327	Sediment Pulp	58.4	22.6	0.41	60.4	0.135	<20	1.31	0.041	0.17	0.9	3.2	0.23	0.18	76	0.3	<0.02	4.2	1.72	<0.1	0.10
013J771328	Sediment Pulp	79.9	25.0	0.31	62.2	0.107	<20	1.36	0.034	0.12	1.4	3.7	0.19	0.26	89	0.7	<0.02	4.0	1.09	0.2	0.08
013J771329	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771330	Sediment Pulp	49.2	14.2	0.23	46.2	0.116	<20	0.90	0.027	0.10	0.6	2.6	0.10	0.05	53	<0.1	<0.02	3.4	1.12	<0.1	0.08
013J771331	Sediment Pulp	66.6	17.1	0.28	81.3	0.095	<20	1.58	0.034	0.14	0.9	2.9	0.18	0.12	111	0.5	<0.02	4.1	1.51	<0.1	0.04
013J771332	Sediment Pulp	107.0	21.4	0.21	76.1	0.080	<20	1.96	0.017	0.07	0.6	2.8	0.12	0.18	103	1.9	<0.02	3.6	0.64	0.1	0.03
013J771333	Sediment Pulp	157.9	26.3	0.18	70.5	0.066	<20	2.29	0.021	0.06	0.6	3.4	0.29	0.19	147	4.0	<0.02	4.3	0.91	0.2	<0.02



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771304	Sediment Pulp	1.46	5.7	0.4	<0.05	0.7	15.88	116.9	<0.02	1	<0.1	3.9	13.71	48.27	7.34	1.13	4.33	0.62	3.28	0.57	1.59
013J771305	Sediment Pulp	2.51	7.6	0.6	<0.05	1.0	13.64	66.7	<0.02	<1	<0.1	5.0	8.03	29.00	4.70	0.75	3.07	0.44	2.36	0.43	1.31
013J771306	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771307	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771308	Sediment Pulp	2.07	26.0	1.2	<0.05	5.6	18.44	77.8	0.05	1	0.7	20.9	10.34	36.27	6.67	1.03	4.33	0.63	3.74	0.67	2.01
013J771309	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771310	Sediment Pulp	2.09	12.4	0.6	<0.05	1.5	40.98	179.1	0.03	2	2.1	6.6	23.09	84.02	14.32	2.10	9.93	1.50	8.33	1.46	4.53
013J771311	Sediment Pulp	2.18	5.0	0.5	<0.05	0.6	24.02	107.1	<0.02	<1	3.0	5.4	12.24	43.42	7.01	0.93	5.11	0.86	4.58	0.92	2.62
013J771312	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771313	Sediment Pulp	2.63	5.6	0.6	<0.05	1.0	14.22	63.0	<0.02	<1	1.1	6.8	8.04	29.07	4.54	0.67	3.53	0.50	2.74	0.54	1.63
013J771314	Sediment Pulp	1.55	1.6	0.3	<0.05	0.2	52.38	290.8	0.02	<1	2.6	1.1	26.19	90.10	14.47	2.45	11.97	1.73	9.33	1.88	5.73
013J771315	Sediment Pulp	1.96	2.6	0.5	<0.05	0.5	41.40	189.3	0.03	2	1.5	2.1	20.20	71.10	11.34	1.84	8.22	1.32	7.85	1.49	4.78
013J771316	Sediment Pulp	3.77	10.9	1.0	<0.05	1.9	18.60	83.1	0.04	<1	0.9	10.6	9.95	34.86	5.89	0.81	4.55	0.65	3.68	0.70	2.02
013J771317	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771318	Sediment Pulp	2.98	9.8	1.0	<0.05	2.1	12.75	54.4	<0.02	<1	0.3	9.1	6.53	22.99	4.13	0.57	2.91	0.45	2.57	0.49	1.42
013J771319	Sediment Pulp	4.62	10.2	1.2	<0.05	3.4	21.04	80.3	<0.02	<1	0.8	10.6	9.29	34.03	5.66	0.77	4.22	0.61	3.62	0.68	2.12
013J771320	Sediment Pulp	4.10	11.7	0.9	<0.05	2.2	31.43	134.0	<0.02	<1	0.8	10.6	15.92	57.61	8.98	1.27	6.45	0.99	5.60	1.13	3.19
013J771321	Sediment Pulp	4.33	13.3	1.1	<0.05	2.4	33.30	146.6	0.03	<1	1.1	9.8	17.28	62.84	10.01	1.49	7.53	1.07	6.17	1.14	3.47
013J771322	Sediment Pulp	3.58	19.1	1.0	<0.05	2.9	23.53	100.8	<0.02	<1	0.7	15.6	12.43	43.23	6.99	0.95	5.48	0.81	4.61	0.91	2.66
013J771323	Sediment Pulp	3.92	16.1	1.2	<0.05	2.6	28.21	124.4	0.03	<1	0.9	12.6	14.08	54.93	8.61	1.22	6.67	0.95	5.62	1.05	3.13
013J771324	Sediment Pulp	0.62	3.6	3.7	<0.05	1.2	10.29	18.9	0.48	19	<0.1	5.2	2.94	12.01	2.47	0.51	2.12	0.32	1.76	0.34	1.06
013J771325	Sediment Pulp	3.60	4.9	1.0	<0.05	1.2	78.23	384.2	0.05	<1	3.2	3.8	33.51	121.98	20.84	2.72	17.03	2.56	15.20	3.17	9.46
013J771326	Sediment Pulp	4.06	13.1	1.1	<0.05	2.4	37.06	180.1	0.03	<1	1.1	12.3	20.50	75.89	11.81	1.56	9.10	1.33	7.68	1.43	4.41
013J771327	Sediment Pulp	4.40	18.0	1.2	<0.05	2.9	27.65	115.8	0.02	<1	0.7	14.7	13.59	48.81	7.80	1.08	5.91	0.86	5.03	1.04	2.93
013J771328	Sediment Pulp	4.78	12.3	1.3	<0.05	2.6	42.73	170.4	0.03	<1	1.8	10.6	18.51	67.01	10.34	1.18	8.19	1.26	7.15	1.52	4.57
013J771329	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771330	Sediment Pulp	3.76	11.0	1.1	<0.05	2.0	26.30	93.0	0.02	<1	2.0	11.6	12.32	42.20	7.33	0.87	5.54	0.81	4.64	0.91	2.71
013J771331	Sediment Pulp	3.51	13.0	0.8	<0.05	1.5	34.62	141.2	0.02	<1	2.5	11.1	16.60	58.38	9.32	1.21	7.18	1.13	6.58	1.29	3.69
013J771332	Sediment Pulp	2.75	6.2	0.5	<0.05	0.8	44.08	200.9	<0.02	<1	2.4	6.0	24.07	85.16	13.63	2.10	9.57	1.43	8.04	1.63	4.77
013J771333	Sediment Pulp	2.49	5.5	0.5	<0.05	0.5	73.25	341.8	0.02	1	4.3	4.4	34.96	134.50	20.65	3.17	15.07	2.32	13.41	2.67	7.55



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Project: None Given

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J771304	Sediment Pulp	0.24	1.42	0.20	<10	<2
013J771305	Sediment Pulp	0.19	1.32	0.17	<10	<2
013J771306	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771307	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771308	Sediment Pulp	0.27	1.76	0.24	<10	<2
013J771309	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771310	Sediment Pulp	0.67	4.45	0.61	<10	<2
013J771311	Sediment Pulp	0.40	2.77	0.39	<10	2
013J771312	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771313	Sediment Pulp	0.23	1.58	0.21	<10	<2
013J771314	Sediment Pulp	0.87	5.21	0.74	<10	<2
013J771315	Sediment Pulp	0.75	4.72	0.67	<10	2
013J771316	Sediment Pulp	0.32	1.96	0.30	<10	<2
013J771317	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771318	Sediment Pulp	0.22	1.35	0.19	<10	2
013J771319	Sediment Pulp	0.33	2.09	0.31	<10	<2
013J771320	Sediment Pulp	0.49	3.09	0.45	<10	<2
013J771321	Sediment Pulp	0.53	3.41	0.54	<10	<2
013J771322	Sediment Pulp	0.39	2.64	0.37	<10	3
013J771323	Sediment Pulp	0.47	3.21	0.47	<10	<2
013J771324	Sediment Pulp	0.14	0.94	0.15	<10	<2
013J771325	Sediment Pulp	1.48	8.71	1.33	<10	4
013J771326	Sediment Pulp	0.72	4.42	0.63	<10	<2
013J771327	Sediment Pulp	0.47	3.01	0.43	<10	<2
013J771328	Sediment Pulp	0.70	4.62	0.71	<10	<2
013J771329	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771330	Sediment Pulp	0.44	2.81	0.40	<10	2
013J771331	Sediment Pulp	0.63	3.67	0.49	<10	<2
013J771332	Sediment Pulp	0.70	4.65	0.69	<10	<2
013J771333	Sediment Pulp	1.14	7.47	1.07	<10	2



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771334	Sediment Pulp	18.50	54.05	8.05	85.7	192	11.9	31.3	1467	7.54	0.5	74.1	2.9	4.3	19.3	0.39	0.10	0.09	59	0.29	0.211
013J771335	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771336	Sediment Pulp	14.75	28.82	6.40	37.7	74	8.0	3.5	116	1.93	0.3	69.5	1.2	3.2	19.6	0.11	0.09	0.05	44	0.36	0.113
013J771337	Sediment Pulp	31.08	23.78	4.26	91.4	117	13.2	5.9	119	3.79	0.4	15.9	0.7	1.7	17.5	0.33	0.08	0.05	62	0.22	0.141
013J771338	Sediment Pulp	3.62	29.82	4.14	36.6	45	7.0	10.1	751	1.50	2.1	19.6	<0.2	5.4	16.9	0.09	0.10	0.04	25	0.37	0.107
013J771339	Sediment Pulp	2.09	23.70	3.99	38.7	51	6.2	6.4	318	1.71	1.2	13.3	<0.2	6.6	25.2	0.08	0.07	0.03	30	0.48	0.114
013J771340	Sediment Pulp	9.69	33.94	3.45	105.1	239	19.8	9.9	156	3.19	<0.1	13.1	<0.2	2.6	21.9	0.34	0.08	<0.02	46	0.24	0.114
013J771341	Sediment Pulp	9.25	33.58	3.16	106.1	224	19.2	10.0	152	3.12	0.4	12.6	<0.2	2.0	21.8	0.32	0.08	<0.02	44	0.23	0.110
013J771342	Sediment Pulp	6.98	27.14	5.89	39.4	192	9.4	3.2	77	1.67	0.5	16.7	<0.2	1.5	13.7	0.13	0.14	0.06	55	0.15	0.093
013J771343	Sediment Pulp	11.82	27.45	8.96	38.1	176	7.3	2.9	78	1.00	1.5	66.4	0.7	2.8	21.7	0.38	0.15	0.09	39	0.28	0.131
013J771344	Sediment Pulp	4.64	12.27	5.84	17.3	30	2.8	1.6	64	0.71	0.9	36.3	0.2	2.5	13.3	0.12	0.06	0.04	17	0.27	0.086
013J771345	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771346	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771347	Sediment Pulp	4.55	13.89	4.53	46.6	138	10.7	4.0	90	1.31	0.5	10.3	0.3	2.1	18.6	0.17	0.16	0.03	28	0.24	0.065
013J771348	Sediment Pulp	4.26	18.17	2.75	39.8	72	5.7	9.2	465	3.11	0.7	8.4	<0.2	4.9	14.7	0.05	0.04	0.03	30	0.21	0.114
013J771349	Sediment Pulp	21.91	39.16	5.36	139.7	300	13.4	37.3	1265	12.42	1.4	15.6	<0.2	10.9	25.0	0.44	0.05	0.06	106	0.27	0.315
013J771350	Sediment Pulp	11.80	37.54	2.67	73.7	318	10.0	7.3	134	3.04	<0.1	13.1	<0.2	1.2	28.4	0.33	0.07	0.03	47	0.24	0.162
013J771351	Sediment Pulp	4.98	14.91	3.13	39.2	85	4.6	6.3	371	3.55	1.1	4.1	<0.2	6.7	25.5	0.09	0.04	0.03	44	0.36	0.147
013J771352	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771353	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771354	Sediment Pulp	0.95	32.56	27.23	132.2	2722	45.0	27.8	1199	3.09	26.9	4.0	2.1	8.4	27.2	0.60	0.68	3.25	48	0.60	0.092
013J771355	Sediment Pulp	2.43	11.60	1.65	32.0	34	4.1	4.6	119	1.14	0.3	2.7	0.2	1.8	15.9	0.05	0.03	<0.02	23	0.29	0.098
013J771356	Sediment Pulp	3.84	12.62	3.42	43.5	60	5.2	5.2	245	1.52	0.8	4.3	<0.2	4.7	22.4	0.11	0.05	0.03	29	0.38	0.123
013J771357	Sediment Pulp	3.78	20.24	2.44	58.3	144	9.3	1.9	112	1.21	0.5	6.8	<0.2	0.9	22.3	0.22	0.06	<0.02	37	0.27	0.070
013J771358	Sediment Pulp	16.29	32.04	3.88	98.2	247	13.2	27.3	382	7.95	1.3	16.2	4.7	7.2	17.4	0.24	0.07	0.04	74	0.23	0.225
013J771359	Sediment Pulp	4.66	7.07	2.58	31.7	26	5.0	3.3	115	1.50	0.9	9.1	<0.2	5.9	17.2	0.05	0.03	<0.02	23	0.34	0.096
013J771360	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771361	Sediment Pulp	3.73	19.35	2.37	53.2	125	8.7	1.9	111	1.20	<0.1	6.6	1.3	0.8	22.1	0.19	0.06	<0.02	37	0.27	0.070
013J771362	Sediment Pulp	1.87	19.44	5.59	44.9	71	14.9	2.9	85	1.02	0.4	7.0	9.8	1.3	20.3	0.24	0.09	0.03	36	0.24	0.077
013J771363	Sediment Pulp	13.59	24.13	11.38	114.2	190	10.4	10.4	233	3.37	0.6	11.0	5.4	3.0	17.4	0.36	0.08	0.04	55	0.25	0.104



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J771334	Sediment Pulp	147.2	23.4	0.22	72.4	0.083	<20	2.42	0.024	0.09	0.4	3.5	0.37	0.18	110	5.7	0.02	2.9	1.08	<0.1	<0.02
013J771335	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771336	Sediment Pulp	101.2	19.2	0.23	47.5	0.093	<20	1.68	0.028	0.07	0.4	2.9	0.08	0.21	123	2.2	<0.02	3.0	0.92	<0.1	0.03
013J771337	Sediment Pulp	75.2	21.2	0.21	45.2	0.062	<20	1.58	0.019	0.07	0.3	2.6	0.13	0.49	121	3.2	<0.02	2.5	0.91	<0.1	<0.02
013J771338	Sediment Pulp	39.5	11.7	0.24	40.1	0.088	<20	0.70	0.028	0.12	0.6	2.5	0.11	0.02	34	0.5	<0.02	2.0	0.92	<0.1	<0.02
013J771339	Sediment Pulp	46.0	11.3	0.26	64.3	0.098	<20	0.73	0.036	0.15	0.8	3.3	0.10	0.03	49	<0.1	<0.02	2.8	0.97	0.1	0.03
013J771340	Sediment Pulp	148.0	22.1	0.16	58.6	0.055	<20	1.73	0.015	0.05	0.4	2.6	0.23	0.39	126	1.9	<0.02	3.6	0.46	0.2	<0.02
013J771341	Sediment Pulp	138.3	22.2	0.15	53.0	0.053	<20	1.68	0.016	0.05	0.4	2.6	0.22	0.38	128	1.8	<0.02	3.7	0.45	0.2	<0.02
013J771342	Sediment Pulp	105.3	18.5	0.17	47.9	0.053	<20	1.47	0.012	0.06	0.3	2.1	0.08	0.22	116	1.8	<0.02	3.1	0.80	<0.1	0.03
013J771343	Sediment Pulp	97.1	12.3	0.13	53.5	0.061	<20	1.60	0.018	0.04	0.6	2.1	0.08	0.18	102	2.5	<0.02	3.5	0.95	<0.1	0.04
013J771344	Sediment Pulp	43.9	5.6	0.12	21.1	0.058	<20	0.62	0.018	0.04	0.3	1.6	0.05	0.06	42	0.7	<0.02	1.7	0.64	<0.1	<0.02
013J771345	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771346	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771347	Sediment Pulp	97.8	12.2	0.15	66.2	0.058	<20	0.75	0.016	0.06	0.3	2.3	0.10	0.23	122	1.4	<0.02	2.7	0.67	<0.1	<0.02
013J771348	Sediment Pulp	43.5	12.3	0.20	41.4	0.081	<20	0.67	0.029	0.09	0.3	2.7	0.09	0.03	139	0.3	<0.02	2.1	0.49	<0.1	<0.02
013J771349	Sediment Pulp	151.4	27.4	0.24	92.0	0.111	<20	2.01	0.027	0.11	0.9	5.8	0.34	0.15	78	2.6	0.02	5.2	0.87	0.2	0.07
013J771350	Sediment Pulp	147.2	12.6	0.05	75.5	0.030	<20	1.57	0.009	0.02	0.4	2.2	0.10	0.27	148	2.0	<0.02	2.8	0.23	<0.1	<0.02
013J771351	Sediment Pulp	56.8	11.4	0.21	61.0	0.091	<20	0.73	0.033	0.10	0.5	3.4	0.09	0.05	82	0.5	<0.02	2.7	0.63	<0.1	0.04
013J771352	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771353	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771354	Sediment Pulp	42.5	49.0	0.78	167.7	0.105	<20	1.63	0.030	0.26	0.4	6.2	0.28	0.15	291	0.5	0.02	5.8	1.42	<0.1	0.12
013J771355	Sediment Pulp	40.2	5.7	0.18	35.4	0.072	<20	0.45	0.019	0.08	0.3	1.6	0.11	0.12	89	0.3	<0.02	2.2	0.46	<0.1	0.03
013J771356	Sediment Pulp	45.5	10.2	0.20	54.3	0.086	<20	0.62	0.029	0.10	0.5	3.1	0.11	0.04	80	0.1	<0.02	2.4	0.61	0.1	<0.02
013J771357	Sediment Pulp	83.2	11.8	0.08	56.8	0.033	<20	0.72	0.019	0.03	0.4	1.7	0.09	0.21	151	1.3	<0.02	2.4	0.28	<0.1	<0.02
013J771358	Sediment Pulp	112.5	24.9	0.17	52.2	0.077	<20	1.58	0.021	0.07	0.6	4.3	0.28	0.15	277	2.5	<0.02	3.6	0.53	0.1	0.04
013J771359	Sediment Pulp	47.6	9.9	0.15	48.4	0.066	<20	0.54	0.019	0.06	0.4	2.3	0.04	0.03	54	0.2	<0.02	1.7	0.45	<0.1	0.03
013J771360	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771361	Sediment Pulp	82.7	11.5	0.08	55.5	0.034	<20	0.71	0.019	0.03	0.4	1.8	0.09	0.21	151	1.1	<0.02	2.4	0.29	<0.1	0.02
013J771362	Sediment Pulp	74.9	17.9	0.19	55.8	0.061	<20	0.86	0.022	0.04	0.2	2.0	0.05	0.25	150	1.0	<0.02	2.7	0.38	<0.1	<0.02
013J771363	Sediment Pulp	80.7	17.0	0.25	79.1	0.090	<20	1.21	0.020	0.07	0.2	3.0	0.17	0.22	241	1.2	0.03	3.8	0.46	0.1	0.03



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771334	Sediment Pulp	2.60	7.2	0.6	<0.05	0.6	69.28	292.6	0.04	<1	2.6	6.2	32.36	112.71	17.57	2.47	13.51	1.90	11.17	2.15	6.61
013J771335	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771336	Sediment Pulp	2.88	6.1	0.6	<0.05	0.9	45.36	175.8	0.03	<1	1.9	7.3	24.07	86.50	13.38	1.78	10.06	1.35	7.71	1.47	4.48
013J771337	Sediment Pulp	1.85	7.0	0.4	<0.05	0.6	34.82	152.0	0.02	<1	2.5	5.5	17.94	64.94	10.12	1.53	7.66	1.01	5.87	1.14	3.51
013J771338	Sediment Pulp	1.43	9.0	0.5	<0.05	0.9	19.50	121.3	<0.02	<1	1.3	7.6	10.51	37.59	6.22	0.86	4.62	0.63	3.66	0.69	2.07
013J771339	Sediment Pulp	2.22	11.3	0.5	<0.05	1.5	16.77	91.0	0.03	<1	0.9	7.4	11.00	38.73	6.22	0.99	4.51	0.62	3.16	0.59	1.72
013J771340	Sediment Pulp	2.02	5.3	0.2	<0.05	0.7	44.13	273.3	<0.02	<1	0.9	4.2	34.20	121.61	18.01	2.69	12.80	1.77	8.83	1.61	4.64
013J771341	Sediment Pulp	1.81	5.4	0.3	<0.05	0.5	42.99	249.0	<0.02	<1	1.2	3.8	33.37	118.43	17.47	2.46	12.15	1.69	8.57	1.54	4.11
013J771342	Sediment Pulp	1.75	6.0	0.3	<0.05	0.7	49.19	208.0	0.03	<1	2.1	5.5	26.57	94.39	14.24	1.95	10.39	1.63	9.25	1.79	5.37
013J771343	Sediment Pulp	2.96	4.1	0.9	<0.05	0.9	50.30	178.7	<0.02	<1	10.3	4.7	25.33	88.52	15.01	1.59	12.11	1.79	10.29	2.12	6.56
013J771344	Sediment Pulp	2.33	3.7	0.5	<0.05	0.7	22.11	74.9	<0.02	<1	1.5	4.3	10.89	37.91	6.46	0.76	5.70	0.77	4.30	0.80	2.54
013J771345	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771346	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771347	Sediment Pulp	1.30	7.7	0.6	<0.05	0.5	20.16	165.9	<0.02	<1	0.3	5.1	22.33	76.47	10.78	1.60	7.35	0.92	3.99	0.85	2.34
013J771348	Sediment Pulp	2.24	6.4	0.5	<0.05	0.7	15.98	91.6	<0.02	<1	0.4	4.6	10.60	37.66	5.56	1.02	4.48	0.59	3.24	0.61	1.66
013J771349	Sediment Pulp	2.72	8.9	0.6	<0.05	0.8	49.68	315.0	0.05	3	0.7	6.0	36.30	131.29	19.19	3.25	15.87	2.03	10.36	2.01	6.13
013J771350	Sediment Pulp	1.35	1.6	0.2	<0.05	0.2	52.08	218.3	<0.02	<1	1.0	1.4	34.86	128.05	18.73	3.05	13.65	1.72	9.12	1.76	5.16
013J771351	Sediment Pulp	2.51	7.1	0.5	<0.05	1.1	17.97	104.1	<0.02	2	0.3	4.2	13.97	48.35	7.58	1.23	5.78	0.76	3.83	0.73	2.14
013J771352	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771353	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771354	Sediment Pulp	2.00	24.7	1.1	<0.05	5.2	18.58	74.6	0.05	<1	0.8	21.5	10.56	38.26	6.54	1.00	5.08	0.70	4.03	0.69	2.14
013J771355	Sediment Pulp	1.76	5.6	0.3	<0.05	0.4	13.09	59.9	<0.02	1	0.4	4.3	9.39	34.04	4.89	0.90	3.71	0.50	2.56	0.41	1.41
013J771356	Sediment Pulp	2.17	8.1	0.5	<0.05	0.8	16.25	85.7	0.02	<1	0.1	4.6	11.03	39.14	6.15	0.97	4.60	0.59	3.43	0.62	1.83
013J771357	Sediment Pulp	1.24	2.9	0.4	<0.05	0.3	21.96	129.7	<0.02	<1	0.5	2.1	19.89	70.10	10.04	1.40	6.90	0.89	4.49	0.84	2.20
013J771358	Sediment Pulp	2.54	5.8	0.4	<0.05	0.6	38.21	224.0	0.03	<1	0.7	3.5	27.57	95.68	14.57	2.25	10.57	1.50	8.22	1.52	4.62
013J771359	Sediment Pulp	2.27	4.8	0.4	<0.05	0.8	16.71	88.3	<0.02	<1	0.6	4.6	12.17	44.47	7.13	1.02	5.18	0.69	3.54	0.63	1.93
013J771360	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771361	Sediment Pulp	1.31	2.8	0.3	<0.05	0.3	20.99	131.2	0.02	<1	0.5	1.8	18.55	67.56	9.92	1.44	6.66	0.89	4.32	0.79	2.28
013J771362	Sediment Pulp	2.29	3.3	0.6	<0.05	0.9	25.83	147.6	0.02	<1	0.5	5.2	18.59	65.31	9.47	1.19	7.34	0.98	5.08	0.95	2.97
013J771363	Sediment Pulp	2.73	5.1	0.5	<0.05	1.0	29.47	151.5	<0.02	<1	0.5	7.0	19.58	69.24	10.78	1.28	8.15	1.07	5.60	1.10	2.99



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J771334	Sediment Pulp		0.93	6.14	0.92	<10	<2
013J771335	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771336	Sediment Pulp		0.63	4.12	0.62	<10	<2
013J771337	Sediment Pulp		0.49	3.33	0.52	<10	<2
013J771338	Sediment Pulp		0.28	1.92	0.30	<10	<2
013J771339	Sediment Pulp		0.26	1.61	0.26	<10	<2
013J771340	Sediment Pulp		0.69	3.89	0.59	<10	<2
013J771341	Sediment Pulp		0.66	3.96	0.54	<10	<2
013J771342	Sediment Pulp		0.82	5.54	0.81	<10	<2
013J771343	Sediment Pulp		0.93	6.40	0.86	<10	<2
013J771344	Sediment Pulp		0.39	2.49	0.37	<10	<2
013J771345	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771346	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771347	Sediment Pulp		0.27	1.99	0.29	<10	<2
013J771348	Sediment Pulp		0.26	1.53	0.20	<10	<2
013J771349	Sediment Pulp		0.83	5.55	0.71	<10	3
013J771350	Sediment Pulp		0.76	4.33	0.68	11	<2
013J771351	Sediment Pulp		0.26	1.70	0.22	<10	<2
013J771352	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771353	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771354	Sediment Pulp		0.30	1.71	0.28	<10	<2
013J771355	Sediment Pulp		0.16	1.12	0.14	<10	<2
013J771356	Sediment Pulp		0.25	1.79	0.24	<10	<2
013J771357	Sediment Pulp		0.30	2.03	0.30	<10	<2
013J771358	Sediment Pulp		0.63	4.04	0.60	<10	<2
013J771359	Sediment Pulp		0.26	1.72	0.27	<10	<2
013J771360	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J771361	Sediment Pulp		0.29	1.96	0.29	<10	<2
013J771362	Sediment Pulp		0.34	2.72	0.37	<10	<2
013J771363	Sediment Pulp		0.45	2.66	0.38	11	<2



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771364	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771365	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771366	Sediment Pulp	6.08	14.39	7.47	60.7	125	8.0	6.4	183	1.76	0.3	9.7	13.0	1.9	21.8	0.25	0.08	0.04	47	0.30	0.089
013J771367	Sediment Pulp	5.89	14.17	6.75	59.9	124	8.5	7.2	184	1.88	0.5	9.0	0.4	2.3	20.5	0.17	0.06	0.04	48	0.30	0.094
013J771368	Sediment Pulp	2.41	14.50	3.37	35.7	203	10.2	2.3	55	1.05	<0.1	3.1	<0.2	0.7	19.8	0.16	0.03	<0.02	32	0.23	0.108
013J771369	Sediment Pulp	4.50	13.56	4.36	62.6	140	12.2	2.8	81	1.49	0.2	3.9	<0.2	0.6	16.6	0.25	0.05	0.02	47	0.28	0.108
013J771370	Sediment Pulp	36.03	32.86	3.32	204.8	414	19.2	45.6	748	14.49	<0.1	10.6	<0.2	3.0	17.2	0.98	0.05	0.02	56	0.20	0.212
013J771371	Sediment Pulp	9.59	10.90	5.57	45.2	65	7.4	6.5	132	3.02	1.1	4.2	0.2	3.7	16.5	0.15	0.07	0.03	41	0.29	0.088
013J771372	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771373	Sediment Pulp	9.39	42.09	85.19	315.1	592	13.3	7.8	424	1.81	36.1	9.2	2.3	1.6	65.9	1.39	0.62	0.96	21	6.18	0.067
013J771374	Sediment Pulp	5.21	10.93	2.60	30.0	116	9.0	2.6	60	0.90	<0.1	3.6	1.0	0.5	17.4	0.15	0.04	<0.02	31	0.20	0.056
013J771375	Sediment Pulp	8.38	21.74	3.47	71.1	134	9.5	8.3	214	4.45	0.4	6.1	<0.2	3.2	14.5	0.10	0.13	<0.02	52	0.19	0.089
013J771376	Sediment Pulp	7.82	25.56	4.96	90.6	117	19.8	16.9	246	4.65	0.3	6.2	3.2	4.0	18.4	0.22	0.04	<0.02	77	0.23	0.115
013J771377	Sediment Pulp	4.04	17.49	4.59	49.8	182	7.3	3.1	67	0.63	0.4	5.8	<0.2	0.5	17.6	0.30	0.04	<0.02	39	0.27	0.072
013J771378	Sediment Pulp	18.55	20.22	9.59	81.3	119	10.8	5.9	89	2.22	0.9	17.1	<0.2	2.6	18.4	0.32	0.08	0.05	70	0.24	0.097
013J771379	Sediment Pulp	25.52	58.83	10.99	119.3	324	15.3	45.6	801	11.45	2.5	60.8	<0.2	15.6	20.3	0.37	0.08	0.05	68	0.30	0.215
013J771380	Sediment Pulp	7.06	14.56	5.33	67.2	129	8.0	3.3	94	0.97	0.2	13.0	<0.2	1.7	20.6	0.28	0.04	<0.02	29	0.27	0.062
013J771381	Sediment Pulp	7.20	13.98	5.07	65.5	143	7.8	3.1	92	0.97	0.1	12.8	<0.2	1.6	21.0	0.28	0.05	<0.02	29	0.27	0.062
013J771382	Sediment Pulp	4.52	17.89	4.92	56.8	161	11.5	3.3	62	1.22	0.3	7.7	<0.2	0.6	19.5	0.28	0.07	<0.02	33	0.25	0.100
013J771383	Sediment Pulp	11.36	65.02	5.02	167.9	269	22.9	14.5	252	6.22	0.5	21.0	1.4	4.6	16.4	0.61	0.06	0.03	73	0.23	0.256
013J771384	Sediment Pulp	0.96	34.98	27.98	136.2	2825	46.4	29.3	1221	3.12	25.3	4.1	1.2	8.7	28.1	0.54	0.60	3.36	48	0.61	0.093
013J771385	Sediment Pulp	9.53	63.37	4.48	171.1	335	31.5	69.0	397	15.33	0.9	13.3	0.6	8.1	15.6	0.72	0.06	0.05	115	0.19	0.257
013J771386	Sediment Pulp	5.13	28.86	3.38	122.4	218	25.9	63.1	870	11.13	0.2	5.1	<0.2	3.5	17.1	0.48	0.04	0.03	50	0.18	0.176
013J771387	Sediment Pulp	3.71	24.02	2.13	39.0	282	14.0	2.9	69	1.16	<0.1	4.3	1.7	0.6	24.0	0.25	0.03	0.07	46	0.33	0.222
013J771388	Sediment Pulp	16.83	39.00	5.56	77.2	82	12.2	18.2	983	5.44	1.9	33.6	<0.2	11.0	24.7	0.10	0.07	0.05	49	0.36	0.176
013J771389	Sediment Pulp	13.06	38.42	4.08	141.5	396	20.9	57.2	1482	13.68	<0.1	18.7	2.5	7.2	16.9	0.59	0.04	0.06	67	0.20	0.249
013J771390	Sediment Pulp	6.56	18.59	2.10	53.7	191	13.2	2.1	36	0.37	<0.1	11.3	2.2	0.6	25.5	0.28	0.05	0.08	16	0.24	0.050
013J771391	Sediment Pulp	8.89	44.25	4.58	104.0	362	19.6	120.3	536	18.39	0.8	8.4	0.5	7.7	14.2	0.48	0.04	0.05	128	0.16	0.263
013J771392	Sediment Pulp	10.69	34.65	5.05	138.0	227	13.9	8.5	168	2.30	<0.1	17.5	2.0	2.0	19.5	0.49	0.06	0.03	57	0.25	0.130
013J771393	Sediment Pulp	8.71	36.61	5.63	117.6	169	14.0	8.6	174	1.89	0.2	26.5	0.7	3.3	22.3	0.35	0.06	0.04	47	0.31	0.106



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J771364	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771365	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771366	Sediment Pulp	52.1	19.1	0.26	63.1	0.102	<20	1.16	0.025	0.05	0.2	2.6	0.13	0.15	127	1.1	<0.02	4.1	0.35	<0.1
013J771367	Sediment Pulp	50.8	18.8	0.27	62.5	0.103	<20	1.16	0.026	0.06	0.2	2.6	0.11	0.14	112	1.1	<0.02	4.3	0.37	<0.1
013J771368	Sediment Pulp	48.7	14.5	0.11	79.3	0.043	<20	0.89	0.014	0.02	0.1	1.4	0.06	0.19	136	1.2	<0.02	2.6	0.21	<0.1
013J771369	Sediment Pulp	60.3	18.2	0.14	49.3	0.041	<20	1.02	0.015	0.03	0.2	1.6	0.07	0.25	107	1.7	<0.02	2.8	0.31	<0.1
013J771370	Sediment Pulp	143.5	21.2	0.07	91.5	0.038	<20	1.77	0.008	0.03	0.2	4.2	0.62	0.23	110	4.7	0.02	2.5	0.27	0.2
013J771371	Sediment Pulp	46.5	16.0	0.17	47.9	0.081	<20	0.76	0.027	0.06	0.2	2.5	0.08	0.13	71	0.7	<0.02	2.6	0.29	<0.1
013J771372	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771373	Sediment Pulp	10.6	12.6	0.57	94.9	0.042	<20	0.44	0.027	0.05	0.5	2.5	0.21	1.53	110	0.8	<0.02	2.1	0.53	<0.1
013J771374	Sediment Pulp	63.1	12.6	0.08	65.6	0.030	<20	0.71	0.012	0.03	0.4	1.3	0.07	0.18	239	0.6	<0.02	2.2	0.19	<0.1
013J771375	Sediment Pulp	90.8	15.2	0.20	88.6	0.059	<20	1.22	0.015	0.08	0.7	3.4	0.08	0.10	149	0.7	<0.02	2.8	0.33	<0.1
013J771376	Sediment Pulp	80.5	29.4	0.36	73.2	0.094	<20	1.48	0.018	0.08	0.4	3.1	0.18	0.20	226	1.4	<0.02	4.3	0.52	<0.1
013J771377	Sediment Pulp	34.1	11.1	0.10	49.7	0.044	<20	0.82	0.018	0.03	0.3	1.1	0.07	0.17	110	0.7	<0.02	2.5	0.27	<0.1
013J771378	Sediment Pulp	87.7	22.3	0.18	57.5	0.078	<20	1.54	0.016	0.04	0.4	2.7	0.12	0.19	147	1.4	<0.02	3.7	0.46	<0.1
013J771379	Sediment Pulp	237.9	32.8	0.17	48.2	0.104	<20	2.60	0.021	0.07	1.2	5.8	0.34	0.13	122	2.4	0.03	4.3	0.44	0.2
013J771380	Sediment Pulp	81.4	15.8	0.09	55.4	0.050	<20	1.36	0.018	0.03	0.5	1.9	0.05	0.20	115	1.0	<0.02	2.4	0.23	<0.1
013J771381	Sediment Pulp	83.6	16.2	0.09	57.3	0.050	<20	1.38	0.017	0.03	0.5	1.8	0.05	0.20	86	0.7	<0.02	2.3	0.24	<0.1
013J771382	Sediment Pulp	58.3	17.1	0.11	63.3	0.041	<20	1.19	0.013	0.03	0.4	1.4	0.08	0.21	131	1.4	<0.02	2.5	0.29	<0.1
013J771383	Sediment Pulp	197.4	44.7	0.19	62.7	0.059	<20	3.14	0.014	0.06	0.7	5.7	0.24	0.24	211	2.9	0.02	3.0	0.39	0.2
013J771384	Sediment Pulp	43.1	52.9	0.79	176.0	0.109	<20	1.65	0.030	0.26	0.3	6.3	0.28	0.15	275	0.4	0.03	5.8	1.44	<0.1
013J771385	Sediment Pulp	167.6	45.7	0.09	57.4	0.063	<20	2.84	0.010	0.03	0.4	5.6	0.82	0.20	124	3.7	<0.02	3.4	0.23	0.2
013J771386	Sediment Pulp	86.0	31.4	0.14	100.3	0.048	<20	1.84	0.013	0.05	0.3	3.6	0.46	0.21	99	2.9	<0.02	2.3	0.28	0.1
013J771387	Sediment Pulp	59.1	21.3	0.11	109.9	0.028	<20	1.16	0.014	0.03	0.3	1.1	0.06	0.22	130	1.6	<0.02	2.4	0.23	<0.1
013J771388	Sediment Pulp	97.2	24.9	0.34	81.5	0.132	<20	1.56	0.026	0.19	0.5	5.4	0.14	0.04	40	<0.1	0.03	3.8	1.06	0.1
013J771389	Sediment Pulp	204.7	31.9	0.12	106.3	0.050	<20	2.35	0.008	0.05	0.5	4.9	0.64	0.20	129	4.1	<0.02	3.2	0.33	0.3
013J771390	Sediment Pulp	82.6	10.5	0.05	78.0	0.012	<20	0.72	0.009	0.02	0.2	0.6	0.08	0.29	104	0.8	<0.02	1.2	0.15	<0.1
013J771391	Sediment Pulp	127.4	44.1	0.08	67.8	0.077	<20	2.36	0.007	0.03	0.4	5.1	0.43	0.18	140	4.5	<0.02	4.0	0.26	0.2
013J771392	Sediment Pulp	111.6	23.3	0.13	83.3	0.043	<20	1.63	0.011	0.05	0.6	2.4	0.20	0.21	147	1.5	<0.02	2.4	0.28	<0.1
013J771393	Sediment Pulp	94.5	21.4	0.20	80.8	0.066	<20	1.34	0.023	0.09	0.5	2.9	0.22	0.15	112	0.9	<0.02	2.4	0.45	<0.1



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771364	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771365	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771366	Sediment Pulp	3.31	3.7	0.6	<0.05	1.3	22.76	100.4	<0.02	<1	0.4	6.0	12.68	46.47	7.35	0.86	5.61	0.80	4.38	0.82	2.68
013J771367	Sediment Pulp	3.20	3.8	0.6	<0.05	2.3	20.58	97.9	<0.02	<1	0.6	5.9	12.20	41.38	6.72	0.91	4.98	0.75	4.29	0.75	2.50
013J771368	Sediment Pulp	1.94	1.8	0.4	<0.05	0.8	17.25	89.6	0.02	<1	0.1	1.9	11.70	41.82	6.51	0.93	4.37	0.68	3.65	0.65	1.87
013J771369	Sediment Pulp	1.81	2.6	0.4	<0.05	0.7	24.63	116.3	<0.02	1	0.5	2.9	14.75	53.68	8.47	1.02	7.54	0.88	5.23	0.97	2.79
013J771370	Sediment Pulp	1.27	2.5	0.2	<0.05	0.2	48.32	272.3	<0.02	<1	1.0	1.3	30.99	109.78	15.89	2.26	12.87	1.59	8.83	1.66	5.28
013J771371	Sediment Pulp	3.08	3.9	0.5	<0.05	1.3	18.58	88.1	<0.02	<1	0.4	3.9	11.24	39.30	6.18	0.90	4.53	0.64	3.55	0.69	2.16
013J771372	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771373	Sediment Pulp	0.71	3.5	3.8	<0.05	1.3	10.46	17.2	0.48	18	0.2	3.9	2.89	11.68	2.66	0.49	2.22	0.30	1.70	0.33	1.11
013J771374	Sediment Pulp	0.87	2.3	0.2	<0.05	0.3	16.57	112.7	<0.02	<1	<0.1	1.2	14.44	48.78	6.98	0.76	4.73	0.67	3.67	0.62	1.68
013J771375	Sediment Pulp	1.09	5.5	0.2	<0.05	0.6	27.34	175.5	<0.02	<1	0.3	4.4	21.23	76.32	10.16	1.47	7.51	1.02	5.37	0.99	3.09
013J771376	Sediment Pulp	2.69	7.0	0.4	<0.05	1.1	25.90	153.9	0.02	<1	0.9	6.8	18.49	65.11	9.15	1.19	6.85	0.95	4.92	1.00	2.88
013J771377	Sediment Pulp	1.66	2.5	0.6	<0.05	0.7	12.37	66.2	<0.02	<1	0.6	2.3	8.13	29.07	4.67	0.73	3.50	0.49	2.66	0.49	1.43
013J771378	Sediment Pulp	3.23	4.4	0.9	<0.05	1.2	40.90	174.6	0.02	1	2.2	5.0	22.39	81.27	12.84	1.53	10.82	1.53	8.48	1.69	5.10
013J771379	Sediment Pulp	4.37	6.2	0.7	<0.05	1.5	113.43	519.5	0.04	<1	3.4	4.6	56.70	205.88	32.37	2.81	27.57	4.05	23.46	4.68	14.31
013J771380	Sediment Pulp	2.79	2.6	0.4	<0.05	0.8	39.32	153.1	0.03	<1	1.9	2.4	20.69	75.15	11.22	1.12	9.86	1.42	7.77	1.60	4.50
013J771381	Sediment Pulp	2.67	2.6	0.4	<0.05	0.7	39.21	153.7	<0.02	<1	1.6	2.0	19.96	72.57	11.54	1.25	9.87	1.51	8.34	1.62	4.69
013J771382	Sediment Pulp	1.72	2.5	0.3	<0.05	0.5	27.70	106.9	0.02	<1	1.5	2.8	14.34	51.38	8.44	1.14	6.90	0.95	5.48	1.13	3.46
013J771383	Sediment Pulp	2.10	4.6	0.3	<0.05	0.6	76.36	413.7	0.02	1	1.7	4.0	50.04	171.39	27.12	3.10	22.01	2.90	14.92	2.93	9.40
013J771384	Sediment Pulp	2.04	25.4	1.1	<0.05	5.4	19.23	75.7	0.05	<1	0.5	22.3	10.19	38.23	6.68	0.94	5.02	0.68	3.52	0.69	1.81
013J771385	Sediment Pulp	2.67	2.1	0.3	<0.05	0.9	64.77	431.2	0.03	<1	1.6	1.3	39.96	135.99	20.55	2.66	17.16	2.40	12.94	2.56	7.80
013J771386	Sediment Pulp	1.47	3.6	0.2	<0.05	0.4	35.59	199.6	0.02	<1	0.6	2.6	20.97	72.34	10.30	1.59	8.99	1.25	6.56	1.31	4.43
013J771387	Sediment Pulp	1.23	2.9	0.6	<0.05	0.3	20.82	107.5	<0.02	<1	0.3	2.0	15.07	52.20	7.97	1.17	5.88	0.83	4.27	0.78	2.13
013J771388	Sediment Pulp	2.12	16.6	0.8	<0.05	1.5	37.56	246.3	<0.02	<1	0.9	9.9	29.98	102.72	15.39	1.87	11.03	1.54	8.14	1.42	4.19
013J771389	Sediment Pulp	1.38	4.0	0.3	<0.05	0.4	61.40	452.5	0.03	1	1.0	1.9	45.08	160.24	22.19	2.44	16.54	2.33	11.99	2.28	7.16
013J771390	Sediment Pulp	0.83	1.7	0.4	<0.05	0.4	29.81	130.3	<0.02	1	0.7	1.1	19.90	69.13	10.20	0.96	7.67	1.03	6.16	1.13	3.29
013J771391	Sediment Pulp	2.74	2.5	0.4	<0.05	0.7	54.17	297.3	0.03	2	0.5	1.0	30.99	105.25	16.87	2.03	12.10	1.94	10.44	2.07	6.74
013J771392	Sediment Pulp	1.93	3.9	0.3	<0.05	0.6	49.40	228.2	<0.02	<1	1.0	2.7	28.47	103.38	15.92	1.79	12.48	1.88	9.85	1.90	5.65
013J771393	Sediment Pulp	2.50	7.2	0.4	<0.05	2.2	44.47	186.3	<0.02	<1	1.2	3.6	25.51	89.50	13.86	1.61	11.58	1.61	8.57	1.74	5.13



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Project: None Given

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013J771364	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771365	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771366	Sediment Pulp	0.37	2.25	0.37	<10
013J771367	Sediment Pulp	0.34	2.19	0.34	<10
013J771368	Sediment Pulp	0.27	1.50	0.26	<10
013J771369	Sediment Pulp	0.38	2.59	0.36	<10
013J771370	Sediment Pulp	0.75	4.93	0.71	<10
013J771371	Sediment Pulp	0.28	1.80	0.30	<10
013J771372	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771373	Sediment Pulp	0.14	0.85	0.15	<10
013J771374	Sediment Pulp	0.27	1.54	0.24	<10
013J771375	Sediment Pulp	0.42	2.62	0.38	<10
013J771376	Sediment Pulp	0.38	2.59	0.41	<10
013J771377	Sediment Pulp	0.20	1.22	0.19	<10
013J771378	Sediment Pulp	0.68	4.64	0.71	<10
013J771379	Sediment Pulp	2.09	13.29	1.89	<10
013J771380	Sediment Pulp	0.67	4.27	0.62	<10
013J771381	Sediment Pulp	0.66	4.05	0.58	<10
013J771382	Sediment Pulp	0.45	2.96	0.41	<10
013J771383	Sediment Pulp	1.26	8.45	1.22	<10
013J771384	Sediment Pulp	0.27	1.77	0.26	<10
013J771385	Sediment Pulp	1.12	7.51	1.15	<10
013J771386	Sediment Pulp	0.63	3.79	0.59	<10
013J771387	Sediment Pulp	0.28	1.86	0.28	<10
013J771388	Sediment Pulp	0.63	4.19	0.59	<10
013J771389	Sediment Pulp	0.92	6.35	0.95	<10
013J771390	Sediment Pulp	0.44	2.78	0.46	<10
013J771391	Sediment Pulp	0.95	6.32	0.93	<10
013J771392	Sediment Pulp	0.79	5.25	0.77	<10
013J771393	Sediment Pulp	0.73	4.48	0.69	<10



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771394	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771395	Sediment Pulp	1.90	10.59	2.06	24.3	113	5.8	1.2	41	0.84	<0.1	1.8	5.2	0.5	14.4	0.11	<0.02	<0.02	26	0.17	0.067
013J771396	Sediment Pulp	14.01	14.60	1.98	64.3	88	11.8	6.2	53	1.04	0.3	4.2	6.3	0.8	19.2	0.18	0.08	<0.02	30	0.21	0.042
013J771397	Sediment Pulp	13.24	10.56	1.78	43.0	28	3.9	5.3	150	6.17	0.7	1.6	0.6	3.9	10.1	0.11	0.07	<0.02	32	0.11	0.028
013J771398	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771399	Sediment Pulp	9.10	17.63	2.60	51.5	90	6.4	9.9	85	1.08	<0.1	4.2	1.2	1.7	28.8	0.15	0.05	<0.02	47	0.27	0.041
013J771400	Sediment Pulp	24.05	13.27	1.66	25.5	42	4.8	3.6	53	1.02	<0.1	1.8	0.6	1.4	25.4	0.11	0.03	<0.02	10	0.26	0.023
013J771401	Sediment Pulp	2.02	11.15	2.18	26.3	108	5.5	1.4	41	0.87	<0.1	2.0	4.0	0.4	15.2	0.09	<0.02	<0.02	27	0.18	0.072
013J771402	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771403	Sediment Pulp	4.37	13.20	1.91	42.9	108	4.1	1.5	37	0.77	<0.1	4.4	4.3	0.2	20.2	0.09	0.03	<0.02	23	0.18	0.070
013J771404	Sediment Pulp	4.37	12.75	2.81	42.4	114	4.1	1.6	37	0.74	<0.1	4.4	1.2	0.2	20.5	0.13	0.03	<0.02	23	0.18	0.073
013J771405	Sediment Pulp	1.92	14.65	2.45	36.1	132	4.7	1.4	52	0.59	0.1	2.8	2.0	0.3	21.9	0.14	0.03	<0.02	15	0.21	0.060
013J771406	Sediment Pulp	4.09	32.03	1.76	100.0	121	11.0	4.8	95	2.34	<0.1	3.9	1.7	3.7	29.3	0.18	0.04	<0.02	72	0.25	0.087
013J771407	Sediment Pulp	1.19	19.84	2.41	50.9	85	5.3	2.4	80	0.67	<0.1	2.5	2.8	1.1	18.1	0.09	0.03	<0.02	30	0.22	0.048
013J771408	Sediment Pulp	4.46	27.98	1.43	48.7	122	6.4	2.6	33	0.46	<0.1	5.5	1.6	0.6	40.2	0.18	0.06	<0.02	23	0.27	0.034
013J771409	Sediment Pulp	10.01	40.72	85.21	302.5	633	13.1	7.7	422	1.81	35.3	9.8	5.0	1.7	68.7	3.47	0.63	1.09	21	6.10	0.062



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J771394	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771395	Sediment Pulp	30.4	9.5	0.07	56.4	0.030	<20	0.57	0.012	0.03	0.1	0.9	0.05	0.13	102	0.5	<0.02	1.8	0.17	<0.1
013J771396	Sediment Pulp	60.8	9.2	0.06	49.2	0.029	22	0.58	0.012	0.03	4.1	1.4	0.10	0.48	323	0.7	<0.02	1.3	0.29	<0.1
013J771397	Sediment Pulp	50.3	10.2	0.08	25.2	0.044	<20	0.59	0.012	0.05	0.7	2.2	0.07	0.11	66	0.3	<0.02	1.4	0.51	<0.1
013J771398	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771399	Sediment Pulp	75.8	11.4	0.11	48.8	0.058	<20	0.75	0.009	0.03	1.8	2.0	0.09	0.29	119	1.5	<0.02	2.6	0.47	0.1
013J771400	Sediment Pulp	35.7	6.0	0.09	33.2	0.031	<20	0.29	0.041	0.04	1.6	1.5	0.08	1.17	121	0.6	<0.02	1.1	0.35	<0.1
013J771401	Sediment Pulp	32.4	9.0	0.07	59.4	0.031	<20	0.59	0.013	0.03	0.1	1.1	0.05	0.14	109	0.5	<0.02	2.0	0.19	<0.1
013J771402	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771403	Sediment Pulp	68.0	5.8	0.06	32.5	0.018	<20	0.54	0.010	0.03	1.8	0.8	0.04	0.28	126	1.0	<0.02	1.5	0.29	<0.1
013J771404	Sediment Pulp	69.3	5.7	0.06	33.4	0.020	<20	0.53	0.010	0.03	2.0	0.8	0.04	0.27	173	0.1	<0.02	1.4	0.29	<0.1
013J771405	Sediment Pulp	49.4	6.7	0.08	36.8	0.031	<20	0.47	0.014	0.04	0.4	1.0	0.05	0.15	118	0.4	<0.02	1.8	0.36	<0.1
013J771406	Sediment Pulp	125.3	18.5	0.19	68.6	0.048	<20	0.86	0.015	0.06	1.3	2.9	0.17	0.26	121	1.1	<0.02	2.0	0.53	0.2
013J771407	Sediment Pulp	48.9	8.9	0.18	51.0	0.062	<20	0.54	0.016	0.07	0.2	1.6	0.07	0.11	99	0.2	<0.02	2.3	0.53	<0.1
013J771408	Sediment Pulp	107.7	7.6	0.06	43.1	0.021	<20	0.61	0.012	0.02	0.5	1.4	0.05	0.36	129	1.1	<0.02	1.4	0.21	<0.1
013J771409	Sediment Pulp	11.5	12.4	0.58	95.7	0.045	<20	0.45	0.029	0.05	0.6	2.5	0.22	1.51	114	0.8	<0.02	2.0	0.54	<0.1



BUREAU VERITAS MINERAL LABORATORIES
Canada

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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771394	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771395	Sediment Pulp	1.12	1.7	0.2	<0.05	0.7	8.12	57.6	<0.02	<1	0.3	1.4	6.65	21.51	2.91	0.46	2.18	0.35	1.69	0.30	1.01
013J771396	Sediment Pulp	0.91	2.7	0.4	<0.05	0.3	22.19	93.9	<0.02	4	0.4	1.5	14.47	52.51	7.91	1.28	5.89	0.75	4.01	0.65	2.12
013J771397	Sediment Pulp	1.54	3.8	0.4	<0.05	0.7	18.87	87.5	<0.02	1	0.8	2.4	10.86	38.07	5.83	0.84	4.64	0.62	3.05	0.58	1.79
013J771398	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771399	Sediment Pulp	2.10	2.9	0.4	<0.05	0.8	22.13	123.0	<0.02	8	0.7	3.3	16.88	63.13	9.02	1.40	6.69	0.83	4.56	0.73	2.08
013J771400	Sediment Pulp	1.24	3.1	0.2	<0.05	0.5	10.80	60.1	<0.02	47	<0.1	2.6	8.19	31.14	4.17	0.75	3.15	0.42	2.29	0.39	1.05
013J771401	Sediment Pulp	1.18	1.8	0.2	<0.05	0.4	8.88	59.7	<0.02	<1	0.4	1.4	6.88	23.14	3.38	0.46	2.25	0.34	1.52	0.30	0.93
013J771402	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771403	Sediment Pulp	0.71	2.2	0.2	<0.05	0.1	21.06	86.5	<0.02	<1	0.3	1.4	14.94	52.27	7.38	1.13	5.23	0.75	3.46	0.69	1.82
013J771404	Sediment Pulp	0.48	2.3	0.4	<0.05	0.1	21.07	89.3	<0.02	<1	0.4	1.5	14.56	54.04	7.45	1.11	5.88	0.70	3.56	0.71	1.95
013J771405	Sediment Pulp	1.15	2.8	0.3	<0.05	0.3	14.79	77.3	<0.02	<1	0.4	1.7	11.07	40.03	5.80	0.90	3.94	0.50	2.75	0.47	1.35
013J771406	Sediment Pulp	1.84	4.6	0.3	<0.05	1.3	32.68	235.1	<0.02	<1	0.7	4.4	28.41	105.77	15.03	2.45	11.55	1.31	6.42	1.09	3.07
013J771407	Sediment Pulp	1.92	5.1	0.4	<0.05	0.7	13.53	86.2	<0.02	<1	0.7	4.2	11.43	40.29	6.03	1.06	4.33	0.58	2.74	0.48	1.42
013J771408	Sediment Pulp	0.91	1.8	0.2	<0.05	0.3	28.13	160.9	<0.02	5	0.6	1.2	24.53	88.04	12.15	1.92	9.03	1.10	5.29	0.89	2.61
013J771409	Sediment Pulp	0.75	3.6	3.6	<0.05	1.4	10.98	19.2	0.49	21	<0.1	4.2	3.08	12.13	2.56	0.51	2.34	0.33	1.87	0.37	0.99



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Project: None Given

Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000381.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013J771394	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771395	Sediment Pulp	0.14	0.76	0.11	<10
013J771396	Sediment Pulp	0.30	1.86	0.31	<10
013J771397	Sediment Pulp	0.26	1.50	0.24	<10
013J771398	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771399	Sediment Pulp	0.28	1.71	0.28	<10
013J771400	Sediment Pulp	0.14	0.97	0.15	<10
013J771401	Sediment Pulp	0.11	0.78	0.14	<10
013J771402	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J771403	Sediment Pulp	0.20	1.56	0.20	<10
013J771404	Sediment Pulp	0.23	1.54	0.21	<10
013J771405	Sediment Pulp	0.17	1.18	0.15	<10
013J771406	Sediment Pulp	0.42	2.28	0.36	<10
013J771407	Sediment Pulp	0.17	1.19	0.18	<10
013J771408	Sediment Pulp	0.33	2.01	0.28	<10
013J771409	Sediment Pulp	0.14	1.00	0.14	21



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QUALITY CONTROL REPORT

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013J771281	Sediment Pulp	6.46	13.69	2.59	69.3	182	7.3	3.6	101	1.71	0.2	6.6	0.8	1.2	16.4	0.19	0.07	<0.02	44	0.19	0.074
REP 013J771281	QC	6.81	14.38	2.64	70.6	193	7.4	3.7	102	1.73	0.4	6.7	<0.2	1.2	16.9	0.19	0.07	<0.02	45	0.19	0.075
013J771325	Sediment Pulp	6.34	28.33	11.29	136.6	311	11.4	49.6	1192	13.24	1.9	34.3	<0.2	11.1	23.6	0.71	0.32	0.11	125	0.28	0.227
REP 013J771325	QC	6.71	28.72	11.23	143.9	328	10.9	47.0	1214	13.44	2.0	35.4	<0.2	11.4	23.8	0.68	0.33	0.11	125	0.28	0.227
013J771370	Sediment Pulp	36.03	32.86	3.32	204.8	414	19.2	45.6	748	14.49	<0.1	10.6	<0.2	3.0	17.2	0.98	0.05	0.02	56	0.20	0.212
REP 013J771370	QC	37.39	33.83	3.38	213.6	412	18.9	46.0	753	14.47	<0.1	10.6	<0.2	3.2	17.5	0.99	0.04	0.03	57	0.20	0.211
Reference Materials																					
STD DS11	Standard	13.23	139.81	128.62	314.8	1958	73.6	13.0	1003	2.99	41.8	2.4	71.8	7.8	65.6	2.46	6.50	10.93	45	1.01	0.067
STD DS11	Standard	12.75	143.68	142.76	334.6	1654	75.9	13.0	990	2.99	40.4	2.7	44.8	8.5	65.8	2.33	6.90	12.91	48	1.01	0.065
STD DS11	Standard	15.21	149.82	142.61	346.3	2042	80.6	13.8	1013	3.10	45.0	2.7	50.1	9.4	72.8	2.45	6.41	11.74	49	1.05	0.067
STD DS11	Standard	13.46	146.79	139.04	344.3	1851	83.2	14.1	1051	3.20	45.5	3.0	72.3	9.4	73.2	2.53	6.92	12.63	50	1.08	0.073
STD DS11	Standard	13.85	151.18	126.68	345.4	1651	79.9	13.5	1052	3.06	43.4	2.4	96.6	7.1	62.0	2.41	6.63	10.09	50	1.03	0.068
STD OREAS262	Standard	0.67	114.99	58.80	151.3	474	64.0	28.1	537	3.24	38.1	1.4	59.7	10.5	38.3	0.73	2.44	1.00	20	2.94	0.037
STD OREAS262	Standard	0.58	112.56	58.82	146.4	476	64.4	27.3	526	3.27	36.0	1.2	53.0	10.2	36.5	0.69	2.09	1.03	21	2.86	0.039
STD OREAS262	Standard	0.54	111.76	56.65	147.8	469	63.7	26.5	522	3.20	35.6	1.2	53.0	10.2	36.2	0.61	2.03	1.02	21	2.82	0.038
STD OREAS262	Standard	0.69	118.14	61.75	155.4	484	67.9	29.6	557	3.42	38.7	1.3	53.3	10.6	41.5	0.67	1.88	1.10	22	2.98	0.042
STD OREAS262	Standard	0.63	116.50	51.62	151.9	482	64.1	26.7	545	3.22	36.1	1.1	48.1	8.2	33.0	0.66	2.23	0.86	21	2.88	0.037
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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QUALITY CONTROL REPORT

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf	
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02	
Pulp Duplicates																						
013J771281	Sediment Pulp	54.3	13.1	0.17	50.7	0.051	<20	0.68	0.014	0.06	0.6	1.9	0.12	0.17	141	0.8	<0.02	2.5	0.47	<0.1	<0.02	
REP 013J771281	QC	55.6	13.0	0.18	52.3	0.052	<20	0.69	0.015	0.06	0.5	2.0	0.12	0.17	163	0.9	<0.02	2.3	0.50	<0.1	0.02	
013J771325	Sediment Pulp	144.1	33.1	0.14	54.1	0.089	<20	2.24	0.027	0.05	0.6	3.7	0.46	0.46	171	4.9	0.02	4.7	0.90	0.2	0.02	
REP 013J771325	QC	139.8	34.4	0.15	54.4	0.090	<20	2.27	0.027	0.05	1.0	4.1	0.47	0.46	167	4.5	0.04	4.8	0.88	0.2	0.06	
013J771370	Sediment Pulp	143.5	21.2	0.07	91.5	0.038	<20	1.77	0.008	0.03	0.2	4.2	0.62	0.23	110	4.7	0.02	2.5	0.27	0.2	<0.02	
REP 013J771370	QC	149.5	20.9	0.07	92.7	0.037	<20	1.79	0.007	0.03	0.2	4.3	0.66	0.23	114	4.2	0.03	2.6	0.28	0.3	0.02	
Reference Materials																						
STD DS11	Standard	17.3	53.5	0.82	408.3	0.085	<20	1.07	0.068	0.38	2.4	3.1	4.81	0.27	261	2.0	4.25	4.8	2.71	<0.1	0.06	
STD DS11	Standard	17.3	57.5	0.81	418.0	0.093	<20	1.08	0.069	0.38	2.4	3.2	4.79	0.27	237	2.0	4.49	4.7	2.79	<0.1	0.05	
STD DS11	Standard	20.1	62.1	0.84	452.3	0.102	<20	1.14	0.074	0.40	2.9	3.5	4.89	0.28	267	2.1	4.82	4.9	3.10	<0.1	0.06	
STD DS11	Standard	19.5	61.5	0.87	420.0	0.102	<20	1.17	0.076	0.41	2.5	3.2	5.09	0.30	385	1.8	4.50	4.8	3.03	<0.1	0.07	
STD DS11	Standard	16.6	57.5	0.83	390.7	0.090	<20	1.09	0.072	0.39	2.5	3.1	4.83	0.28	259	2.6	4.62	4.9	2.78	<0.1	0.07	
STD OREAS262	Standard	18.1	39.9	1.15	254.5	0.003	<20	1.22	0.067	0.31	<0.1	3.3	0.49	0.25	207	0.3	0.20	3.9	2.41	<0.1	0.21	
STD OREAS262	Standard	16.7	41.1	1.15	248.5	0.003	<20	1.21	0.067	0.30	<0.1	3.4	0.47	0.27	169	0.4	0.21	3.8	2.35	<0.1	0.17	
STD OREAS262	Standard	17.4	42.2	1.14	254.5	0.003	<20	1.25	0.065	0.31	<0.1	3.3	0.45	0.26	153	<0.1	0.21	3.7	2.42	<0.1	0.18	
STD OREAS262	Standard	18.1	47.0	1.22	258.2	0.003	<20	1.30	0.071	0.32	<0.1	3.4	0.50	0.28	187	<0.1	0.24	4.2	2.63	<0.1	0.19	
STD OREAS262	Standard	13.6	39.6	1.16	225.1	0.003	<20	1.14	0.067	0.28	0.1	3.0	0.43	0.26	155	0.7	0.22	3.6	2.16	<0.1	0.26	
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06	
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17	
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02	
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	0.2	<0.02	<0.1	<0.02	<0.1	<0.02	
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02	
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	0.2	<0.02	<0.1	<0.02	<0.1	<0.02	
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02	



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QUALITY CONTROL REPORT

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013J771281	Sediment Pulp	1.75	4.8	0.3	<0.05	0.5	20.28	97.8	<0.02	<1	0.3	3.8	12.45	45.90	6.87	0.99	5.47	0.69	3.77	0.70	2.23
REP 013J771281	QC	1.89	5.1	0.3	<0.05	0.6	20.54	100.1	<0.02	<1	0.4	3.5	12.44	46.40	7.05	1.02	4.93	0.64	3.50	0.74	1.98
013J771325	Sediment Pulp	3.60	4.9	1.0	<0.05	1.2	78.23	384.2	0.05	<1	3.2	3.8	33.51	121.98	20.84	2.72	17.03	2.56	15.20	3.17	9.46
REP 013J771325	QC	3.47	5.0	0.9	<0.05	1.3	84.64	366.2	0.05	<1	2.8	4.1	32.55	124.23	20.86	2.74	16.53	2.57	14.77	3.02	8.88
013J771370	Sediment Pulp	1.27	2.5	0.2	<0.05	0.2	48.32	272.3	<0.02	<1	1.0	1.3	30.99	109.78	15.89	2.26	12.87	1.59	8.83	1.66	5.28
REP 013J771370	QC	1.39	2.6	0.1	<0.05	0.2	49.43	283.3	<0.02	1	1.1	1.4	33.40	111.64	16.25	2.16	12.61	1.67	8.82	1.76	5.20
Reference Materials																					
STD DS11	Standard	1.13	32.3	1.8	<0.05	2.3	7.61	35.1	0.23	43	1.1	21.5	3.71	13.42	2.27	0.45	2.02	0.27	1.53	0.26	0.81
STD DS11	Standard	1.27	32.7	1.8	<0.05	2.3	7.62	35.2	0.23	45	0.9	21.7	3.98	13.93	2.57	0.53	2.07	0.30	1.52	0.28	0.88
STD DS11	Standard	1.38	35.7	2.1	<0.05	2.6	8.45	40.4	0.28	45	0.5	22.9	4.41	15.92	2.87	0.55	2.44	0.36	1.52	0.30	0.92
STD DS11	Standard	1.29	35.9	1.9	<0.05	3.1	8.32	37.9	0.26	41	0.7	24.7	3.92	15.45	2.78	0.52	2.05	0.32	1.69	0.31	0.84
STD DS11	Standard	1.34	33.0	1.7	<0.05	2.9	7.62	32.5	0.24	42	0.7	22.3	3.50	13.13	2.35	0.47	1.94	0.25	1.44	0.26	0.74
STD OREAS262	Standard	<0.02	19.2	0.6	<0.05	7.5	11.20	36.5	0.04	<1	0.6	16.5	4.30	16.01	3.46	0.70	2.86	0.44	2.21	0.42	1.14
STD OREAS262	Standard	<0.02	18.5	0.5	<0.05	6.2	10.51	33.2	0.04	<1	1.0	17.2	3.98	15.67	3.45	0.70	3.17	0.45	2.09	0.40	1.20
STD OREAS262	Standard	<0.02	19.3	0.5	<0.05	6.2	10.80	34.4	0.04	1	1.2	17.0	4.25	15.89	3.68	0.66	3.15	0.43	2.18	0.40	1.05
STD OREAS262	Standard	<0.02	19.9	0.6	<0.05	6.4	11.51	35.9	0.04	2	1.6	17.8	4.36	16.42	3.46	0.71	2.98	0.43	2.50	0.46	1.15
STD OREAS262	Standard	<0.02	16.6	0.5	<0.05	11.3	10.29	26.3	0.03	<1	1.1	16.5	3.20	12.59	2.87	0.59	2.65	0.35	1.96	0.35	0.98
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 18, 2022

Page: 1 of 1

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000381.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013J771281	Sediment Pulp	0.29	1.83	0.29	<10	<2
REP 013J771281	QC	0.29	1.91	0.27	<10	<2
013J771325	Sediment Pulp	1.48	8.71	1.33	<10	4
REP 013J771325	QC	1.43	8.82	1.30	<10	<2
013J771370	Sediment Pulp	0.75	4.93	0.71	<10	<2
REP 013J771370	QC	0.74	4.61	0.74	18	<2
Reference Materials						
STD DS11	Standard	0.11	0.68	0.10	99	178
STD DS11	Standard	0.11	0.71	0.09	116	169
STD DS11	Standard	0.13	0.76	0.13	120	182
STD DS11	Standard	0.13	0.87	0.12	89	180
STD DS11	Standard	0.10	0.66	0.10	93	163
STD OREAS262	Standard	0.13	0.89	0.13	13	3
STD OREAS262	Standard	0.15	0.93	0.12	<10	<2
STD OREAS262	Standard	0.15	0.87	0.14	<10	<2
STD OREAS262	Standard	0.17	0.92	0.14	<10	<2
STD OREAS262	Standard	0.12	0.78	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 25, 2022
Report Date: April 07, 2022
Page: 1 of 5

CERTIFICATE OF ANALYSIS

VAN22000382.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 112

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	112	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	112	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Client: Geological Survey of Canada
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Project: None Given
Report Date: April 07, 2022

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Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22000382.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J871000	Sediment Pulp	9.66	41.80	82.51	302.4	613	12.3	7.5	421	1.79	34.2	9.4	3.9	1.6	67.4	1.47	0.61	0.94	21	6.01	0.068
013J871001	Sediment Pulp	1.41	130.85	4.01	103.1	388	24.2	49.1	843	4.22	0.6	2.4	0.8	1.5	80.9	0.53	0.03	0.02	119	0.96	0.271
013J871002	Sediment Pulp	0.91	31.62	3.99	87.6	221	7.5	1.7	48	0.29	1.7	64.8	1.5	0.7	48.3	0.42	0.86	0.04	30	0.57	0.044
013J871003	Sediment Pulp	16.62	80.58	23.96	140.1	540	16.1	46.2	806	5.69	103.1	65.1	0.7	9.2	59.3	0.59	1.25	0.13	126	0.72	0.327
013J871004	Sediment Pulp	8.85	91.12	23.21	131.7	767	12.0	18.6	708	3.65	37.3	42.6	0.7	5.1	52.5	0.61	1.36	0.16	122	0.70	0.336
013J871005	Sediment Pulp	8.75	83.67	22.68	123.7	731	11.6	18.1	695	3.56	35.3	41.7	0.6	5.1	52.0	0.61	1.27	0.14	119	0.69	0.349
013J871006	Sediment Pulp	3.70	103.04	6.78	143.9	518	17.9	69.9	910	7.68	0.8	5.7	0.4	1.9	64.6	0.55	0.04	0.04	162	0.70	0.379
013J871007	Sediment Pulp	23.90	41.58	8.02	106.3	162	25.4	15.4	338	4.00	9.3	6.2	1.1	6.2	102.9	0.75	0.23	0.05	100	0.96	0.207
013J871008	Sediment Pulp	2.01	97.78	6.60	155.3	467	60.4	81.2	2793	9.11	0.7	2.5	1.0	3.2	53.3	0.66	0.05	0.04	100	0.59	0.223
013J871009	Sediment Pulp	3.97	54.32	6.00	139.0	193	33.9	49.5	907	8.32	3.8	3.9	0.5	4.1	102.4	0.49	0.06	0.03	99	0.73	0.242
013J871010	Sediment Pulp	0.97	33.47	23.48	132.6	2714	45.9	28.0	1224	3.16	24.8	3.9	2.5	8.9	29.7	0.58	0.61	3.23	50	0.63	0.093
013J871011	Sediment Pulp	2.95	66.18	6.05	130.1	279	47.2	62.4	2100	10.02	1.0	3.2	1.0	3.2	43.7	0.60	0.04	0.04	100	0.46	0.207
013J871012	Sediment Pulp	5.03	15.94	5.22	61.1	61	11.9	4.8	105	1.47	0.2	4.6	1.4	2.7	29.8	0.17	0.06	0.02	57	0.34	0.054
013J871013	Sediment Pulp	7.69	36.79	10.80	167.4	198	12.7	8.6	267	3.33	0.5	14.9	<0.2	5.3	42.3	0.43	0.06	0.03	76	0.52	0.262
013J871014	Sediment Pulp	6.83	30.25	15.62	124.6	223	10.7	1.8	78	0.69	<0.1	15.4	<0.2	1.9	24.3	0.55	0.05	0.05	37	0.30	0.134
013J871015	Sediment Pulp	4.80	19.00	8.03	102.9	119	12.5	3.9	130	1.40	<0.1	6.6	0.3	2.7	37.2	0.17	0.05	0.03	34	0.43	0.101
013J871016	Sediment Pulp	2.91	26.75	4.17	44.3	175	11.3	4.2	82	1.03	0.2	3.4	1.6	1.2	58.2	0.26	0.06	0.12	59	0.72	0.115
013J871017	Sediment Pulp	6.45	22.78	6.86	97.5	135	12.4	17.5	655	4.01	1.8	17.6	0.3	5.0	96.4	0.31	0.12	0.05	50	0.56	0.104
013J871018	Sediment Pulp	1.77	93.93	4.43	154.5	355	27.3	18.9	333	5.60	<0.1	2.3	0.9	1.9	118.1	0.47	0.05	0.04	110	0.77	0.256
013J871019	Sediment Pulp	5.19	27.83	9.27	122.8	169	13.7	9.0	216	1.99	1.2	26.0	<0.2	4.2	36.5	0.41	0.14	0.10	47	0.46	0.099
013J871020	Sediment Pulp	5.36	50.71	10.49	168.7	400	19.7	20.1	440	5.38	1.4	5.5	<0.2	2.8	61.6	0.55	0.08	0.06	102	0.76	0.209
013J871021	Sediment Pulp	1.85	92.37	4.37	145.1	342	26.2	18.5	343	5.70	0.3	2.3	0.9	1.9	116.2	0.49	0.04	0.04	120	0.78	0.262
013J871022	Sediment Pulp	9.18	40.86	80.65	297.1	589	11.7	7.3	434	1.76	34.4	9.7	2.9	1.8	65.0	1.24	0.53	0.96	21	6.27	0.063
013J871023	Sediment Pulp	4.69	21.59	12.93	213.5	201	14.2	20.4	1006	4.48	4.2	11.5	0.3	7.8	132.8	0.90	0.16	0.07	58	0.89	0.158
013J871024	Sediment Pulp	5.71	52.03	13.17	250.8	743	14.3	25.4	868	8.51	2.8	13.4	<0.2	3.7	36.7	1.03	0.22	0.07	90	0.47	0.199
013J871025	Sediment Pulp	2.46	60.24	13.04	186.4	207	15.8	27.5	310	3.25	0.8	5.7	0.8	2.2	77.5	0.85	0.10	0.05	83	0.63	0.071
013J871026	Sediment Pulp	2.51	60.56	12.23	193.7	231	14.6	23.2	280	2.56	0.1	6.1	0.8	1.6	73.6	0.91	0.09	0.04	77	0.62	0.075
013J871027	Sediment Pulp	10.98	12.64	15.18	127.0	59	7.0	3.8	137	2.05	1.6	82.8	<0.2	8.3	26.6	0.38	0.18	0.06	37	0.41	0.071
013J871028	Sediment Pulp	19.64	103.00	9.17	35.7	241	7.4	2.5	47	0.44	<0.1	135.4	0.6	1.6	33.8	0.37	0.05	0.10	18	0.84	0.047
013J871029	Sediment Pulp	0.53	16.25	7.36	29.2	79	3.0	0.9	12	0.19	<0.1	6.7	<0.2	0.8	18.3	0.20	0.09	0.05	6	0.17	0.052



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Project: None Given
Report Date: April 07, 2022

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CERTIFICATE OF ANALYSIS

VAN22000382.1

	Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250			
					La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
					ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
					0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J871000	Sediment Pulp	10.9	12.4	0.57	96.1	0.046	<20	0.45	0.028	0.05	0.5	2.8	0.22	1.51	104	0.8	0.03	2.0	0.55	<0.1	0.03			
013J871001	Sediment Pulp	38.5	30.4	0.33	173.4	0.067	<20	2.49	0.036	0.05	0.5	5.0	0.21	0.20	217	1.9	<0.02	4.4	0.48	<0.1	<0.02			
013J871002	Sediment Pulp	84.2	11.0	0.06	59.1	0.035	<20	1.08	0.022	0.01	0.4	1.3	0.12	0.35	156	3.3	<0.02	2.9	0.37	0.1	0.05			
013J871003	Sediment Pulp	106.7	39.0	0.17	101.1	0.101	<20	2.70	0.050	0.04	12.1	4.4	0.31	1.54	171	3.2	0.05	7.7	0.32	0.1	0.05			
013J871004	Sediment Pulp	106.4	38.3	0.17	128.0	0.101	<20	2.65	0.044	0.04	5.4	4.1	0.26	0.22	233	3.2	0.04	8.8	0.32	0.1	0.06			
013J871005	Sediment Pulp	102.8	36.1	0.16	126.5	0.097	<20	2.60	0.043	0.04	5.2	3.6	0.25	0.21	260	3.0	0.07	8.2	0.29	0.1	0.06			
013J871006	Sediment Pulp	64.4	27.2	0.21	154.5	0.084	<20	2.99	0.030	0.03	0.4	4.7	0.17	0.33	227	3.3	0.03	7.6	0.25	0.1	0.04			
013J871007	Sediment Pulp	60.3	46.7	0.71	156.0	0.127	24	2.01	0.136	0.30	0.5	4.7	0.25	2.01	43	1.6	<0.02	5.0	1.23	0.1	0.09			
013J871008	Sediment Pulp	57.6	66.3	0.28	159.6	0.073	<20	3.01	0.036	0.06	0.3	6.9	0.33	0.48	251	3.1	0.02	4.7	0.51	0.1	<0.02			
013J871009	Sediment Pulp	54.2	58.3	0.49	82.8	0.094	<20	2.66	0.197	0.11	0.9	4.8	0.25	1.42	85	2.1	<0.02	4.4	0.50	<0.1	0.02			
013J871010	Sediment Pulp	43.8	49.4	0.81	174.7	0.110	<20	1.71	0.033	0.27	0.2	6.1	0.29	0.16	257	<0.1	0.04	5.8	1.56	<0.1	0.15			
013J871011	Sediment Pulp	52.6	68.8	0.25	136.9	0.088	<20	3.18	0.033	0.07	0.3	5.1	0.25	0.38	160	3.4	<0.02	4.9	0.49	0.1	0.02			
013J871012	Sediment Pulp	42.0	26.1	0.23	66.6	0.067	<20	1.05	0.036	0.07	2.0	2.6	0.08	0.21	82	0.3	<0.02	2.7	0.48	<0.1	0.05			
013J871013	Sediment Pulp	119.2	38.6	0.30	85.5	0.113	<20	1.65	0.045	0.10	4.0	3.0	0.41	0.18	156	1.0	<0.02	6.0	0.85	<0.1	0.06			
013J871014	Sediment Pulp	165.5	23.9	0.13	60.7	0.063	<20	1.11	0.018	0.04	0.3	2.2	0.10	0.22	103	2.0	<0.02	4.7	0.39	<0.1	0.06			
013J871015	Sediment Pulp	81.3	24.8	0.32	105.7	0.085	<20	1.11	0.032	0.14	0.7	2.8	0.12	0.19	91	0.7	<0.02	4.8	1.11	0.1	0.08			
013J871016	Sediment Pulp	38.9	28.4	0.22	106.5	0.068	<20	1.24	0.026	0.06	1.1	2.3	0.09	0.17	119	1.2	<0.02	3.8	0.44	<0.1	0.05			
013J871017	Sediment Pulp	54.9	30.6	0.24	59.1	0.092	<20	1.13	0.033	0.06	0.4	2.9	0.10	0.17	39	1.6	<0.02	3.5	0.42	0.1	0.04			
013J871018	Sediment Pulp	62.8	73.8	0.27	159.9	0.078	<20	3.49	0.081	0.03	0.3	5.7	0.14	0.28	234	2.9	<0.02	4.8	0.21	<0.1	<0.02			
013J871019	Sediment Pulp	65.0	35.9	0.35	76.6	0.097	<20	1.39	0.033	0.07	0.5	3.0	0.08	0.09	65	1.4	<0.02	3.9	0.47	<0.1	0.08			
013J871020	Sediment Pulp	70.3	55.0	0.26	124.5	0.086	<20	2.87	0.026	0.05	0.8	4.8	0.15	0.21	154	2.4	0.02	5.6	0.39	0.1	0.04			
013J871021	Sediment Pulp	61.8	72.3	0.28	154.5	0.076	<20	3.52	0.084	0.04	0.3	5.7	0.14	0.29	211	3.1	<0.02	4.6	0.21	<0.1	0.02			
013J871022	Sediment Pulp	10.8	12.4	0.56	89.3	0.043	<20	0.46	0.028	0.05	0.8	2.4	0.21	1.48	88	1.2	<0.02	2.1	0.52	<0.1	0.03			
013J871023	Sediment Pulp	67.7	29.0	0.39	105.4	0.100	<20	1.46	0.121	0.12	1.0	3.7	0.15	0.40	65	1.4	<0.02	4.4	0.80	<0.1	0.05			
013J871024	Sediment Pulp	108.3	41.3	0.15	108.8	0.054	<20	3.41	0.015	0.03	0.6	4.8	0.19	0.22	206	5.8	0.03	4.8	0.55	0.1	0.02			
013J871025	Sediment Pulp	85.0	16.2	0.17	68.6	0.039	<20	2.80	0.044	0.03	0.4	2.9	0.11	0.25	60	3.1	<0.02	4.8	0.27	<0.1	0.05			
013J871026	Sediment Pulp	91.3	16.1	0.16	69.5	0.038	<20	2.85	0.039	0.02	0.4	2.9	0.12	0.26	83	2.6	<0.02	4.3	0.26	<0.1	0.03			
013J871027	Sediment Pulp	105.1	16.5	0.20	49.4	0.108	<20	1.20	0.025	0.05	0.7	2.9	0.09	0.14	55	1.7	<0.02	4.1	0.51	0.1	0.09			
013J871028	Sediment Pulp	50.8	17.5	0.10	31.4	0.046	<20	0.86	0.016	0.02	0.3	2.3	0.04	0.48	113	40.2	<0.02	1.8	0.43	<0.1	0.07			
013J871029	Sediment Pulp	82.4	6.3	0.03	20.7	0.020	<20	0.90	0.006	<0.01	<0.1	1.2	<0.02	0.44	102	2.5	<0.02	1.2	0.11	0.2	0.04			



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J871000	Sediment Pulp	0.81	3.7	3.5	<0.05	1.4	10.91	18.5	0.53	16	0.3	4.1	3.08	12.93	2.59	0.49	2.44	0.34	1.87	0.35	1.01
013J871001	Sediment Pulp	2.04	3.7	0.5	<0.05	0.8	21.43	79.6	0.04	1	0.2	6.7	10.27	38.50	6.26	1.06	5.08	0.79	4.15	0.78	2.20
013J871002	Sediment Pulp	1.91	0.8	0.5	<0.05	1.0	27.10	139.0	<0.02	<1	0.7	1.1	18.79	67.32	10.32	2.10	7.96	1.01	5.04	0.93	2.91
013J871003	Sediment Pulp	3.12	2.9	0.5	<0.05	1.6	58.15	308.2	0.07	2	3.9	3.8	27.80	100.48	16.84	2.72	13.57	2.18	11.89	2.29	6.81
013J871004	Sediment Pulp	3.61	2.6	0.6	<0.05	1.6	57.24	256.2	0.06	1	1.2	2.8	26.69	99.93	16.67	2.66	13.83	2.07	11.69	2.18	6.68
013J871005	Sediment Pulp	3.65	2.5	0.6	<0.05	1.5	55.31	253.2	0.06	1	3.1	2.6	26.35	100.30	16.95	2.58	14.72	2.11	11.49	2.14	6.15
013J871006	Sediment Pulp	2.63	1.9	0.4	<0.05	0.6	39.30	132.6	0.06	1	0.8	1.9	16.77	63.25	10.59	1.79	9.62	1.40	7.84	1.57	4.60
013J871007	Sediment Pulp	3.39	20.0	0.7	<0.05	4.2	25.63	116.1	0.03	12	0.9	14.6	14.32	50.82	8.58	1.24	6.52	1.00	5.58	0.96	2.84
013J871008	Sediment Pulp	1.87	5.7	0.4	<0.05	0.8	34.31	137.1	0.03	<1	1.0	5.7	14.90	56.14	9.60	1.62	8.22	1.26	7.32	1.33	3.95
013J871009	Sediment Pulp	2.66	7.3	0.5	<0.05	1.2	31.87	140.5	0.03	<1	0.6	6.4	14.02	51.86	9.18	1.39	7.56	1.11	6.29	1.25	3.45
013J871010	Sediment Pulp	1.89	25.8	1.1	<0.05	5.8	19.18	79.5	0.05	<1	0.3	20.9	10.72	38.50	6.67	1.11	5.00	0.74	3.57	0.70	1.94
013J871011	Sediment Pulp	1.97	5.8	0.4	<0.05	1.0	37.15	123.5	0.05	<1	1.1	5.3	13.30	49.12	8.44	1.57	6.75	1.12	6.53	1.28	3.89
013J871012	Sediment Pulp	2.52	5.3	0.4	<0.05	2.0	19.45	80.1	<0.02	<1	0.6	5.0	9.51	34.24	5.39	0.70	4.17	0.66	3.87	0.78	2.27
013J871013	Sediment Pulp	5.64	8.2	1.0	<0.05	2.4	68.62	232.3	0.06	<1	2.6	7.3	28.70	102.64	17.07	1.46	14.33	2.39	13.48	2.77	8.55
013J871014	Sediment Pulp	7.08	4.5	1.0	0.05	2.8	148.36	323.9	0.06	1	5.0	4.3	40.42	146.39	28.65	1.86	25.93	4.59	27.36	5.84	16.61
013J871015	Sediment Pulp	3.96	14.3	0.7	<0.05	2.6	66.59	158.5	0.02	<1	2.1	9.6	19.58	70.72	12.76	1.05	12.21	2.04	11.27	2.41	7.05
013J871016	Sediment Pulp	3.04	4.1	1.1	<0.05	1.3	16.88	73.3	0.03	<1	0.2	5.1	9.21	30.39	5.10	0.73	4.76	0.59	3.30	0.61	1.94
013J871017	Sediment Pulp	3.44	5.5	0.8	<0.05	1.7	42.67	94.7	0.03	<1	0.7	5.1	12.81	47.14	8.31	1.03	8.32	1.24	7.19	1.47	4.47
013J871018	Sediment Pulp	2.73	2.4	0.3	<0.05	1.0	37.37	115.2	0.03	2	0.5	3.0	15.25	54.93	9.33	1.75	8.64	1.24	6.97	1.39	3.82
013J871019	Sediment Pulp	3.94	6.1	0.8	<0.05	2.5	54.13	109.9	<0.02	1	1.4	6.6	14.80	56.07	9.71	1.22	9.74	1.44	9.10	1.72	5.04
013J871020	Sediment Pulp	3.93	4.1	0.7	<0.05	1.3	46.13	144.9	0.05	2	1.6	4.8	17.50	61.94	10.92	1.55	9.86	1.49	9.04	1.73	5.47
013J871021	Sediment Pulp	2.77	2.4	0.3	<0.05	1.0	36.71	112.5	0.04	<1	0.5	2.8	14.57	54.91	9.64	1.76	8.40	1.22	6.92	1.35	3.71
013J871022	Sediment Pulp	0.75	3.5	3.2	<0.05	1.4	10.58	17.8	0.42	20	0.1	3.8	2.87	11.40	2.46	0.52	2.35	0.32	1.93	0.37	1.08
013J871023	Sediment Pulp	4.05	9.1	1.0	<0.05	2.8	42.57	136.7	0.03	1	2.1	13.8	16.32	59.46	10.36	1.07	9.84	1.37	8.18	1.54	4.78
013J871024	Sediment Pulp	3.07	2.6	0.3	<0.05	0.7	128.41	230.7	0.06	<1	2.4	4.6	27.03	100.98	19.30	2.33	21.37	3.41	20.95	4.46	13.34
013J871025	Sediment Pulp	2.05	2.4	0.5	<0.05	1.5	50.76	127.8	0.03	2	1.9	3.1	19.72	72.33	12.16	1.37	11.89	1.56	8.76	1.71	5.20
013J871026	Sediment Pulp	2.23	2.4	0.5	<0.05	0.7	54.88	145.3	<0.02	<1	3.1	3.3	21.66	77.41	13.61	1.47	12.68	1.75	9.68	2.01	5.90
013J871027	Sediment Pulp	8.21	4.8	1.7	<0.05	3.8	73.60	187.0	0.03	2	4.6	7.0	24.04	84.30	14.91	1.51	13.63	2.07	12.49	2.54	7.83
013J871028	Sediment Pulp	2.85	1.4	0.8	<0.05	2.3	23.44	89.0	<0.02	23	0.9	2.6	10.23	35.07	5.89	0.79	4.63	0.75	4.25	0.83	2.50
013J871029	Sediment Pulp	1.68	0.4	0.6	<0.05	0.7	31.26	146.7	<0.02	<1	0.5	<0.1	16.57	54.70	8.49	0.87	7.00	1.06	5.92	1.17	3.57



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J871000	Sediment Pulp	0.14	0.91	0.15	<10	<2	
013J871001	Sediment Pulp	0.31	1.82	0.23	<10	<2	
013J871002	Sediment Pulp	0.39	2.57	0.33	<10	<2	
013J871003	Sediment Pulp	1.02	5.90	0.77	<10	5	
013J871004	Sediment Pulp	0.98	5.62	0.72	<10	<2	
013J871005	Sediment Pulp	0.87	5.52	0.76	<10	2	
013J871006	Sediment Pulp	0.66	4.00	0.54	<10	<2	
013J871007	Sediment Pulp	0.38	2.40	0.34	<10	<2	
013J871008	Sediment Pulp	0.54	3.25	0.40	<10	<2	
013J871009	Sediment Pulp	0.51	3.23	0.44	<10	<2	
013J871010	Sediment Pulp	0.27	1.70	0.25	<10	<2	
013J871011	Sediment Pulp	0.53	3.43	0.46	<10	<2	
013J871012	Sediment Pulp	0.31	1.96	0.33	<10	<2	
013J871013	Sediment Pulp	1.27	7.68	1.11	<10	<2	
013J871014	Sediment Pulp	2.41	13.48	1.94	<10	<2	
013J871015	Sediment Pulp	1.03	5.98	0.81	<10	<2	
013J871016	Sediment Pulp	0.29	1.53	0.24	<10	<2	
013J871017	Sediment Pulp	0.60	3.72	0.57	<10	3	
013J871018	Sediment Pulp	0.55	3.28	0.47	<10	3	
013J871019	Sediment Pulp	0.73	4.40	0.69	<10	<2	
013J871020	Sediment Pulp	0.78	4.57	0.64	<10	2	
013J871021	Sediment Pulp	0.55	3.15	0.44	<10	<2	
013J871022	Sediment Pulp	0.13	1.01	0.13	<10	<2	
013J871023	Sediment Pulp	0.65	3.82	0.59	<10	2	
013J871024	Sediment Pulp	1.99	11.12	1.55	<10	<2	
013J871025	Sediment Pulp	0.76	4.33	0.64	<10	<2	
013J871026	Sediment Pulp	0.76	4.69	0.67	<10	<2	
013J871027	Sediment Pulp	1.11	7.41	1.12	<10	<2	
013J871028	Sediment Pulp	0.35	2.15	0.33	<10	7	
013J871029	Sediment Pulp	0.44	2.95	0.40	<10	<2	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J871030	Sediment Pulp	21.01	38.21	25.10	622.8	539	10.5	15.0	764	5.21	1.8	74.5	<0.2	12.6	33.6	2.24	0.10	0.07	55	0.53	0.318
013J871031	Sediment Pulp	12.40	8.55	18.51	159.6	36	5.1	5.1	220	2.08	1.5	18.8	0.4	7.0	15.9	0.49	0.10	0.04	23	0.28	0.052
013J871032	Sediment Pulp	13.97	63.07	6.73	154.7	161	16.5	8.0	148	2.52	1.6	90.2	0.5	7.0	34.0	0.39	0.24	0.03	39	0.47	0.112
013J871033	Sediment Pulp	0.33	3.87	4.26	34.2	181	2.8	0.7	21	0.43	<0.1	0.9	0.3	0.5	26.5	0.14	0.03	0.02	3	0.24	0.040
013J871034	Sediment Pulp	2.82	7.16	9.04	30.8	84	3.6	0.9	39	0.34	0.6	7.2	<0.2	0.7	15.0	0.11	0.05	0.06	15	0.24	0.040
013J871035	Sediment Pulp	12.13	22.08	10.63	85.9	312	7.4	3.7	148	2.08	0.9	10.9	0.5	3.2	23.9	0.37	0.07	0.07	80	0.40	0.166
013J871036	Sediment Pulp	3.07	8.24	5.83	31.7	63	3.3	1.0	40	0.39	<0.1	5.8	<0.2	0.7	19.1	0.14	0.03	0.02	7	0.38	0.034
013J871037	Sediment Pulp	3.62	7.79	3.97	43.6	68	5.3	0.6	26	0.38	<0.1	4.4	0.4	1.0	18.8	0.19	0.02	<0.02	6	0.24	0.027
013J871038	Sediment Pulp	16.00	40.16	14.20	141.9	590	8.8	4.7	250	3.62	1.1	32.1	<0.2	3.0	31.2	0.48	0.05	0.08	66	0.49	0.249
013J871039	Sediment Pulp	3.08	11.66	11.95	84.2	86	15.3	11.1	377	2.57	1.3	6.6	<0.2	9.4	30.1	0.16	0.05	0.06	39	0.50	0.127
013J871040	Sediment Pulp	3.04	6.66	12.52	65.9	45	10.2	8.3	256	2.03	1.5	3.9	<0.2	6.3	21.3	0.15	0.07	0.05	27	0.41	0.090
013J871041	Sediment Pulp	20.44	39.61	26.41	671.0	526	10.6	15.2	758	5.22	2.0	77.8	<0.2	12.2	33.4	2.32	0.09	0.06	54	0.53	0.316
013J871042	Sediment Pulp	1.77	13.45	2.02	53.8	86	12.9	1.3	25	0.17	<0.1	2.4	0.3	1.2	24.2	0.13	<0.02	<0.02	7	0.34	0.026
013J871043	Sediment Pulp	1.60	15.21	1.98	75.3	97	12.6	1.3	20	0.18	<0.1	2.4	0.6	1.0	25.2	0.12	0.03	<0.02	8	0.35	0.028
013J871044	Sediment Pulp	1.22	9.74	10.84	80.1	48	11.6	5.1	164	1.31	0.5	7.9	<0.2	2.4	25.2	0.14	0.04	0.02	20	0.37	0.080
013J871045	Sediment Pulp	24.91	11.99	11.86	118.8	83	5.2	12.2	179	5.00	3.2	69.9	<0.2	3.2	25.0	0.39	0.15	0.05	75	0.40	0.092
013J871046	Sediment Pulp	8.28	62.80	4.23	255.3	132	8.2	1.4	38	0.29	<0.1	57.4	<0.2	0.6	24.4	0.56	0.09	<0.02	10	0.46	0.054
013J871047	Sediment Pulp	30.29	19.52	6.14	111.4	260	5.3	3.9	107	3.05	0.6	38.7	<0.2	1.6	28.5	0.45	0.11	0.03	47	0.51	0.239
013J871048	Sediment Pulp	31.26	21.35	16.29	208.9	276	8.6	6.1	181	7.01	0.8	31.0	<0.2	6.4	17.5	0.88	0.05	0.04	49	0.25	0.151
013J871049	Sediment Pulp	47.93	19.67	11.14	430.8	245	9.3	5.4	117	4.86	<0.1	65.6	<0.2	3.9	21.0	1.40	0.08	0.03	28	0.37	0.112
013J871050	Sediment Pulp	35.43	43.10	35.81	565.5	682	9.3	14.7	1523	5.45	<0.1	130.4	<0.2	9.4	20.5	2.30	0.08	0.09	26	0.31	0.237
013J871051	Sediment Pulp	23.53	27.83	25.86	450.5	587	7.4	7.1	274	4.53	0.4	198.4	0.2	3.9	72.6	1.67	0.15	0.07	46	1.08	0.218
013J871052	Sediment Pulp	4.57	14.81	32.70	212.1	196	3.9	1.8	82	0.77	<0.1	40.9	0.6	1.3	25.1	0.94	0.10	0.14	24	0.34	0.085
013J871053	Sediment Pulp	25.04	14.17	14.60	201.2	126	6.0	8.9	395	4.94	1.4	71.5	<0.2	7.8	22.7	0.67	0.12	0.06	40	0.39	0.112
013J871054	Sediment Pulp	1.10	10.60	9.24	124.6	74	6.1	2.0	53	0.55	0.2	44.1	<0.2	2.0	16.3	0.79	0.12	0.08	13	0.40	0.060
013J871055	Sediment Pulp	2.82	33.09	25.35	248.9	248	7.2	1.0	51	0.50	<0.1	21.6	<0.2	1.2	14.5	0.94	0.09	0.17	10	0.19	0.122
013J871056	Sediment Pulp	13.12	29.32	24.44	101.1	180	5.8	1.6	64	0.66	<0.1	142.8	<0.2	1.7	19.8	0.50	0.08	0.07	18	0.35	0.102
013J871057	Sediment Pulp	0.81	33.21	25.97	128.9	2723	45.2	26.7	1208	3.11	24.4	4.0	2.5	8.4	28.6	0.50	0.60	3.07	50	0.62	0.094
013J871058	Sediment Pulp	5.91	31.03	35.07	923.6	176	5.7	2.7	121	1.37	0.9	52.1	<0.2	4.0	16.9	7.13	0.16	0.13	25	0.35	0.063
013J871059	Sediment Pulp	24.72	59.79	35.70	1526.8	305	8.4	11.2	456	5.65	1.1	67.9	<0.2	4.5	16.1	6.53	0.13	0.08	40	0.36	0.127



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Project: None Given
Report Date: April 07, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J871030	Sediment Pulp	299.3	24.1	0.28	105.3	0.103	<20	3.35	0.018	0.11	2.7	4.1	0.45	0.18	142	4.2	0.02	6.6	0.88	0.1	0.06
013J871031	Sediment Pulp	99.7	10.8	0.24	42.1	0.091	<20	1.01	0.012	0.05	0.7	1.8	0.09	0.07	32	1.2	<0.02	3.5	0.43	0.1	0.08
013J871032	Sediment Pulp	246.8	25.0	0.17	61.7	0.054	<20	2.37	0.013	0.06	1.1	3.6	0.21	0.26	80	2.7	<0.02	2.9	0.48	0.1	<0.02
013J871033	Sediment Pulp	23.3	3.8	0.05	51.2	0.007	<20	0.40	0.006	<0.01	<0.1	0.7	<0.02	0.35	75	1.9	<0.02	0.5	0.06	<0.1	<0.02
013J871034	Sediment Pulp	45.4	6.3	0.07	54.9	0.062	<20	0.53	0.017	0.02	0.4	1.2	0.03	0.15	56	0.9	<0.02	3.2	0.43	<0.1	0.03
013J871035	Sediment Pulp	128.1	17.1	0.18	60.4	0.105	<20	1.48	0.021	0.05	0.4	3.1	0.09	0.14	106	2.6	<0.02	5.9	0.51	<0.1	0.07
013J871036	Sediment Pulp	35.8	4.9	0.05	28.3	0.039	<20	0.47	0.021	0.02	<0.1	1.3	0.03	0.31	57	1.9	<0.02	1.8	0.31	<0.1	0.04
013J871037	Sediment Pulp	47.9	3.8	0.04	63.6	0.016	<20	0.34	0.013	0.01	0.4	1.4	<0.02	0.39	80	1.7	<0.02	1.0	0.09	0.1	<0.02
013J871038	Sediment Pulp	243.9	18.1	0.10	94.1	0.078	<20	2.27	0.014	0.03	0.8	3.5	0.16	0.27	194	4.1	<0.02	8.7	0.28	0.2	<0.02
013J871039	Sediment Pulp	75.7	27.3	0.60	104.7	0.139	<20	1.53	0.045	0.26	0.6	4.2	0.23	0.04	38	0.5	<0.02	6.1	1.78	<0.1	0.07
013J871040	Sediment Pulp	57.1	18.7	0.39	64.3	0.118	<20	1.12	0.027	0.15	0.6	3.0	0.16	0.06	34	0.7	<0.02	4.8	1.17	<0.1	0.08
013J871041	Sediment Pulp	305.1	24.5	0.28	108.9	0.108	<20	3.38	0.017	0.10	3.1	4.1	0.47	0.18	160	4.3	<0.02	7.0	0.90	0.1	<0.02
013J871042	Sediment Pulp	30.9	5.3	0.08	81.6	0.015	<20	0.34	0.015	0.02	<0.1	1.2	0.04	0.36	72	1.3	<0.02	0.8	0.13	<0.1	<0.02
013J871043	Sediment Pulp	32.8	5.7	0.08	72.7	0.017	<20	0.37	0.016	0.02	<0.1	1.1	0.03	0.36	71	1.3	<0.02	0.8	0.13	<0.1	<0.02
013J871044	Sediment Pulp	53.2	17.7	0.37	77.4	0.102	<20	1.07	0.035	0.14	0.2	2.5	0.12	0.09	50	0.6	<0.02	5.0	1.29	<0.1	0.04
013J871045	Sediment Pulp	87.8	11.2	0.14	49.0	0.068	<20	1.32	0.016	0.02	0.9	2.1	0.15	0.27	100	2.4	<0.02	3.6	0.30	0.1	0.07
013J871046	Sediment Pulp	169.2	8.3	0.07	40.9	0.023	<20	0.97	0.012	0.02	0.3	1.0	0.09	0.41	93	2.7	<0.02	1.3	0.28	0.2	0.10
013J871047	Sediment Pulp	120.7	13.0	0.13	79.0	0.057	<20	1.62	0.012	0.02	0.5	2.2	0.06	0.18	92	3.4	<0.02	3.6	0.32	<0.1	0.04
013J871048	Sediment Pulp	158.0	19.6	0.07	75.2	0.050	<20	2.51	0.008	0.02	0.5	3.6	0.07	0.18	96	4.1	<0.02	3.4	0.29	0.1	0.05
013J871049	Sediment Pulp	329.2	14.9	0.11	50.3	0.043	<20	2.41	0.010	0.04	1.0	2.9	0.22	0.31	73	3.1	<0.02	2.7	0.29	<0.1	0.02
013J871050	Sediment Pulp	652.8	23.7	0.12	54.4	0.050	<20	4.32	0.007	0.05	0.9	3.5	0.67	0.32	105	6.9	<0.02	3.8	0.49	0.2	0.09
013J871051	Sediment Pulp	317.4	18.3	0.13	309.0	0.056	<20	2.87	0.011	0.03	0.9	2.8	0.18	0.26	162	5.9	0.02	4.9	0.37	<0.1	0.06
013J871052	Sediment Pulp	101.1	8.6	0.10	173.2	0.043	<20	1.12	0.017	0.03	0.3	1.5	0.05	0.17	119	1.4	<0.02	2.7	0.42	<0.1	0.03
013J871053	Sediment Pulp	165.1	17.9	0.17	64.8	0.072	<20	1.74	0.021	0.05	0.6	3.0	0.12	0.12	64	2.5	0.03	4.2	0.44	0.2	0.04
013J871054	Sediment Pulp	139.7	8.9	0.10	44.5	0.046	<20	1.13	0.014	0.02	0.5	1.5	0.07	0.35	73	1.4	<0.02	2.8	0.27	<0.1	0.07
013J871055	Sediment Pulp	204.1	10.8	0.10	26.0	0.049	<20	1.24	0.014	0.04	0.3	1.1	0.08	0.40	151	2.5	<0.02	3.7	0.79	0.1	0.06
013J871056	Sediment Pulp	132.4	12.5	0.12	50.8	0.038	<20	1.43	0.013	0.03	0.3	1.4	0.07	0.33	76	2.6	0.02	3.2	0.47	<0.1	0.07
013J871057	Sediment Pulp	42.5	51.1	0.80	167.4	0.107	<20	1.71	0.032	0.26	0.2	6.3	0.30	0.15	266	0.5	0.04	6.0	1.43	<0.1	0.12
013J871058	Sediment Pulp	128.6	14.4	0.16	57.5	0.069	<20	0.81	0.015	0.02	0.6	2.1	0.08	0.16	57	1.4	0.02	3.0	0.34	<0.1	0.06
013J871059	Sediment Pulp	209.6	24.4	0.13	85.7	0.045	<20	2.15	0.014	0.02	0.4	3.3	0.24	0.26	75	3.5	0.03	3.6	0.37	0.1	0.03



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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J871030	Sediment Pulp	6.17	12.0	0.9	<0.05	1.3	244.26	521.6	0.10	3	9.9	9.7	66.56	257.37	46.77	3.59	46.63	7.60	46.54	9.81	29.36
013J871031	Sediment Pulp	5.67	6.1	1.0	<0.05	2.1	67.84	163.4	0.03	<1	2.4	11.8	22.49	78.47	13.23	1.10	13.27	1.93	11.61	2.54	7.20
013J871032	Sediment Pulp	3.88	6.7	0.4	<0.05	1.3	122.22	439.0	0.02	<1	4.7	5.7	55.93	189.50	29.44	3.77	24.79	3.69	21.44	4.57	13.25
013J871033	Sediment Pulp	0.53	0.4	0.4	<0.05	0.5	12.16	41.2	<0.02	<1	0.5	0.2	4.85	16.23	2.57	0.38	2.29	0.34	1.97	0.42	1.22
013J871034	Sediment Pulp	3.00	2.1	0.7	<0.05	1.0	16.12	84.9	<0.02	<1	0.5	1.9	10.18	36.01	5.58	0.62	4.38	0.63	3.10	0.65	1.67
013J871035	Sediment Pulp	5.31	4.8	0.8	<0.05	2.0	35.41	248.2	0.05	<1	0.8	5.9	28.04	94.54	13.59	1.77	11.84	1.54	8.42	1.49	4.42
013J871036	Sediment Pulp	2.11	1.4	0.5	<0.05	1.0	11.25	64.7	<0.02	<1	0.4	0.7	7.69	25.84	4.14	0.54	3.30	0.49	2.50	0.45	1.41
013J871037	Sediment Pulp	0.98	0.8	0.2	<0.05	0.5	13.91	73.0	<0.02	<1	0.3	0.4	9.57	32.14	4.59	0.53	4.09	0.53	2.71	0.51	1.60
013J871038	Sediment Pulp	5.16	2.3	0.6	<0.05	1.1	80.63	429.5	0.10	<1	1.8	3.0	51.76	180.56	25.66	3.13	20.96	3.11	17.05	3.25	9.80
013J871039	Sediment Pulp	3.57	27.3	1.2	<0.05	2.8	31.25	146.8	<0.02	<1	0.7	19.4	17.82	60.88	9.44	1.22	8.02	1.09	6.22	1.19	3.58
013J871040	Sediment Pulp	4.13	17.0	0.9	<0.05	2.8	25.01	104.6	0.02	1	1.0	13.8	13.65	47.85	7.66	0.98	6.34	0.88	5.15	0.94	2.87
013J871041	Sediment Pulp	6.21	11.9	1.0	0.05	1.3	250.71	548.1	0.14	2	10.4	9.8	71.37	265.16	48.12	3.99	48.37	8.01	48.21	10.33	30.91
013J871042	Sediment Pulp	0.60	1.2	0.1	<0.05	0.6	5.48	48.7	<0.02	<1	0.2	0.8	5.66	18.16	2.39	0.42	1.79	0.22	1.16	0.21	0.63
013J871043	Sediment Pulp	0.66	1.2	0.2	<0.05	0.5	5.63	50.7	<0.02	<1	<0.1	0.9	5.89	18.72	2.51	0.39	1.85	0.25	1.17	0.23	0.61
013J871044	Sediment Pulp	3.55	16.3	0.8	<0.05	1.3	30.09	92.9	0.03	<1	1.0	15.7	12.89	45.03	8.12	0.98	6.94	1.03	5.75	1.14	3.43
013J871045	Sediment Pulp	3.45	2.4	0.7	<0.05	1.4	67.86	168.0	<0.02	3	2.5	4.1	21.52	76.49	12.99	1.48	11.25	1.85	10.81	2.56	7.73
013J871046	Sediment Pulp	2.05	1.6	0.2	<0.05	0.7	256.06	237.0	0.03	<1	4.7	1.3	42.47	152.10	32.31	2.36	41.00	7.26	47.59	10.81	31.18
013J871047	Sediment Pulp	2.80	2.3	0.4	<0.05	0.7	72.42	192.9	0.03	2	1.4	3.4	27.15	96.17	15.92	2.23	14.53	2.21	12.12	2.68	7.83
013J871048	Sediment Pulp	3.71	2.3	0.5	<0.05	0.5	88.72	309.3	0.04	<1	2.9	1.9	38.30	136.22	22.01	2.51	19.31	2.90	17.02	3.55	11.35
013J871049	Sediment Pulp	2.73	4.0	0.4	<0.05	0.4	276.75	398.1	0.05	3	8.7	4.4	72.19	270.16	48.43	3.66	47.96	7.79	48.13	10.78	32.50
013J871050	Sediment Pulp	3.63	6.2	0.6	0.08	0.5	673.20	985.7	0.11	4	15.1	5.1	143.70	494.08	99.81	6.23	109.71	19.00	118.37	25.72	78.59
013J871051	Sediment Pulp	5.18	3.0	0.7	0.06	0.7	282.01	445.6	0.09	<1	10.4	5.7	67.91	249.71	42.79	3.86	43.97	7.39	46.29	10.34	32.45
013J871052	Sediment Pulp	2.96	2.5	1.1	<0.05	0.9	104.95	149.8	0.04	<1	4.3	3.1	22.47	81.77	14.03	1.38	14.99	2.47	16.49	3.53	10.93
013J871053	Sediment Pulp	4.79	5.2	1.1	<0.05	1.2	126.03	279.0	0.05	2	6.6	6.7	38.78	138.99	24.56	2.14	22.06	3.78	22.50	4.66	14.80
013J871054	Sediment Pulp	4.34	2.3	1.2	<0.05	1.5	90.58	210.7	0.04	<1	2.7	4.1	32.30	117.42	21.29	1.49	19.03	2.87	17.15	3.38	10.35
013J871055	Sediment Pulp	3.82	6.6	1.3	<0.05	1.1	209.95	265.0	0.06	<1	7.6	7.1	58.78	241.60	52.88	4.83	53.26	8.36	50.11	10.12	29.89
013J871056	Sediment Pulp	3.95	3.5	1.1	<0.05	1.4	139.17	218.6	0.05	<1	7.9	5.8	33.84	126.53	25.38	2.10	26.92	4.16	24.36	5.07	16.25
013J871057	Sediment Pulp	1.89	24.9	1.2	<0.05	5.5	19.43	74.8	0.04	1	0.4	20.0	10.37	36.56	7.29	1.09	5.17	0.74	3.65	0.77	2.11
013J871058	Sediment Pulp	4.62	2.6	1.2	<0.05	2.5	94.67	177.9	0.07	<1	2.3	6.6	32.62	119.67	23.28	1.70	20.71	3.06	17.43	3.39	9.92
013J871059	Sediment Pulp	2.96	2.3	0.7	<0.05	0.7	185.27	541.2	0.09	<1	4.3	4.5	51.59	204.57	39.50	2.88	40.26	5.81	33.28	7.15	20.52



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		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J871030	Sediment Pulp	4.14	23.73	3.18	<10	<2
013J871031	Sediment Pulp	0.94	5.60	0.82	<10	<2
013J871032	Sediment Pulp	2.02	13.11	2.00	<10	2
013J871033	Sediment Pulp	0.17	1.30	0.19	<10	<2
013J871034	Sediment Pulp	0.24	1.51	0.22	<10	<2
013J871035	Sediment Pulp	0.57	3.41	0.49	<10	3
013J871036	Sediment Pulp	0.19	1.18	0.20	<10	<2
013J871037	Sediment Pulp	0.22	1.36	0.19	<10	<2
013J871038	Sediment Pulp	1.45	8.97	1.22	<10	3
013J871039	Sediment Pulp	0.46	3.05	0.47	<10	<2
013J871040	Sediment Pulp	0.39	2.40	0.37	<10	<2
013J871041	Sediment Pulp	4.35	24.73	3.39	<10	<2
013J871042	Sediment Pulp	0.08	0.57	0.08	<10	<2
013J871043	Sediment Pulp	0.08	0.49	0.08	<10	<2
013J871044	Sediment Pulp	0.49	2.86	0.46	<10	<2
013J871045	Sediment Pulp	1.04	6.44	1.05	<10	<2
013J871046	Sediment Pulp	4.07	21.99	3.23	<10	<2
013J871047	Sediment Pulp	1.03	6.50	0.93	<10	<2
013J871048	Sediment Pulp	1.58	9.44	1.41	<10	<2
013J871049	Sediment Pulp	4.24	24.12	3.51	<10	<2
013J871050	Sediment Pulp	10.56	60.98	7.88	<10	<2
013J871051	Sediment Pulp	4.54	27.97	3.75	<10	3
013J871052	Sediment Pulp	1.50	8.99	1.29	<10	<2
013J871053	Sediment Pulp	2.03	12.55	1.85	<10	<2
013J871054	Sediment Pulp	1.33	7.96	1.11	<10	<2
013J871055	Sediment Pulp	4.12	25.22	3.66	<10	<2
013J871056	Sediment Pulp	2.42	15.42	2.42	<10	<2
013J871057	Sediment Pulp	0.25	1.62	0.26	<10	<2
013J871058	Sediment Pulp	1.25	7.91	1.14	<10	<2
013J871059	Sediment Pulp	2.74	16.31	2.44	<10	<2



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Project: None Given
Report Date: April 07, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J871060	Sediment Pulp	8.19	30.89	28.73	370.3	229	7.0	6.7	287	2.72	2.3	36.1	<0.2	6.2	41.0	1.78	0.15	0.22	44	0.47	0.095
013J871061	Sediment Pulp	24.29	57.02	34.88	1478.8	286	8.7	11.0	442	5.40	1.3	65.4	0.5	4.1	15.6	6.43	0.13	0.10	39	0.35	0.133
013J871062	Sediment Pulp	1.18	37.02	6.72	69.3	159	12.3	2.2	38	0.47	0.7	5.0	0.2	0.8	23.9	0.27	0.23	0.09	31	0.37	0.043
013J871063	Sediment Pulp	1.04	35.96	9.21	76.9	168	11.5	2.5	47	0.63	1.0	4.9	<0.2	0.8	26.4	0.28	0.21	0.05	35	0.37	0.053
013J871064	Sediment Pulp	27.98	50.07	29.79	651.4	793	9.1	6.2	282	2.37	<0.1	41.5	<0.2	2.7	26.3	3.63	0.18	0.10	34	0.40	0.096
013J871065	Sediment Pulp	37.03	43.15	23.03	509.3	553	15.1	26.9	1872	8.54	4.7	63.6	<0.2	6.9	29.2	2.50	0.35	0.14	57	0.39	0.138
013J871066	Sediment Pulp	2.20	18.47	8.20	69.9	32	18.7	8.0	233	1.88	2.0	8.7	<0.2	5.5	27.3	0.15	0.09	<0.02	39	0.42	0.075
013J871067	Sediment Pulp	21.60	57.15	17.00	334.2	504	18.2	32.7	1088	8.45	4.3	83.8	<0.2	8.1	43.0	1.40	0.26	0.05	78	0.64	0.226
013J871068	Sediment Pulp	6.80	28.47	4.09	86.9	163	12.4	4.2	67	1.16	<0.1	9.5	0.6	1.1	27.6	0.32	0.04	<0.02	59	0.41	0.101
013J871069	Sediment Pulp	2.09	35.73	4.05	61.8	183	12.7	3.1	69	0.87	<0.1	5.2	0.6	0.7	24.8	0.35	0.03	<0.02	75	0.36	0.119
013J871070	Sediment Pulp	13.60	49.42	10.26	122.5	167	14.9	20.4	521	6.59	2.1	13.1	<0.2	6.8	23.3	0.53	0.08	<0.02	94	0.35	0.172
013J871071	Sediment Pulp	4.69	20.81	7.48	50.9	144	6.9	5.9	145	2.16	2.4	7.6	<0.2	1.2	12.2	0.17	0.11	<0.02	57	0.17	0.053
013J871072	Sediment Pulp	9.25	39.70	75.19	298.1	582	11.3	7.3	428	1.75	36.4	9.2	3.3	1.6	67.4	1.30	0.52	1.00	21	6.24	0.067
013J871073	Sediment Pulp	6.45	37.02	8.15	175.0	233	16.9	15.5	385	2.44	0.9	5.1	0.7	3.0	50.7	0.34	0.09	0.03	64	0.65	0.138
013J871074	Sediment Pulp	6.42	22.76	14.29	208.3	125	10.1	14.5	959	2.64	2.2	10.1	<0.2	7.1	31.5	0.55	0.11	0.03	55	0.52	0.134
013J871075	Sediment Pulp	29.60	34.83	20.02	433.8	394	7.6	9.7	558	6.61	1.5	40.1	<0.2	4.3	23.2	1.28	0.07	0.06	65	0.42	0.177
013J871076	Sediment Pulp	77.93	38.58	9.04	622.6	409	8.9	17.5	798	8.63	0.7	64.6	<0.2	5.9	21.8	1.33	0.08	0.05	71	0.55	0.194
013J871077	Sediment Pulp	75.02	26.52	7.42	496.6	194	8.6	8.7	274	6.76	1.1	37.9	<0.2	3.1	17.7	0.85	0.05	<0.02	64	0.41	0.118
013J871078	Sediment Pulp	36.27	42.07	13.78	600.5	239	10.0	8.2	242	3.79	1.1	44.9	<0.2	6.4	17.5	2.08	0.08	<0.02	57	0.27	0.119
013J871079	Sediment Pulp	26.71	23.82	10.22	328.9	283	7.4	14.4	720	12.70	1.3	32.2	<0.2	7.7	16.1	0.68	0.07	0.04	52	0.22	0.182
013J871080	Sediment Pulp	15.72	19.31	19.30	295.5	209	7.3	22.9	4928	10.00	1.4	43.7	<0.2	9.2	17.3	1.00	0.09	0.06	33	0.25	0.138
013J871081	Sediment Pulp	22.82	58.46	18.37	332.7	543	17.8	32.2	1115	8.59	4.5	88.3	<0.2	8.2	44.5	1.45	0.27	0.06	80	0.65	0.219
013J871082	Sediment Pulp	38.72	15.34	16.69	504.2	176	6.1	13.8	413	7.01	0.3	60.7	<0.2	5.7	20.3	1.69	0.06	0.04	37	0.34	0.118
013J871083	Sediment Pulp	39.90	16.55	16.31	558.9	166	7.4	16.4	502	8.20	0.9	61.4	<0.2	5.9	18.9	1.72	0.07	0.03	39	0.29	0.110
013J871084	Sediment Pulp	15.48	46.73	12.79	411.6	162	12.5	5.6	272	1.85	1.4	62.1	<0.2	10.7	28.0	1.06	0.09	0.04	37	0.47	0.179
013J871085	Sediment Pulp	41.64	24.17	17.62	326.4	370	8.4	26.6	2058	11.53	1.0	48.8	<0.2	9.3	21.3	1.11	0.09	0.04	59	0.33	0.226
013J871086	Sediment Pulp	57.29	15.27	8.67	341.5	201	6.6	6.2	138	6.44	0.9	46.8	<0.2	4.4	23.1	0.92	0.05	0.03	63	0.38	0.203
013J871087	Sediment Pulp	0.84	31.44	24.21	121.0	2518	41.6	26.3	1149	2.95	24.4	3.8	2.1	8.4	27.6	0.52	0.61	3.17	48	0.59	0.093
013J871088	Sediment Pulp	34.59	15.78	14.15	228.3	113	6.8	4.0	83	2.96	<0.1	75.8	<0.2	3.2	21.5	0.58	0.05	0.07	42	0.43	0.083
013J871089	Sediment Pulp	11.48	18.25	21.89	235.3	396	5.3	2.0	92	1.27	<0.1	84.2	<0.2	1.2	21.2	1.13	0.06	0.05	44	0.34	0.212



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J871060	Sediment Pulp	99.1	21.0	0.21	79.0	0.089	<20	1.22	0.021	0.04	0.8	2.9	0.09	0.16	90	1.7	<0.02	3.9	0.45	<0.1	0.11
013J871061	Sediment Pulp	199.5	23.9	0.12	80.2	0.045	<20	2.09	0.014	0.02	0.4	3.2	0.23	0.24	78	4.1	0.03	3.5	0.35	0.1	0.03
013J871062	Sediment Pulp	41.2	16.8	0.10	55.9	0.039	<20	1.05	0.016	0.02	0.3	1.6	0.05	0.31	83	1.9	<0.02	2.6	0.24	<0.1	0.05
013J871063	Sediment Pulp	41.4	18.7	0.12	45.6	0.046	<20	1.11	0.021	0.02	0.5	1.8	0.06	0.30	82	1.8	0.02	2.7	0.29	<0.1	0.05
013J871064	Sediment Pulp	208.4	24.4	0.10	64.3	0.040	<20	2.32	0.016	0.03	1.0	3.0	0.16	0.31	107	5.0	0.02	2.8	0.34	0.1	<0.02
013J871065	Sediment Pulp	142.9	31.8	0.19	142.2	0.063	<20	2.61	0.018	0.04	1.0	3.9	0.31	0.18	117	5.6	0.03	4.8	0.53	0.2	0.03
013J871066	Sediment Pulp	38.0	32.3	0.47	65.5	0.115	<20	0.79	0.026	0.09	0.3	1.8	0.07	0.02	18	0.4	<0.02	3.2	0.52	<0.1	0.06
013J871067	Sediment Pulp	155.3	45.8	0.25	85.3	0.097	<20	2.83	0.025	0.06	1.1	4.6	0.26	0.19	101	4.9	0.03	5.7	0.51	0.2	0.03
013J871068	Sediment Pulp	49.4	32.2	0.14	78.1	0.050	<20	1.29	0.016	0.02	0.3	2.4	0.06	0.26	81	2.1	<0.02	3.2	0.22	<0.1	0.03
013J871069	Sediment Pulp	43.2	29.6	0.13	78.4	0.049	<20	1.17	0.014	0.02	0.2	2.0	0.05	0.20	141	2.0	<0.02	2.9	0.22	<0.1	0.03
013J871070	Sediment Pulp	104.8	43.1	0.21	42.9	0.085	<20	2.48	0.017	0.03	0.6	3.8	0.15	0.28	84	2.1	0.02	4.0	0.27	<0.1	0.03
013J871071	Sediment Pulp	51.9	24.9	0.08	39.7	0.040	<20	1.16	0.012	0.02	0.2	2.1	0.05	0.12	87	1.3	<0.02	2.8	0.22	<0.1	0.03
013J871072	Sediment Pulp	11.0	12.5	0.59	90.7	0.043	<20	0.45	0.028	0.05	0.6	2.7	0.21	1.45	90	1.1	0.03	1.9	0.50	<0.1	0.04
013J871073	Sediment Pulp	61.5	37.8	0.29	129.4	0.100	<20	1.91	0.035	0.11	1.1	3.5	0.18	0.18	116	1.3	<0.02	5.6	0.80	<0.1	0.07
013J871074	Sediment Pulp	75.1	26.3	0.36	73.4	0.119	<20	1.24	0.032	0.11	0.5	3.2	0.19	0.05	44	0.7	<0.02	4.7	0.90	<0.1	0.07
013J871075	Sediment Pulp	175.1	26.8	0.13	99.9	0.050	<20	2.42	0.016	0.03	0.7	3.4	0.12	0.20	132	3.9	<0.02	3.8	0.36	0.1	0.04
013J871076	Sediment Pulp	277.5	28.9	0.11	74.8	0.042	<20	2.52	0.015	0.02	0.6	3.7	0.18	0.20	137	4.7	<0.02	3.8	0.41	0.2	0.06
013J871077	Sediment Pulp	155.6	23.8	0.09	50.8	0.040	<20	2.06	0.010	0.02	0.9	3.2	0.08	0.18	72	2.9	<0.02	2.8	0.30	0.1	<0.02
013J871078	Sediment Pulp	299.4	24.2	0.08	42.1	0.044	<20	2.90	0.010	0.02	0.6	3.5	0.15	0.24	90	2.6	0.02	2.9	0.24	0.1	0.03
013J871079	Sediment Pulp	215.8	25.7	0.08	53.5	0.042	<20	2.53	0.007	0.02	0.5	4.2	0.14	0.18	83	4.2	0.03	2.9	0.30	0.2	0.03
013J871080	Sediment Pulp	215.3	18.6	0.15	64.2	0.061	<20	2.15	0.017	0.05	0.5	3.5	0.27	0.14	54	3.6	0.03	3.3	0.46	0.2	0.06
013J871081	Sediment Pulp	161.3	43.3	0.26	91.3	0.097	<20	2.86	0.025	0.06	1.2	4.3	0.27	0.18	110	5.2	0.03	5.7	0.52	<0.1	0.04
013J871082	Sediment Pulp	246.1	15.7	0.08	65.3	0.029	<20	2.30	0.014	0.03	0.5	2.7	0.15	0.18	60	4.9	0.02	2.5	0.25	0.2	0.06
013J871083	Sediment Pulp	247.3	15.8	0.10	63.2	0.031	<20	2.31	0.015	0.03	0.4	2.7	0.19	0.17	54	5.1	<0.02	2.6	0.29	0.1	0.07
013J871084	Sediment Pulp	276.2	22.7	0.41	77.0	0.103	<20	2.08	0.034	0.19	0.8	4.5	0.24	0.12	36	2.4	<0.02	4.3	1.11	0.2	0.06
013J871085	Sediment Pulp	334.4	18.9	0.13	64.1	0.066	<20	2.74	0.015	0.04	0.5	3.5	0.35	0.19	120	5.1	0.02	5.4	0.39	0.2	0.07
013J871086	Sediment Pulp	201.4	13.5	0.12	61.8	0.049	<20	1.86	0.016	0.03	0.5	2.5	0.20	0.20	70	3.3	<0.02	3.1	0.32	0.2	0.09
013J871087	Sediment Pulp	40.8	49.0	0.76	158.4	0.103	<20	1.61	0.030	0.25	0.2	5.9	0.28	0.14	267	0.8	0.03	5.6	1.38	<0.1	0.12
013J871088	Sediment Pulp	201.5	12.0	0.12	42.5	0.049	<20	1.72	0.019	0.04	0.7	2.5	0.06	0.18	65	3.3	<0.02	3.3	0.36	0.1	0.06
013J871089	Sediment Pulp	222.0	11.4	0.10	85.5	0.043	<20	1.81	0.014	0.03	0.4	1.4	0.08	0.25	142	4.0	<0.02	4.7	0.34	0.2	0.04



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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J871060	Sediment Pulp	5.28	3.7	1.0	<0.05	2.7	72.87	183.9	0.06	<1	3.1	6.7	26.70	98.67	17.79	1.70	16.32	2.43	13.08	2.79	7.96
013J871061	Sediment Pulp	2.93	2.2	0.7	<0.05	0.7	178.85	510.3	0.08	1	5.3	4.9	48.26	197.13	37.61	2.82	38.04	5.62	32.11	6.77	19.91
013J871062	Sediment Pulp	2.67	1.6	0.6	<0.05	1.5	25.71	75.2	0.02	<1	0.4	3.0	9.78	35.23	6.60	0.70	5.39	0.86	5.09	0.96	2.89
013J871063	Sediment Pulp	2.93	1.9	0.7	<0.05	1.3	25.04	76.3	0.02	<1	0.8	3.1	9.45	33.97	6.12	0.72	5.57	0.81	4.54	0.94	2.79
013J871064	Sediment Pulp	2.95	2.8	0.5	<0.05	0.6	213.74	359.4	0.06	2	8.6	3.2	57.32	225.68	45.97	4.88	48.91	7.25	41.08	8.38	24.40
013J871065	Sediment Pulp	2.78	3.5	0.8	<0.05	0.8	149.36	340.5	0.08	2	5.1	6.5	36.38	141.22	27.30	3.20	26.30	4.34	26.76	6.03	17.64
013J871066	Sediment Pulp	2.62	7.3	0.8	<0.05	2.1	20.59	84.6	<0.02	<1	0.9	8.2	8.37	30.01	5.22	0.60	4.83	0.65	3.76	0.74	2.30
013J871067	Sediment Pulp	3.44	5.3	0.9	<0.05	1.2	140.93	361.9	0.07	2	3.7	5.6	38.04	143.81	27.08	2.86	26.71	4.15	25.53	5.25	16.23
013J871068	Sediment Pulp	2.45	2.1	0.4	<0.05	1.2	28.01	93.8	0.03	2	0.6	2.3	11.86	40.74	7.20	0.88	6.31	0.97	5.41	1.03	3.20
013J871069	Sediment Pulp	2.41	1.8	0.4	<0.05	1.1	20.50	83.0	0.02	2	0.8	2.3	10.10	35.04	6.02	0.80	4.88	0.79	4.22	0.87	2.45
013J871070	Sediment Pulp	3.92	3.2	0.6	<0.05	1.2	63.34	233.4	0.05	<1	2.2	4.1	26.03	93.38	15.82	1.80	13.34	2.16	12.64	2.62	7.62
013J871071	Sediment Pulp	1.69	1.6	0.4	<0.05	0.5	40.97	101.7	<0.02	<1	0.9	1.3	12.31	44.28	7.74	0.88	6.80	1.14	7.10	1.61	4.75
013J871072	Sediment Pulp	0.67	3.6	3.2	<0.05	1.2	10.30	17.3	0.50	20	0.2	3.7	2.85	11.75	2.43	0.46	2.28	0.35	1.85	0.39	0.94
013J871073	Sediment Pulp	4.42	10.8	0.7	<0.05	2.0	42.93	111.6	0.04	<1	1.6	7.5	15.08	53.40	9.43	1.12	8.36	1.34	7.73	1.61	5.00
013J871074	Sediment Pulp	3.32	11.3	1.0	<0.05	2.4	53.16	164.7	0.03	<1	2.5	8.7	18.05	65.29	12.53	1.19	10.29	1.64	9.59	2.05	6.07
013J871075	Sediment Pulp	3.21	2.7	0.6	<0.05	0.6	149.34	343.3	0.07	<1	7.3	3.1	44.37	163.83	29.55	3.23	26.81	4.38	26.15	5.76	18.05
013J871076	Sediment Pulp	2.66	2.1	0.5	<0.05	0.5	188.60	520.2	0.07	5	15.6	2.9	65.13	254.77	44.53	4.28	41.20	6.23	36.59	7.64	22.85
013J871077	Sediment Pulp	2.16	1.9	0.4	<0.05	0.4	103.06	292.6	0.03	<1	6.3	2.3	40.07	143.32	25.19	2.64	23.11	3.38	19.18	4.26	12.34
013J871078	Sediment Pulp	3.08	1.9	0.4	<0.05	0.7	145.39	615.4	0.05	1	11.0	1.9	69.32	280.22	44.91	4.02	38.92	5.33	29.88	6.46	18.97
013J871079	Sediment Pulp	2.18	2.3	0.5	<0.05	0.4	112.61	396.2	0.06	<1	6.9	2.2	49.96	181.75	28.58	2.73	24.57	3.71	21.26	4.55	14.35
013J871080	Sediment Pulp	2.46	6.0	0.9	<0.05	0.8	227.73	414.6	0.06	<1	8.9	4.9	46.07	177.46	32.41	2.26	34.13	6.06	37.88	8.77	26.85
013J871081	Sediment Pulp	3.55	5.3	0.8	<0.05	1.2	145.56	374.9	0.07	3	4.8	6.4	38.00	146.72	28.35	3.01	28.26	4.38	26.24	5.60	16.67
013J871082	Sediment Pulp	1.95	2.5	0.4	<0.05	1.3	208.58	379.9	0.04	1	13.5	2.4	51.84	190.34	34.56	2.45	35.58	5.80	34.98	8.24	24.74
013J871083	Sediment Pulp	1.96	3.0	0.4	<0.05	0.5	215.47	396.2	0.03	2	13.5	2.5	54.54	200.53	36.80	2.61	37.28	6.09	36.73	8.30	25.71
013J871084	Sediment Pulp	3.54	19.4	0.8	<0.05	2.2	265.70	432.6	0.04	2	7.3	15.4	63.88	256.47	52.40	4.23	52.65	8.31	51.03	10.88	33.78
013J871085	Sediment Pulp	2.47	4.5	0.7	<0.05	0.5	257.28	519.5	0.06	2	6.8	5.3	71.26	277.65	51.08	4.15	51.27	7.95	48.04	10.52	31.25
013J871086	Sediment Pulp	3.31	3.5	0.6	<0.05	0.6	215.74	287.2	0.02	<1	4.3	4.2	43.10	164.25	28.84	2.19	30.04	5.31	33.72	8.04	25.15
013J871087	Sediment Pulp	1.81	24.6	1.1	<0.05	5.1	17.89	72.9	0.04	<1	0.8	20.8	10.06	36.30	6.47	1.04	5.46	0.66	3.57	0.71	1.92
013J871088	Sediment Pulp	2.65	3.2	0.6	0.05	0.6	326.99	297.2	0.03	3	8.4	5.0	49.34	179.85	34.08	2.39	37.64	7.16	46.45	11.22	35.90
013J871089	Sediment Pulp	3.54	2.7	0.8	<0.05	0.7	218.21	315.9	0.04	2	7.8	3.1	52.21	194.49	34.21	2.79	36.19	6.12	37.40	8.53	24.25



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J871060	Sediment Pulp	1.03	6.50	0.90	<10	<2
013J871061	Sediment Pulp	2.64	15.78	2.34	<10	<2
013J871062	Sediment Pulp	0.37	2.31	0.34	<10	<2
013J871063	Sediment Pulp	0.35	2.35	0.31	<10	2
013J871064	Sediment Pulp	3.15	19.05	2.71	<10	<2
013J871065	Sediment Pulp	2.52	15.54	2.35	<10	<2
013J871066	Sediment Pulp	0.31	1.98	0.26	<10	<2
013J871067	Sediment Pulp	2.27	13.66	2.00	<10	<2
013J871068	Sediment Pulp	0.43	2.90	0.39	<10	<2
013J871069	Sediment Pulp	0.32	1.98	0.29	<10	<2
013J871070	Sediment Pulp	1.04	6.75	0.90	<10	<2
013J871071	Sediment Pulp	0.67	3.99	0.56	<10	<2
013J871072	Sediment Pulp	0.13	0.90	0.13	<10	<2
013J871073	Sediment Pulp	0.71	4.15	0.61	<10	<2
013J871074	Sediment Pulp	0.84	5.39	0.73	<10	<2
013J871075	Sediment Pulp	2.41	16.02	2.47	<10	<2
013J871076	Sediment Pulp	3.24	20.05	3.27	13	<2
013J871077	Sediment Pulp	1.70	11.18	1.69	11	3
013J871078	Sediment Pulp	2.66	16.73	2.69	<10	<2
013J871079	Sediment Pulp	2.01	13.25	2.05	<10	<2
013J871080	Sediment Pulp	3.88	24.16	3.45	<10	<2
013J871081	Sediment Pulp	2.22	14.40	2.10	<10	<2
013J871082	Sediment Pulp	3.46	21.20	3.04	13	<2
013J871083	Sediment Pulp	3.63	21.53	3.27	<10	<2
013J871084	Sediment Pulp	4.71	30.12	4.43	<10	<2
013J871085	Sediment Pulp	4.38	26.65	3.71	12	<2
013J871086	Sediment Pulp	3.44	20.27	2.97	17	<2
013J871087	Sediment Pulp	0.28	1.72	0.26	<10	<2
013J871088	Sediment Pulp	5.25	30.22	4.37	14	<2
013J871089	Sediment Pulp	3.52	20.21	2.91	<10	<2



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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J871090	Sediment Pulp	3.34	4.15	7.46	48.3	9	2.3	2.4	98	1.36	1.3	7.8	0.2	6.9	13.7	0.12	0.07	0.03	19	0.28	0.077
013J871091	Sediment Pulp	10.31	14.50	23.76	305.7	105	6.9	3.3	94	2.20	0.6	35.3	<0.2	4.4	23.9	1.16	0.12	0.05	38	0.33	0.062
013J871092	Sediment Pulp	14.06	21.67	26.64	344.4	139	7.5	3.2	99	1.79	<0.1	53.5	<0.2	5.3	22.5	1.42	0.09	0.07	36	0.36	0.085
013J871093	Sediment Pulp	19.33	22.44	14.71	219.4	157	6.3	2.9	119	1.78	0.4	76.2	<0.2	5.9	20.2	0.71	0.11	0.08	32	0.36	0.081
013J871094	Sediment Pulp	5.30	10.50	10.60	114.0	27	3.9	2.7	145	1.77	1.6	21.5	0.9	10.6	15.7	0.32	0.18	0.05	20	0.32	0.065
013J871095	Sediment Pulp	25.16	15.25	12.40	144.6	151	4.9	8.8	4296	4.17	2.5	31.7	0.3	11.9	27.0	0.44	0.09	0.08	30	0.41	0.123
013J871096	Sediment Pulp	19.24	15.81	14.49	317.1	65	5.5	3.9	114	2.03	1.5	99.5	0.4	5.9	26.0	1.42	0.14	0.10	33	0.34	0.054
013J871097	Sediment Pulp	8.50	38.85	18.13	276.4	139	7.6	2.2	79	1.25	<0.1	82.9	<0.2	2.2	22.8	1.44	0.21	0.13	33	0.42	0.064
013J871098	Sediment Pulp	3.40	18.53	10.74	145.5	88	5.4	2.4	95	0.67	<0.1	54.3	<0.2	1.2	32.0	0.88	0.13	0.06	16	0.46	0.059
013J871099	Sediment Pulp	32.38	57.41	9.97	237.5	181	13.0	7.1	301	2.14	5.4	121.2	1.0	9.9	34.6	1.03	0.56	0.05	41	0.55	0.119
013J871100	Sediment Pulp	10.07	15.34	9.89	142.1	91	4.6	4.0	102	1.40	4.1	64.7	0.3	6.6	26.6	0.47	0.33	0.03	35	0.37	0.055
013J871101	Sediment Pulp	18.58	21.59	14.08	205.6	160	6.2	2.8	114	1.72	0.2	69.1	<0.2	5.9	19.6	0.72	0.09	0.09	31	0.35	0.079
013J871102	Sediment Pulp	34.02	40.28	35.36	402.2	620	9.8	39.8	5557	6.12	4.1	78.4	<0.2	8.4	37.2	1.55	0.32	0.05	86	0.62	0.225
013J871103	Sediment Pulp	3.01	20.48	15.64	394.7	96	8.5	3.8	114	0.85	0.3	116.1	0.4	2.1	43.5	1.55	0.18	0.04	19	0.48	0.065
013J871104	Sediment Pulp	78.68	51.11	28.48	671.4	886	12.6	17.4	2446	6.12	5.6	86.6	<0.2	4.3	22.5	3.64	0.21	0.24	40	0.31	0.188
013J871105	Sediment Pulp	10.18	48.05	21.77	368.2	155	9.9	3.4	78	0.78	0.3	59.3	<0.2	0.9	24.8	2.36	0.20	0.11	23	0.50	0.074
013J871106	Sediment Pulp	11.39	44.24	18.57	366.9	144	9.4	3.7	82	0.78	0.7	58.2	<0.2	0.9	25.1	2.26	0.21	0.10	25	0.50	0.071
013J871107	Sediment Pulp	12.88	16.63	11.15	216.2	112	6.2	6.2	402	3.14	1.6	30.0	1.6	5.8	20.6	1.01	0.09	0.05	34	0.35	0.091
013J871108	Sediment Pulp	8.40	38.39	78.85	283.3	534	11.0	6.9	401	1.63	32.3	8.4	3.2	1.5	59.9	1.18	0.50	0.86	19	5.48	0.060
013J871109	Sediment Pulp	1.83	12.06	12.18	74.6	56	3.0	1.2	36	0.39	0.2	25.3	<0.2	1.1	14.4	0.33	0.02	0.14	12	0.23	0.035
013J871110	Sediment Pulp	13.22	18.24	11.70	233.8	183	5.8	12.0	664	5.48	2.1	32.5	<0.2	7.5	24.0	0.78	0.17	0.07	35	0.37	0.105
013J871111	Sediment Pulp	12.01	24.54	22.17	276.1	193	6.1	3.8	133	1.69	0.4	79.5	<0.2	5.2	22.4	0.99	0.06	0.05	31	0.37	0.127



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J871090	Sediment Pulp	55.0	7.0	0.11	16.7	0.066	<20	0.37	0.010	0.03	0.3	1.4	0.04	0.02	9	<0.1	<0.02	2.0	0.19	0.1	0.05
013J871091	Sediment Pulp	140.1	14.5	0.15	54.0	0.062	<20	1.40	0.018	0.03	0.4	2.5	0.08	0.22	51	1.6	<0.02	3.2	0.34	0.1	0.06
013J871092	Sediment Pulp	215.8	17.5	0.17	55.5	0.063	<20	1.73	0.019	0.04	0.6	2.6	0.07	0.20	72	2.5	<0.02	4.0	0.52	0.2	0.10
013J871093	Sediment Pulp	176.1	16.4	0.15	57.4	0.067	<20	1.46	0.017	0.03	0.7	2.5	0.08	0.16	43	2.2	<0.02	3.5	0.38	0.1	0.06
013J871094	Sediment Pulp	88.1	10.8	0.14	38.3	0.094	<20	0.55	0.013	0.04	0.5	2.2	0.06	0.06	15	0.2	<0.02	2.7	0.49	0.1	0.10
013J871095	Sediment Pulp	103.7	14.8	0.19	195.2	0.086	<20	0.94	0.022	0.05	0.6	2.9	0.11	0.04	35	1.3	<0.02	3.1	0.47	0.1	0.08
013J871096	Sediment Pulp	104.5	13.5	0.14	61.0	0.062	<20	0.88	0.019	0.03	0.7	2.3	0.05	0.15	40	1.2	<0.02	2.7	0.33	0.1	0.06
013J871097	Sediment Pulp	240.8	15.3	0.13	49.7	0.039	<20	1.36	0.015	0.03	0.4	1.8	0.08	0.32	83	5.1	<0.02	3.0	0.41	0.1	0.02
013J871098	Sediment Pulp	106.1	11.3	0.16	171.6	0.059	<20	0.95	0.020	0.03	0.4	1.8	0.06	0.26	67	3.0	<0.02	3.2	0.39	<0.1	0.07
013J871099	Sediment Pulp	107.1	26.1	0.36	76.7	0.120	<20	1.10	0.041	0.12	1.2	4.7	0.16	0.06	12	3.0	0.02	3.8	0.70	0.1	0.07
013J871100	Sediment Pulp	63.9	13.3	0.11	61.2	0.056	<20	0.62	0.017	0.03	0.9	2.1	0.08	0.09	41	1.7	<0.02	1.8	0.18	<0.1	0.04
013J871101	Sediment Pulp	175.1	16.0	0.15	54.6	0.063	<20	1.41	0.018	0.03	0.5	2.6	0.08	0.16	46	1.8	<0.02	3.3	0.37	0.1	0.07
013J871102	Sediment Pulp	209.3	32.3	0.14	100.7	0.099	<20	2.33	0.016	0.03	0.9	3.8	0.39	0.20	164	3.2	<0.02	7.7	0.35	0.1	0.05
013J871103	Sediment Pulp	95.9	16.0	0.25	67.1	0.073	<20	0.80	0.030	0.05	0.3	2.2	0.07	0.33	64	1.1	<0.02	2.7	0.49	<0.1	0.09
013J871104	Sediment Pulp	203.8	30.3	0.13	109.4	0.050	<20	2.75	0.014	0.04	2.2	3.5	0.46	0.20	112	5.8	<0.02	4.2	0.72	0.2	0.03
013J871105	Sediment Pulp	110.1	17.1	0.14	85.8	0.048	<20	1.24	0.016	0.04	0.4	1.6	0.08	0.33	85	1.9	<0.02	3.1	0.54	<0.1	0.05
013J871106	Sediment Pulp	106.7	18.0	0.14	85.3	0.053	<20	1.19	0.014	0.03	0.4	1.6	0.07	0.32	89	1.4	<0.02	3.0	0.55	<0.1	0.07
013J871107	Sediment Pulp	101.6	15.2	0.15	56.2	0.067	<20	1.07	0.019	0.04	0.5	2.5	0.09	0.07	32	0.9	<0.02	2.6	0.34	0.2	0.04
013J871108	Sediment Pulp	10.0	10.9	0.55	85.5	0.038	<20	0.42	0.027	0.05	0.4	2.2	0.19	1.41	83	0.7	<0.02	1.8	0.46	0.1	0.03
013J871109	Sediment Pulp	91.2	7.6	0.07	25.2	0.030	<20	0.58	0.009	0.02	0.2	0.8	0.02	0.15	31	1.1	<0.02	1.7	0.16	<0.1	0.05
013J871110	Sediment Pulp	104.0	17.4	0.16	70.1	0.073	<20	1.27	0.020	0.05	0.5	3.0	0.11	0.08	54	2.0	<0.02	2.8	0.38	0.1	0.04
013J871111	Sediment Pulp	219.2	14.9	0.16	56.4	0.057	<20	1.50	0.018	0.04	0.5	2.2	0.11	0.17	70	2.4	<0.02	3.9	0.39	0.1	0.06



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J871090	Sediment Pulp	3.46	3.4	0.9	<0.05	1.3	36.02	92.9	<0.02	<1	1.1	3.9	13.51	46.53	7.79	0.77	6.67	1.12	6.69	1.25	3.79
013J871091	Sediment Pulp	4.37	3.4	1.1	<0.05	1.5	126.06	244.5	0.04	<1	6.7	6.2	35.83	128.79	24.07	1.98	23.38	3.59	21.04	4.66	14.32
013J871092	Sediment Pulp	4.42	4.1	1.0	0.05	2.4	259.96	316.3	0.05	2	15.8	6.0	53.96	200.08	38.03	2.61	42.76	7.23	46.52	9.77	28.71
013J871093	Sediment Pulp	5.28	3.5	1.2	<0.05	2.0	157.98	282.0	0.07	1	9.5	7.3	44.24	163.42	29.45	2.38	29.16	4.75	27.74	5.93	17.74
013J871094	Sediment Pulp	6.58	5.6	1.6	<0.05	3.4	66.60	139.5	0.02	<1	2.5	6.5	21.46	79.54	14.40	1.34	12.96	1.98	10.79	2.42	7.66
013J871095	Sediment Pulp	3.66	5.5	1.1	<0.05	1.9	85.07	202.8	0.04	1	3.3	7.2	26.18	91.89	16.07	1.49	14.66	2.39	15.53	3.06	9.32
013J871096	Sediment Pulp	3.90	3.1	0.9	<0.05	2.1	68.89	178.7	0.04	<1	1.5	7.4	25.40	94.62	15.95	1.40	15.25	2.17	12.12	2.52	7.18
013J871097	Sediment Pulp	3.07	2.5	0.8	<0.05	1.5	150.26	418.0	0.05	2	3.3	5.2	66.24	255.86	47.19	3.27	45.22	6.12	31.58	5.63	15.68
013J871098	Sediment Pulp	3.39	2.6	0.8	<0.05	1.9	92.52	151.7	0.04	2	2.8	5.0	25.75	97.86	18.18	2.04	18.23	2.62	15.86	3.29	9.19
013J871099	Sediment Pulp	3.11	10.2	1.1	<0.05	2.9	111.45	164.6	0.04	4	2.5	9.0	26.82	97.47	18.76	1.78	18.09	2.84	17.51	3.76	10.99
013J871100	Sediment Pulp	3.54	2.1	0.7	<0.05	1.6	56.92	120.3	<0.02	7	2.2	2.7	15.69	55.34	9.38	0.84	10.03	1.57	9.24	1.96	5.72
013J871101	Sediment Pulp	5.06	3.2	1.1	<0.05	1.8	156.18	283.7	0.05	1	10.1	7.1	43.95	164.09	29.02	2.29	27.33	4.36	26.44	5.50	16.34
013J871102	Sediment Pulp	3.52	2.7	0.8	0.05	1.2	149.82	501.9	0.11	3	5.9	3.8	48.53	179.14	31.60	2.77	31.28	4.98	29.29	6.11	17.22
013J871103	Sediment Pulp	2.90	4.3	0.8	<0.05	2.3	70.31	110.2	0.04	8	2.3	8.0	25.33	100.05	17.96	2.10	16.26	2.28	13.00	2.55	7.06
013J871104	Sediment Pulp	1.86	3.9	0.6	<0.05	0.5	191.02	465.8	0.09	3	9.1	5.1	50.05	194.70	36.05	4.41	40.39	6.01	35.22	7.16	21.29
013J871105	Sediment Pulp	2.83	4.0	0.8	<0.05	1.3	170.29	178.0	0.05	3	5.6	4.9	30.57	116.14	24.34	2.70	26.93	4.60	27.85	6.15	17.38
013J871106	Sediment Pulp	3.05	3.7	0.8	<0.05	1.5	163.05	182.8	0.03	2	4.9	5.7	30.37	119.10	23.81	2.73	27.58	4.34	26.56	5.59	17.16
013J871107	Sediment Pulp	3.07	3.8	0.8	<0.05	1.1	83.84	203.2	0.03	2	4.6	4.0	25.42	92.17	15.18	1.41	15.34	2.38	15.29	2.96	9.00
013J871108	Sediment Pulp	0.64	3.2	3.0	<0.05	1.0	9.66	16.8	0.46	18	<0.1	3.7	2.69	11.04	2.31	0.46	2.00	0.30	1.81	0.35	0.94
013J871109	Sediment Pulp	2.71	1.4	0.7	<0.05	1.6	60.92	139.6	<0.02	<1	2.4	2.2	20.12	67.86	11.38	0.79	10.28	1.65	9.91	2.16	6.49
013J871110	Sediment Pulp	3.00	4.6	0.9	<0.05	1.3	90.02	238.5	0.04	1	5.6	5.0	25.31	93.34	16.55	1.53	15.05	2.47	14.90	3.42	9.98
013J871111	Sediment Pulp	5.01	5.0	0.8	<0.05	1.7	226.77	331.8	0.05	1	10.8	6.0	52.46	190.86	36.43	2.31	38.87	6.48	41.34	8.66	25.57



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Project: None Given
Report Date: April 07, 2022

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CERTIFICATE OF ANALYSIS

VAN22000382.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J871090	Sediment Pulp		0.54	3.18	0.46	<10	2
013J871091	Sediment Pulp		1.97	12.31	1.82	<10	<2
013J871092	Sediment Pulp		4.18	24.44	3.67	<10	<2
013J871093	Sediment Pulp		2.59	16.08	2.47	<10	<2
013J871094	Sediment Pulp		1.00	6.54	0.97	<10	<2
013J871095	Sediment Pulp		1.44	8.28	1.19	<10	<2
013J871096	Sediment Pulp		1.04	6.30	0.94	<10	<2
013J871097	Sediment Pulp		2.02	12.04	1.79	<10	4
013J871098	Sediment Pulp		1.34	7.74	1.15	<10	<2
013J871099	Sediment Pulp		1.61	9.74	1.52	<10	<2
013J871100	Sediment Pulp		0.84	4.89	0.76	<10	<2
013J871101	Sediment Pulp		2.53	15.97	2.40	<10	<2
013J871102	Sediment Pulp		2.50	14.46	1.96	<10	5
013J871103	Sediment Pulp		0.99	5.50	0.88	<10	<2
013J871104	Sediment Pulp		2.89	17.15	2.55	<10	3
013J871105	Sediment Pulp		2.44	14.17	2.24	<10	<2
013J871106	Sediment Pulp		2.36	14.16	2.06	<10	<2
013J871107	Sediment Pulp		1.32	7.93	1.19	<10	<2
013J871108	Sediment Pulp		0.13	0.76	0.13	<10	<2
013J871109	Sediment Pulp		0.84	5.15	0.74	<10	<2
013J871110	Sediment Pulp		1.43	8.83	1.24	<10	<2
013J871111	Sediment Pulp		3.86	21.77	3.01	<10	<2



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QUALITY CONTROL REPORT

VAN22000382.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013J871000	Sediment Pulp	9.66	41.80	82.51	302.4	613	12.3	7.5	421	1.79	34.2	9.4	3.9	1.6	67.4	1.47	0.61	0.94	21	6.01	0.068
REP 013J871000	QC	9.38	40.04	82.17	301.7	598	12.1	7.3	416	1.79	34.3	9.6	3.0	1.7	65.7	1.29	0.58	1.02	21	6.01	0.064
013J871036	Sediment Pulp	3.07	8.24	5.83	31.7	63	3.3	1.0	40	0.39	<0.1	5.8	<0.2	0.7	19.1	0.14	0.03	0.02	7	0.38	0.034
REP 013J871036	QC	3.02	8.07	5.53	31.6	59	3.2	0.9	39	0.38	<0.1	5.6	<0.2	0.6	18.8	0.12	0.03	<0.02	8	0.37	0.034
013J871072	Sediment Pulp	9.25	39.70	75.19	298.1	582	11.3	7.3	428	1.75	36.4	9.2	3.3	1.6	67.4	1.30	0.52	1.00	21	6.24	0.067
REP 013J871072	QC	9.04	40.18	79.16	301.5	630	12.1	7.3	416	1.72	34.7	9.4	2.6	1.6	65.6	1.35	0.54	1.01	21	6.16	0.063
013J871108	Sediment Pulp	8.40	38.39	78.85	283.3	534	11.0	6.9	401	1.63	32.3	8.4	3.2	1.5	59.9	1.18	0.50	0.86	19	5.48	0.060
REP 013J871108	QC	9.01	40.95	85.36	297.1	624	11.7	7.5	431	1.75	34.4	8.7	2.1	1.5	64.2	1.35	0.50	0.91	21	5.88	0.060
Reference Materials																					
STD DS11	Standard	13.76	141.67	134.13	333.5	1737	76.1	13.4	1011	3.05	41.6	2.8	47.7	8.9	68.0	2.43	6.13	11.72	49	1.04	0.071
STD DS11	Standard	15.21	149.82	142.61	346.3	2042	80.6	13.8	1013	3.10	45.0	2.7	50.1	9.4	72.8	2.45	6.41	11.74	49	1.05	0.067
STD DS11	Standard	13.95	136.49	126.60	308.2	2723	72.9	12.7	950	2.85	40.4	2.5	68.3	8.4	65.2	2.36	6.07	10.53	46	0.97	0.062
STD DS11	Standard	15.15	143.97	134.13	341.0	1598	76.8	13.6	1000	3.05	42.7	2.8	46.3	9.4	72.1	2.44	6.37	11.39	46	1.02	0.070
STD OREAS262	Standard	0.58	114.26	58.12	156.6	481	62.1	26.8	532	3.20	36.4	1.3	55.3	10.4	37.3	0.71	2.53	1.03	21	2.92	0.039
STD OREAS262	Standard	0.54	111.76	56.65	147.8	469	63.7	26.5	522	3.20	35.6	1.2	53.0	10.2	36.2	0.61	2.03	1.02	21	2.82	0.038
STD OREAS262	Standard	0.56	108.19	54.84	148.6	461	58.6	25.8	516	3.07	35.1	1.2	49.5	10.5	35.1	0.60	1.95	0.97	21	2.85	0.038
STD OREAS262	Standard	0.55	111.37	56.01	143.8	472	60.8	25.0	523	3.13	34.0	1.3	55.4	10.4	35.3	0.60	2.12	0.99	21	2.79	0.037
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Project: None Given
Report Date: April 07, 2022

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QUALITY CONTROL REPORT

VAN22000382.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013J871000	Sediment Pulp	10.9	12.4	0.57	96.1	0.046	<20	0.45	0.028	0.05	0.5	2.8	0.22	1.51	104	0.8	0.03	2.0	0.55	<0.1	0.03
REP 013J871000	QC	11.2	12.4	0.57	94.4	0.045	<20	0.45	0.028	0.05	0.6	2.5	0.22	1.49	89	0.7	<0.02	2.0	0.52	<0.1	0.03
013J871036	Sediment Pulp	35.8	4.9	0.05	28.3	0.039	<20	0.47	0.021	0.02	<0.1	1.3	0.03	0.31	57	1.9	<0.02	1.8	0.31	<0.1	0.04
REP 013J871036	QC	35.5	4.6	0.05	26.6	0.039	<20	0.44	0.019	0.02	0.1	1.4	0.03	0.31	56	2.0	<0.02	1.7	0.30	<0.1	0.04
013J871072	Sediment Pulp	11.0	12.5	0.59	90.7	0.043	<20	0.45	0.028	0.05	0.6	2.7	0.21	1.45	90	1.1	0.03	1.9	0.50	<0.1	0.04
REP 013J871072	QC	11.0	12.0	0.57	93.3	0.043	<20	0.45	0.028	0.05	0.5	2.3	0.22	1.46	107	1.0	<0.02	2.1	0.52	<0.1	0.04
013J871108	Sediment Pulp	10.0	10.9	0.55	85.5	0.038	<20	0.42	0.027	0.05	0.4	2.2	0.19	1.41	83	0.7	<0.02	1.8	0.46	0.1	0.03
REP 013J871108	QC	10.7	11.6	0.59	91.2	0.039	<20	0.45	0.029	0.05	0.5	2.2	0.20	1.51	96	0.7	0.03	2.0	0.49	<0.1	0.03
Reference Materials																					
STD DS11	Standard	19.3	57.3	0.83	420.6	0.091	<20	1.15	0.073	0.38	2.3	3.4	5.08	0.29	258	2.1	4.50	5.0	2.85	<0.1	0.07
STD DS11	Standard	20.1	62.1	0.84	452.3	0.102	<20	1.14	0.074	0.40	2.9	3.5	4.89	0.28	267	2.1	4.82	4.9	3.10	<0.1	0.06
STD DS11	Standard	17.2	55.0	0.79	396.8	0.091	<20	1.06	0.065	0.37	2.7	3.0	4.48	0.26	249	2.0	4.28	4.4	2.71	<0.1	0.04
STD DS11	Standard	19.4	58.9	0.83	425.9	0.097	<20	1.11	0.070	0.39	2.6	3.6	4.80	0.26	252	2.3	4.56	5.1	2.92	<0.1	0.07
STD OREAS262	Standard	18.5	40.8	1.16	263.2	0.003	<20	1.23	0.066	0.30	0.1	3.4	0.47	0.27	190	0.4	0.27	3.7	2.46	<0.1	0.17
STD OREAS262	Standard	17.4	42.2	1.14	254.5	0.003	<20	1.25	0.065	0.31	<0.1	3.3	0.45	0.26	153	<0.1	0.21	3.7	2.42	<0.1	0.18
STD OREAS262	Standard	17.3	40.8	1.12	241.1	0.003	<20	1.24	0.064	0.30	<0.1	3.6	0.44	0.25	154	<0.1	0.20	4.1	2.35	<0.1	0.15
STD OREAS262	Standard	18.3	39.7	1.12	250.1	0.003	<20	1.20	0.064	0.31	0.1	3.3	0.44	0.24	173	0.4	0.21	3.9	2.47	<0.1	0.13
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Project: None Given

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QUALITY CONTROL REPORT

VAN22000382.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013J871000	Sediment Pulp	0.81	3.7	3.5	<0.05	1.4	10.91	18.5	0.53	16	0.3	4.1	3.08	12.93	2.59	0.49	2.44	0.34	1.87	0.35	1.01
REP 013J871000	QC	0.81	3.6	3.2	<0.05	1.4	10.76	19.3	0.50	19	<0.1	4.4	3.15	13.09	2.53	0.53	2.46	0.34	1.98	0.39	1.07
013J871036	Sediment Pulp	2.11	1.4	0.5	<0.05	1.0	11.25	64.7	<0.02	<1	0.4	0.7	7.69	25.84	4.14	0.54	3.30	0.49	2.50	0.45	1.41
REP 013J871036	QC	2.10	1.4	0.5	<0.05	1.0	11.06	64.0	<0.02	<1	0.2	0.7	7.60	25.97	3.84	0.51	3.42	0.44	2.22	0.44	1.24
013J871072	Sediment Pulp	0.67	3.6	3.2	<0.05	1.2	10.30	17.3	0.50	20	0.2	3.7	2.85	11.75	2.43	0.46	2.28	0.35	1.85	0.39	0.94
REP 013J871072	QC	0.71	3.5	3.1	<0.05	1.4	10.53	17.4	0.55	17	0.1	4.4	2.74	11.59	2.41	0.54	2.26	0.33	1.97	0.34	1.11
013J871108	Sediment Pulp	0.64	3.2	3.0	<0.05	1.0	9.66	16.8	0.46	18	<0.1	3.7	2.69	11.04	2.31	0.46	2.00	0.30	1.81	0.35	0.94
REP 013J871108	QC	0.59	3.3	3.1	<0.05	1.1	10.12	16.8	0.46	18	0.1	3.5	2.72	11.91	2.49	0.45	2.15	0.30	1.79	0.37	0.97
Reference Materials																					
STD DS11	Standard	1.11	33.4	1.7	<0.05	2.5	8.08	36.9	0.26	45	0.9	22.4	4.08	15.24	2.78	0.59	2.31	0.30	1.59	0.32	0.85
STD DS11	Standard	1.38	35.7	2.1	<0.05	2.6	8.45	40.4	0.28	45	0.5	22.9	4.41	15.92	2.87	0.55	2.44	0.36	1.52	0.30	0.92
STD DS11	Standard	1.27	31.8	1.7	<0.05	2.2	7.40	34.8	0.22	40	0.6	20.9	3.79	13.82	2.57	0.50	2.11	0.26	1.43	0.28	0.77
STD DS11	Standard	1.44	34.1	1.9	<0.05	2.5	8.23	38.5	0.25	50	0.9	22.5	4.27	15.27	2.62	0.55	2.46	0.32	1.74	0.30	0.83
STD OREAS262	Standard	<0.02	19.1	0.5	<0.05	6.7	10.98	36.6	0.03	<1	1.0	16.7	4.33	16.00	3.68	0.75	3.24	0.45	2.28	0.43	1.19
STD OREAS262	Standard	<0.02	19.3	0.5	<0.05	6.2	10.80	34.4	0.04	1	1.2	17.0	4.25	15.89	3.68	0.66	3.15	0.43	2.18	0.40	1.05
STD OREAS262	Standard	<0.02	18.6	0.6	<0.05	5.3	10.89	35.1	0.03	1	1.7	17.3	4.26	15.76	3.38	0.69	3.16	0.41	2.06	0.43	1.07
STD OREAS262	Standard	<0.02	18.5	0.5	<0.05	6.1	10.47	34.6	0.04	<1	0.9	16.5	4.17	15.97	3.48	0.76	3.14	0.42	2.31	0.39	1.01
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Bureau Veritas Commodities Canada Ltd.

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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 07, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000382.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013J871000	Sediment Pulp	0.14	0.91	0.15	<10	<2
REP 013J871000	QC	0.15	0.93	0.14	<10	<2
013J871036	Sediment Pulp	0.19	1.18	0.20	<10	<2
REP 013J871036	QC	0.19	1.12	0.16	<10	<2
013J871072	Sediment Pulp	0.13	0.90	0.13	<10	<2
REP 013J871072	QC	0.12	0.89	0.14	<10	3
013J871108	Sediment Pulp	0.13	0.76	0.13	<10	<2
REP 013J871108	QC	0.14	0.82	0.15	<10	<2
Reference Materials						
STD DS11	Standard	0.12	0.79	0.11	95	173
STD DS11	Standard	0.13	0.76	0.13	120	182
STD DS11	Standard	0.10	0.69	0.10	94	160
STD DS11	Standard	0.12	0.86	0.11	93	170
STD OREAS262	Standard	0.15	0.98	0.10	<10	3
STD OREAS262	Standard	0.15	0.87	0.14	<10	<2
STD OREAS262	Standard	0.15	0.78	0.10	<10	3
STD OREAS262	Standard	0.14	0.90	0.15	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 25, 2022
Report Date: April 18, 2022
Page: 1 of 11

CERTIFICATE OF ANALYSIS

VAN22000383.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 272

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	261	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	260	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Client: Geological Survey of Canada
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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 18, 2022

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Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831541	Sediment Pulp	4.56	22.01	2.18	59.6	63	7.5	2.3	44	0.79	1.7	4.7	0.6	1.3	95.5	0.27	0.05	<0.02	65	0.59	0.022
013K831542	Sediment Pulp	6.70	23.65	1.06	41.3	63	3.7	1.7	28	0.27	5.8	8.5	0.3	0.9	29.8	0.25	0.09	<0.02	209	0.50	0.020
013K831543	Sediment Pulp	9.26	31.21	1.31	68.5	75	5.1	2.0	34	0.35	7.0	12.3	2.2	0.8	36.1	0.29	0.12	<0.02	312	0.66	0.022
013K831544	Sediment Pulp	8.66	39.43	81.30	287.0	610	11.8	7.3	406	1.67	31.8	9.1	2.5	1.6	63.4	1.28	0.59	0.95	20	5.63	0.057
013K831545	Sediment Pulp	4.88	21.59	2.15	64.4	62	7.6	2.5	46	0.78	2.0	5.0	0.7	1.4	101.6	0.26	0.06	<0.02	64	0.59	0.023
013K831546	Sediment Pulp	1.65	48.43	5.02	73.8	204	23.4	14.6	744	3.59	2.8	4.2	1.1	4.0	30.6	0.27	0.05	0.04	47	0.53	0.128
013K831547	Sediment Pulp	3.32	30.11	4.51	92.2	360	15.6	10.5	466	2.64	0.7	2.3	1.7	1.1	35.2	0.49	0.03	0.03	47	0.52	0.170
013K831548	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831549	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831550	Sediment Pulp	3.80	48.64	4.54	60.8	97	20.8	12.0	1232	2.22	2.5	6.3	0.9	4.6	31.0	0.26	0.03	0.03	39	0.49	0.118
013K831551	Sediment Pulp	1.36	37.85	4.56	56.9	67	19.9	13.8	1208	2.68	1.3	3.6	0.8	3.0	24.8	0.21	0.04	0.03	40	0.40	0.105
013K831552	Sediment Pulp	5.63	45.35	3.32	121.3	133	21.0	10.3	413	3.58	0.9	2.0	1.1	1.3	27.0	0.64	0.02	<0.02	40	0.41	0.121
013K831553	Sediment Pulp	3.11	40.90	5.02	105.2	254	21.9	17.6	2200	3.73	3.3	3.1	1.1	2.0	26.9	0.45	0.04	0.03	34	0.43	0.160
013K831554	Sediment Pulp	0.99	39.71	1.78	53.3	102	17.5	4.5	55	0.39	<0.1	1.0	8.6	0.3	16.6	0.22	0.05	<0.02	11	0.35	0.037
013K831555	Sediment Pulp	4.25	49.42	4.30	85.4	193	25.6	16.3	1197	3.08	2.2	3.4	1.0	2.1	22.0	0.51	0.07	0.07	48	0.46	0.202
013K831556	Sediment Pulp	4.77	41.80	5.92	75.1	445	18.0	8.6	261	2.19	1.8	2.1	1.5	2.1	27.3	0.40	0.09	0.06	42	0.50	0.122
013K831557	Sediment Pulp	22.12	43.12	9.46	185.6	404	23.1	19.0	1003	9.03	3.6	3.7	1.2	3.5	39.1	0.79	0.08	0.05	39	0.66	0.174
013K831558	Sediment Pulp	9.18	47.69	8.66	83.6	314	16.7	15.4	1644	3.41	4.5	10.2	0.4	3.5	71.1	0.35	0.10	0.05	61	0.85	0.131
013K831559	Sediment Pulp	4.59	76.08	10.32	130.5	320	30.9	17.6	1558	3.76	4.2	10.0	0.9	5.8	37.2	0.52	0.09	0.08	47	0.57	0.201
013K831560	Sediment Pulp	1.13	15.47	5.32	37.6	197	10.9	6.8	513	1.97	1.7	2.1	0.4	6.1	19.5	0.11	0.03	0.04	28	0.38	0.089
013K831561	Sediment Pulp	6.37	55.76	3.93	252.1	214	115.0	7.8	311	1.01	2.8	2.6	1.0	1.4	21.7	2.63	0.22	<0.02	14	0.58	0.060
013K831562	Sediment Pulp	7.76	30.48	12.57	276.9	235	17.2	12.3	2845	3.29	2.8	7.4	0.6	3.5	31.1	0.61	0.04	0.06	33	0.48	0.153
013K831563	Sediment Pulp	2.41	91.22	9.61	191.7	494	65.5	12.3	1106	2.40	12.0	5.1	1.8	2.0	29.3	1.81	0.22	0.05	32	0.49	0.148
013K831564	Sediment Pulp	6.44	58.30	4.29	262.7	249	118.1	8.7	339	1.07	2.8	2.8	1.5	1.4	23.0	3.18	0.25	<0.02	14	0.60	0.066
013K831565	Sediment Pulp	2.02	21.57	4.92	65.3	122	19.1	17.6	207	2.49	3.3	2.9	0.3	2.5	35.5	0.24	0.03	0.03	34	0.76	0.135
013K831566	Sediment Pulp	2.98	25.37	3.78	70.6	232	17.5	13.9	164	2.46	0.9	2.7	0.3	1.1	44.3	0.32	<0.02	<0.02	32	0.92	0.168
013K831567	Sediment Pulp	19.16	74.33	3.49	105.4	322	29.8	18.3	1272	3.23	2.7	2.6	0.7	1.3	20.1	0.90	0.07	<0.02	32	0.38	0.190
013K831568	Sediment Pulp	8.80	25.62	3.75	24.4	17	13.6	6.1	127	1.24	1.0	3.0	<0.2	5.4	22.8	0.11	0.04	0.03	30	0.49	0.076
013K831569	Sediment Pulp	8.24	57.02	7.00	93.8	214	17.7	9.2	3944	2.16	1.1	18.0	0.9	1.4	36.0	0.74	0.04	0.04	36	0.65	0.138
013K831570	Sediment Pulp	0.90	30.94	28.35	128.8	2944	42.2	26.9	1201	3.06	24.6	3.8	2.7	8.8	27.4	0.52	0.72	3.14	45	0.62	0.090



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013K831541	Sediment Pulp			15.7	17.2	0.17	169.9	0.025	<20	0.52	0.015	0.03	<0.1	3.6	0.05	1.01	34	4.0	<0.02	1.4	0.37
013K831542	Sediment Pulp			9.0	12.6	0.07	112.5	0.008	<20	0.19	0.007	0.01	<0.1	2.3	0.03	0.70	65	3.8	<0.02	0.6	0.18
013K831543	Sediment Pulp			11.6	15.3	0.08	129.2	0.008	<20	0.25	0.011	0.02	0.4	2.3	0.03	0.84	67	4.1	<0.02	0.7	0.20
013K831544	Sediment Pulp			10.8	11.5	0.55	88.9	0.040	<20	0.43	0.028	0.05	0.6	2.4	0.20	1.44	103	1.0	<0.02	1.9	0.48
013K831545	Sediment Pulp			16.6	18.6	0.18	174.2	0.027	<20	0.52	0.015	0.03	<0.1	3.8	0.05	1.01	47	4.1	<0.02	1.6	0.38
013K831546	Sediment Pulp			36.8	29.4	0.49	144.8	0.078	<20	1.70	0.048	0.14	0.1	5.0	0.16	0.08	53	0.6	<0.02	4.0	0.60
013K831547	Sediment Pulp			37.2	23.1	0.27	173.4	0.044	<20	2.30	0.021	0.07	0.3	3.5	0.13	0.16	144	1.0	<0.02	3.9	0.53
013K831548	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831549	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831550	Sediment Pulp			33.8	24.4	0.43	148.4	0.077	<20	1.25	0.039	0.10	0.1	4.2	0.10	0.04	30	0.2	<0.02	3.4	0.49
013K831551	Sediment Pulp			31.0	25.3	0.42	117.6	0.081	<20	1.53	0.030	0.09	<0.1	4.2	0.09	0.06	26	<0.1	<0.02	3.7	0.46
013K831552	Sediment Pulp			40.1	20.6	0.20	154.9	0.035	<20	2.00	0.015	0.05	0.1	4.1	0.10	0.16	56	1.0	<0.02	2.4	0.32
013K831553	Sediment Pulp			32.8	23.4	0.38	207.3	0.048	<20	2.17	0.031	0.09	<0.1	4.3	0.13	0.14	87	1.3	<0.02	3.3	0.52
013K831554	Sediment Pulp			22.0	8.8	0.10	77.7	0.016	<20	1.06	0.008	0.02	<0.1	1.1	0.06	0.22	76	0.5	<0.02	1.3	0.24
013K831555	Sediment Pulp			36.3	23.5	0.22	193.9	0.036	<20	1.81	0.020	0.05	0.2	3.5	0.11	0.12	84	0.8	<0.02	2.5	0.32
013K831556	Sediment Pulp			45.7	22.8	0.32	231.7	0.060	<20	1.88	0.018	0.12	0.3	3.1	0.12	0.11	141	0.5	<0.02	3.8	0.81
013K831557	Sediment Pulp			75.7	23.6	0.23	249.0	0.040	<20	2.30	0.010	0.08	0.2	4.5	0.29	0.19	170	2.0	<0.02	3.0	0.65
013K831558	Sediment Pulp			53.8	22.0	0.34	240.5	0.066	<20	1.69	0.018	0.12	0.4	3.5	0.14	1.23	115	1.2	<0.02	3.7	0.86
013K831559	Sediment Pulp			61.1	29.8	0.62	264.7	0.089	<20	2.23	0.030	0.28	0.3	5.2	0.27	0.59	78	1.8	0.02	5.0	1.50
013K831560	Sediment Pulp			28.7	16.2	0.34	92.3	0.077	<20	0.64	0.022	0.06	0.2	2.2	0.05	0.03	10	<0.1	0.02	2.6	0.56
013K831561	Sediment Pulp			39.5	14.7	0.20	133.8	0.023	<20	0.72	0.028	0.05	<0.1	3.1	0.22	0.75	74	3.2	<0.02	1.3	0.40
013K831562	Sediment Pulp			82.0	20.9	0.39	274.5	0.066	<20	1.51	0.024	0.09	0.2	3.3	0.17	0.21	75	1.3	<0.02	3.2	1.09
013K831563	Sediment Pulp			60.1	64.9	0.64	237.9	0.049	<20	1.63	0.029	0.10	0.1	5.4	0.20	0.12	201	1.4	0.03	3.1	1.10
013K831564	Sediment Pulp			42.7	15.9	0.21	144.6	0.025	<20	0.75	0.030	0.05	<0.1	3.3	0.23	0.82	77	3.5	<0.02	1.5	0.42
013K831565	Sediment Pulp			29.7	19.4	0.36	129.9	0.073	<20	1.77	0.041	0.08	0.2	3.1	0.14	0.43	71	0.3	<0.02	3.4	0.46
013K831566	Sediment Pulp			27.7	18.0	0.23	122.1	0.041	<20	2.28	0.022	0.04	0.2	2.5	0.09	0.12	130	0.5	<0.02	3.3	0.37
013K831567	Sediment Pulp			32.2	17.1	0.10	154.7	0.024	<20	2.24	0.010	0.02	0.2	3.1	0.26	0.18	136	1.7	<0.02	1.8	0.19
013K831568	Sediment Pulp			23.8	19.0	0.32	47.1	0.097	<20	0.64	0.042	0.06	0.2	2.9	0.05	0.31	11	<0.1	<0.02	2.5	0.34
013K831569	Sediment Pulp			37.7	22.2	0.31	434.5	0.028	<20	1.41	0.023	0.07	0.1	4.1	0.14	0.26	75	2.6	<0.02	2.7	0.80
013K831570	Sediment Pulp			41.8	48.1	0.76	160.2	0.104	<20	1.62	0.030	0.26	0.2	5.9	0.26	0.15	295	0.3	0.05	5.5	1.38



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831541	Sediment Pulp	0.61	2.9	0.2	<0.05	2.4	15.61	18.4	<0.02	1	<0.1	3.2	3.74	15.05	2.82	0.53	2.65	0.38	2.09	0.46	1.15
013K831542	Sediment Pulp	0.27	1.2	0.1	<0.05	1.9	14.15	7.0	<0.02	2	0.4	1.2	2.78	11.22	2.13	0.56	2.10	0.30	1.86	0.41	1.17
013K831543	Sediment Pulp	0.28	1.3	0.2	<0.05	2.3	18.21	8.6	<0.02	3	0.4	1.2	3.32	13.77	2.74	0.57	2.73	0.38	2.51	0.51	1.63
013K831544	Sediment Pulp	0.66	3.3	3.1	<0.05	1.1	10.15	17.1	0.51	17	0.2	3.7	2.76	11.57	2.32	0.44	2.11	0.29	1.62	0.36	0.97
013K831545	Sediment Pulp	0.68	3.0	0.2	<0.05	2.5	16.40	19.8	<0.02	2	0.3	3.7	4.11	15.62	2.88	0.55	2.52	0.39	2.23	0.47	1.23
013K831546	Sediment Pulp	0.98	10.4	0.5	<0.05	2.0	24.49	68.0	<0.02	1	0.4	9.8	9.72	36.70	6.47	1.13	5.93	0.81	4.32	0.85	2.36
013K831547	Sediment Pulp	1.27	6.7	0.3	<0.05	1.0	22.36	66.5	<0.02	1	1.0	7.2	9.93	37.86	6.37	1.36	5.52	0.75	4.32	0.80	2.32
013K831548	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831549	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831550	Sediment Pulp	0.74	7.9	0.4	<0.05	1.3	18.21	64.2	0.02	2	0.4	8.9	8.62	32.20	5.42	0.90	4.52	0.63	3.51	0.60	1.90
013K831551	Sediment Pulp	0.76	7.0	0.4	<0.05	1.1	18.23	65.8	<0.02	<1	0.3	9.5	7.97	29.91	5.44	0.97	4.81	0.66	3.63	0.64	1.97
013K831552	Sediment Pulp	0.79	4.0	0.2	<0.05	0.6	24.71	74.4	<0.02	7	0.5	4.3	10.72	40.06	7.19	1.44	6.09	0.81	4.58	0.94	2.46
013K831553	Sediment Pulp	0.62	6.3	0.3	<0.05	1.0	23.39	64.2	<0.02	3	0.5	7.1	8.54	31.75	5.80	1.19	5.45	0.75	4.56	0.82	2.40
013K831554	Sediment Pulp	0.61	2.2	0.2	<0.05	0.4	16.09	33.1	<0.02	4	0.1	1.6	6.05	23.09	4.39	0.89	3.82	0.54	3.09	0.57	1.64
013K831555	Sediment Pulp	1.04	3.5	0.4	<0.05	0.9	21.25	73.8	<0.02	3	0.3	4.1	9.31	35.36	6.07	1.21	5.22	0.73	4.27	0.77	2.38
013K831556	Sediment Pulp	2.24	11.1	0.5	<0.05	2.1	26.59	69.8	<0.02	1	0.9	7.5	11.79	42.55	7.18	1.29	6.18	0.91	5.20	1.01	2.97
013K831557	Sediment Pulp	2.65	8.4	0.4	<0.05	3.5	59.54	150.7	0.02	4	3.6	5.3	19.42	71.35	13.06	2.02	12.83	2.11	11.57	2.27	6.60
013K831558	Sediment Pulp	1.93	11.4	0.6	<0.05	3.1	40.60	100.2	<0.02	12	2.4	10.5	13.95	51.70	9.83	1.53	8.72	1.36	7.78	1.48	4.30
013K831559	Sediment Pulp	2.05	23.4	0.6	<0.05	3.7	41.92	118.0	0.03	6	1.6	15.1	15.53	56.17	10.23	1.66	9.48	1.44	7.63	1.62	4.76
013K831560	Sediment Pulp	1.46	5.4	0.5	<0.05	4.9	13.42	56.5	<0.02	<1	0.2	7.7	6.82	24.98	4.09	0.76	3.53	0.48	2.90	0.50	1.56
013K831561	Sediment Pulp	0.51	3.8	0.2	<0.05	1.5	15.13	33.2	<0.02	9	0.5	3.5	7.91	26.91	4.09	0.84	3.40	0.45	2.67	0.45	1.46
013K831562	Sediment Pulp	1.52	9.6	0.5	<0.05	2.3	68.79	162.1	<0.02	2	8.5	9.8	21.46	76.37	14.37	1.91	14.40	2.25	13.11	2.44	7.06
013K831563	Sediment Pulp	0.77	8.8	0.4	<0.05	1.7	36.90	65.7	0.02	3	0.7	10.4	14.48	53.87	9.14	1.90	8.34	1.17	6.68	1.15	3.29
013K831564	Sediment Pulp	0.54	4.0	0.2	<0.05	1.4	16.31	36.1	<0.02	11	0.6	4.5	8.46	28.86	4.51	0.95	3.74	0.51	2.69	0.51	1.50
013K831565	Sediment Pulp	1.84	5.6	0.4	<0.05	2.1	16.69	59.5	<0.02	7	0.3	7.2	8.10	30.64	5.71	0.99	3.92	0.66	3.37	0.63	1.83
013K831566	Sediment Pulp	1.35	3.4	0.3	<0.05	1.2	18.78	56.3	<0.02	3	0.5	5.2	7.69	29.07	5.40	1.06	4.62	0.67	3.74	0.67	1.91
013K831567	Sediment Pulp	0.61	1.9	0.1	<0.05	1.4	27.48	59.1	<0.02	10	0.8	2.1	8.81	32.57	6.20	1.17	5.73	0.87	5.00	1.00	2.97
013K831568	Sediment Pulp	1.66	4.8	0.5	<0.05	9.9	12.50	48.5	<0.02	10	<0.1	5.1	6.29	22.64	4.03	0.72	3.18	0.52	2.62	0.47	1.32
013K831569	Sediment Pulp	0.75	6.8	0.3	<0.05	1.9	35.81	57.8	<0.02	<1	1.1	6.5	9.89	37.43	7.53	1.50	7.00	1.09	6.15	1.25	3.52
013K831570	Sediment Pulp	1.93	23.7	1.1	<0.05	5.6	18.32	75.4	0.04	<1	0.5	20.6	10.24	36.62	6.57	1.08	4.84	0.74	3.70	0.72	2.01



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K831541	Sediment Pulp		0.16	0.99	0.15	<10	<2
013K831542	Sediment Pulp		0.15	1.01	0.14	<10	<2
013K831543	Sediment Pulp		0.18	1.22	0.19	<10	7
013K831544	Sediment Pulp		0.15	0.90	0.14	<10	<2
013K831545	Sediment Pulp		0.18	0.98	0.17	<10	<2
013K831546	Sediment Pulp		0.33	2.12	0.32	<10	3
013K831547	Sediment Pulp		0.30	1.82	0.26	<10	<2
013K831548	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K831549	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K831550	Sediment Pulp		0.26	1.51	0.24	<10	<2
013K831551	Sediment Pulp		0.27	1.48	0.22	<10	<2
013K831552	Sediment Pulp		0.36	2.11	0.30	<10	<2
013K831553	Sediment Pulp		0.37	2.09	0.30	<10	<2
013K831554	Sediment Pulp		0.25	1.42	0.21	<10	<2
013K831555	Sediment Pulp		0.30	1.98	0.30	<10	<2
013K831556	Sediment Pulp		0.41	2.46	0.38	<10	<2
013K831557	Sediment Pulp		0.87	5.39	0.65	<10	<2
013K831558	Sediment Pulp		0.56	3.29	0.42	<10	5
013K831559	Sediment Pulp		0.64	4.12	0.56	<10	3
013K831560	Sediment Pulp		0.17	1.13	0.17	<10	<2
013K831561	Sediment Pulp		0.18	1.24	0.19	<10	<2
013K831562	Sediment Pulp		0.93	5.11	0.61	<10	<2
013K831563	Sediment Pulp		0.46	2.92	0.40	<10	<2
013K831564	Sediment Pulp		0.20	1.17	0.19	<10	<2
013K831565	Sediment Pulp		0.22	1.33	0.18	<10	<2
013K831566	Sediment Pulp		0.27	1.52	0.20	<10	<2
013K831567	Sediment Pulp		0.35	2.41	0.36	<10	<2
013K831568	Sediment Pulp		0.19	1.15	0.15	<10	<2
013K831569	Sediment Pulp		0.48	2.83	0.41	12	3
013K831570	Sediment Pulp		0.28	1.65	0.26	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831571	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831572	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831573	Sediment Pulp	2.46	55.87	7.82	79.7	138	20.9	14.0	1226	2.50	3.4	5.4	0.6	5.4	23.7	0.26	0.06	0.05	43	0.52	0.111
013K831574	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831575	Sediment Pulp	7.77	37.22	14.45	136.1	381	11.4	39.2	4562	8.87	2.5	3.5	<0.2	4.8	24.4	0.63	<0.02	0.04	45	0.46	0.262
013K831576	Sediment Pulp	1.07	17.71	5.03	41.1	119	6.4	2.8	92	0.69	<0.1	2.2	<0.2	0.6	53.9	0.28	<0.02	0.03	19	0.94	0.140
013K831577	Sediment Pulp	4.21	19.10	10.56	61.5	199	6.6	5.7	205	1.74	0.3	2.0	<0.2	0.9	25.8	0.39	<0.02	0.02	36	0.27	0.138
013K831578	Sediment Pulp	6.42	29.95	12.04	90.9	361	7.5	7.5	290	2.92	0.1	2.6	<0.2	1.3	22.9	0.61	0.06	0.02	48	0.27	0.226
013K831579	Sediment Pulp	6.51	29.78	13.76	142.2	364	10.8	15.0	377	6.31	0.5	4.8	0.5	3.1	25.5	0.68	0.04	0.04	62	0.30	0.202
013K831580	Sediment Pulp	11.12	33.06	12.04	131.1	459	9.6	10.5	359	3.67	1.0	7.6	0.8	1.1	20.1	0.58	0.14	0.07	83	0.32	0.218
013K831581	Sediment Pulp	2.58	19.33	5.06	113.1	133	10.8	4.5	93	0.78	<0.1	4.4	0.5	0.9	28.5	0.66	0.08	0.02	23	0.36	0.041
013K831582	Sediment Pulp	0.94	15.48	2.79	25.5	132	8.9	1.1	33	0.21	<0.1	1.8	<0.2	0.4	24.6	0.23	<0.02	<0.02	9	0.33	0.032
013K831583	Sediment Pulp	1.24	19.52	3.57	48.9	176	10.5	2.8	67	1.72	<0.1	2.5	<0.2	0.6	19.4	0.22	0.02	<0.02	34	0.26	0.128
013K831584	Sediment Pulp	1.11	19.57	3.34	43.5	217	10.1	2.7	65	1.60	0.1	2.4	<0.2	0.5	17.7	0.25	<0.02	<0.02	33	0.23	0.122
013K831585	Sediment Pulp	0.89	19.21	3.14	40.3	147	6.9	1.7	53	0.48	<0.1	3.6	<0.2	0.3	15.0	0.27	0.02	<0.02	24	0.25	0.068
013K831586	Sediment Pulp	10.47	40.81	21.21	228.3	525	12.2	34.0	2274	10.50	0.8	5.4	<0.2	5.5	25.2	0.99	0.05	0.05	67	0.31	0.328
013K831587	Sediment Pulp	2.04	15.56	4.51	91.6	99	9.3	4.0	76	0.66	<0.1	3.8	0.3	1.2	25.9	0.53	0.04	<0.02	18	0.33	0.036
013K831588	Sediment Pulp	3.07	72.48	8.64	72.9	477	14.0	8.0	206	2.85	<0.1	9.0	<0.2	1.5	28.5	0.89	0.12	0.07	75	0.36	0.292
013K831589	Sediment Pulp	1.80	19.45	3.79	77.4	136	10.4	3.0	64	0.81	<0.1	4.0	<0.2	1.0	26.6	0.34	0.03	<0.02	25	0.29	0.057
013K831590	Sediment Pulp	6.06	21.49	6.25	107.7	133	9.9	8.5	192	3.37	0.3	5.7	<0.2	2.4	19.2	0.40	0.06	0.03	38	0.25	0.084
013K831591	Sediment Pulp	2.57	34.34	4.35	57.4	262	9.7	2.3	48	0.92	<0.1	10.0	<0.2	0.4	26.7	0.46	0.05	0.02	21	0.31	0.102
013K831592	Sediment Pulp	1.35	13.32	4.49	44.2	125	10.2	2.3	50	1.03	<0.1	1.8	<0.2	0.5	24.0	0.23	<0.02	<0.02	22	0.26	0.064
013K831593	Sediment Pulp	9.23	41.50	76.98	291.3	593	12.3	7.9	409	1.66	34.9	8.5	3.2	1.2	61.0	1.14	0.53	0.90	19	6.50	0.061
013K831594	Sediment Pulp	7.17	43.79	6.23	125.7	335	12.9	9.8	207	7.96	<0.1	11.3	1.0	1.8	23.1	0.62	0.06	0.06	69	0.35	0.254
013K831595	Sediment Pulp	2.96	18.48	4.72	54.6	214	9.2	2.7	62	0.60	<0.1	3.6	0.6	0.2	19.8	0.34	0.04	0.02	22	0.35	0.072
013K831596	Sediment Pulp	11.46	52.64	15.57	243.3	416	13.3	27.1	1182	9.66	0.4	7.2	0.2	4.4	21.4	1.04	0.05	0.07	80	0.34	0.288
013K831597	Sediment Pulp	8.13	33.82	14.81	119.1	393	7.5	9.1	312	3.89	<0.1	3.1	0.2	1.2	20.6	0.54	0.04	0.04	52	0.29	0.225
013K831598	Sediment Pulp	1.36	15.42	6.44	48.8	194	9.3	2.5	106	0.83	<0.1	1.0	<0.2	0.2	26.6	0.29	0.03	0.03	21	0.38	0.105
013K831599	Sediment Pulp	3.41	31.68	9.11	96.9	218	10.1	12.0	355	2.08	<0.1	4.5	0.6	1.2	30.8	0.38	0.03	0.03	31	0.41	0.130
013K831600	Sediment Pulp	4.64	70.02	6.22	105.1	142	22.6	15.0	791	2.19	1.3	4.5	0.3	1.2	15.5	0.55	0.06	0.04	28	0.39	0.163



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K831571	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831572	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831573	Sediment Pulp	41.1	25.6	0.49	208.9	0.085	<20	1.49	0.031	0.13	0.1	4.9	0.15	0.03	34	0.6	0.03	4.1	0.75	<0.1	0.05
013K831574	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K831575	Sediment Pulp	91.5	18.1	0.18	519.6	0.072	<20	2.42	0.008	0.06	0.2	4.1	0.22	0.16	147	0.9	<0.02	4.6	0.48	0.1	0.07
013K831576	Sediment Pulp	31.5	9.0	0.09	101.6	0.031	<20	1.07	0.010	0.03	0.2	0.8	0.06	0.57	81	0.3	<0.02	2.4	0.38	<0.1	0.05
013K831577	Sediment Pulp	52.9	12.7	0.08	105.0	0.046	<20	1.32	0.007	0.03	0.2	1.8	0.10	0.13	96	0.6	<0.02	3.2	0.50	<0.1	0.05
013K831578	Sediment Pulp	76.5	15.3	0.08	114.8	0.045	<20	1.55	0.006	0.03	0.2	2.2	0.12	0.16	120	0.9	<0.02	3.5	0.36	<0.1	0.04
013K831579	Sediment Pulp	101.5	23.6	0.10	76.6	0.050	<20	2.04	0.006	0.04	0.5	3.1	0.27	0.19	123	1.1	<0.02	3.2	0.40	<0.1	0.06
013K831580	Sediment Pulp	95.4	24.8	0.09	68.2	0.047	<20	1.89	0.008	0.04	2.1	1.8	0.28	0.28	130	2.6	0.02	7.5	0.54	<0.1	0.06
013K831581	Sediment Pulp	69.7	13.7	0.09	60.9	0.040	<20	1.12	0.006	0.03	0.2	1.3	0.14	0.24	47	1.2	<0.02	1.4	0.37	<0.1	0.11
013K831582	Sediment Pulp	33.9	6.7	0.04	70.1	0.020	<20	0.49	0.008	0.02	0.3	0.8	0.04	0.23	62	0.4	<0.02	1.2	0.26	<0.1	0.06
013K831583	Sediment Pulp	64.2	15.7	0.06	75.7	0.032	<20	1.26	0.007	0.02	0.2	1.6	0.12	0.26	84	0.5	<0.02	2.2	0.35	<0.1	0.05
013K831584	Sediment Pulp	61.2	14.6	0.06	72.1	0.031	<20	1.18	0.007	0.02	0.2	1.4	0.12	0.23	76	0.7	<0.02	2.1	0.34	<0.1	0.02
013K831585	Sediment Pulp	37.3	10.2	0.07	62.2	0.028	<20	0.66	0.008	0.02	0.2	0.8	0.07	0.15	45	0.2	<0.02	1.9	0.40	<0.1	0.03
013K831586	Sediment Pulp	154.9	25.5	0.07	165.6	0.065	<20	2.78	0.007	0.03	0.3	4.5	0.54	0.18	189	1.7	<0.02	4.3	0.41	<0.1	0.05
013K831587	Sediment Pulp	60.8	13.0	0.08	56.8	0.038	<20	0.93	0.007	0.03	0.2	1.4	0.13	0.19	35	<0.1	<0.02	1.6	0.32	<0.1	0.14
013K831588	Sediment Pulp	91.6	26.3	0.06	106.1	0.049	<20	2.60	0.004	0.02	0.2	2.7	0.19	0.23	187	1.6	<0.02	4.9	0.51	<0.1	0.07
013K831589	Sediment Pulp	56.5	13.0	0.11	76.9	0.038	<20	0.85	0.009	0.04	0.3	1.3	0.10	0.21	63	0.2	<0.02	1.9	0.55	<0.1	0.07
013K831590	Sediment Pulp	69.8	18.0	0.12	58.0	0.047	<20	1.42	0.008	0.05	0.6	2.2	0.25	0.22	68	0.2	<0.02	2.0	0.70	0.1	0.05
013K831591	Sediment Pulp	102.1	12.8	0.04	81.1	0.014	<20	1.37	0.005	0.02	0.4	0.8	0.15	0.31	93	1.0	<0.02	1.5	0.30	<0.1	0.02
013K831592	Sediment Pulp	42.6	10.5	0.06	84.7	0.028	<20	0.84	0.007	0.02	0.2	1.2	0.08	0.25	68	0.2	<0.02	1.7	0.29	<0.1	0.06
013K831593	Sediment Pulp	10.0	12.6	0.55	79.8	0.042	<20	0.43	0.027	0.05	0.5	2.2	0.22	1.44	106	1.0	0.03	1.9	0.48	<0.1	0.03
013K831594	Sediment Pulp	101.8	30.4	0.07	73.3	0.040	<20	2.45	0.008	0.03	0.5	3.1	0.19	0.19	105	2.5	0.02	1.3	0.45	<0.1	0.04
013K831595	Sediment Pulp	55.9	12.1	0.06	52.0	0.027	<20	1.02	0.006	0.02	0.2	0.7	0.06	0.17	58	1.0	<0.02	1.0	0.27	<0.1	0.04
013K831596	Sediment Pulp	154.4	34.9	0.09	68.8	0.063	<20	3.28	0.007	0.03	0.4	3.9	0.35	0.15	99	3.3	0.03	0.5	0.43	<0.1	0.07
013K831597	Sediment Pulp	92.4	19.8	0.06	93.1	0.046	<20	2.05	0.007	0.03	0.2	2.2	0.13	0.16	98	1.7	<0.02	1.4	0.29	<0.1	0.03
013K831598	Sediment Pulp	40.8	12.7	0.10	88.1	0.033	<20	1.06	0.010	0.04	0.1	0.8	0.06	0.18	79	0.9	<0.02	2.1	0.38	<0.1	0.05
013K831599	Sediment Pulp	61.8	17.1	0.18	247.2	0.052	<20	1.72	0.006	0.03	<0.1	1.6	0.17	0.22	97	1.2	<0.02	2.2	0.53	<0.1	0.05
013K831600	Sediment Pulp	47.5	20.8	0.21	75.1	0.047	<20	1.64	0.015	0.06	0.1	2.3	0.17	0.11	46	1.3	<0.02	1.3	0.37	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831571	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831572	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831573	Sediment Pulp	1.22	12.0	0.5	<0.05	3.3	31.08	74.0	0.02	2	1.1	11.4	10.67	38.94	7.22	1.14	7.06	1.04	5.91	1.14
013K831574	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831575	Sediment Pulp	2.38	6.7	0.5	<0.05	2.8	58.99	202.2	0.02	1	5.7	5.1	23.76	88.72	14.63	2.24	13.63	2.17	11.65	2.31
013K831576	Sediment Pulp	1.67	2.6	0.5	<0.05	2.1	16.17	64.0	<0.02	7	1.1	3.7	8.01	29.69	5.25	0.80	4.34	0.65	3.68	0.67
013K831577	Sediment Pulp	2.52	3.8	0.5	<0.05	2.3	27.64	108.2	<0.02	6	1.6	2.6	13.57	50.02	8.31	1.31	6.91	1.04	6.02	1.20
013K831578	Sediment Pulp	2.73	3.4	0.4	<0.05	2.2	43.96	159.6	0.03	8	3.8	2.5	20.14	71.34	12.47	1.62	10.31	1.69	8.95	1.85
013K831579	Sediment Pulp	3.24	3.7	0.4	<0.05	3.8	78.32	224.3	0.02	<1	4.8	2.4	27.63	101.80	18.55	2.64	16.56	2.63	14.87	3.11
013K831580	Sediment Pulp	3.06	3.6	0.4	<0.05	3.2	67.46	186.6	<0.02	2	3.5	2.8	22.91	86.19	14.88	2.05	13.06	1.91	11.51	2.27
013K831581	Sediment Pulp	2.96	3.1	0.4	<0.05	7.8	57.32	149.9	<0.02	<1	2.0	2.6	19.27	76.65	14.49	1.83	12.78	1.79	10.58	2.03
013K831582	Sediment Pulp	1.23	1.5	0.4	<0.05	2.5	19.40	63.5	<0.02	<1	1.3	1.7	8.04	29.23	5.18	0.87	4.86	0.71	3.97	0.80
013K831583	Sediment Pulp	2.00	2.3	0.4	<0.05	1.6	37.30	118.9	<0.02	<1	1.4	1.9	16.05	58.46	9.64	1.38	7.98	1.14	6.48	1.33
013K831584	Sediment Pulp	1.89	2.2	0.3	<0.05	1.5	35.69	115.1	<0.02	1	1.4	1.6	15.68	55.31	9.04	1.32	8.44	1.17	6.72	1.28
013K831585	Sediment Pulp	1.70	2.4	0.3	<0.05	2.1	19.65	71.6	<0.02	<1	0.6	2.1	9.51	35.10	5.59	0.86	5.16	0.72	3.95	0.79
013K831586	Sediment Pulp	3.31	3.5	0.5	<0.05	2.9	99.10	347.6	0.02	7	5.9	2.2	40.52	147.18	26.01	3.63	23.34	3.52	19.77	4.11
013K831587	Sediment Pulp	2.67	2.8	0.5	<0.05	6.0	46.56	123.1	<0.02	<1	1.6	2.2	17.12	63.26	12.06	1.64	10.74	1.68	8.74	1.75
013K831588	Sediment Pulp	3.80	2.3	0.5	<0.05	4.2	66.60	197.7	<0.02	1	3.6	1.6	24.58	91.01	16.27	2.40	14.89	2.27	12.80	2.66
013K831589	Sediment Pulp	2.65	3.9	0.4	<0.05	5.6	36.96	106.7	<0.02	<1	1.6	3.1	14.77	56.29	10.26	1.33	8.51	1.29	7.22	1.46
013K831590	Sediment Pulp	2.90	5.4	0.5	<0.05	3.7	49.58	137.5	<0.02	<1	3.5	4.1	17.77	62.55	11.22	1.54	9.86	1.54	9.27	1.78
013K831591	Sediment Pulp	1.10	1.6	0.2	<0.05	1.0	67.03	162.3	<0.02	<1	3.1	1.1	25.18	90.96	15.66	2.15	15.24	2.10	11.91	2.39
013K831592	Sediment Pulp	1.94	2.0	0.3	<0.05	2.8	28.04	82.0	<0.02	<1	0.9	1.5	11.21	40.48	7.59	0.97	6.03	0.94	5.29	1.02
013K831593	Sediment Pulp	0.77	3.3	2.9	<0.05	1.2	10.11	15.9	0.45	18	0.1	4.0	2.59	10.98	2.33	0.43	2.00	0.28	1.64	0.32
013K831594	Sediment Pulp	3.19	2.5	0.3	<0.05	3.3	85.18	211.5	0.02	<1	4.5	1.7	26.08	97.09	17.21	2.31	14.87	2.26	14.26	2.89
013K831595	Sediment Pulp	2.09	2.2	0.2	<0.05	2.9	43.35	113.8	<0.02	1	1.9	1.6	14.64	58.52	10.75	1.35	9.48	1.34	8.09	1.55
013K831596	Sediment Pulp	3.95	3.5	0.7	<0.05	5.4	130.83	400.1	0.04	5	7.8	2.6	41.17	154.69	28.86	3.54	25.09	3.89	24.40	4.78
013K831597	Sediment Pulp	2.90	2.9	0.3	<0.05	2.3	58.81	196.5	0.02	6	4.6	1.8	23.96	90.62	15.86	2.05	13.19	1.89	11.28	2.16
013K831598	Sediment Pulp	2.41	3.7	0.3	<0.05	2.9	22.87	87.7	<0.02	2	1.1	2.8	10.64	41.84	7.38	0.95	5.98	0.82	4.80	0.88
013K831599	Sediment Pulp	3.16	4.3	0.3	<0.05	2.6	38.65	128.6	<0.02	1	5.0	3.8	15.83	58.75	10.60	1.36	8.83	1.26	7.42	1.36
013K831600	Sediment Pulp	1.17	4.6	0.3	<0.05	1.0	29.98	112.9	<0.02	2	1.4	4.6	12.12	46.82	8.38	1.27	6.91	0.94	5.49	1.02



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013K831571	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013K831572	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013K831573	Sediment Pulp	0.45	2.72	0.36	<10
013K831574	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013K831575	Sediment Pulp	0.85	4.71	0.58	<10
013K831576	Sediment Pulp	0.21	1.35	0.16	<10
013K831577	Sediment Pulp	0.45	2.33	0.29	<10
013K831578	Sediment Pulp	0.65	3.88	0.52	<10
013K831579	Sediment Pulp	1.24	7.05	0.93	<10
013K831580	Sediment Pulp	0.85	4.97	0.68	<10
013K831581	Sediment Pulp	0.76	4.51	0.60	<10
013K831582	Sediment Pulp	0.28	1.85	0.19	<10
013K831583	Sediment Pulp	0.56	3.19	0.44	<10
013K831584	Sediment Pulp	0.54	2.87	0.40	<10
013K831585	Sediment Pulp	0.33	1.70	0.23	<10
013K831586	Sediment Pulp	1.61	8.69	1.25	<10
013K831587	Sediment Pulp	0.74	4.02	0.48	<10
013K831588	Sediment Pulp	1.07	5.72	0.74	<10
013K831589	Sediment Pulp	0.53	3.24	0.40	<10
013K831590	Sediment Pulp	0.72	4.22	0.59	<10
013K831591	Sediment Pulp	0.89	4.77	0.70	<10
013K831592	Sediment Pulp	0.40	2.23	0.26	<10
013K831593	Sediment Pulp	0.13	0.82	0.12	<10
013K831594	Sediment Pulp	1.20	7.12	0.95	<10
013K831595	Sediment Pulp	0.57	3.27	0.41	<10
013K831596	Sediment Pulp	1.90	11.32	1.43	<10
013K831597	Sediment Pulp	0.82	4.77	0.61	<10
013K831598	Sediment Pulp	0.31	1.79	0.22	<10
013K831599	Sediment Pulp	0.48	2.76	0.33	<10
013K831600	Sediment Pulp	0.39	2.41	0.33	<10



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K831601	Sediment Pulp	4.62	70.12	6.14	103.7	140	22.7	14.7	793	2.17	1.3	4.4	<0.2	1.1	15.2	0.54	0.06	0.04	27	0.38	0.160
013K831602	Sediment Pulp	4.58	31.33	13.18	132.8	448	13.9	6.3	228	1.52	2.9	7.9	0.3	0.8	38.4	0.46	0.08	0.05	95	0.72	0.171
013K831603	Sediment Pulp	5.20	31.78	14.25	139.2	450	15.5	7.3	239	1.68	3.1	7.6	<0.2	1.0	40.1	0.45	0.09	0.06	93	0.73	0.176
013K831604	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831605	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831606	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833000	Sediment Pulp	0.90	33.44	24.12	130.4	2623	47.3	29.6	1203	3.14	24.8	3.6	6.4	7.1	26.0	0.47	0.50	2.70	48	0.62	0.087
013K833001	Sediment Pulp	2.07	14.36	1.43	39.5	74	5.6	3.0	39	0.22	0.3	3.5	1.5	0.3	15.1	0.18	0.05	<0.02	36	0.59	0.028
013K833002	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833003	Sediment Pulp	0.59	21.14	3.41	40.2	32	21.6	10.1	202	1.81	0.3	1.6	0.5	3.4	21.6	0.11	0.03	0.02	41	0.53	0.065
013K833004	Sediment Pulp	12.92	42.66	2.95	122.8	207	29.9	24.5	1909	5.23	1.2	5.3	0.8	0.7	18.2	0.73	0.08	0.03	36	0.49	0.106
013K833005	Sediment Pulp	1.80	12.68	1.23	35.7	62	4.8	2.6	34	0.18	<0.1	3.1	0.6	0.3	13.1	0.15	0.04	<0.02	31	0.51	0.024
013K833006	Sediment Pulp	4.64	34.75	8.22	86.4	218	10.4	7.4	149	1.57	<0.1	5.1	<0.2	0.2	18.1	0.62	0.02	0.04	47	0.70	0.084
013K833007	Sediment Pulp	0.84	10.71	3.83	41.6	38	14.9	6.8	153	1.20	0.3	3.3	<0.2	1.3	14.0	0.09	<0.02	0.04	24	0.36	0.047
013K833008	Sediment Pulp	3.83	35.20	2.50	49.0	56	21.0	5.5	84	0.80	1.7	4.4	<0.2	0.7	15.1	0.20	0.05	0.03	27	0.45	0.031
013K833009	Sediment Pulp	8.88	44.13	7.69	126.8	330	15.2	23.2	307	3.97	5.9	8.7	0.4	0.5	28.5	0.74	0.05	0.04	66	1.05	0.166
013K833010	Sediment Pulp	18.93	28.63	4.54	135.4	123	30.8	34.1	883	3.40	5.9	7.8	0.9	1.2	19.3	0.57	0.04	0.06	47	0.44	0.094
013K833011	Sediment Pulp	9.61	42.62	79.80	301.4	618	13.2	8.1	422	1.78	32.5	8.8	2.2	1.2	62.8	1.20	0.48	0.92	20	6.69	0.063
013K833012	Sediment Pulp	7.87	13.52	3.26	51.5	99	11.6	5.3	87	0.88	1.9	4.5	<0.2	<0.1	17.2	0.20	0.02	0.02	29	0.39	0.046
013K833013	Sediment Pulp	3.67	69.37	4.10	56.3	287	17.5	6.3	130	1.22	27.9	5.1	1.5	0.1	14.0	0.36	0.23	0.07	22	0.62	0.079
013K833014	Sediment Pulp	13.36	33.23	3.97	137.0	155	16.5	16.7	462	3.17	<0.1	16.5	<0.2	1.2	17.8	0.63	<0.02	0.03	56	0.38	0.065
013K833015	Sediment Pulp	6.75	14.23	1.59	44.7	228	8.3	5.5	58	0.75	<0.1	29.0	<0.2	<0.1	29.8	0.30	<0.02	<0.02	38	0.63	0.077
013K833016	Sediment Pulp	6.38	26.98	4.41	150.8	190	16.7	46.6	478	4.79	0.3	15.2	0.8	0.9	70.7	0.63	<0.02	0.03	79	1.08	0.200
013K833017	Sediment Pulp	7.26	28.88	5.65	88.0	416	15.4	33.0	2378	8.66	0.1	11.2	<0.2	0.8	22.0	0.58	<0.02	0.05	56	0.39	0.221
013K833018	Sediment Pulp	3.17	24.89	4.25	74.8	103	8.5	6.9	195	3.53	<0.1	10.3	<0.2	0.7	11.8	0.28	<0.02	0.03	54	0.19	0.099
013K833019	Sediment Pulp	4.64	37.65	6.18	103.3	440	18.2	61.4	2038	6.97	2.4	6.9	10.4	1.0	21.0	0.50	0.03	0.08	59	0.47	0.221
013K833020	Sediment Pulp	1.52	18.73	2.75	22.5	240	10.6	1.9	66	0.51	0.1	5.8	<0.2	<0.1	19.6	0.23	<0.02	0.03	26	0.49	0.133
013K833021	Sediment Pulp	3.18	25.33	4.21	74.2	106	8.7	6.9	189	3.55	<0.1	10.4	<0.2	0.7	11.9	0.28	<0.02	0.03	54	0.20	0.100
013K833022	Sediment Pulp	1.92	15.88	2.25	40.3	121	11.1	4.7	87	0.79	0.2	9.7	<0.2	<0.1	30.3	0.22	0.02	0.03	23	0.47	0.091
013K833023	Sediment Pulp	1.91	24.18	7.83	93.2	116	32.6	19.2	330	3.40	1.2	3.6	<0.2	2.9	29.1	0.17	0.04	0.07	57	0.52	0.142



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CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013K831601	Sediment Pulp			47.4	20.8	0.21	74.0	0.046	<20	1.64	0.013	0.06	0.2	2.2	0.16	0.11	47	1.3	<0.02	1.3	0.36
013K831602	Sediment Pulp			90.3	28.2	0.28	422.3	0.044	<20	2.06	0.018	0.12	0.3	2.3	0.18	0.29	118	2.1	<0.02	2.4	0.96
013K831603	Sediment Pulp			90.3	30.3	0.32	421.5	0.050	<20	2.20	0.020	0.13	0.3	2.6	0.17	0.39	105	2.0	<0.02	2.9	1.10
013K831604	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831605	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831606	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833000	Sediment Pulp			40.6	51.6	0.79	149.2	0.106	<20	1.71	0.030	0.27	0.2	6.0	0.37	0.15	262	0.7	0.04	5.2	1.37
013K833001	Sediment Pulp			17.5	19.7	0.09	170.2	0.013	<20	0.43	0.019	0.02	<0.1	1.5	0.07	0.43	36	1.9	<0.02	1.6	0.27
013K833002	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833003	Sediment Pulp			19.5	25.6	0.45	69.0	0.084	<20	1.04	0.060	0.07	<0.1	3.1	0.09	0.03	9	0.1	<0.02	2.8	0.30
013K833004	Sediment Pulp			34.4	24.7	0.11	279.3	0.020	<20	2.28	0.008	0.02	0.1	4.1	0.24	0.28	94	1.8	<0.02	1.6	0.21
013K833005	Sediment Pulp			15.3	17.3	0.08	148.1	0.011	<20	0.36	0.015	0.02	<0.1	1.3	0.03	0.37	24	1.8	<0.02	1.4	0.23
013K833006	Sediment Pulp			38.6	23.9	0.13	124.5	0.024	<20	1.60	0.013	0.02	<0.1	1.7	0.08	0.18	63	2.1	<0.02	2.5	0.33
013K833007	Sediment Pulp			14.6	19.6	0.37	36.9	0.080	<20	0.87	0.028	0.04	<0.1	1.8	0.05	0.03	12	0.1	<0.02	2.6	0.45
013K833008	Sediment Pulp			19.7	19.7	0.16	46.7	0.034	<20	0.80	0.023	0.02	<0.1	2.2	0.06	0.54	38	0.8	<0.02	1.4	0.22
013K833009	Sediment Pulp			43.9	37.8	0.08	73.6	0.027	<20	2.86	0.008	0.02	0.2	2.2	0.14	0.29	130	3.8	<0.02	3.0	0.17
013K833010	Sediment Pulp			33.1	26.8	0.33	93.3	0.054	<20	1.94	0.034	0.05	0.2	2.9	0.24	0.11	49	1.2	<0.02	3.3	0.47
013K833011	Sediment Pulp			10.4	13.4	0.58	82.5	0.041	<20	0.44	0.027	0.05	0.5	2.3	0.23	1.49	95	1.2	0.02	1.9	0.48
013K833012	Sediment Pulp			28.5	14.8	0.06	48.4	0.020	<20	1.60	0.007	0.01	0.1	1.0	0.04	0.26	45	1.0	<0.02	1.6	0.18
013K833013	Sediment Pulp			41.8	24.7	0.10	53.8	0.020	<20	1.60	0.009	0.01	0.1	1.3	0.10	0.22	143	1.6	<0.02	2.0	0.26
013K833014	Sediment Pulp			72.6	23.4	0.05	53.2	0.027	<20	3.24	0.009	0.01	<0.1	2.8	0.12	0.22	76	1.7	<0.02	1.7	0.12
013K833015	Sediment Pulp			20.2	11.9	0.06	84.6	0.014	<20	1.08	0.011	0.01	0.1	0.8	0.03	0.16	87	1.2	<0.02	1.6	0.12
013K833016	Sediment Pulp			41.1	20.9	0.15	63.3	0.042	<20	3.66	0.023	0.03	0.2	3.0	0.30	1.50	85	2.1	<0.02	3.2	0.23
013K833017	Sediment Pulp			40.6	27.5	0.07	68.0	0.048	<20	3.62	0.005	0.02	0.1	2.9	0.19	0.25	138	3.6	<0.02	6.6	0.30
013K833018	Sediment Pulp			41.4	26.2	0.05	26.1	0.049	<20	3.46	0.006	0.01	<0.1	2.8	0.04	0.25	72	2.3	<0.02	4.4	0.18
013K833019	Sediment Pulp			38.7	27.6	0.16	78.1	0.057	<20	2.89	0.011	0.02	0.1	3.0	0.18	0.21	180	2.8	<0.02	8.3	0.32
013K833020	Sediment Pulp			23.6	12.8	0.07	70.6	0.029	<20	1.45	0.010	0.01	<0.1	0.6	<0.02	0.26	105	1.5	<0.02	4.9	0.16
013K833021	Sediment Pulp			40.8	26.6	0.05	25.8	0.048	<20	3.55	0.007	0.01	<0.1	2.8	0.05	0.26	74	2.4	<0.02	4.4	0.18
013K833022	Sediment Pulp			22.9	13.2	0.12	51.0	0.031	<20	2.17	0.014	0.02	0.3	1.0	0.02	0.23	72	1.5	<0.02	3.9	0.22
013K833023	Sediment Pulp			30.1	36.0	0.79	95.6	0.108	<20	2.80	0.063	0.21	<0.1	4.8	0.13	0.07	55	0.6	<0.02	7.3	1.03



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K831601 Sediment Pulp	1.16	4.5	0.3	<0.05	0.9	29.95	111.9	<0.02	2	1.4	4.5	12.00	46.23	8.36	1.27	6.86	0.94	5.52	1.03	2.95
013K831602 Sediment Pulp	3.18	13.7	0.5	<0.05	4.0	91.01	139.6	0.03	<1	3.9	9.8	25.76	98.54	19.67	2.21	17.93	2.74	16.73	3.21	9.22
013K831603 Sediment Pulp	3.46	15.4	0.6	<0.05	4.9	90.70	141.9	0.03	<1	4.0	10.8	25.68	99.27	19.86	2.25	18.14	2.76	17.07	3.24	9.28
013K831604 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831605 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K831606 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833000 Sediment Pulp	1.87	23.9	1.0	<0.05	5.7	18.60	74.8	0.04	<1	0.6	20.0	9.66	36.90	6.36	0.93	4.70	0.61	3.48	0.63	1.83
013K833001 Sediment Pulp	0.27	1.9	<0.1	<0.05	1.1	14.47	10.2	<0.02	2	0.1	1.4	4.03	16.83	2.75	0.46	2.55	0.29	1.74	0.35	1.07
013K833002 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833003 Sediment Pulp	0.75	4.2	0.3	<0.05	3.2	12.28	40.2	<0.02	<1	0.3	6.0	5.07	20.00	3.66	0.59	3.09	0.41	2.37	0.42	1.19
013K833004 Sediment Pulp	0.40	1.7	0.1	<0.05	0.9	22.61	54.9	<0.02	<1	0.7	2.2	8.46	32.88	5.75	1.23	4.94	0.65	3.87	0.73	2.10
013K833005 Sediment Pulp	0.21	1.6	<0.1	<0.05	0.8	12.67	8.9	<0.02	2	0.2	1.2	3.55	14.70	2.40	0.40	2.20	0.25	1.51	0.31	0.94
013K833006 Sediment Pulp	0.63	1.4	0.1	<0.05	0.4	19.20	45.5	<0.02	1	0.5	3.5	9.63	38.86	6.43	1.27	5.19	0.62	3.41	0.61	1.70
013K833007 Sediment Pulp	0.93	3.2	0.3	<0.05	1.8	7.43	27.9	<0.02	<1	0.2	7.3	3.51	13.63	2.41	0.42	2.00	0.25	1.47	0.26	0.73
013K833008 Sediment Pulp	0.62	1.7	0.1	<0.05	1.0	13.16	26.7	<0.02	1	0.3	3.4	4.76	18.87	3.38	0.61	2.92	0.36	2.19	0.41	1.20
013K833009 Sediment Pulp	0.66	1.0	0.1	<0.05	0.6	22.17	65.2	<0.02	4	0.8	1.6	10.62	41.37	7.08	1.35	5.70	0.72	4.10	0.71	1.99
013K833010 Sediment Pulp	0.72	3.9	0.2	<0.05	0.7	16.87	63.1	<0.02	1	0.6	8.5	8.02	30.84	5.34	0.90	4.30	0.54	3.18	0.57	1.61
013K833011 Sediment Pulp	0.65	3.4	3.0	<0.05	1.1	10.51	16.6	0.46	16	0.1	3.8	2.70	11.61	2.39	0.45	2.14	0.27	1.71	0.32	0.96
013K833012 Sediment Pulp	0.63	1.1	0.1	<0.05	0.3	17.05	59.5	<0.02	<1	0.5	1.4	7.84	31.92	5.69	0.99	4.67	0.59	3.43	0.62	1.72
013K833013 Sediment Pulp	0.62	1.1	0.1	<0.05	0.3	14.03	36.9	<0.02	1	0.4	2.1	9.62	36.77	5.86	1.07	4.40	0.50	2.73	0.46	1.25
013K833014 Sediment Pulp	0.92	0.8	<0.1	<0.05	0.8	23.19	123.9	<0.02	<1	1.2	1.2	18.43	67.58	10.47	1.87	7.49	0.87	4.69	0.80	2.18
013K833015 Sediment Pulp	0.36	0.9	<0.1	<0.05	0.1	8.77	34.6	<0.02	4	0.2	1.2	4.94	19.18	3.07	0.58	2.37	0.27	1.64	0.29	0.85
013K833016 Sediment Pulp	1.08	1.8	0.2	<0.05	0.8	22.95	112.0	<0.02	1	0.7	3.7	10.79	42.28	7.30	1.41	6.00	0.76	4.41	0.79	2.22
013K833017 Sediment Pulp	0.94	1.6	0.2	<0.05	0.3	22.38	82.6	0.03	<1	0.7	1.9	10.08	39.16	6.82	1.39	5.61	0.74	4.40	0.78	2.18
013K833018 Sediment Pulp	1.35	1.1	0.2	<0.05	0.4	19.51	87.4	<0.02	<1	0.9	1.3	10.00	38.33	6.79	1.32	5.48	0.71	4.10	0.69	1.93
013K833019 Sediment Pulp	1.29	1.9	0.3	<0.05	0.4	22.25	83.8	0.03	<1	0.6	3.1	9.50	37.05	6.45	1.30	5.30	0.72	4.32	0.77	2.19
013K833020 Sediment Pulp	1.14	1.0	0.2	<0.05	0.6	10.50	48.5	<0.02	<1	0.4	1.4	5.75	22.71	3.91	0.75	3.16	0.40	2.32	0.40	1.05
013K833021 Sediment Pulp	1.39	1.1	0.2	<0.05	0.4	19.69	88.3	0.02	<1	0.9	1.3	9.95	38.12	6.79	1.31	5.49	0.71	4.04	0.70	1.91
013K833022 Sediment Pulp	0.98	1.9	0.1	<0.05	0.4	13.60	46.0	<0.02	<1	0.5	2.8	5.86	23.35	4.25	0.83	3.62	0.47	2.70	0.47	1.26
013K833023 Sediment Pulp	1.83	16.3	0.6	<0.05	4.1	16.59	61.1	0.03	<1	0.7	18.1	7.46	28.79	5.26	0.93	4.37	0.59	3.43	0.58	1.60



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K831601	Sediment Pulp		0.39	2.43	0.32	<10	<2
013K831602	Sediment Pulp		1.19	6.83	0.84	<10	<2
013K831603	Sediment Pulp		1.18	6.91	0.84	<10	<2
013K831604	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K831605	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K831606	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833000	Sediment Pulp		0.24	1.60	0.23	<10	<2
013K833001	Sediment Pulp		0.13	0.89	0.15	<10	<2
013K833002	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833003	Sediment Pulp		0.15	0.95	0.13	<10	<2
013K833004	Sediment Pulp		0.27	1.72	0.24	<10	<2
013K833005	Sediment Pulp		0.11	0.79	0.13	<10	<2
013K833006	Sediment Pulp		0.21	1.30	0.18	<10	<2
013K833007	Sediment Pulp		0.09	0.59	0.07	<10	<2
013K833008	Sediment Pulp		0.15	0.99	0.14	<10	<2
013K833009	Sediment Pulp		0.24	1.54	0.20	<10	<2
013K833010	Sediment Pulp		0.20	1.28	0.16	<10	<2
013K833011	Sediment Pulp		0.12	0.83	0.12	<10	<2
013K833012	Sediment Pulp		0.21	1.27	0.16	<10	<2
013K833013	Sediment Pulp		0.15	0.98	0.13	<10	<2
013K833014	Sediment Pulp		0.27	1.67	0.21	<10	<2
013K833015	Sediment Pulp		0.10	0.67	0.08	<10	<2
013K833016	Sediment Pulp		0.28	1.75	0.23	<10	<2
013K833017	Sediment Pulp		0.28	1.75	0.22	<10	<2
013K833018	Sediment Pulp		0.24	1.54	0.19	<10	<2
013K833019	Sediment Pulp		0.28	1.79	0.23	<10	<2
013K833020	Sediment Pulp		0.13	0.77	0.09	<10	<2
013K833021	Sediment Pulp		0.25	1.53	0.19	<10	<2
013K833022	Sediment Pulp		0.15	0.94	0.12	<10	<2
013K833023	Sediment Pulp		0.20	1.23	0.15	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833024	Sediment Pulp	9.53	74.44	5.89	111.5	458	28.0	34.1	2279	10.54	1.2	7.5	0.4	2.0	20.1	0.43	0.04	0.05	72	0.63	0.247
013K833025	Sediment Pulp	3.50	72.62	3.30	125.2	325	74.8	84.6	1881	7.07	<0.1	5.4	0.3	1.9	16.3	0.53	<0.02	0.03	41	0.44	0.182
013K833026	Sediment Pulp	2.75	31.74	3.68	56.1	374	15.9	7.8	178	2.07	0.2	3.0	3.9	0.2	30.7	0.33	0.06	0.05	50	0.75	0.196
013K833027	Sediment Pulp	1.76	45.82	4.17	61.4	110	30.3	14.4	439	2.71	0.8	6.0	1.7	2.9	18.3	0.21	0.04	0.04	43	0.43	0.115
013K833028	Sediment Pulp	2.90	29.32	5.10	56.0	345	11.4	6.8	461	2.78	0.4	7.1	1.5	0.5	34.1	0.33	0.04	0.06	47	0.79	0.268
013K833029	Sediment Pulp	1.42	10.45	2.55	26.8	66	9.7	2.0	47	0.34	0.2	5.8	0.9	<0.1	16.6	0.15	<0.02	0.02	12	0.36	0.056
013K833030	Sediment Pulp	1.44	10.84	2.49	23.2	79	8.7	1.9	47	0.27	0.1	5.4	1.1	<0.1	15.7	0.18	0.04	0.02	13	0.35	0.033
013K833031	Sediment Pulp	1.10	60.52	6.17	82.8	77	38.2	15.7	277	2.64	30.0	1.6	2.3	4.0	37.7	0.15	0.83	0.11	45	0.78	0.103
013K833032	Sediment Pulp	8.12	40.78	6.02	93.3	307	15.5	30.0	1686	6.44	0.2	20.9	1.2	1.7	31.0	0.59	0.03	0.06	75	0.59	0.232
013K833033	Sediment Pulp	1.86	44.35	4.15	85.3	120	16.1	5.9	92	1.01	<0.1	25.0	0.9	0.9	17.1	0.46	0.02	0.04	40	0.35	0.100
013K833034	Sediment Pulp	3.65	17.11	3.57	48.4	142	10.7	2.3	32	0.93	<0.1	26.7	0.5	0.2	21.5	0.23	0.02	0.05	19	0.41	0.048
013K833035	Sediment Pulp	2.83	23.07	2.70	58.1	89	19.5	8.1	101	0.82	0.8	4.2	1.1	0.4	27.2	0.18	0.02	0.03	14	0.51	0.051
013K833036	Sediment Pulp	5.44	50.84	7.15	104.1	252	27.1	24.1	682	3.48	5.3	11.3	0.9	2.9	27.0	0.36	0.04	0.10	49	0.51	0.150
013K833037	Sediment Pulp	14.90	86.47	3.23	127.9	295	35.9	21.6	>10000	3.46	4.7	2.0	3.2	0.6	12.6	0.85	0.09	0.03	24	0.60	0.178
013K833038	Sediment Pulp	16.48	71.36	3.71	159.1	298	155.0	17.1	996	2.99	13.3	5.8	2.2	0.4	13.8	0.77	0.17	0.05	33	0.55	0.239
013K833039	Sediment Pulp	0.95	33.70	25.90	133.8	2680	47.2	30.0	1233	3.16	24.9	3.6	7.4	7.2	27.2	0.51	0.50	2.84	48	0.64	0.090
013K833040	Sediment Pulp	4.21	14.37	2.12	50.1	108	12.1	7.4	110	2.44	<0.1	1.8	0.6	0.2	20.6	0.32	<0.02	<0.02	33	0.57	0.053
013K833041	Sediment Pulp	2.01	110.61	5.31	132.7	228	42.6	14.2	293	2.00	5.2	2.3	1.2	0.8	37.9	1.05	0.13	0.04	52	0.96	0.096
013K833042	Sediment Pulp	4.90	39.55	9.47	156.7	148	22.5	15.1	675	2.25	3.6	8.8	0.9	1.2	27.8	0.57	<0.02	0.03	43	0.58	0.148
013K833043	Sediment Pulp	3.19	64.21	5.35	172.5	183	31.0	9.4	116	1.17	0.6	2.4	3.0	0.1	18.9	0.81	0.13	0.03	29	0.60	0.057
013K833044	Sediment Pulp	1.63	23.30	2.25	30.1	55	8.6	3.9	56	0.74	0.4	1.4	0.4	0.9	14.2	0.16	0.04	<0.02	15	0.41	0.020
013K833045	Sediment Pulp	1.77	99.70	4.95	117.7	186	41.3	14.3	265	1.87	4.4	2.3	1.2	0.9	33.9	0.88	0.14	0.04	47	0.84	0.088
013K833046	Sediment Pulp	3.22	29.80	10.64	146.1	87	28.6	23.2	1108	4.49	2.5	10.6	0.5	11.8	47.6	0.19	0.07	0.09	68	0.60	0.106
013K833047	Sediment Pulp	3.13	18.51	8.64	104.6	71	25.9	16.8	593	3.19	1.2	9.9	0.5	10.8	45.9	0.09	0.06	0.09	53	0.60	0.085
013K833048	Sediment Pulp	2.78	22.40	8.57	100.5	57	24.0	16.7	541	2.89	2.0	13.7	0.6	10.5	44.1	0.09	0.06	0.09	51	0.62	0.086
013K833049	Sediment Pulp	5.11	11.00	3.18	31.6	119	7.9	2.4	73	0.60	<0.1	7.5	0.4	0.7	17.8	0.10	0.05	0.02	16	0.21	0.037
013K833050	Sediment Pulp	13.58	22.87	5.57	120.0	273	12.8	28.4	866	9.29	3.2	4.5	0.5	7.9	19.3	0.28	0.05	0.05	85	0.28	0.205
013K833051	Sediment Pulp	3.80	13.21	2.95	45.9	147	6.8	3.6	80	1.03	0.8	1.8	0.4	1.6	15.3	0.09	0.04	<0.02	23	0.18	0.040
013K833052	Sediment Pulp	5.69	6.49	3.49	54.4	50	4.8	6.6	208	5.24	1.6	1.5	<0.2	6.1	14.9	0.08	0.06	0.03	40	0.25	0.068
013K833053	Sediment Pulp	2.49	17.83	2.87	51.7	50	11.8	6.6	145	1.47	0.7	3.3	0.4	4.6	19.4	0.10	0.05	0.03	20	0.34	0.073



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833024	Sediment Pulp	92.8	44.7	0.11	58.4	0.104	<20	4.88	0.002	0.02	<0.1	4.9	0.16	0.22	252	5.0	0.02	8.6	0.28	<0.1	<0.02
013K833025	Sediment Pulp	51.6	50.4	0.08	78.6	0.052	<20	4.01	0.008	0.01	<0.1	5.1	0.25	0.20	149	3.8	<0.02	2.5	0.15	<0.1	0.05
013K833026	Sediment Pulp	27.7	29.8	0.14	82.7	0.054	<20	2.45	0.009	0.02	0.1	1.9	0.07	0.18	151	2.5	<0.02	6.2	0.26	<0.1	0.02
013K833027	Sediment Pulp	42.4	31.8	0.37	50.0	0.077	<20	1.79	0.042	0.08	0.1	3.6	0.11	0.10	35	1.2	<0.02	3.0	0.40	<0.1	0.03
013K833028	Sediment Pulp	40.8	21.5	0.08	78.2	0.062	<20	3.83	0.005	0.02	0.2	2.7	0.06	0.29	219	2.8	<0.02	10.6	0.24	<0.1	0.02
013K833029	Sediment Pulp	13.2	8.9	0.11	42.4	0.029	<20	0.98	0.010	0.02	<0.1	0.5	<0.02	0.17	55	0.6	<0.02	3.1	0.32	<0.1	<0.02
013K833030	Sediment Pulp	14.0	8.1	0.09	39.2	0.029	<20	0.93	0.009	0.02	<0.1	0.6	<0.02	0.15	55	0.7	<0.02	3.3	0.29	<0.1	<0.02
013K833031	Sediment Pulp	29.6	50.1	0.90	53.1	0.106	<20	1.95	0.097	0.16	0.1	5.5	0.10	0.16	34	0.7	0.02	5.7	1.08	<0.1	0.05
013K833032	Sediment Pulp	63.9	28.8	0.07	76.9	0.059	<20	4.31	0.003	0.02	0.1	4.0	0.16	0.23	159	3.4	<0.02	5.6	0.17	<0.1	0.03
013K833033	Sediment Pulp	68.2	26.4	0.17	41.7	0.043	<20	2.81	0.018	0.04	<0.1	2.7	0.08	0.16	56	1.3	<0.02	2.0	0.31	<0.1	<0.02
013K833034	Sediment Pulp	57.1	10.2	0.04	32.6	0.016	<20	1.88	0.009	<0.01	<0.1	0.9	0.04	0.36	74	1.3	<0.02	1.6	0.21	<0.1	<0.02
013K833035	Sediment Pulp	31.7	16.6	0.22	38.7	0.033	<20	1.57	0.026	0.04	<0.1	1.6	0.06	0.36	45	0.8	<0.02	2.2	0.45	<0.1	<0.02
013K833036	Sediment Pulp	43.1	36.8	0.53	86.8	0.089	<20	2.27	0.041	0.09	0.1	4.6	0.14	0.07	69	1.0	<0.02	4.7	0.66	<0.1	0.04
013K833037	Sediment Pulp	25.5	25.3	0.09	135.4	0.020	<20	2.09	0.010	0.01	0.1	3.1	0.14	0.22	133	2.3	<0.02	2.1	0.23	<0.1	0.03
013K833038	Sediment Pulp	30.8	50.4	0.20	76.3	0.023	<20	2.57	0.012	0.04	0.3	2.8	0.17	0.33	83	3.5	<0.02	2.0	0.45	<0.1	0.03
013K833039	Sediment Pulp	40.7	51.2	0.80	156.3	0.104	<20	1.73	0.031	0.27	0.2	6.0	0.30	0.15	241	0.7	0.05	5.4	1.41	<0.1	0.12
013K833040	Sediment Pulp	26.3	13.4	0.04	64.2	0.017	<20	1.99	0.008	<0.01	<0.1	1.4	0.03	0.32	89	0.9	<0.02	1.7	0.12	<0.1	<0.02
013K833041	Sediment Pulp	38.8	39.2	0.34	97.3	0.042	<20	2.00	0.029	0.04	1.3	4.2	0.32	0.24	230	1.8	<0.02	2.9	0.72	<0.1	0.03
013K833042	Sediment Pulp	29.8	26.3	0.29	65.3	0.051	<20	1.94	0.033	0.04	0.1	2.7	0.13	0.08	81	1.1	<0.02	2.8	0.31	<0.1	0.02
013K833043	Sediment Pulp	30.9	28.8	0.18	63.8	0.026	<20	1.89	0.012	0.02	<0.1	1.8	0.11	0.38	70	1.2	<0.02	2.5	0.38	<0.1	<0.02
013K833044	Sediment Pulp	71.8	18.0	0.20	104.4	0.044	<20	0.61	0.025	0.03	<0.1	5.4	0.04	0.43	38	1.0	<0.02	1.9	0.44	<0.1	0.03
013K833045	Sediment Pulp	35.4	36.1	0.35	90.4	0.048	<20	1.71	0.032	0.04	0.4	4.0	0.27	0.29	196	1.5	<0.02	2.8	0.69	<0.1	0.03
013K833046	Sediment Pulp	63.6	34.8	1.33	342.8	0.276	<20	2.83	0.034	0.89	0.4	6.4	0.53	0.03	18	0.6	0.04	8.4	6.13	<0.1	0.08
013K833047	Sediment Pulp	49.5	36.0	1.07	205.6	0.221	<20	2.11	0.048	0.57	0.3	5.7	0.33	0.04	10	0.3	<0.02	6.4	4.14	<0.1	0.13
013K833048	Sediment Pulp	45.2	35.2	1.04	184.4	0.213	<20	1.90	0.043	0.58	0.3	5.3	0.32	0.07	11	0.2	<0.02	6.0	3.64	<0.1	0.17
013K833049	Sediment Pulp	67.5	8.3	0.13	73.6	0.038	<20	0.70	0.009	0.06	0.5	1.3	0.06	0.17	35	0.6	<0.02	1.1	0.80	<0.1	0.02
013K833050	Sediment Pulp	84.2	24.5	0.22	88.4	0.088	<20	1.98	0.009	0.11	1.0	4.3	0.35	0.11	77	1.2	<0.02	2.5	1.11	<0.1	0.04
013K833051	Sediment Pulp	34.3	8.8	0.13	69.3	0.040	<20	0.57	0.009	0.06	0.7	1.4	0.08	0.17	53	0.5	<0.02	1.5	0.74	<0.1	0.03
013K833052	Sediment Pulp	42.4	10.9	0.19	57.8	0.069	<20	0.85	0.008	0.06	1.2	2.3	0.05	0.05	32	0.5	<0.02	1.6	0.89	<0.1	0.06
013K833053	Sediment Pulp	44.0	14.0	0.25	51.0	0.071	<20	0.70	0.024	0.11	0.7	2.6	0.11	0.36	27	0.4	<0.02	1.4	0.87	<0.1	0.06



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833024	Sediment Pulp	1.65	1.9	0.3	<0.05	1.0	47.12	176.0	0.06	2	1.2	1.9	22.25	83.09	14.67	2.67	12.26	1.73	10.06	1.70	4.58
013K833025	Sediment Pulp	1.19	1.1	0.1	<0.05	1.8	27.21	117.4	0.02	1	1.0	1.3	12.45	48.08	8.56	1.69	7.04	0.96	5.61	0.98	2.65
013K833026	Sediment Pulp	1.89	1.6	0.3	0.11	0.9	14.39	58.8	0.07	<1	0.6	2.2	7.05	27.41	4.81	0.96	3.96	0.55	3.00	0.53	1.42
013K833027	Sediment Pulp	1.39	6.4	0.4	<0.05	1.4	22.36	91.9	0.03	<1	0.6	6.6	10.59	40.27	6.99	1.05	5.66	0.76	4.32	0.79	2.22
013K833028	Sediment Pulp	1.86	1.5	0.3	<0.05	1.1	25.58	84.6	0.05	<1	1.1	1.5	10.20	39.04	7.09	1.42	6.08	0.91	5.27	0.94	2.51
013K833029	Sediment Pulp	0.76	2.0	0.2	<0.05	0.5	5.86	27.0	<0.02	<1	0.2	3.3	3.20	12.43	2.21	0.43	1.77	0.21	1.25	0.21	0.57
013K833030	Sediment Pulp	0.83	1.7	0.2	<0.05	0.6	5.94	27.2	<0.02	<1	0.2	3.0	3.34	12.74	2.26	0.45	1.87	0.25	1.33	0.23	0.60
013K833031	Sediment Pulp	1.28	12.9	0.5	<0.05	2.7	15.02	60.0	0.02	<1	0.5	16.8	7.05	26.67	4.57	0.73	3.73	0.50	2.85	0.52	1.47
013K833032	Sediment Pulp	1.79	1.2	0.2	<0.05	1.2	37.95	140.4	0.04	<1	1.3	1.5	16.07	60.89	10.79	1.99	8.94	1.25	7.22	1.31	3.64
013K833033	Sediment Pulp	1.38	3.1	0.2	<0.05	0.9	30.77	135.5	<0.02	<1	0.9	5.1	17.91	68.29	11.33	1.87	8.68	1.09	5.85	1.04	2.90
013K833034	Sediment Pulp	0.67	0.8	<0.1	<0.05	0.3	18.77	73.3	<0.02	<1	0.7	1.1	12.22	46.45	7.47	1.31	5.80	0.67	3.47	0.60	1.58
013K833035	Sediment Pulp	0.83	3.5	0.2	<0.05	0.9	14.13	56.0	<0.02	<1	0.5	6.9	8.23	32.70	5.48	0.98	4.39	0.53	2.80	0.50	1.34
013K833036	Sediment Pulp	1.25	7.3	0.4	<0.05	1.8	24.57	78.4	0.02	<1	0.7	14.8	10.63	40.36	7.01	1.12	5.87	0.78	4.43	0.83	2.33
013K833037	Sediment Pulp	0.33	1.1	<0.1	<0.05	1.0	18.35	42.2	<0.02	2	0.5	2.2	6.45	25.56	4.69	0.98	4.25	0.57	3.35	0.61	1.70
013K833038	Sediment Pulp	0.49	3.0	0.2	<0.05	1.1	22.05	58.0	<0.02	1	0.7	4.2	7.89	30.80	5.56	1.08	4.83	0.66	3.85	0.72	2.08
013K833039	Sediment Pulp	1.81	25.1	1.1	<0.05	6.1	18.94	73.8	0.04	<1	0.7	21.2	9.78	37.20	6.51	0.94	4.81	0.62	3.46	0.64	1.84
013K833040	Sediment Pulp	0.56	0.8	<0.1	<0.05	0.5	10.50	46.0	<0.02	<1	0.4	0.9	6.44	24.54	3.77	0.71	2.87	0.34	1.98	0.36	1.00
013K833041	Sediment Pulp	1.16	4.2	0.2	<0.05	1.4	23.82	61.7	<0.02	6	0.7	7.2	9.70	38.08	6.76	1.42	5.84	0.77	4.33	0.79	2.20
013K833042	Sediment Pulp	0.69	3.0	0.2	<0.05	1.0	15.25	51.4	<0.02	3	0.5	6.6	7.41	28.43	4.77	0.87	3.89	0.49	2.79	0.50	1.43
013K833043	Sediment Pulp	0.67	2.5	0.2	<0.05	0.8	16.74	44.2	<0.02	1	0.5	5.3	7.42	28.51	4.82	1.09	4.10	0.52	3.01	0.54	1.53
013K833044	Sediment Pulp	0.46	2.9	0.2	<0.05	1.7	44.70	13.3	<0.02	2	0.3	4.8	15.47	59.58	9.54	1.59	8.69	1.01	5.74	1.13	3.22
013K833045	Sediment Pulp	1.17	4.3	0.3	<0.05	1.6	21.75	57.6	<0.02	6	0.6	7.1	8.81	34.08	6.06	1.25	5.30	0.68	3.89	0.71	1.98
013K833046	Sediment Pulp	1.14	83.0	0.9	<0.05	4.9	26.01	135.4	0.03	<1	1.2	40.1	13.85	50.50	8.11	1.18	6.29	0.85	4.88	0.91	2.63
013K833047	Sediment Pulp	1.69	51.3	0.8	<0.05	7.2	19.95	93.9	0.02	<1	0.9	27.4	10.98	40.34	6.58	1.02	5.05	0.67	3.77	0.70	2.01
013K833048	Sediment Pulp	0.74	48.4	0.8	<0.05	9.2	18.77	86.7	0.02	<1	0.8	26.2	10.03	36.42	6.04	0.91	4.68	0.63	3.60	0.66	1.87
013K833049	Sediment Pulp	1.17	6.0	0.3	<0.05	1.0	20.62	99.0	<0.02	<1	0.3	4.1	15.01	57.00	8.41	1.10	6.24	0.73	3.79	0.70	1.97
013K833050	Sediment Pulp	2.47	10.8	0.5	<0.05	1.8	35.34	163.7	0.03	2	1.4	6.0	18.91	67.72	10.71	1.54	8.38	1.12	6.45	1.24	3.61
013K833051	Sediment Pulp	1.29	6.0	0.2	<0.05	1.1	11.85	63.6	<0.02	<1	0.3	4.1	7.56	27.94	4.43	0.63	3.31	0.41	2.26	0.42	1.18
013K833052	Sediment Pulp	2.25	5.7	0.4	<0.05	2.8	14.83	79.9	<0.02	<1	0.4	5.8	9.09	33.34	5.10	0.69	3.80	0.49	2.70	0.50	1.44
013K833053	Sediment Pulp	2.17	9.3	0.4	<0.05	2.4	17.23	83.4	<0.02	<1	0.3	7.1	10.04	37.26	6.03	0.81	4.56	0.58	3.22	0.59	1.66



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K833024	Sediment Pulp	0.58	3.40	0.41	<10	<2
013K833025	Sediment Pulp	0.33	2.03	0.25	<10	<2
013K833026	Sediment Pulp	0.18	1.07	0.13	<10	<2
013K833027	Sediment Pulp	0.29	1.80	0.24	<10	<2
013K833028	Sediment Pulp	0.33	1.86	0.23	<10	<2
013K833029	Sediment Pulp	0.06	0.41	0.05	<10	<2
013K833030	Sediment Pulp	0.07	0.42	0.06	<10	<2
013K833031	Sediment Pulp	0.19	1.22	0.17	<10	<2
013K833032	Sediment Pulp	0.47	2.90	0.37	<10	<2
013K833033	Sediment Pulp	0.37	2.35	0.32	<10	<2
013K833034	Sediment Pulp	0.19	1.14	0.15	<10	<2
013K833035	Sediment Pulp	0.16	0.99	0.13	<10	<2
013K833036	Sediment Pulp	0.31	1.92	0.27	<10	<2
013K833037	Sediment Pulp	0.21	1.37	0.18	<10	<2
013K833038	Sediment Pulp	0.27	1.78	0.25	<10	<2
013K833039	Sediment Pulp	0.25	1.61	0.23	<10	<2
013K833040	Sediment Pulp	0.12	0.76	0.09	<10	<2
013K833041	Sediment Pulp	0.27	1.77	0.24	<10	<2
013K833042	Sediment Pulp	0.17	1.13	0.15	<10	<2
013K833043	Sediment Pulp	0.18	1.20	0.15	<10	<2
013K833044	Sediment Pulp	0.40	2.60	0.41	<10	<2
013K833045	Sediment Pulp	0.25	1.61	0.22	<10	<2
013K833046	Sediment Pulp	0.36	2.29	0.32	<10	<2
013K833047	Sediment Pulp	0.27	1.78	0.26	<10	<2
013K833048	Sediment Pulp	0.25	1.59	0.23	<10	<2
013K833049	Sediment Pulp	0.25	1.60	0.25	<10	<2
013K833050	Sediment Pulp	0.49	3.22	0.47	<10	<2
013K833051	Sediment Pulp	0.15	0.97	0.14	<10	<2
013K833052	Sediment Pulp	0.19	1.23	0.18	<10	<2
013K833053	Sediment Pulp	0.21	1.36	0.20	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833054	Sediment Pulp	3.07	11.28	1.84	56.6	80	5.5	2.7	65	0.62	0.5	1.4	0.2	0.7	14.6	0.13	0.05	<0.02	20	0.23	0.047
013K833055	Sediment Pulp	1.53	10.67	2.89	24.6	129	6.6	1.5	55	0.51	<0.1	2.6	0.3	0.5	16.7	0.10	0.04	<0.02	12	0.24	0.035
013K833056	Sediment Pulp	2.44	12.51	1.73	47.1	112	5.2	4.2	121	1.51	0.6	2.0	0.3	1.8	14.5	0.10	0.04	<0.02	29	0.24	0.074
013K833057	Sediment Pulp	10.01	44.70	80.31	311.5	605	13.2	8.5	427	1.80	36.4	8.9	3.8	1.3	64.7	1.21	0.61	0.87	20	6.69	0.065
013K833058	Sediment Pulp	1.81	14.43	1.85	26.2	107	4.5	1.1	49	0.44	0.3	2.0	1.9	0.2	15.9	0.10	0.09	<0.02	13	0.25	0.033
013K833059	Sediment Pulp	2.30	10.14	1.84	32.5	87	3.7	2.3	81	0.73	0.4	1.3	<0.2	1.5	14.1	0.05	0.03	<0.02	18	0.25	0.053
013K833060	Sediment Pulp	3.49	35.17	3.71	46.6	74	8.9	7.3	207	1.42	1.8	4.1	0.9	5.2	26.8	0.10	0.06	0.04	30	0.44	0.112
013K833061	Sediment Pulp	1.10	8.67	1.03	10.3	79	2.3	0.4	40	0.42	<0.1	0.8	0.5	0.3	15.5	0.06	<0.02	<0.02	6	0.16	0.022
013K833062	Sediment Pulp	1.33	8.86	2.10	31.1	54	4.5	3.0	94	0.90	1.2	1.2	1.0	3.9	20.7	0.07	0.04	0.05	22	0.31	0.090
013K833063	Sediment Pulp	1.13	10.37	1.82	26.4	116	3.5	0.8	27	0.22	0.2	2.2	0.5	0.8	16.3	0.13	0.05	0.08	11	0.15	0.030
013K833064	Sediment Pulp	1.25	3.62	3.25	21.0	13	2.2	1.8	81	0.82	0.8	0.8	0.5	2.4	20.0	0.04	0.04	<0.02	18	0.28	0.073
013K833065	Sediment Pulp	1.12	8.20	0.99	9.8	82	2.0	0.3	36	0.42	0.3	0.8	0.5	0.7	18.0	0.06	0.02	0.03	7	0.16	0.025
013K833066	Sediment Pulp	3.12	18.94	1.45	21.0	190	3.0	0.6	27	0.54	0.3	2.1	0.4	0.3	18.5	0.13	0.03	<0.02	27	0.16	0.075
013K833067	Sediment Pulp	3.37	20.68	1.32	24.4	192	3.0	0.7	24	0.59	0.4	2.3	0.4	0.3	17.3	0.13	0.03	<0.02	29	0.17	0.076
013K833068	Sediment Pulp	1.84	12.28	2.00	36.8	158	3.7	2.5	41	0.37	0.2	14.2	0.8	0.2	30.3	0.19	0.08	<0.02	14	0.27	0.042
013K833069	Sediment Pulp	5.99	16.73	1.50	63.7	93	6.0	4.8	88	2.49	0.9	3.9	<0.2	4.4	17.0	0.10	0.04	0.11	60	0.24	0.072
013K833070	Sediment Pulp	4.23	26.14	2.03	68.9	107	6.3	3.6	64	0.81	0.4	6.0	0.4	1.8	19.6	0.15	0.06	0.06	24	0.26	0.071
013K833071	Sediment Pulp	2.63	14.08	2.24	52.1	127	6.2	2.4	52	0.95	0.4	3.3	0.8	1.0	22.5	0.16	0.04	0.03	24	0.26	0.042
013K833072	Sediment Pulp	5.24	20.62	2.28	58.4	201	7.4	5.7	223	1.65	0.6	10.6	0.4	1.2	19.7	0.16	0.03	<0.02	26	0.27	0.078
013K833073	Sediment Pulp	1.95	6.64	1.78	30.4	34	4.7	6.2	96	1.19	1.6	1.7	0.5	4.4	17.7	0.07	0.05	<0.02	17	0.28	0.079
013K833074	Sediment Pulp	2.19	14.69	1.75	47.1	159	7.1	1.9	37	0.85	0.6	2.9	0.4	0.8	20.0	0.18	0.06	<0.02	31	0.20	0.042
013K833075	Sediment Pulp	0.90	32.61	25.04	130.2	2780	45.5	27.8	1162	2.96	24.4	3.9	2.1	8.5	28.6	0.56	0.66	3.38	48	0.59	0.089
013K833076	Sediment Pulp	3.26	12.66	2.26	45.7	160	8.2	2.1	53	0.68	0.8	4.8	<0.2	0.7	21.0	0.17	0.06	<0.02	26	0.25	0.062
013K833077	Sediment Pulp	1.95	11.82	1.32	43.0	161	4.5	1.9	62	0.85	0.6	2.0	0.7	1.1	14.8	0.12	0.04	<0.02	26	0.18	0.036
013K833078	Sediment Pulp	12.26	11.47	2.24	55.7	72	6.4	5.3	78	1.83	1.6	4.7	<0.2	7.8	15.1	0.14	0.06	<0.02	49	0.22	0.053
013K833079	Sediment Pulp	1.65	17.43	1.88	66.9	184	9.3	3.3	79	0.97	0.6	2.2	0.4	1.1	16.0	0.15	0.03	<0.02	25	0.22	0.059
013K833080	Sediment Pulp	2.12	14.98	3.37	64.4	163	13.1	4.3	115	1.28	1.0	1.9	0.3	1.3	21.1	0.13	0.03	<0.02	19	0.24	0.056
013K833081	Sediment Pulp	3.26	12.28	2.30	45.9	159	8.5	2.1	55	0.69	0.8	4.8	0.5	0.5	20.7	0.19	0.05	<0.02	27	0.25	0.062
013K833082	Sediment Pulp	3.22	16.06	3.11	91.2	162	10.1	4.0	89	1.54	1.2	2.6	0.6	2.1	17.1	0.18	0.04	<0.02	31	0.24	0.061
013K833083	Sediment Pulp	13.33	8.78	4.86	55.1	42	6.9	30.1	2223	3.56	2.6	25.4	<0.2	5.9	14.2	0.16	0.09	<0.02	28	0.19	0.056



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013K833054	Sediment Pulp			29.8	7.3	0.09	40.7	0.045	<20	0.46	0.006	0.04	0.5	1.1	0.06	0.13	28	0.5	<0.02	0.9	0.45
013K833055	Sediment Pulp			37.6	6.9	0.06	46.0	0.028	<20	0.56	0.007	0.03	0.2	0.9	0.04	0.15	54	0.6	<0.02	1.1	0.47
013K833056	Sediment Pulp			37.8	10.1	0.12	37.6	0.043	<20	0.55	0.008	0.06	0.4	1.5	0.11	0.09	41	0.6	<0.02	1.1	0.60
013K833057	Sediment Pulp			10.7	13.6	0.59	85.9	0.045	<20	0.47	0.029	0.05	0.5	2.4	0.23	1.53	99	1.1	0.03	2.0	0.51
013K833058	Sediment Pulp			35.0	7.3	0.05	34.6	0.021	<20	0.46	0.005	0.02	0.2	0.7	0.05	0.14	52	0.6	<0.02	0.8	0.34
013K833059	Sediment Pulp			25.1	7.7	0.13	33.2	0.052	<20	0.44	0.009	0.06	0.2	1.2	0.05	0.05	28	0.3	<0.02	1.4	0.52
013K833060	Sediment Pulp			42.6	15.3	0.32	56.2	0.093	<20	0.79	0.028	0.20	0.4	2.6	0.13	0.10	14	0.2	<0.02	2.0	1.18
013K833061	Sediment Pulp			22.4	3.9	0.02	22.9	0.015	<20	0.22	0.002	<0.01	<0.1	0.7	<0.02	0.14	55	0.3	<0.02	0.4	0.10
013K833062	Sediment Pulp			29.4	9.9	0.18	49.9	0.063	<20	0.51	0.010	0.10	0.5	1.7	0.06	0.04	18	<0.1	<0.02	1.8	0.65
013K833063	Sediment Pulp			28.4	5.3	0.05	28.2	0.024	<20	0.34	0.004	0.02	<0.1	0.7	<0.02	0.10	40	0.4	<0.02	1.6	0.26
013K833064	Sediment Pulp			24.2	5.8	0.12	25.0	0.059	<20	0.34	0.007	0.04	0.3	1.1	0.03	0.03	14	<0.1	<0.02	2.0	0.38
013K833065	Sediment Pulp			23.1	3.8	0.02	25.6	0.016	<20	0.23	<0.001	<0.01	<0.1	1.1	<0.02	0.14	52	0.4	<0.02	0.7	0.11
013K833066	Sediment Pulp			37.6	6.8	0.04	34.1	0.023	<20	0.50	0.002	0.02	0.1	1.0	0.03	0.09	52	0.4	<0.02	1.5	0.17
013K833067	Sediment Pulp			41.1	7.2	0.03	36.1	0.024	<20	0.52	0.003	0.02	0.1	1.0	0.04	0.09	62	0.4	<0.02	1.7	0.18
013K833068	Sediment Pulp			69.8	6.5	0.05	37.3	0.015	<20	0.63	0.003	0.02	0.3	0.6	0.03	0.31	32	0.8	<0.02	1.4	0.25
013K833069	Sediment Pulp			120.1	17.5	0.12	36.2	0.052	<20	0.66	0.005	0.06	0.4	2.3	0.12	0.25	35	0.4	<0.02	1.9	0.53
013K833070	Sediment Pulp			68.9	10.8	0.11	37.3	0.041	<20	0.72	0.005	0.04	0.5	1.8	0.08	0.15	40	0.4	<0.02	1.8	0.41
013K833071	Sediment Pulp			56.2	9.7	0.07	44.7	0.030	<20	0.64	0.007	0.04	0.3	1.6	0.06	0.21	60	0.7	<0.02	1.7	0.38
013K833072	Sediment Pulp			45.0	12.1	0.11	51.0	0.047	<20	0.89	0.007	0.04	0.5	2.0	0.09	0.13	71	0.8	<0.02	3.0	0.54
013K833073	Sediment Pulp			23.7	7.4	0.15	35.5	0.061	<20	0.43	0.011	0.07	0.5	1.9	0.09	0.09	15	0.2	<0.02	1.5	0.65
013K833074	Sediment Pulp			48.0	7.6	0.05	55.4	0.020	<20	0.48	0.003	0.03	0.2	1.4	0.08	0.22	50	0.8	<0.02	1.4	0.30
013K833075	Sediment Pulp			41.5	48.8	0.75	166.1	0.104	<20	1.60	0.029	0.25	0.2	6.1	0.28	0.15	283	0.6	0.04	5.7	1.41
013K833076	Sediment Pulp			53.9	8.1	0.07	60.7	0.027	<20	0.73	0.005	0.04	0.3	1.0	0.05	0.22	50	0.6	<0.02	1.9	0.51
013K833077	Sediment Pulp			33.9	6.9	0.09	49.2	0.026	<20	0.49	0.004	0.05	0.2	1.5	0.09	0.11	46	0.5	<0.02	1.6	0.61
013K833078	Sediment Pulp			136.7	10.3	0.10	55.1	0.043	<20	0.74	0.006	0.05	1.4	3.6	0.08	0.24	25	0.1	<0.02	1.5	0.47
013K833079	Sediment Pulp			42.1	13.3	0.17	100.3	0.040	<20	0.70	0.007	0.07	0.2	1.9	0.08	0.15	61	0.8	<0.02	1.9	0.51
013K833080	Sediment Pulp			40.1	13.7	0.20	117.1	0.050	<20	0.77	0.007	0.08	0.4	1.7	0.10	0.20	62	0.9	<0.02	2.4	1.08
013K833081	Sediment Pulp			54.5	8.0	0.07	60.1	0.028	<20	0.75	0.005	0.04	0.3	1.0	0.05	0.23	50	0.8	<0.02	1.7	0.49
013K833082	Sediment Pulp			50.8	13.9	0.18	80.2	0.054	<20	0.80	0.006	0.07	0.3	2.1	0.12	0.15	58	1.0	<0.02	2.5	0.64
013K833083	Sediment Pulp			38.3	8.6	0.19	89.3	0.069	<20	0.68	0.006	0.08	0.6	2.4	0.17	0.02	17	0.2	<0.02	1.9	1.07



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CERTIFICATE OF ANALYSIS

VAN22000383.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833054	Sediment Pulp	1.67	3.6	0.3	<0.05	0.8	11.49	56.8	<0.02	1	0.2	3.0	6.78	25.52	4.06	0.62	3.09	0.39	2.14	0.40
013K833055	Sediment Pulp	1.01	2.4	0.2	<0.05	0.5	12.57	71.7	<0.02	<1	0.2	1.9	8.68	32.97	5.29	0.77	3.95	0.49	2.61	0.46
013K833056	Sediment Pulp	1.48	5.7	0.2	<0.05	0.9	14.73	69.5	<0.02	<1	0.3	3.1	8.43	32.20	5.02	0.77	3.85	0.47	2.61	0.49
013K833057	Sediment Pulp	0.74	3.6	3.0	<0.05	1.3	10.82	17.0	0.46	19	0.1	4.1	2.79	11.72	2.46	0.46	2.17	0.29	1.76	0.33
013K833058	Sediment Pulp	0.85	2.1	0.2	<0.05	0.3	12.17	62.6	<0.02	<1	0.2	1.4	7.90	30.26	4.86	0.81	3.71	0.45	2.43	0.44
013K833059	Sediment Pulp	1.58	5.0	0.3	<0.05	0.9	8.89	46.2	<0.02	<1	0.2	3.2	5.58	20.75	3.26	0.52	2.44	0.30	1.69	0.31
013K833060	Sediment Pulp	2.01	15.2	0.4	<0.05	2.1	15.71	82.4	<0.02	1	0.3	7.3	9.50	34.37	5.53	0.85	4.11	0.53	3.01	0.55
013K833061	Sediment Pulp	0.71	0.6	0.1	<0.05	0.5	5.32	36.7	<0.02	<1	<0.1	0.2	4.38	15.81	2.28	0.34	1.58	0.19	1.05	0.18
013K833062	Sediment Pulp	1.67	7.5	0.5	<0.05	1.0	9.97	53.7	<0.02	<1	0.3	5.2	6.78	24.32	3.95	0.65	3.07	0.41	2.06	0.37
013K833063	Sediment Pulp	0.98	1.9	0.8	<0.05	0.3	7.34	47.5	<0.02	<1	0.2	1.5	6.28	22.88	3.65	0.64	2.77	0.35	1.73	0.28
013K833064	Sediment Pulp	1.84	3.4	0.5	<0.05	1.0	7.41	41.7	<0.02	<1	0.2	3.6	5.24	18.83	3.04	0.48	2.51	0.30	1.53	0.30
013K833065	Sediment Pulp	0.74	0.6	0.6	<0.05	0.3	5.45	37.0	<0.02	<1	0.2	0.1	4.58	15.73	2.38	0.39	1.65	0.23	1.09	0.20
013K833066	Sediment Pulp	0.91	1.2	0.3	<0.05	0.2	9.82	67.3	<0.02	2	0.2	0.7	8.87	31.71	5.10	0.92	3.83	0.46	2.08	0.35
013K833067	Sediment Pulp	0.94	1.2	0.3	<0.05	0.2	10.52	73.9	<0.02	3	0.3	0.6	9.67	34.17	5.19	0.90	3.65	0.48	2.47	0.36
013K833068	Sediment Pulp	0.76	2.0	0.4	<0.05	0.2	22.12	87.1	<0.02	2	0.3	1.7	14.54	53.12	8.40	1.33	6.74	0.84	4.29	0.77
013K833069	Sediment Pulp	1.89	5.3	0.3	<0.05	1.3	45.15	195.2	<0.02	14	0.4	3.6	25.55	105.54	16.02	2.77	13.81	1.50	7.16	1.43
013K833070	Sediment Pulp	1.61	3.6	0.4	<0.05	1.0	26.04	128.7	<0.02	2	0.2	3.6	17.74	65.73	11.26	1.95	9.34	1.09	5.42	0.93
013K833071	Sediment Pulp	1.52	3.1	0.3	<0.05	0.7	20.76	101.7	<0.02	1	0.3	2.1	13.50	49.04	7.78	1.35	6.60	0.79	3.68	0.71
013K833072	Sediment Pulp	1.69	4.1	0.3	<0.05	0.5	17.28	75.8	<0.02	<1	0.3	2.4	10.15	37.80	6.47	1.13	4.99	0.65	3.09	0.63
013K833073	Sediment Pulp	2.08	6.3	0.4	<0.05	1.7	11.71	45.1	<0.02	1	0.4	4.5	5.72	20.38	3.68	0.58	2.60	0.41	2.10	0.41
013K833074	Sediment Pulp	0.98	2.4	0.3	<0.05	0.5	16.40	83.4	<0.02	<1	0.3	1.3	10.56	40.44	6.54	1.08	5.17	0.63	3.23	0.62
013K833075	Sediment Pulp	1.91	25.1	1.2	<0.05	4.9	18.37	74.1	0.03	1	0.5	21.0	10.26	37.00	6.62	1.08	5.29	0.72	3.69	0.66
013K833076	Sediment Pulp	1.29	3.6	0.3	<0.05	0.8	19.57	95.4	<0.02	2	0.3	2.3	12.92	48.34	8.03	1.24	6.12	0.71	3.80	0.72
013K833077	Sediment Pulp	0.94	4.4	0.2	<0.05	0.5	11.53	60.6	<0.02	<1	0.2	2.8	7.81	28.19	4.62	0.72	3.60	0.47	2.18	0.38
013K833078	Sediment Pulp	1.80	4.2	0.3	<0.05	2.4	50.11	267.8	<0.02	2	1.1	4.4	33.32	136.29	21.72	2.82	18.13	1.99	10.07	1.81
013K833079	Sediment Pulp	1.12	4.4	0.2	<0.05	1.2	14.73	75.5	<0.02	1	0.4	2.9	8.89	31.83	5.37	0.84	4.31	0.57	2.76	0.57
013K833080	Sediment Pulp	1.67	7.9	0.3	<0.05	1.3	15.03	78.2	<0.02	<1	0.4	6.8	9.59	33.71	5.41	0.89	4.25	0.57	3.24	0.56
013K833081	Sediment Pulp	1.26	3.4	0.3	<0.05	0.6	19.10	94.6	<0.02	1	1.0	2.5	12.89	47.33	7.39	1.20	5.71	0.77	4.18	0.70
013K833082	Sediment Pulp	1.91	5.8	0.3	<0.05	1.5	18.64	92.1	<0.02	1	0.3	4.3	11.33	41.92	6.92	1.09	5.92	0.73	3.98	0.71
013K833083	Sediment Pulp	1.43	9.8	0.5	<0.05	0.8	15.98	91.7	<0.02	<1	0.8	7.1	9.46	32.77	5.70	0.79	4.61	0.63	3.13	0.64



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K833054	Sediment Pulp	0.15	0.97	0.14	<10	<2	
013K833055	Sediment Pulp	0.16	0.98	0.14	<10	<2	
013K833056	Sediment Pulp	0.18	1.12	0.17	<10	<2	
013K833057	Sediment Pulp	0.13	0.87	0.13	<10	<2	
013K833058	Sediment Pulp	0.14	0.91	0.13	<10	<2	
013K833059	Sediment Pulp	0.11	0.69	0.10	<10	<2	
013K833060	Sediment Pulp	0.20	1.27	0.18	<10	<2	
013K833061	Sediment Pulp	0.06	0.38	0.05	<10	<2	
013K833062	Sediment Pulp	0.16	0.88	0.11	<10	<2	
013K833063	Sediment Pulp	0.09	0.61	0.08	<10	<2	
013K833064	Sediment Pulp	0.11	0.62	0.10	<10	<2	
013K833065	Sediment Pulp	0.07	0.39	0.07	<10	<2	
013K833066	Sediment Pulp	0.12	0.68	0.09	<10	<2	
013K833067	Sediment Pulp	0.13	0.73	0.09	<10	<2	
013K833068	Sediment Pulp	0.26	1.40	0.22	<10	2	
013K833069	Sediment Pulp	0.42	2.46	0.35	<10	<2	
013K833070	Sediment Pulp	0.37	2.08	0.31	<10	3	
013K833071	Sediment Pulp	0.27	1.76	0.23	<10	<2	
013K833072	Sediment Pulp	0.21	1.54	0.18	<10	<2	
013K833073	Sediment Pulp	0.16	1.08	0.16	<10	<2	
013K833074	Sediment Pulp	0.23	1.52	0.21	<10	<2	
013K833075	Sediment Pulp	0.26	1.86	0.24	<10	<2	
013K833076	Sediment Pulp	0.28	1.60	0.23	<10	<2	
013K833077	Sediment Pulp	0.16	1.03	0.14	<10	<2	
013K833078	Sediment Pulp	0.59	3.59	0.66	<10	<2	
013K833079	Sediment Pulp	0.19	1.30	0.18	<10	<2	
013K833080	Sediment Pulp	0.22	1.40	0.20	<10	<2	
013K833081	Sediment Pulp	0.26	1.72	0.25	<10	<2	
013K833082	Sediment Pulp	0.25	1.73	0.25	<10	<2	
013K833083	Sediment Pulp	0.24	1.65	0.23	<10	<2	



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833084	Sediment Pulp	10.17	20.63	10.62	96.1	388	19.3	12.6	513	2.55	1.0	12.6	1.2	6.2	35.7	0.20	0.08	0.07	49	0.40	0.193
013K833085	Sediment Pulp	16.57	33.84	5.35	131.2	223	19.8	17.4	413	4.24	1.8	21.7	0.5	5.3	24.4	0.33	0.06	0.04	41	0.26	0.155
013K833086	Sediment Pulp	16.04	50.91	5.63	123.7	614	11.5	10.6	337	3.36	0.4	28.9	0.6	3.7	21.0	0.51	0.06	<0.02	49	0.26	0.207
013K833087	Sediment Pulp	9.84	40.65	80.81	308.9	599	12.1	7.8	438	1.82	34.4	9.4	3.3	1.6	66.8	1.52	0.62	0.98	22	6.32	0.070
013K833088	Sediment Pulp	3.35	24.47	14.45	55.1	406	15.5	3.6	130	1.00	0.4	18.5	1.1	1.0	32.7	0.41	0.04	0.05	28	0.54	0.196
013K833089	Sediment Pulp	1.67	15.28	7.06	35.8	231	14.4	2.6	70	0.51	0.3	14.3	1.2	0.4	22.4	0.22	0.03	<0.02	19	0.32	0.088
013K833090	Sediment Pulp	1.89	19.44	8.44	47.3	284	13.9	2.6	90	0.63	0.4	17.6	1.9	0.5	20.5	0.37	0.06	<0.02	25	0.30	0.099
013K833091	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833092	Sediment Pulp	8.74	34.78	6.45	81.8	160	16.4	3.0	35	0.28	0.6	81.8	2.0	1.6	22.2	0.33	0.10	0.14	8	0.40	0.053
013K833093	Sediment Pulp	46.51	58.77	10.45	218.0	815	15.0	10.6	437	3.64	3.5	71.8	2.2	14.1	37.0	0.97	0.15	0.06	23	0.75	0.194
013K833094	Sediment Pulp	0.44	17.30	9.54	59.4	50	25.6	13.6	602	2.93	2.7	1.5	8.4	8.3	41.6	0.08	0.08	0.05	45	0.66	0.098
013K833095	Sediment Pulp	5.25	73.94	4.76	56.4	325	14.0	8.9	179	1.83	0.2	13.1	1.0	0.9	26.8	0.52	0.03	<0.02	46	0.62	0.160
013K833096	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833097	Sediment Pulp	6.55	58.91	8.00	101.3	542	15.3	43.0	1829	8.87	0.5	17.8	1.9	4.3	23.8	0.76	<0.02	<0.02	61	0.45	0.318
013K833098	Sediment Pulp	3.22	62.37	7.75	83.6	177	27.5	21.7	1089	4.30	2.5	35.4	1.4	8.3	26.8	0.22	0.03	0.03	57	0.44	0.150
013K833099	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833100	Sediment Pulp	1.79	32.65	4.17	84.0	265	15.6	44.1	918	7.74	<0.1	8.8	1.6	3.1	24.2	0.62	<0.02	<0.02	43	0.25	0.192
013K833101	Sediment Pulp	3.59	50.00	4.80	47.6	664	15.9	7.5	242	1.67	<0.1	10.1	*	0.4	44.1	0.33	0.04	0.05	43	1.16	0.211
013K833102	Sediment Pulp	1.49	41.44	4.24	60.0	239	20.5	4.2	77	0.62	<0.1	5.3	0.6	0.4	26.5	0.29	0.04	0.02	35	0.47	0.072
013K833103	Sediment Pulp	0.94	38.21	3.48	37.2	255	16.3	3.3	72	0.51	<0.1	5.1	0.4	0.3	27.2	0.27	0.02	0.02	26	0.57	0.071
013K833104	Sediment Pulp	5.69	65.42	6.78	86.5	208	35.2	30.7	792	3.27	2.3	27.5	1.3	5.9	31.0	0.21	0.04	0.05	51	0.55	0.121
013K833105	Sediment Pulp	15.25	52.64	5.90	93.9	398	16.0	40.6	2186	7.42	0.2	18.1	7.4	2.2	25.8	0.49	0.02	0.04	65	0.59	0.260
013K833106	Sediment Pulp	3.41	47.79	4.53	45.0	640	15.3	7.0	225	1.54	<0.1	9.5	2.1	0.4	41.5	0.29	0.03	0.04	40	1.08	0.196
013K833107	Sediment Pulp	8.58	46.47	4.14	76.4	219	17.6	20.2	249	2.34	0.2	8.5	2.5	0.8	22.8	0.44	0.04	0.03	46	0.51	0.086
013K833108	Sediment Pulp	3.55	12.44	4.62	40.5	133	7.8	6.3	227	1.50	<0.1	7.1	<0.2	0.3	15.6	0.31	<0.02	0.03	28	0.27	0.091
013K833109	Sediment Pulp	7.08	48.07	3.85	130.9	205	27.5	45.4	9289	4.86	<0.1	13.2	<0.2	1.3	12.8	0.61	<0.02	0.03	33	0.26	0.156
013K833110	Sediment Pulp	0.56	16.39	8.67	64.1	36	27.0	14.5	622	2.97	2.5	1.3	1.8	6.3	36.1	0.08	0.07	0.08	42	0.62	0.084
013K833111	Sediment Pulp	16.54	93.51	6.87	99.1	362	33.6	55.7	1132	8.97	0.6	18.6	<0.2	2.9	24.8	0.41	0.03	0.03	66	0.34	0.280
013K833112	Sediment Pulp	15.28	42.82	15.44	119.6	788	17.8	13.2	362	2.70	1.5	38.1	2.2	2.1	38.9	0.72	0.06	0.13	40	0.80	0.293
013K833113	Sediment Pulp	6.92	71.93	7.34	139.0	163	36.1	9.4	70	1.09	21.0	49.4	2.2	6.2	28.7	0.45	0.09	0.09	25	0.45	0.047



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833084	Sediment Pulp	70.8	27.7	0.72	178.2	0.136	<20	2.08	0.035	0.37	0.6	4.3	0.25	0.12	90	0.8	<0.02	6.6	3.83	<0.1	0.07
013K833085	Sediment Pulp	113.7	24.5	0.38	121.6	0.068	<20	2.13	0.012	0.21	0.6	4.2	0.37	0.21	39	1.7	<0.02	3.8	1.89	<0.1	0.04
013K833086	Sediment Pulp	136.4	25.2	0.14	102.6	0.042	<20	2.66	0.006	0.08	1.1	3.9	0.24	0.22	112	3.3	<0.02	2.3	0.86	0.1	0.03
013K833087	Sediment Pulp	11.2	12.1	0.59	97.5	0.041	<20	0.45	0.025	0.05	0.5	2.5	0.21	1.58	93	1.2	<0.02	2.1	0.52	<0.1	0.06
013K833088	Sediment Pulp	98.3	20.9	0.07	117.1	0.035	<20	2.02	0.004	0.03	0.6	1.9	0.11	0.33	113	2.1	<0.02	3.4	0.38	0.2	0.03
013K833089	Sediment Pulp	71.5	13.9	0.09	106.0	0.029	<20	1.20	0.004	0.04	0.2	1.0	0.05	0.29	83	1.4	<0.02	2.4	0.44	<0.1	<0.02
013K833090	Sediment Pulp	85.1	16.8	0.10	104.2	0.033	<20	1.46	0.005	0.04	0.3	1.2	0.06	0.29	83	1.7	<0.02	2.8	0.50	<0.1	0.03
013K833091	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833092	Sediment Pulp	462.6	11.3	0.06	46.1	0.015	<20	1.76	0.005	0.02	0.2	1.6	0.16	0.34	66	0.8	<0.02	1.2	0.36	0.2	<0.02
013K833093	Sediment Pulp	583.1	32.0	0.08	114.4	0.037	<20	4.82	0.009	0.03	1.0	5.3	0.26	0.33	236	4.0	<0.02	3.0	0.35	0.3	0.21
013K833094	Sediment Pulp	35.2	35.1	0.91	118.6	0.159	<20	1.52	0.060	0.27	0.1	4.4	0.14	<0.02	11	<0.1	<0.02	5.4	1.70	<0.1	0.32
013K833095	Sediment Pulp	53.9	32.2	0.08	65.1	0.038	<20	2.64	0.006	0.02	0.3	2.2	0.09	0.32	168	2.3	<0.02	4.0	0.19	<0.1	0.03
013K833096	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833097	Sediment Pulp	109.5	36.2	0.12	65.5	0.078	<20	4.33	0.007	0.03	0.2	4.3	0.33	0.23	205	3.8	<0.02	9.0	0.31	0.1	<0.02
013K833098	Sediment Pulp	94.0	44.7	0.77	105.9	0.111	<20	2.43	0.036	0.22	0.2	5.5	0.22	0.11	52	1.1	<0.02	6.2	0.95	0.1	0.03
013K833099	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833100	Sediment Pulp	64.0	28.5	0.07	68.4	0.059	<20	3.30	0.007	0.02	<0.1	3.7	0.32	0.22	128	4.8	<0.02	5.8	0.25	<0.1	<0.02
013K833101	Sediment Pulp	69.2	31.7	0.11	85.9	0.052	45	3.12	0.011	0.03	0.2	2.0	0.08	0.37	222	2.7	<0.02	7.3	0.28	<0.1	<0.02
013K833102	Sediment Pulp	65.9	22.0	0.12	90.6	0.039	<20	2.22	0.009	0.04	<0.1	1.2	0.11	0.30	103	1.7	<0.02	2.2	0.32	<0.1	<0.02
013K833103	Sediment Pulp	52.3	20.4	0.14	77.9	0.037	<20	1.90	0.008	0.04	<0.1	1.1	0.07	0.27	107	1.4	<0.02	2.8	0.37	<0.1	<0.02
013K833104	Sediment Pulp	66.7	47.5	0.85	108.2	0.104	<20	2.12	0.036	0.23	0.1	4.9	0.34	0.07	45	0.9	<0.02	5.4	0.94	<0.1	0.05
013K833105	Sediment Pulp	95.0	33.4	0.08	65.9	0.074	<20	3.95	0.008	0.02	0.2	3.8	0.23	0.24	187	3.7	<0.02	6.7	0.23	<0.1	<0.02
013K833106	Sediment Pulp	65.8	31.0	0.10	81.5	0.048	<20	2.95	0.006	0.02	0.2	1.8	0.07	0.34	200	2.4	<0.02	7.0	0.27	<0.1	<0.02
013K833107	Sediment Pulp	66.4	31.7	0.07	61.7	0.041	<20	3.36	0.007	0.01	<0.1	2.5	0.20	0.26	113	1.8	<0.02	2.2	0.14	<0.1	<0.02
013K833108	Sediment Pulp	36.2	12.1	0.07	40.6	0.030	<20	1.71	0.007	0.02	0.1	0.8	0.04	0.19	77	1.5	<0.02	4.2	0.22	<0.1	<0.02
013K833109	Sediment Pulp	52.8	24.1	0.06	167.2	0.034	<20	2.77	0.006	0.02	<0.1	2.3	0.63	0.17	98	2.3	<0.02	2.8	0.20	<0.1	<0.02
013K833110	Sediment Pulp	29.2	36.7	0.91	86.5	0.149	<20	1.51	0.060	0.27	0.1	4.2	<0.02	<0.02	17	<0.1	<0.02	5.0	1.64	<0.1	0.20
013K833111	Sediment Pulp	94.2	71.3	0.07	64.8	0.054	<20	4.12	0.007	0.01	0.4	4.2	0.34	0.21	177	2.8	<0.02	2.5	0.19	<0.1	0.02
013K833112	Sediment Pulp	200.5	38.2	0.13	99.7	0.048	<20	3.33	0.009	0.05	1.7	2.7	0.41	0.37	207	3.3	<0.02	1.5	0.48	<0.1	<0.02
013K833113	Sediment Pulp	326.7	28.6	0.07	65.7	0.027	<20	2.18	0.009	0.03	1.0	4.0	0.52	0.63	102	2.2	<0.02	1.3	0.26	<0.1	0.04



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833084	Sediment Pulp	2.84	37.6	0.8	<0.05	3.2	28.30	116.3	0.02	<1	0.8	19.8	15.65	55.78	8.82	1.41	7.25	0.98	5.01	0.98	3.07
013K833085	Sediment Pulp	1.45	19.8	0.4	<0.05	2.0	46.58	195.0	<0.02	2	1.3	12.1	26.54	94.83	14.50	2.04	11.38	1.61	8.74	1.75	4.87
013K833086	Sediment Pulp	1.86	7.9	0.2	<0.05	1.0	59.05	273.4	0.02	5	1.8	4.0	33.10	120.60	19.13	2.86	16.05	2.10	11.81	2.30	6.91
013K833087	Sediment Pulp	0.72	3.6	3.3	<0.05	1.4	10.69	18.4	0.49	20	<0.1	4.6	2.91	12.12	2.68	0.55	2.27	0.34	1.79	0.41	1.14
013K833088	Sediment Pulp	2.47	3.6	0.3	<0.05	1.3	32.17	197.1	0.03	<1	0.6	2.0	24.46	85.52	13.75	1.93	10.69	1.41	7.42	1.28	3.70
013K833089	Sediment Pulp	1.80	4.0	0.3	<0.05	0.9	26.42	139.8	<0.02	<1	0.4	2.5	17.84	64.37	10.33	1.26	7.50	1.06	6.01	1.08	2.89
013K833090	Sediment Pulp	1.95	4.6	0.3	<0.05	1.1	30.47	165.9	<0.02	<1	0.8	2.9	21.42	77.84	12.76	1.52	9.30	1.26	6.92	1.23	3.48
013K833091	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833092	Sediment Pulp	0.91	3.0	0.2	<0.05	0.4	75.01	656.0	<0.02	2	1.9	2.1	132.18	456.46	65.56	8.12	41.79	4.70	21.50	3.45	9.65
013K833093	Sediment Pulp	2.85	2.7	0.3	0.07	3.7	367.81	764.1	0.07	7	26.7	2.1	150.93	552.98	110.54	11.55	97.15	15.09	83.19	15.24	42.69
013K833094	Sediment Pulp	0.66	23.0	0.8	<0.05	14.1	14.85	70.8	0.02	<1	0.9	17.5	8.47	31.03	5.36	0.94	4.57	0.61	3.37	0.63	1.69
013K833095	Sediment Pulp	1.35	1.4	0.2	<0.05	1.2	14.01	94.5	<0.02	3	0.9	1.9	12.78	45.78	6.94	1.37	4.70	0.65	3.15	0.47	1.49
013K833096	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833097	Sediment Pulp	1.63	3.0	0.4	<0.05	0.6	36.31	247.3	0.05	2	1.1	3.0	27.14	92.77	14.40	2.99	11.57	1.60	8.22	1.44	4.10
013K833098	Sediment Pulp	1.56	18.5	0.6	<0.05	2.0	26.87	173.1	<0.02	1	0.9	15.8	21.29	76.10	11.52	1.93	8.34	1.08	5.66	0.99	2.75
013K833099	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833100	Sediment Pulp	1.19	2.1	0.2	<0.05	0.3	15.34	144.9	0.03	<1	0.6	1.8	13.29	45.00	6.57	1.48	5.41	0.73	3.64	0.64	1.85
013K833101	Sediment Pulp	2.12	2.4	0.2	0.13	0.8	22.10	127.4	0.04	<1	0.8	2.2	15.35	55.59	8.56	1.57	6.31	0.83	4.54	0.78	2.10
013K833102	Sediment Pulp	1.28	3.8	0.2	0.06	0.7	14.61	132.1	<0.02	<1	0.6	3.0	14.85	52.89	7.94	1.39	5.54	0.68	3.51	0.57	1.51
013K833103	Sediment Pulp	1.05	4.3	0.2	<0.05	0.6	11.53	103.1	<0.02	<1	0.5	3.9	11.59	42.75	6.39	1.14	4.47	0.55	2.79	0.45	1.19
013K833104	Sediment Pulp	1.48	19.5	0.4	<0.05	2.6	19.90	137.9	<0.02	<1	0.6	14.6	14.97	53.64	8.07	1.21	5.86	0.73	3.94	0.68	1.91
013K833105	Sediment Pulp	2.05	1.9	0.2	<0.05	0.7	32.39	201.0	0.04	1	1.1	1.5	20.70	74.05	11.27	2.18	8.45	1.15	6.60	1.14	3.13
013K833106	Sediment Pulp	1.72	2.2	0.2	<0.05	0.9	20.64	120.3	0.03	<1	0.7	1.9	14.96	52.75	8.05	1.49	5.92	0.79	4.33	0.73	1.99
013K833107	Sediment Pulp	1.35	1.3	0.1	<0.05	0.7	18.07	143.0	<0.02	<1	0.9	1.1	14.53	52.31	7.88	1.41	5.80	0.75	4.05	0.68	1.84
013K833108	Sediment Pulp	0.89	1.8	0.1	<0.05	0.3	8.94	69.7	<0.02	<1	0.5	1.9	7.63	28.53	4.16	0.81	2.96	0.38	1.89	0.32	0.88
013K833109	Sediment Pulp	0.59	1.9	0.1	<0.05	0.3	15.88	137.9	<0.02	<1	0.7	1.8	11.16	40.88	6.06	1.15	4.52	0.58	3.20	0.54	1.53
013K833110	Sediment Pulp	0.72	22.6	0.6	<0.05	11.7	13.58	62.8	<0.02	<1	0.6	17.0	7.08	27.61	4.70	0.78	3.65	0.50	2.79	0.49	1.40
013K833111	Sediment Pulp	1.83	1.1	0.2	<0.05	0.9	25.09	187.9	0.02	1	1.3	0.8	19.29	66.25	9.19	1.65	6.63	0.85	4.69	0.81	2.32
013K833112	Sediment Pulp	3.00	3.9	0.3	<0.05	0.9	104.56	410.3	0.04	3	3.5	3.1	49.64	175.52	27.95	3.47	22.06	3.16	19.37	3.56	10.58
013K833113	Sediment Pulp	1.85	2.6	0.1	<0.05	3.3	113.45	691.0	<0.02	<1	2.4	1.7	90.16	332.82	52.45	6.62	37.94	4.59	24.56	4.15	11.17



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833084	Sediment Pulp		0.41	2.62	0.40	<10	<2
013K833085	Sediment Pulp		0.74	4.73	0.76	<10	3
013K833086	Sediment Pulp		0.95	5.97	0.91	<10	2
013K833087	Sediment Pulp		0.16	0.99	0.15	14	<2
013K833088	Sediment Pulp		0.48	2.95	0.38	<10	2
013K833089	Sediment Pulp		0.40	2.26	0.31	<10	<2
013K833090	Sediment Pulp		0.45	2.76	0.40	<10	<2
013K833091	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833092	Sediment Pulp		1.19	7.30	1.02	<10	<2
013K833093	Sediment Pulp		5.69	33.65	4.79	12	<2
013K833094	Sediment Pulp		0.25	1.36	0.18	<10	2
013K833095	Sediment Pulp		0.19	1.20	0.17	<10	<2
013K833096	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833097	Sediment Pulp		0.57	3.18	0.43	<10	<2
013K833098	Sediment Pulp		0.39	2.40	0.35	<10	<2
013K833099	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833100	Sediment Pulp		0.26	1.44	0.19	<10	<2
013K833101	Sediment Pulp		0.26	1.59	0.19	<10	<2
013K833102	Sediment Pulp		0.18	1.08	0.13	<10	<2
013K833103	Sediment Pulp		0.14	0.86	0.10	<10	<2
013K833104	Sediment Pulp		0.24	1.57	0.21	<10	<2
013K833105	Sediment Pulp		0.40	2.51	0.31	<10	<2
013K833106	Sediment Pulp		0.25	1.50	0.18	<10	<2
013K833107	Sediment Pulp		0.22	1.37	0.17	<10	<2
013K833108	Sediment Pulp		0.10	0.65	0.08	<10	<2
013K833109	Sediment Pulp		0.20	1.23	0.15	<10	<2
013K833110	Sediment Pulp		0.18	1.15	0.15	<10	<2
013K833111	Sediment Pulp		0.30	1.88	0.24	<10	<2
013K833112	Sediment Pulp		1.42	9.13	1.21	<10	<2
013K833113	Sediment Pulp		1.35	8.52	1.21	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833114	Sediment Pulp	3.51	54.88	14.05	98.9	840	15.9	29.9	979	7.65	4.5	7.7	0.7	4.8	20.0	0.62	0.04	0.11	69	0.34	0.306
013K833115	Sediment Pulp	9.36	39.89	7.96	90.1	176	17.7	13.4	439	2.24	3.1	41.0	0.3	5.4	23.3	0.27	0.10	0.07	38	0.37	0.130
013K833116	Sediment Pulp	0.90	32.90	23.06	130.0	2647	46.3	28.5	1177	3.02	24.2	3.5	2.9	6.5	24.9	0.49	0.55	2.74	45	0.60	0.086
013K833117	Sediment Pulp	17.93	37.91	9.31	95.8	119	21.3	12.7	354	2.03	2.0	64.8	0.7	10.2	34.0	0.16	0.13	0.08	43	0.52	0.073
013K833118	Sediment Pulp	4.25	17.75	7.41	43.1	273	14.9	4.2	116	0.40	0.2	13.5	3.9	0.4	32.9	0.24	0.05	0.10	14	0.80	0.049
013K833119	Sediment Pulp	1.84	34.84	5.47	46.3	239	25.3	4.8	138	0.60	0.5	8.6	0.3	0.7	37.9	0.22	0.04	0.04	20	0.63	0.079
013K833120	Sediment Pulp	0.59	15.21	3.27	19.7	290	9.2	2.4	66	0.31	0.2	1.9	0.3	<0.1	15.7	0.13	0.03	0.02	12	0.23	0.067
013K833121	Sediment Pulp	5.55	24.08	9.23	96.8	90	27.9	24.9	1499	3.48	5.4	6.3	<0.2	3.8	20.2	0.13	0.10	0.06	39	0.26	0.067
013K833122	Sediment Pulp	1.59	30.16	7.87	35.1	355	12.3	2.8	96	0.44	0.5	10.0	0.6	0.1	23.3	0.39	0.04	0.10	22	0.51	0.196
013K833123	Sediment Pulp	5.80	25.10	9.54	100.0	300	28.4	26.0	1529	3.52	5.5	6.6	1.5	4.1	20.2	0.12	0.10	0.06	39	0.25	0.071
013K833124	Sediment Pulp	37.54	53.96	38.34	175.0	636	26.7	36.4	5396	7.35	36.4	18.7	1.7	2.3	50.0	1.17	0.88	0.16	51	0.72	0.189
013K833125	Sediment Pulp	5.37	44.07	9.10	106.3	139	40.0	20.0	823	3.81	10.6	5.2	0.9	3.4	37.6	0.38	0.11	0.08	45	0.75	0.100
013K833126	Sediment Pulp	2.77	41.13	4.36	82.8	158	28.0	7.3	206	0.94	4.5	6.3	1.1	0.2	43.6	0.48	0.24	0.03	20	0.72	0.062
013K833127	Sediment Pulp	2.57	46.54	4.44	80.5	164	28.1	7.1	200	0.83	2.9	6.3	0.7	0.1	48.5	0.54	0.24	0.03	19	0.81	0.063
013K833128	Sediment Pulp	0.86	37.12	8.84	65.0	79	44.0	16.8	315	3.03	3.9	1.3	0.7	4.6	33.3	0.15	0.12	0.06	51	0.68	0.075
013K833129	Sediment Pulp	3.73	35.07	4.32	121.9	229	32.8	14.7	1493	3.08	6.8	9.8	1.2	1.3	62.9	0.86	0.57	0.03	30	1.10	0.061
013K833130	Sediment Pulp	9.97	45.68	80.87	300.3	647	13.0	8.1	446	1.83	34.3	8.7	6.7	1.3	62.8	1.21	0.54	0.85	21	6.43	0.064
013K833131	Sediment Pulp	0.80	29.25	4.07	66.3	309	24.4	7.0	127	0.70	0.3	0.9	<0.2	<0.1	16.6	0.47	0.07	0.03	18	0.54	0.050
013K833132	Sediment Pulp	12.26	42.64	2.48	75.4	277	24.1	15.9	149	2.99	<0.1	7.4	0.2	0.9	13.1	0.22	0.04	<0.02	26	0.28	0.148
013K833133	Sediment Pulp	14.22	31.81	2.34	82.5	302	21.2	15.1	164	2.12	<0.1	11.2	0.5	0.5	16.7	0.30	0.08	0.02	30	0.26	0.084
013K833134	Sediment Pulp	5.66	33.83	7.24	87.9	111	21.0	9.0	344	2.11	1.1	15.7	0.3	5.4	25.2	0.15	0.08	0.06	34	0.32	0.143
013K833135	Sediment Pulp	3.47	15.63	3.25	49.5	169	11.4	2.6	62	0.39	<0.1	6.8	0.5	0.6	24.9	0.12	0.06	0.02	10	0.29	0.040
013K833136	Sediment Pulp	7.25	14.21	3.61	86.5	148	8.7	5.8	188	1.62	1.0	5.4	<0.2	2.2	18.9	0.14	0.07	0.03	26	0.28	0.083
013K833137	Sediment Pulp	5.94	17.04	2.20	83.6	266	8.2	2.7	59	0.66	<0.1	6.7	2.2	0.5	16.7	0.22	0.08	0.02	19	0.22	0.053
013K833138	Sediment Pulp	33.19	22.64	2.20	102.2	198	12.3	7.3	67	1.75	<0.1	19.5	1.0	1.6	22.3	0.22	0.16	0.02	23	0.22	0.044
013K833139	Sediment Pulp	2.74	22.55	2.83	89.1	276	6.4	1.9	57	0.48	0.3	3.0	1.4	0.2	15.3	0.23	0.08	0.02	24	0.23	0.055
013K833140	Sediment Pulp	2.26	12.19	2.80	62.0	162	5.9	2.9	87	1.02	0.7	2.1	4.6	1.2	12.5	0.16	0.06	0.02	18	0.19	0.042
013K833141	Sediment Pulp	1.75	6.34	3.37	39.8	52	4.8	6.2	158	1.49	1.1	2.1	0.9	4.9	12.5	0.04	0.06	0.03	21	0.19	0.052
013K833142	Sediment Pulp	1.86	8.19	1.93	13.7	113	2.8	1.0	27	0.58	0.1	2.4	0.9	0.6	6.8	0.04	0.07	<0.02	14	0.09	0.026
013K833143	Sediment Pulp	1.65	6.19	3.24	38.3	54	4.6	6.0	155	1.45	1.1	2.0	1.4	4.7	12.5	0.04	0.05	0.03	20	0.20	0.052



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833114	Sediment Pulp	96.0	36.7	0.10	97.7	0.073	<20	2.87	0.008	0.05	0.4	4.3	0.27	0.17	186	4.1	0.03	4.6	0.73	<0.1	0.03
013K833115	Sediment Pulp	69.6	30.1	0.43	106.8	0.088	<20	1.71	0.028	0.23	0.6	3.9	0.32	0.10	31	1.5	0.02	2.6	1.76	<0.1	0.04
013K833116	Sediment Pulp	37.3	48.3	0.76	141.8	0.097	<20	1.63	0.029	0.25	0.2	5.6	0.29	0.14	264	0.6	0.04	5.1	1.34	<0.1	0.11
013K833117	Sediment Pulp	57.1	31.8	0.71	156.7	0.137	<20	1.77	0.040	0.41	0.7	4.2	0.38	0.13	33	0.6	<0.02	4.2	2.88	<0.1	0.14
013K833118	Sediment Pulp	63.6	12.1	0.07	57.5	0.024	<20	1.20	0.009	0.03	0.3	1.0	0.05	0.32	89	1.3	<0.02	0.8	0.43	<0.1	0.03
013K833119	Sediment Pulp	79.0	25.1	0.13	122.9	0.035	<20	1.62	0.009	0.05	0.5	1.3	0.14	0.38	85	1.4	<0.02	0.7	0.53	<0.1	0.04
013K833120	Sediment Pulp	19.2	16.6	0.11	66.9	0.023	<20	0.73	0.009	0.03	0.3	0.4	0.05	0.16	69	0.6	<0.02	1.7	0.49	<0.1	<0.02
013K833121	Sediment Pulp	52.5	62.7	0.58	69.4	0.098	<20	1.86	0.010	0.10	0.3	3.5	0.16	0.05	29	0.5	<0.02	2.7	1.75	<0.1	0.05
013K833122	Sediment Pulp	46.6	22.8	0.10	85.4	0.027	<20	1.38	0.008	0.03	0.5	0.6	0.07	0.20	117	1.6	<0.02	2.3	0.43	<0.1	0.02
013K833123	Sediment Pulp	54.0	63.8	0.58	70.0	0.098	<20	1.89	0.009	0.10	0.3	3.5	0.20	0.06	32	0.7	<0.02	2.8	1.74	<0.1	0.05
013K833124	Sediment Pulp	53.2	44.2	0.37	205.1	0.049	<20	3.04	0.011	0.07	0.2	3.6	0.19	0.12	252	3.8	0.03	5.4	0.91	<0.1	0.04
013K833125	Sediment Pulp	29.7	49.0	0.82	240.0	0.100	<20	2.69	0.038	0.24	0.1	5.1	0.18	0.11	86	1.4	<0.02	5.7	1.94	<0.1	0.10
013K833126	Sediment Pulp	34.4	40.6	0.24	160.9	0.022	<20	1.60	0.010	0.03	<0.1	1.9	0.07	0.31	95	1.6	<0.02	1.5	0.68	<0.1	<0.02
013K833127	Sediment Pulp	35.6	39.6	0.23	168.5	0.021	<20	1.60	0.015	0.03	<0.1	1.6	0.07	0.31	81	1.7	<0.02	1.4	0.63	<0.1	<0.02
013K833128	Sediment Pulp	27.3	49.6	0.98	113.1	0.162	<20	1.59	0.050	0.16	<0.1	5.0	0.10	0.11	23	0.1	<0.02	4.9	0.89	<0.1	0.28
013K833129	Sediment Pulp	31.6	41.6	0.32	593.5	0.031	<20	1.62	0.024	0.05	<0.1	5.9	0.17	0.41	100	8.0	<0.02	2.0	0.72	<0.1	0.04
013K833130	Sediment Pulp	10.5	13.4	0.58	82.1	0.044	<20	0.47	0.030	0.05	0.5	2.4	0.24	1.54	98	1.1	0.02	2.0	0.50	<0.1	0.04
013K833131	Sediment Pulp	29.4	26.4	0.28	88.7	0.022	<20	1.27	0.009	0.06	<0.1	1.3	0.09	0.24	88	0.9	<0.02	2.2	0.63	<0.1	0.02
013K833132	Sediment Pulp	44.0	20.0	0.09	54.5	0.019	<20	1.96	0.010	0.02	0.8	1.9	0.15	0.19	95	1.4	<0.02	1.2	0.27	<0.1	<0.02
013K833133	Sediment Pulp	67.5	17.0	0.05	59.1	0.015	<20	1.67	0.007	0.02	0.5	1.5	0.13	0.30	69	1.4	<0.02	0.5	0.23	<0.1	<0.02
013K833134	Sediment Pulp	72.1	30.7	0.57	88.2	0.110	<20	1.69	0.015	0.28	0.5	4.2	0.17	0.13	18	0.9	<0.02	3.1	2.44	<0.1	0.05
013K833135	Sediment Pulp	58.6	10.0	0.11	69.8	0.031	<20	0.87	0.009	0.05	0.4	1.1	0.07	0.26	48	0.8	<0.02	0.6	0.75	<0.1	0.02
013K833136	Sediment Pulp	53.3	13.0	0.25	71.5	0.068	<20	1.00	0.012	0.16	0.5	2.2	0.14	0.13	38	0.5	<0.02	1.6	1.26	<0.1	0.04
013K833137	Sediment Pulp	71.9	7.8	0.07	68.0	0.024	<20	0.72	0.006	0.03	0.2	1.0	0.08	0.17	48	0.9	<0.02	0.5	0.45	<0.1	<0.02
013K833138	Sediment Pulp	199.3	8.3	0.06	62.9	0.021	<20	0.88	0.006	0.03	0.2	2.7	0.14	0.39	49	2.2	<0.02	<0.1	0.41	<0.1	<0.02
013K833139	Sediment Pulp	49.5	7.0	0.08	66.9	0.024	<20	0.62	0.007	0.04	0.4	0.9	0.07	0.19	73	0.8	<0.02	0.9	0.45	<0.1	<0.02
013K833140	Sediment Pulp	40.9	6.0	0.11	66.0	0.040	<20	0.52	0.009	0.06	0.2	1.5	0.13	0.20	48	0.5	<0.02	1.2	0.65	<0.1	0.03
013K833141	Sediment Pulp	30.9	8.8	0.17	46.3	0.082	<20	0.59	0.008	0.08	0.4	2.2	0.07	0.03	28	<0.1	<0.02	1.6	1.03	<0.1	0.05
013K833142	Sediment Pulp	33.6	5.4	0.05	29.4	0.023	<20	0.40	0.005	0.02	0.2	1.0	<0.02	0.07	41	0.4	<0.02	0.9	0.37	<0.1	<0.02
013K833143	Sediment Pulp	30.4	8.6	0.17	44.5	0.082	<20	0.58	0.009	0.07	0.4	2.2	0.07	0.03	19	<0.1	<0.02	1.6	0.98	<0.1	0.05



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833114	Sediment Pulp	3.48	4.7	0.4	<0.05	1.4	43.11	207.7	0.04	<1	1.3	2.4	22.21	81.88	13.35	1.98	10.53	1.49	8.86	1.61	4.58
013K833115	Sediment Pulp	1.81	21.1	0.5	<0.05	2.2	39.02	149.4	<0.02	1	1.3	13.3	16.73	61.71	10.21	1.28	8.24	1.14	6.81	1.28	3.86
013K833116	Sediment Pulp	1.95	24.0	1.0	<0.05	5.5	17.69	69.2	0.04	<1	0.7	19.4	9.01	35.11	6.05	0.89	4.53	0.58	3.26	0.59	1.74
013K833117	Sediment Pulp	2.79	35.8	0.6	<0.05	6.9	27.83	108.9	<0.02	3	1.2	17.6	12.89	48.77	8.03	1.05	6.35	0.86	4.98	0.93	2.78
013K833118	Sediment Pulp	1.57	2.8	0.2	<0.05	1.2	27.30	130.4	<0.02	<1	0.7	2.1	15.67	57.00	9.27	1.09	7.08	0.95	5.47	0.98	2.82
013K833119	Sediment Pulp	1.77	4.2	0.2	<0.05	2.2	30.52	168.9	<0.02	<1	0.9	3.4	19.77	72.19	11.31	1.51	8.57	1.12	6.30	1.12	3.16
013K833120	Sediment Pulp	0.73	3.3	0.1	<0.05	0.6	7.75	40.2	<0.02	<1	0.3	2.7	4.61	17.58	2.91	0.43	2.27	0.31	1.69	0.30	0.85
013K833121	Sediment Pulp	1.36	11.0	0.4	<0.05	2.6	23.98	111.8	<0.02	<1	1.2	13.0	12.91	49.94	8.11	1.18	6.22	0.79	4.46	0.80	2.37
013K833122	Sediment Pulp	1.50	3.1	0.2	<0.05	1.2	16.59	96.9	<0.02	<1	0.8	2.4	11.16	42.47	6.78	0.93	5.16	0.68	3.68	0.64	1.72
013K833123	Sediment Pulp	1.35	11.1	0.4	<0.05	2.6	24.75	116.1	<0.02	<1	1.2	13.2	13.44	52.04	8.42	1.20	6.45	0.83	4.68	0.84	2.44
013K833124	Sediment Pulp	1.09	5.8	0.3	<0.05	1.9	27.39	109.4	0.03	1	1.2	6.7	12.95	50.95	8.97	1.55	7.33	0.97	5.40	0.94	2.65
013K833125	Sediment Pulp	2.31	19.4	0.5	<0.05	5.6	15.35	63.1	0.02	2	0.9	18.6	7.31	28.36	4.93	0.91	4.01	0.56	3.18	0.56	1.60
013K833126	Sediment Pulp	0.82	2.9	0.1	<0.05	1.0	20.48	54.6	<0.02	1	0.7	3.8	8.34	33.21	5.81	1.12	5.02	0.67	3.76	0.67	1.92
013K833127	Sediment Pulp	0.80	2.6	0.1	<0.05	0.9	21.37	55.8	<0.02	1	0.7	3.5	8.43	33.97	5.93	1.13	5.17	0.69	3.87	0.70	1.96
013K833128	Sediment Pulp	0.95	10.6	0.5	<0.05	14.8	15.74	57.2	<0.02	2	0.7	12.8	6.71	26.68	4.85	0.85	4.01	0.56	3.20	0.57	1.66
013K833129	Sediment Pulp	0.73	4.3	0.2	<0.05	1.7	24.21	38.2	<0.02	3	0.6	7.1	7.47	29.84	5.35	1.03	4.86	0.67	3.91	0.74	2.17
013K833130	Sediment Pulp	0.73	3.6	3.0	<0.05	1.5	10.38	16.6	0.47	17	0.1	3.9	2.72	11.84	2.44	0.46	2.16	0.30	1.76	0.33	0.98
013K833131	Sediment Pulp	0.85	5.8	0.2	<0.05	1.3	17.94	40.0	<0.02	<1	0.5	4.9	7.38	29.70	5.28	0.99	4.56	0.61	3.49	0.62	1.77
013K833132	Sediment Pulp	0.70	1.7	0.1	<0.05	0.3	24.66	68.3	<0.02	1	0.5	1.2	9.88	37.45	6.02	0.94	5.04	0.69	4.06	0.77	2.33
013K833133	Sediment Pulp	0.85	1.7	0.1	<0.05	0.2	30.95	121.8	<0.02	1	0.7	0.9	14.44	52.97	8.15	1.10	6.44	0.87	5.05	0.98	3.00
013K833134	Sediment Pulp	2.05	25.3	0.5	<0.05	2.6	33.92	126.0	<0.02	<1	0.8	15.8	18.45	68.15	11.11	1.58	8.59	1.10	6.23	1.13	3.34
013K833135	Sediment Pulp	1.12	5.3	0.2	<0.05	1.0	23.39	111.3	<0.02	2	0.6	4.0	16.14	61.20	10.33	1.41	7.68	0.94	5.01	0.86	2.35
013K833136	Sediment Pulp	2.04	13.4	0.3	<0.05	1.5	22.43	99.6	<0.02	<1	0.7	7.2	12.44	47.75	7.65	1.08	5.86	0.75	4.12	0.73	2.16
013K833137	Sediment Pulp	1.36	3.1	0.2	<0.05	0.6	25.28	123.3	<0.02	1	0.5	2.0	17.89	66.60	10.87	1.43	8.02	0.97	5.05	0.88	2.40
013K833138	Sediment Pulp	1.20	3.2	0.2	<0.05	0.6	72.86	259.6	<0.02	7	1.2	2.2	44.33	165.47	26.02	3.18	20.56	2.52	13.25	2.32	6.18
013K833139	Sediment Pulp	1.17	3.4	0.2	<0.05	0.6	16.04	95.4	<0.02	2	0.4	2.3	11.07	43.28	6.74	0.98	5.07	0.63	3.36	0.60	1.64
013K833140	Sediment Pulp	1.38	5.7	0.2	<0.05	0.9	13.90	76.9	<0.02	<1	0.3	3.7	8.94	34.10	5.41	0.78	4.09	0.52	2.81	0.50	1.40
013K833141	Sediment Pulp	2.15	10.8	0.4	<0.05	2.0	11.40	65.6	<0.02	<1	0.3	5.2	6.98	26.43	4.22	0.65	3.15	0.42	2.34	0.41	1.19
013K833142	Sediment Pulp	0.69	2.1	0.2	<0.05	0.3	10.11	62.0	<0.02	<1	0.2	1.5	7.26	27.51	4.26	0.60	3.17	0.40	2.11	0.37	0.99
013K833143	Sediment Pulp	2.15	10.4	0.4	<0.05	2.0	11.18	64.0	<0.02	<1	0.3	4.9	6.82	25.69	4.08	0.63	3.08	0.41	2.26	0.40	1.18



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833114	Sediment Pulp		0.61	3.88	0.51	<10	<2
013K833115	Sediment Pulp		0.52	3.50	0.49	<10	<2
013K833116	Sediment Pulp		0.22	1.49	0.21	<10	<2
013K833117	Sediment Pulp		0.37	2.51	0.37	<10	<2
013K833118	Sediment Pulp		0.36	2.34	0.32	<10	<2
013K833119	Sediment Pulp		0.39	2.48	0.32	<10	<2
013K833120	Sediment Pulp		0.10	0.68	0.08	<10	<2
013K833121	Sediment Pulp		0.31	2.06	0.29	<10	<2
013K833122	Sediment Pulp		0.21	1.34	0.16	<10	<2
013K833123	Sediment Pulp		0.32	2.13	0.30	<10	<2
013K833124	Sediment Pulp		0.34	2.16	0.28	<10	<2
013K833125	Sediment Pulp		0.20	1.33	0.17	<10	<2
013K833126	Sediment Pulp		0.24	1.52	0.20	<10	<2
013K833127	Sediment Pulp		0.24	1.54	0.21	<10	<2
013K833128	Sediment Pulp		0.20	1.33	0.17	<10	<2
013K833129	Sediment Pulp		0.28	1.83	0.26	<10	3
013K833130	Sediment Pulp		0.12	0.88	0.12	<10	<2
013K833131	Sediment Pulp		0.21	1.34	0.17	<10	<2
013K833132	Sediment Pulp		0.31	2.10	0.29	<10	<2
013K833133	Sediment Pulp		0.42	2.81	0.42	<10	<2
013K833134	Sediment Pulp		0.44	2.95	0.43	<10	<2
013K833135	Sediment Pulp		0.28	1.82	0.25	<10	<2
013K833136	Sediment Pulp		0.27	1.81	0.25	<10	<2
013K833137	Sediment Pulp		0.30	1.89	0.26	<10	<2
013K833138	Sediment Pulp		0.71	4.27	0.63	<10	<2
013K833139	Sediment Pulp		0.20	1.30	0.19	<10	<2
013K833140	Sediment Pulp		0.17	1.09	0.16	<10	<2
013K833141	Sediment Pulp		0.15	1.01	0.14	<10	<2
013K833142	Sediment Pulp		0.12	0.77	0.11	<10	<2
013K833143	Sediment Pulp		0.15	1.01	0.14	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833144	Sediment Pulp	6.61	7.71	2.30	82.0	76	6.8	26.8	1061	3.58	1.8	2.7	0.7	5.0	13.8	0.14	0.06	0.02	31	0.28	0.059
013K833145	Sediment Pulp	2.99	9.99	2.13	82.1	70	8.1	28.2	2110	4.13	1.6	4.0	0.7	6.2	12.5	0.17	0.03	0.02	22	0.23	0.056
013K833146	Sediment Pulp	1.33	5.94	2.58	43.1	60	5.9	2.2	60	0.45	0.4	2.7	0.7	1.5	17.0	0.12	0.10	<0.02	8	0.28	0.025
013K833147	Sediment Pulp	0.89	33.62	23.48	132.7	2639	47.2	29.4	1222	3.15	24.7	3.5	3.8	6.8	24.3	0.51	0.58	2.73	46	0.60	0.087
013K833148	Sediment Pulp	1.91	12.31	3.11	72.0	87	9.9	5.4	144	1.15	1.0	3.4	0.5	2.8	21.9	0.17	0.07	0.03	19	0.33	0.048
013K833149	Sediment Pulp	5.60	11.01	3.01	57.8	68	8.7	10.6	113	1.63	1.1	3.4	0.8	4.7	20.0	0.09	0.04	0.02	15	0.34	0.042
013K833150	Sediment Pulp	1.23	3.72	2.19	21.4	60	2.2	1.0	61	0.36	0.4	1.4	1.8	0.8	9.2	0.05	0.03	<0.02	9	0.15	0.037
013K833151	Sediment Pulp	5.83	18.28	3.62	99.8	204	9.8	7.2	295	3.15	2.5	7.0	1.2	2.9	15.9	0.20	0.08	0.04	33	0.24	0.109
013K833152	Sediment Pulp	5.72	19.74	3.78	107.7	206	10.3	7.9	334	3.76	3.0	7.8	1.3	4.7	17.3	0.18	0.07	0.04	37	0.25	0.108
013K833153	Sediment Pulp	2.92	11.06	1.51	73.8	151	3.9	1.0	63	0.19	0.2	0.5	1.0	<0.1	29.2	0.19	0.04	<0.02	10	0.35	0.040
013K833154	Sediment Pulp	2.28	32.39	2.20	65.5	231	6.6	2.4	57	0.39	0.1	3.2	1.0	0.3	16.5	0.14	0.07	0.02	20	0.20	0.055
013K833155	Sediment Pulp	0.27	4.07	1.60	15.3	27	1.8	1.8	60	0.37	0.3	0.5	0.7	1.2	13.5	0.03	0.02	<0.02	7	0.21	0.040
013K833156	Sediment Pulp	1.13	8.99	1.90	20.0	52	3.3	2.1	70	0.58	0.4	2.0	0.4	1.9	11.5	<0.01	0.04	<0.02	16	0.18	0.044
013K833157	Sediment Pulp	3.57	14.78	2.22	49.7	123	5.9	3.4	98	1.04	0.2	1.8	0.9	0.6	17.0	0.12	0.04	<0.02	15	0.23	0.062
013K833158	Sediment Pulp	4.03	23.38	1.61	47.4	138	6.4	3.8	100	1.09	0.3	2.1	0.7	1.3	17.4	0.07	0.03	<0.02	21	0.27	0.078
013K833159	Sediment Pulp	7.01	20.28	2.52	68.2	180	5.8	5.4	189	1.51	0.1	2.5	0.6	0.7	16.9	0.15	0.04	0.03	38	0.21	0.123
013K833160	Sediment Pulp	1.91	14.83	1.85	29.0	103	4.5	2.3	73	0.54	0.3	1.2	1.0	0.3	14.9	0.06	0.03	<0.02	13	0.20	0.041
013K833161	Sediment Pulp	1.26	9.90	2.04	21.7	59	3.6	2.3	75	0.65	0.4	2.1	<0.2	2.0	12.4	<0.01	0.05	<0.02	18	0.20	0.043
013K833162	Sediment Pulp	5.43	37.65	2.73	69.2	210	10.7	11.2	130	2.24	<0.1	8.7	3.2	2.6	20.5	0.16	0.08	0.02	30	0.32	0.046
013K833163	Sediment Pulp	6.26	24.78	2.96	84.2	189	8.3	7.6	101	1.80	<0.1	5.6	2.2	1.3	19.7	0.19	0.09	0.02	30	0.29	0.040
013K833164	Sediment Pulp	0.47	6.33	2.26	16.5	19	3.1	2.3	94	0.63	1.0	1.9	0.8	2.8	11.4	0.03	0.06	<0.02	12	0.25	0.059
013K833165	Sediment Pulp	14.98	24.62	5.40	140.2	344	10.5	27.9	2370	11.42	4.0	7.7	1.2	8.6	16.0	0.30	0.04	0.06	56	0.19	0.224
013K833166	Sediment Pulp	4.04	20.62	2.15	39.0	212	6.4	3.2	91	0.85	0.3	2.9	0.5	0.2	16.1	0.11	0.06	<0.02	19	0.23	0.095
013K833167	Sediment Pulp	5.83	11.17	3.00	87.6	104	8.2	23.7	754	3.74	1.9	3.8	0.3	4.3	12.8	0.18	0.05	0.03	35	0.22	0.101
013K833168	Sediment Pulp	7.15	8.59	3.02	66.5	86	6.5	15.7	445	2.36	1.7	3.0	<0.2	2.5	11.6	0.12	0.05	0.02	35	0.21	0.080
013K833169	Sediment Pulp	1.51	8.96	2.29	21.1	102	7.1	1.8	60	0.35	0.6	2.0	<0.2	0.4	14.8	0.09	0.06	<0.02	7	0.20	0.028
013K833170	Sediment Pulp	9.67	41.34	76.81	297.2	586	12.5	7.7	440	1.79	32.9	8.4	3.8	1.2	62.0	1.18	0.48	0.83	21	6.40	0.062
013K833171	Sediment Pulp	2.60	15.53	2.35	27.5	273	3.9	1.4	42	0.25	0.5	2.5	0.4	<0.1	10.6	0.18	0.12	<0.02	20	0.14	0.057
013K833172	Sediment Pulp	5.23	9.91	2.15	37.0	92	4.5	4.4	109	1.15	1.4	3.8	0.4	1.9	10.5	0.04	0.05	<0.02	14	0.22	0.062
013K833173	Sediment Pulp	4.63	9.56	3.29	30.7	105	4.6	3.3	103	1.29	0.7	4.0	0.4	3.1	11.8	0.04	0.05	0.02	28	0.15	0.039



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833144	Sediment Pulp	44.2	9.9	0.21	70.2	0.070	<20	0.97	0.010	0.07	0.5	2.4	0.14	0.22	33	0.5	<0.02	1.8	0.90	<0.1	0.04
013K833145	Sediment Pulp	52.7	10.3	0.12	65.4	0.053	<20	0.98	0.007	0.05	0.4	2.7	0.13	0.09	35	0.5	<0.02	1.0	0.65	<0.1	0.05
013K833146	Sediment Pulp	20.1	6.0	0.10	38.4	0.031	<20	0.33	0.009	0.04	0.5	1.1	0.05	0.21	31	0.8	<0.02	0.9	0.71	<0.1	0.02
013K833147	Sediment Pulp	39.4	50.1	0.79	143.9	0.100	<20	1.64	0.029	0.26	0.2	5.8	0.32	0.15	276	0.7	0.05	5.2	1.36	<0.1	0.12
013K833148	Sediment Pulp	54.8	12.0	0.23	64.5	0.061	<20	0.73	0.015	0.12	0.7	2.2	0.13	0.21	47	0.7	<0.02	1.4	1.03	<0.1	0.05
013K833149	Sediment Pulp	49.5	9.3	0.20	70.7	0.061	<20	0.63	0.013	0.13	5.2	2.4	0.13	1.16	23	0.4	<0.02	1.1	1.09	<0.1	0.04
013K833150	Sediment Pulp	22.1	4.1	0.08	30.9	0.041	<20	0.32	0.008	0.05	0.1	0.9	0.03	0.04	21	0.2	<0.02	1.2	0.64	<0.1	<0.02
013K833151	Sediment Pulp	125.1	14.7	0.22	101.6	0.053	<20	1.41	0.009	0.13	0.6	3.4	0.15	0.15	46	1.2	0.03	0.9	1.52	<0.1	0.02
013K833152	Sediment Pulp	126.6	16.9	0.28	113.5	0.067	<20	1.45	0.010	0.16	0.5	4.3	0.15	0.13	43	1.1	<0.02	1.0	1.88	<0.1	0.03
013K833153	Sediment Pulp	7.0	3.5	0.02	90.6	0.014	<20	0.27	0.005	<0.01	<0.1	0.2	<0.02	0.30	62	1.0	<0.02	0.7	0.14	<0.1	<0.02
013K833154	Sediment Pulp	42.9	10.7	0.11	42.3	0.039	<20	0.62	0.007	0.05	<0.1	0.9	0.12	0.14	49	1.3	<0.02	1.5	0.61	<0.1	<0.02
013K833155	Sediment Pulp	8.7	2.9	0.10	19.7	0.047	<20	0.22	0.006	0.05	0.2	0.6	0.02	0.14	<5	0.1	<0.02	1.1	0.60	<0.1	0.02
013K833156	Sediment Pulp	23.3	8.5	0.13	34.8	0.054	<20	0.50	0.006	0.07	0.4	1.4	0.04	0.02	13	0.2	<0.02	1.4	0.64	<0.1	<0.02
013K833157	Sediment Pulp	36.7	9.4	0.10	36.6	0.039	<20	0.55	0.008	0.05	1.0	1.0	0.10	0.11	35	0.6	<0.02	1.4	0.43	<0.1	<0.02
013K833158	Sediment Pulp	47.8	10.0	0.13	46.4	0.048	<20	0.74	0.009	0.08	0.2	1.4	0.12	0.08	40	0.5	<0.02	1.1	0.56	<0.1	<0.02
013K833159	Sediment Pulp	44.0	11.3	0.18	54.5	0.053	<20	1.01	0.009	0.11	1.0	1.3	0.14	0.10	41	1.0	<0.02	2.4	0.86	<0.1	<0.02
013K833160	Sediment Pulp	19.2	6.6	0.12	36.4	0.039	<20	0.45	0.008	0.06	0.4	0.7	0.08	0.11	38	0.6	<0.02	1.5	0.61	<0.1	<0.02
013K833161	Sediment Pulp	25.1	9.3	0.14	38.0	0.059	<20	0.56	0.007	0.08	0.4	1.6	0.12	0.03	25	0.2	<0.02	1.6	0.70	<0.1	<0.02
013K833162	Sediment Pulp	109.4	13.9	0.13	60.2	0.037	<20	0.77	0.010	0.06	0.6	2.5	0.26	0.44	47	1.7	<0.02	<0.1	0.71	<0.1	0.03
013K833163	Sediment Pulp	91.3	11.3	0.10	53.9	0.031	<20	0.69	0.007	0.04	0.4	1.7	0.24	0.29	38	1.7	<0.02	0.3	0.69	<0.1	0.02
013K833164	Sediment Pulp	17.8	6.2	0.16	30.1	0.058	<20	0.36	0.007	0.05	0.2	1.3	0.05	0.03	11	<0.1	<0.02	1.3	0.64	<0.1	0.03
013K833165	Sediment Pulp	171.1	19.3	0.26	215.8	0.082	<20	2.04	0.008	0.17	0.5	5.5	0.26	0.15	62	1.7	0.05	1.0	1.62	<0.1	0.04
013K833166	Sediment Pulp	40.9	8.3	0.10	79.7	0.031	<20	0.73	0.006	0.05	0.7	0.7	0.09	0.15	62	0.6	<0.02	1.4	0.64	<0.1	<0.02
013K833167	Sediment Pulp	48.6	11.6	0.19	64.5	0.069	<20	1.11	0.009	0.08	0.3	2.4	0.26	0.05	38	0.5	<0.02	1.6	1.13	<0.1	0.03
013K833168	Sediment Pulp	39.4	8.9	0.19	57.6	0.072	<20	0.91	0.008	0.07	0.4	1.8	0.22	0.05	24	0.3	<0.02	2.1	0.88	<0.1	0.03
013K833169	Sediment Pulp	25.1	5.3	0.08	53.7	0.022	<20	0.46	0.010	0.04	0.1	0.8	0.03	0.16	47	0.3	<0.02	0.8	0.55	<0.1	<0.02
013K833170	Sediment Pulp	10.3	12.8	0.57	82.8	0.040	<20	0.45	0.027	0.05	0.5	2.3	0.25	1.54	101	1.1	0.03	2.0	0.50	<0.1	0.03
013K833171	Sediment Pulp	26.3	4.8	0.05	47.3	0.018	<20	0.48	0.004	0.03	0.2	0.4	<0.02	0.13	57	0.6	0.03	0.9	0.35	<0.1	<0.02
013K833172	Sediment Pulp	33.6	6.1	0.13	30.1	0.047	<20	0.52	0.007	0.07	0.6	1.4	0.12	0.07	21	0.3	<0.02	1.0	0.62	<0.1	0.02
013K833173	Sediment Pulp	52.0	8.8	0.15	60.6	0.062	<20	0.72	0.010	0.08	0.2	2.2	0.04	0.05	25	0.6	<0.02	2.0	0.98	<0.1	0.02



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Project: None Given

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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833144	Sediment Pulp	2.03	6.5	0.3	<0.05	1.8	17.16	97.1	<0.02	<1	0.4	6.5	10.11	38.89	6.15	0.90	4.65	0.59	3.28	0.59	1.72
013K833145	Sediment Pulp	1.72	4.7	0.3	<0.05	2.3	21.13	111.7	<0.02	<1	0.5	4.1	12.04	46.32	7.36	1.06	5.56	0.71	3.87	0.71	2.07
013K833146	Sediment Pulp	1.08	3.9	0.2	<0.05	1.0	7.89	35.6	<0.02	<1	0.1	2.4	4.45	17.27	2.71	0.40	2.12	0.28	1.49	0.27	0.78
013K833147	Sediment Pulp	2.02	24.1	1.0	<0.05	5.7	17.83	72.4	0.04	<1	0.6	20.2	9.37	36.39	6.23	0.92	4.68	0.60	3.37	0.61	1.78
013K833148	Sediment Pulp	2.04	10.4	0.3	<0.05	2.3	24.97	106.9	<0.02	<1	0.4	6.7	12.77	50.39	8.28	1.14	6.47	0.80	4.54	0.82	2.35
013K833149	Sediment Pulp	1.70	11.1	0.3	<0.05	2.3	19.95	89.9	<0.02	4	0.4	6.3	12.02	46.78	7.66	1.07	5.85	0.72	3.95	0.71	2.02
013K833150	Sediment Pulp	0.97	4.4	0.2	<0.05	0.6	7.55	38.8	<0.02	<1	0.1	3.0	4.89	18.71	2.98	0.44	2.22	0.29	1.54	0.27	0.75
013K833151	Sediment Pulp	1.56	11.4	0.3	<0.05	1.2	46.68	212.9	<0.02	<1	1.0	5.6	29.26	108.63	17.07	2.60	13.08	1.61	8.75	1.51	4.18
013K833152	Sediment Pulp	1.83	14.6	0.3	<0.05	1.8	47.08	216.3	<0.02	<1	1.1	7.0	29.65	112.22	17.81	2.67	13.47	1.67	9.07	1.58	4.38
013K833153	Sediment Pulp	0.66	0.7	0.1	<0.05	0.5	3.75	11.9	<0.02	<1	0.1	0.1	1.50	5.80	0.97	0.17	0.80	0.12	0.65	0.12	0.39
013K833154	Sediment Pulp	1.63	4.7	0.3	<0.05	0.7	15.54	78.1	<0.02	1	0.3	2.5	9.99	39.39	6.15	0.98	4.64	0.57	3.11	0.55	1.57
013K833155	Sediment Pulp	1.30	4.4	0.2	<0.05	0.9	3.76	15.6	<0.02	<1	<0.1	2.3	1.94	7.46	1.19	0.19	0.91	0.13	0.70	0.12	0.38
013K833156	Sediment Pulp	1.07	6.3	0.3	<0.05	0.6	9.74	43.9	<0.02	<1	0.1	3.6	5.39	21.37	3.44	0.58	2.64	0.34	1.88	0.34	0.99
013K833157	Sediment Pulp	1.31	4.1	0.2	<0.05	0.5	13.25	62.8	<0.02	1	0.2	2.6	7.82	30.24	4.59	0.81	3.51	0.44	2.40	0.44	1.25
013K833158	Sediment Pulp	1.64	6.6	0.2	<0.05	0.7	16.85	88.1	<0.02	1	0.2	3.0	10.77	42.79	6.47	1.14	4.83	0.58	3.24	0.57	1.63
013K833159	Sediment Pulp	1.40	9.1	0.3	<0.05	0.5	17.26	77.5	<0.02	2	0.4	4.1	9.57	37.70	5.65	1.00	4.34	0.54	3.07	0.57	1.64
013K833160	Sediment Pulp	0.99	5.1	0.2	<0.05	0.4	6.12	32.8	<0.02	1	0.1	2.5	4.05	15.58	2.32	0.38	1.74	0.21	1.18	0.20	0.60
013K833161	Sediment Pulp	1.15	6.9	0.3	<0.05	0.9	10.69	47.5	<0.02	<1	0.1	3.9	5.86	23.25	3.73	0.63	2.91	0.36	2.04	0.37	1.07
013K833162	Sediment Pulp	1.52	5.4	0.2	<0.05	1.9	47.10	196.6	<0.02	4	0.7	3.1	26.64	103.81	17.35	2.52	13.40	1.61	8.78	1.54	4.30
013K833163	Sediment Pulp	1.36	4.4	0.2	<0.05	1.2	35.91	166.1	<0.02	7	0.6	2.5	21.50	82.08	13.15	1.94	10.09	1.22	6.63	1.16	3.24
013K833164	Sediment Pulp	1.69	4.4	0.3	<0.05	1.3	7.49	34.5	<0.02	<1	0.1	4.2	4.08	15.27	2.45	0.38	1.87	0.25	1.43	0.25	0.76
013K833165	Sediment Pulp	1.75	13.6	0.5	<0.05	1.7	68.92	312.3	0.03	<1	1.7	6.1	39.50	143.80	22.63	3.37	17.62	2.29	12.93	2.29	6.52
013K833166	Sediment Pulp	0.96	4.4	0.2	<0.05	0.6	15.11	71.7	<0.02	<1	0.3	2.1	8.96	34.47	5.40	0.85	4.10	0.52	2.89	0.51	1.53
013K833167	Sediment Pulp	1.73	7.3	0.3	<0.05	1.4	20.73	118.0	<0.02	1	0.7	5.5	11.05	42.18	6.83	0.99	5.27	0.68	3.85	0.69	2.02
013K833168	Sediment Pulp	1.83	5.9	0.3	<0.05	1.2	14.07	86.9	<0.02	<1	0.5	5.5	8.90	34.03	5.38	0.77	4.08	0.51	2.84	0.50	1.45
013K833169	Sediment Pulp	0.81	3.4	0.1	<0.05	0.7	8.65	47.2	<0.02	<1	0.2	2.2	5.46	20.91	3.35	0.51	2.53	0.33	1.79	0.32	0.92
013K833170	Sediment Pulp	0.71	3.5	2.9	<0.05	1.3	10.10	16.6	0.47	18	0.1	3.9	2.66	11.61	2.44	0.46	2.09	0.29	1.71	0.32	0.95
013K833171	Sediment Pulp	0.66	2.3	0.1	<0.05	0.3	9.23	47.9	<0.02	2	0.2	1.3	6.01	23.25	3.65	0.54	2.74	0.35	1.90	0.33	0.95
013K833172	Sediment Pulp	1.34	6.1	0.2	<0.05	0.9	12.64	63.6	<0.02	<1	0.3	3.7	7.52	29.12	4.68	0.68	3.54	0.44	2.42	0.43	1.28
013K833173	Sediment Pulp	1.61	7.7	0.3	<0.05	0.9	19.38	99.1	<0.02	<1	0.4	6.1	12.76	49.72	7.66	0.98	5.77	0.71	3.68	0.67	1.75



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K833144	Sediment Pulp	0.22	1.42	0.20	<10	<2
013K833145	Sediment Pulp	0.26	1.74	0.26	<10	<2
013K833146	Sediment Pulp	0.10	0.62	0.09	<10	<2
013K833147	Sediment Pulp	0.23	1.56	0.22	<10	<2
013K833148	Sediment Pulp	0.29	1.85	0.26	<10	<2
013K833149	Sediment Pulp	0.25	1.61	0.24	<10	<2
013K833150	Sediment Pulp	0.09	0.58	0.08	<10	<2
013K833151	Sediment Pulp	0.51	3.20	0.46	<10	<2
013K833152	Sediment Pulp	0.53	3.34	0.48	<10	<2
013K833153	Sediment Pulp	0.05	0.36	0.05	<10	<2
013K833154	Sediment Pulp	0.19	1.26	0.18	<10	<2
013K833155	Sediment Pulp	0.05	0.33	0.04	<10	<2
013K833156	Sediment Pulp	0.12	0.83	0.11	<10	<2
013K833157	Sediment Pulp	0.15	0.99	0.13	<10	<2
013K833158	Sediment Pulp	0.19	1.25	0.17	<10	<2
013K833159	Sediment Pulp	0.20	1.32	0.18	<10	<2
013K833160	Sediment Pulp	0.06	0.47	0.06	<10	<2
013K833161	Sediment Pulp	0.13	0.89	0.12	<10	<2
013K833162	Sediment Pulp	0.52	3.31	0.49	<10	<2
013K833163	Sediment Pulp	0.38	2.39	0.35	<10	<2
013K833164	Sediment Pulp	0.09	0.66	0.09	<10	<2
013K833165	Sediment Pulp	0.82	5.20	0.74	<10	<2
013K833166	Sediment Pulp	0.19	1.26	0.17	<10	<2
013K833167	Sediment Pulp	0.26	1.67	0.23	<10	<2
013K833168	Sediment Pulp	0.18	1.20	0.16	<10	<2
013K833169	Sediment Pulp	0.11	0.76	0.10	<10	<2
013K833170	Sediment Pulp	0.12	0.84	0.12	<10	<2
013K833171	Sediment Pulp	0.11	0.76	0.10	<10	<2
013K833172	Sediment Pulp	0.16	1.08	0.15	<10	<2
013K833173	Sediment Pulp	0.23	1.35	0.20	<10	<2



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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013K833174	Sediment Pulp	5.65	11.44	2.40	53.7	144	6.0	2.7	90	0.79	0.8	3.1	0.4	0.8	16.0	0.12	0.08	<0.02	19	0.21	0.042
013K833175	Sediment Pulp	21.18	19.49	2.78	95.2	200	10.8	9.2	225	2.86	0.8	8.8	0.4	2.2	17.2	0.20	0.09	0.03	36	0.27	0.091
013K833176	Sediment Pulp	5.86	20.16	5.99	66.2	66	17.6	14.8	1270	3.16	1.9	6.0	1.1	8.0	24.9	0.09	0.05	0.06	40	0.35	0.120
013K833177	Sediment Pulp	12.87	25.12	6.96	82.7	272	14.9	9.4	311	2.55	0.5	7.5	0.6	3.4	25.2	0.26	0.07	0.08	44	0.33	0.155
013K833178	Sediment Pulp	7.61	20.33	5.72	87.8	205	22.1	12.6	315	2.52	4.4	6.7	0.6	3.7	28.4	0.16	0.07	0.06	34	0.45	0.088
013K833179	Sediment Pulp	16.83	35.43	6.01	139.3	214	24.6	12.9	377	2.61	1.1	20.4	0.6	3.5	22.9	0.53	0.09	0.07	44	0.31	0.121
013K833180	Sediment Pulp	1.41	15.67	3.91	22.8	130	8.2	2.4	72	0.40	<0.1	2.4	0.6	0.2	19.9	0.17	0.04	0.06	24	0.31	0.081
013K833181	Sediment Pulp	29.30	38.91	3.46	61.0	671	9.1	7.0	171	2.18	0.3	16.2	0.7	1.2	22.0	0.36	0.10	0.03	61	0.34	0.240
013K833182	Sediment Pulp	8.28	6.64	5.04	26.6	48	7.3	5.2	211	1.28	0.5	11.2	<0.2	2.2	19.3	0.04	0.08	0.04	22	0.23	0.043
013K833183	Sediment Pulp	27.53	24.56	3.63	105.6	90	9.1	14.6	128	2.25	1.1	40.7	<0.2	5.1	15.7	0.20	0.17	0.03	31	0.20	0.038
013K833184	Sediment Pulp	5.84	11.48	5.25	31.6	99	7.7	3.1	79	0.63	0.3	7.2	<0.2	0.6	20.6	0.11	0.95	0.03	20	0.27	0.038
013K833185	Sediment Pulp	29.29	38.81	3.31	59.3	663	9.5	7.0	169	2.16	0.2	16.5	0.7	1.1	21.9	0.36	0.10	0.03	61	0.34	0.240
013K833186	Sediment Pulp	3.17	15.37	5.14	51.5	37	11.1	10.3	1120	2.26	3.6	7.3	<0.2	7.3	26.7	0.08	0.09	0.05	33	0.42	0.099
013K833187	Sediment Pulp	16.02	28.39	5.09	100.9	328	17.3	23.0	882	4.56	6.4	5.8	0.4	3.4	21.3	0.32	0.09	0.05	50	0.32	0.153
013K833188	Sediment Pulp	8.39	33.36	4.78	92.9	361	10.0	14.6	472	3.56	3.4	5.8	0.4	2.9	20.1	0.27	0.10	0.05	42	0.26	0.177
013K833189	Sediment Pulp	6.73	48.89	7.16	123.0	124	19.2	18.7	647	2.66	3.6	13.2	0.5	7.6	28.1	0.25	0.14	0.06	43	0.37	0.108
013K833190	Sediment Pulp	1.22	6.45	2.80	18.5	98	5.5	2.1	73	0.60	2.3	1.7	0.4	1.2	12.5	0.07	0.06	<0.02	11	0.18	0.035
013K833191	Sediment Pulp	10.09	19.96	4.54	71.8	254	11.1	35.2	1006	4.09	4.2	4.6	<0.2	2.6	15.2	0.22	0.09	0.16	40	0.20	0.156
013K833192	Sediment Pulp	3.22	20.60	2.62	36.1	545	8.2	1.8	83	0.78	0.4	5.9	0.5	0.5	32.6	0.23	0.10	0.02	26	0.41	0.137
013K833193	Sediment Pulp	2.92	16.44	2.30	31.7	385	7.1	1.6	64	0.59	0.4	4.4	0.4	0.3	22.7	0.17	0.09	<0.02	19	0.30	0.092
013K833194	Sediment Pulp	0.89	32.26	22.89	128.0	2503	44.9	28.1	1169	3.04	23.8	3.2	2.3	6.2	24.9	0.51	0.62	2.73	47	0.59	0.088
013K833195	Sediment Pulp	27.46	32.18	6.27	111.9	730	10.6	56.9	3529	10.80	9.6	17.2	0.6	5.7	30.0	0.40	0.14	0.11	43	0.31	0.289
013K833196	Sediment Pulp	5.02	26.38	2.43	66.1	278	8.1	5.4	168	2.43	0.4	5.5	0.5	0.7	16.1	0.26	0.11	0.03	29	0.23	0.118
013K833197	Sediment Pulp	9.08	31.48	4.10	113.5	421	9.5	27.7	1716	10.59	0.6	9.4	0.8	5.5	17.6	0.36	0.06	0.06	64	0.24	0.272
013K833198	Sediment Pulp	2.31	10.92	2.41	25.9	115	18.8	4.2	91	0.51	1.2	2.1	0.3	0.3	14.8	0.15	0.07	<0.02	17	0.19	0.040
013K833199	Sediment Pulp	1.45	14.64	2.22	29.6	100	4.7	2.7	98	0.66	0.2	1.5	<0.2	0.8	15.6	0.08	0.05	<0.02	13	0.20	0.039
013K833200	Sediment Pulp	2.33	30.06	1.49	47.1	253	8.9	5.2	119	1.00	0.3	3.8	0.5	0.6	18.0	0.18	0.05	<0.02	26	0.30	0.086
013K833201	Sediment Pulp	3.14	11.53	3.10	61.3	104	7.1	8.4	300	1.93	0.3	2.9	<0.2	2.0	16.9	0.09	0.17	0.02	28	0.28	0.070
013K833202	Sediment Pulp	2.82	11.46	2.13	38.6	65	4.1	6.5	191	1.33	0.5	1.2	0.6	1.1	14.8	0.06	0.04	<0.02	24	0.23	0.073
013K833203	Sediment Pulp	2.11	13.51	1.33	22.9	173	4.1	1.4	51	0.46	0.1	1.7	0.2	0.3	13.8	0.09	0.03	<0.02	11	0.18	0.037



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Project: None Given
Report Date: April 18, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833174	Sediment Pulp	29.3	6.4	0.12	55.5	0.041	<20	0.53	0.009	0.05	0.5	1.1	0.07	0.13	33	0.6	<0.02	1.6	0.57	<0.1	<0.02
013K833175	Sediment Pulp	77.5	16.4	0.17	74.2	0.048	<20	1.51	0.010	0.10	0.7	2.5	0.18	0.17	46	0.9	<0.02	1.4	0.98	<0.1	0.02
013K833176	Sediment Pulp	42.2	37.6	0.75	141.6	0.141	<20	1.36	0.018	0.44	0.4	2.8	0.25	0.03	12	0.6	<0.02	3.9	2.94	<0.1	0.05
013K833177	Sediment Pulp	65.9	22.8	0.45	147.2	0.082	<20	1.95	0.020	0.25	0.4	3.0	0.18	0.14	69	1.0	<0.02	3.7	2.52	<0.1	0.05
013K833178	Sediment Pulp	49.8	29.2	0.54	162.0	0.091	<20	1.88	0.022	0.30	0.6	3.0	0.23	0.71	61	0.7	<0.02	3.8	2.67	<0.1	0.06
013K833179	Sediment Pulp	102.8	34.9	0.43	98.0	0.065	<20	2.64	0.013	0.16	0.4	4.1	0.24	0.21	41	1.9	0.02	2.5	1.45	<0.1	0.04
013K833180	Sediment Pulp	35.9	13.8	0.06	72.6	0.028	<20	1.11	0.006	0.03	0.3	0.6	0.03	0.21	67	0.9	<0.02	1.9	0.30	<0.1	<0.02
013K833181	Sediment Pulp	109.4	22.1	0.06	86.9	0.047	<20	2.23	0.006	0.02	0.7	2.6	0.07	0.22	132	1.7	0.02	2.3	0.35	<0.1	0.02
013K833182	Sediment Pulp	39.8	17.9	0.24	83.9	0.069	<20	0.74	0.010	0.09	1.0	1.6	0.07	0.08	23	0.7	<0.02	2.4	1.43	<0.1	0.03
013K833183	Sediment Pulp	158.5	15.0	0.11	88.2	0.031	<20	1.52	0.007	0.05	1.1	3.3	0.16	0.22	31	1.3	<0.02	<0.1	0.78	<0.1	<0.02
013K833184	Sediment Pulp	52.4	9.6	0.14	78.8	0.042	<20	0.84	0.009	0.05	0.3	1.1	0.07	0.16	36	0.7	<0.02	1.5	0.86	<0.1	<0.02
013K833185	Sediment Pulp	109.7	22.6	0.06	86.5	0.048	<20	2.21	0.006	0.03	0.7	2.6	0.07	0.22	130	1.8	<0.02	2.3	0.36	<0.1	0.02
013K833186	Sediment Pulp	35.2	15.0	0.47	121.9	0.135	<20	1.05	0.019	0.28	0.4	3.3	0.16	<0.02	8	0.1	<0.02	3.3	2.16	<0.1	0.07
013K833187	Sediment Pulp	71.6	22.6	0.30	113.3	0.074	<20	2.18	0.015	0.16	0.5	3.6	0.17	0.12	66	1.4	<0.02	2.7	1.61	<0.1	0.03
013K833188	Sediment Pulp	80.0	21.5	0.28	123.5	0.075	<20	1.99	0.011	0.17	0.3	3.2	0.16	0.14	65	1.6	<0.02	2.2	1.56	<0.1	0.03
013K833189	Sediment Pulp	62.8	20.9	0.52	126.5	0.117	<20	1.70	0.022	0.30	0.5	4.1	0.38	0.07	27	0.7	0.03	3.1	2.47	<0.1	0.07
013K833190	Sediment Pulp	23.6	5.7	0.12	41.2	0.042	<20	0.45	0.010	0.06	0.1	1.0	0.04	0.10	35	0.3	<0.02	1.4	0.76	<0.1	0.03
013K833191	Sediment Pulp	66.1	14.8	0.16	95.4	0.060	<20	1.59	0.009	0.09	0.3	2.6	0.27	0.12	67	1.1	<0.02	2.2	1.00	<0.1	<0.02
013K833192	Sediment Pulp	86.7	8.5	0.05	164.3	0.022	<20	0.88	0.008	0.02	0.3	1.2	0.04	0.22	100	1.2	<0.02	1.1	0.33	<0.1	<0.02
013K833193	Sediment Pulp	67.2	6.5	0.04	126.6	0.017	<20	0.71	0.007	0.02	0.2	0.9	0.03	0.22	97	0.9	<0.02	0.8	0.28	<0.1	<0.02
013K833194	Sediment Pulp	37.4	49.8	0.77	148.6	0.100	<20	1.63	0.031	0.25	0.2	5.5	0.26	0.14	254	0.6	0.04	5.4	1.25	<0.1	0.11
013K833195	Sediment Pulp	271.0	16.9	0.08	179.3	0.040	<20	2.54	0.012	0.04	1.3	5.0	0.37	0.19	120	3.3	0.32	0.8	0.77	<0.1	<0.02
013K833196	Sediment Pulp	103.7	11.5	0.07	75.5	0.027	<20	1.43	0.006	0.04	0.4	1.7	0.09	0.23	52	1.1	<0.02	0.9	0.48	<0.1	<0.02
013K833197	Sediment Pulp	207.9	19.7	0.13	100.0	0.058	<20	2.47	0.008	0.07	0.5	5.2	0.25	0.13	110	2.2	0.04	2.2	0.87	<0.1	<0.02
013K833198	Sediment Pulp	29.2	42.8	0.23	54.2	0.030	<20	0.55	0.006	0.05	0.4	0.6	0.03	0.16	62	0.5	<0.02	1.4	0.52	<0.1	<0.02
013K833199	Sediment Pulp	21.8	8.0	0.15	35.6	0.047	<20	0.48	0.010	0.07	0.2	0.9	0.07	0.10	33	0.6	<0.02	1.8	0.82	<0.1	<0.02
013K833200	Sediment Pulp	71.5	11.4	0.09	59.9	0.029	<20	0.92	0.006	0.04	0.6	1.1	0.19	0.16	58	0.7	<0.02	0.9	0.52	<0.1	<0.02
013K833201	Sediment Pulp	53.3	12.0	0.23	73.8	0.059	<20	1.20	0.010	0.12	0.2	1.8	0.09	0.09	37	0.4	<0.02	1.7	1.03	<0.1	<0.02
013K833202	Sediment Pulp	21.8	7.8	0.18	42.8	0.072	<20	0.59	0.009	0.10	0.5	1.0	0.13	0.04	31	0.4	<0.02	2.3	0.69	<0.1	<0.02
013K833203	Sediment Pulp	26.7	5.9	0.07	34.0	0.026	<20	0.40	0.007	0.04	0.1	0.6	0.07	0.11	53	0.4	<0.02	1.2	0.44	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833174	Sediment Pulp	1.36	4.6	0.2	<0.05	0.8	10.73	54.3	<0.02	1	0.2	4.1	6.78	24.70	3.82	0.56	2.85	0.36	1.96	0.37	1.00
013K833175	Sediment Pulp	1.62	9.0	0.3	<0.05	1.0	33.83	153.6	<0.02	1	1.0	5.1	19.42	74.33	11.85	1.61	9.14	1.16	6.19	1.16	3.17
013K833176	Sediment Pulp	1.61	39.3	0.6	<0.05	2.7	16.69	82.3	<0.02	<1	0.6	18.9	8.86	30.58	4.69	0.61	3.56	0.49	2.84	0.55	1.59
013K833177	Sediment Pulp	2.20	26.0	0.5	<0.05	2.3	26.79	114.4	<0.02	1	1.0	12.2	14.55	51.94	7.86	0.98	6.03	0.81	4.66	0.91	2.63
013K833178	Sediment Pulp	2.23	27.0	0.4	<0.05	2.8	22.83	94.5	<0.02	6	0.8	15.3	12.03	43.11	6.77	0.87	5.22	0.71	4.02	0.77	2.21
013K833179	Sediment Pulp	1.95	15.3	0.4	<0.05	2.4	45.87	211.5	<0.02	<1	1.9	11.9	23.66	82.97	13.19	1.68	10.13	1.41	8.03	1.56	4.42
013K833180	Sediment Pulp	1.55	2.3	0.3	<0.05	0.7	16.30	75.3	<0.02	<1	0.4	1.2	8.95	33.30	5.23	0.70	4.05	0.55	3.16	0.59	1.65
013K833181	Sediment Pulp	2.99	2.3	0.3	<0.05	1.1	44.56	210.7	0.03	2	1.2	1.5	25.38	95.92	14.85	2.24	11.34	1.51	8.36	1.58	4.35
013K833182	Sediment Pulp	1.81	9.9	0.5	<0.05	1.2	16.10	58.6	<0.02	<1	0.4	7.8	9.26	33.73	4.86	0.61	3.65	0.47	2.68	0.52	1.48
013K833183	Sediment Pulp	1.05	4.2	0.2	<0.05	1.0	62.26	234.2	<0.02	2	2.3	4.6	35.14	127.56	19.38	2.43	14.68	1.87	10.33	2.02	5.78
013K833184	Sediment Pulp	1.25	5.3	0.6	<0.05	0.8	22.64	77.8	<0.02	1	0.7	4.7	14.15	53.89	8.94	1.21	6.72	0.84	4.40	0.80	2.14
013K833185	Sediment Pulp	3.03	2.3	0.3	<0.05	1.1	43.94	210.4	0.03	2	1.2	1.5	25.83	94.50	14.98	2.24	11.37	1.50	8.35	1.59	4.40
013K833186	Sediment Pulp	1.21	26.5	0.6	<0.05	4.1	14.97	77.0	<0.02	<1	0.5	13.0	8.36	29.41	4.81	0.71	3.62	0.49	2.81	0.53	1.46
013K833187	Sediment Pulp	1.93	14.9	0.4	<0.05	1.5	33.92	151.5	0.02	3	1.0	8.9	16.60	60.65	9.78	1.46	7.66	1.07	6.11	1.17	3.27
013K833188	Sediment Pulp	1.94	13.9	0.4	<0.05	1.5	38.07	166.2	<0.02	<1	1.2	7.8	18.91	70.09	10.74	1.62	8.41	1.15	6.68	1.29	3.62
013K833189	Sediment Pulp	2.33	26.0	0.5	<0.05	3.9	30.89	136.7	<0.02	<1	1.2	14.3	15.36	56.33	9.13	1.29	7.12	0.97	5.44	1.04	2.94
013K833190	Sediment Pulp	1.42	4.9	0.2	<0.05	1.1	8.65	42.4	<0.02	<1	0.2	3.4	5.25	18.66	2.91	0.43	2.21	0.29	1.64	0.30	0.82
013K833191	Sediment Pulp	1.57	8.7	0.3	<0.05	1.0	31.41	137.5	<0.02	3	0.8	4.3	16.32	61.51	9.33	1.44	7.21	0.95	5.41	1.04	2.95
013K833192	Sediment Pulp	1.48	1.9	0.2	<0.05	0.9	28.95	153.3	<0.02	<1	0.6	1.1	18.15	64.62	9.86	1.40	7.39	0.99	5.43	0.99	2.60
013K833193	Sediment Pulp	1.09	1.6	0.2	<0.05	0.6	22.22	118.2	<0.02	<1	0.5	0.9	14.23	52.12	7.71	1.10	5.86	0.77	4.29	0.77	2.02
013K833194	Sediment Pulp	2.00	24.3	1.1	<0.05	5.5	17.23	68.9	0.04	<1	0.6	21.1	9.21	34.06	5.76	0.84	4.26	0.56	3.14	0.58	1.62
013K833195	Sediment Pulp	1.38	3.6	0.3	<0.05	0.5	127.24	517.4	0.04	3	2.6	2.0	63.56	235.63	39.19	5.42	30.73	4.24	22.92	4.29	11.49
013K833196	Sediment Pulp	1.07	3.3	0.2	<0.05	0.4	38.33	183.7	<0.02	<1	0.9	1.7	24.01	88.97	13.26	2.05	9.68	1.20	6.50	1.22	3.39
013K833197	Sediment Pulp	1.90	6.2	0.4	<0.05	0.8	88.77	388.4	0.04	2	1.8	3.3	46.97	172.73	28.35	4.40	21.52	2.90	16.00	2.97	7.81
013K833198	Sediment Pulp	0.62	3.0	0.1	<0.05	0.6	10.62	54.3	<0.02	<1	0.2	4.9	7.05	25.91	4.19	0.52	3.10	0.39	2.11	0.38	0.99
013K833199	Sediment Pulp	1.31	6.5	0.2	<0.05	0.7	7.78	36.4	<0.02	1	0.2	3.7	5.09	18.23	2.76	0.42	2.03	0.25	1.40	0.26	0.69
013K833200	Sediment Pulp	1.16	4.1	0.2	<0.05	0.6	25.54	162.4	<0.02	<1	0.5	2.0	18.13	68.57	10.89	1.72	7.87	0.95	5.04	0.91	2.42
013K833201	Sediment Pulp	1.28	11.1	0.3	<0.05	1.3	24.63	104.3	<0.02	<1	0.8	6.2	13.28	50.95	8.09	1.17	6.21	0.79	4.43	0.84	2.31
013K833202	Sediment Pulp	1.83	7.2	0.3	<0.05	0.7	8.68	42.3	<0.02	<1	0.2	4.8	5.28	19.43	3.00	0.47	2.20	0.28	1.58	0.29	0.81
013K833203	Sediment Pulp	0.82	3.6	0.1	<0.05	0.4	8.12	47.9	<0.02	<1	0.2	1.7	6.06	21.23	3.10	0.45	2.20	0.27	1.51	0.27	0.74



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CERTIFICATE OF ANALYSIS

VAN22000383.1

		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K833174	Sediment Pulp	0.13	0.84	0.12	<10	<2	
013K833175	Sediment Pulp	0.43	2.70	0.40	<10	<2	
013K833176	Sediment Pulp	0.23	1.51	0.23	<10	<2	
013K833177	Sediment Pulp	0.38	2.46	0.37	<10	<2	
013K833178	Sediment Pulp	0.31	2.05	0.30	<10	<2	
013K833179	Sediment Pulp	0.63	4.08	0.60	<10	<2	
013K833180	Sediment Pulp	0.24	1.50	0.21	<10	<2	
013K833181	Sediment Pulp	0.61	3.78	0.55	<10	<2	
013K833182	Sediment Pulp	0.21	1.33	0.21	<10	<2	
013K833183	Sediment Pulp	0.80	5.17	0.85	<10	<2	
013K833184	Sediment Pulp	0.28	1.69	0.25	<10	<2	
013K833185	Sediment Pulp	0.61	3.78	0.54	<10	<2	
013K833186	Sediment Pulp	0.20	1.30	0.18	<10	<2	
013K833187	Sediment Pulp	0.45	2.88	0.41	<10	<2	
013K833188	Sediment Pulp	0.51	3.29	0.49	<10	<2	
013K833189	Sediment Pulp	0.41	2.70	0.42	<10	<2	
013K833190	Sediment Pulp	0.11	0.68	0.10	<10	<2	
013K833191	Sediment Pulp	0.41	2.66	0.39	<10	<2	
013K833192	Sediment Pulp	0.34	2.05	0.29	<10	<2	
013K833193	Sediment Pulp	0.26	1.59	0.23	<10	<2	
013K833194	Sediment Pulp	0.23	1.42	0.21	<10	<2	
013K833195	Sediment Pulp	1.55	9.39	1.31	<10	<2	
013K833196	Sediment Pulp	0.46	2.84	0.43	<10	<2	
013K833197	Sediment Pulp	1.03	6.16	0.90	<10	<2	
013K833198	Sediment Pulp	0.12	0.77	0.11	<10	<2	
013K833199	Sediment Pulp	0.09	0.55	0.08	<10	<2	
013K833200	Sediment Pulp	0.32	1.95	0.29	<10	<2	
013K833201	Sediment Pulp	0.31	1.92	0.28	<10	<2	
013K833202	Sediment Pulp	0.11	0.67	0.10	<10	<2	
013K833203	Sediment Pulp	0.10	0.60	0.09	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833204	Sediment Pulp	1.65	16.79	1.17	25.6	197	4.7	1.5	57	0.61	<0.1	2.0	0.2	0.4	14.3	0.10	0.03	<0.02	15	0.19	0.038
013K833205	Sediment Pulp	3.21	12.01	3.07	63.1	105	7.3	8.4	303	1.97	0.4	2.8	1.3	2.2	16.7	0.09	0.14	<0.02	28	0.28	0.071



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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833204	Sediment Pulp	34.1	7.1	0.07	36.9	0.026	<20	0.44	0.008	0.04	0.2	0.8	0.08	0.12	48	0.5	<0.02	1.1	0.46	<0.1	<0.02
013K833205	Sediment Pulp	52.9	12.3	0.23	73.0	0.059	<20	1.22	0.011	0.13	0.2	1.8	0.14	0.10	32	0.4	<0.02	1.9	1.01	<0.1	0.02



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CERTIFICATE OF ANALYSIS

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833204	Sediment Pulp	0.91	3.6	0.1	<0.05	0.6	10.36	62.5	<0.02	<1	0.2	1.7	7.65	27.85	4.16	0.61	2.95	0.36	1.95	0.35	0.95
013K833205	Sediment Pulp	1.31	11.1	0.3	<0.05	1.5	25.38	101.9	<0.02	<1	0.9	6.4	12.80	49.82	7.93	1.16	6.11	0.79	4.37	0.83	2.27



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CERTIFICATE OF ANALYSIS

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	Method	Analyte	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			Unit	ppm	ppm	ppm	ppb
			MDL	0.02	0.02	0.02	10
013K833204	Sediment Pulp		0.12	0.76	0.11	<10	<2
013K833205	Sediment Pulp		0.31	1.89	0.28	<10	<2



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QUALITY CONTROL REPORT

VAN22000383.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
Pulp Duplicates																				
013K831577	Sediment Pulp	4.21	19.10	10.56	61.5	199	6.6	5.7	205	1.74	0.3	2.0	<0.2	0.9	25.8	0.39	<0.02	0.02	36	0.27
REP 013K831577	QC	4.08	19.53	10.39	65.1	209	6.3	5.7	210	1.76	0.2	1.9	0.4	0.9	25.9	0.38	<0.02	<0.02	37	0.28
013K831580	Sediment Pulp	11.12	33.06	12.04	131.1	459	9.6	10.5	359	3.67	1.0	7.6	0.8	1.1	20.1	0.58	0.14	0.07	83	0.32
REP 013K831580	QC	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833010	Sediment Pulp	18.93	28.63	4.54	135.4	123	30.8	34.1	883	3.40	5.9	7.8	0.9	1.2	19.3	0.57	0.04	0.06	47	0.44
REP 013K833010	QC	18.68	28.13	4.46	134.3	123	30.4	33.9	879	3.37	5.7	7.6	<0.2	1.1	19.4	0.55	0.04	0.06	47	0.44
013K833046	Sediment Pulp	3.22	29.80	10.64	146.1	87	28.6	23.2	1108	4.49	2.5	10.6	0.5	11.8	47.6	0.19	0.07	0.09	68	0.60
REP 013K833046	QC	3.36	30.94	10.93	151.4	95	29.9	24.4	1153	4.70	2.4	11.0	0.7	12.3	50.7	0.21	0.08	0.09	71	0.63
013K833082	Sediment Pulp	3.22	16.06	3.11	91.2	162	10.1	4.0	89	1.54	1.2	2.6	0.6	2.1	17.1	0.18	0.04	<0.02	31	0.24
REP 013K833082	QC	3.33	16.26	3.24	93.4	162	9.9	3.9	87	1.59	1.3	2.7	0.2	2.0	17.2	0.18	0.05	<0.02	32	0.24
013K833121	Sediment Pulp	5.55	24.08	9.23	96.8	90	27.9	24.9	1499	3.48	5.4	6.3	<0.2	3.8	20.2	0.13	0.10	0.06	39	0.26
REP 013K833121	QC	5.59	24.67	9.33	98.5	88	28.3	25.3	1489	3.48	5.4	6.4	<0.2	3.9	19.8	0.12	0.10	0.06	39	0.25
013K833157	Sediment Pulp	3.57	14.78	2.22	49.7	123	5.9	3.4	98	1.04	0.2	1.8	0.9	0.6	17.0	0.12	0.04	<0.02	15	0.23
REP 013K833157	QC	3.57	14.65	2.23	48.2	118	5.9	3.4	96	1.04	0.3	1.8	1.8	0.6	16.9	0.12	0.04	<0.02	15	0.23
013K833193	Sediment Pulp	2.92	16.44	2.30	31.7	385	7.1	1.6	64	0.59	0.4	4.4	0.4	0.3	22.7	0.17	0.09	<0.02	19	0.30
REP 013K833193	QC	2.96	16.48	2.33	32.6	397	7.1	1.6	65	0.59	0.4	4.5	0.5	0.3	22.6	0.19	0.09	<0.02	20	0.30
Reference Materials																				
STD DS11	Standard	14.01	144.18	138.55	351.2	1679	79.0	14.4	997	3.02	46.2	2.8	87.6	8.9	71.0	2.47	7.67	12.30	48	1.01
STD DS11	Standard	13.32	131.94	126.35	308.7	1602	70.4	12.3	991	2.94	41.1	2.4	45.0	8.5	66.7	2.33	6.43	10.67	43	0.99
STD DS11	Standard	15.41	146.34	130.53	325.3	1719	80.2	13.9	1008	3.07	43.1	2.6	61.9	7.6	64.6	2.13	6.18	10.36	47	1.04
STD DS11	Standard	13.02	139.38	124.62	315.5	1785	76.3	13.3	969	2.93	42.9	2.3	55.9	6.9	60.9	2.06	6.23	9.65	44	0.99
STD DS11	Standard	13.95	136.49	126.60	308.2	2723	72.9	12.7	950	2.85	40.4	2.5	68.3	8.4	65.2	2.36	6.07	10.53	46	0.97
STD DS11	Standard	13.83	142.73	124.87	325.3	1720	78.0	14.0	996	3.06	43.9	2.4	64.7	7.1	64.7	2.23	5.79	10.37	47	1.02
STD DS11	Standard	12.69	142.19	121.48	320.0	1558	76.6	13.4	975	2.97	39.1	2.5	48.2	6.6	59.1	2.16	6.13	10.68	46	0.98
STD DS11	Standard	13.90	137.36	130.48	327.5	1521	79.0	13.7	946	2.98	39.9	2.3	77.7	7.3	61.6	2.07	5.74	9.72	45	0.99
STD DS11	Standard	13.85	151.18	126.68	345.4	1651	79.9	13.5	1052	3.06	43.4	2.4	96.6	7.1	62.0	2.41	6.63	10.09	50	1.03
STD OREAS262	Standard	0.66	116.55	59.06	159.8	482	66.5	27.6	549	3.31	38.5	1.3	52.3	11.2	38.6	0.70	2.03	1.05	22	2.91
STD OREAS262	Standard	0.56	109.88	57.51	148.7	476	59.8	26.0	532	3.25	35.6	1.2	50.2	10.5	36.8	0.67	2.21	1.01	20	2.99



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QUALITY CONTROL REPORT

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K831577	Sediment Pulp	52.9	12.7	0.08	105.0	0.046	<20	1.32	0.007	0.03	0.2	1.8	0.10	0.13	96	0.6	<0.02	3.2	0.50	<0.1	0.05
REP 013K831577	QC	53.0	13.0	0.08	107.9	0.045	<20	1.35	0.006	0.03	0.1	1.7	0.09	0.13	103	0.2	<0.02	3.3	0.48	<0.1	0.03
013K831580	Sediment Pulp	95.4	24.8	0.09	68.2	0.047	<20	1.89	0.008	0.04	2.1	1.8	0.28	0.28	130	2.6	0.02	7.5	0.54	<0.1	0.06
REP 013K831580	QC	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833010	Sediment Pulp	33.1	26.8	0.33	93.3	0.054	<20	1.94	0.034	0.05	0.2	2.9	0.24	0.11	49	1.2	<0.02	3.3	0.47	<0.1	<0.02
REP 013K833010	QC	33.5	26.9	0.32	92.5	0.057	<20	1.91	0.035	0.05	0.2	2.9	0.23	0.11	43	1.2	<0.02	3.3	0.47	<0.1	<0.02
013K833046	Sediment Pulp	63.6	34.8	1.33	342.8	0.276	<20	2.83	0.034	0.89	0.4	6.4	0.53	0.03	18	0.6	0.04	8.4	6.13	<0.1	0.08
REP 013K833046	QC	65.2	36.2	1.40	342.5	0.288	<20	2.97	0.039	0.94	0.4	6.7	0.54	0.04	17	0.8	0.04	8.9	6.27	<0.1	0.09
013K833082	Sediment Pulp	50.8	13.9	0.18	80.2	0.054	<20	0.80	0.006	0.07	0.3	2.1	0.12	0.15	58	1.0	<0.02	2.5	0.64	<0.1	0.04
REP 013K833082	QC	52.6	13.8	0.18	81.9	0.056	<20	0.81	0.007	0.07	0.3	2.1	0.12	0.16	64	0.9	<0.02	2.5	0.63	<0.1	0.04
013K833121	Sediment Pulp	52.5	62.7	0.58	69.4	0.098	<20	1.86	0.010	0.10	0.3	3.5	0.16	0.05	29	0.5	<0.02	2.7	1.75	<0.1	0.05
REP 013K833121	QC	53.2	63.9	0.58	69.7	0.097	<20	1.86	0.011	0.10	0.3	3.5	0.21	0.05	35	0.6	<0.02	2.7	1.77	<0.1	0.05
013K833157	Sediment Pulp	36.7	9.4	0.10	36.6	0.039	<20	0.55	0.008	0.05	1.0	1.0	0.10	0.11	35	0.6	<0.02	1.4	0.43	<0.1	<0.02
REP 013K833157	QC	36.5	9.4	0.10	37.0	0.040	<20	0.55	0.007	0.05	1.1	1.0	0.10	0.11	34	0.7	<0.02	1.4	0.43	<0.1	<0.02
013K833193	Sediment Pulp	67.2	6.5	0.04	126.6	0.017	<20	0.71	0.007	0.02	0.2	0.9	0.03	0.22	97	0.9	<0.02	0.8	0.28	<0.1	<0.02
REP 013K833193	QC	68.1	6.7	0.04	128.8	0.017	<20	0.71	0.007	0.02	0.2	0.9	0.03	0.22	93	0.8	<0.02	0.8	0.28	<0.1	<0.02
Reference Materials																					
STD DS11	Standard	18.7	58.2	0.82	437.2	0.093	<20	1.09	0.069	0.38	2.4	3.4	5.03	0.28	263	2.3	4.72	5.0	2.97	<0.1	0.06
STD DS11	Standard	18.2	52.4	0.77	400.0	0.089	<20	1.06	0.066	0.36	2.6	3.2	4.46	0.26	276	1.8	4.35	4.8	2.76	<0.1	0.05
STD DS11	Standard	16.7	57.1	0.83	389.8	0.089	<20	1.11	0.072	0.39	2.4	3.1	5.32	0.27	260	2.3	4.68	4.8	2.80	<0.1	0.06
STD DS11	Standard	16.7	55.0	0.79	366.1	0.086	<20	1.08	0.067	0.38	2.6	3.0	5.07	0.26	225	2.2	4.38	4.5	2.64	<0.1	0.06
STD DS11	Standard	17.2	55.0	0.79	396.8	0.091	<20	1.06	0.065	0.37	2.7	3.0	4.48	0.26	249	2.0	4.28	4.4	2.71	<0.1	0.04
STD DS11	Standard	16.8	56.8	0.83	387.5	0.090	<20	1.11	0.070	0.39	2.6	3.1	5.24	0.27	237	2.3	4.49	4.7	2.80	<0.1	0.06
STD DS11	Standard	14.8	55.2	0.80	375.2	0.083	<20	1.04	0.066	0.37	2.6	2.8	4.50	0.28	218	2.2	4.41	4.5	2.49	<0.1	0.06
STD DS11	Standard	18.1	56.5	0.80	366.0	0.093	<20	1.11	0.070	0.38	2.2	3.1	4.91	0.25	221	2.0	4.43	4.6	2.71	<0.1	0.06
STD DS11	Standard	16.6	57.5	0.83	390.7	0.090	<20	1.09	0.072	0.39	2.5	3.1	4.83	0.28	259	2.6	4.62	4.9	2.78	<0.1	0.07
STD OREAS262	Standard	17.3	43.7	1.20	265.4	0.003	<20	1.31	0.067	0.31	<0.1	3.6	0.49	0.27	172	0.5	0.24	4.2	2.44	<0.1	0.17
STD OREAS262	Standard	16.8	40.5	1.14	249.7	0.003	<20	1.21	0.067	0.29	<0.1	3.4	0.45	0.24	160	0.3	0.26	3.9	2.31	<0.1	0.15



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

QUALITY CONTROL REPORT

VAN22000383.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K831577	Sediment Pulp	2.52	3.8	0.5	<0.05	2.3	27.64	108.2	<0.02	6	1.6	2.6	13.57	50.02	8.31	1.31	6.91	1.04	6.02	1.20	3.17
REP 013K831577	QC	2.39	3.8	0.4	<0.05	2.2	28.46	107.9	<0.02	4	1.5	2.9	13.59	48.22	8.46	1.25	7.42	1.06	6.03	1.11	3.34
013K831580	Sediment Pulp	3.06	3.6	0.4	<0.05	3.2	67.46	186.6	<0.02	2	3.5	2.8	22.91	86.19	14.88	2.05	13.06	1.91	11.51	2.27	6.56
REP 013K831580	QC	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833010	Sediment Pulp	0.72	3.9	0.2	<0.05	0.7	16.87	63.1	<0.02	1	0.6	8.5	8.02	30.84	5.34	0.90	4.30	0.54	3.18	0.57	1.61
REP 013K833010	QC	0.74	3.9	0.2	<0.05	0.6	16.70	63.0	<0.02	<1	0.6	8.3	7.92	30.52	5.20	0.89	4.27	0.53	3.11	0.56	1.58
013K833046	Sediment Pulp	1.14	83.0	0.9	<0.05	4.9	26.01	135.4	0.03	<1	1.2	40.1	13.85	50.50	8.11	1.18	6.29	0.85	4.88	0.91	2.63
REP 013K833046	QC	1.25	85.8	1.0	<0.05	5.4	26.69	139.3	0.03	<1	1.2	42.0	14.26	52.29	8.42	1.22	6.45	0.87	5.01	0.93	2.71
013K833082	Sediment Pulp	1.91	5.8	0.3	<0.05	1.5	18.64	92.1	<0.02	1	0.3	4.3	11.33	41.92	6.92	1.09	5.92	0.73	3.98	0.71	1.91
REP 013K833082	QC	2.01	5.8	0.3	<0.05	1.5	19.38	94.5	<0.02	<1	0.4	4.1	12.03	43.06	7.17	1.12	6.04	0.73	3.93	0.72	2.14
013K833121	Sediment Pulp	1.36	11.0	0.4	<0.05	2.6	23.98	111.8	<0.02	<1	1.2	13.0	12.91	49.94	8.11	1.18	6.22	0.79	4.46	0.80	2.37
REP 013K833121	QC	1.37	11.1	0.4	<0.05	2.8	24.09	112.4	<0.02	<1	1.2	13.0	13.06	50.55	8.17	1.18	6.33	0.81	4.55	0.81	2.41
013K833157	Sediment Pulp	1.31	4.1	0.2	<0.05	0.5	13.25	62.8	<0.02	1	0.2	2.6	7.82	30.24	4.59	0.81	3.51	0.44	2.40	0.44	1.25
REP 013K833157	QC	1.36	4.2	0.2	<0.05	0.5	13.18	62.8	<0.02	1	0.2	2.6	7.84	30.36	4.67	0.81	3.53	0.44	2.42	0.43	1.25
013K833193	Sediment Pulp	1.09	1.6	0.2	<0.05	0.6	22.22	118.2	<0.02	<1	0.5	0.9	14.23	52.12	7.71	1.10	5.86	0.77	4.29	0.77	2.02
REP 013K833193	QC	1.11	1.6	0.2	<0.05	0.6	22.47	120.8	<0.02	<1	0.5	0.9	14.45	53.10	7.92	1.12	5.95	0.79	4.34	0.78	2.08
Reference Materials																					
STD DS11	Standard	1.32	34.4	2.2	<0.05	2.4	8.01	37.2	0.28	44	0.8	23.8	3.93	15.18	2.62	0.52	2.25	0.30	1.70	0.29	0.80
STD DS11	Standard	1.30	32.0	1.6	<0.05	2.4	7.58	36.5	0.22	44	0.7	21.8	3.92	14.34	2.50	0.63	2.31	0.29	1.67	0.30	0.89
STD DS11	Standard	1.31	33.2	1.7	<0.05	2.8	7.71	35.4	0.23	44	0.7	21.8	3.61	14.26	2.50	0.47	2.04	0.28	1.52	0.27	0.78
STD DS11	Standard	1.22	31.5	1.6	<0.05	2.5	7.29	33.5	0.21	41	0.7	20.7	3.46	13.63	2.35	0.44	1.92	0.25	1.42	0.24	0.72
STD DS11	Standard	1.27	31.8	1.7	<0.05	2.2	7.40	34.8	0.22	40	0.6	20.9	3.79	13.82	2.57	0.50	2.11	0.26	1.43	0.28	0.77
STD DS11	Standard	1.26	32.6	1.7	<0.05	2.9	7.91	34.4	0.23	43	0.7	21.3	3.66	14.05	2.52	0.47	2.05	0.27	1.49	0.27	0.78
STD DS11	Standard	1.27	31.6	1.6	<0.05	2.7	7.13	30.0	0.22	41	0.7	22.6	3.17	12.21	2.17	0.39	1.77	0.23	1.30	0.24	0.66
STD DS11	Standard	1.33	31.0	1.6	<0.05	2.5	7.83	35.4	0.21	41	0.7	20.5	3.77	14.44	2.54	0.48	2.07	0.26	1.52	0.27	0.78
STD DS11	Standard	1.34	33.0	1.7	<0.05	2.9	7.62	32.5	0.24	42	0.7	22.3	3.50	13.13	2.35	0.47	1.94	0.25	1.44	0.26	0.74
STD OREAS262	Standard	<0.02	19.9	0.5	<0.05	6.2	11.22	34.5	0.04	2	1.2	17.4	4.07	15.63	3.55	0.80	3.43	0.43	2.44	0.43	1.04
STD OREAS262	Standard	<0.02	18.0	0.6	<0.05	5.9	10.61	32.6	0.03	2	1.6	17.8	3.99	14.40	3.22	0.68	3.42	0.43	2.45	0.44	1.23



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 18, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000383.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
Pulp Duplicates							
013K831577	Sediment Pulp		0.45	2.33	0.29	<10	<2
REP 013K831577	QC		0.43	2.39	0.32	<10	<2
013K831580	Sediment Pulp		0.85	4.97	0.68	<10	<2
REP 013K831580	QC		I.S.	I.S.	I.S.	I.S.	I.S.
013K833010	Sediment Pulp		0.20	1.28	0.16	<10	<2
REP 013K833010	QC		0.19	1.23	0.16	<10	<2
013K833046	Sediment Pulp		0.36	2.29	0.32	<10	<2
REP 013K833046	QC		0.37	2.36	0.33	<10	<2
013K833082	Sediment Pulp		0.25	1.73	0.25	<10	<2
REP 013K833082	QC		0.27	1.72	0.28	<10	<2
013K833121	Sediment Pulp		0.31	2.06	0.29	<10	<2
REP 013K833121	QC		0.31	2.11	0.29	<10	<2
013K833157	Sediment Pulp		0.15	0.99	0.13	<10	<2
REP 013K833157	QC		0.15	0.98	0.13	<10	<2
013K833193	Sediment Pulp		0.26	1.59	0.23	<10	<2
REP 013K833193	QC		0.27	1.63	0.23	<10	<2
Reference Materials							
STD DS11	Standard		0.12	0.72	0.10	124	183
STD DS11	Standard		0.10	0.76	0.10	82	159
STD DS11	Standard		0.10	0.69	0.09	97	158
STD DS11	Standard		0.09	0.65	0.08	92	147
STD DS11	Standard		0.10	0.69	0.10	94	160
STD DS11	Standard		0.11	0.70	0.10	93	158
STD DS11	Standard		0.09	0.59	0.09	90	148
STD DS11	Standard		0.10	0.70	0.10	92	152
STD DS11	Standard		0.10	0.66	0.10	93	163
STD OREAS262	Standard		0.16	0.96	0.14	<10	3
STD OREAS262	Standard		0.16	0.92	0.13	<10	<2



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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 18, 2022

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Part: 1 of 4

QUALITY CONTROL REPORT

VAN22000383.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.60	110.57	52.25	151.4	454	64.1	27.7	536	3.22	35.6	1.1	50.7	8.6	33.1	0.58	1.87	0.88	21	2.91	0.037
STD OREAS262	Standard	0.61	109.09	51.44	147.7	451	62.5	26.8	514	3.15	34.5	1.1	48.6	8.3	32.2	0.57	1.74	0.85	20	2.84	0.035
STD OREAS262	Standard	0.56	108.19	54.84	148.6	461	58.6	25.8	516	3.07	35.1	1.2	49.5	10.5	35.1	0.60	1.95	0.97	21	2.85	0.038
STD OREAS262	Standard	0.59	109.86	53.07	147.8	438	63.1	27.6	515	3.12	34.5	1.2	55.2	8.7	32.1	0.60	1.52	0.87	20	2.95	0.035
STD OREAS262	Standard	0.57	109.13	49.36	143.8	434	61.8	25.7	519	3.12	33.1	1.0	47.7	8.0	32.0	0.59	1.98	0.85	20	2.87	0.037
STD OREAS262	Standard	0.57	112.32	53.85	151.5	452	64.9	28.4	524	3.19	35.1	1.2	57.0	8.9	32.8	0.60	1.90	0.88	21	2.93	0.036
STD OREAS262	Standard	0.63	116.50	51.62	151.9	482	64.1	26.7	545	3.22	36.1	1.1	48.1	8.2	33.0	0.66	2.23	0.86	21	2.88	0.037
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.03	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.06	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	0.03	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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QUALITY CONTROL REPORT

VAN22000383.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	15.8	40.6	1.14	226.7	0.003	<20	1.19	0.068	0.31	<0.1	3.0	0.46	0.25	155	0.5	0.21	3.6	2.31	<0.1	0.20
STD OREAS262	Standard	15.2	40.0	1.11	222.4	0.003	<20	1.15	0.064	0.30	<0.1	3.0	0.52	0.25	159	0.4	0.22	3.5	2.20	<0.1	0.17
STD OREAS262	Standard	17.3	40.8	1.12	241.1	0.003	<20	1.24	0.064	0.30	<0.1	3.6	0.44	0.25	154	<0.1	0.20	4.1	2.35	<0.1	0.15
STD OREAS262	Standard	16.1	41.7	1.14	230.3	0.003	<20	1.27	0.065	0.31	<0.1	3.1	0.46	0.25	155	0.4	0.22	3.6	2.27	<0.1	0.14
STD OREAS262	Standard	14.3	39.6	1.13	221.0	0.003	<20	1.17	0.067	0.29	<0.1	2.8	0.41	0.26	148	0.5	0.23	3.5	2.11	<0.1	0.21
STD OREAS262	Standard	18.6	44.5	1.14	226.0	0.003	<20	1.26	0.065	0.32	<0.1	3.1	0.49	0.25	146	0.4	0.21	3.7	2.46	<0.1	0.19
STD OREAS262	Standard	13.6	39.6	1.16	225.1	0.003	<20	1.14	0.067	0.28	0.1	3.0	0.43	0.26	155	0.7	0.22	3.6	2.16	<0.1	0.26
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

QUALITY CONTROL REPORT

VAN22000383.1

		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	18.2	0.5	<0.05	8.8	10.29	30.7	0.03	1	1.1	16.0	3.58	14.68	3.17	0.61	2.80	0.38	2.08	0.36	1.01
STD OREAS262	Standard	<0.02	17.7	0.5	<0.05	7.3	9.95	29.5	0.03	<1	1.0	15.3	3.47	14.25	3.09	0.59	2.75	0.36	2.01	0.35	0.98
STD OREAS262	Standard	<0.02	18.6	0.6	<0.05	5.3	10.89	35.1	0.03	1	1.7	17.3	4.26	15.76	3.38	0.69	3.16	0.41	2.06	0.43	1.07
STD OREAS262	Standard	<0.02	18.2	0.5	<0.05	6.2	10.40	31.1	0.03	<1	1.0	15.6	3.71	14.44	3.13	0.60	2.77	0.36	2.04	0.36	1.00
STD OREAS262	Standard	<0.02	17.1	0.5	<0.05	9.6	9.92	28.8	0.03	<1	1.0	15.8	3.37	13.34	2.86	0.54	2.54	0.34	1.86	0.34	0.89
STD OREAS262	Standard	<0.02	18.9	0.5	<0.05	8.0	10.79	36.0	0.03	<1	1.1	15.5	4.25	16.79	3.45	0.65	2.97	0.38	2.12	0.38	1.03
STD OREAS262	Standard	<0.02	16.6	0.5	<0.05	11.3	10.29	26.3	0.03	<1	1.1	16.5	3.20	12.59	2.87	0.59	2.65	0.35	1.96	0.35	0.98
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	0.03	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 18, 2022

Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000383.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.12	0.82	0.11	<10	<2
STD OREAS262	Standard	0.12	0.78	0.10	<10	2
STD OREAS262	Standard	0.15	0.78	0.10	<10	3
STD OREAS262	Standard	0.13	0.78	0.11	<10	<2
STD OREAS262	Standard	0.12	0.73	0.10	<10	<2
STD OREAS262	Standard	0.13	0.82	0.11	<10	<2
STD OREAS262	Standard	0.12	0.78	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client:

Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: January 24, 2022
Analysis Start: February 28, 2022
Report Date: April 16, 2022
Page: 1 of 6

CERTIFICATE OF ANALYSIS

VAN22000384.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 136

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	135	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	135	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


Martin Wong
Data Validation Specialist

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



BUREAU MINERAL LABORATORIES
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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 16, 2022

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Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22000384.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833206	Sediment Pulp	4.49	39.41	2.56	63.3	329	12.3	7.8	266	1.92	6.6	5.8	1.0	0.6	33.1	0.25	0.30	<0.02	29	0.50	0.133
013K833207	Sediment Pulp	0.78	13.62	1.80	15.4	123	3.7	0.8	26	0.27	<0.1	2.2	<0.2	0.1	11.3	0.12	0.04	<0.02	8	0.16	0.036
013K833208	Sediment Pulp	8.93	41.34	71.90	289.0	560	11.9	7.3	412	1.69	31.3	8.1	2.7	1.0	59.9	1.19	0.49	0.84	19	6.20	0.063
013K833209	Sediment Pulp	0.44	10.38	1.79	13.3	163	3.7	1.0	37	0.23	0.2	1.2	<0.2	<0.1	16.9	0.12	0.03	<0.02	6	0.23	0.051
013K833210	Sediment Pulp	7.04	18.32	4.58	91.1	196	11.5	18.2	1061	5.80	2.0	4.7	0.2	3.2	13.4	0.29	0.07	0.05	39	0.21	0.127
013K833211	Sediment Pulp	5.79	45.25	6.87	190.7	162	27.2	23.1	593	2.86	2.9	11.7	0.6	5.5	22.0	0.37	0.12	0.06	35	0.41	0.095
013K833212	Sediment Pulp	8.09	49.93	8.31	113.1	139	20.5	28.8	2257	3.82	6.0	21.3	0.6	8.6	20.9	0.24	0.14	0.07	40	0.32	0.133
013K833213	Sediment Pulp	22.32	32.48	5.92	112.9	395	10.8	33.2	1630	6.45	9.3	10.8	0.4	3.4	15.0	0.40	0.15	0.07	43	0.17	0.197
013K833214	Sediment Pulp	10.56	18.44	6.14	70.0	317	8.5	15.7	335	5.14	1.8	2.9	<0.2	2.9	16.4	0.17	0.08	0.04	43	0.21	0.169
013K833215	Sediment Pulp	5.67	20.83	5.66	76.9	209	13.6	13.3	453	2.52	4.8	3.6	<0.2	1.8	16.8	0.23	0.12	0.05	35	0.37	0.110
013K833216	Sediment Pulp	1.59	79.66	1.86	50.2	545	14.0	6.3	325	1.72	0.6	1.7	0.8	0.3	29.0	0.30	0.08	0.02	39	0.54	0.236
013K833217	Sediment Pulp	2.20	31.34	1.27	89.9	86	24.8	28.9	951	2.32	0.1	0.4	0.3	0.5	32.4	0.40	<0.02	<0.02	47	0.68	0.169
013K833218	Sediment Pulp	8.92	73.71	7.60	192.8	803	85.3	30.6	7277	5.11	364.6	24.0	2.2	1.1	49.9	1.66	0.56	0.07	32	0.63	0.244
013K833219	Sediment Pulp	3.51	35.29	4.88	74.4	154	38.3	8.4	377	1.64	3.9	3.3	0.5	0.7	42.3	0.43	0.13	0.05	33	0.55	0.088
013K833220	Sediment Pulp	1.25	44.76	6.66	73.5	117	47.9	14.1	417	2.40	2.6	3.3	0.9	2.5	31.9	0.25	0.07	0.05	50	0.53	0.162
013K833221	Sediment Pulp	1.29	20.60	5.31	51.8	107	18.0	7.5	259	1.41	2.1	2.6	0.3	1.2	29.2	0.22	0.09	0.04	28	0.40	0.090
013K833222	Sediment Pulp	0.90	31.72	22.76	126.1	2555	44.5	27.8	1167	3.00	23.2	3.3	2.3	6.2	24.4	0.51	0.59	2.72	47	0.58	0.089
013K833223	Sediment Pulp	1.28	20.46	5.24	52.2	110	18.1	7.6	262	1.42	2.1	2.6	0.4	1.2	29.4	0.21	0.09	0.04	28	0.42	0.089
013K833224	Sediment Pulp	3.43	32.14	9.73	88.0	443	13.8	10.0	409	2.41	4.1	3.1	0.5	1.2	26.5	0.28	0.16	0.06	34	0.47	0.200
013K833225	Sediment Pulp	6.57	47.69	6.08	125.2	185	29.2	24.7	745	3.35	9.2	20.6	0.3	9.0	26.0	0.38	0.18	0.04	59	0.58	0.112
013K833226	Sediment Pulp	18.11	48.06	7.66	136.5	436	21.5	34.8	1577	4.80	10.0	23.4	0.5	3.9	23.6	0.69	0.22	0.06	78	0.52	0.174
013K833227	Sediment Pulp	5.28	31.31	7.56	108.5	205	14.2	9.6	254	2.48	1.2	9.0	0.4	2.6	25.8	0.22	0.09	0.04	36	0.42	0.097
013K833228	Sediment Pulp	8.38	49.79	8.06	149.7	400	17.6	17.6	648	3.45	6.1	15.2	0.4	5.0	21.9	0.57	0.19	0.06	51	0.35	0.183
013K833229	Sediment Pulp	5.46	17.44	4.99	45.5	282	8.2	2.5	130	0.71	<0.1	12.3	<0.2	0.9	21.6	0.23	0.12	0.05	11	0.36	0.047
013K833230	Sediment Pulp	4.85	37.28	6.94	44.9	643	6.9	2.3	79	0.97	0.7	7.2	<0.2	1.6	19.1	0.20	0.13	0.09	18	0.29	0.123
013K833231	Sediment Pulp	21.36	22.94	5.33	80.2	501	8.8	31.1	1378	4.88	1.6	16.0	<0.2	3.1	15.7	0.35	0.09	0.03	51	0.24	0.214
013K833232	Sediment Pulp	3.64	19.13	2.77	20.9	253	5.8	1.1	39	0.34	0.3	10.6	<0.2	<0.1	12.6	0.16	0.10	<0.02	11	0.18	0.066
013K833233	Sediment Pulp	6.32	33.96	2.35	81.4	221	8.7	7.9	110	2.34	1.5	31.6	<0.2	4.9	16.1	0.18	0.15	<0.02	32	0.22	0.105
013K833234	Sediment Pulp	1.69	27.91	1.55	31.5	220	9.3	2.2	34	0.33	<0.1	2.5	<0.2	0.1	25.2	0.18	0.04	<0.02	17	0.32	0.050
013K833235	Sediment Pulp	2.85	31.65	4.41	37.4	430	7.7	3.4	145	1.27	0.1	6.1	<0.2	0.4	19.4	0.28	0.07	0.03	45	0.29	0.173



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Project: None Given
Report Date: April 16, 2022

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Part: 2 of 4

CERTIFICATE OF ANALYSIS

VAN22000384.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833206	Sediment Pulp	92.4	16.7	0.17	93.4	0.027	<20	1.31	0.008	0.10	0.4	1.3	0.24	0.23	99	2.4	0.06	0.6	0.66	<0.1	<0.02
013K833207	Sediment Pulp	23.5	4.0	0.03	46.3	0.020	<20	0.44	0.006	0.01	<0.1	0.5	<0.02	0.11	64	0.4	<0.02	1.3	0.29	<0.1	<0.02
013K833208	Sediment Pulp	9.1	12.3	0.56	83.9	0.036	<20	0.42	0.026	0.05	0.5	2.0	0.19	1.44	90	1.1	0.02	2.0	0.44	<0.1	0.02
013K833209	Sediment Pulp	13.4	4.7	0.06	51.2	0.019	<20	0.38	0.005	0.04	0.1	0.3	<0.02	0.13	65	0.3	<0.02	1.6	0.21	<0.1	<0.02
013K833210	Sediment Pulp	67.1	17.3	0.22	93.1	0.053	<20	1.62	0.014	0.07	0.3	3.0	0.17	0.12	65	0.8	<0.02	1.0	0.80	<0.1	0.03
013K833211	Sediment Pulp	92.1	22.4	0.52	145.7	0.085	<20	1.77	0.023	0.15	0.3	4.7	0.43	0.09	48	0.7	0.03	2.0	1.01	<0.1	0.09
013K833212	Sediment Pulp	59.4	20.8	0.47	111.1	0.099	<20	1.54	0.019	0.25	0.5	4.1	0.31	0.05	35	0.7	0.05	2.1	2.01	<0.1	0.05
013K833213	Sediment Pulp	96.9	17.0	0.16	89.5	0.052	<20	2.08	0.006	0.08	0.8	3.5	0.34	0.14	71	1.9	<0.02	0.5	1.07	<0.1	0.02
013K833214	Sediment Pulp	53.1	19.6	0.18	94.2	0.059	<20	1.32	0.008	0.09	0.5	2.4	0.15	0.15	67	0.9	0.02	1.6	1.35	<0.1	0.04
013K833215	Sediment Pulp	46.7	22.4	0.29	74.8	0.049	<20	1.57	0.015	0.06	0.3	2.1	0.14	0.11	57	0.8	<0.02	1.6	0.72	<0.1	0.03
013K833216	Sediment Pulp	34.9	67.2	0.20	120.2	0.030	<20	2.21	0.004	0.04	0.2	1.7	0.07	0.24	164	3.3	<0.02	1.4	0.32	<0.1	0.02
013K833217	Sediment Pulp	11.0	17.9	0.14	30.2	0.017	<20	3.78	0.094	0.02	<0.1	2.8	0.13	0.19	77	1.8	<0.02	4.0	0.10	<0.1	0.03
013K833218	Sediment Pulp	50.4	75.0	0.30	601.1	0.028	<20	3.02	0.012	0.05	1.6	4.4	0.38	0.36	233	4.4	<0.02	1.7	0.82	<0.1	0.07
013K833219	Sediment Pulp	38.4	74.7	0.51	178.7	0.034	<20	1.72	0.015	0.05	<0.1	2.6	0.08	0.16	72	1.1	<0.02	1.6	0.83	<0.1	0.03
013K833220	Sediment Pulp	39.6	96.2	1.03	87.1	0.090	<20	2.24	0.024	0.11	0.2	4.0	0.07	0.06	44	0.7	<0.02	3.7	1.25	<0.1	0.07
013K833221	Sediment Pulp	44.3	35.8	0.53	58.8	0.062	<20	1.29	0.017	0.07	0.1	2.5	0.05	0.10	36	0.3	<0.02	1.9	0.94	<0.1	0.05
013K833222	Sediment Pulp	38.9	48.9	0.77	151.3	0.097	<20	1.59	0.029	0.25	0.4	5.5	0.26	0.14	264	0.7	0.04	4.8	1.30	<0.1	0.11
013K833223	Sediment Pulp	43.9	34.9	0.54	58.4	0.063	<20	1.27	0.017	0.07	0.1	2.6	0.05	0.09	31	0.4	<0.02	1.9	0.93	<0.1	0.05
013K833224	Sediment Pulp	59.8	26.6	0.31	122.2	0.054	<20	2.47	0.015	0.09	0.2	2.7	0.15	0.14	135	1.1	<0.02	2.3	0.99	<0.1	0.04
013K833225	Sediment Pulp	84.7	36.5	0.51	150.4	0.081	<20	1.80	0.012	0.12	0.7	4.2	0.38	0.11	54	1.3	<0.02	1.9	1.33	<0.1	0.06
013K833226	Sediment Pulp	114.5	35.3	0.19	273.4	0.040	<20	2.51	0.009	0.05	1.0	4.1	0.42	0.21	93	2.6	<0.02	0.8	0.78	<0.1	0.04
013K833227	Sediment Pulp	87.1	20.8	0.28	102.3	0.055	<20	1.62	0.013	0.09	0.4	3.1	0.19	0.14	50	1.0	<0.02	0.9	0.97	<0.1	0.05
013K833228	Sediment Pulp	116.8	23.3	0.22	78.9	0.059	<20	2.45	0.011	0.08	0.5	4.3	0.35	0.12	71	1.6	0.02	<0.1	0.96	<0.1	0.05
013K833229	Sediment Pulp	134.8	7.7	0.04	56.5	0.019	<20	1.15	0.004	0.02	<0.1	1.0	0.03	0.24	64	1.1	<0.02	<0.1	0.28	<0.1	0.02
013K833230	Sediment Pulp	130.4	10.0	0.06	86.8	0.027	<20	0.95	0.005	0.03	0.2	1.3	0.11	0.20	92	1.2	<0.02	0.1	0.45	<0.1	0.03
013K833231	Sediment Pulp	144.6	15.4	0.05	97.5	0.045	<20	2.12	0.005	0.02	0.4	2.7	0.46	0.12	120	1.2	0.03	1.0	0.74	<0.1	<0.02
013K833232	Sediment Pulp	36.0	5.6	0.04	47.8	0.015	<20	0.61	0.004	0.02	<0.1	0.4	0.02	0.16	63	0.6	<0.02	1.1	0.51	<0.1	<0.02
013K833233	Sediment Pulp	141.1	14.9	0.09	44.7	0.030	<20	1.37	0.007	0.04	0.2	2.5	0.22	0.12	73	1.2	<0.02	<0.1	0.93	<0.1	0.03
013K833234	Sediment Pulp	60.5	7.9	0.03	74.9	0.021	<20	0.88	0.004	0.01	<0.1	0.6	0.06	0.24	57	0.7	<0.02	0.5	0.23	<0.1	<0.02
013K833235	Sediment Pulp	73.8	15.9	0.05	90.0	0.045	<20	1.39	0.005	0.02	0.1	1.5	0.06	0.19	118	1.2	<0.02	2.3	0.35	<0.1	0.03



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833206	Sediment Pulp	0.87	5.3	0.1	<0.05	0.6	38.22	170.5	<0.02	2	0.7	3.0	22.58	86.10	13.38	1.94	10.04	1.27	6.85	1.27	3.41
013K833207	Sediment Pulp	0.86	1.4	0.1	<0.05	0.4	9.11	43.7	<0.02	<1	0.2	1.0	5.27	19.04	3.03	0.50	2.30	0.31	1.80	0.33	0.91
013K833208	Sediment Pulp	0.60	3.3	2.9	<0.05	1.1	9.49	15.1	0.45	18	0.1	3.9	2.45	10.46	2.20	0.40	1.87	0.25	1.53	0.30	0.83
013K833209	Sediment Pulp	0.62	2.1	0.1	<0.05	0.2	5.01	25.6	<0.02	<1	0.1	1.0	2.99	10.75	1.65	0.31	1.26	0.16	0.95	0.18	0.51
013K833210	Sediment Pulp	1.71	5.8	0.3	<0.05	1.6	35.19	185.7	0.02	<1	1.1	4.6	16.15	61.14	9.63	1.43	7.73	1.06	6.01	1.17	3.25
013K833211	Sediment Pulp	2.24	12.9	0.4	<0.05	5.1	43.59	175.8	<0.02	<1	1.2	10.5	22.02	80.72	13.04	1.90	10.27	1.35	7.28	1.41	3.88
013K833212	Sediment Pulp	1.69	21.6	0.5	<0.05	3.1	31.37	153.4	0.02	<1	1.0	13.1	14.81	55.41	8.97	1.27	7.10	0.98	5.61	1.09	3.04
013K833213	Sediment Pulp	1.56	7.9	0.3	<0.05	1.1	49.98	215.5	<0.02	1	1.4	4.4	22.98	86.03	13.42	2.10	10.60	1.45	8.35	1.66	4.70
013K833214	Sediment Pulp	2.06	9.0	0.3	<0.05	1.7	20.92	96.0	<0.02	<1	0.8	4.2	11.17	40.00	5.88	0.91	4.53	0.62	3.56	0.70	1.97
013K833215	Sediment Pulp	1.34	6.5	0.3	<0.05	1.4	23.39	96.1	<0.02	<1	1.1	6.2	12.27	45.42	7.22	1.03	5.69	0.76	4.19	0.79	2.17
013K833216	Sediment Pulp	1.18	2.9	0.1	<0.05	1.3	20.40	60.8	<0.02	<1	1.0	3.1	9.45	35.13	5.93	0.93	4.76	0.65	3.64	0.69	1.86
013K833217	Sediment Pulp	0.34	0.8	<0.1	<0.05	0.8	9.78	18.8	<0.02	1	0.1	1.6	2.92	11.74	2.13	0.67	1.95	0.27	1.54	0.30	0.84
013K833218	Sediment Pulp	0.80	4.2	0.2	<0.05	3.2	41.58	92.6	0.03	3	1.3	5.8	13.15	50.14	9.04	1.68	8.32	1.20	7.01	1.36	3.75
013K833219	Sediment Pulp	1.03	4.4	0.2	<0.05	1.7	20.25	65.8	<0.02	<1	0.9	5.9	9.70	36.35	6.13	1.07	5.10	0.68	3.74	0.70	1.84
013K833220	Sediment Pulp	1.72	9.2	0.4	<0.05	4.5	21.76	95.3	<0.02	<1	1.1	13.5	10.34	39.57	6.61	1.02	5.33	0.74	4.12	0.76	2.03
013K833221	Sediment Pulp	1.14	6.0	0.3	<0.05	2.7	20.02	77.3	<0.02	<1	1.1	8.4	11.23	42.51	6.80	0.99	5.22	0.67	3.66	0.67	1.82
013K833222	Sediment Pulp	2.04	23.7	1.0	<0.05	5.4	17.73	70.4	0.04	<1	0.6	19.1	9.44	34.89	5.85	0.85	4.39	0.58	3.22	0.60	1.68
013K833223	Sediment Pulp	1.15	6.0	0.3	<0.05	2.6	19.79	76.6	<0.02	<1	1.0	8.3	10.97	41.59	6.62	0.97	5.15	0.66	3.61	0.67	1.79
013K833224	Sediment Pulp	2.05	8.6	0.3	<0.05	2.1	27.95	123.5	0.02	2	1.4	7.0	16.19	60.74	9.98	1.49	7.67	1.01	5.47	1.00	2.64
013K833225	Sediment Pulp	1.93	14.2	0.3	<0.05	3.1	42.14	159.9	<0.02	1	1.4	14.0	20.38	73.24	11.49	1.46	8.94	1.20	6.77	1.36	3.96
013K833226	Sediment Pulp	1.51	6.3	0.2	<0.05	1.6	51.21	225.2	<0.02	2	1.8	5.2	26.73	96.48	14.62	1.98	11.28	1.52	8.58	1.69	4.87
013K833227	Sediment Pulp	1.89	8.7	0.3	<0.05	2.9	40.99	148.1	<0.02	<1	1.5	4.8	19.79	75.56	11.91	1.65	9.49	1.25	6.84	1.33	3.64
013K833228	Sediment Pulp	2.51	7.7	0.4	<0.05	3.1	66.63	284.6	0.02	2	2.2	5.3	29.91	114.19	18.23	2.36	14.70	2.01	11.36	2.22	6.25
013K833229	Sediment Pulp	2.09	1.9	0.2	<0.05	1.3	55.34	224.2	0.02	<1	0.9	0.9	31.43	114.02	18.64	1.86	14.58	1.95	10.22	1.83	4.60
013K833230	Sediment Pulp	2.29	2.7	0.3	<0.05	1.7	49.89	204.9	0.02	<1	0.7	1.4	26.62	96.01	14.62	1.39	12.02	1.64	8.94	1.64	4.14
013K833231	Sediment Pulp	1.83	2.2	0.2	<0.05	1.0	59.80	278.6	0.03	6	1.9	1.6	34.43	128.71	19.70	2.55	15.37	2.06	11.40	2.15	5.73
013K833232	Sediment Pulp	0.79	1.5	0.1	<0.05	0.4	15.58	66.1	<0.02	<1	0.5	1.2	8.32	29.66	4.66	0.63	3.61	0.50	2.87	0.55	1.49
013K833233	Sediment Pulp	1.62	4.1	0.2	<0.05	1.9	62.44	270.6	<0.02	1	1.8	2.5	32.82	121.02	19.50	2.36	15.51	2.06	11.16	2.09	5.52
013K833234	Sediment Pulp	1.08	1.4	0.1	<0.05	1.1	21.29	104.3	<0.02	<1	0.7	0.7	12.01	43.82	6.55	1.11	5.10	0.68	3.85	0.72	1.94
013K833235	Sediment Pulp	2.43	2.0	0.3	<0.05	1.6	35.95	142.6	<0.02	<1	1.0	1.3	17.28	67.22	10.95	1.47	8.81	1.21	6.80	1.27	3.39



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Project: None Given
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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K833206	Sediment Pulp	0.44	2.75	0.40	<10	<2
013K833207	Sediment Pulp	0.12	0.77	0.10	<10	<2
013K833208	Sediment Pulp	0.11	0.75	0.11	<10	<2
013K833209	Sediment Pulp	0.07	0.43	0.06	<10	<2
013K833210	Sediment Pulp	0.46	2.81	0.41	<10	<2
013K833211	Sediment Pulp	0.53	3.38	0.51	<10	<2
013K833212	Sediment Pulp	0.43	2.76	0.42	<10	<2
013K833213	Sediment Pulp	0.67	4.33	0.65	<10	<2
013K833214	Sediment Pulp	0.28	1.78	0.26	<10	<2
013K833215	Sediment Pulp	0.30	1.83	0.26	<10	<2
013K833216	Sediment Pulp	0.26	1.58	0.21	<10	<2
013K833217	Sediment Pulp	0.12	0.73	0.11	<10	<2
013K833218	Sediment Pulp	0.52	3.19	0.45	<10	<2
013K833219	Sediment Pulp	0.25	1.52	0.20	<10	<2
013K833220	Sediment Pulp	0.28	1.69	0.23	<10	<2
013K833221	Sediment Pulp	0.24	1.46	0.20	<10	<2
013K833222	Sediment Pulp	0.23	1.50	0.22	<10	<2
013K833223	Sediment Pulp	0.24	1.43	0.20	<10	<2
013K833224	Sediment Pulp	0.36	2.14	0.29	<10	<2
013K833225	Sediment Pulp	0.57	3.77	0.60	<10	<2
013K833226	Sediment Pulp	0.70	4.55	0.69	<10	<2
013K833227	Sediment Pulp	0.50	3.12	0.47	<10	<2
013K833228	Sediment Pulp	0.88	5.48	0.83	<10	<2
013K833229	Sediment Pulp	0.59	3.47	0.47	<10	<2
013K833230	Sediment Pulp	0.50	2.77	0.36	<10	<2
013K833231	Sediment Pulp	0.77	4.48	0.63	<10	<2
013K833232	Sediment Pulp	0.20	1.23	0.17	<10	<2
013K833233	Sediment Pulp	0.72	4.27	0.62	<10	<2
013K833234	Sediment Pulp	0.26	1.55	0.21	<10	<2
013K833235	Sediment Pulp	0.45	2.65	0.35	<10	<2



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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833236	Sediment Pulp	4.98	32.94	3.91	70.4	383	8.4	10.3	334	3.06	0.3	4.0	0.3	1.3	21.6	0.29	0.05	0.03	57	0.29	0.221
013K833237	Sediment Pulp	2.69	21.65	3.70	66.4	152	13.3	30.9	736	3.76	0.7	4.5	<0.2	3.4	22.9	0.15	0.03	0.03	45	0.32	0.146
013K833238	Sediment Pulp	1.31	8.69	1.82	13.1	100	3.3	0.6	16	0.13	0.3	1.7	<0.2	<0.1	20.2	0.10	0.02	<0.02	4	0.15	0.022
013K833239	Sediment Pulp	14.36	35.02	3.96	72.0	402	8.2	13.0	618	3.55	18.6	8.9	0.3	1.6	36.6	0.38	0.11	0.08	40	0.60	0.177
013K833240	Sediment Pulp	9.38	24.27	6.32	113.0	206	16.7	18.7	1100	6.13	4.4	5.1	<0.2	3.9	17.7	0.46	0.08	0.05	46	0.28	0.137
013K833241	Sediment Pulp	8.19	31.44	3.77	105.9	206	17.7	11.1	199	2.97	0.8	6.4	<0.2	1.5	16.3	0.25	0.07	0.03	54	0.35	0.080
013K833242	Sediment Pulp	11.15	15.48	13.74	122.4	444	8.8	5.4	345	2.66	1.3	6.8	<0.2	3.5	18.3	0.29	0.15	0.10	16	0.31	0.080
013K833243	Sediment Pulp	13.09	17.42	15.36	161.5	423	8.7	6.6	404	3.13	2.0	8.6	0.4	4.7	20.5	0.35	0.18	0.11	20	0.35	0.077
013K833244	Sediment Pulp	6.17	21.59	7.20	111.1	217	12.9	11.6	540	2.89	1.2	5.0	0.9	1.8	17.1	0.37	0.11	0.05	30	0.33	0.097
013K833245	Sediment Pulp	4.33	65.64	5.15	62.8	696	10.1	4.7	191	1.58	0.4	2.5	1.1	0.5	28.3	0.28	0.07	0.05	64	0.44	0.301
013K833246	Sediment Pulp	8.13	30.58	3.77	105.1	197	17.5	11.1	200	2.92	0.9	6.4	0.3	1.3	17.4	0.25	0.08	0.03	54	0.36	0.084
013K833247	Sediment Pulp	5.86	56.67	15.38	104.1	815	10.4	7.1	241	1.53	1.4	4.9	1.2	0.5	21.8	0.75	0.21	0.11	38	0.33	0.230
013K833248	Sediment Pulp	6.31	93.39	19.67	135.3	612	14.5	22.3	1046	11.29	21.1	4.1	1.2	2.9	34.8	0.68	0.08	0.05	81	0.53	0.375
013K833249	Sediment Pulp	4.22	33.98	6.67	87.5	358	21.9	11.1	543	3.26	8.2	4.3	0.9	1.4	33.8	0.36	0.10	0.05	38	0.48	0.206
013K833250	Sediment Pulp	8.82	45.05	5.36	116.3	311	27.6	25.2	1878	6.28	8.9	4.3	0.9	1.2	29.5	0.33	0.07	0.04	47	0.43	0.205
013K833251	Sediment Pulp	3.59	75.95	3.48	90.1	548	17.5	4.8	303	0.86	6.4	11.6	1.0	0.2	100.8	0.52	0.21	0.02	24	0.95	0.169
013K833252	Sediment Pulp	7.38	68.41	4.79	217.0	926	33.7	11.9	645	1.98	3.7	14.0	1.3	0.3	90.9	2.27	0.60	0.04	23	0.76	0.147
013K833253	Sediment Pulp	13.70	104.65	8.21	171.9	1469	49.2	13.1	984	3.93	24.8	22.9	2.4	0.7	55.2	1.47	0.25	0.06	39	0.91	0.252
013K833254	Sediment Pulp	3.46	29.04	3.64	52.5	316	14.8	10.8	343	2.33	1.1	1.9	0.4	0.3	28.2	0.29	0.04	0.02	30	0.42	0.180
013K833255	Sediment Pulp	3.64	119.29	2.12	102.5	315	13.7	7.7	81	0.75	2.1	5.2	1.4	0.5	32.9	0.40	0.17	<0.02	27	0.61	0.044
013K833256	Sediment Pulp	8.89	39.85	74.23	289.8	562	11.7	7.4	420	1.73	31.9	7.8	2.5	1.1	60.4	1.21	0.54	0.84	21	6.23	0.065
013K833257	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833258	Sediment Pulp	7.42	32.59	9.49	71.4	666	12.5	8.2	339	1.84	3.4	7.1	0.7	0.6	27.4	0.38	0.14	0.05	38	0.45	0.224
013K833259	Sediment Pulp	2.53	55.88	8.03	129.5	306	19.5	9.6	88	0.66	<0.1	9.8	0.7	0.6	26.9	1.27	0.25	0.02	14	0.57	0.052
013K833260	Sediment Pulp	15.42	65.12	17.79	162.0	381	18.2	14.3	677	3.13	0.9	28.8	4.2	4.2	27.0	1.02	0.08	0.20	46	0.44	0.244
013K833261	Sediment Pulp	2.60	17.60	3.97	54.7	139	8.9	9.1	191	1.91	<0.1	2.0	<0.2	1.2	24.9	0.13	0.04	<0.02	33	0.32	0.104
013K833262	Sediment Pulp	1.20	22.55	2.56	50.7	248	7.8	3.1	77	0.61	0.6	1.3	<0.2	0.4	17.9	0.11	0.06	<0.02	17	0.29	0.050
013K833263	Sediment Pulp	1.21	30.46	2.38	55.6	248	10.5	4.2	116	0.88	0.7	1.9	0.5	0.7	22.8	0.13	0.06	<0.02	19	0.42	0.066
013K833264	Sediment Pulp	5.38	15.69	7.08	98.6	192	11.0	8.4	279	2.42	0.8	6.5	0.7	1.7	18.8	0.30	0.08	0.05	29	0.30	0.092
013K833265	Sediment Pulp	6.92	23.28	6.92	136.5	207	13.5	17.3	807	3.26	2.2	6.2	0.4	1.8	18.2	0.50	0.11	0.05	40	0.34	0.108



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Project: None Given
Report Date: April 16, 2022

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CERTIFICATE OF ANALYSIS

VAN22000384.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833236	Sediment Pulp	78.6	21.5	0.12	85.6	0.061	<20	2.18	0.007	0.05	0.4	2.4	0.13	0.14	130	1.1	<0.02	2.7	0.51	<0.1	0.04
013K833237	Sediment Pulp	52.5	18.3	0.42	84.4	0.076	<20	1.44	0.011	0.14	0.2	2.3	0.24	0.05	54	0.5	<0.02	2.2	1.04	<0.1	0.05
013K833238	Sediment Pulp	9.2	2.9	0.02	38.1	0.017	<20	0.27	0.007	0.01	<0.1	0.3	<0.02	0.10	50	0.2	<0.02	0.7	1.27	<0.1	<0.02
013K833239	Sediment Pulp	99.4	17.1	0.10	101.8	0.042	<20	2.06	0.011	0.05	0.7	2.4	0.24	0.13	86	1.3	<0.02	0.7	0.80	<0.1	<0.02
013K833240	Sediment Pulp	64.2	20.1	0.27	149.4	0.061	<20	1.64	0.023	0.06	0.2	3.1	0.32	0.06	48	0.9	<0.02	1.2	0.69	<0.1	0.04
013K833241	Sediment Pulp	54.4	22.6	0.22	119.2	0.043	<20	1.51	0.009	0.03	0.6	2.5	0.20	0.18	58	1.0	<0.02	1.9	0.73	<0.1	0.03
013K833242	Sediment Pulp	106.6	10.1	0.15	61.2	0.040	<20	1.39	0.007	0.06	0.3	2.4	0.13	0.24	64	1.2	0.10	0.6	1.03	<0.1	0.04
013K833243	Sediment Pulp	114.1	11.1	0.17	75.1	0.044	<20	1.51	0.008	0.07	0.7	2.9	0.11	0.21	52	1.1	0.13	0.5	1.06	<0.1	0.05
013K833244	Sediment Pulp	68.7	17.7	0.17	104.3	0.043	<20	1.91	0.012	0.04	0.2	2.2	0.16	0.18	65	0.9	<0.02	0.9	0.46	<0.1	0.03
013K833245	Sediment Pulp	64.1	30.0	0.15	201.1	0.077	<20	2.19	0.006	0.07	0.2	2.0	0.17	0.22	203	1.6	<0.02	3.3	0.54	<0.1	0.04
013K833246	Sediment Pulp	54.7	22.8	0.22	122.8	0.049	<20	1.49	0.010	0.04	0.6	2.5	0.21	0.17	58	0.9	<0.02	2.0	0.75	<0.1	0.03
013K833247	Sediment Pulp	62.6	25.3	0.16	171.6	0.043	<20	2.37	0.007	0.04	0.3	1.8	0.20	0.24	104	1.9	<0.02	1.8	0.77	<0.1	<0.02
013K833248	Sediment Pulp	104.2	42.9	0.08	98.7	0.076	<20	4.91	0.006	0.03	0.3	5.2	0.16	0.22	221	3.7	0.02	3.7	0.42	<0.1	0.04
013K833249	Sediment Pulp	50.0	44.0	0.61	80.0	0.065	<20	2.38	0.025	0.09	0.1	3.3	0.09	0.10	67	1.6	<0.02	2.6	1.05	<0.1	0.03
013K833250	Sediment Pulp	52.4	64.8	0.36	113.3	0.048	<20	3.26	0.013	0.05	0.2	4.2	0.12	0.17	130	2.3	<0.02	2.5	0.67	<0.1	0.03
013K833251	Sediment Pulp	36.6	53.7	0.10	291.7	0.016	<20	2.27	0.006	0.02	0.1	1.5	0.08	0.30	220	3.2	<0.02	0.7	0.47	<0.1	0.02
013K833252	Sediment Pulp	44.5	40.9	0.15	221.7	0.017	<20	2.37	0.007	0.03	0.1	2.6	0.15	0.39	237	3.7	0.03	0.9	0.41	<0.1	0.03
013K833253	Sediment Pulp	42.4	104.2	0.33	254.5	0.028	<20	2.98	0.011	0.05	0.8	4.2	0.15	0.33	396	4.9	0.03	2.0	0.74	<0.1	0.06
013K833254	Sediment Pulp	43.2	34.2	0.09	84.1	0.032	<20	2.54	0.006	0.02	0.1	1.9	0.05	0.18	128	1.6	<0.02	2.0	0.37	<0.1	<0.02
013K833255	Sediment Pulp	86.2	27.6	0.04	36.3	0.014	<20	1.33	0.007	<0.01	0.2	3.1	0.09	0.54	105	2.0	<0.02	<0.1	0.26	<0.1	0.04
013K833256	Sediment Pulp	9.4	12.4	0.57	83.2	0.041	<20	0.44	0.029	0.05	0.5	2.3	0.19	1.44	98	1.1	<0.02	1.9	0.45	<0.1	0.03
013K833257	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833258	Sediment Pulp	72.9	27.3	0.15	91.5	0.049	<20	2.57	0.011	0.04	0.2	2.3	0.10	0.20	149	1.6	<0.02	2.7	0.59	<0.1	0.02
013K833259	Sediment Pulp	96.8	16.8	0.12	101.3	0.025	<20	1.19	0.008	0.02	<0.1	2.2	0.14	0.39	106	1.9	<0.02	0.2	0.44	<0.1	0.03
013K833260	Sediment Pulp	134.7	27.3	0.23	84.3	0.055	<20	2.47	0.016	0.07	1.9	4.2	0.51	0.20	73	1.6	0.02	0.3	1.18	<0.1	<0.02
013K833261	Sediment Pulp	37.4	15.0	0.29	90.7	0.064	<20	1.12	0.009	0.06	0.1	1.5	0.10	0.10	67	0.5	<0.02	2.4	0.71	<0.1	0.03
013K833262	Sediment Pulp	25.2	14.5	0.16	85.2	0.042	<20	0.70	0.011	0.06	0.1	1.0	0.11	0.11	91	0.5	<0.02	1.3	0.43	<0.1	0.03
013K833263	Sediment Pulp	40.5	15.7	0.17	114.7	0.039	<20	0.94	0.013	0.06	0.1	1.3	0.23	0.13	101	0.6	<0.02	0.8	0.40	<0.1	0.03
013K833264	Sediment Pulp	64.4	17.5	0.19	70.0	0.055	<20	1.56	0.013	0.05	0.1	2.2	0.08	0.10	79	0.6	<0.02	1.2	0.46	<0.1	0.03
013K833265	Sediment Pulp	66.0	19.2	0.19	116.4	0.051	<20	1.97	0.013	0.05	0.2	2.5	0.23	0.13	65	1.0	<0.02	1.2	0.55	<0.1	<0.02



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Project: None Given
Report Date: April 16, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833236	Sediment Pulp	2.95	3.9	0.3	<0.05	2.4	43.35	159.2	0.03	2	1.6	2.3	19.44	75.15	12.34	1.96	10.00	1.39	7.94	1.53	4.23
013K833237	Sediment Pulp	1.98	12.1	0.3	<0.05	3.0	29.80	107.4	<0.02	<1	1.2	5.1	12.31	46.05	7.26	1.11	5.93	0.86	5.18	1.02	2.91
013K833238	Sediment Pulp	0.60	2.6	0.1	<0.05	0.4	4.02	17.3	<0.02	<1	0.1	0.3	1.98	7.07	1.11	0.17	0.86	0.12	0.73	0.14	0.40
013K833239	Sediment Pulp	1.51	3.8	0.2	<0.05	1.0	50.12	209.6	<0.02	3	1.7	2.2	24.53	92.75	14.14	2.08	11.16	1.49	8.43	1.65	4.64
013K833240	Sediment Pulp	1.49	5.3	0.3	<0.05	2.3	32.44	184.9	<0.02	1	1.5	4.7	15.68	57.59	9.37	1.29	7.39	1.02	5.84	1.12	3.13
013K833241	Sediment Pulp	1.29	3.9	0.2	<0.05	1.8	26.18	96.2	<0.02	<1	1.0	4.0	12.48	47.54	7.23	1.09	5.90	0.78	4.41	0.87	2.48
013K833242	Sediment Pulp	2.03	6.8	0.3	<0.05	2.4	45.54	184.7	0.03	<1	1.1	3.3	24.10	87.27	13.59	1.56	10.95	1.47	7.92	1.46	3.76
013K833243	Sediment Pulp	2.05	7.4	0.3	<0.05	2.8	48.95	203.0	0.03	<1	1.5	3.7	25.37	92.14	14.68	1.68	11.81	1.59	8.71	1.59	4.14
013K833244	Sediment Pulp	1.60	3.6	0.3	<0.05	1.5	37.99	155.4	<0.02	<1	1.7	3.5	17.87	68.10	11.17	1.46	8.91	1.20	6.67	1.27	3.50
013K833245	Sediment Pulp	3.34	5.0	0.3	<0.05	2.1	27.33	126.5	0.03	1	1.2	2.9	14.92	56.07	8.78	1.38	6.81	0.96	5.61	1.04	2.84
013K833246	Sediment Pulp	1.37	4.2	0.2	<0.05	1.7	25.93	96.1	<0.02	<1	1.0	4.2	12.65	47.09	7.46	1.11	5.99	0.80	4.57	0.88	2.52
013K833247	Sediment Pulp	1.68	5.2	0.3	<0.05	0.8	32.72	115.8	<0.02	3	1.3	4.3	15.64	58.28	9.52	1.44	7.58	1.01	5.81	1.10	3.14
013K833248	Sediment Pulp	2.78	2.2	0.3	<0.05	2.0	57.10	237.7	0.05	1	3.3	1.7	25.90	96.16	16.22	2.33	13.18	1.95	11.41	2.04	5.50
013K833249	Sediment Pulp	1.26	6.9	0.4	<0.05	1.6	25.07	89.6	<0.02	<1	1.6	10.0	12.84	47.03	7.81	1.16	6.19	0.84	4.73	0.84	2.28
013K833250	Sediment Pulp	1.04	4.2	0.3	<0.05	1.2	30.10	105.2	0.02	<1	1.6	5.0	13.61	53.07	9.13	1.39	7.39	1.00	5.66	1.02	2.74
013K833251	Sediment Pulp	0.70	2.0	0.2	<0.05	0.9	23.50	51.1	<0.02	4	1.0	1.8	9.26	34.87	6.08	1.15	5.24	0.73	4.17	0.77	2.09
013K833252	Sediment Pulp	0.87	2.7	0.1	<0.05	1.1	32.93	79.9	<0.02	3	1.1	2.4	11.69	45.07	7.94	1.50	7.06	0.99	5.74	1.09	2.99
013K833253	Sediment Pulp	0.99	4.4	0.2	<0.05	2.2	32.76	57.6	0.02	9	1.1	4.6	10.87	41.64	7.52	1.48	6.88	0.99	5.79	1.09	2.97
013K833254	Sediment Pulp	1.12	2.0	0.2	<0.05	0.4	26.95	84.7	<0.02	<1	1.2	1.7	12.48	48.10	8.30	1.29	6.86	0.91	5.15	0.92	2.45
013K833255	Sediment Pulp	0.65	0.7	<0.1	<0.05	2.9	42.00	111.0	<0.02	1	1.7	0.5	21.80	86.83	13.34	1.85	10.35	1.23	6.77	1.30	3.65
013K833256	Sediment Pulp	0.70	3.4	3.0	<0.05	1.2	10.17	16.1	0.44	17	0.1	4.0	2.57	10.78	2.26	0.42	1.98	0.28	1.61	0.32	0.90
013K833257	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833258	Sediment Pulp	2.19	3.8	0.3	<0.05	1.3	33.82	148.1	0.03	<1	1.8	3.3	19.70	74.68	12.51	1.80	9.87	1.30	7.06	1.26	3.25
013K833259	Sediment Pulp	1.16	3.0	0.1	<0.05	1.9	46.08	114.0	<0.02	3	0.9	2.3	21.69	78.85	12.35	1.81	9.94	1.30	7.37	1.46	4.18
013K833260	Sediment Pulp	1.52	7.5	0.3	<0.05	1.3	56.21	242.6	<0.02	3	2.9	5.1	26.43	95.65	14.77	2.08	12.08	1.67	9.69	1.86	5.32
013K833261	Sediment Pulp	1.89	4.9	0.3	<0.05	2.0	18.19	73.2	<0.02	<1	0.7	5.7	9.51	35.16	5.69	0.85	4.49	0.60	3.41	0.64	1.72
013K833262	Sediment Pulp	1.45	4.5	0.2	<0.05	1.5	11.79	50.9	<0.02	<1	0.4	3.4	6.17	22.54	3.74	0.61	2.94	0.40	2.28	0.42	1.15
013K833263	Sediment Pulp	1.51	4.2	0.2	<0.05	1.8	18.74	84.4	<0.02	<1	0.5	3.3	10.24	38.92	6.49	1.01	5.22	0.68	3.77	0.70	1.90
013K833264	Sediment Pulp	1.86	3.6	0.3	<0.05	1.7	40.44	134.7	<0.02	<1	2.2	3.4	17.46	66.16	11.54	1.38	9.65	1.33	7.43	1.39	3.78
013K833265	Sediment Pulp	1.49	4.0	0.3	<0.05	1.2	38.40	158.6	<0.02	<1	2.0	3.9	17.37	66.46	10.87	1.47	8.72	1.20	6.70	1.30	3.60



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CERTIFICATE OF ANALYSIS

VAN22000384.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833236	Sediment Pulp		0.59	3.61	0.49	<10	<2
013K833237	Sediment Pulp		0.43	2.63	0.37	<10	<2
013K833238	Sediment Pulp		0.06	0.36	0.05	<10	<2
013K833239	Sediment Pulp		0.65	4.06	0.60	<10	<2
013K833240	Sediment Pulp		0.44	2.75	0.39	<10	<2
013K833241	Sediment Pulp		0.34	2.20	0.33	<10	<2
013K833242	Sediment Pulp		0.48	2.81	0.39	<10	<2
013K833243	Sediment Pulp		0.53	3.07	0.44	<10	<2
013K833244	Sediment Pulp		0.48	2.95	0.42	<10	<2
013K833245	Sediment Pulp		0.40	2.40	0.32	<10	<2
013K833246	Sediment Pulp		0.35	2.22	0.34	<10	<2
013K833247	Sediment Pulp		0.45	2.83	0.42	<10	<2
013K833248	Sediment Pulp		0.75	4.37	0.56	<10	<2
013K833249	Sediment Pulp		0.31	1.89	0.25	<10	<2
013K833250	Sediment Pulp		0.37	2.18	0.29	<10	<2
013K833251	Sediment Pulp		0.28	1.70	0.24	<10	3
013K833252	Sediment Pulp		0.41	2.52	0.35	<10	<2
013K833253	Sediment Pulp		0.40	2.50	0.35	<10	3
013K833254	Sediment Pulp		0.32	1.90	0.25	<10	<2
013K833255	Sediment Pulp		0.50	3.15	0.50	<10	<2
013K833256	Sediment Pulp		0.12	0.79	0.12	<10	<2
013K833257	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833258	Sediment Pulp		0.44	2.48	0.32	<10	<2
013K833259	Sediment Pulp		0.59	3.82	0.61	<10	<2
013K833260	Sediment Pulp		0.76	4.87	0.73	<10	<2
013K833261	Sediment Pulp		0.24	1.41	0.20	<10	<2
013K833262	Sediment Pulp		0.16	0.99	0.13	<10	<2
013K833263	Sediment Pulp		0.26	1.58	0.22	<10	<2
013K833264	Sediment Pulp		0.53	3.12	0.43	<10	<2
013K833265	Sediment Pulp		0.50	3.05	0.44	<10	<2



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833266	Sediment Pulp	0.84	13.32	3.13	20.6	291	4.4	1.0	30	0.23	0.2	3.4	0.5	<0.1	15.5	0.18	0.08	0.02	9	0.22	0.068
013K833267	Sediment Pulp	3.36	17.05	3.51	49.4	210	6.6	4.3	127	1.59	0.2	4.0	0.5	0.7	21.1	0.16	0.05	0.02	32	0.26	0.132
013K833268	Sediment Pulp	1.47	24.09	2.31	48.5	298	6.1	3.1	65	1.13	0.2	1.2	0.4	0.3	19.5	0.13	0.04	<0.02	41	0.20	0.139
013K833269	Sediment Pulp	2.66	18.15	4.11	57.1	144	9.1	9.5	198	1.97	0.1	2.1	<0.2	1.2	26.0	0.14	0.04	<0.02	34	0.33	0.110
013K833270	Sediment Pulp	1.15	164.47	3.36	59.4	417	11.1	9.3	189	1.55	<0.1	2.0	0.8	0.5	20.3	0.39	0.03	<0.02	62	0.35	0.194
013K833271	Sediment Pulp	1.87	24.22	3.08	79.6	197	12.1	14.5	386	3.38	0.3	4.5	0.3	1.7	17.0	0.22	0.04	<0.02	40	0.22	0.106
013K833272	Sediment Pulp	4.30	25.15	7.29	84.8	697	6.6	13.3	612	6.92	1.9	4.3	0.8	1.5	76.6	0.22	0.03	0.05	102	0.86	0.346
013K833273	Sediment Pulp	2.05	23.31	3.62	62.1	218	8.8	4.9	136	1.73	0.3	3.8	0.6	0.4	19.1	0.27	0.04	0.02	37	0.23	0.128
013K833274	Sediment Pulp	4.46	43.12	3.26	116.2	121	16.5	9.1	150	3.83	1.3	17.1	0.7	1.9	21.6	0.29	0.10	0.03	40	0.29	0.092
013K833275	Sediment Pulp	0.60	8.87	2.93	39.5	126	7.6	1.8	57	0.61	0.9	5.1	<0.2	0.1	14.2	0.15	0.06	<0.02	15	0.19	0.048
013K833276	Sediment Pulp	0.97	14.36	3.03	52.3	198	7.5	2.7	79	0.70	1.4	4.5	0.5	0.2	22.6	0.18	0.07	<0.02	21	0.25	0.052
013K833277	Sediment Pulp	0.83	31.52	20.36	125.8	2453	43.1	26.8	1152	2.96	23.3	3.1	2.3	6.5	25.7	0.49	0.56	2.62	47	0.59	0.088
013K833278	Sediment Pulp	5.72	15.66	8.00	51.8	287	6.9	3.0	104	1.06	5.3	12.1	0.3	0.4	60.0	0.25	0.12	0.02	25	0.30	0.125
013K833279	Sediment Pulp	8.90	27.11	6.11	96.0	230	16.8	18.9	1985	4.64	3.1	5.5	0.6	1.9	19.1	0.37	0.11	0.05	41	0.34	0.118
013K833280	Sediment Pulp	3.36	15.38	4.17	78.6	614	10.8	4.0	84	2.01	2.0	3.1	0.7	0.3	17.3	0.22	0.32	0.02	21	0.30	0.081
013K833281	Sediment Pulp	46.92	37.91	4.51	152.3	232	37.3	92.7	>10000	6.61	69.7	120.6	0.5	2.5	73.1	1.13	0.85	0.03	116	0.80	0.242
013K833282	Sediment Pulp	2.88	57.89	3.42	46.3	244	14.8	4.6	78	0.53	<0.1	4.5	2.5	0.6	21.3	0.52	0.19	0.12	18	0.43	0.032
013K833283	Sediment Pulp	3.42	30.15	6.03	73.4	309	13.6	8.2	220	1.83	1.6	3.6	2.4	0.7	20.5	0.54	0.16	0.03	31	0.41	0.150
013K833284	Sediment Pulp	3.21	29.53	6.25	76.0	303	13.2	8.7	329	2.08	2.4	3.7	<0.2	1.0	20.8	0.57	0.15	0.03	35	0.41	0.154
013K833285	Sediment Pulp	58.31	42.13	6.34	191.9	257	46.3	120.5	>10000	7.80	85.5	170.2	0.9	3.7	93.5	1.77	1.09	0.04	132	0.85	0.262
013K833286	Sediment Pulp	5.50	79.02	7.49	129.3	382	41.3	17.4	2427	4.19	23.8	3.8	1.0	2.5	22.6	0.69	0.10	0.05	44	0.43	0.256
013K833287	Sediment Pulp	3.53	77.13	4.27	99.8	571	25.1	4.8	302	0.90	11.4	4.5	1.1	0.6	86.1	0.67	0.35	0.04	29	0.73	0.137
013K833288	Sediment Pulp	34.53	37.50	9.54	94.2	589	15.6	11.5	737	3.36	0.8	27.1	0.6	0.8	126.2	0.84	0.06	0.11	40	0.91	0.220
013K833289	Sediment Pulp	104.13	43.77	28.07	173.4	529	37.8	98.4	8280	13.70	5.0	25.3	1.7	2.1	30.9	1.38	0.18	0.20	71	0.50	0.302
013K833290	Sediment Pulp	0.60	22.27	5.26	24.4	174	15.3	2.1	66	0.39	3.9	2.4	0.9	0.2	80.8	0.21	0.23	0.10	8	0.55	0.060
013K833291	Sediment Pulp	3.98	65.65	8.00	65.3	663	18.2	12.7	827	2.65	2.1	3.9	1.6	1.0	78.6	0.61	0.12	0.10	51	0.76	0.207
013K833292	Sediment Pulp	2.05	15.41	7.59	30.7	250	10.7	6.6	169	0.95	0.5	4.6	0.9	0.3	25.0	0.25	0.05	0.11	24	0.31	0.129
013K833293	Sediment Pulp	1.62	15.70	6.57	69.9	63	18.7	9.2	302	1.72	1.2	4.5	0.5	2.6	26.9	0.15	0.05	0.12	29	0.32	0.077
013K833294	Sediment Pulp	11.69	42.36	5.28	100.1	89	17.4	9.7	290	1.97	2.1	32.6	0.5	11.8	18.6	0.12	0.10	0.06	38	0.30	0.084
013K833295	Sediment Pulp	22.02	63.20	7.05	124.6	509	38.3	78.4	3226	4.43	0.7	47.1	0.9	9.3	14.2	0.39	0.09	0.04	26	0.18	0.192



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833266	Sediment Pulp	26.0	6.0	0.05	61.0	0.018	<20	0.51	0.008	0.02	<0.1	0.3	0.02	0.13	83	0.5	<0.02	1.3	0.72	<0.1	<0.02
013K833267	Sediment Pulp	44.9	12.6	0.14	69.7	0.044	<20	1.02	0.007	0.05	0.2	1.2	0.08	0.12	79	0.8	<0.02	1.8	0.74	<0.1	0.03
013K833268	Sediment Pulp	32.3	12.2	0.10	71.8	0.044	<20	0.92	0.006	0.04	1.1	1.0	0.10	0.12	78	0.6	<0.02	1.9	0.45	<0.1	<0.02
013K833269	Sediment Pulp	38.1	15.5	0.30	93.1	0.066	<20	1.15	0.010	0.06	0.1	1.5	0.11	0.10	69	0.5	<0.02	2.5	0.72	<0.1	0.03
013K833270	Sediment Pulp	41.3	21.0	0.19	217.7	0.051	<20	1.57	0.008	0.05	<0.1	1.7	0.23	0.16	176	1.1	<0.02	2.6	0.42	<0.1	0.03
013K833271	Sediment Pulp	59.3	21.1	0.27	116.1	0.050	<20	1.62	0.006	0.05	<0.1	2.1	0.21	0.10	64	0.8	<0.02	1.3	0.54	<0.1	0.03
013K833272	Sediment Pulp	78.2	18.6	0.04	559.9	0.080	<20	2.04	0.005	0.02	0.2	2.4	0.10	0.28	177	1.6	<0.02	5.6	0.22	<0.1	0.03
013K833273	Sediment Pulp	55.7	17.4	0.11	85.9	0.039	<20	1.51	0.004	0.03	0.4	1.3	0.08	0.14	70	1.0	<0.02	1.2	0.47	<0.1	<0.02
013K833274	Sediment Pulp	76.0	24.8	0.19	89.1	0.040	<20	1.69	0.012	0.05	0.4	3.0	0.18	0.16	48	1.1	<0.02	0.4	0.37	<0.1	0.04
013K833275	Sediment Pulp	36.4	9.7	0.08	86.3	0.027	<20	0.66	0.006	0.02	0.3	0.6	0.03	0.12	41	0.5	<0.02	1.2	0.51	<0.1	<0.02
013K833276	Sediment Pulp	63.8	9.3	0.07	132.0	0.022	<20	0.76	0.004	0.02	0.1	0.7	0.06	0.16	58	0.7	<0.02	0.3	0.56	<0.1	<0.02
013K833277	Sediment Pulp	36.1	47.8	0.76	142.1	0.101	<20	1.60	0.030	0.25	0.3	5.6	0.25	0.14	235	0.7	0.04	4.9	1.26	<0.1	0.10
013K833278	Sediment Pulp	53.2	13.8	0.10	82.8	0.039	<20	1.19	0.007	0.03	0.2	1.0	0.05	0.15	67	0.7	<0.02	1.8	0.54	<0.1	<0.02
013K833279	Sediment Pulp	51.9	22.2	0.25	228.4	0.045	<20	1.58	0.024	0.06	0.2	3.3	0.21	0.13	44	1.4	<0.02	1.6	0.67	<0.1	<0.02
013K833280	Sediment Pulp	45.1	9.6	0.06	130.2	0.020	<20	1.03	0.004	0.02	0.1	1.3	0.10	0.24	65	1.2	<0.02	0.7	0.29	<0.1	<0.02
013K833281	Sediment Pulp	84.5	47.5	0.15	632.1	0.039	<20	4.23	0.017	0.05	1.3	4.5	0.77	0.19	75	2.4	<0.02	2.1	0.81	<0.1	0.07
013K833282	Sediment Pulp	72.5	17.2	0.15	96.0	0.027	<20	0.60	0.008	0.02	0.1	5.5	0.04	0.34	60	2.3	<0.02	1.7	0.95	<0.1	0.06
013K833283	Sediment Pulp	64.7	24.9	0.07	53.0	0.027	<20	2.74	0.005	0.02	0.2	2.3	0.03	0.27	121	1.4	<0.02	2.9	0.43	<0.1	0.03
013K833284	Sediment Pulp	62.9	25.3	0.07	53.2	0.028	<20	2.83	0.006	0.02	0.1	1.9	0.04	0.25	132	1.4	<0.02	2.6	0.40	<0.1	0.04
013K833285	Sediment Pulp	101.5	53.9	0.17	769.6	0.048	<20	4.43	0.015	0.04	1.9	5.8	1.12	0.21	100	2.0	0.02	8.7	1.02	0.1	0.09
013K833286	Sediment Pulp	91.4	54.5	0.47	125.3	0.053	<20	3.89	0.016	0.06	0.2	5.3	0.22	0.22	102	2.8	<0.02	2.9	0.91	<0.1	0.12
013K833287	Sediment Pulp	56.6	83.9	0.22	239.8	0.020	<20	2.05	0.007	0.03	<0.1	3.0	0.11	0.33	185	2.9	<0.02	1.3	0.55	<0.1	0.08
013K833288	Sediment Pulp	58.6	35.8	0.14	330.5	0.035	<20	3.25	0.009	0.03	0.2	2.7	0.08	0.28	227	2.4	<0.02	4.1	0.40	<0.1	0.03
013K833289	Sediment Pulp	45.7	43.0	0.18	386.3	0.062	<20	3.85	0.008	0.05	0.3	3.8	0.62	0.26	194	4.0	0.02	7.1	0.45	<0.1	0.03
013K833290	Sediment Pulp	15.5	14.2	0.08	110.1	0.019	<20	0.72	0.008	0.02	<0.1	0.6	0.03	0.25	118	0.5	<0.02	1.8	0.36	<0.1	0.04
013K833291	Sediment Pulp	63.8	65.7	0.15	168.2	0.045	<20	2.87	0.006	0.03	0.3	2.7	0.19	0.25	251	1.8	<0.02	3.7	0.44	<0.1	0.03
013K833292	Sediment Pulp	32.0	22.8	0.19	86.2	0.035	<20	1.13	0.009	0.05	0.3	0.9	0.08	0.12	87	0.2	<0.02	2.7	0.88	<0.1	<0.02
013K833293	Sediment Pulp	39.5	31.6	0.54	109.9	0.087	<20	1.37	0.017	0.20	0.2	2.4	0.13	0.11	22	<0.1	<0.02	3.9	1.63	<0.1	0.06
013K833294	Sediment Pulp	140.0	28.4	0.31	71.4	0.083	<20	1.85	0.009	0.12	1.4	5.2	0.14	0.13	36	1.2	<0.02	1.7	1.33	<0.1	0.07
013K833295	Sediment Pulp	328.8	18.9	0.05	259.2	0.025	<20	2.40	0.004	0.03	0.3	5.2	1.76	0.18	125	2.6	<0.02	<0.1	0.55	<0.1	0.07



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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833266	Sediment Pulp	0.73	1.8	0.2	<0.05	0.4	12.45	48.3	<0.02	<1	0.5	1.3	5.98	21.69	3.53	0.47	2.88	0.39	2.28	0.44	1.19
013K833267	Sediment Pulp	1.56	4.7	0.2	<0.05	1.4	24.38	91.0	<0.02	<1	0.8	2.7	11.50	43.78	6.97	1.03	5.69	0.75	4.28	0.84	2.34
013K833268	Sediment Pulp	1.54	3.5	0.2	<0.05	1.2	16.16	65.3	<0.02	<1	0.6	1.7	8.24	30.45	4.95	0.72	3.85	0.53	3.02	0.58	1.60
013K833269	Sediment Pulp	1.95	5.0	0.3	<0.05	2.0	18.34	75.7	<0.02	<1	0.7	5.9	9.62	35.68	5.80	0.88	4.61	0.62	3.47	0.65	1.78
013K833270	Sediment Pulp	1.78	3.3	0.2	<0.05	1.9	19.21	87.8	<0.02	1	0.9	2.8	10.61	39.47	6.50	0.96	5.00	0.69	3.93	0.73	1.97
013K833271	Sediment Pulp	1.77	4.0	0.3	<0.05	2.0	32.85	130.4	<0.02	<1	1.6	3.1	15.46	59.49	9.84	1.41	8.05	1.12	6.41	1.24	3.42
013K833272	Sediment Pulp	3.36	1.3	0.4	<0.05	1.8	43.05	158.0	0.04	1	1.3	0.6	19.07	71.27	11.44	1.70	9.17	1.33	7.92	1.58	4.49
013K833273	Sediment Pulp	1.62	3.2	0.2	<0.05	1.2	35.23	122.8	<0.02	<1	1.4	2.1	15.06	59.79	10.09	1.45	8.31	1.13	6.49	1.25	3.46
013K833274	Sediment Pulp	1.86	4.0	0.2	<0.05	3.1	56.82	154.6	<0.02	<1	2.4	3.1	19.99	77.21	13.47	1.82	11.54	1.63	9.48	1.90	5.42
013K833275	Sediment Pulp	1.12	2.2	0.2	<0.05	0.9	18.39	75.4	<0.02	<1	0.6	2.0	9.74	38.50	6.21	0.89	5.02	0.66	3.59	0.67	1.80
013K833276	Sediment Pulp	1.09	2.1	0.1	<0.05	1.1	28.60	127.1	<0.02	<1	0.9	1.5	15.94	61.70	9.55	1.42	7.62	0.99	5.49	1.05	2.85
013K833277	Sediment Pulp	1.89	23.8	1.0	<0.05	5.1	17.88	67.1	0.04	1	0.7	19.6	9.03	33.68	5.67	0.83	4.21	0.56	3.07	0.58	1.61
013K833278	Sediment Pulp	1.65	2.5	0.2	<0.05	1.2	35.49	101.2	<0.02	<1	2.0	2.1	14.03	53.92	9.54	1.08	7.99	1.12	6.36	1.22	3.31
013K833279	Sediment Pulp	0.86	6.0	0.3	<0.05	0.8	27.80	95.1	<0.02	<1	1.4	4.8	11.99	44.66	7.25	1.09	5.89	0.81	4.65	0.91	2.60
013K833280	Sediment Pulp	1.04	2.4	0.1	<0.05	0.5	30.36	83.2	<0.02	<1	1.6	1.1	12.33	49.55	8.58	1.21	7.16	0.91	5.14	1.02	2.85
013K833281	Sediment Pulp	0.65	3.1	0.2	<0.05	2.4	41.77	213.2	0.02	<1	3.7	25.4	20.34	74.65	12.59	1.62	10.01	1.40	7.74	1.41	3.75
013K833282	Sediment Pulp	0.69	2.8	1.2	<0.05	1.4	76.72	13.7	<0.02	5	1.3	2.5	19.86	82.62	14.34	2.53	14.22	1.89	11.30	2.17	7.02
013K833283	Sediment Pulp	1.48	1.7	0.5	<0.05	1.0	36.93	134.9	0.02	2	3.2	2.4	20.24	75.34	13.49	2.06	10.73	1.37	7.61	1.26	3.56
013K833284	Sediment Pulp	1.43	1.6	0.3	<0.05	2.0	33.91	127.1	<0.02	<1	2.4	2.3	17.99	68.46	11.84	1.99	10.00	1.25	7.00	1.20	3.34
013K833285	Sediment Pulp	0.89	3.6	0.3	<0.05	3.1	49.06	280.2	0.03	<1	4.2	32.9	25.06	91.56	16.76	2.14	12.46	1.74	10.21	1.62	4.62
013K833286	Sediment Pulp	1.30	4.9	0.3	<0.05	4.3	43.56	160.5	0.02	<1	2.7	8.7	22.17	81.46	13.86	1.92	11.17	1.49	8.22	1.47	4.09
013K833287	Sediment Pulp	0.88	3.4	0.1	<0.05	3.3	45.07	55.7	<0.02	2	1.3	3.2	14.47	55.65	10.06	1.81	9.16	1.25	7.40	1.41	4.06
013K833288	Sediment Pulp	1.35	2.7	0.2	<0.05	1.4	30.22	114.1	0.03	2	0.9	2.8	14.10	51.05	8.80	1.91	7.31	1.04	6.32	1.12	3.08
013K833289	Sediment Pulp	1.33	3.7	0.3	<0.05	1.2	36.02	137.9	0.05	2	1.9	3.3	12.13	45.42	8.59	1.38	7.56	1.10	6.57	1.21	3.47
013K833290	Sediment Pulp	0.74	2.1	0.4	<0.05	1.2	7.76	29.2	<0.02	1	0.2	1.9	3.74	14.03	2.51	0.49	1.87	0.29	1.82	0.30	0.80
013K833291	Sediment Pulp	1.95	2.9	0.2	<0.05	1.7	30.21	124.7	0.03	1	1.2	2.2	16.85	67.23	10.98	1.80	8.60	1.18	6.85	1.18	3.14
013K833292	Sediment Pulp	1.04	5.6	0.3	<0.05	1.0	12.95	64.8	<0.02	<1	1.0	4.3	8.17	29.35	4.32	0.65	3.52	0.49	2.78	0.49	1.48
013K833293	Sediment Pulp	1.60	17.8	0.5	<0.05	3.0	18.41	87.9	<0.02	<1	0.7	13.2	9.48	33.40	5.64	0.80	4.54	0.67	3.81	0.65	1.93
013K833294	Sediment Pulp	2.28	11.3	0.4	<0.05	3.3	65.23	224.3	<0.02	<1	1.6	8.8	36.78	136.90	22.05	2.80	17.02	2.13	11.85	2.25	6.63
013K833295	Sediment Pulp	0.87	3.9	0.2	<0.05	1.5	80.30	512.1	<0.02	<1	2.3	1.7	57.00	179.39	24.57	2.88	18.27	2.44	13.99	2.65	7.96



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K833266	Sediment Pulp	0.16	0.97	0.14	<10	<2	
013K833267	Sediment Pulp	0.33	2.05	0.29	<10	<2	
013K833268	Sediment Pulp	0.22	1.30	0.17	<10	<2	
013K833269	Sediment Pulp	0.25	1.47	0.20	<10	<2	
013K833270	Sediment Pulp	0.27	1.62	0.22	<10	<2	
013K833271	Sediment Pulp	0.48	2.81	0.38	<10	<2	
013K833272	Sediment Pulp	0.65	3.92	0.53	<10	<2	
013K833273	Sediment Pulp	0.48	2.88	0.39	<10	<2	
013K833274	Sediment Pulp	0.76	4.66	0.66	<10	<2	
013K833275	Sediment Pulp	0.24	1.43	0.20	<10	<2	
013K833276	Sediment Pulp	0.38	2.32	0.33	<10	<2	
013K833277	Sediment Pulp	0.23	1.45	0.21	<10	<2	
013K833278	Sediment Pulp	0.45	2.70	0.36	<10	<2	
013K833279	Sediment Pulp	0.37	2.36	0.34	<10	<2	
013K833280	Sediment Pulp	0.40	2.45	0.35	<10	<2	
013K833281	Sediment Pulp	0.50	3.03	0.40	<10	3	
013K833282	Sediment Pulp	0.92	5.98	0.91	<10	<2	
013K833283	Sediment Pulp	0.45	2.59	0.38	<10	<2	
013K833284	Sediment Pulp	0.49	2.68	0.33	<10	3	
013K833285	Sediment Pulp	0.66	3.98	0.53	<10	4	
013K833286	Sediment Pulp	0.52	3.19	0.44	<10	<2	
013K833287	Sediment Pulp	0.53	3.40	0.52	<10	3	
013K833288	Sediment Pulp	0.44	2.45	0.33	<10	<2	
013K833289	Sediment Pulp	0.46	2.89	0.40	<10	<2	
013K833290	Sediment Pulp	0.11	0.67	0.07	<10	<2	
013K833291	Sediment Pulp	0.48	2.78	0.33	<10	2	
013K833292	Sediment Pulp	0.19	1.24	0.16	<10	<2	
013K833293	Sediment Pulp	0.30	1.87	0.23	<10	<2	
013K833294	Sediment Pulp	0.90	6.02	1.02	<10	<2	
013K833295	Sediment Pulp	1.10	7.37	1.17	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013K833296	Sediment Pulp	17.07	24.84	7.64	82.0	195	20.8	19.7	590	3.28	3.1	19.5	1.0	5.5	24.5	0.35	0.09	0.13	34	0.38	0.114
013K833297	Sediment Pulp	8.23	30.00	2.83	42.7	258	14.1	8.4	84	1.25	2.2	5.4	<0.2	1.6	20.5	0.15	0.07	0.06	19	0.23	0.083
013K833298	Sediment Pulp	9.25	40.16	80.91	309.4	592	11.9	7.9	409	1.75	35.5	8.6	4.1	1.6	64.5	1.42	0.53	1.07	20	6.13	0.068
013K833299	Sediment Pulp	14.66	22.85	1.85	80.2	171	11.9	14.4	149	1.76	1.3	5.6	1.0	0.9	24.6	0.27	0.13	0.02	30	0.38	0.034
013K833300	Sediment Pulp	7.58	20.09	2.45	19.3	147	8.9	4.3	46	0.65	1.5	3.7	0.9	0.5	19.9	0.12	0.05	0.03	18	0.16	0.034
013K833301	Sediment Pulp	19.61	42.20	7.53	129.9	160	16.7	13.6	682	1.89	1.9	66.5	0.3	11.1	26.9	0.24	0.13	0.14	26	0.35	0.085
013K833302	Sediment Pulp	6.26	22.53	4.71	51.0	346	7.9	7.6	226	2.02	2.0	3.9	<0.2	1.7	18.2	0.16	0.07	0.04	29	0.20	0.148
013K833303	Sediment Pulp	4.48	17.03	7.18	57.4	130	16.7	21.1	317	2.46	3.0	7.5	0.6	7.2	31.6	0.12	0.07	0.10	30	0.46	0.090
013K833304	Sediment Pulp	4.91	64.59	4.99	77.0	208	22.7	13.2	68	1.72	<0.1	29.5	0.9	13.5	41.8	0.25	0.14	0.10	11	0.57	0.051
013K833305	Sediment Pulp	1.59	10.75	3.95	13.4	166	7.6	1.1	24	0.30	<0.1	6.3	0.8	0.7	21.5	0.11	0.03	0.06	7	0.24	0.040
013K833306	Sediment Pulp	19.45	41.63	7.98	128.6	130	16.7	14.3	666	1.88	2.5	73.9	1.0	13.4	31.5	0.27	0.14	0.16	25	0.36	0.090
013K833307	Sediment Pulp	9.56	56.62	6.17	167.6	450	32.2	130.3	3586	8.34	19.9	93.8	1.3	4.8	73.6	0.52	0.74	0.03	218	1.42	0.254
013K833308	Sediment Pulp	2.90	83.07	6.41	62.4	780	50.1	19.9	1196	3.40	0.7	2.7	1.3	0.9	278.1	0.42	0.09	0.03	60	0.68	0.265
013K833309	Sediment Pulp	3.78	56.84	6.11	64.2	612	10.2	6.1	346	2.18	7.3	3.9	1.7	1.0	45.1	0.48	0.17	<0.02	46	0.81	0.157
013K833310	Sediment Pulp	4.51	36.80	5.39	55.9	533	16.2	10.9	744	2.82	1.4	4.6	0.7	0.7	39.5	0.51	0.06	<0.02	33	0.60	0.231
013K833311	Sediment Pulp	14.68	184.66	8.07	162.7	1086	35.3	48.6	5369	6.62	48.1	8.3	1.2	3.3	76.8	0.89	0.11	<0.02	78	0.86	0.385
013K833312	Sediment Pulp	1.86	50.63	5.28	116.6	102	29.5	12.0	323	1.40	5.4	4.1	0.4	1.4	71.3	0.43	0.09	0.03	34	0.55	0.071
013K833313	Sediment Pulp	7.09	25.78	3.58	44.5	282	19.3	6.8	128	0.44	0.6	20.1	1.1	0.5	50.6	0.35	0.15	<0.02	11	0.72	0.045
013K833314	Sediment Pulp	2.21	71.75	4.90	102.8	171	26.8	10.2	364	1.43	1.5	5.2	1.6	0.5	28.6	0.51	0.08	<0.02	32	0.56	0.125
013K833315	Sediment Pulp	0.93	30.58	24.38	116.9	2534	44.2	28.8	1167	3.03	22.3	3.7	2.3	7.1	27.0	0.54	0.63	3.06	46	0.57	0.087
013K833316	Sediment Pulp	1.61	30.70	1.85	56.8	171	15.1	7.1	119	0.48	1.6	2.4	1.2	0.3	46.5	0.38	0.05	<0.02	47	0.69	0.076
013K833317	Sediment Pulp	1.14	10.72	2.79	60.6	28	16.8	9.2	202	1.32	4.7	1.5	0.7	2.0	18.3	0.14	0.03	<0.02	22	0.45	0.065
013K833318	Sediment Pulp	2.63	22.40	4.85	39.0	42	21.5	8.6	139	1.54	1.5	1.9	1.6	1.6	19.2	0.16	0.08	0.11	30	0.54	0.080
013K833319	Sediment Pulp	2.80	20.77	4.29	50.1	144	13.0	9.8	266	1.70	1.0	1.7	1.0	1.2	35.1	0.23	0.05	0.06	28	0.53	0.145
013K833320	Sediment Pulp	2.34	16.34	0.92	45.7	64	9.8	2.9	25	0.29	0.1	1.1	0.2	0.4	15.6	0.23	0.04	0.04	16	0.46	0.027
013K833321	Sediment Pulp	1.31	11.04	3.11	65.0	62	17.1	9.5	206	1.34	5.3	1.7	<0.2	2.0	18.0	0.15	0.05	<0.02	22	0.46	0.072
013K833322	Sediment Pulp	6.86	46.34	4.45	101.6	218	19.5	11.0	590	2.66	8.1	6.6	0.5	0.7	24.5	0.93	0.10	<0.02	39	0.43	0.201
013K833323	Sediment Pulp	8.16	46.82	15.16	142.1	300	18.9	34.6	3015	4.46	4.1	8.4	0.5	1.3	35.8	0.95	0.12	0.05	33	0.42	0.177
013K833324	Sediment Pulp	2.65	55.37	5.37	74.2	100	21.6	13.5	942	2.34	1.3	4.2	<0.2	2.7	19.2	0.34	0.05	<0.02	36	0.40	0.111
013K833325	Sediment Pulp	7.09	33.08	69.35	249.0	482	9.1	6.0	329	1.32	27.9	7.8	2.0	0.9	54.3	1.15	0.40	0.81	13	5.31	0.054



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833296	Sediment Pulp	102.4	32.5	0.35	103.5	0.065	<20	1.94	0.009	0.11	0.6	3.5	0.30	0.15	44	0.4	<0.02	3.3	1.31	0.2	0.04
013K833297	Sediment Pulp	76.6	11.8	0.14	148.9	0.032	<20	1.03	0.007	0.06	0.4	1.4	0.09	0.19	68	0.3	<0.02	2.0	0.91	0.1	<0.02
013K833298	Sediment Pulp	11.0	12.2	0.55	95.0	0.042	<20	0.41	0.024	0.05	0.5	2.1	0.22	1.49	101	0.5	0.02	2.1	0.52	<0.1	0.03
013K833299	Sediment Pulp	60.5	11.0	0.06	117.8	0.023	<20	1.36	0.004	0.02	0.3	1.4	0.23	0.26	58	<0.1	<0.02	1.3	0.14	<0.1	<0.02
013K833300	Sediment Pulp	52.1	8.1	0.08	125.4	0.025	<20	0.72	0.005	0.04	0.2	0.7	0.05	0.22	51	0.3	<0.02	1.4	0.61	<0.1	<0.02
013K833301	Sediment Pulp	108.2	19.8	0.38	113.3	0.076	<20	1.70	0.010	0.20	0.4	4.7	0.61	0.10	27	1.3	<0.02	1.9	1.91	<0.1	0.07
013K833302	Sediment Pulp	61.7	17.3	0.21	116.0	0.065	<20	1.35	0.006	0.12	0.3	1.6	0.10	0.15	73	0.2	<0.02	3.2	1.25	<0.1	<0.02
013K833303	Sediment Pulp	53.7	22.0	0.52	123.0	0.127	<20	1.32	0.025	0.17	0.9	3.6	0.29	0.52	35	<0.1	0.02	3.7	1.70	<0.1	0.10
013K833304	Sediment Pulp	173.2	14.6	0.08	115.0	0.036	<20	1.67	0.008	0.04	2.7	5.2	0.39	2.12	55	2.4	<0.02	<0.1	0.40	<0.1	0.11
013K833305	Sediment Pulp	58.9	7.7	0.04	83.1	0.022	<20	0.94	0.004	0.02	0.3	0.6	0.03	0.29	53	0.2	<0.02	1.5	0.42	<0.1	<0.02
013K833306	Sediment Pulp	119.5	21.0	0.39	137.1	0.083	<20	1.68	0.009	0.21	0.5	4.7	0.68	0.09	31	<0.1	0.03	3.1	2.10	0.2	0.08
013K833307	Sediment Pulp	75.7	37.2	0.25	383.5	0.072	<20	4.96	0.018	0.09	2.2	5.2	0.93	0.33	184	67.4	<0.02	5.8	0.51	0.2	0.14
013K833308	Sediment Pulp	42.9	144.2	0.62	247.3	0.068	<20	2.92	0.007	0.09	0.4	2.8	0.18	0.22	290	2.7	0.04	4.6	0.99	<0.1	0.04
013K833309	Sediment Pulp	65.2	48.9	0.08	97.8	0.028	<20	2.33	0.004	0.02	0.4	2.3	0.13	0.21	156	2.3	<0.02	2.0	0.39	<0.1	0.04
013K833310	Sediment Pulp	50.3	42.6	0.13	113.9	0.048	<20	3.24	0.005	0.03	0.2	2.5	0.06	0.34	204	2.2	<0.02	4.3	0.40	<0.1	0.03
013K833311	Sediment Pulp	88.1	61.5	0.20	468.1	0.066	<20	4.24	0.011	0.04	3.1	4.9	0.46	0.24	256	2.3	<0.02	5.5	0.59	0.2	0.14
013K833312	Sediment Pulp	83.1	56.6	0.47	99.0	0.053	<20	1.74	0.014	0.05	0.2	3.8	0.17	0.21	44	1.2	<0.02	1.8	0.83	<0.1	0.06
013K833313	Sediment Pulp	34.8	22.9	0.11	149.8	0.020	<20	1.08	0.008	0.02	0.1	1.2	0.06	0.60	97	1.4	<0.02	1.3	0.36	<0.1	0.04
013K833314	Sediment Pulp	38.0	26.9	0.41	147.6	0.030	<20	1.35	0.015	0.06	0.1	2.7	0.17	0.29	60	1.0	<0.02	2.5	0.85	<0.1	0.02
013K833315	Sediment Pulp	42.0	48.6	0.77	163.0	0.104	<20	1.56	0.029	0.25	0.3	5.9	0.27	0.15	269	<0.1	0.04	5.4	1.40	<0.1	0.11
013K833316	Sediment Pulp	17.9	18.4	0.12	104.0	0.012	<20	1.08	0.008	0.01	0.2	0.8	0.05	0.33	92	1.1	<0.02	1.4	0.42	<0.1	<0.02
013K833317	Sediment Pulp	22.8	17.3	0.29	72.7	0.063	<20	0.82	0.028	0.03	0.3	1.8	0.07	0.04	16	<0.1	<0.02	2.3	0.56	<0.1	0.02
013K833318	Sediment Pulp	13.4	18.1	0.35	149.6	0.046	<20	0.82	0.021	0.04	<0.1	2.1	0.04	0.31	8	1.1	<0.02	2.8	0.39	<0.1	0.04
013K833319	Sediment Pulp	27.1	16.8	0.24	253.0	0.048	<20	1.34	0.026	0.04	0.2	2.1	0.09	0.11	66	0.5	<0.02	2.4	0.35	<0.1	0.03
013K833320	Sediment Pulp	7.9	12.0	0.05	59.5	0.012	<20	0.42	0.004	<0.01	<0.1	1.3	0.03	0.59	40	0.7	<0.02	0.9	0.35	<0.1	0.03
013K833321	Sediment Pulp	23.9	16.0	0.28	81.4	0.059	<20	0.85	0.026	0.03	0.3	2.1	0.09	0.05	21	0.2	<0.02	2.2	0.58	<0.1	0.05
013K833322	Sediment Pulp	31.2	26.7	0.25	120.2	0.028	<20	1.54	0.015	0.04	0.2	3.1	0.14	0.13	39	2.3	<0.02	2.4	0.64	<0.1	0.02
013K833323	Sediment Pulp	64.3	21.2	0.39	225.7	0.050	<20	2.57	0.009	0.08	<0.1	3.7	0.33	0.16	73	2.4	<0.02	3.9	1.32	<0.1	0.04
013K833324	Sediment Pulp	46.8	22.2	0.39	91.0	0.062	<20	1.50	0.030	0.08	0.1	3.7	0.19	0.06	32	0.4	<0.02	2.9	0.44	<0.1	0.04
013K833325	Sediment Pulp	8.5	8.9	0.42	75.8	0.025	<20	0.29	0.017	0.03	0.3	1.4	0.17	1.15	90	0.7	<0.02	1.5	0.37	<0.1	0.02



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CERTIFICATE OF ANALYSIS

VAN22000384.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833296	Sediment Pulp	1.74	11.3	0.4	<0.05	1.6	40.20	155.8	<0.02	<1	1.6	9.2	23.81	84.16	13.86	1.76	9.96	1.41	7.71	1.47	4.03
013K833297	Sediment Pulp	0.96	5.7	0.2	<0.05	1.0	24.23	149.0	<0.02	1	0.3	3.7	18.74	68.29	10.17	1.50	7.14	0.92	5.48	0.90	2.56
013K833298	Sediment Pulp	0.65	3.4	3.4	<0.05	1.3	10.01	18.2	0.49	22	<0.1	4.1	2.83	12.20	2.57	0.48	2.21	0.29	1.83	0.33	0.99
013K833299	Sediment Pulp	0.73	0.9	0.1	<0.05	0.3	23.78	122.9	<0.02	2	0.6	0.5	14.49	53.63	8.00	1.37	6.50	0.82	4.91	0.90	2.57
013K833300	Sediment Pulp	0.71	3.6	0.2	<0.05	0.5	15.01	95.2	<0.02	2	0.3	3.0	11.37	42.93	6.24	0.83	4.42	0.53	3.06	0.58	1.54
013K833301	Sediment Pulp	2.56	20.8	0.4	<0.05	3.4	61.56	182.3	<0.02	<1	3.0	9.1	25.54	91.34	15.52	1.89	12.73	1.77	10.34	2.02	6.23
013K833302	Sediment Pulp	1.91	9.4	0.3	<0.05	1.2	27.76	119.8	<0.02	2	0.2	5.3	15.47	55.02	8.58	1.52	6.56	0.93	5.40	0.92	2.96
013K833303	Sediment Pulp	2.44	17.5	0.6	<0.05	5.1	22.56	107.2	0.02	1	0.5	10.2	13.10	46.94	8.09	1.04	5.71	0.80	4.43	0.84	2.16
013K833304	Sediment Pulp	2.30	3.5	0.2	<0.05	5.0	74.71	321.0	<0.02	2	1.9	2.9	43.51	161.25	27.07	3.49	21.10	2.71	14.84	2.72	7.75
013K833305	Sediment Pulp	1.01	2.4	0.3	<0.05	0.6	19.55	106.7	<0.02	<1	0.6	1.4	14.24	50.34	7.91	1.04	5.88	0.86	4.35	0.83	2.32
013K833306	Sediment Pulp	2.80	21.3	0.6	<0.05	2.9	59.41	205.6	<0.02	2	3.6	11.2	28.58	95.48	17.22	2.15	13.43	1.95	11.52	2.30	6.65
013K833307	Sediment Pulp	1.62	5.1	0.3	<0.05	4.1	37.93	175.1	0.03	11	1.6	28.5	19.84	71.37	11.67	2.04	9.21	1.41	7.94	1.45	4.09
013K833308	Sediment Pulp	1.95	6.0	0.2	<0.05	2.4	23.44	78.8	0.02	<1	1.1	6.5	11.34	42.45	7.25	1.22	5.80	0.80	4.55	0.81	2.32
013K833309	Sediment Pulp	1.19	2.5	0.2	<0.05	1.7	33.71	123.7	<0.02	1	1.1	1.9	16.67	65.30	10.99	1.72	8.17	1.11	6.27	1.22	3.54
013K833310	Sediment Pulp	2.26	2.8	0.3	<0.05	1.5	29.61	103.7	0.03	<1	1.6	2.7	13.58	49.76	8.79	1.55	7.36	1.14	6.58	1.25	3.12
013K833311	Sediment Pulp	1.59	3.4	0.3	<0.05	6.5	48.04	189.0	0.03	2	2.2	4.1	22.14	79.55	13.32	2.13	9.77	1.59	8.98	1.68	4.94
013K833312	Sediment Pulp	1.37	4.5	0.2	<0.05	3.1	37.83	151.8	<0.02	<1	1.9	6.9	20.23	75.66	12.27	1.77	9.67	1.23	6.74	1.23	3.48
013K833313	Sediment Pulp	0.71	1.5	0.2	<0.05	1.1	17.54	53.0	<0.02	1	0.6	2.5	8.70	32.09	5.86	1.24	4.76	0.66	3.81	0.75	1.83
013K833314	Sediment Pulp	1.01	5.6	0.3	<0.05	1.8	36.44	54.7	<0.02	2	0.7	6.7	9.96	37.55	6.99	1.29	6.60	1.06	6.19	1.25	3.47
013K833315	Sediment Pulp	2.05	24.0	1.2	<0.05	5.1	17.10	73.1	0.04	2	0.5	21.1	9.84	35.67	6.18	0.89	4.44	0.60	3.76	0.65	1.91
013K833316	Sediment Pulp	0.46	1.3	0.2	<0.05	0.5	16.52	25.9	<0.02	2	0.4	1.6	4.75	18.58	3.78	0.71	3.09	0.49	2.95	0.53	1.69
013K833317	Sediment Pulp	1.05	2.6	0.3	<0.05	1.9	12.57	41.4	<0.02	2	0.4	5.6	5.61	21.02	3.67	0.65	3.31	0.44	2.32	0.43	1.28
013K833318	Sediment Pulp	1.09	3.7	0.4	<0.05	1.7	7.94	29.2	0.06	5	0.3	4.7	3.49	12.71	2.51	0.42	1.93	0.30	1.71	0.30	0.86
013K833319	Sediment Pulp	1.31	4.3	0.4	<0.05	1.0	16.20	53.4	0.03	1	0.4	5.2	7.45	28.29	5.31	0.95	4.52	0.64	3.32	0.65	1.69
013K833320	Sediment Pulp	0.34	0.7	0.3	<0.05	0.7	7.56	15.4	<0.02	2	0.2	0.8	2.35	9.81	2.00	0.44	1.93	0.27	1.54	0.31	0.73
013K833321	Sediment Pulp	1.05	2.8	0.3	<0.05	1.5	14.26	43.5	<0.02	2	0.5	5.3	6.09	22.95	4.12	0.71	3.47	0.51	2.62	0.51	1.67
013K833322	Sediment Pulp	0.53	4.3	0.2	<0.05	0.8	22.56	46.1	<0.02	5	0.9	6.2	8.46	31.74	5.58	1.21	4.86	0.75	4.34	0.88	2.55
013K833323	Sediment Pulp	1.08	10.3	0.4	<0.05	1.5	37.34	128.5	<0.02	8	1.3	12.2	16.60	60.65	10.78	1.89	10.19	1.34	7.68	1.50	4.13
013K833324	Sediment Pulp	1.10	7.2	0.4	<0.05	1.8	36.06	108.7	<0.02	<1	0.8	7.1	13.06	49.56	9.75	1.54	8.53	1.27	7.33	1.41	4.22
013K833325	Sediment Pulp	0.36	2.5	2.6	<0.05	0.5	8.10	13.4	0.41	17	<0.1	3.1	2.27	9.37	1.95	0.41	1.78	0.26	1.43	0.27	0.83



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Client: Geological Survey of Canada

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Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 16, 2022

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833296	Sediment Pulp	0.60	3.99	0.57	<10	<2	
013K833297	Sediment Pulp	0.34	2.30	0.29	<10	<2	
013K833298	Sediment Pulp	0.13	0.88	0.14	<10	2	
013K833299	Sediment Pulp	0.39	2.15	0.31	<10	<2	
013K833300	Sediment Pulp	0.22	1.36	0.20	<10	<2	
013K833301	Sediment Pulp	0.86	5.97	1.02	<10	<2	
013K833302	Sediment Pulp	0.42	2.75	0.38	<10	3	
013K833303	Sediment Pulp	0.37	2.19	0.31	<10	2	
013K833304	Sediment Pulp	1.02	6.69	1.11	<10	<2	
013K833305	Sediment Pulp	0.34	2.14	0.34	<10	<2	
013K833306	Sediment Pulp	1.01	7.17	1.14	<10	2	
013K833307	Sediment Pulp	0.62	3.81	0.47	<10	2	
013K833308	Sediment Pulp	0.30	1.89	0.26	<10	<2	
013K833309	Sediment Pulp	0.50	2.99	0.44	<10	2	
013K833310	Sediment Pulp	0.41	2.55	0.32	<10	3	
013K833311	Sediment Pulp	0.68	4.35	0.61	<10	11	
013K833312	Sediment Pulp	0.45	2.84	0.43	<10	<2	
013K833313	Sediment Pulp	0.28	1.63	0.21	<10	<2	
013K833314	Sediment Pulp	0.50	3.22	0.41	<10	<2	
013K833315	Sediment Pulp	0.27	1.64	0.26	<10	<2	
013K833316	Sediment Pulp	0.23	1.28	0.19	<10	<2	
013K833317	Sediment Pulp	0.17	1.06	0.16	<10	<2	
013K833318	Sediment Pulp	0.11	0.68	0.10	<10	<2	
013K833319	Sediment Pulp	0.22	1.29	0.19	<10	<2	
013K833320	Sediment Pulp	0.09	0.59	0.09	<10	2	
013K833321	Sediment Pulp	0.19	1.20	0.17	<10	2	
013K833322	Sediment Pulp	0.29	2.06	0.31	<10	4	
013K833323	Sediment Pulp	0.55	3.45	0.49	<10	3	
013K833324	Sediment Pulp	0.58	3.42	0.45	<10	<2	
013K833325	Sediment Pulp	0.11	0.61	0.11	12	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833326	Sediment Pulp	5.76	38.27	3.82	78.1	186	15.1	28.8	439	3.19	0.2	1.7	<0.2	0.9	21.5	0.42	0.05	<0.02	26	0.37	0.103
013K833327	Sediment Pulp	1.06	32.34	7.14	63.0	50	23.7	15.3	822	2.29	6.8	45.2	0.3	6.1	46.4	0.27	0.55	0.03	50	0.58	0.103
013K833328	Sediment Pulp	2.43	40.84	7.85	74.8	88	16.9	17.0	230	1.77	1.6	7.2	<0.2	5.9	27.9	0.18	0.06	0.02	36	0.45	0.110
013K833329	Sediment Pulp	4.86	23.93	7.22	84.0	124	6.7	11.7	367	1.13	<0.1	2.1	<0.2	0.8	16.8	0.48	0.04	<0.02	27	0.27	0.075
013K833330	Sediment Pulp	5.56	28.54	8.41	94.1	171	8.1	17.4	869	1.97	0.4	2.5	<0.2	0.9	19.2	0.45	0.04	<0.02	30	0.30	0.111
013K833331	Sediment Pulp	19.46	157.54	13.56	213.0	766	22.9	30.6	1187	4.67	0.6	8.2	<0.2	3.9	27.7	1.04	0.09	<0.02	46	0.85	0.363
013K833332	Sediment Pulp	1.33	14.47	11.73	63.8	76	9.5	7.8	180	1.14	<0.1	1.4	<0.2	0.8	21.3	0.34	0.11	<0.02	16	0.26	0.075
013K833333	Sediment Pulp	2.00	29.48	4.98	63.6	290	11.5	2.0	41	0.72	0.3	3.3	<0.2	0.4	23.7	0.29	0.04	<0.02	16	0.31	0.064
013K833334	Sediment Pulp	11.43	60.53	10.90	185.4	365	13.9	27.9	1052	5.93	1.0	9.8	<0.2	3.8	26.4	0.59	0.06	0.05	55	0.46	0.196
013K833335	Sediment Pulp	17.39	39.30	6.38	168.3	252	10.4	34.9	370	5.89	1.1	5.8	<0.2	3.0	51.4	0.82	0.05	<0.02	69	0.58	0.136
013K833336	Sediment Pulp	5.06	34.77	6.98	90.8	508	6.9	4.7	226	1.98	0.3	5.5	<0.2	0.9	39.2	0.48	0.05	0.03	74	0.47	0.262
013K833337	Sediment Pulp	0.53	11.21	3.03	47.9	80	7.1	2.7	66	0.97	<0.1	1.0	<0.2	0.8	23.5	0.14	0.08	<0.02	19	0.24	0.043
013K833338	Sediment Pulp	4.93	15.44	3.54	55.1	100	7.3	3.1	81	0.81	0.2	4.3	<0.2	0.5	22.8	0.21	0.07	<0.02	23	0.36	0.059
013K833339	Sediment Pulp	1.75	10.05	5.49	41.1	43	6.8	4.4	145	1.47	0.4	2.4	<0.2	3.9	23.9	0.10	0.03	<0.02	29	0.31	0.088
013K833340	Sediment Pulp	0.35	13.85	2.21	28.7	136	5.4	0.9	27	0.15	<0.1	1.5	<0.2	0.2	23.4	0.15	<0.02	<0.02	9	0.30	0.039
013K833341	Sediment Pulp	1.70	9.61	5.44	43.0	42	7.0	4.5	143	1.45	0.5	2.4	<0.2	3.6	24.1	0.08	0.03	<0.02	29	0.31	0.090



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833326	Sediment Pulp	51.2	16.2	0.07	119.9	0.027	<20	2.02	0.004	0.02	0.1	2.6	0.19	0.19	99	0.9	0.02	1.7	0.22	<0.1
013K833327	Sediment Pulp	38.7	21.8	0.50	165.5	0.106	<20	1.14	0.042	0.13	0.1	3.4	0.24	0.10	15	3.0	<0.02	3.4	0.69	<0.1
013K833328	Sediment Pulp	48.6	20.6	0.42	118.5	0.099	<20	1.25	0.033	0.21	0.2	3.4	0.18	0.19	18	0.4	<0.02	3.5	0.97	<0.1
013K833329	Sediment Pulp	48.4	9.6	0.09	132.9	0.030	<20	1.30	0.006	0.03	0.2	1.3	0.15	0.13	70	0.5	<0.02	2.2	0.39	<0.1
013K833330	Sediment Pulp	57.9	10.9	0.11	177.0	0.035	<20	1.50	0.006	0.03	0.2	1.8	0.23	0.13	105	0.7	<0.02	2.6	0.47	<0.1
013K833331	Sediment Pulp	165.3	23.5	0.12	242.7	0.051	<20	4.30	0.010	0.05	0.4	5.1	0.51	0.25	327	3.0	<0.02	3.1	0.36	<0.1
013K833332	Sediment Pulp	39.5	10.2	0.21	105.8	0.054	<20	0.95	0.004	0.04	<0.1	1.4	0.09	0.12	54	0.1	<0.02	3.2	0.81	<0.1
013K833333	Sediment Pulp	61.4	8.8	0.05	90.1	0.019	<20	0.91	0.005	0.02	0.2	1.0	0.20	0.28	83	0.7	<0.02	1.5	0.23	<0.1
013K833334	Sediment Pulp	127.7	23.0	0.11	77.4	0.058	<20	2.32	0.008	0.05	0.6	3.1	0.49	0.31	102	1.1	0.05	3.2	0.60	0.1
013K833335	Sediment Pulp	96.0	23.7	0.06	47.8	0.042	<20	2.03	0.006	0.03	3.1	2.7	0.65	1.77	89	1.1	0.03	2.4	0.30	0.1
013K833336	Sediment Pulp	92.2	20.4	0.08	114.0	0.060	<20	1.93	0.009	0.03	0.9	1.9	0.15	0.19	162	1.4	<0.02	5.4	0.48	<0.1
013K833337	Sediment Pulp	25.4	9.0	0.17	84.7	0.039	<20	0.69	0.006	0.05	<0.1	1.2	0.06	0.14	54	0.3	<0.02	1.7	0.50	<0.1
013K833338	Sediment Pulp	39.9	9.9	0.10	60.8	0.038	<20	0.81	0.009	0.05	0.6	1.1	0.09	0.22	36	0.4	<0.02	2.0	0.49	<0.1
013K833339	Sediment Pulp	37.7	15.7	0.23	54.7	0.091	<20	0.72	0.014	0.08	0.4	2.0	0.13	0.04	20	<0.1	<0.02	2.9	1.10	<0.1
013K833340	Sediment Pulp	31.5	5.1	0.04	43.5	0.020	<20	0.50	0.007	0.02	<0.1	0.5	0.05	0.19	51	0.1	<0.02	1.5	0.32	<0.1
013K833341	Sediment Pulp	37.4	15.9	0.23	53.9	0.093	<20	0.72	0.014	0.08	0.3	2.1	0.12	0.04	27	<0.1	<0.02	2.7	1.08	<0.1



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Project: None Given
Report Date: April 16, 2022

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CERTIFICATE OF ANALYSIS

VAN22000384.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833326	Sediment Pulp	1.41	2.1	0.1	<0.05	1.3	33.58	112.8	<0.02	1	1.4	2.1	14.46	53.58	9.62	1.62	8.59	1.30	7.04	1.43	3.91
013K833327	Sediment Pulp	1.29	11.5	0.5	<0.05	7.0	22.02	75.7	<0.02	2	0.8	10.8	9.89	36.62	6.99	1.12	5.71	0.84	4.48	0.84	2.58
013K833328	Sediment Pulp	2.43	17.8	0.5	<0.05	5.7	30.77	102.2	<0.02	<1	1.7	11.4	12.53	45.16	8.25	1.22	6.89	1.10	5.99	1.25	3.67
013K833329	Sediment Pulp	1.41	3.6	0.2	<0.05	1.7	23.41	112.2	<0.02	1	1.7	2.7	13.37	47.78	8.67	1.30	6.89	0.97	5.49	0.97	2.87
013K833330	Sediment Pulp	1.56	4.5	0.3	<0.05	1.2	29.22	132.4	<0.02	5	1.8	3.8	14.77	55.67	9.36	1.51	8.28	1.18	6.47	1.25	3.43
013K833331	Sediment Pulp	3.07	4.9	0.3	<0.05	5.1	80.46	319.3	0.04	13	3.9	4.0	40.61	143.60	24.41	3.49	20.67	3.00	16.24	3.20	9.25
013K833332	Sediment Pulp	2.17	5.8	0.5	<0.05	2.2	17.53	81.4	<0.02	<1	0.7	4.7	10.03	38.51	6.59	0.91	5.76	0.77	3.70	0.73	2.16
013K833333	Sediment Pulp	1.48	1.7	0.2	<0.05	1.9	34.90	116.6	<0.02	<1	1.8	1.2	15.52	56.41	10.42	1.38	9.47	1.38	7.51	1.53	4.03
013K833334	Sediment Pulp	2.94	4.2	0.3	<0.05	3.7	95.27	320.0	0.02	8	4.6	3.4	36.47	136.72	25.47	3.20	22.69	3.50	20.59	4.31	12.30
013K833335	Sediment Pulp	2.33	2.2	0.3	<0.05	3.3	75.36	258.4	<0.02	15	3.3	1.9	26.76	102.78	18.21	2.54	16.72	2.48	15.31	3.12	9.70
013K833336	Sediment Pulp	4.00	2.9	0.5	<0.05	3.0	64.27	183.2	0.03	<1	2.2	2.1	23.92	87.00	16.34	2.35	13.90	2.24	12.58	2.63	7.81
013K833337	Sediment Pulp	1.69	3.9	0.3	<0.05	3.4	15.60	51.5	<0.02	<1	0.7	4.2	6.49	24.65	4.67	0.62	3.74	0.53	2.99	0.66	1.89
013K833338	Sediment Pulp	1.94	4.6	0.3	<0.05	2.3	20.45	79.4	<0.02	2	0.8	3.6	10.27	37.53	6.39	0.92	5.45	0.79	4.54	0.84	2.23
013K833339	Sediment Pulp	3.25	9.1	0.6	<0.05	5.3	18.08	73.2	<0.02	<1	1.0	6.7	9.14	32.59	5.96	0.89	4.64	0.65	3.44	0.67	1.88
013K833340	Sediment Pulp	0.92	1.9	0.2	<0.05	0.9	13.54	54.8	<0.02	<1	0.9	1.7	6.73	24.44	3.98	0.57	3.36	0.49	2.46	0.55	1.55
013K833341	Sediment Pulp	3.27	9.1	0.7	<0.05	5.0	18.20	72.9	<0.02	<1	0.5	7.6	9.16	32.20	5.52	0.82	4.53	0.71	3.72	0.73	2.10



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K833326	Sediment Pulp	0.52	2.96	0.40	<10	<2
013K833327	Sediment Pulp	0.33	2.07	0.27	<10	8
013K833328	Sediment Pulp	0.46	2.90	0.40	<10	<2
013K833329	Sediment Pulp	0.40	2.22	0.30	<10	<2
013K833330	Sediment Pulp	0.45	2.84	0.36	<10	<2
013K833331	Sediment Pulp	1.23	7.35	1.02	10	<2
013K833332	Sediment Pulp	0.27	1.58	0.25	<10	<2
013K833333	Sediment Pulp	0.55	2.94	0.36	<10	<2
013K833334	Sediment Pulp	1.63	9.43	1.22	<10	<2
013K833335	Sediment Pulp	1.33	7.41	1.04	11	2
013K833336	Sediment Pulp	1.09	6.29	0.81	<10	<2
013K833337	Sediment Pulp	0.24	1.32	0.20	<10	3
013K833338	Sediment Pulp	0.28	1.95	0.24	<10	<2
013K833339	Sediment Pulp	0.27	1.61	0.23	<10	2
013K833340	Sediment Pulp	0.21	1.09	0.16	<10	<2
013K833341	Sediment Pulp	0.28	1.67	0.21	<10	<2



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QUALITY CONTROL REPORT

VAN22000384.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
Pulp Duplicates																					
013K833229	Sediment Pulp	5.46	17.44	4.99	45.5	282	8.2	2.5	130	0.71	<0.1	12.3	<0.2	0.9	21.6	0.23	0.12	0.05	11	0.36	0.047
REP 013K833229	QC	5.48	19.60	5.21	48.8	285	8.2	2.5	130	0.70	<0.1	12.5	<0.2	0.9	21.8	0.24	0.12	0.06	11	0.36	0.046
013K833266	Sediment Pulp	0.84	13.32	3.13	20.6	291	4.4	1.0	30	0.23	0.2	3.4	0.5	<0.1	15.5	0.18	0.08	0.02	9	0.22	0.068
REP 013K833266	QC	0.85	13.28	3.10	20.6	292	4.4	1.0	30	0.24	0.2	3.4	0.7	<0.1	15.8	0.17	0.07	0.02	9	0.22	0.069
013K833302	Sediment Pulp	6.26	22.53	4.71	51.0	346	7.9	7.6	226	2.02	2.0	3.9	<0.2	1.7	18.2	0.16	0.07	0.04	29	0.20	0.148
REP 013K833302	QC	6.45	23.40	5.12	51.5	379	8.1	8.2	230	2.04	1.7	4.2	0.5	1.5	18.8	0.16	0.08	0.04	29	0.20	0.159
013K833338	Sediment Pulp	4.93	15.44	3.54	55.1	100	7.3	3.1	81	0.81	0.2	4.3	<0.2	0.5	22.8	0.21	0.07	<0.02	23	0.36	0.059
REP 013K833338	QC	5.26	16.38	3.40	53.2	92	7.9	3.1	84	0.81	0.3	4.3	0.3	0.5	23.0	0.21	0.04	<0.02	23	0.36	0.058
Reference Materials																					
STD DS11	Standard	14.17	135.98	131.04	327.7	1633	72.8	12.5	940	2.95	42.5	2.6	50.2	8.1	64.8	2.27	7.08	11.01	45	1.00	0.071
STD DS11	Standard	14.31	137.36	120.39	325.2	1637	76.0	13.4	985	2.99	39.9	2.3	54.2	6.7	65.7	2.15	5.98	9.97	48	1.01	0.067
STD DS11	Standard	12.69	142.19	121.48	320.0	1558	76.6	13.4	975	2.97	39.1	2.5	48.2	6.6	59.1	2.16	6.13	10.68	46	0.98	0.068
STD DS11	Standard	13.41	140.08	121.52	322.0	1731	77.0	13.5	980	2.93	42.6	2.3	158.6	7.2	61.2	2.17	6.23	9.96	46	0.99	0.065
STD DS11	Standard	13.86	149.40	136.31	344.4	1829	85.3	15.0	1019	3.10	48.1	3.0	55.2	8.8	70.9	2.58	6.08	12.88	48	1.04	0.073
STD DS11	Standard	13.85	151.18	126.68	345.4	1651	79.9	13.5	1052	3.06	43.4	2.4	96.6	7.1	62.0	2.41	6.63	10.09	50	1.03	0.068
STD OREAS262	Standard	0.62	109.18	58.61	148.6	466	61.4	26.5	527	3.17	36.6	1.3	52.4	10.4	35.4	0.63	2.51	1.03	20	3.04	0.040
STD OREAS262	Standard	0.56	105.71	48.21	143.3	424	59.3	25.6	514	3.07	33.2	1.0	50.6	8.1	32.5	0.58	2.32	0.84	20	2.84	0.039
STD OREAS262	Standard	0.57	109.13	49.36	143.8	434	61.8	25.7	519	3.12	33.1	1.0	47.7	8.0	32.0	0.59	1.98	0.85	20	2.87	0.037
STD OREAS262	Standard	0.62	115.49	51.74	154.4	469	65.1	28.0	530	3.17	36.0	1.0	49.6	8.2	34.6	0.62	2.12	0.88	23	2.98	0.040
STD OREAS262	Standard	0.62	105.36	52.38	140.9	457	59.3	26.5	497	3.04	35.6	1.1	57.6	8.6	35.4	0.72	2.34	0.94	19	2.68	0.036
STD OREAS262	Standard	0.63	116.50	51.62	151.9	482	64.1	26.7	545	3.22	36.1	1.1	48.1	8.2	33.0	0.66	2.23	0.86	21	2.88	0.037
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.06	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	0.02	<1	<0.01	<0.001



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QUALITY CONTROL REPORT

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K833229	Sediment Pulp	134.8	7.7	0.04	56.5	0.019	<20	1.15	0.004	0.02	<0.1	1.0	0.03	0.24	64	1.1	<0.02	<0.1	0.28	<0.1	0.02
REP 013K833229	QC	136.1	7.8	0.04	56.0	0.019	<20	1.13	0.003	0.02	<0.1	1.0	0.04	0.25	63	1.1	<0.02	<0.1	0.28	<0.1	0.02
013K833266	Sediment Pulp	26.0	6.0	0.05	61.0	0.018	<20	0.51	0.008	0.02	<0.1	0.3	0.02	0.13	83	0.5	<0.02	1.3	0.72	<0.1	<0.02
REP 013K833266	QC	25.8	6.1	0.05	60.2	0.018	<20	0.52	0.008	0.02	<0.1	0.3	0.02	0.13	80	0.5	<0.02	1.3	0.73	<0.1	<0.02
013K833302	Sediment Pulp	61.7	17.3	0.21	116.0	0.065	<20	1.35	0.006	0.12	0.3	1.6	0.10	0.15	73	0.2	<0.02	3.2	1.25	<0.1	<0.02
REP 013K833302	QC	69.5	18.1	0.21	129.2	0.070	<20	1.36	0.007	0.12	0.3	1.9	0.10	0.15	93	<0.1	0.02	3.2	1.37	<0.1	0.03
013K833338	Sediment Pulp	39.9	9.9	0.10	60.8	0.038	<20	0.81	0.009	0.05	0.6	1.1	0.09	0.22	36	0.4	<0.02	2.0	0.49	<0.1	0.06
REP 013K833338	QC	40.8	10.2	0.09	62.0	0.038	<20	0.81	0.009	0.05	0.7	1.1	0.09	0.23	45	0.5	<0.02	2.0	0.51	<0.1	0.04
Reference Materials																					
STD DS11	Standard	18.0	56.1	0.79	407.2	0.091	<20	1.09	0.067	0.38	2.5	3.3	4.76	0.26	241	2.1	4.39	4.8	2.81	<0.1	0.05
STD DS11	Standard	17.0	54.8	0.81	375.8	0.091	<20	1.11	0.069	0.39	2.3	3.1	4.46	0.27	220	2.2	4.41	4.6	2.59	<0.1	0.06
STD DS11	Standard	14.8	55.2	0.80	375.2	0.083	<20	1.04	0.066	0.37	2.6	2.8	4.50	0.28	218	2.2	4.41	4.5	2.49	<0.1	0.06
STD DS11	Standard	15.2	55.6	0.81	366.0	0.085	<20	1.05	0.067	0.37	2.3	2.9	4.57	0.26	220	2.2	4.44	4.4	2.53	<0.1	0.06
STD DS11	Standard	18.3	58.4	0.84	438.9	0.096	<20	1.11	0.071	0.39	2.6	3.2	5.13	0.29	261	1.7	4.79	5.3	3.07	<0.1	0.07
STD DS11	Standard	16.6	57.5	0.83	390.7	0.090	<20	1.09	0.072	0.39	2.5	3.1	4.83	0.28	259	2.6	4.62	4.9	2.78	<0.1	0.07
STD OREAS262	Standard	16.7	40.8	1.17	255.4	0.003	<20	1.17	0.067	0.29	<0.1	3.5	0.47	0.26	174	0.4	0.24	3.8	2.34	<0.1	0.20
STD OREAS262	Standard	15.5	41.0	1.11	216.6	0.003	<20	1.21	0.065	0.31	<0.1	3.0	0.41	0.26	149	0.6	0.21	3.5	2.17	<0.1	0.18
STD OREAS262	Standard	14.3	39.6	1.13	221.0	0.003	<20	1.17	0.067	0.29	<0.1	2.8	0.41	0.26	148	0.5	0.23	3.5	2.11	<0.1	0.21
STD OREAS262	Standard	13.8	41.4	1.15	224.7	0.003	<20	1.15	0.067	0.29	<0.1	3.0	0.44	0.25	159	0.5	0.24	3.6	2.16	<0.1	0.24
STD OREAS262	Standard	15.6	38.8	1.07	248.5	0.003	<20	1.08	0.063	0.28	0.2	3.4	0.44	0.25	152	0.2	0.22	3.8	2.28	<0.1	0.16
STD OREAS262	Standard	13.6	39.6	1.16	225.1	0.003	<20	1.14	0.067	0.28	0.1	3.0	0.43	0.26	155	0.7	0.22	3.6	2.16	<0.1	0.26
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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QUALITY CONTROL REPORT

VAN22000384.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K833229	Sediment Pulp	2.09	1.9	0.2	<0.05	1.3	55.34	224.2	0.02	<1	0.9	0.9	31.43	114.02	18.64	1.86	14.58	1.95	10.22	1.83	4.60
REP 013K833229	QC	2.14	1.9	0.2	<0.05	1.4	55.14	226.3	0.02	<1	0.9	0.9	31.77	113.91	18.95	1.87	14.87	1.96	10.38	1.85	4.69
013K833266	Sediment Pulp	0.73	1.8	0.2	<0.05	0.4	12.45	48.3	<0.02	<1	0.5	1.3	5.98	21.69	3.53	0.47	2.88	0.39	2.28	0.44	1.19
REP 013K833266	QC	0.74	1.8	0.2	<0.05	0.5	12.64	47.2	<0.02	<1	0.5	1.3	6.12	21.70	3.50	0.47	2.86	0.39	2.25	0.43	1.19
013K833302	Sediment Pulp	1.91	9.4	0.3	<0.05	1.2	27.76	119.8	<0.02	2	0.2	5.3	15.47	55.02	8.58	1.52	6.56	0.93	5.40	0.92	2.96
REP 013K833302	QC	1.73	9.8	0.4	<0.05	1.2	28.12	126.8	<0.02	2	0.8	5.5	16.52	60.50	9.65	1.54	7.04	1.01	5.49	1.01	2.86
013K833338	Sediment Pulp	1.94	4.6	0.3	<0.05	2.3	20.45	79.4	<0.02	2	0.8	3.6	10.27	37.53	6.39	0.92	5.45	0.79	4.54	0.84	2.23
REP 013K833338	QC	1.92	4.5	0.3	<0.05	2.3	20.62	78.3	<0.02	2	0.6	3.4	9.86	38.03	6.45	0.97	5.52	0.78	4.12	0.84	2.39
Reference Materials																					
STD DS11	Standard	1.15	32.2	1.8	<0.05	2.4	7.56	35.8	0.23	45	0.7	22.5	3.81	14.51	2.52	0.53	2.07	0.31	1.52	0.28	0.87
STD DS11	Standard	1.44	32.5	1.7	<0.05	2.8	7.99	34.5	0.22	39	0.7	21.9	3.73	14.07	2.47	0.45	1.98	0.27	1.47	0.27	0.75
STD DS11	Standard	1.27	31.6	1.6	<0.05	2.7	7.13	30.0	0.22	41	0.7	22.6	3.17	12.21	2.17	0.39	1.77	0.23	1.30	0.24	0.66
STD DS11	Standard	1.29	32.2	1.6	<0.05	2.8	7.45	31.3	0.22	41	0.7	21.3	3.31	12.58	2.23	0.41	1.83	0.24	1.35	0.24	0.68
STD DS11	Standard	1.33	32.3	1.9	<0.05	2.3	7.69	36.8	0.24	50	0.9	22.8	4.03	14.38	2.66	0.50	2.24	0.29	1.53	0.27	0.84
STD DS11	Standard	1.34	33.0	1.7	<0.05	2.9	7.62	32.5	0.24	42	0.7	22.3	3.50	13.13	2.35	0.47	1.94	0.25	1.44	0.26	0.74
STD OREAS262	Standard	<0.02	17.8	0.5	<0.05	7.2	10.64	32.5	0.03	<1	0.9	18.4	3.91	15.30	3.52	0.70	3.14	0.43	2.06	0.43	1.18
STD OREAS262	Standard	<0.02	18.1	0.5	<0.05	9.0	10.17	31.2	0.03	<1	1.1	16.0	3.88	14.41	3.07	0.57	2.63	0.35	1.91	0.35	0.93
STD OREAS262	Standard	<0.02	17.1	0.5	<0.05	9.6	9.92	28.8	0.03	<1	1.0	15.8	3.37	13.34	2.86	0.54	2.54	0.34	1.86	0.34	0.89
STD OREAS262	Standard	<0.02	17.9	0.5	<0.05	10.9	10.51	27.3	0.03	<1	1.0	16.0	3.26	13.01	2.87	0.55	2.51	0.33	1.83	0.34	0.90
STD OREAS262	Standard	<0.02	16.6	0.7	<0.05	6.9	10.34	30.6	0.04	2	1.6	16.3	3.59	14.54	3.24	0.65	2.97	0.38	2.18	0.35	0.94
STD OREAS262	Standard	<0.02	16.6	0.5	<0.05	11.3	10.29	26.3	0.03	<1	1.1	16.5	3.20	12.59	2.87	0.59	2.65	0.35	1.96	0.35	0.98
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 16, 2022

Page: 1 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000384.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013K833229	Sediment Pulp	0.59	3.47	0.47	<10	<2
REP 013K833229	QC	0.60	3.53	0.48	<10	<2
013K833266	Sediment Pulp	0.16	0.97	0.14	<10	<2
REP 013K833266	QC	0.16	0.97	0.13	<10	<2
013K833302	Sediment Pulp	0.42	2.75	0.38	<10	3
REP 013K833302	QC	0.42	2.85	0.41	<10	<2
013K833338	Sediment Pulp	0.28	1.95	0.24	<10	<2
REP 013K833338	QC	0.31	1.77	0.23	<10	<2
Reference Materials						
STD DS11	Standard	0.11	0.77	0.10	108	153
STD DS11	Standard	0.11	0.67	0.10	94	156
STD DS11	Standard	0.09	0.59	0.09	90	148
STD DS11	Standard	0.10	0.62	0.09	92	152
STD DS11	Standard	0.13	0.83	0.11	76	182
STD DS11	Standard	0.10	0.66	0.10	93	163
STD OREAS262	Standard	0.14	0.83	0.15	<10	<2
STD OREAS262	Standard	0.12	0.75	0.10	<10	<2
STD OREAS262	Standard	0.12	0.73	0.10	<10	<2
STD OREAS262	Standard	0.12	0.72	0.10	<10	<2
STD OREAS262	Standard	0.13	0.80	0.10	<10	<2
STD OREAS262	Standard	0.12	0.78	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Part: 1 of 4

VAN22000384.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Pb
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
BLK	Blank	<0.01	<0.01	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001	



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Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: April 16, 2022

Bureau Veritas Commodities Canada Ltd.

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Part: 2 of 4

QUALITY CONTROL REPORT

VAN22000384.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
		BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02



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Client: **Geological Survey of Canada**
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Ottawa Ontario K1A 0E8 Canada

Project: None Given
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Part: 3 of 4

QUALITY CONTROL REPORT

VAN22000384.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	



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Client: **Geological Survey of Canada**

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Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: April 16, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22000384.1

		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: June 16, 2022
Analysis Start: June 29, 2022
Report Date: July 22, 2022
Page: 1 of 11

CERTIFICATE OF ANALYSIS

VAN22001767.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 013N78
P.O. Number: 3000732409
Number of Samples: 274

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	272	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	272	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Client: Geological Survey of Canada
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Project: None Given
Report Date: July 22, 2022

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Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781000	Sediment Pulp	9.57	43.34	82.60	318.5	637	12.8	8.1	455	1.83	35.8	8.5	2.7	1.1	67.5	1.33	0.57	0.88	21	7.05	0.071
013N781001	Sediment Pulp	1.02	9.07	2.91	43.0	31	19.5	6.6	130	1.30	0.9	1.0	0.4	1.0	44.0	0.12	0.02	0.02	27	0.72	0.064
013N781006	Sediment Pulp	0.89	33.99	23.29	136.1	2832	47.3	29.5	1260	3.25	25.8	3.4	2.7	6.7	28.2	0.52	0.51	2.88	49	0.66	0.095
013N781031	Sediment Pulp	8.96	41.93	76.01	305.3	620	12.2	7.8	431	1.73	33.2	8.5	3.5	1.0	65.1	1.30	0.49	0.97	20	6.67	0.066
013N781039	Sediment Pulp	20.87	18.24	4.71	56.5	83	25.5	9.8	268	2.46	7.1	5.3	<0.2	4.9	83.9	0.52	0.09	0.04	58	1.07	0.097
013N781041	Sediment Pulp	20.96	18.49	4.68	56.7	90	25.7	9.7	266	2.46	6.7	5.2	<0.2	4.8	84.6	0.51	0.10	0.04	59	1.07	0.096
013N781047	Sediment Pulp	3.15	15.15	5.19	53.6	40	21.3	11.7	339	2.41	5.4	2.3	<0.2	4.2	37.7	0.13	0.10	0.05	48	0.67	0.113
013N781054	Sediment Pulp	0.92	33.79	22.82	136.3	2730	48.1	29.1	1283	3.25	25.5	3.4	3.1	6.3	27.6	0.54	0.51	3.00	48	0.65	0.095
013N781061	Sediment Pulp	1.05	9.41	3.00	44.6	31	20.4	6.9	134	1.35	1.0	1.1	<0.2	1.0	44.6	0.13	0.02	0.02	27	0.72	0.064
013N781076	Sediment Pulp	1.04	9.79	2.98	43.9	30	20.0	6.7	131	1.31	1.1	1.1	0.5	1.1	43.5	0.13	0.02	0.02	27	0.73	0.065
013N781078	Sediment Pulp	9.46	43.25	78.07	315.1	638	13.2	8.1	456	1.85	36.9	8.7	3.9	1.2	66.9	1.38	0.52	1.00	21	7.05	0.071
013N781079	Sediment Pulp	15.98	44.30	7.48	113.9	348	30.9	33.8	1450	8.42	1.2	7.0	1.5	1.2	31.7	0.80	0.03	0.07	78	0.58	0.224
013N781081	Sediment Pulp	3.86	24.93	3.95	41.4	169	21.4	4.3	59	1.22	0.2	18.6	0.3	0.2	26.4	0.33	0.03	0.04	40	0.47	0.070
013N781083	Sediment Pulp	3.70	23.84	3.82	39.6	147	20.4	4.0	56	1.17	<0.1	17.8	0.2	0.2	24.4	0.32	0.03	0.04	38	0.45	0.068
013N781085	Sediment Pulp	5.77	43.00	3.91	83.3	99	25.8	7.7	100	1.79	1.0	10.7	0.3	0.5	30.0	0.35	0.03	0.04	38	0.60	0.071
013N781086	Sediment Pulp	9.24	60.91	3.29	86.1	131	33.9	7.1	62	1.45	1.3	52.2	0.4	0.2	16.8	0.42	0.04	0.04	29	0.57	0.059
013N781087	Sediment Pulp	0.56	12.83	4.78	55.4	31	24.0	11.4	264	2.40	1.2	1.1	0.7	5.4	80.4	0.07	<0.02	0.02	41	1.28	0.081
013N781088	Sediment Pulp	4.42	11.08	1.56	50.7	64	10.7	4.1	44	0.67	0.1	4.2	1.9	<0.1	20.9	0.17	<0.02	<0.02	32	0.43	0.037
013N781090	Sediment Pulp	11.10	24.66	3.12	83.6	175	18.8	14.9	466	4.29	0.1	2.2	0.8	1.1	40.2	0.39	0.02	0.03	80	0.69	0.157
013N781128	Sediment Pulp	11.39	15.76	2.00	69.6	79	10.6	7.7	73	1.29	0.1	2.2	1.5	<0.1	24.8	0.35	0.03	<0.02	26	0.46	0.049
013N781131	Sediment Pulp	2.29	19.85	3.14	60.0	51	15.0	6.1	82	1.11	0.5	5.2	0.6	0.7	40.6	0.19	0.05	0.02	37	0.63	0.058
013N781132	Sediment Pulp	0.81	9.01	3.93	54.7	27	20.3	16.5	776	1.90	1.1	1.9	<0.2	2.1	51.9	0.10	<0.02	0.03	29	0.77	0.057
013N781134	Sediment Pulp	4.19	46.78	5.38	112.0	305	20.6	21.4	1018	9.57	0.4	13.8	1.1	1.4	26.6	0.64	0.02	0.07	78	0.46	0.260
013N781135	Sediment Pulp	3.00	25.51	4.35	55.1	172	15.6	14.1	236	4.01	0.5	31.1	0.7	0.8	35.2	0.41	<0.02	0.05	50	0.55	0.112
013N781138	Sediment Pulp	3.73	45.36	3.73	76.0	127	45.8	8.8	92	1.96	0.2	2.9	0.2	0.6	27.3	0.37	0.03	0.04	34	0.53	0.048
013N781139	Sediment Pulp	0.85	32.97	22.42	133.7	2559	47.5	28.5	1219	3.17	24.7	3.5	3.9	6.4	26.5	0.52	0.51	2.85	47	0.61	0.092
013N781140	Sediment Pulp	7.48	13.81	3.97	52.7	35	25.9	8.2	209	1.82	2.4	2.4	0.7	2.4	45.7	0.27	0.04	0.03	35	0.70	0.137
013N781141	Sediment Pulp	3.62	44.35	3.54	70.9	119	45.6	8.4	89	1.86	<0.1	2.7	0.5	0.5	26.4	0.36	0.03	0.03	33	0.51	0.047
013N781142	Sediment Pulp	1.01	10.67	5.09	55.4	37	19.7	10.5	332	2.43	1.1	1.6	0.4	2.6	47.6	0.07	<0.02	0.04	34	0.74	0.061
013N781144	Sediment Pulp	0.54	17.23	2.67	20.3	86	13.6	2.1	33	0.46	0.2	3.8	0.5	0.1	27.8	0.21	<0.02	0.03	22	0.40	0.048



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013N781000	Sediment Pulp	10.4	13.8	0.59	92.2	0.042	<20	0.48	0.029	0.05	0.7	2.4	0.22	1.56	119	1.5	<0.02	2.1	0.50	<0.1	0.03
013N781001	Sediment Pulp	15.2	21.7	0.40	43.8	0.062	<20	1.38	0.107	0.09	<0.1	2.1	0.08	0.45	54	0.7	<0.02	3.9	0.46	<0.1	0.03
013N781006	Sediment Pulp	41.1	52.6	0.83	161.2	0.109	<20	1.82	0.033	0.27	0.2	6.0	0.28	0.15	262	1.0	0.05	5.7	1.41	<0.1	0.11
013N781031	Sediment Pulp	10.3	13.0	0.55	91.3	0.040	<20	0.44	0.027	0.05	0.5	2.2	0.22	1.49	97	1.4	0.05	2.0	0.49	<0.1	0.03
013N781039	Sediment Pulp	31.1	39.1	0.79	58.6	0.096	26	2.12	0.323	0.26	<0.1	3.9	0.21	1.34	45	1.3	<0.02	5.3	0.89	<0.1	0.09
013N781041	Sediment Pulp	31.2	39.4	0.78	56.7	0.097	31	2.10	0.323	0.26	<0.1	3.9	0.20	1.33	49	1.4	<0.02	5.4	0.88	<0.1	0.08
013N781047	Sediment Pulp	30.4	33.0	0.62	45.5	0.110	<20	1.71	0.119	0.18	0.2	4.2	0.12	0.38	104	0.8	<0.02	4.8	0.73	<0.1	0.06
013N781054	Sediment Pulp	40.3	52.1	0.83	158.5	0.108	<20	1.79	0.033	0.27	0.2	6.0	0.28	0.15	269	1.0	0.06	5.7	1.36	<0.1	0.11
013N781061	Sediment Pulp	15.6	22.5	0.41	44.6	0.063	<20	1.41	0.111	0.09	<0.1	2.1	0.08	0.47	54	0.7	<0.02	4.0	0.47	<0.1	0.03
013N781076	Sediment Pulp	15.5	22.1	0.40	44.7	0.064	<20	1.41	0.108	0.09	<0.1	2.1	0.08	0.46	59	0.5	<0.02	3.9	0.47	<0.1	0.03
013N781078	Sediment Pulp	10.8	13.7	0.59	93.4	0.043	<20	0.48	0.030	0.05	0.5	2.4	0.22	1.57	110	1.5	<0.02	2.1	0.51	<0.1	0.03
013N781079	Sediment Pulp	40.9	34.6	0.19	53.7	0.057	<20	4.14	0.044	0.04	0.2	2.6	0.27	0.24	172	4.5	0.03	8.6	0.55	<0.1	<0.02
013N781081	Sediment Pulp	32.6	22.6	0.12	34.2	0.028	<20	2.59	0.039	0.02	<0.1	1.2	0.04	0.40	118	2.6	<0.02	3.6	0.43	<0.1	<0.02
013N781083	Sediment Pulp	31.2	21.7	0.12	32.3	0.028	<20	2.48	0.037	0.02	<0.1	1.1	0.04	0.38	117	2.5	<0.02	3.4	0.41	<0.1	<0.02
013N781085	Sediment Pulp	30.7	25.1	0.15	33.6	0.032	<20	2.66	0.078	0.03	0.2	1.3	0.06	0.21	171	2.1	0.02	3.8	0.40	<0.1	<0.02
013N781086	Sediment Pulp	37.7	22.2	0.07	26.1	0.022	<20	2.63	0.020	0.02	0.3	1.0	0.10	0.43	108	2.6	0.02	2.8	0.41	<0.1	<0.02
013N781087	Sediment Pulp	27.7	30.2	0.68	82.1	0.095	<20	2.97	0.324	0.19	<0.1	4.1	0.10	<0.02	41	0.4	<0.02	6.9	0.55	<0.1	0.06
013N781088	Sediment Pulp	23.7	11.5	0.08	16.5	0.016	<20	1.01	0.030	0.02	0.1	0.4	0.05	0.30	66	1.2	0.04	2.5	0.10	<0.1	<0.02
013N781090	Sediment Pulp	41.9	27.7	0.19	60.1	0.034	<20	3.36	0.096	0.03	0.2	2.0	0.13	0.21	222	2.4	<0.02	5.8	0.19	<0.1	<0.02
013N781128	Sediment Pulp	19.5	14.6	0.10	8.4	0.014	<20	1.63	0.041	0.02	<0.1	0.6	0.05	0.44	65	1.8	<0.02	2.9	0.13	<0.1	<0.02
013N781131	Sediment Pulp	47.9	17.1	0.21	41.5	0.032	<20	1.70	0.097	0.06	2.3	1.7	0.06	0.23	91	1.1	<0.02	3.3	0.27	<0.1	<0.02
013N781132	Sediment Pulp	19.7	24.3	0.42	73.7	0.068	<20	2.28	0.189	0.10	<0.1	2.5	0.08	<0.02	27	0.3	<0.02	5.2	0.71	<0.1	<0.02
013N781134	Sediment Pulp	59.4	34.3	0.11	37.6	0.060	<20	4.37	0.025	0.03	0.1	2.8	0.22	0.26	169	6.2	0.03	8.4	0.36	<0.1	<0.02
013N781135	Sediment Pulp	38.4	29.1	0.16	50.2	0.041	<20	2.79	0.056	0.03	0.1	1.9	0.07	0.22	120	3.9	<0.02	5.3	0.43	<0.1	<0.02
013N781138	Sediment Pulp	44.5	47.3	0.23	26.8	0.046	<20	2.16	0.041	0.04	<0.1	1.7	0.17	0.38	99	2.0	<0.02	3.7	0.42	<0.1	<0.02
013N781139	Sediment Pulp	39.9	51.0	0.80	155.4	0.106	<20	1.70	0.030	0.27	0.3	5.6	0.28	0.15	269	1.0	0.07	5.4	1.36	<0.1	0.10
013N781140	Sediment Pulp	27.9	34.7	0.52	37.1	0.069	<20	1.74	0.151	0.14	0.1	2.5	0.14	0.41	124	0.9	0.03	4.2	0.56	<0.1	<0.02
013N781141	Sediment Pulp	41.5	46.4	0.22	25.1	0.046	<20	2.11	0.039	0.04	<0.1	1.7	0.17	0.38	93	1.9	0.03	3.6	0.39	<0.1	<0.02
013N781142	Sediment Pulp	30.0	28.9	0.45	69.3	0.080	<20	2.38	0.173	0.14	<0.1	3.2	0.10	0.06	44	0.9	<0.02	5.9	0.73	<0.1	0.02
013N781144	Sediment Pulp	31.1	17.4	0.10	40.3	0.030	<20	1.68	0.055	0.02	<0.1	0.9	0.04	0.27	128	1.7	<0.02	3.2	0.24	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781000 Sediment Pulp	0.75	3.5	3.2	<0.05	1.3	10.99	17.2	0.48	17	0.1	4.3	2.68	11.72	2.46	0.46	2.14	0.28	1.75	0.34	0.96
013N781001 Sediment Pulp	1.17	6.3	0.3	<0.05	1.3	6.40	30.1	<0.02	<1	0.2	9.9	3.48	13.29	2.20	0.36	1.71	0.21	1.24	0.22	0.60
013N781006 Sediment Pulp	1.93	25.6	1.2	<0.05	5.7	19.02	75.4	0.04	1	0.7	21.9	9.92	37.89	6.41	0.94	4.80	0.61	3.45	0.65	1.79
013N781031 Sediment Pulp	0.67	3.3	3.2	<0.05	1.1	10.77	16.9	0.45	20	0.1	4.0	2.66	11.59	2.44	0.44	2.09	0.28	1.71	0.34	0.95
013N781039 Sediment Pulp	1.79	16.8	0.5	<0.05	4.0	11.88	62.8	<0.02	11	0.4	14.1	7.14	25.92	4.09	0.61	3.12	0.40	2.32	0.42	1.15
013N781041 Sediment Pulp	1.80	16.8	0.5	<0.05	3.9	11.66	61.2	<0.02	14	0.4	14.2	7.19	25.59	4.01	0.59	3.04	0.39	2.26	0.42	1.14
013N781047 Sediment Pulp	1.41	12.7	0.5	<0.05	3.0	12.72	60.0	<0.02	6	0.4	12.8	7.39	26.45	4.43	0.68	3.45	0.45	2.58	0.48	1.28
013N781054 Sediment Pulp	1.97	25.5	1.2	<0.05	5.6	18.79	73.7	0.04	<1	0.7	21.6	9.77	37.41	6.27	0.90	4.62	0.58	3.33	0.63	1.76
013N781061 Sediment Pulp	1.15	6.5	0.3	<0.05	1.1	6.33	31.2	<0.02	<1	0.2	10.4	3.58	13.76	2.24	0.36	1.75	0.22	1.26	0.23	0.61
013N781076 Sediment Pulp	1.19	6.4	0.3	<0.05	1.2	6.45	31.1	<0.02	1	0.2	10.2	3.55	13.64	2.25	0.37	1.74	0.22	1.25	0.23	0.61
013N781078 Sediment Pulp	0.72	3.5	3.2	<0.05	1.3	11.07	18.2	0.47	19	0.2	4.3	2.79	12.18	2.52	0.46	2.19	0.30	1.78	0.35	0.97
013N781079 Sediment Pulp	1.04	3.2	0.3	<0.05	0.3	18.26	86.0	0.03	2	0.5	5.2	10.11	36.56	5.88	1.11	4.60	0.60	3.52	0.63	1.68
013N781081 Sediment Pulp	1.01	2.0	0.2	<0.05	0.2	11.15	60.7	<0.02	<1	0.4	4.7	7.78	27.27	4.14	0.72	3.06	0.36	2.04	0.37	0.98
013N781083 Sediment Pulp	0.96	1.9	0.2	<0.05	0.2	10.76	57.5	<0.02	<1	0.4	4.5	7.26	26.18	3.99	0.68	2.93	0.35	1.95	0.35	0.94
013N781085 Sediment Pulp	0.94	1.7	0.2	<0.05	0.2	8.92	55.3	<0.02	<1	0.3	4.4	7.16	25.26	3.65	0.63	2.52	0.30	1.65	0.30	0.79
013N781086 Sediment Pulp	0.88	1.1	0.2	<0.05	0.2	10.95	59.5	<0.02	2	0.4	3.1	8.19	28.33	4.11	0.73	3.00	0.35	1.94	0.35	0.93
013N781087 Sediment Pulp	1.05	14.0	0.5	<0.05	2.7	11.62	59.9	0.02	<1	0.4	13.3	6.62	24.30	3.93	0.55	3.00	0.39	2.30	0.42	1.14
013N781088 Sediment Pulp	0.49	1.5	<0.1	<0.05	0.1	5.22	41.5	<0.02	1	0.1	1.8	5.33	18.47	2.46	0.34	1.59	0.17	0.99	0.18	0.47
013N781090 Sediment Pulp	1.07	2.3	0.2	<0.05	0.5	13.56	68.5	<0.02	<1	0.3	3.9	9.30	32.27	4.60	0.73	3.39	0.43	2.50	0.47	1.28
013N781128 Sediment Pulp	0.45	1.3	0.1	<0.05	<0.1	7.14	23.6	<0.02	<1	0.2	1.8	4.46	15.91	2.25	0.38	1.70	0.20	1.18	0.23	0.64
013N781131 Sediment Pulp	1.27	4.4	0.3	<0.05	0.6	15.56	69.6	0.02	2	0.2	5.8	11.19	40.82	5.81	0.83	4.22	0.50	2.83	0.54	1.47
013N781132 Sediment Pulp	0.71	6.9	0.3	<0.05	0.3	7.70	41.9	<0.02	<1	0.3	10.5	4.67	16.86	2.73	0.44	2.07	0.26	1.52	0.27	0.74
013N781134 Sediment Pulp	1.42	1.8	0.3	<0.05	0.3	24.08	122.7	0.03	<1	0.6	2.3	14.16	51.55	7.92	1.44	5.97	0.80	4.68	0.85	2.30
013N781135 Sediment Pulp	1.14	2.2	0.3	<0.05	0.3	11.61	71.2	<0.02	<1	0.4	4.7	8.67	30.13	4.49	0.80	3.16	0.38	2.19	0.39	1.05
013N781138 Sediment Pulp	1.01	2.9	0.2	<0.05	0.4	10.31	79.5	<0.02	<1	0.3	7.2	9.61	33.91	4.59	0.72	3.15	0.35	1.95	0.35	0.94
013N781139 Sediment Pulp	1.96	23.9	1.1	<0.05	5.2	17.91	73.5	0.04	1	0.6	21.7	9.63	36.89	6.15	0.88	4.55	0.57	3.31	0.62	1.74
013N781140 Sediment Pulp	1.37	10.5	0.4	<0.05	0.8	9.83	57.7	<0.02	5	0.4	13.9	6.53	22.54	3.50	0.48	2.61	0.33	1.93	0.35	0.94
013N781141 Sediment Pulp	0.95	2.9	0.2	<0.05	0.4	9.70	74.0	<0.02	1	0.3	7.0	9.08	31.41	4.22	0.66	2.90	0.33	1.81	0.32	0.86
013N781142 Sediment Pulp	1.52	10.6	0.5	<0.05	1.0	10.77	58.1	<0.02	<1	0.4	12.9	6.89	24.76	3.94	0.58	2.93	0.37	2.20	0.39	1.06
013N781144 Sediment Pulp	0.87	1.4	0.2	<0.05	0.4	7.28	55.7	<0.02	<1	0.2	2.9	6.59	23.49	3.38	0.55	2.35	0.27	1.45	0.25	0.66



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N781000	Sediment Pulp	0.13	0.86	0.13	<10	<2	
013N781001	Sediment Pulp	0.08	0.49	0.06	<10	<2	
013N781006	Sediment Pulp	0.25	1.59	0.23	<10	<2	
013N781031	Sediment Pulp	0.13	0.85	0.13	<10	<2	
013N781039	Sediment Pulp	0.15	0.97	0.13	<10	<2	
013N781041	Sediment Pulp	0.15	0.93	0.13	<10	<2	
013N781047	Sediment Pulp	0.17	1.05	0.14	<10	<2	
013N781054	Sediment Pulp	0.24	1.53	0.22	<10	<2	
013N781061	Sediment Pulp	0.08	0.50	0.07	<10	<2	
013N781076	Sediment Pulp	0.08	0.49	0.07	<10	<2	
013N781078	Sediment Pulp	0.13	0.87	0.13	<10	<2	
013N781079	Sediment Pulp	0.22	1.33	0.18	<10	<2	
013N781081	Sediment Pulp	0.13	0.79	0.11	<10	<2	
013N781083	Sediment Pulp	0.12	0.77	0.10	<10	<2	
013N781085	Sediment Pulp	0.10	0.63	0.08	<10	<2	
013N781086	Sediment Pulp	0.12	0.74	0.10	<10	<2	
013N781087	Sediment Pulp	0.15	0.96	0.13	<10	<2	
013N781088	Sediment Pulp	0.06	0.36	0.05	<10	3	
013N781090	Sediment Pulp	0.17	1.07	0.15	<10	<2	
013N781128	Sediment Pulp	0.09	0.55	0.08	<10	<2	
013N781131	Sediment Pulp	0.19	1.22	0.18	<10	<2	
013N781132	Sediment Pulp	0.10	0.59	0.08	<10	<2	
013N781134	Sediment Pulp	0.31	1.90	0.25	<10	<2	
013N781135	Sediment Pulp	0.14	0.86	0.11	<10	2	
013N781138	Sediment Pulp	0.12	0.78	0.11	<10	<2	
013N781139	Sediment Pulp	0.24	1.53	0.22	<10	2	
013N781140	Sediment Pulp	0.12	0.78	0.10	<10	<2	
013N781141	Sediment Pulp	0.11	0.71	0.10	<10	<2	
013N781142	Sediment Pulp	0.14	0.87	0.11	<10	<2	
013N781144	Sediment Pulp	0.08	0.50	0.06	<10	<2	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781145	Sediment Pulp	8.89	41.10	74.37	302.4	559	12.3	7.7	427	1.74	33.2	8.2	3.7	1.1	64.0	1.27	0.54	2.62	20	6.71	0.067
013N781146	Sediment Pulp	7.60	14.90	2.18	65.4	105	12.9	9.4	159	3.54	1.5	4.4	0.7	0.5	21.2	0.33	<0.02	0.04	61	0.42	0.059
013N781147	Sediment Pulp	3.52	36.19	4.06	37.1	110	29.9	3.5	39	1.38	1.6	4.2	0.5	0.3	19.0	0.22	0.02	0.05	28	0.30	0.049
013N781148	Sediment Pulp	3.08	18.45	4.94	78.1	64	27.1	15.3	1161	3.96	1.7	3.4	0.2	4.1	61.8	0.15	<0.02	0.04	46	0.92	0.128
013N781149	Sediment Pulp	1.42	16.84	5.24	73.9	65	23.6	12.1	136	2.17	0.6	5.7	0.6	2.5	38.4	0.09	<0.02	0.06	46	0.55	0.076
013N781150	Sediment Pulp	0.89	21.16	4.45	78.2	53	44.8	12.1	128	1.74	0.5	2.4	0.5	3.2	42.4	0.20	<0.02	0.04	32	0.69	0.047
013N781151	Sediment Pulp	1.12	22.09	1.69	46.0	28	40.9	11.0	47	0.97	<0.1	2.5	<0.2	1.1	17.2	0.15	<0.02	<0.02	16	0.27	0.057
013N781152	Sediment Pulp	1.96	30.75	7.53	95.9	84	29.8	16.6	447	3.92	2.1	3.7	<0.2	5.8	38.2	0.26	0.03	0.07	58	0.61	0.266
013N781153	Sediment Pulp	4.20	24.17	6.18	77.0	138	18.5	13.6	218	2.90	0.9	5.5	0.2	2.3	31.9	0.47	0.03	0.06	50	0.53	0.105
013N781154	Sediment Pulp	3.38	24.75	6.58	80.0	132	24.7	18.6	573	4.49	1.4	3.0	<0.2	4.4	37.3	0.39	<0.02	0.05	57	0.57	0.135
013N781155	Sediment Pulp	3.17	18.70	6.59	43.8	96	12.1	8.3	140	2.48	<0.1	7.2	0.3	0.9	28.0	0.29	0.02	0.06	41	0.48	0.094
013N781156	Sediment Pulp	4.05	15.61	4.43	60.6	126	9.3	8.6	169	3.28	<0.1	10.0	<0.2	0.9	20.1	0.49	<0.02	0.04	29	0.37	0.119
013N781157	Sediment Pulp	1.94	19.43	4.42	54.5	107	14.5	4.1	59	1.49	<0.1	11.5	<0.2	0.5	22.8	0.34	0.02	0.06	34	0.37	0.065
013N781158	Sediment Pulp	5.43	22.97	3.78	55.5	89	12.7	3.7	57	1.36	<0.1	2.5	<0.2	0.7	28.9	0.57	<0.02	0.07	52	0.48	0.042
013N781159	Sediment Pulp	0.90	7.81	3.13	57.7	13	16.1	9.2	92	1.32	0.4	1.6	<0.2	4.6	41.3	0.11	<0.02	<0.02	25	0.69	0.051
013N781160	Sediment Pulp	1.72	18.21	7.43	79.6	37	28.2	17.4	704	4.03	1.3	1.2	0.2	8.7	65.4	0.14	<0.02	0.03	49	0.97	0.116
013N781161	Sediment Pulp	0.93	8.41	3.08	61.0	19	16.8	9.0	92	1.32	0.1	1.6	<0.2	4.7	42.6	0.12	<0.02	<0.02	26	0.69	0.056
013N781181	Sediment Pulp	5.00	22.35	3.57	55.0	78	12.0	3.7	58	1.42	0.1	2.3	<0.2	0.9	28.6	0.54	<0.02	0.06	52	0.51	0.040
013N781240	Sediment Pulp	9.46	41.60	82.00	293.1	603	13.2	8.0	449	1.82	36.5	9.2	2.5	1.6	62.3	1.40	0.54	1.06	21	6.40	0.070
013N781241	Sediment Pulp	10.46	12.03	2.66	59.6	52	12.1	6.0	151	1.47	0.3	2.3	<0.2	0.7	37.7	0.30	<0.02	<0.02	40	0.57	0.051
013N781264	Sediment Pulp	37.15	25.56	9.14	211.6	57	12.7	14.3	2399	3.34	1.4	21.4	<0.2	10.0	33.4	2.03	0.02	0.03	36	0.49	0.132
013N781267	Sediment Pulp	8.51	12.05	5.01	50.7	30	7.2	6.8	460	1.77	0.5	3.1	<0.2	6.6	10.6	0.21	<0.02	<0.02	20	0.30	0.096
013N781281	Sediment Pulp	0.28	20.24	3.86	48.2	27	31.6	15.1	362	2.54	0.6	0.4	<0.2	6.0	124.6	0.06	<0.02	<0.02	33	1.82	0.054
013N781284	Sediment Pulp	0.47	20.89	3.93	48.2	29	32.3	15.3	374	2.65	0.3	0.5	0.2	6.2	125.2	0.06	<0.02	<0.02	36	1.85	0.053
013N781286	Sediment Pulp	6.57	11.17	1.87	40.2	40	9.9	5.7	55	0.54	<0.1	28.4	<0.2	0.7	29.3	0.17	<0.02	0.03	18	0.54	0.034
013N781287	Sediment Pulp	18.65	15.49	2.20	48.6	109	9.2	6.6	115	1.63	<0.1	8.8	<0.2	0.4	23.5	0.26	<0.02	<0.02	40	0.50	0.086
013N781290	Sediment Pulp	0.96	34.80	25.70	135.5	2691	47.7	31.4	1229	3.16	25.1	3.9	2.9	8.6	28.4	0.55	0.49	3.27	48	0.63	0.094
013N781291	Sediment Pulp	3.06	11.49	0.75	39.8	45	9.6	2.9	15	0.11	<0.1	2.5	<0.2	0.5	18.8	0.14	<0.02	<0.02	12	0.39	0.027
013N781292	Sediment Pulp	9.35	13.14	2.06	59.4	61	11.5	12.3	92	3.32	0.1	20.7	0.3	0.6	29.0	0.20	0.02	<0.02	70	0.54	0.066
013N781294	Sediment Pulp	1.87	6.45	1.24	24.8	29	7.7	2.3	23	0.26	<0.1	1.0	<0.2	0.2	25.5	0.09	0.02	<0.02	13	0.48	0.031



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013N781145	Sediment Pulp	10.0	12.6	0.55	85.2	0.040	<20	0.44	0.027	0.05	0.6	2.2	0.21	1.50	103	1.5	0.03	2.0	0.47	<0.1	0.03
013N781146	Sediment Pulp	27.2	25.2	0.10	28.8	0.025	<20	2.14	0.034	0.02	0.3	1.4	0.04	0.18	84	1.9	<0.02	2.9	0.18	<0.1	<0.02
013N781147	Sediment Pulp	39.2	56.1	0.15	18.5	0.040	<20	2.32	0.035	0.03	<0.1	1.3	0.10	0.34	79	2.8	<0.02	4.3	0.46	<0.1	<0.02
013N781148	Sediment Pulp	32.2	34.2	0.58	98.6	0.090	<20	3.02	0.229	0.18	0.2	4.0	0.12	0.07	74	1.3	<0.02	7.0	1.02	<0.1	0.03
013N781149	Sediment Pulp	35.0	30.9	0.40	85.9	0.077	<20	2.95	0.128	0.10	<0.1	3.3	0.09	0.10	119	0.6	<0.02	6.6	0.79	0.1	0.02
013N781150	Sediment Pulp	34.2	36.1	0.47	78.3	0.081	<20	2.53	0.139	0.15	<0.1	3.5	0.18	0.22	64	1.0	<0.02	6.2	1.23	0.1	0.05
013N781151	Sediment Pulp	31.7	33.3	0.17	21.0	0.037	<20	1.03	0.028	0.03	0.5	1.2	0.19	0.40	55	0.7	<0.02	2.3	0.50	<0.1	<0.02
013N781152	Sediment Pulp	44.7	39.8	0.65	88.3	0.100	<20	3.05	0.109	0.24	0.5	5.2	0.15	0.08	50	1.5	<0.02	7.4	1.02	0.1	0.05
013N781153	Sediment Pulp	43.2	35.6	0.30	83.2	0.065	<20	2.71	0.079	0.10	0.2	3.0	0.12	0.18	96	2.9	<0.02	6.2	0.80	0.1	0.03
013N781154	Sediment Pulp	42.1	42.3	0.46	97.1	0.090	<20	2.80	0.121	0.17	0.2	4.1	0.24	0.11	84	2.5	<0.02	7.4	1.20	0.1	0.05
013N781155	Sediment Pulp	33.3	23.6	0.25	76.6	0.054	<20	2.42	0.059	0.03	0.1	2.0	0.07	0.13	104	3.4	<0.02	5.8	0.63	<0.1	0.03
013N781156	Sediment Pulp	29.5	15.3	0.11	41.2	0.027	<20	2.21	0.039	0.02	0.2	1.8	0.08	0.18	83	3.7	<0.02	3.4	0.31	<0.1	<0.02
013N781157	Sediment Pulp	40.7	19.2	0.12	29.9	0.030	<20	2.49	0.044	0.03	<0.1	1.4	0.06	0.34	74	2.9	<0.02	4.2	0.31	<0.1	<0.02
013N781158	Sediment Pulp	45.5	15.4	0.09	35.9	0.031	<20	2.22	0.045	0.02	0.2	1.5	0.04	0.22	112	1.9	<0.02	3.4	0.16	0.1	<0.02
013N781159	Sediment Pulp	29.2	19.5	0.35	54.5	0.060	<20	1.60	0.129	0.08	<0.1	2.7	0.07	0.20	32	0.4	<0.02	4.3	0.34	<0.1	0.05
013N781160	Sediment Pulp	42.6	35.8	0.70	136.3	0.117	<20	3.10	0.281	0.23	0.1	5.4	0.15	0.05	122	0.5	<0.02	8.2	0.67	0.1	0.08
013N781161	Sediment Pulp	30.6	19.8	0.35	55.9	0.061	<20	1.61	0.131	0.09	<0.1	3.0	0.07	0.21	35	0.5	<0.02	4.3	0.35	<0.1	0.06
013N781181	Sediment Pulp	44.0	15.5	0.09	35.0	0.031	<20	2.33	0.053	0.02	0.1	1.5	0.04	0.23	110	2.0	<0.02	3.7	0.15	0.1	<0.02
013N781240	Sediment Pulp	11.1	13.3	0.58	97.5	0.045	<20	0.48	0.029	0.05	0.6	2.7	0.21	1.54	95	1.3	0.02	2.2	0.54	<0.1	0.04
013N781241	Sediment Pulp	35.4	16.2	0.14	86.0	0.024	<20	2.01	0.092	0.04	0.1	1.3	0.05	0.18	74	0.9	<0.02	3.5	0.16	0.1	<0.02
013N781264	Sediment Pulp	130.6	18.1	0.26	185.0	0.079	<20	1.13	0.035	0.09	0.3	4.3	0.34	0.03	27	1.3	<0.02	4.7	0.25	0.4	0.03
013N781267	Sediment Pulp	51.9	10.7	0.16	47.1	0.057	<20	0.72	0.022	0.06	0.2	2.8	0.09	<0.02	<5	0.3	<0.02	2.9	0.17	0.1	0.03
013N781281	Sediment Pulp	29.4	27.0	0.83	115.2	0.087	<20	3.96	0.513	0.20	<0.1	4.1	0.07	<0.02	17	<0.1	<0.02	9.0	0.28	0.1	0.09
013N781284	Sediment Pulp	30.4	28.0	0.86	119.6	0.084	<20	4.06	0.533	0.20	<0.1	4.1	0.08	<0.02	27	<0.1	<0.02	8.6	0.30	0.1	0.07
013N781286	Sediment Pulp	23.3	12.6	0.10	36.0	0.022	<20	1.33	0.057	0.02	<0.1	1.1	0.04	0.29	62	1.1	<0.02	2.7	0.11	<0.1	<0.02
013N781287	Sediment Pulp	24.9	15.2	0.08	26.6	0.020	<20	1.76	0.025	0.01	0.1	1.1	0.06	0.19	170	1.5	<0.02	3.1	0.11	<0.1	<0.02
013N781290	Sediment Pulp	42.3	54.5	0.81	174.2	0.112	<20	1.74	0.031	0.27	0.2	6.0	0.29	0.15	263	1.0	0.04	6.3	1.48	0.1	0.14
013N781291	Sediment Pulp	12.8	7.2	0.05	13.0	0.011	<20	0.50	0.019	0.01	0.1	0.6	0.03	0.28	58	1.0	<0.02	1.1	0.06	<0.1	<0.02
013N781292	Sediment Pulp	19.1	21.3	0.10	22.2	0.024	<20	1.98	0.060	0.02	0.2	1.5	0.08	0.22	79	1.6	<0.02	3.2	0.11	<0.1	<0.02
013N781294	Sediment Pulp	7.5	8.1	0.07	21.1	0.014	<20	0.64	0.055	0.02	<0.1	0.6	0.03	0.29	70	0.6	<0.02	1.8	0.07	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781145	Sediment Pulp	0.68	3.3	3.1	<0.05	1.3	10.31	16.6	0.45	18	0.1	4.1	2.58	11.17	2.30	0.43	2.01	0.27	1.65	0.32	0.91
013N781146	Sediment Pulp	0.58	1.4	0.1	<0.05	0.2	7.75	52.7	<0.02	<1	0.3	2.4	6.19	21.68	3.09	0.55	2.14	0.25	1.43	0.26	0.71
013N781147	Sediment Pulp	1.22	2.2	0.3	<0.05	0.5	9.29	61.4	<0.02	<1	0.3	3.7	8.25	29.90	4.47	0.84	3.16	0.35	1.88	0.32	0.81
013N781148	Sediment Pulp	1.54	13.5	0.5	<0.05	1.2	12.88	69.7	0.02	<1	0.4	14.3	7.44	26.63	4.26	0.62	3.27	0.43	2.50	0.46	1.26
013N781149	Sediment Pulp	1.64	8.5	0.7	<0.05	1.0	11.62	69.9	<0.02	<1	0.3	13.3	8.97	30.09	4.80	0.90	3.86	0.50	2.63	0.49	1.25
013N781150	Sediment Pulp	2.33	11.5	0.5	<0.05	2.0	10.67	65.9	0.02	1	0.4	19.2	8.50	29.14	4.75	0.66	3.29	0.45	2.39	0.44	1.09
013N781151	Sediment Pulp	0.68	2.7	0.2	<0.05	0.4	5.42	50.0	<0.02	2	0.2	6.5	6.91	23.43	3.40	0.52	2.10	0.26	1.29	0.22	0.52
013N781152	Sediment Pulp	1.71	17.6	0.6	<0.05	2.2	17.55	98.3	0.04	<1	0.6	26.5	11.54	38.86	6.40	1.03	4.80	0.71	3.79	0.72	1.94
013N781153	Sediment Pulp	1.83	8.1	0.5	<0.05	1.3	13.75	82.9	<0.02	<1	0.4	10.2	9.89	32.72	5.32	0.86	3.89	0.56	2.99	0.53	1.44
013N781154	Sediment Pulp	2.06	13.7	0.6	<0.05	1.8	15.23	89.5	0.03	1	0.4	14.5	10.17	34.91	5.57	0.85	4.29	0.63	3.23	0.61	1.73
013N781155	Sediment Pulp	1.36	2.7	0.4	<0.05	1.1	8.68	57.5	0.02	4	0.3	7.9	7.07	23.05	3.63	0.68	2.67	0.37	1.89	0.33	0.88
013N781156	Sediment Pulp	0.70	1.9	0.2	<0.05	0.2	8.97	46.6	<0.02	<1	0.3	3.7	6.59	22.36	3.52	0.60	2.65	0.33	1.71	0.33	0.89
013N781157	Sediment Pulp	1.03	2.3	0.3	<0.05	0.4	12.17	73.8	<0.02	<1	0.4	4.5	9.42	33.06	4.94	0.88	3.63	0.49	2.58	0.47	1.28
013N781158	Sediment Pulp	1.00	1.4	0.2	<0.05	0.4	13.31	83.8	<0.02	1	0.5	2.7	11.07	38.72	6.00	0.89	3.88	0.55	2.86	0.51	1.42
013N781159	Sediment Pulp	1.93	6.0	0.4	<0.05	2.1	10.28	58.1	<0.02	<1	0.2	10.8	6.86	22.93	3.86	0.44	2.94	0.41	1.97	0.39	1.04
013N781160	Sediment Pulp	1.98	17.3	0.8	<0.05	3.7	16.05	97.6	0.04	<1	0.7	16.3	10.18	34.43	5.66	0.81	4.47	0.62	3.50	0.63	1.69
013N781161	Sediment Pulp	2.07	6.0	0.4	<0.05	2.3	10.47	58.8	<0.02	<1	0.3	9.7	7.15	24.56	4.11	0.48	3.13	0.42	2.31	0.40	1.08
013N781181	Sediment Pulp	0.98	1.4	0.2	<0.05	0.4	12.47	81.4	<0.02	<1	0.5	2.4	10.53	37.03	5.56	0.93	3.53	0.51	2.73	0.48	1.38
013N781240	Sediment Pulp	0.77	3.6	3.3	<0.05	1.4	10.48	18.8	0.46	21	<0.1	4.6	3.02	11.79	2.81	0.50	2.36	0.33	1.87	0.37	1.03
013N781241	Sediment Pulp	0.63	2.9	0.2	<0.05	0.2	7.21	51.4	<0.02	<1	0.3	4.4	8.92	30.86	4.00	0.57	2.58	0.28	1.53	0.25	0.73
013N781264	Sediment Pulp	1.05	8.7	0.6	<0.05	2.1	173.21	249.4	0.02	<1	5.0	15.6	33.56	125.96	23.87	1.75	22.76	3.98	24.43	5.18	14.64
013N781267	Sediment Pulp	1.13	5.4	0.4	<0.05	1.3	35.66	125.6	<0.02	<1	1.0	8.0	14.31	51.40	9.44	0.84	8.04	1.24	7.35	1.41	4.20
013N781281	Sediment Pulp	0.42	12.4	0.5	<0.05	3.4	11.63	58.1	<0.02	<1	0.3	10.7	6.85	23.70	3.89	0.64	2.74	0.40	2.44	0.43	1.32
013N781284	Sediment Pulp	0.60	12.7	0.5	<0.05	2.7	11.58	57.1	0.03	<1	0.4	9.9	7.00	24.95	3.82	0.64	2.96	0.42	2.29	0.45	1.25
013N781286	Sediment Pulp	0.70	1.3	0.2	<0.05	0.6	8.59	36.2	<0.02	2	0.1	3.2	6.05	21.43	3.13	0.52	2.74	0.31	1.69	0.33	0.86
013N781287	Sediment Pulp	0.90	1.2	0.2	<0.05	0.2	9.84	39.8	<0.02	2	0.2	2.6	6.46	22.78	3.58	0.54	2.54	0.36	1.91	0.38	1.03
013N781290	Sediment Pulp	1.90	25.1	1.2	<0.05	5.8	18.35	75.5	0.04	1	0.7	25.3	10.49	38.09	6.71	1.03	4.70	0.68	3.46	0.69	1.99
013N781291	Sediment Pulp	0.35	0.7	0.1	<0.05	0.4	5.11	17.9	<0.02	2	<0.1	1.0	3.02	11.53	1.80	0.31	1.57	0.17	1.03	0.18	0.54
013N781292	Sediment Pulp	0.64	1.4	0.1	<0.05	0.2	7.00	29.8	<0.02	<1	0.1	2.7	4.71	16.31	2.60	0.52	1.90	0.25	1.32	0.27	0.71
013N781294	Sediment Pulp	0.32	0.9	0.1	<0.05	0.2	2.31	13.2	<0.02	1	<0.1	1.5	1.65	6.05	0.93	0.18	0.65	0.08	0.49	0.09	0.23



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N781145	Sediment Pulp	0.12	0.81	0.12	<10	<2	
013N781146	Sediment Pulp	0.09	0.57	0.08	<10	<2	
013N781147	Sediment Pulp	0.10	0.61	0.08	<10	<2	
013N781148	Sediment Pulp	0.17	1.04	0.14	<10	<2	
013N781149	Sediment Pulp	0.18	1.01	0.15	<10	<2	
013N781150	Sediment Pulp	0.16	0.95	0.13	<10	<2	
013N781151	Sediment Pulp	0.07	0.44	0.05	<10	<2	
013N781152	Sediment Pulp	0.27	1.64	0.23	<10	<2	
013N781153	Sediment Pulp	0.20	1.18	0.17	<10	<2	
013N781154	Sediment Pulp	0.23	1.44	0.20	<10	<2	
013N781155	Sediment Pulp	0.13	0.73	0.10	<10	<2	
013N781156	Sediment Pulp	0.13	0.80	0.10	<10	<2	
013N781157	Sediment Pulp	0.16	1.02	0.13	<10	<2	
013N781158	Sediment Pulp	0.18	1.13	0.14	<10	<2	
013N781159	Sediment Pulp	0.15	0.96	0.13	<10	<2	
013N781160	Sediment Pulp	0.27	1.51	0.22	<10	<2	
013N781161	Sediment Pulp	0.16	0.99	0.12	<10	<2	
013N781181	Sediment Pulp	0.19	1.08	0.14	<10	<2	
013N781240	Sediment Pulp	0.15	0.95	0.13	<10	<2	
013N781241	Sediment Pulp	0.10	0.61	0.10	<10	<2	
013N781264	Sediment Pulp	1.82	9.62	1.21	<10	<2	
013N781267	Sediment Pulp	0.58	3.34	0.40	<10	<2	
013N781281	Sediment Pulp	0.19	1.17	0.17	<10	<2	
013N781284	Sediment Pulp	0.19	1.10	0.15	<10	<2	
013N781286	Sediment Pulp	0.11	0.73	0.10	<10	<2	
013N781287	Sediment Pulp	0.14	0.95	0.13	<10	<2	
013N781290	Sediment Pulp	0.28	1.66	0.25	<10	<2	
013N781291	Sediment Pulp	0.07	0.44	0.06	<10	<2	
013N781292	Sediment Pulp	0.10	0.68	0.09	<10	<2	
013N781294	Sediment Pulp	0.03	0.18	0.03	<10	<2	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781295	Sediment Pulp	10.00	27.35	2.95	62.5	192	14.0	23.5	2880	3.30	2.4	8.8	0.6	1.0	38.0	0.42	<0.02	<0.02	152	0.79	0.197
013N781296	Sediment Pulp	9.99	22.69	2.69	55.5	143	12.3	6.3	123	1.59	<0.1	2.1	<0.2	0.7	30.9	0.45	<0.02	<0.02	56	0.55	0.110
013N781297	Sediment Pulp	52.73	20.88	2.57	39.2	80	7.9	7.5	137	1.98	<0.1	3.2	0.3	1.2	35.7	0.29	<0.02	<0.02	34	0.59	0.074
013N781298	Sediment Pulp	5.03	21.10	7.24	84.6	66	32.0	15.9	254	2.76	1.1	1.9	0.3	5.8	71.3	0.21	<0.02	0.03	49	1.08	0.098
013N781299	Sediment Pulp	10.38	12.15	2.64	59.8	45	11.3	5.7	153	1.48	<0.1	2.3	0.2	0.7	37.5	0.28	<0.02	<0.02	40	0.56	0.048
013N781300	Sediment Pulp	1.26	14.46	4.14	61.1	23	25.9	10.6	173	2.12	0.6	0.8	1.1	4.6	67.2	0.07	<0.02	<0.02	35	1.05	0.055
013N781301	Sediment Pulp	2.47	11.93	1.67	38.5	41	11.4	3.8	36	0.47	<0.1	2.4	0.2	0.4	30.6	0.15	0.02	<0.02	15	0.46	0.023
013N781302	Sediment Pulp	2.94	13.79	1.87	41.9	50	13.1	4.2	42	0.51	0.2	2.8	<0.2	0.8	36.0	0.19	0.03	<0.02	16	0.52	0.027
013N781303	Sediment Pulp	3.08	21.96	2.60	94.0	65	28.7	10.0	88	1.14	0.2	5.0	<0.2	0.7	45.1	0.35	<0.02	<0.02	19	0.69	0.034
013N781304	Sediment Pulp	5.74	11.63	2.63	70.4	101	9.7	16.4	396	4.43	<0.1	29.4	<0.2	0.9	33.7	0.29	<0.02	<0.02	37	0.53	0.103
013N781305	Sediment Pulp	9.14	39.50	79.29	271.0	589	11.2	8.4	431	1.79	34.5	8.7	4.9	2.5	59.1	1.32	0.47	0.92	21	6.29	0.069
013N781306	Sediment Pulp	21.69	34.61	4.42	81.9	214	18.3	18.3	616	2.52	0.2	31.7	1.1	1.7	101.5	0.63	<0.02	0.02	32	1.07	0.166
013N781307	Sediment Pulp	10.90	58.22	8.52	117.4	217	18.2	19.0	753	4.30	0.9	35.9	0.7	3.2	38.5	0.62	<0.02	0.03	73	0.75	0.241
013N781308	Sediment Pulp	2.91	32.80	5.97	85.0	92	27.1	18.2	733	3.84	2.8	6.2	0.8	5.4	59.4	0.24	<0.02	0.03	67	0.92	0.174
013N781309	Sediment Pulp	2.83	15.04	2.82	61.9	74	20.6	12.1	89	1.63	0.2	4.6	0.7	1.3	36.4	0.21	0.02	<0.02	36	0.61	0.033
013N781312	Sediment Pulp	2.28	12.06	2.78	42.5	36	15.8	7.1	70	0.71	0.2	4.2	0.3	1.0	36.2	0.13	<0.02	<0.02	20	0.55	0.033
013N781313	Sediment Pulp	4.08	19.62	9.01	106.7	106	31.4	20.5	569	4.05	1.9	3.4	1.2	7.1	51.5	0.25	<0.02	0.02	72	0.79	0.161
013N781314	Sediment Pulp	16.51	16.15	2.37	57.1	125	11.1	13.6	322	2.53	<0.1	23.6	0.2	1.4	24.5	0.37	<0.02	<0.02	42	0.49	0.054
013N781315	Sediment Pulp	4.48	14.97	4.41	76.8	71	23.1	18.3	467	2.82	1.0	1.3	0.5	2.3	36.0	0.23	<0.02	<0.02	44	0.57	0.063
013N781316	Sediment Pulp	3.98	25.76	5.80	65.9	151	12.4	8.0	152	1.56	0.1	3.6	0.3	0.8	27.9	0.42	<0.02	<0.02	43	0.49	0.097
013N781317	Sediment Pulp	0.61	12.81	5.05	52.7	27	18.0	10.5	233	2.34	0.5	0.9	<0.2	8.2	52.6	0.10	<0.02	<0.02	42	0.94	0.102
013N781319	Sediment Pulp	3.32	8.96	2.77	29.4	91	10.4	2.8	61	0.51	<0.1	5.6	0.3	0.8	27.9	0.26	<0.02	<0.02	22	0.37	0.058
013N781320	Sediment Pulp	6.41	18.50	4.49	32.3	198	10.0	3.1	99	1.29	<0.1	18.6	0.4	1.1	23.0	0.29	<0.02	0.19	46	0.37	0.205
013N781321	Sediment Pulp	6.37	17.47	4.54	33.2	194	9.6	2.9	98	1.28	<0.1	19.2	0.8	0.4	23.1	0.31	<0.02	0.05	45	0.37	0.186
013N781322	Sediment Pulp	8.46	20.89	2.45	58.2	191	11.0	12.2	261	3.28	6.0	13.0	0.4	0.7	37.8	0.26	0.02	<0.02	65	1.03	0.118
013N781323	Sediment Pulp	1.00	20.57	9.31	86.7	68	35.9	17.8	362	3.26	2.1	2.6	0.4	5.1	44.1	0.13	0.03	0.06	58	0.68	0.130
013N781324	Sediment Pulp	2.16	27.49	7.45	83.5	68	33.0	25.2	1930	5.17	11.2	8.8	0.5	5.9	43.9	0.14	0.03	0.05	60	0.72	0.431
013N781325	Sediment Pulp	2.98	19.20	2.89	21.5	287	8.0	1.7	48	0.40	0.2	9.1	0.8	0.5	18.7	0.25	<0.02	<0.02	22	0.48	0.093
013N781326	Sediment Pulp	1.79	15.42	6.15	78.7	53	24.0	14.6	549	3.22	8.1	3.3	0.5	5.0	43.2	0.17	0.04	0.03	53	0.73	0.131
013N781327	Sediment Pulp	8.83	38.70	74.44	282.9	542	12.1	7.9	427	1.78	34.8	8.2	3.1	1.7	59.3	1.27	0.50	0.86	21	6.16	0.066



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013N781295	Sediment Pulp	44.3	33.6	0.11	64.2	0.022	<20	2.87	0.071	0.04	0.9	1.5	0.16	0.22	95	2.9	<0.02	6.7	0.15	0.1	<0.02
013N781296	Sediment Pulp	37.2	24.8	0.10	62.4	0.021	<20	2.39	0.048	0.02	0.3	1.2	0.05	0.23	75	2.0	<0.02	3.7	0.13	<0.1	<0.02
013N781297	Sediment Pulp	41.2	12.1	0.07	43.3	0.023	<20	2.71	0.059	0.02	<0.1	1.2	0.06	0.14	85	1.3	<0.02	3.9	0.08	<0.1	<0.02
013N781298	Sediment Pulp	45.9	39.8	0.77	156.7	0.114	<20	3.92	0.241	0.25	0.1	5.3	0.13	0.09	57	0.6	<0.02	9.5	0.71	<0.1	0.07
013N781299	Sediment Pulp	36.0	15.4	0.15	83.4	0.024	<20	1.99	0.092	0.04	0.2	1.3	0.05	0.19	58	0.7	<0.02	3.3	0.16	<0.1	<0.02
013N781300	Sediment Pulp	30.8	30.4	0.61	102.2	0.088	<20	2.94	0.237	0.17	0.1	4.3	0.09	0.12	40	0.4	<0.02	7.3	0.47	<0.1	0.06
013N781301	Sediment Pulp	16.0	8.9	0.11	20.6	0.019	<20	1.04	0.045	0.02	<0.1	1.0	0.03	0.23	80	0.7	<0.02	2.1	0.15	<0.1	<0.02
013N781302	Sediment Pulp	18.4	10.7	0.12	24.4	0.022	<20	1.18	0.052	0.02	<0.1	1.0	0.03	0.26	87	0.9	<0.02	2.5	0.17	<0.1	<0.02
013N781303	Sediment Pulp	20.8	16.8	0.25	55.4	0.037	<20	2.31	0.125	0.05	0.1	1.8	0.06	0.18	73	0.8	<0.02	4.5	0.69	<0.1	<0.02
013N781304	Sediment Pulp	19.3	14.4	0.07	35.2	0.024	<20	2.43	0.062	0.02	<0.1	1.4	0.10	0.16	87	2.0	<0.02	3.7	0.18	<0.1	<0.02
013N781305	Sediment Pulp	10.8	12.6	0.59	91.9	0.040	<20	0.45	0.027	0.05	0.5	2.6	0.21	1.55	109	0.7	<0.02	2.0	0.52	<0.1	0.06
013N781306	Sediment Pulp	42.7	26.7	0.15	39.8	0.036	<20	4.50	0.117	0.04	0.1	2.4	0.14	0.62	96	2.9	<0.02	4.9	0.51	<0.1	0.03
013N781307	Sediment Pulp	73.7	31.5	0.19	44.7	0.050	<20	4.73	0.068	0.05	0.2	3.0	0.24	0.27	161	3.0	<0.02	5.9	0.34	0.1	0.03
013N781308	Sediment Pulp	51.9	36.2	0.55	74.1	0.084	<20	3.50	0.180	0.18	0.3	4.3	0.21	0.12	85	1.0	<0.02	6.6	0.94	<0.1	<0.02
013N781309	Sediment Pulp	26.5	17.4	0.18	20.9	0.033	<20	1.95	0.048	0.05	0.2	1.9	0.15	0.41	107	1.0	<0.02	3.3	0.38	<0.1	<0.02
013N781312	Sediment Pulp	26.9	18.0	0.19	46.0	0.039	<20	1.75	0.077	0.05	<0.1	1.9	0.06	0.31	54	0.4	<0.02	3.6	0.55	<0.1	<0.02
013N781313	Sediment Pulp	46.4	40.8	0.72	135.3	0.129	<20	3.40	0.157	0.27	0.2	6.1	0.24	0.10	85	0.7	<0.02	8.9	1.54	<0.1	0.03
013N781314	Sediment Pulp	35.7	14.8	0.06	40.6	0.022	<20	2.49	0.033	0.01	<0.1	1.9	0.11	0.22	109	1.2	<0.02	2.8	0.20	<0.1	<0.02
013N781315	Sediment Pulp	27.4	24.8	0.37	89.6	0.059	<20	2.61	0.106	0.11	0.1	3.6	0.14	0.12	83	0.4	<0.02	4.9	0.54	<0.1	0.03
013N781316	Sediment Pulp	32.6	20.2	0.18	56.1	0.046	<20	2.47	0.031	0.05	<0.1	1.9	0.08	0.15	94	0.9	<0.02	5.2	0.44	<0.1	<0.02
013N781317	Sediment Pulp	43.3	26.2	0.58	126.9	0.097	<20	1.99	0.209	0.18	<0.1	4.1	0.11	0.03	75	<0.1	<0.02	5.9	0.42	<0.1	0.07
013N781319	Sediment Pulp	13.9	13.0	0.11	72.7	0.026	<20	1.42	0.020	0.02	<0.1	1.0	0.02	0.20	89	0.8	<0.02	4.2	0.21	<0.1	<0.02
013N781320	Sediment Pulp	25.1	18.3	0.06	78.5	0.058	<20	3.19	0.010	0.02	0.1	1.8	0.03	0.37	174	2.7	<0.02	10.7	0.23	<0.1	0.02
013N781321	Sediment Pulp	24.8	19.0	0.06	79.6	0.060	<20	3.15	0.011	0.02	<0.1	1.9	0.03	0.37	165	2.7	<0.02	10.9	0.23	<0.1	0.02
013N781322	Sediment Pulp	33.3	29.4	0.13	51.8	0.040	<20	2.69	0.019	0.02	0.4	2.6	0.05	0.22	145	1.6	<0.02	3.9	0.23	<0.1	0.02
013N781323	Sediment Pulp	35.1	38.7	1.01	110.7	0.122	<20	2.68	0.155	0.32	<0.1	6.7	0.13	0.05	108	0.1	<0.02	7.5	1.16	<0.1	0.10
013N781324	Sediment Pulp	37.4	41.5	0.88	127.5	0.103	<20	2.73	0.106	0.26	0.5	5.8	0.13	0.09	49	0.5	<0.02	6.8	1.09	<0.1	0.04
013N781325	Sediment Pulp	12.7	14.4	0.09	65.2	0.035	<20	1.01	0.025	0.02	<0.1	1.0	0.03	0.20	175	0.9	<0.02	4.7	0.42	<0.1	0.02
013N781326	Sediment Pulp	27.6	37.0	0.65	101.6	0.102	<20	2.40	0.139	0.18	0.1	4.6	0.12	0.07	121	0.3	<0.02	6.7	1.00	<0.1	0.06
013N781327	Sediment Pulp	10.2	12.9	0.58	90.2	0.039	<20	0.45	0.027	0.05	0.4	2.3	0.21	1.54	99	0.8	<0.02	2.0	0.50	<0.1	0.04



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Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781295 Sediment Pulp	0.26	2.1	0.1	<0.05	0.3	11.64	66.0	<0.02	2	0.2	4.5	11.45	38.30	5.51	0.79	3.20	0.44	2.00	0.38	1.13
013N781296 Sediment Pulp	0.61	1.6	0.1	<0.05	0.3	7.69	60.3	<0.02	<1	0.2	3.2	8.93	30.20	4.08	0.62	2.66	0.29	1.48	0.26	0.73
013N781297 Sediment Pulp	0.67	1.0	<0.1	<0.05	0.3	7.61	76.7	<0.02	2	0.2	2.0	10.32	34.38	4.58	0.60	2.56	0.33	1.72	0.29	0.80
013N781298 Sediment Pulp	3.11	20.8	0.7	<0.05	2.5	13.96	81.9	0.03	<1	0.4	20.9	10.41	35.67	5.80	0.85	3.58	0.54	2.99	0.53	1.43
013N781299 Sediment Pulp	0.62	2.8	0.1	<0.05	0.2	7.00	50.9	<0.02	1	0.2	4.7	8.44	30.50	4.03	0.59	2.56	0.29	1.60	0.27	0.73
013N781300 Sediment Pulp	2.41	13.9	0.5	<0.05	2.4	11.37	57.9	0.02	1	0.3	16.0	7.35	25.81	4.27	0.61	2.86	0.44	2.46	0.42	1.28
013N781301 Sediment Pulp	0.57	1.5	0.1	<0.05	0.3	3.77	27.2	<0.02	<1	0.1	3.1	3.74	13.05	1.78	0.29	1.18	0.15	0.78	0.15	0.40
013N781302 Sediment Pulp	0.65	1.8	0.1	<0.05	1.0	4.56	32.0	<0.02	1	<0.1	3.7	4.26	14.74	2.10	0.34	1.35	0.18	0.97	0.17	0.47
013N781303 Sediment Pulp	1.02	3.7	0.2	<0.05	0.6	6.67	36.2	<0.02	1	0.2	8.2	5.05	18.32	2.90	0.51	1.93	0.25	1.37	0.23	0.69
013N781304 Sediment Pulp	0.50	1.2	0.1	<0.05	0.3	7.15	35.4	<0.02	<1	0.2	2.2	4.50	15.78	2.46	0.50	1.72	0.24	1.23	0.23	0.75
013N781305 Sediment Pulp	0.73	3.3	3.2	<0.05	2.2	9.81	17.4	0.43	21	0.2	4.2	2.88	12.90	2.57	0.46	2.31	0.32	1.83	0.35	0.92
013N781306 Sediment Pulp	0.92	2.4	0.2	<0.05	0.9	13.68	80.5	<0.02	<1	0.1	4.0	9.65	36.05	5.47	1.03	4.37	0.51	3.11	0.48	1.40
013N781307 Sediment Pulp	1.67	3.3	0.2	<0.05	1.0	30.65	150.6	<0.02	3	0.3	4.3	16.93	64.24	9.88	1.48	8.42	1.03	6.43	1.02	2.73
013N781308 Sediment Pulp	1.62	13.8	0.5	<0.05	1.0	16.48	117.3	<0.02	<1	0.4	17.6	12.83	47.58	6.86	1.10	5.28	0.64	3.88	0.63	1.70
013N781309 Sediment Pulp	1.23	4.5	0.3	<0.05	0.9	7.18	44.9	<0.02	2	0.4	5.2	6.27	23.45	3.38	0.55	2.57	0.28	1.69	0.26	0.72
013N781312 Sediment Pulp	1.07	4.1	0.2	<0.05	0.7	7.61	38.4	<0.02	<1	0.2	7.2	6.56	24.92	3.79	0.66	2.59	0.30	1.77	0.27	0.73
013N781313 Sediment Pulp	2.96	24.3	0.9	<0.05	2.1	14.67	102.2	0.02	<1	0.6	22.3	11.03	40.10	5.98	0.92	4.34	0.65	3.66	0.59	1.63
013N781314 Sediment Pulp	0.59	1.0	<0.1	<0.05	0.4	8.91	57.1	<0.02	<1	0.2	1.7	8.80	31.31	4.42	0.74	2.99	0.34	1.88	0.31	0.86
013N781315 Sediment Pulp	1.64	8.8	0.3	<0.05	0.9	9.90	60.3	<0.02	<1	0.2	11.1	6.89	25.40	3.89	0.67	2.90	0.39	2.49	0.36	1.07
013N781316 Sediment Pulp	1.56	4.4	0.3	<0.05	0.6	10.79	61.6	<0.02	<1	0.4	6.3	8.11	30.28	4.70	0.83	3.13	0.47	2.68	0.40	1.11
013N781317 Sediment Pulp	2.27	13.6	0.6	<0.05	2.6	15.92	89.6	<0.02	<1	0.6	10.7	10.75	39.84	6.25	0.77	5.09	0.65	3.95	0.59	1.78
013N781319 Sediment Pulp	0.87	1.6	0.2	<0.05	0.6	6.44	27.3	<0.02	<1	0.6	2.5	3.66	14.59	2.49	0.48	2.28	0.27	1.59	0.24	0.63
013N781320 Sediment Pulp	2.11	1.2	0.3	<0.05	1.3	10.91	47.6	0.02	2	0.4	1.4	6.19	24.71	4.56	1.00	3.74	0.52	3.12	0.47	1.15
013N781321 Sediment Pulp	2.13	1.3	0.3	<0.05	1.1	11.23	46.3	0.03	1	0.4	1.6	6.18	23.56	4.35	0.86	3.59	0.47	3.00	0.48	1.21
013N781322 Sediment Pulp	1.24	1.6	0.1	<0.05	0.6	17.80	56.1	<0.02	1	0.7	3.7	8.66	35.49	6.33	1.20	5.40	0.71	4.17	0.67	1.74
013N781323 Sediment Pulp	1.96	21.5	0.7	<0.05	4.4	15.25	69.7	0.03	<1	0.9	21.2	8.97	35.55	5.97	1.01	5.02	0.63	3.88	0.61	1.54
013N781324 Sediment Pulp	1.13	18.9	0.6	<0.05	2.0	16.98	92.4	0.03	2	0.6	28.8	9.27	34.38	5.98	1.02	4.58	0.66	3.82	0.65	1.75
013N781325 Sediment Pulp	1.03	2.0	0.3	<0.05	1.2	5.32	24.7	<0.02	<1	0.2	3.0	3.15	12.62	2.25	0.40	1.65	0.23	1.50	0.21	0.61
013N781326 Sediment Pulp	1.74	15.2	0.6	<0.05	2.3	10.49	59.2	<0.02	<1	0.1	17.8	6.53	25.21	4.06	0.68	3.10	0.42	2.55	0.41	1.21
013N781327 Sediment Pulp	0.73	3.3	3.0	<0.05	1.3	9.90	17.1	0.44	18	0.3	4.0	2.84	11.92	2.42	0.50	2.20	0.32	2.07	0.35	0.88



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Project: None Given

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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013N781295	Sediment Pulp	0.15	1.06	0.14	<10	<2
013N781296	Sediment Pulp	0.10	0.65	0.07	<10	<2
013N781297	Sediment Pulp	0.10	0.70	0.08	<10	<2
013N781298	Sediment Pulp	0.20	1.28	0.17	<10	<2
013N781299	Sediment Pulp	0.11	0.55	0.08	<10	<2
013N781300	Sediment Pulp	0.16	1.17	0.14	<10	<2
013N781301	Sediment Pulp	0.06	0.33	0.04	<10	<2
013N781302	Sediment Pulp	0.07	0.39	0.05	<10	<2
013N781303	Sediment Pulp	0.10	0.57	0.07	<10	<2
013N781304	Sediment Pulp	0.10	0.61	0.08	<10	<2
013N781305	Sediment Pulp	0.14	1.05	0.13	<10	<2
013N781306	Sediment Pulp	0.18	1.26	0.15	<10	<2
013N781307	Sediment Pulp	0.37	2.54	0.31	<10	3
013N781308	Sediment Pulp	0.26	1.57	0.20	<10	<2
013N781309	Sediment Pulp	0.09	0.68	0.06	<10	<2
013N781312	Sediment Pulp	0.09	0.68	0.07	<10	<2
013N781313	Sediment Pulp	0.22	1.59	0.18	<10	<2
013N781314	Sediment Pulp	0.12	0.77	0.09	<10	<2
013N781315	Sediment Pulp	0.14	1.03	0.12	<10	<2
013N781316	Sediment Pulp	0.15	1.14	0.11	<10	<2
013N781317	Sediment Pulp	0.27	1.80	0.20	<10	<2
013N781319	Sediment Pulp	0.07	0.58	0.06	<10	<2
013N781320	Sediment Pulp	0.16	1.01	0.11	<10	<2
013N781321	Sediment Pulp	0.15	1.06	0.11	<10	<2
013N781322	Sediment Pulp	0.24	1.43	0.16	<10	<2
013N781323	Sediment Pulp	0.21	1.43	0.16	<10	<2
013N781324	Sediment Pulp	0.24	1.56	0.20	<10	<2
013N781325	Sediment Pulp	0.09	0.52	0.04	<10	<2
013N781326	Sediment Pulp	0.16	1.05	0.13	<10	<2
013N781327	Sediment Pulp	0.13	0.97	0.11	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781328	Sediment Pulp	15.04	27.24	6.08	46.4	345	10.0	5.8	248	2.19	0.1	60.1	0.4	0.5	96.0	0.36	<0.02	0.05	64	1.94	0.209
013N781329	Sediment Pulp	6.91	23.90	6.37	88.8	194	21.3	23.3	701	4.24	0.3	12.0	<0.2	1.4	44.4	0.42	<0.02	<0.02	57	0.65	0.149
013N781330	Sediment Pulp	6.63	24.45	6.23	91.3	190	22.3	22.4	811	4.00	0.3	12.7	<0.2	1.6	44.2	0.45	<0.02	<0.02	56	0.66	0.159
013N781331	Sediment Pulp	0.55	8.56	3.55	43.8	21	16.6	6.7	134	1.07	0.3	4.5	0.3	1.7	44.9	0.07	<0.02	<0.02	24	0.71	0.046
013N781332	Sediment Pulp	3.24	22.29	2.59	46.9	61	22.5	5.0	59	0.60	0.2	10.5	0.4	0.4	26.2	0.21	<0.02	<0.02	20	0.56	0.038
013N781333	Sediment Pulp	7.03	40.49	4.08	68.9	240	25.4	6.9	201	1.27	0.2	35.5	0.3	0.2	31.5	0.46	<0.02	<0.02	38	0.69	0.142
013N781334	Sediment Pulp	0.74	31.08	6.20	101.3	55	24.6	11.6	345	2.24	1.3	4.5	0.3	6.4	40.8	0.19	<0.02	<0.02	48	0.64	0.150
013N781335	Sediment Pulp	6.21	26.50	7.24	81.0	204	26.1	19.1	512	5.52	0.4	10.4	<0.2	2.7	34.9	0.36	<0.02	0.02	59	0.57	0.168
013N781336	Sediment Pulp	9.93	36.07	4.14	107.4	134	41.2	4.8	75	1.39	<0.1	6.9	0.5	3.0	24.0	0.52	<0.02	0.06	33	0.41	0.064
013N781338	Sediment Pulp	2.21	14.26	2.42	26.6	85	11.3	2.5	44	0.64	<0.1	3.4	<0.2	0.5	29.5	0.19	<0.02	<0.02	23	0.54	0.044
013N781339	Sediment Pulp	2.14	10.39	4.43	57.7	52	21.8	11.1	173	1.92	0.6	1.2	0.5	2.1	47.7	0.16	<0.02	<0.02	42	0.76	0.081
013N781340	Sediment Pulp	3.52	27.27	7.24	106.2	96	26.1	15.8	623	3.73	2.7	4.3	0.3	3.7	51.6	0.40	0.03	0.03	71	0.80	0.244
013N781341	Sediment Pulp	3.26	20.68	2.51	46.1	60	21.1	4.7	59	0.63	0.2	10.2	<0.2	0.5	24.6	0.24	<0.02	<0.02	20	0.58	0.036
013N781342	Sediment Pulp	1.13	9.63	3.71	58.3	41	20.6	5.8	109	1.05	0.4	1.4	<0.2	1.1	38.4	0.17	<0.02	<0.02	24	0.56	0.048
013N781343	Sediment Pulp	1.99	11.27	3.31	60.4	66	26.1	8.7	145	1.23	0.3	1.0	0.4	0.8	34.7	0.22	<0.02	<0.02	36	0.53	0.040
013N781345	Sediment Pulp	8.51	41.83	4.95	89.8	379	16.2	32.9	1288	11.97	0.3	4.7	0.5	2.1	28.1	0.66	<0.02	<0.02	64	0.45	0.239
013N781346	Sediment Pulp	10.44	28.62	4.58	62.0	300	12.9	15.0	757	4.71	<0.1	2.9	0.8	1.8	35.4	0.46	<0.02	0.08	58	0.68	0.224
013N781347	Sediment Pulp	0.84	32.12	21.43	123.6	2533	42.8	27.3	1209	3.05	24.3	3.5	2.8	8.0	26.6	0.52	0.50	3.06	47	0.61	0.099
013N781348	Sediment Pulp	9.18	28.34	4.27	64.5	271	13.4	17.9	905	6.20	<0.1	2.7	0.4	1.9	30.2	0.44	<0.02	0.04	57	0.57	0.195
013N781349	Sediment Pulp	11.23	32.11	4.36	86.0	262	27.9	44.0	2723	6.68	<0.1	6.1	0.6	1.5	22.8	0.73	<0.02	0.03	45	0.37	0.212
013N781350	Sediment Pulp	5.23	83.05	12.26	106.9	158	26.7	15.4	450	2.53	0.8	10.2	0.3	2.3	43.0	0.59	<0.02	0.09	36	0.78	0.117
013N781351	Sediment Pulp	135.47	224.43	8.26	147.8	1008	32.0	12.2	187	3.71	<0.1	29.7	0.9	1.3	24.9	1.22	0.04	0.29	40	0.62	0.329
013N781352	Sediment Pulp	2.36	35.47	3.01	63.3	53	20.2	7.2	125	1.10	<0.1	7.0	0.3	2.5	59.1	0.21	<0.02	<0.02	35	0.94	0.096
013N781353	Sediment Pulp	4.34	20.24	4.23	70.7	98	24.7	19.5	728	3.44	0.3	2.6	0.2	2.3	53.9	0.25	<0.02	0.02	42	0.79	0.108
013N781354	Sediment Pulp	3.13	15.71	4.16	64.8	103	23.3	7.1	98	1.41	0.4	3.2	0.4	1.0	40.7	0.26	<0.02	<0.02	32	0.56	0.087
013N781355	Sediment Pulp	4.86	42.87	8.19	153.6	228	26.6	27.5	1010	6.74	2.2	4.4	0.4	2.4	29.7	0.61	<0.02	0.03	58	0.48	0.238
013N781356	Sediment Pulp	1.23	18.89	4.60	81.5	60	27.1	10.1	143	1.45	0.6	1.6	<0.2	1.7	43.2	0.17	<0.02	<0.02	38	0.67	0.087
013N781357	Sediment Pulp	4.53	17.67	3.77	57.4	125	21.9	5.6	82	0.75	0.2	3.4	0.8	0.7	43.5	0.19	<0.02	0.02	21	0.58	0.061
013N781361	Sediment Pulp	4.49	22.23	4.24	69.2	101	24.3	19.3	741	3.51	0.7	2.6	<0.2	2.2	53.5	0.25	<0.02	0.02	43	0.81	0.105
013N781370	Sediment Pulp	9.26	40.91	77.03	300.7	651	12.9	7.8	439	1.84	38.2	8.7	7.7	1.7	62.7	1.38	0.50	1.18	22	6.75	0.070



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Project: None Given

Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N781328	Sediment Pulp	35.1	20.4	0.11	139.8	0.068	<20	3.41	0.022	0.02	0.2	2.7	0.05	0.30	251	2.7	<0.02	12.0	0.23	<0.1	0.02
013N781329	Sediment Pulp	28.6	29.4	0.38	89.2	0.071	<20	3.69	0.103	0.08	<0.1	3.5	0.11	0.17	132	1.9	<0.02	8.3	0.53	<0.1	<0.02
013N781330	Sediment Pulp	28.9	30.5	0.38	93.7	0.075	<20	3.62	0.102	0.08	<0.1	3.7	0.12	0.16	128	1.7	<0.02	8.8	0.52	<0.1	0.02
013N781331	Sediment Pulp	13.0	23.7	0.40	67.5	0.071	<20	1.78	0.142	0.07	<0.1	2.4	0.04	0.06	40	<0.1	<0.02	4.6	0.44	<0.1	0.02
013N781332	Sediment Pulp	13.9	18.4	0.18	31.2	0.028	<20	1.35	0.041	0.03	<0.1	1.3	0.04	0.30	95	0.8	<0.02	2.5	0.31	<0.1	<0.02
013N781333	Sediment Pulp	18.9	24.6	0.11	51.7	0.037	<20	2.34	0.029	0.02	<0.1	1.5	0.06	0.29	169	2.7	<0.02	5.3	0.33	<0.1	<0.02
013N781334	Sediment Pulp	56.1	32.9	0.58	78.9	0.100	<20	2.06	0.107	0.19	0.2	4.5	0.15	0.09	92	<0.1	<0.02	5.9	0.87	0.1	0.05
013N781335	Sediment Pulp	32.3	32.9	0.38	99.6	0.083	<20	3.57	0.074	0.09	<0.1	3.5	0.14	0.17	129	1.8	<0.02	10.8	0.91	<0.1	0.02
013N781336	Sediment Pulp	36.4	25.6	0.06	69.9	0.024	<20	2.73	0.010	0.01	<0.1	1.7	0.06	0.41	115	2.4	<0.02	3.3	0.25	<0.1	0.09
013N781338	Sediment Pulp	19.2	12.5	0.10	58.1	0.031	<20	1.76	0.065	0.02	<0.1	1.2	0.03	0.24	97	1.0	<0.02	3.3	0.17	<0.1	<0.02
013N781339	Sediment Pulp	17.1	28.1	0.43	79.9	0.078	<20	2.51	0.159	0.10	<0.1	2.9	0.08	0.07	50	0.3	<0.02	6.8	0.91	<0.1	0.02
013N781340	Sediment Pulp	39.5	36.1	0.57	81.8	0.082	<20	3.48	0.149	0.17	0.3	3.7	0.15	0.12	79	1.4	<0.02	7.3	1.14	<0.1	<0.02
013N781341	Sediment Pulp	13.5	18.5	0.19	31.1	0.027	<20	1.39	0.042	0.03	<0.1	1.3	0.04	0.31	82	0.7	<0.02	2.4	0.31	<0.1	<0.02
013N781342	Sediment Pulp	22.1	22.8	0.32	68.6	0.057	<20	1.81	0.095	0.10	<0.1	2.3	0.07	0.21	83	0.5	<0.02	4.4	0.64	<0.1	0.02
013N781343	Sediment Pulp	20.3	22.0	0.30	86.0	0.052	<20	2.38	0.080	0.08	<0.1	2.0	0.06	0.21	67	0.7	<0.02	4.9	0.52	<0.1	0.03
013N781345	Sediment Pulp	44.8	23.6	0.11	41.3	0.047	<20	4.40	0.043	0.02	0.1	2.6	0.17	0.23	168	3.6	<0.02	7.5	0.28	0.1	0.02
013N781346	Sediment Pulp	38.6	21.8	0.14	43.8	0.051	<20	4.55	0.058	0.03	0.1	2.6	0.11	0.22	186	2.8	<0.02	7.8	0.25	<0.1	<0.02
013N781347	Sediment Pulp	38.1	49.0	0.79	162.6	0.094	<20	1.69	0.029	0.26	0.2	6.0	0.26	0.15	269	0.4	0.03	5.4	1.36	<0.1	0.13
013N781348	Sediment Pulp	36.0	20.9	0.11	39.1	0.049	<20	4.41	0.053	0.02	<0.1	2.3	0.13	0.20	163	2.5	<0.02	7.6	0.24	<0.1	<0.02
013N781349	Sediment Pulp	32.2	21.9	0.08	45.4	0.037	<20	3.76	0.026	0.02	<0.1	2.3	0.21	0.25	158	3.5	<0.02	5.8	0.29	<0.1	0.02
013N781350	Sediment Pulp	36.3	24.1	0.27	32.7	0.046	<20	3.30	0.156	0.05	0.2	2.3	0.15	0.10	68	1.2	<0.02	5.1	0.42	<0.1	<0.02
013N781351	Sediment Pulp	96.8	33.1	0.11	35.5	0.039	<20	4.68	0.026	0.03	0.8	2.6	0.22	0.38	319	5.2	<0.02	6.6	0.72	0.1	0.03
013N781352	Sediment Pulp	39.6	23.2	0.29	45.8	0.052	<20	2.46	0.220	0.08	<0.1	2.3	0.14	0.10	111	0.5	<0.02	4.9	0.35	<0.1	<0.02
013N781353	Sediment Pulp	21.8	30.2	0.47	62.7	0.063	<20	2.89	0.167	0.07	<0.1	2.8	0.13	0.08	77	1.0	<0.02	7.0	0.60	<0.1	<0.02
013N781354	Sediment Pulp	26.3	28.3	0.27	63.4	0.046	<20	2.14	0.060	0.08	0.1	2.1	0.08	0.24	93	0.9	<0.02	4.3	0.77	<0.1	0.02
013N781355	Sediment Pulp	43.3	33.4	0.34	71.5	0.066	<20	4.00	0.053	0.09	0.2	4.0	0.17	0.19	96	2.5	<0.02	7.2	0.72	0.1	<0.02
013N781356	Sediment Pulp	30.6	27.5	0.46	88.3	0.075	<20	2.74	0.101	0.11	<0.1	3.2	0.10	0.14	67	0.4	<0.02	6.2	0.88	<0.1	0.03
013N781357	Sediment Pulp	22.7	16.4	0.24	50.2	0.039	<20	1.42	0.077	0.07	0.1	1.8	0.05	0.26	77	0.6	<0.02	3.4	0.51	<0.1	0.02
013N781361	Sediment Pulp	21.1	31.1	0.48	60.3	0.066	<20	2.96	0.171	0.07	<0.1	2.9	0.13	0.08	72	1.0	<0.02	7.0	0.61	<0.1	<0.02
013N781370	Sediment Pulp	11.3	13.2	0.61	101.4	0.042	<20	0.47	0.029	0.05	0.7	2.5	0.23	1.55	98	0.9	<0.02	2.2	0.54	<0.1	0.05



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781328	Sediment Pulp	1.80	1.3	0.3	<0.05	1.1	18.91	64.4	0.03	8	0.6	1.7	9.21	37.15	6.71	1.32	5.69	0.75	4.59	0.70	1.71
013N781329	Sediment Pulp	1.49	6.1	0.3	<0.05	0.8	17.05	63.2	<0.02	2	0.4	10.8	7.31	28.31	5.01	1.02	4.33	0.62	3.89	0.63	1.66
013N781330	Sediment Pulp	1.45	6.0	0.3	<0.05	0.8	16.97	63.2	<0.02	2	0.4	10.5	7.31	28.82	4.81	1.07	4.52	0.62	3.92	0.63	1.67
013N781331	Sediment Pulp	1.09	5.4	0.3	<0.05	1.2	4.97	25.0	<0.02	<1	<0.1	12.0	3.02	11.53	1.99	0.39	1.53	0.20	1.19	0.17	0.51
013N781332	Sediment Pulp	0.71	2.5	0.2	<0.05	0.5	6.03	25.2	<0.02	1	<0.1	4.3	3.41	13.83	2.34	0.42	1.91	0.25	1.48	0.23	0.61
013N781333	Sediment Pulp	1.14	1.6	0.2	<0.05	0.5	9.05	35.0	<0.02	4	0.2	2.8	4.80	18.90	3.16	0.65	2.51	0.35	2.08	0.32	0.83
013N781334	Sediment Pulp	2.07	16.9	0.6	<0.05	2.0	19.28	110.5	<0.02	<1	0.6	19.0	13.69	51.44	7.86	1.05	5.84	0.73	4.40	0.71	1.88
013N781335	Sediment Pulp	1.90	7.6	0.4	<0.05	1.0	12.92	62.7	<0.02	<1	0.4	10.7	7.90	30.92	5.16	0.91	4.06	0.51	3.25	0.52	1.29
013N781336	Sediment Pulp	1.14	1.0	0.2	<0.05	4.4	11.31	69.8	<0.02	<1	0.7	1.2	8.43	31.56	4.89	0.87	3.69	0.47	2.85	0.43	1.11
013N781338	Sediment Pulp	0.81	1.1	0.1	<0.05	0.6	5.48	35.3	<0.02	<1	0.3	2.9	4.48	16.74	2.76	0.46	2.19	0.23	1.42	0.21	0.55
013N781339	Sediment Pulp	1.42	8.1	0.4	<0.05	1.1	6.01	35.2	<0.02	<1	0.3	13.1	4.19	16.52	2.74	0.50	1.99	0.26	1.49	0.26	0.64
013N781340	Sediment Pulp	1.57	13.4	0.5	<0.05	0.9	13.59	93.3	<0.02	3	0.4	22.0	9.63	36.44	5.48	0.88	4.02	0.53	3.09	0.50	1.39
013N781341	Sediment Pulp	0.69	2.4	0.2	<0.05	0.5	5.91	24.2	<0.02	2	0.2	4.5	3.31	13.05	2.19	0.40	1.82	0.23	1.33	0.22	0.56
013N781342	Sediment Pulp	1.52	8.3	0.4	<0.05	1.2	7.05	41.8	<0.02	<1	0.2	11.0	5.20	20.08	3.05	0.51	2.15	0.28	1.72	0.28	0.76
013N781343	Sediment Pulp	1.35	6.7	0.3	<0.05	0.9	6.10	38.0	<0.02	<1	0.2	9.3	4.99	18.51	2.83	0.52	2.43	0.28	1.46	0.23	0.65
013N781345	Sediment Pulp	1.00	1.6	0.2	<0.05	0.6	16.77	80.2	<0.02	1	0.4	2.7	10.65	39.94	6.16	1.14	4.55	0.61	3.79	0.59	1.59
013N781346	Sediment Pulp	1.22	1.6	0.4	<0.05	0.6	12.66	74.8	<0.02	<1	0.5	3.1	9.44	34.49	5.39	1.03	4.01	0.52	2.84	0.43	1.16
013N781347	Sediment Pulp	1.85	24.7	1.3	<0.05	5.5	17.18	71.5	0.03	<1	0.6	21.4	9.77	38.86	6.41	0.98	4.72	0.60	3.55	0.61	1.67
013N781348	Sediment Pulp	1.01	1.5	0.2	<0.05	0.5	12.31	65.3	<0.02	<1	0.3	2.7	9.05	33.59	4.98	0.96	3.68	0.49	2.74	0.43	1.13
013N781349	Sediment Pulp	0.74	1.5	0.2	<0.05	0.5	12.46	61.3	<0.02	<1	0.6	1.9	7.67	28.17	4.43	0.92	3.38	0.45	2.62	0.42	1.17
013N781350	Sediment Pulp	1.02	3.1	0.2	<0.05	0.6	14.84	85.5	<0.02	1	0.4	6.0	9.12	33.16	5.04	0.85	4.08	0.53	3.11	0.48	1.35
013N781351	Sediment Pulp	1.46	2.1	0.2	<0.05	0.5	32.52	161.0	<0.02	10	0.5	3.0	21.53	83.07	13.48	2.37	11.29	1.32	7.01	1.06	2.72
013N781352	Sediment Pulp	1.10	5.1	0.3	<0.05	0.6	14.24	77.6	<0.02	1	0.3	6.8	9.38	35.90	5.50	0.74	3.66	0.50	2.98	0.48	1.27
013N781353	Sediment Pulp	0.99	5.3	0.3	<0.05	0.6	7.28	42.6	<0.02	1	0.3	12.0	5.13	20.01	3.12	0.61	2.42	0.30	1.62	0.26	0.76
013N781354	Sediment Pulp	1.62	7.2	0.3	<0.05	0.9	7.74	47.9	<0.02	<1	0.2	8.5	6.35	23.60	3.59	0.54	2.58	0.32	1.95	0.29	0.74
013N781355	Sediment Pulp	1.30	7.4	0.4	<0.05	0.6	17.17	92.6	<0.02	<1	0.7	13.0	10.59	38.64	6.34	1.09	5.28	0.65	3.90	0.63	1.75
013N781356	Sediment Pulp	1.99	9.9	0.5	<0.05	1.4	9.73	58.9	<0.02	<1	0.4	20.1	7.17	28.14	4.44	0.76	3.31	0.41	2.48	0.37	1.02
013N781357	Sediment Pulp	1.31	5.5	0.4	<0.05	1.0	6.76	40.5	<0.02	3	0.3	9.1	5.04	19.59	3.04	0.52	2.17	0.27	1.70	0.28	0.66
013N781361	Sediment Pulp	1.00	5.4	0.3	<0.05	0.6	7.32	41.9	<0.02	1	0.4	11.9	5.23	19.67	2.94	0.63	2.21	0.31	1.73	0.30	0.76
013N781370	Sediment Pulp	0.76	3.7	3.3	<0.05	1.4	10.68	19.4	0.47	23	0.1	4.3	3.22	14.13	2.85	0.53	2.41	0.34	2.11	0.37	0.99



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N781328	Sediment Pulp		0.25	1.61	0.19	<10	<2
013N781329	Sediment Pulp		0.24	1.48	0.16	<10	<2
013N781330	Sediment Pulp		0.23	1.45	0.17	<10	<2
013N781331	Sediment Pulp		0.06	0.44	0.05	<10	<2
013N781332	Sediment Pulp		0.08	0.53	0.05	<10	<2
013N781333	Sediment Pulp		0.12	0.83	0.09	<10	<2
013N781334	Sediment Pulp		0.29	1.89	0.22	<10	<2
013N781335	Sediment Pulp		0.17	1.23	0.12	<10	<2
013N781336	Sediment Pulp		0.14	1.00	0.11	<10	<2
013N781338	Sediment Pulp		0.06	0.47	0.05	<10	<2
013N781339	Sediment Pulp		0.09	0.61	0.06	<10	<2
013N781340	Sediment Pulp		0.20	1.32	0.16	<10	<2
013N781341	Sediment Pulp		0.07	0.54	0.05	<10	<2
013N781342	Sediment Pulp		0.09	0.63	0.08	<10	<2
013N781343	Sediment Pulp		0.08	0.56	0.05	<10	<2
013N781345	Sediment Pulp		0.19	1.37	0.16	<10	<2
013N781346	Sediment Pulp		0.17	0.98	0.13	<10	<2
013N781347	Sediment Pulp		0.24	1.72	0.23	<10	<2
013N781348	Sediment Pulp		0.15	0.95	0.11	<10	<2
013N781349	Sediment Pulp		0.16	1.08	0.12	<10	<2
013N781350	Sediment Pulp		0.18	1.16	0.14	<10	<2
013N781351	Sediment Pulp		0.36	2.32	0.26	<10	<2
013N781352	Sediment Pulp		0.18	1.27	0.17	13	<2
013N781353	Sediment Pulp		0.10	0.62	0.07	<10	<2
013N781354	Sediment Pulp		0.11	0.70	0.08	<10	<2
013N781355	Sediment Pulp		0.24	1.63	0.20	<10	<2
013N781356	Sediment Pulp		0.13	0.89	0.10	<10	<2
013N781357	Sediment Pulp		0.08	0.57	0.07	<10	<2
013N781361	Sediment Pulp		0.09	0.71	0.07	<10	<2
013N781370	Sediment Pulp		0.13	0.98	0.14	<10	<2



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781381	Sediment Pulp	13.17	24.70	3.13	239.9	249	15.2	33.5	3507	12.46	0.1	1.7	1.1	4.8	21.3	0.70	<0.02	<0.02	34	0.34	0.205
013N781384	Sediment Pulp	0.92	36.64	24.76	149.8	2927	49.7	29.3	1245	3.19	27.9	3.9	2.4	9.4	28.9	0.58	0.53	3.44	49	0.64	0.095
013N781385	Sediment Pulp	2.28	26.88	2.76	132.4	120	11.2	10.0	252	6.86	0.4	1.3	0.9	6.9	21.3	0.27	<0.02	<0.02	32	0.40	0.143
013N781387	Sediment Pulp	13.26	24.61	3.26	228.1	248	15.0	33.7	3585	12.92	0.2	1.8	0.9	5.2	21.9	0.76	<0.02	<0.02	35	0.34	0.195
013N781388	Sediment Pulp	8.69	18.93	1.65	53.6	114	13.4	10.2	136	4.21	<0.1	3.3	0.3	1.3	25.2	0.27	<0.02	<0.02	27	0.40	0.075
013N781389	Sediment Pulp	3.18	20.51	1.77	33.7	37	11.1	8.1	40	0.68	<0.1	2.9	0.3	1.8	34.5	0.14	<0.02	<0.02	29	0.56	0.035
013N781390	Sediment Pulp	1.36	40.04	2.25	36.0	71	21.3	5.5	42	0.78	<0.1	0.9	<0.2	0.5	32.1	0.14	<0.02	<0.02	24	0.63	0.064
013N781391	Sediment Pulp	25.75	12.20	1.54	51.2	76	11.6	19.0	159	4.61	0.7	6.8	0.2	1.0	47.1	0.25	<0.02	<0.02	128	1.02	0.119
013N781393	Sediment Pulp	4.03	18.18	1.83	37.1	131	10.7	5.1	111	1.14	<0.1	1.8	0.3	0.3	39.9	0.37	<0.02	<0.02	28	0.74	0.141
013N781394	Sediment Pulp	6.90	8.87	1.14	28.1	46	8.2	4.6	73	0.90	<0.1	2.8	<0.2	0.2	24.8	0.19	<0.02	<0.02	47	0.55	0.033
013N781395	Sediment Pulp	7.89	13.57	1.58	32.3	98	12.7	5.3	34	1.85	<0.1	1.6	<0.2	0.4	25.4	0.25	<0.02	<0.02	37	0.57	0.053
013N781396	Sediment Pulp	5.93	20.43	2.55	40.1	224	13.9	4.2	85	1.14	<0.1	2.6	0.4	0.3	37.0	0.32	<0.02	<0.02	43	0.70	0.136
013N781397	Sediment Pulp	5.01	33.45	3.66	86.7	179	14.0	15.2	348	5.56	<0.1	2.2	0.3	2.0	23.2	0.42	<0.02	<0.02	81	0.50	0.248
013N781400	Sediment Pulp	20.30	24.97	3.54	68.3	322	18.5	22.3	428	3.67	<0.1	16.4	0.3	1.8	54.4	0.38	<0.02	<0.02	62	1.18	0.251
013N781401	Sediment Pulp	5.33	33.47	3.78	89.1	183	14.3	15.2	356	5.65	<0.1	2.2	0.4	2.3	24.8	0.46	<0.02	<0.02	83	0.51	0.218
013N781405	Sediment Pulp	1.52	35.12	4.13	31.6	413	15.6	3.5	92	0.92	<0.1	4.6	3.5	0.4	45.9	0.36	<0.02	<0.02	45	0.96	0.205
013N781407	Sediment Pulp	9.79	43.29	81.45	294.8	634	12.4	7.9	447	1.90	38.5	8.9	2.9	1.6	61.4	1.38	0.59	1.18	22	6.86	0.064
013N781409	Sediment Pulp	1.50	24.49	3.59	55.2	308	12.6	7.8	186	2.05	<0.1	2.8	0.6	0.5	39.1	0.36	<0.02	0.02	74	0.69	0.211
013N781411	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013N781412	Sediment Pulp	5.20	13.95	2.48	101.3	63	16.2	32.8	1585	4.96	<0.1	5.4	0.5	1.9	14.2	0.46	<0.02	0.22	29	0.28	0.054
013N781415	Sediment Pulp	1.30	17.64	8.19	76.2	55	27.0	14.2	425	3.17	2.5	2.0	1.8	8.1	53.4	0.11	<0.02	0.02	60	0.84	0.142
013N781416	Sediment Pulp	13.60	18.64	5.79	90.9	114	14.9	16.1	226	4.03	0.7	14.6	1.1	1.2	31.6	0.49	0.03	0.02	55	0.52	0.079
013N781417	Sediment Pulp	1.57	21.38	8.51	80.8	54	25.6	13.5	343	3.20	1.6	2.7	1.2	11.1	50.8	0.10	<0.02	0.02	65	0.84	0.227
013N781418	Sediment Pulp	1.41	12.04	4.72	66.4	37	18.7	8.0	137	1.44	0.7	3.5	1.2	2.0	37.8	0.09	<0.02	<0.02	28	0.62	0.081
013N781420	Sediment Pulp	2.19	15.36	5.95	73.1	65	21.4	11.7	245	2.29	0.8	6.4	0.7	2.9	29.7	0.16	<0.02	<0.02	47	0.51	0.082
013N781421	Sediment Pulp	0.80	14.23	3.40	30.8	112	13.8	3.7	65	0.86	0.2	2.0	1.0	0.4	33.3	0.25	<0.02	0.02	26	0.55	0.105
013N781422	Sediment Pulp	4.38	15.71	4.95	46.2	47	15.3	12.7	1500	5.86	4.0	1.6	1.7	5.8	29.7	0.12	0.03	<0.02	49	0.46	0.420
013N781423	Sediment Pulp	2.42	10.70	4.73	45.5	19	15.0	7.6	148	1.60	0.3	1.4	0.5	3.4	31.2	0.08	<0.02	<0.02	36	0.55	0.082
013N781424	Sediment Pulp	9.35	13.93	3.17	41.1	52	13.4	9.9	85	2.02	<0.1	2.5	0.7	1.2	38.5	0.17	<0.02	<0.02	35	0.68	0.074
013N781425	Sediment Pulp	3.84	18.18	2.99	49.6	83	18.9	9.6	100	1.40	<0.1	0.9	1.1	0.9	39.9	0.19	<0.02	<0.02	30	0.65	0.081



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N781381	Sediment Pulp	68.2	15.1	0.12	96.7	0.035	<20	4.03	0.036	0.02	0.2	6.3	0.12	0.14	177	1.6	<0.02	5.3	0.15	0.2	0.06
013N781384	Sediment Pulp	44.4	52.9	0.82	183.2	0.111	<20	1.75	0.034	0.27	0.2	7.1	0.31	0.15	298	0.6	0.03	6.4	1.60	<0.1	0.15
013N781385	Sediment Pulp	60.5	15.8	0.19	53.0	0.048	<20	1.95	0.053	0.05	0.1	4.6	0.09	0.08	144	0.8	<0.02	3.5	0.15	0.1	<0.02
013N781387	Sediment Pulp	66.9	15.0	0.12	97.2	0.035	<20	4.15	0.035	0.02	0.3	6.0	0.13	0.14	199	1.7	<0.02	5.3	0.15	0.2	0.08
013N781388	Sediment Pulp	27.9	14.7	0.09	50.3	0.020	<20	3.04	0.026	0.01	<0.1	2.3	0.05	0.24	121	1.3	<0.02	3.2	0.09	<0.1	0.03
013N781389	Sediment Pulp	37.2	14.0	0.10	40.9	0.020	<20	1.27	0.073	0.03	0.1	1.4	0.07	0.42	90	1.2	<0.02	2.4	0.07	<0.1	0.04
013N781390	Sediment Pulp	12.7	17.9	0.18	55.0	0.027	<20	3.15	0.077	0.03	<0.1	1.0	0.03	0.28	103	1.0	<0.02	4.3	0.13	<0.1	<0.02
013N781391	Sediment Pulp	15.2	19.3	0.13	63.7	0.023	<20	2.23	0.091	0.03	0.6	1.5	0.08	0.35	98	1.8	<0.02	4.0	0.10	<0.1	<0.02
013N781393	Sediment Pulp	31.9	11.3	0.12	63.2	0.022	<20	2.84	0.037	0.02	<0.1	0.9	0.03	0.27	149	1.3	<0.02	3.6	0.13	<0.1	<0.02
013N781394	Sediment Pulp	14.7	10.0	0.06	30.7	0.013	<20	1.53	0.030	0.01	0.2	0.7	<0.02	0.23	79	0.9	<0.02	2.2	0.06	<0.1	<0.02
013N781395	Sediment Pulp	15.1	9.6	0.07	13.9	0.015	<20	1.38	0.027	0.02	<0.1	0.9	0.05	0.39	111	1.4	<0.02	2.1	0.09	<0.1	<0.02
013N781396	Sediment Pulp	41.3	15.1	0.10	95.1	0.025	<20	2.33	0.019	0.01	<0.1	1.0	0.03	0.32	143	1.9	<0.02	4.8	0.12	<0.1	<0.02
013N781397	Sediment Pulp	73.2	22.9	0.08	38.3	0.036	<20	3.75	0.014	0.02	<0.1	2.6	0.08	0.24	121	2.4	<0.02	4.9	0.13	0.1	<0.02
013N781400	Sediment Pulp	45.2	27.0	0.19	60.2	0.037	<20	3.12	0.087	0.04	0.8	2.3	0.13	1.06	184	2.3	<0.02	4.8	0.24	<0.1	<0.02
013N781401	Sediment Pulp	78.6	23.8	0.08	41.7	0.036	<20	3.82	0.014	0.02	<0.1	2.9	0.08	0.24	123	2.6	<0.02	5.2	0.13	0.1	<0.02
013N781405	Sediment Pulp	33.7	18.3	0.12	145.2	0.036	<20	2.67	0.017	0.02	0.1	1.6	0.04	0.35	212	1.9	<0.02	7.1	0.23	<0.1	0.02
013N781407	Sediment Pulp	11.7	13.2	0.62	100.4	0.044	<20	0.48	0.031	0.05	0.6	2.7	0.23	1.55	94	0.9	<0.02	2.1	0.55	<0.1	0.04
013N781409	Sediment Pulp	33.0	18.4	0.10	113.1	0.045	<20	2.69	0.013	0.02	0.1	2.5	0.06	0.21	171	2.0	<0.02	6.2	0.24	<0.1	<0.02
013N781411	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013N781412	Sediment Pulp	24.2	15.5	0.04	90.0	0.030	<20	2.98	0.008	0.01	<0.1	2.7	0.14	0.27	72	1.7	<0.02	3.6	0.14	<0.1	<0.02
013N781415	Sediment Pulp	48.0	40.1	0.74	134.4	0.131	<20	2.71	0.174	0.26	0.1	6.4	0.17	0.04	55	0.2	<0.02	8.0	1.14	<0.1	0.06
013N781416	Sediment Pulp	32.2	21.3	0.09	58.4	0.032	<20	3.28	0.016	0.02	0.7	2.1	0.09	0.26	71	1.8	<0.02	4.3	0.19	0.1	<0.02
013N781417	Sediment Pulp	59.6	35.7	0.76	158.1	0.119	<20	2.62	0.161	0.28	0.7	6.4	0.17	0.05	91	0.3	<0.02	7.1	0.94	<0.1	0.05
013N781418	Sediment Pulp	32.7	25.3	0.46	69.8	0.079	<20	1.52	0.097	0.15	0.1	3.3	0.10	0.16	51	0.3	<0.02	4.7	0.63	<0.1	0.04
013N781420	Sediment Pulp	36.2	27.3	0.43	89.2	0.075	<20	2.18	0.071	0.15	0.2	3.2	0.12	0.16	67	0.5	<0.02	5.0	0.66	<0.1	0.04
013N781421	Sediment Pulp	19.8	15.4	0.12	67.7	0.031	<20	2.22	0.014	0.03	0.1	1.4	0.03	0.26	83	1.1	<0.02	4.1	0.25	<0.1	<0.02
013N781422	Sediment Pulp	52.1	22.4	0.37	119.5	0.059	<20	1.83	0.077	0.13	0.6	3.2	0.10	0.05	23	0.2	<0.02	4.3	0.42	<0.1	<0.02
013N781423	Sediment Pulp	43.5	22.9	0.41	96.2	0.078	<20	1.52	0.088	0.13	0.2	3.1	0.08	0.07	46	0.1	<0.02	4.7	0.48	<0.1	0.03
013N781424	Sediment Pulp	30.7	16.9	0.20	59.0	0.035	<20	1.98	0.091	0.04	<0.1	1.7	0.07	0.19	78	1.7	<0.02	4.5	0.20	<0.1	<0.02
013N781425	Sediment Pulp	33.6	19.6	0.26	45.3	0.035	<20	2.09	0.063	0.06	<0.1	2.0	0.05	0.29	65	1.1	<0.02	3.6	0.28	<0.1	<0.02



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781381	Sediment Pulp	0.94	1.8	0.2	<0.05	1.5	54.00	141.5	<0.02	<1	1.1	4.0	18.81	79.35	14.81	1.82	13.80	1.92	12.07	2.22	6.15
013N781384	Sediment Pulp	2.11	27.1	1.2	<0.05	6.4	19.31	79.9	0.03	1	0.5	23.1	11.29	43.89	7.18	1.18	5.56	0.69	4.08	0.69	1.99
013N781385	Sediment Pulp	1.59	4.3	0.2	<0.05	0.8	31.80	127.3	<0.02	<1	0.4	4.1	15.20	61.32	10.19	1.18	9.04	1.19	7.52	1.30	3.49
013N781387	Sediment Pulp	1.03	1.8	0.2	<0.05	1.5	54.54	143.3	0.03	1	0.8	4.5	19.01	79.74	15.14	1.90	15.08	2.05	12.82	2.23	6.33
013N781388	Sediment Pulp	0.60	1.1	<0.1	<0.05	0.6	13.67	46.4	<0.02	<1	0.4	2.0	7.23	28.21	4.41	0.84	4.07	0.48	3.01	0.52	1.37
013N781389	Sediment Pulp	0.76	1.6	0.2	<0.05	1.9	10.57	54.3	<0.02	2	<0.1	2.7	8.64	31.34	4.44	0.64	3.22	0.39	2.24	0.36	1.11
013N781390	Sediment Pulp	1.08	1.9	0.2	<0.05	0.7	5.55	24.6	<0.02	1	0.3	4.3	3.12	12.42	2.09	0.40	1.63	0.22	1.29	0.21	0.57
013N781391	Sediment Pulp	0.63	1.4	<0.1	<0.05	0.5	5.88	26.0	<0.02	6	0.2	2.4	3.83	14.28	2.26	0.43	1.43	0.21	1.26	0.20	0.56
013N781393	Sediment Pulp	0.96	1.4	0.2	<0.05	0.3	9.52	44.1	<0.02	<1	0.2	2.0	7.59	28.25	3.81	0.79	2.93	0.37	2.11	0.33	0.96
013N781394	Sediment Pulp	0.42	0.7	<0.1	<0.05	0.1	4.37	23.1	<0.02	1	<0.1	1.2	3.58	14.12	2.02	0.33	1.40	0.16	0.97	0.17	0.42
013N781395	Sediment Pulp	0.50	1.0	0.1	<0.05	0.2	3.95	25.4	<0.02	1	<0.1	1.8	3.42	12.81	1.74	0.29	1.10	0.15	0.89	0.12	0.40
013N781396	Sediment Pulp	1.12	1.1	0.2	<0.05	0.3	10.08	75.3	<0.02	<1	0.5	1.7	9.96	37.84	5.05	0.84	3.69	0.42	2.37	0.39	1.01
013N781397	Sediment Pulp	1.60	1.3	0.2	<0.05	0.4	18.59	141.3	<0.02	<1	0.3	1.7	17.78	65.28	8.94	1.25	6.07	0.69	4.24	0.67	1.88
013N781400	Sediment Pulp	0.87	2.3	0.1	<0.05	0.5	16.08	70.2	<0.02	3	0.2	5.1	12.12	47.97	7.50	1.18	5.73	0.62	3.27	0.56	1.37
013N781401	Sediment Pulp	1.72	1.3	0.2	<0.05	0.4	19.12	149.0	<0.02	1	0.4	1.5	18.74	65.87	8.82	1.26	5.91	0.76	4.38	0.67	1.89
013N781405	Sediment Pulp	1.65	1.8	0.3	<0.05	0.9	16.03	66.4	<0.02	<1	0.7	2.3	9.28	36.75	6.11	1.26	5.09	0.66	4.21	0.66	1.64
013N781407	Sediment Pulp	0.76	3.6	3.3	<0.05	1.3	10.52	19.6	0.47	19	<0.1	4.7	3.28	13.65	2.94	0.54	2.44	0.34	2.07	0.38	1.00
013N781409	Sediment Pulp	1.65	1.7	0.2	<0.05	0.8	14.95	65.5	<0.02	1	0.3	1.8	8.56	33.18	5.62	1.07	4.35	0.56	3.58	0.57	1.48
013N781411	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013N781412	Sediment Pulp	0.62	0.9	<0.1	<0.05	0.5	11.28	48.5	<0.02	1	0.5	1.4	5.88	22.50	3.97	0.82	3.11	0.45	2.48	0.42	1.16
013N781415	Sediment Pulp	2.47	25.1	0.8	<0.05	2.4	16.97	108.4	0.02	<1	0.8	21.0	11.74	43.91	6.68	0.95	4.90	0.68	4.01	0.70	1.78
013N781416	Sediment Pulp	1.11	1.8	0.2	<0.05	0.5	12.32	60.8	<0.02	3	0.8	3.6	7.60	27.72	4.32	0.87	3.42	0.42	2.43	0.42	1.23
013N781417	Sediment Pulp	2.67	24.7	0.8	<0.05	2.3	19.78	147.1	<0.02	2	0.5	18.3	14.53	52.62	7.81	1.06	6.13	0.78	4.46	0.77	2.19
013N781418	Sediment Pulp	2.45	13.7	0.6	<0.05	1.4	10.89	66.2	0.02	<1	0.3	14.4	7.93	29.92	4.17	0.62	3.18	0.43	2.62	0.38	1.15
013N781420	Sediment Pulp	2.95	13.5	0.6	<0.05	1.4	11.87	74.3	<0.02	<1	0.4	13.1	8.99	33.83	5.00	0.73	3.51	0.49	2.88	0.45	1.23
013N781421	Sediment Pulp	1.34	2.5	0.3	<0.05	0.5	8.37	38.8	<0.02	<1	0.3	3.7	4.97	19.28	3.30	0.64	2.61	0.34	2.06	0.33	0.90
013N781422	Sediment Pulp	1.29	11.2	0.5	<0.05	0.6	13.88	104.3	<0.02	<1	0.4	13.0	11.48	41.16	5.54	0.79	3.70	0.51	3.10	0.52	1.47
013N781423	Sediment Pulp	2.13	11.9	0.5	<0.05	1.2	13.27	83.1	<0.02	<1	0.3	10.9	9.81	37.00	5.26	0.75	3.89	0.55	3.06	0.50	1.49
013N781424	Sediment Pulp	0.93	2.6	0.2	<0.05	0.4	5.79	49.7	<0.02	2	0.2	4.2	7.29	26.24	3.27	0.49	2.02	0.25	1.40	0.18	0.59
013N781425	Sediment Pulp	1.28	5.1	0.3	<0.05	0.5	8.08	48.9	<0.02	<1	0.2	5.7	7.75	29.20	3.85	0.58	2.55	0.31	1.83	0.30	0.78



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N781381	Sediment Pulp	0.86	5.76	0.78	<10	<2	
013N781384	Sediment Pulp	0.27	1.83	0.24	<10	<2	
013N781385	Sediment Pulp	0.52	3.26	0.46	<10	<2	
013N781387	Sediment Pulp	0.94	6.02	0.82	<10	<2	
013N781388	Sediment Pulp	0.20	1.29	0.17	<10	<2	
013N781389	Sediment Pulp	0.13	0.95	0.11	<10	<2	
013N781390	Sediment Pulp	0.07	0.53	0.06	<10	<2	
013N781391	Sediment Pulp	0.06	0.50	0.06	<10	3	
013N781393	Sediment Pulp	0.11	0.82	0.09	<10	<2	
013N781394	Sediment Pulp	0.05	0.36	0.04	<10	<2	
013N781395	Sediment Pulp	0.04	0.37	0.03	<10	<2	
013N781396	Sediment Pulp	0.12	0.77	0.10	<10	<2	
013N781397	Sediment Pulp	0.27	1.66	0.21	<10	<2	
013N781400	Sediment Pulp	0.19	1.28	0.17	<10	<2	
013N781401	Sediment Pulp	0.28	1.80	0.20	<10	<2	
013N781405	Sediment Pulp	0.22	1.56	0.17	<10	<2	
013N781407	Sediment Pulp	0.14	1.00	0.16	<10	<2	
013N781409	Sediment Pulp	0.22	1.38	0.15	<10	<2	
013N781411	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	
013N781412	Sediment Pulp	0.15	1.00	0.11	<10	<2	
013N781415	Sediment Pulp	0.25	1.67	0.21	<10	<2	
013N781416	Sediment Pulp	0.16	1.04	0.13	<10	<2	
013N781417	Sediment Pulp	0.30	2.23	0.27	<10	<2	
013N781418	Sediment Pulp	0.15	1.01	0.12	<10	<2	
013N781420	Sediment Pulp	0.16	1.11	0.14	<10	<2	
013N781421	Sediment Pulp	0.11	0.74	0.09	<10	<2	
013N781422	Sediment Pulp	0.20	1.37	0.17	<10	<2	
013N781423	Sediment Pulp	0.19	1.33	0.14	<10	<2	
013N781424	Sediment Pulp	0.07	0.47	0.05	<10	<2	
013N781425	Sediment Pulp	0.12	0.74	0.08	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781426	Sediment Pulp	3.42	39.25	6.04	84.5	56	28.1	16.8	325	2.46	1.6	2.7	2.0	7.9	69.8	0.18	<0.02	<0.02	59	1.15	0.170
013N781427	Sediment Pulp	3.11	37.94	5.85	82.7	53	29.2	15.7	333	2.54	0.8	2.3	1.2	6.3	67.0	0.19	<0.02	<0.02	63	1.12	0.239
013N781429	Sediment Pulp	3.69	27.94	2.06	29.2	18	20.6	10.1	96	1.24	<0.1	2.7	1.6	4.4	78.0	0.04	<0.02	<0.02	30	1.29	0.051
013N781430	Sediment Pulp	6.42	24.36	3.11	55.4	109	21.6	9.9	165	1.98	0.1	3.6	0.5	1.4	43.7	0.22	<0.02	<0.02	60	0.79	0.143
013N781431	Sediment Pulp	0.90	32.78	27.25	130.2	2733	47.5	29.5	1185	3.04	25.9	3.9	2.5	8.1	26.0	0.55	0.48	3.28	46	0.60	0.086
013N781432	Sediment Pulp	4.08	24.90	2.12	41.9	133	21.4	7.5	141	1.88	<0.1	2.2	1.1	0.6	41.5	0.24	<0.02	<0.02	59	0.91	0.080
013N781433	Sediment Pulp	3.32	10.81	0.77	27.3	32	12.2	4.7	23	0.29	<0.1	17.7	0.8	0.5	24.6	0.11	<0.02	<0.02	12	0.51	0.028
013N781434	Sediment Pulp	9.78	16.94	0.75	22.8	34	14.0	5.0	24	0.17	<0.1	27.0	2.2	0.8	29.5	0.13	<0.02	<0.02	11	0.56	0.033
013N781435	Sediment Pulp	6.19	21.91	2.74	57.9	122	22.1	17.8	709	3.38	1.0	30.3	1.2	1.2	56.7	0.34	<0.02	<0.02	127	1.27	0.139
013N781436	Sediment Pulp	1.12	31.07	4.18	94.1	68	47.1	24.7	549	3.56	1.3	1.2	1.7	4.5	83.4	0.21	<0.02	<0.02	56	1.23	0.250
013N781437	Sediment Pulp	1.63	25.97	4.38	82.1	73	40.5	30.8	3114	4.50	3.5	1.0	1.3	4.3	89.6	0.20	<0.02	<0.02	46	1.33	0.123
013N781438	Sediment Pulp	1.01	27.41	1.63	56.5	85	35.3	30.1	825	3.98	<0.1	0.2	0.8	0.8	47.3	0.30	<0.02	<0.02	27	0.79	0.111
013N781439	Sediment Pulp	0.76	21.83	1.52	64.6	65	33.2	14.6	139	1.70	<0.1	0.2	<0.2	0.3	47.8	0.28	<0.02	<0.02	25	0.79	0.075
013N781440	Sediment Pulp	1.00	15.14	3.49	51.4	21	30.6	13.1	145	1.86	0.6	0.6	<0.2	2.9	66.0	0.07	<0.02	<0.02	37	0.99	0.044
013N781441	Sediment Pulp	7.38	27.30	3.47	61.7	119	23.4	10.9	184	2.19	<0.1	4.0	0.5	1.3	48.6	0.21	<0.02	<0.02	68	0.90	0.172
013N781442	Sediment Pulp	0.30	23.84	3.50	45.4	27	35.4	17.8	261	2.46	1.4	0.6	<0.2	5.5	116.4	0.03	<0.02	<0.02	39	1.80	0.052
013N781444	Sediment Pulp	2.65	12.79	1.00	30.3	31	15.4	9.3	42	0.95	<0.1	1.6	1.0	1.1	47.1	0.14	<0.02	<0.02	33	0.81	0.028
013N781447	Sediment Pulp	7.54	27.54	1.78	91.2	195	19.3	16.9	405	5.18	0.1	1.7	1.0	2.2	50.6	0.50	<0.02	<0.02	33	0.70	0.176
013N781450	Sediment Pulp	9.41	43.14	78.47	303.9	607	12.9	8.4	425	1.73	36.5	8.5	4.2	1.5	61.5	1.45	0.52	0.94	20	6.63	0.066
013N781461	Sediment Pulp	2.49	12.35	0.98	30.4	26	15.0	8.6	40	0.91	<0.1	1.5	0.8	1.1	45.0	0.13	<0.02	0.05	32	0.76	0.026
013N781466	Sediment Pulp	0.57	17.15	1.51	54.3	38	31.9	14.9	181	2.19	<0.1	0.3	<0.2	1.1	63.7	0.23	<0.02	<0.02	33	0.86	0.069
013N781470	Sediment Pulp	0.41	17.16	2.11	35.7	30	24.9	11.8	92	1.91	0.1	0.4	0.8	0.5	44.5	0.15	<0.02	<0.02	26	1.02	0.186
013N781471	Sediment Pulp	1.16	24.12	2.30	72.7	78	24.5	13.3	425	1.98	<0.1	0.4	0.7	0.5	33.6	0.28	<0.02	<0.02	33	0.58	0.109
013N781474	Sediment Pulp	1.39	25.78	1.78	84.3	69	32.7	23.1	509	2.64	<0.1	0.8	1.7	1.4	48.1	0.41	<0.02	<0.02	40	0.81	0.143
013N781475	Sediment Pulp	1.07	9.01	0.64	20.2	18	16.0	4.8	18	0.42	<0.1	0.9	0.8	0.6	24.8	0.07	<0.02	<0.02	15	0.49	0.026
013N781477	Sediment Pulp	1.08	20.82	1.15	43.6	69	19.7	8.9	86	1.99	<0.1	0.2	0.4	0.3	58.3	0.22	<0.02	<0.02	26	1.01	0.081
013N781478	Sediment Pulp	0.54	23.24	1.37	36.6	34	29.7	10.0	87	1.02	0.2	0.3	2.2	0.2	62.7	0.30	<0.02	<0.02	21	1.00	0.084
013N781479	Sediment Pulp	1.05	33.89	27.22	138.5	2711	46.8	30.6	1219	3.16	25.6	3.8	3.0	8.4	26.5	0.54	0.48	3.05	48	0.62	0.099
013N781480	Sediment Pulp	0.83	15.44	2.07	40.5	31	23.6	9.4	62	1.88	0.2	0.3	0.7	0.5	39.3	0.22	<0.02	<0.02	39	0.67	0.060
013N781481	Sediment Pulp	1.09	20.65	1.09	43.2	70	19.2	7.6	87	1.93	0.3	0.2	1.3	0.3	61.6	0.23	0.02	<0.02	25	0.96	0.085



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N781426	Sediment Pulp	86.6	35.0	0.71	128.4	0.101	<20	3.06	0.237	0.23	0.3	5.5	0.26	0.23	61	0.4	<0.02	6.8	0.69	0.1	0.06
013N781427	Sediment Pulp	84.6	33.6	0.66	129.7	0.090	<20	3.45	0.217	0.20	0.4	5.1	0.23	0.08	78	0.5	<0.02	6.9	0.59	0.1	0.05
013N781429	Sediment Pulp	27.7	18.5	0.39	64.7	0.053	<20	2.37	0.318	0.08	<0.1	2.7	0.06	0.35	60	0.2	<0.02	4.9	0.13	<0.1	0.05
013N781430	Sediment Pulp	23.4	25.7	0.39	83.8	0.044	<20	3.24	0.133	0.10	0.2	2.4	0.06	0.14	80	1.8	<0.02	5.1	0.32	<0.1	<0.02
013N781431	Sediment Pulp	40.6	48.5	0.79	161.0	0.098	<20	1.61	0.030	0.26	0.2	6.1	0.27	0.15	269	0.6	0.05	5.6	1.41	<0.1	0.13
013N781432	Sediment Pulp	18.0	24.9	0.16	90.8	0.021	<20	2.53	0.075	0.03	0.3	1.2	0.08	0.34	166	2.0	<0.02	3.6	0.13	<0.1	<0.02
013N781433	Sediment Pulp	13.5	8.6	0.08	18.8	0.012	<20	1.17	0.039	0.01	<0.1	0.9	0.03	0.39	133	0.7	<0.02	1.4	0.07	<0.1	<0.02
013N781434	Sediment Pulp	20.5	12.4	0.10	38.7	0.012	<20	0.94	0.041	0.02	<0.1	1.2	0.03	0.33	71	0.7	<0.02	1.2	0.06	<0.1	<0.02
013N781435	Sediment Pulp	16.7	26.6	0.31	98.6	0.034	<20	3.33	0.147	0.05	1.4	2.1	0.08	0.21	133	3.9	<0.02	6.0	0.18	<0.1	<0.02
013N781436	Sediment Pulp	27.3	35.2	0.91	150.9	0.069	<20	4.99	0.325	0.18	0.3	6.1	0.13	0.07	124	0.5	<0.02	8.5	0.44	<0.1	0.07
013N781437	Sediment Pulp	27.6	32.0	0.86	143.3	0.073	<20	4.76	0.344	0.18	<0.1	5.2	0.11	0.06	60	0.3	<0.02	8.5	0.51	<0.1	0.04
013N781438	Sediment Pulp	9.4	15.4	0.28	66.9	0.021	<20	3.99	0.147	0.03	<0.1	2.3	0.04	0.21	96	1.1	<0.02	5.0	0.09	<0.1	0.02
013N781439	Sediment Pulp	9.7	16.3	0.32	59.3	0.019	<20	3.84	0.161	0.03	<0.1	1.5	0.03	0.22	169	0.7	<0.02	4.9	0.09	<0.1	0.02
013N781440	Sediment Pulp	26.6	26.8	0.60	103.7	0.065	<20	3.36	0.234	0.14	<0.1	4.3	0.07	0.11	43	<0.1	<0.02	6.7	0.36	<0.1	<0.02
013N781441	Sediment Pulp	26.1	27.9	0.44	95.4	0.048	<20	3.72	0.149	0.11	0.2	2.4	0.07	0.16	89	1.9	<0.02	5.9	0.37	<0.1	<0.02
013N781442	Sediment Pulp	27.2	31.8	0.94	95.0	0.084	<20	3.85	0.506	0.20	<0.1	5.0	0.07	0.02	54	<0.1	<0.02	7.8	0.38	<0.1	0.10
013N781444	Sediment Pulp	16.4	17.1	0.15	33.9	0.020	<20	1.89	0.154	0.03	<0.1	1.6	0.06	0.30	60	0.4	<0.02	3.2	0.08	<0.1	<0.02
013N781447	Sediment Pulp	41.4	15.6	0.21	80.2	0.024	<20	4.12	0.101	0.03	0.3	4.2	0.09	0.18	196	1.7	<0.02	4.8	0.11	<0.1	0.03
013N781450	Sediment Pulp	11.0	13.8	0.58	95.3	0.040	<20	0.44	0.028	0.05	0.8	2.5	0.21	1.51	93	0.9	<0.02	2.1	0.51	<0.1	0.03
013N781461	Sediment Pulp	15.9	16.4	0.15	33.1	0.019	<20	1.76	0.142	0.02	<0.1	1.4	0.06	0.29	54	0.3	<0.02	3.0	0.06	<0.1	0.02
013N781466	Sediment Pulp	11.2	21.8	0.40	78.7	0.022	<20	3.95	0.244	0.03	<0.1	3.6	0.03	0.13	63	0.2	<0.02	6.0	0.12	<0.1	0.03
013N781470	Sediment Pulp	15.8	16.1	0.31	48.7	0.026	<20	3.82	0.143	0.03	<0.1	2.1	0.03	0.12	75	0.4	<0.02	7.1	0.14	<0.1	<0.02
013N781471	Sediment Pulp	13.8	19.6	0.30	50.4	0.032	<20	3.87	0.090	0.03	<0.1	2.2	0.04	0.23	125	0.8	<0.02	6.2	0.16	<0.1	<0.02
013N781474	Sediment Pulp	17.3	25.8	0.37	85.5	0.030	<20	4.14	0.178	0.04	<0.1	4.1	0.09	0.13	94	0.7	<0.02	5.7	0.14	<0.1	0.05
013N781475	Sediment Pulp	11.6	14.2	0.10	33.2	0.009	<20	1.09	0.065	0.02	<0.1	1.6	0.04	0.46	194	0.2	<0.02	1.4	0.04	<0.1	<0.02
013N781477	Sediment Pulp	12.9	14.8	0.20	45.8	0.015	<20	4.24	0.219	0.03	<0.1	1.7	0.03	0.18	92	0.7	<0.02	4.8	0.07	<0.1	<0.02
013N781478	Sediment Pulp	15.3	14.8	0.35	45.2	0.018	<20	3.73	0.223	0.04	<0.1	1.1	0.02	0.15	113	0.2	<0.02	4.9	0.10	<0.1	<0.02
013N781479	Sediment Pulp	43.6	51.3	0.81	171.0	0.109	<20	1.70	0.032	0.27	0.7	6.8	0.29	0.15	274	0.4	0.04	6.2	1.48	<0.1	0.12
013N781480	Sediment Pulp	10.7	18.4	0.27	30.4	0.020	<20	3.41	0.123	0.03	<0.1	1.7	0.03	0.21	82	0.5	<0.02	6.0	0.15	<0.1	<0.02
013N781481	Sediment Pulp	11.6	13.8	0.19	40.1	0.015	<20	3.99	0.198	0.03	<0.1	1.4	0.03	0.18	85	1.2	<0.02	4.5	0.07	<0.1	<0.02



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781426	Sediment Pulp	2.83	17.6	0.6	<0.05	2.0	18.18	130.9	0.02	2	0.5	16.5	19.35	71.62	8.92	1.21	5.86	0.67	4.16	0.66	1.86
013N781427	Sediment Pulp	2.70	15.4	0.5	<0.05	1.7	17.14	139.3	<0.02	<1	0.5	17.4	19.11	70.84	9.09	1.22	6.03	0.70	4.15	0.65	1.81
013N781429	Sediment Pulp	0.76	4.1	0.2	<0.05	2.2	9.53	41.2	<0.02	<1	0.2	4.7	6.38	24.16	3.40	0.54	2.68	0.34	2.25	0.37	1.04
013N781430	Sediment Pulp	1.32	7.2	0.3	<0.05	0.6	8.32	40.9	<0.02	2	0.3	9.8	5.62	22.14	3.20	0.62	2.26	0.31	1.88	0.30	0.80
013N781431	Sediment Pulp	1.98	23.8	1.2	<0.05	5.5	18.31	75.7	0.03	<1	0.5	19.6	9.95	38.97	6.44	0.97	5.08	0.63	3.87	0.64	1.86
013N781432	Sediment Pulp	0.71	2.1	0.2	<0.05	0.4	6.46	26.7	<0.02	2	<0.1	3.1	4.25	16.17	2.23	0.47	1.66	0.21	1.52	0.21	0.67
013N781433	Sediment Pulp	0.29	0.7	0.1	<0.05	0.5	5.69	16.1	<0.02	2	<0.1	1.8	3.37	13.21	1.86	0.51	1.59	0.19	1.16	0.19	0.56
013N781434	Sediment Pulp	0.33	0.7	0.3	<0.05	0.5	6.86	25.0	<0.02	6	<0.1	2.4	5.28	21.23	3.11	0.61	2.60	0.26	1.59	0.25	0.69
013N781435	Sediment Pulp	0.73	2.3	0.2	<0.05	0.7	6.33	24.3	<0.02	9	0.2	8.1	4.29	16.58	2.34	0.61	1.78	0.23	1.41	0.23	0.65
013N781436	Sediment Pulp	1.48	10.9	0.4	<0.05	2.0	14.20	71.1	<0.02	<1	0.3	14.4	7.12	27.25	4.10	0.84	3.48	0.47	3.17	0.53	1.50
013N781437	Sediment Pulp	0.96	11.9	0.5	<0.05	1.5	11.90	64.6	<0.02	<1	0.4	11.4	6.73	25.30	4.07	0.82	3.47	0.44	2.78	0.47	1.30
013N781438	Sediment Pulp	0.34	1.0	0.1	<0.05	0.9	6.87	16.4	<0.02	<1	<0.1	2.0	2.56	10.69	1.73	0.59	1.57	0.22	1.40	0.25	0.64
013N781439	Sediment Pulp	0.35	1.2	0.1	<0.05	0.4	6.01	16.4	<0.02	<1	<0.1	2.5	2.53	10.29	1.78	0.56	1.51	0.21	1.24	0.22	0.59
013N781440	Sediment Pulp	1.67	10.7	0.4	<0.05	1.0	9.33	46.9	<0.02	<1	0.3	9.3	5.97	21.94	3.52	0.64	2.72	0.35	2.31	0.36	1.01
013N781441	Sediment Pulp	1.44	7.9	0.3	<0.05	0.6	9.20	46.8	<0.02	5	0.2	10.1	6.59	23.51	3.44	0.73	2.68	0.33	2.10	0.33	0.90
013N781442	Sediment Pulp	0.24	12.3	0.4	<0.05	3.5	10.31	54.9	<0.02	<1	0.4	11.3	6.49	24.01	3.77	0.62	2.91	0.39	2.31	0.39	1.09
013N781444	Sediment Pulp	0.36	1.1	0.1	<0.05	0.8	4.97	18.5	<0.02	2	0.1	2.9	3.77	14.12	1.79	0.41	1.37	0.17	1.03	0.17	0.50
013N781447	Sediment Pulp	0.56	1.4	0.1	<0.05	1.0	23.81	65.1	<0.02	1	0.5	5.1	9.92	38.14	6.43	1.25	5.68	0.77	4.92	0.87	2.43
013N781450	Sediment Pulp	0.70	3.5	3.6	<0.05	1.3	10.38	18.1	0.46	19	0.3	4.7	2.91	13.22	2.50	0.52	2.28	0.32	2.20	0.34	0.97
013N781461	Sediment Pulp	0.36	0.9	<0.1	<0.05	0.7	4.82	17.5	<0.02	2	<0.1	2.7	3.60	13.50	1.95	0.41	1.42	0.17	1.09	0.17	0.46
013N781466	Sediment Pulp	0.41	1.3	0.1	<0.05	0.9	7.36	18.1	<0.02	<1	0.2	3.1	3.03	12.35	2.06	0.60	1.88	0.23	1.54	0.25	0.79
013N781470	Sediment Pulp	0.73	1.6	0.2	<0.05	0.3	11.45	35.1	<0.02	<1	0.2	3.0	4.77	21.01	3.96	0.58	3.46	0.47	2.86	0.44	1.21
013N781471	Sediment Pulp	0.58	1.7	0.2	<0.05	0.5	8.70	25.6	<0.02	<1	0.3	3.4	3.64	13.99	2.56	0.71	2.07	0.30	1.78	0.31	0.96
013N781474	Sediment Pulp	0.52	1.7	0.1	<0.05	1.3	10.98	31.2	<0.02	<1	0.1	3.9	4.71	18.94	3.25	0.78	2.95	0.39	2.54	0.43	1.20
013N781475	Sediment Pulp	0.18	0.7	<0.1	<0.05	0.6	7.65	14.1	<0.02	<1	<0.1	1.0	2.98	12.09	2.13	0.37	1.78	0.23	1.50	0.27	0.83
013N781477	Sediment Pulp	0.36	0.9	<0.1	<0.05	0.5	8.66	20.3	<0.02	<1	0.1	2.0	3.42	13.78	2.34	0.70	2.21	0.27	1.77	0.31	0.80
013N781478	Sediment Pulp	0.45	1.4	0.1	<0.05	0.2	9.26	26.4	<0.02	<1	0.1	3.2	4.01	16.06	2.76	0.65	2.61	0.30	1.88	0.31	0.89
013N781479	Sediment Pulp	2.04	23.7	1.1	<0.05	5.3	17.74	81.3	0.04	1	0.5	22.3	10.83	41.96	6.98	1.05	4.91	0.64	3.97	0.68	1.97
013N781480	Sediment Pulp	0.56	1.4	0.2	<0.05	0.4	6.75	19.4	<0.02	<1	0.2	3.1	2.92	11.70	2.08	0.61	1.90	0.24	1.47	0.25	0.69
013N781481	Sediment Pulp	0.37	0.9	<0.1	<0.05	0.5	8.75	18.2	<0.02	<1	0.2	1.9	3.02	12.04	2.15	0.66	1.91	0.25	1.49	0.29	0.79



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013N781426	Sediment Pulp	0.25	1.84	0.21	<10	<2
013N781427	Sediment Pulp	0.25	1.61	0.18	<10	<2
013N781429	Sediment Pulp	0.14	0.84	0.11	<10	<2
013N781430	Sediment Pulp	0.10	0.80	0.08	<10	<2
013N781431	Sediment Pulp	0.26	1.75	0.22	<10	<2
013N781432	Sediment Pulp	0.07	0.56	0.06	<10	<2
013N781433	Sediment Pulp	0.06	0.45	0.04	<10	<2
013N781434	Sediment Pulp	0.08	0.55	0.06	<10	<2
013N781435	Sediment Pulp	0.07	0.54	0.06	<10	3
013N781436	Sediment Pulp	0.21	1.45	0.19	<10	<2
013N781437	Sediment Pulp	0.18	1.27	0.15	<10	<2
013N781438	Sediment Pulp	0.08	0.57	0.07	<10	<2
013N781439	Sediment Pulp	0.07	0.53	0.06	<10	<2
013N781440	Sediment Pulp	0.13	0.91	0.11	<10	<2
013N781441	Sediment Pulp	0.12	0.81	0.11	<10	<2
013N781442	Sediment Pulp	0.14	1.08	0.15	<10	3
013N781444	Sediment Pulp	0.06	0.46	0.05	<10	<2
013N781447	Sediment Pulp	0.35	2.36	0.33	<10	<2
013N781450	Sediment Pulp	0.14	1.01	0.13	<10	<2
013N781461	Sediment Pulp	0.05	0.44	0.04	<10	<2
013N781466	Sediment Pulp	0.10	0.69	0.09	<10	<2
013N781470	Sediment Pulp	0.13	1.02	0.10	<10	<2
013N781471	Sediment Pulp	0.11	0.74	0.09	<10	2
013N781474	Sediment Pulp	0.16	1.15	0.14	<10	<2
013N781475	Sediment Pulp	0.10	0.73	0.09	<10	<2
013N781477	Sediment Pulp	0.11	0.72	0.08	<10	<2
013N781478	Sediment Pulp	0.11	0.85	0.10	<10	<2
013N781479	Sediment Pulp	0.26	1.86	0.24	<10	2
013N781480	Sediment Pulp	0.10	0.66	0.08	<10	<2
013N781481	Sediment Pulp	0.10	0.62	0.09	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N781482	Sediment Pulp	0.80	29.15	2.14	51.3	73	17.6	11.6	137	1.93	<0.1	1.2	1.4	1.5	47.2	0.23	0.03	0.03	61	0.84	0.080
013N781483	Sediment Pulp	0.27	11.17	2.14	34.3	23	19.3	7.9	93	1.33	0.4	0.2	0.5	0.2	53.1	0.14	<0.02	<0.02	24	0.78	0.048
013N781484	Sediment Pulp	0.23	14.01	1.25	43.5	18	29.1	14.2	184	1.59	0.2	0.1	0.4	0.5	79.9	0.11	<0.02	<0.02	33	1.17	0.042
013N781485	Sediment Pulp	0.31	20.93	2.33	30.8	43	28.2	13.9	184	3.56	0.3	0.3	0.5	1.1	47.1	0.12	<0.02	0.02	27	0.67	0.084
013N781486	Sediment Pulp	0.39	22.26	2.01	46.0	39	38.4	18.9	342	2.42	0.5	0.3	0.5	1.1	79.5	0.15	<0.02	<0.02	30	1.14	0.062
013N781487	Sediment Pulp	0.27	22.02	3.26	39.2	39	34.4	15.2	348	2.31	0.4	0.3	0.4	1.0	72.2	0.16	<0.02	0.03	28	1.05	0.064
013N781488	Sediment Pulp	3.05	19.34	1.39	50.5	67	20.6	10.0	453	2.53	0.3	0.7	0.4	0.4	32.8	0.25	<0.02	<0.02	35	0.66	0.096
013N781489	Sediment Pulp	0.41	24.47	2.65	33.4	38	31.5	12.7	125	2.03	0.4	0.3	0.3	0.9	59.7	0.11	<0.02	<0.02	36	0.81	0.065
013N781491	Sediment Pulp	2.14	22.12	1.28	44.4	54	23.9	12.1	64	1.11	0.3	0.6	0.4	0.4	61.7	0.25	<0.02	<0.02	36	0.90	0.041
013N781493	Sediment Pulp	0.46	15.85	1.58	45.6	28	28.1	10.1	72	1.04	0.3	0.2	0.4	0.2	48.8	0.17	<0.02	<0.02	21	0.74	0.043
013N781494	Sediment Pulp	0.81	15.77	1.23	34.1	50	18.4	6.8	80	0.78	0.2	0.2	0.6	<0.1	30.8	0.26	<0.02	<0.02	24	0.57	0.046
013N781497	Sediment Pulp	9.28	42.69	82.50	308.1	603	12.4	7.7	440	1.81	34.1	8.6	3.8	1.2	64.0	1.29	0.57	0.91	21	6.36	0.066
013N781499	Sediment Pulp	0.34	26.71	1.92	36.7	25	36.4	13.4	159	1.52	0.4	0.4	0.2	2.5	89.8	0.07	<0.02	<0.02	31	1.16	0.047
013N781501	Sediment Pulp	3.12	19.62	1.44	51.7	67	21.0	10.2	455	2.52	<0.1	0.7	0.3	0.4	33.9	0.25	<0.02	<0.02	35	0.67	0.096
013N781502	Sediment Pulp	0.16	24.38	1.52	41.7	23	33.3	10.6	154	1.45	0.2	0.3	<0.2	1.2	82.6	0.09	<0.02	<0.02	36	0.86	0.053
013N781504	Sediment Pulp	0.58	16.34	1.08	38.6	44	18.2	7.4	47	0.70	0.6	0.2	0.5	0.5	28.7	0.17	<0.02	<0.02	18	0.52	0.036
013N781505	Sediment Pulp	0.49	30.40	2.36	35.9	38	42.0	18.9	144	4.42	0.4	0.3	0.5	1.2	57.1	0.12	<0.02	0.02	30	0.90	0.053
013N781506	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013N781508	Sediment Pulp	1.13	25.88	1.68	78.4	188	29.1	27.7	1750	5.93	0.2	0.7	<0.2	0.8	35.7	0.43	<0.02	0.03	46	0.64	0.191
013N783000	Sediment Pulp	0.94	34.57	22.62	133.2	2622	46.5	29.4	1267	3.18	24.2	3.3	2.7	6.6	26.7	0.53	0.55	2.82	51	0.64	0.093
013N783001	Sediment Pulp	0.17	24.32	1.57	42.4	27	33.7	10.7	158	1.49	0.1	0.3	9.5	1.1	84.1	0.09	<0.02	<0.02	37	0.90	0.053
013N783003	Sediment Pulp	17.68	13.35	3.06	94.7	179	9.0	15.3	370	3.72	0.2	5.9	0.3	1.4	27.3	0.32	<0.02	<0.02	49	0.63	0.106
013N783011	Sediment Pulp	45.46	26.77	9.90	192.8	267	23.6	50.0	2241	5.17	<0.1	6.4	0.7	2.8	23.9	0.98	<0.02	0.03	31	0.34	0.167
013N783012	Sediment Pulp	8.93	27.72	7.71	128.0	144	16.2	17.6	358	5.80	<0.1	3.2	0.4	3.1	22.7	0.45	<0.02	<0.02	35	0.44	0.130
013N783014	Sediment Pulp	22.12	27.89	4.17	77.4	88	15.2	15.8	127	8.47	<0.1	8.8	1.2	2.1	164.9	0.21	0.03	<0.02	41	0.68	0.088
013N783015	Sediment Pulp	8.67	38.97	75.96	283.5	556	11.8	7.6	426	1.72	31.7	8.2	2.5	1.1	60.3	1.20	0.53	0.92	21	6.04	0.063
013N783019	Sediment Pulp	1.84	15.46	5.94	78.7	58	22.9	12.9	352	3.13	0.4	1.0	0.5	7.2	50.2	0.11	<0.02	0.03	53	0.91	0.107
013N783021	Sediment Pulp	9.04	28.34	7.79	132.2	147	16.5	17.9	360	5.84	<0.1	3.2	0.5	3.3	23.3	0.44	<0.02	0.02	36	0.43	0.135
013N783022	Sediment Pulp	7.23	11.03	25.86	125.6	46	19.6	11.5	657	2.72	0.4	1.8	0.4	5.9	39.6	0.30	<0.02	0.03	39	0.73	0.116
013N783027	Sediment Pulp	35.76	19.98	6.14	75.0	118	11.2	7.9	139	1.67	<0.1	4.9	0.2	0.4	31.1	0.34	<0.02	<0.02	31	0.65	0.105



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N781482	Sediment Pulp	22.0	21.2	0.28	43.7	0.039	<20	3.11	0.143	0.05	<0.1	3.0	0.05	0.27	174	3.9	<0.02	4.7	0.12	<0.1	0.02
013N781483	Sediment Pulp	6.5	15.8	0.28	39.6	0.024	<20	3.59	0.172	0.03	<0.1	1.2	<0.02	0.10	46	0.5	<0.02	6.5	0.10	<0.1	<0.02
013N781484	Sediment Pulp	5.4	21.4	0.46	60.4	0.026	<20	3.25	0.316	0.05	<0.1	2.0	<0.02	0.05	44	0.1	<0.02	5.4	0.07	<0.1	0.03
013N781485	Sediment Pulp	8.9	20.4	0.38	47.5	0.035	<20	4.52	0.170	0.04	<0.1	2.5	0.03	0.12	70	0.7	<0.02	8.1	0.13	<0.1	0.04
013N781486	Sediment Pulp	9.5	26.1	0.59	97.9	0.036	<20	4.98	0.313	0.07	<0.1	3.1	0.04	0.08	60	0.3	<0.02	8.2	0.15	<0.1	0.05
013N781487	Sediment Pulp	8.6	23.2	0.49	83.7	0.030	<20	4.48	0.273	0.05	<0.1	2.4	0.03	0.07	65	0.5	<0.02	7.3	0.13	<0.1	0.04
013N781488	Sediment Pulp	10.7	15.8	0.20	57.5	0.015	<20	2.80	0.090	0.03	<0.1	1.7	0.02	0.21	97	1.0	<0.02	4.2	0.12	<0.1	<0.02
013N781489	Sediment Pulp	9.2	28.2	0.45	101.3	0.034	<20	4.29	0.186	0.04	<0.1	2.9	0.02	0.08	54	0.5	<0.02	7.6	0.11	<0.1	0.04
013N781491	Sediment Pulp	10.9	14.2	0.25	30.4	0.014	<20	2.37	0.159	0.03	<0.1	1.8	0.03	0.62	122	0.6	<0.02	3.5	0.10	<0.1	<0.02
013N781493	Sediment Pulp	9.3	17.5	0.32	39.2	0.024	<20	3.19	0.156	0.03	<0.1	1.4	0.02	0.22	54	0.4	<0.02	5.6	0.14	<0.1	<0.02
013N781494	Sediment Pulp	8.9	11.5	0.15	30.8	0.009	<20	2.31	0.069	0.02	<0.1	0.6	<0.02	0.33	92	0.5	<0.02	2.7	0.09	<0.1	<0.02
013N781497	Sediment Pulp	10.1	13.1	0.60	89.5	0.041	<20	0.45	0.027	0.05	0.5	2.3	0.21	1.57	107	1.1	<0.02	1.9	0.47	<0.1	0.03
013N781499	Sediment Pulp	16.5	26.8	0.63	106.6	0.052	<20	3.48	0.287	0.09	<0.1	3.7	0.06	0.05	53	<0.1	<0.02	6.0	0.17	<0.1	0.06
013N781501	Sediment Pulp	11.2	16.0	0.20	59.1	0.016	<20	2.83	0.096	0.03	<0.1	1.7	0.02	0.21	86	1.1	<0.02	4.3	0.12	<0.1	<0.02
013N781502	Sediment Pulp	10.6	27.4	0.49	85.9	0.038	<20	3.38	0.212	0.06	<0.1	3.1	0.03	0.05	31	0.1	<0.02	5.8	0.10	<0.1	0.04
013N781504	Sediment Pulp	8.0	13.0	0.16	16.3	0.015	<20	2.08	0.058	0.02	<0.1	1.9	0.02	0.35	128	0.3	<0.02	2.8	0.09	<0.1	0.03
013N781505	Sediment Pulp	8.8	28.5	0.50	67.1	0.031	<20	4.60	0.224	0.04	<0.1	3.0	0.03	0.11	79	0.3	<0.02	7.4	0.12	<0.1	0.04
013N781506	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013N781508	Sediment Pulp	14.8	26.2	0.28	62.0	0.024	<20	4.19	0.110	0.03	<0.1	2.5	0.02	0.23	161	1.7	<0.02	5.4	0.17	<0.1	0.04
013N783000	Sediment Pulp	39.0	52.4	0.80	154.3	0.108	<20	1.75	0.035	0.26	0.2	5.8	0.26	0.16	256	0.6	0.04	5.3	1.34	<0.1	0.12
013N783001	Sediment Pulp	11.0	28.0	0.50	89.2	0.040	<20	3.43	0.226	0.06	<0.1	3.1	0.03	0.05	27	0.1	<0.02	5.8	0.11	<0.1	0.03
013N783003	Sediment Pulp	82.0	16.1	0.11	74.4	0.027	<20	1.95	0.029	0.03	1.8	1.9	0.08	0.19	106	2.3	<0.02	2.3	0.11	<0.1	<0.02
013N783011	Sediment Pulp	180.3	20.6	0.17	93.7	0.037	<20	2.58	0.034	0.04	0.3	3.0	0.43	0.17	126	2.1	<0.02	2.1	0.22	<0.1	<0.02
013N783012	Sediment Pulp	72.8	18.7	0.20	63.1	0.040	<20	2.24	0.062	0.05	0.3	3.4	0.16	0.15	91	1.3	<0.02	2.3	0.13	<0.1	<0.02
013N783014	Sediment Pulp	84.3	24.7	0.13	109.4	0.030	<20	2.19	0.053	0.03	0.3	2.0	0.07	0.86	113	1.9	0.02	2.2	0.09	<0.1	<0.02
013N783015	Sediment Pulp	9.7	12.3	0.57	87.2	0.039	<20	0.43	0.025	0.05	0.5	2.1	0.20	1.49	99	1.0	<0.02	1.8	0.46	<0.1	0.03
013N783019	Sediment Pulp	43.3	39.3	0.70	140.6	0.129	<20	2.23	0.200	0.26	0.1	5.4	0.14	0.04	46	0.1	<0.02	6.1	0.47	<0.1	0.10
013N783021	Sediment Pulp	75.5	19.2	0.20	63.9	0.040	<20	2.24	0.061	0.05	0.3	3.5	0.16	0.16	86	1.2	<0.02	2.3	0.13	<0.1	<0.02
013N783022	Sediment Pulp	62.1	29.9	0.48	120.8	0.094	<20	2.09	0.148	0.15	0.2	3.9	0.15	0.04	37	0.4	<0.02	4.8	0.46	<0.1	0.06
013N783027	Sediment Pulp	34.2	16.2	0.14	57.7	0.035	<20	1.70	0.047	0.02	0.1	1.2	0.05	0.17	94	1.5	<0.02	4.1	0.19	<0.1	<0.02



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Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N781482	Sediment Pulp	1.01	2.3	0.2	<0.05	0.8	14.45	41.1	<0.02	<1	0.2	3.6	5.58	21.43	3.65	0.80	3.01	0.40	2.40	0.46	1.29
013N781483	Sediment Pulp	0.55	1.1	0.2	<0.05	0.5	4.03	12.5	<0.02	<1	0.2	2.9	1.63	6.54	1.19	0.41	1.03	0.13	0.78	0.15	0.38
013N781484	Sediment Pulp	0.26	1.4	0.1	<0.05	1.0	3.83	11.1	<0.02	<1	0.1	3.0	1.39	5.65	1.03	0.33	0.91	0.12	0.71	0.13	0.36
013N781485	Sediment Pulp	0.83	1.6	0.2	<0.05	1.4	4.73	19.0	<0.02	<1	0.2	3.5	2.19	8.58	1.56	0.45	1.31	0.17	0.99	0.17	0.46
013N781486	Sediment Pulp	0.56	2.7	0.2	<0.05	1.6	6.14	20.1	<0.02	<1	0.2	5.3	2.44	9.73	1.77	0.52	1.50	0.20	1.16	0.22	0.58
013N781487	Sediment Pulp	0.56	1.9	0.2	<0.05	1.3	5.01	18.5	<0.02	<1	0.2	4.0	2.21	8.68	1.56	0.45	1.31	0.17	0.98	0.18	0.48
013N781488	Sediment Pulp	0.33	1.3	0.1	<0.05	0.6	7.69	14.1	<0.02	<1	0.1	2.1	2.73	11.00	1.93	0.61	1.66	0.22	1.28	0.24	0.68
013N781489	Sediment Pulp	0.62	1.9	0.2	<0.05	1.2	5.23	18.6	<0.02	<1	0.2	3.8	2.30	9.04	1.63	0.49	1.37	0.18	1.04	0.19	0.51
013N781491	Sediment Pulp	0.28	1.1	<0.1	<0.05	0.6	8.27	16.9	<0.02	2	0.1	1.9	2.77	11.11	1.93	0.58	1.68	0.22	1.34	0.27	0.75
013N781493	Sediment Pulp	0.53	1.6	0.2	<0.05	0.3	5.85	17.4	<0.02	<1	0.2	3.2	2.41	9.47	1.68	0.48	1.40	0.18	1.09	0.20	0.54
013N781494	Sediment Pulp	0.28	0.9	<0.1	<0.05	0.2	6.79	13.5	<0.02	<1	0.1	1.3	2.29	9.13	1.62	0.51	1.43	0.18	1.11	0.22	0.62
013N781497	Sediment Pulp	0.65	3.4	3.2	<0.05	1.2	10.50	16.6	0.48	19	0.1	4.1	2.65	11.16	2.33	0.43	2.08	0.28	1.67	0.33	0.93
013N781499	Sediment Pulp	0.82	4.7	0.3	<0.05	2.5	9.09	33.8	<0.02	<1	0.2	5.1	4.17	15.71	2.70	0.52	2.15	0.29	1.64	0.31	0.85
013N781501	Sediment Pulp	0.33	1.4	0.1	<0.05	0.5	7.76	14.3	<0.02	1	0.1	2.1	2.87	11.25	2.01	0.65	1.71	0.23	1.33	0.25	0.70
013N781502	Sediment Pulp	0.48	2.8	0.2	<0.05	1.3	6.98	22.7	<0.02	<1	0.2	4.1	2.81	10.96	1.95	0.43	1.61	0.21	1.25	0.24	0.66
013N781504	Sediment Pulp	0.28	0.9	<0.1	<0.05	0.9	6.58	12.6	<0.02	<1	<0.1	1.6	2.09	8.47	1.52	0.48	1.33	0.16	1.05	0.20	0.59
013N781505	Sediment Pulp	0.62	1.6	0.2	<0.05	1.5	5.08	17.9	<0.02	<1	0.2	3.6	2.24	8.78	1.60	0.47	1.33	0.17	1.01	0.19	0.50
013N781506	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
013N781508	Sediment Pulp	0.42	1.8	0.1	<0.05	1.0	9.16	19.6	<0.02	<1	0.2	2.3	3.55	13.45	2.31	0.63	1.95	0.26	1.53	0.29	0.80
013N783000	Sediment Pulp	1.94	25.2	1.1	<0.05	6.0	18.33	71.7	0.04	<1	0.6	21.0	9.46	34.13	6.00	0.88	4.44	0.59	3.26	0.61	1.72
013N783001	Sediment Pulp	0.49	2.9	0.2	<0.05	1.1	6.95	22.9	<0.02	<1	0.2	4.3	2.86	11.14	2.00	0.45	1.66	0.22	1.31	0.25	0.69
013N783003	Sediment Pulp	1.19	1.9	0.2	<0.05	0.3	33.73	136.6	<0.02	2	0.5	4.8	19.38	72.16	10.65	1.34	8.23	1.08	6.18	1.20	3.34
013N783011	Sediment Pulp	1.29	3.7	0.4	<0.05	0.4	105.03	324.7	0.04	1	3.7	7.1	43.13	157.78	26.32	1.89	22.45	3.31	19.61	3.85	10.59
013N783012	Sediment Pulp	1.28	3.8	0.3	<0.05	0.5	67.62	145.3	0.02	<1	2.2	5.4	17.92	67.30	12.00	1.53	11.22	1.81	11.39	2.28	6.36
013N783014	Sediment Pulp	1.13	1.8	0.2	<0.05	0.6	21.08	123.8	<0.02	3	0.7	3.6	21.09	77.40	9.98	1.55	6.27	0.73	3.91	0.71	1.93
013N783015	Sediment Pulp	0.64	3.2	3.0	<0.05	1.1	9.82	16.1	0.43	17	0.1	3.7	2.55	10.72	2.25	0.42	1.96	0.26	1.60	0.32	0.89
013N783019	Sediment Pulp	2.29	21.2	0.7	<0.05	4.5	21.09	87.9	0.04	<1	0.7	13.5	10.49	39.31	6.46	0.72	5.05	0.69	4.03	0.75	2.07
013N783021	Sediment Pulp	1.31	3.8	0.3	<0.05	0.6	68.49	149.9	0.02	<1	2.3	5.3	18.28	69.54	12.24	1.56	11.50	1.86	11.73	2.33	6.53
013N783022	Sediment Pulp	2.52	14.1	0.7	<0.05	2.7	45.01	115.7	0.03	<1	2.6	14.3	14.77	54.45	9.37	0.85	8.20	1.26	7.69	1.52	4.23
013N783027	Sediment Pulp	1.34	1.7	0.3	<0.05	0.8	8.71	62.3	<0.02	3	0.3	3.1	8.08	28.12	3.97	0.60	2.76	0.33	1.79	0.32	0.86



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N781482	Sediment Pulp	0.18	1.10	0.16	<10	<2	
013N781483	Sediment Pulp	0.05	0.31	0.04	<10	<2	
013N781484	Sediment Pulp	0.05	0.30	0.04	<10	<2	
013N781485	Sediment Pulp	0.06	0.36	0.05	<10	<2	
013N781486	Sediment Pulp	0.08	0.47	0.07	<10	<2	
013N781487	Sediment Pulp	0.06	0.39	0.06	<10	<2	
013N781488	Sediment Pulp	0.09	0.56	0.08	<10	<2	
013N781489	Sediment Pulp	0.07	0.40	0.06	<10	<2	
013N781491	Sediment Pulp	0.10	0.65	0.10	<10	<2	
013N781493	Sediment Pulp	0.07	0.46	0.07	<10	<2	
013N781494	Sediment Pulp	0.08	0.52	0.08	<10	<2	
013N781497	Sediment Pulp	0.13	0.82	0.13	<10	<2	
013N781499	Sediment Pulp	0.11	0.72	0.10	<10	<2	
013N781501	Sediment Pulp	0.09	0.58	0.09	<10	<2	
013N781502	Sediment Pulp	0.09	0.54	0.08	<10	<2	
013N781504	Sediment Pulp	0.08	0.49	0.07	<10	<2	
013N781505	Sediment Pulp	0.07	0.40	0.06	<10	<2	
013N781506	Sediment Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	
013N781508	Sediment Pulp	0.11	0.68	0.10	<10	<2	
013N783000	Sediment Pulp	0.24	1.49	0.22	<10	<2	
013N783001	Sediment Pulp	0.09	0.58	0.08	<10	<2	
013N783003	Sediment Pulp	0.45	2.81	0.41	<10	<2	
013N783011	Sediment Pulp	1.41	8.14	1.06	<10	<2	
013N783012	Sediment Pulp	0.83	4.79	0.61	<10	<2	
013N783014	Sediment Pulp	0.25	1.56	0.22	<10	<2	
013N783015	Sediment Pulp	0.12	0.79	0.12	<10	<2	
013N783019	Sediment Pulp	0.29	1.73	0.24	<10	<2	
013N783021	Sediment Pulp	0.87	4.95	0.62	<10	<2	
013N783022	Sediment Pulp	0.57	3.19	0.40	<10	<2	
013N783027	Sediment Pulp	0.11	0.68	0.10	<10	<2	



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013N783028	Sediment Pulp	32.80	18.64	6.84	116.3	177	13.0	6.1	121	1.54	<0.1	5.6	0.2	0.3	38.2	0.46	<0.02	<0.02	33	0.70	0.099
013N783032	Sediment Pulp	0.92	34.39	22.07	132.9	2625	47.5	30.3	1289	3.20	23.7	3.5	2.4	6.9	27.8	0.51	0.50	2.88	52	0.65	0.095
013N783033	Sediment Pulp	4.36	32.08	6.89	130.9	204	31.3	83.7	8089	15.50	3.8	8.3	0.3	3.9	30.8	0.43	0.03	0.05	66	0.43	0.198
013N783034	Sediment Pulp	10.86	24.13	6.34	125.5	197	17.6	18.5	810	3.87	0.6	24.9	0.4	0.7	33.2	0.40	0.03	0.05	46	0.64	0.141
013N783035	Sediment Pulp	7.01	48.40	9.59	138.7	251	31.9	38.0	1776	12.01	3.7	6.4	0.6	2.7	39.0	0.56	0.03	0.07	60	0.70	0.155
013N783037	Sediment Pulp	2.44	16.47	6.49	85.7	78	24.2	13.9	309	3.16	1.7	3.2	0.5	3.0	40.1	0.21	0.02	0.06	51	0.67	0.082
013N783038	Sediment Pulp	5.29	27.41	5.43	106.9	187	20.2	12.6	352	4.02	0.6	1.7	0.3	1.1	28.7	0.41	<0.02	0.05	53	0.44	0.198
013N783039	Sediment Pulp	3.72	26.82	4.61	144.6	212	18.6	12.0	220	2.21	<0.1	5.4	<0.2	0.4	47.3	0.42	0.03	0.03	43	0.80	0.120
013N783040	Sediment Pulp	8.71	31.52	5.01	88.0	89	24.1	15.2	253	3.64	0.8	8.0	<0.2	2.0	23.0	0.21	0.03	0.04	49	0.35	0.078
013N783041	Sediment Pulp	7.77	51.60	10.68	152.5	284	34.0	41.1	1872	13.06	4.3	7.2	<0.2	3.1	45.1	0.64	0.03	0.09	59	0.78	0.172
013N783042	Sediment Pulp	3.70	11.09	3.73	48.7	44	16.4	7.8	165	2.10	2.5	2.1	<0.2	3.1	43.1	0.30	0.07	0.03	26	0.71	0.056
013N783043	Sediment Pulp	3.29	35.48	5.03	127.1	223	18.8	13.9	302	2.96	1.3	2.4	<0.2	0.8	56.6	0.43	0.06	0.06	63	0.79	0.145
013N783044	Sediment Pulp	6.97	26.92	3.91	137.6	79	25.8	17.0	254	4.67	1.0	1.8	<0.2	1.3	31.1	0.45	0.03	0.04	57	0.51	0.103
013N783045	Sediment Pulp	2.05	15.18	3.98	72.1	44	16.8	7.0	121	1.35	0.7	1.0	<0.2	1.0	33.9	0.19	0.07	0.03	29	0.64	0.058
013N783046	Sediment Pulp	1.13	11.42	2.50	55.6	31	14.6	6.7	116	1.22	0.3	0.8	<0.2	0.6	26.1	0.16	0.03	0.02	21	0.47	0.053
013N783048	Sediment Pulp	8.50	44.66	4.50	111.2	288	17.0	9.5	201	2.46	0.5	3.4	<0.2	0.4	42.3	0.52	0.04	0.05	60	0.72	0.237
013N783050	Sediment Pulp	0.66	17.91	4.07	50.2	72	19.4	4.8	105	0.80	0.1	2.7	<0.2	0.3	29.2	0.14	0.04	0.03	22	0.51	0.045
013N783051	Sediment Pulp	1.12	17.64	2.79	51.1	55	16.7	5.2	96	0.82	0.5	3.0	<0.2	0.4	39.7	0.11	0.04	<0.02	15	0.58	0.064
013N783053	Sediment Pulp	9.42	44.56	79.45	317.3	620	12.9	8.0	441	1.90	34.1	8.2	1.2	1.1	67.4	1.31	0.54	0.94	21	6.42	0.068
013N783055	Sediment Pulp	2.31	32.81	4.44	38.5	95	8.6	1.9	46	0.34	0.2	26.9	<0.2	0.5	19.3	0.28	0.04	<0.02	27	0.27	0.033
013N783056	Sediment Pulp	9.06	27.39	5.22	110.4	269	17.5	8.5	174	1.78	0.3	47.6	0.3	1.2	29.2	0.31	0.06	0.05	37	0.61	0.124
013N783057	Sediment Pulp	10.38	34.43	5.19	145.2	267	18.9	106.0	>10000	14.28	3.3	15.0	0.3	4.7	65.3	0.63	0.05	0.04	79	0.87	0.234
013N783058	Sediment Pulp	20.46	40.28	5.53	147.7	625	10.8	9.5	274	3.86	<0.1	72.0	<0.2	1.3	78.7	0.45	0.04	0.04	56	1.18	0.346
013N783059	Sediment Pulp	5.09	48.97	5.99	126.6	495	12.9	29.4	1494	9.94	0.8	11.9	0.6	3.1	27.0	0.52	0.04	0.05	54	0.54	0.278
013N783061	Sediment Pulp	7.08	28.55	3.94	142.7	88	26.8	17.3	261	4.78	1.1	1.8	<0.2	1.2	31.4	0.45	0.04	0.04	58	0.52	0.104
013N783062	Sediment Pulp	4.43	30.14	5.27	99.9	489	12.8	13.0	314	3.54	0.6	11.0	<0.2	0.9	56.5	0.43	0.04	0.04	42	0.91	0.227
013N783063	Sediment Pulp	1.19	19.96	3.19	60.9	199	11.1	2.3	64	0.54	<0.1	6.3	<0.2	<0.1	24.0	0.31	0.04	0.03	25	0.55	0.086
013N783064	Sediment Pulp	2.59	61.50	7.22	137.1	649	15.5	11.6	1255	4.49	0.8	10.7	1.0	1.8	35.6	0.69	0.05	0.06	50	0.73	0.301
013N783065	Sediment Pulp	4.63	52.99	6.48	147.3	638	14.4	22.4	2560	7.48	1.3	11.4	<0.2	1.9	34.7	0.65	0.05	0.06	43	0.85	0.285
013N783066	Sediment Pulp	0.94	34.03	22.23	135.8	2801	48.2	29.0	1230	3.25	24.5	3.4	3.3	6.9	28.3	0.54	0.53	2.85	47	0.65	0.092



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CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013N783028	Sediment Pulp			41.9	15.2	0.11	63.7	0.029	52	2.46	0.061	0.02	<0.1	1.2	0.04	0.29	131	1.3	<0.02	4.0	0.11
013N783032	Sediment Pulp			42.0	53.7	0.82	163.1	0.110	<20	1.79	0.034	0.26	0.2	5.9	0.27	0.16	296	0.6	0.03	5.4	1.36
013N783033	Sediment Pulp			44.1	35.4	0.42	105.0	0.088	<20	3.83	0.089	0.13	0.2	4.1	0.20	0.11	100	1.6	0.02	8.2	1.12
013N783034	Sediment Pulp			31.2	26.9	0.23	86.3	0.045	<20	3.08	0.055	0.06	0.6	2.2	0.08	0.27	124	3.1	<0.02	7.0	0.54
013N783035	Sediment Pulp			39.0	39.0	0.37	74.1	0.075	<20	4.00	0.111	0.09	0.2	3.5	0.18	0.13	119	2.5	<0.02	7.5	0.96
013N783037	Sediment Pulp			32.7	36.6	0.55	95.7	0.099	<20	2.97	0.132	0.18	0.2	4.0	0.12	0.09	53	1.0	<0.02	7.4	0.98
013N783038	Sediment Pulp			24.4	32.8	0.25	41.3	0.069	<20	2.64	0.059	0.08	0.3	2.2	0.14	0.13	113	2.7	0.03	8.3	0.55
013N783039	Sediment Pulp			27.5	27.9	0.23	65.4	0.049	<20	2.50	0.039	0.05	0.2	1.6	0.12	0.22	161	3.1	0.07	8.2	0.35
013N783040	Sediment Pulp			31.0	31.5	0.36	40.9	0.071	<20	2.27	0.059	0.12	0.1	3.2	0.09	0.14	67	1.7	0.08	5.1	0.61
013N783041	Sediment Pulp			42.5	40.7	0.40	82.1	0.082	<20	4.35	0.125	0.10	0.2	4.0	0.20	0.13	152	3.5	0.09	8.7	1.08
013N783042	Sediment Pulp			22.3	22.8	0.51	30.6	0.087	<20	1.41	0.133	0.14	<0.1	3.0	0.14	1.19	41	1.0	0.09	4.1	0.54
013N783043	Sediment Pulp			25.4	28.2	0.39	59.3	0.078	<20	2.29	0.130	0.11	0.2	2.7	0.10	0.26	200	2.5	0.12	8.3	0.50
013N783044	Sediment Pulp			25.6	29.9	0.35	57.9	0.069	<20	2.26	0.051	0.09	0.2	3.0	0.12	0.23	74	1.6	0.10	4.8	0.47
013N783045	Sediment Pulp			18.5	23.1	0.43	39.2	0.082	<20	1.46	0.081	0.10	<0.1	2.4	0.07	0.29	74	1.1	0.09	4.8	0.58
013N783046	Sediment Pulp			14.4	17.8	0.39	20.4	0.068	<20	1.04	0.057	0.08	0.6	1.8	0.07	0.28	54	0.7	0.07	3.3	0.37
013N783048	Sediment Pulp			24.0	26.9	0.28	58.5	0.061	<20	2.52	0.050	0.07	0.2	2.5	0.07	0.25	194	3.0	0.09	7.8	0.40
013N783050	Sediment Pulp			11.4	21.6	0.35	51.6	0.070	<20	1.12	0.032	0.10	<0.1	1.9	0.06	0.27	117	1.2	0.07	6.0	0.84
013N783051	Sediment Pulp			13.7	15.9	0.36	49.3	0.048	<20	0.94	0.057	0.10	<0.1	1.6	0.06	0.32	119	0.7	<0.02	3.7	0.52
013N783053	Sediment Pulp			10.4	13.2	0.60	90.2	0.043	<20	0.46	0.032	0.06	0.5	2.4	0.20	1.50	99	1.5	0.07	2.1	0.49
013N783055	Sediment Pulp			40.8	13.2	0.09	35.3	0.058	<20	1.02	0.011	0.03	<0.1	1.4	0.03	0.17	181	1.7	0.10	3.1	0.17
013N783056	Sediment Pulp			65.2	28.5	0.31	77.5	0.077	<20	2.62	0.021	0.10	0.1	2.5	0.10	0.27	185	2.7	0.10	7.2	0.67
013N783057	Sediment Pulp			85.3	34.1	0.21	257.1	0.072	<20	3.44	0.033	0.07	0.6	3.8	0.32	0.19	155	4.0	0.13	6.3	0.44
013N783058	Sediment Pulp			111.4	26.1	0.18	106.8	0.088	<20	4.21	0.013	0.05	0.1	2.9	0.10	0.26	265	4.4	0.04	10.9	0.39
013N783059	Sediment Pulp			100.1	29.3	0.10	72.4	0.094	<20	3.96	0.010	0.04	<0.1	3.5	0.24	0.23	262	5.5	0.12	15.2	0.31
013N783061	Sediment Pulp			26.3	30.7	0.36	60.8	0.071	<20	2.32	0.051	0.10	0.2	3.0	0.12	0.25	86	1.6	0.11	4.9	0.49
013N783062	Sediment Pulp			72.4	25.9	0.15	77.6	0.059	<20	2.88	0.011	0.03	<0.1	2.6	0.11	0.22	195	3.4	0.12	7.1	0.32
013N783063	Sediment Pulp			39.3	13.4	0.08	52.4	0.029	<20	1.58	0.009	0.02	<0.1	0.6	0.03	0.28	145	2.4	0.09	3.8	0.21
013N783064	Sediment Pulp			118.8	38.5	0.13	73.1	0.071	<20	4.78	0.010	0.04	<0.1	4.3	0.10	0.31	261	7.7	0.11	7.3	0.33
013N783065	Sediment Pulp			103.3	36.2	0.13	70.1	0.066	<20	4.51	0.008	0.04	<0.1	4.3	0.13	0.27	225	7.3	0.11	7.2	0.35
013N783066	Sediment Pulp			40.3	51.4	0.80	157.7	0.110	<20	1.73	0.032	0.28	0.2	6.1	0.26	0.15	290	1.3	0.16	5.7	1.37



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783028	Sediment Pulp	1.03	1.4	0.2	<0.05	0.3	13.70	72.1	<0.02	2	0.3	2.6	10.22	36.83	5.38	0.83	3.91	0.49	2.70	0.49
013N783032	Sediment Pulp	2.01	25.4	1.1	<0.05	6.6	18.54	74.5	0.04	<1	0.6	21.0	10.23	37.69	6.27	0.92	4.67	0.61	3.44	0.64
013N783033	Sediment Pulp	1.38	11.0	0.5	<0.05	1.2	17.59	101.5	0.03	<1	0.6	14.0	10.40	36.36	5.69	0.95	4.32	0.61	3.55	0.64
013N783034	Sediment Pulp	1.44	5.0	0.3	<0.05	0.4	12.42	59.1	0.02	1	0.5	7.9	7.34	26.34	4.18	0.75	3.25	0.43	2.45	0.44
013N783035	Sediment Pulp	1.36	7.4	0.4	<0.05	0.9	16.30	75.5	0.03	1	0.5	11.5	8.95	30.98	5.00	0.90	3.95	0.54	3.06	0.54
013N783037	Sediment Pulp	2.49	15.6	0.6	<0.05	2.4	11.16	63.9	0.03	<1	0.6	16.1	7.57	26.46	4.24	0.62	3.18	0.41	2.31	0.42
013N783038	Sediment Pulp	1.46	5.7	0.4	<0.05	0.6	9.51	56.1	0.03	<1	0.5	7.6	6.08	21.25	3.31	0.60	2.47	0.33	1.89	0.35
013N783039	Sediment Pulp	1.30	3.2	0.3	<0.05	0.6	11.55	54.0	0.02	2	0.4	5.2	6.77	24.55	3.92	0.71	3.05	0.39	2.25	0.40
013N783040	Sediment Pulp	1.43	8.8	0.4	<0.05	1.0	13.12	61.9	<0.02	2	0.5	11.3	7.85	28.50	4.62	0.65	3.52	0.45	2.46	0.46
013N783041	Sediment Pulp	1.39	8.2	0.4	<0.05	0.9	17.85	83.3	0.03	3	0.6	13.1	9.97	34.28	5.50	0.99	4.30	0.59	3.34	0.60
013N783042	Sediment Pulp	1.53	10.2	0.4	<0.05	3.0	8.86	42.6	<0.02	5	0.3	13.6	5.23	18.56	3.07	0.46	2.36	0.30	1.71	0.31
013N783043	Sediment Pulp	1.71	7.4	0.4	<0.05	1.4	11.90	52.2	0.03	2	0.4	7.7	6.32	23.28	3.77	0.70	2.99	0.40	2.34	0.43
013N783044	Sediment Pulp	1.39	7.5	0.4	<0.05	1.0	10.44	52.3	<0.02	2	0.6	10.4	6.26	22.38	3.60	0.59	2.79	0.36	2.04	0.37
013N783045	Sediment Pulp	1.56	7.3	0.4	<0.05	2.1	7.49	36.0	<0.02	<1	0.3	10.0	4.27	16.05	2.64	0.46	2.04	0.26	1.48	0.27
013N783046	Sediment Pulp	0.89	5.0	0.2	<0.05	1.2	5.21	28.1	<0.02	2	0.2	10.0	3.35	12.45	1.97	0.34	1.48	0.18	1.03	0.19
013N783048	Sediment Pulp	1.42	4.8	0.3	<0.05	1.0	12.26	48.3	0.03	1	0.5	6.1	6.08	22.09	3.69	0.72	2.99	0.41	2.39	0.44
013N783050	Sediment Pulp	1.52	6.6	0.4	<0.05	2.2	4.04	21.8	<0.02	<1	0.2	7.1	2.48	9.16	1.51	0.29	1.19	0.15	0.87	0.16
013N783051	Sediment Pulp	0.93	6.3	0.2	<0.05	1.4	4.25	26.7	<0.02	1	0.2	6.9	3.08	11.16	1.71	0.31	1.26	0.16	0.89	0.16
013N783053	Sediment Pulp	0.76	3.6	3.2	<0.05	1.4	10.59	17.1	0.47	19	0.2	4.1	2.71	11.48	2.38	0.44	2.10	0.28	1.69	0.33
013N783055	Sediment Pulp	1.66	1.8	0.2	<0.05	1.2	7.48	74.1	<0.02	1	0.3	2.0	8.47	28.29	4.19	0.76	2.78	0.34	1.73	0.29
013N783056	Sediment Pulp	2.16	7.8	0.4	<0.05	2.1	16.04	121.8	0.03	2	0.6	8.3	14.76	52.78	7.62	1.46	5.26	0.63	3.29	0.56
013N783057	Sediment Pulp	0.79	5.1	0.3	<0.05	2.6	27.52	213.5	0.03	2	1.2	7.3	18.20	64.32	9.79	2.05	7.20	0.94	5.25	0.92
013N783058	Sediment Pulp	2.22	4.3	0.4	<0.05	1.4	28.55	183.1	0.05	2	1.1	4.4	22.65	78.43	11.64	2.52	8.24	1.07	5.72	0.94
013N783059	Sediment Pulp	1.45	3.0	0.4	<0.05	0.6	31.56	204.9	0.06	2	1.0	2.4	21.48	73.50	11.24	2.42	8.10	1.12	6.36	1.11
013N783061	Sediment Pulp	1.39	7.7	0.4	<0.05	0.9	11.13	53.4	<0.02	2	0.6	10.3	6.45	23.22	3.73	0.59	2.83	0.37	2.05	0.38
013N783062	Sediment Pulp	1.57	2.6	0.3	<0.05	0.9	18.10	147.2	0.03	1	0.8	3.5	15.41	54.99	7.96	1.66	5.66	0.71	3.80	0.66
013N783063	Sediment Pulp	0.88	1.7	0.2	<0.05	0.5	8.08	72.6	<0.02	2	0.4	1.9	8.86	29.98	4.15	0.83	2.78	0.32	1.68	0.29
013N783064	Sediment Pulp	1.96	3.0	0.3	<0.05	1.0	32.46	213.2	0.05	1	1.3	3.1	24.82	85.95	12.88	2.57	9.35	1.25	6.82	1.15
013N783065	Sediment Pulp	1.17	3.1	0.3	<0.05	0.6	30.55	197.6	0.05	3	1.2	3.2	21.71	75.35	11.46	2.34	8.44	1.13	6.28	1.06
013N783066	Sediment Pulp	1.94	25.7	1.1	<0.05	5.9	18.67	76.6	0.04	2	0.7	20.4	10.13	36.61	6.30	0.92	4.65	0.60	3.43	0.64



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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013N783028	Sediment Pulp	0.18	1.08	0.15	<10	<2	
013N783032	Sediment Pulp	0.25	1.58	0.23	<10	<2	
013N783033	Sediment Pulp	0.24	1.48	0.20	<10	<2	
013N783034	Sediment Pulp	0.16	0.95	0.13	<10	<2	
013N783035	Sediment Pulp	0.19	1.18	0.16	<10	<2	
013N783037	Sediment Pulp	0.15	0.91	0.13	<10	<2	
013N783038	Sediment Pulp	0.13	0.80	0.11	<10	<2	
013N783039	Sediment Pulp	0.14	0.88	0.12	<10	4	
013N783040	Sediment Pulp	0.17	1.05	0.14	<10	3	
013N783041	Sediment Pulp	0.21	1.32	0.18	<10	4	
013N783042	Sediment Pulp	0.11	0.68	0.09	<10	4	
013N783043	Sediment Pulp	0.16	0.97	0.13	<10	5	
013N783044	Sediment Pulp	0.14	0.88	0.12	<10	4	
013N783045	Sediment Pulp	0.09	0.57	0.08	<10	5	
013N783046	Sediment Pulp	0.06	0.40	0.06	<10	5	
013N783048	Sediment Pulp	0.16	1.01	0.13	<10	3	
013N783050	Sediment Pulp	0.06	0.36	0.05	<10	4	
013N783051	Sediment Pulp	0.06	0.33	0.04	<10	<2	
013N783053	Sediment Pulp	0.13	0.84	0.12	<10	3	
013N783055	Sediment Pulp	0.09	0.54	0.07	<10	4	
013N783056	Sediment Pulp	0.18	1.09	0.14	<10	5	
013N783057	Sediment Pulp	0.33	2.04	0.27	<10	7	
013N783058	Sediment Pulp	0.31	1.79	0.22	<10	<2	
013N783059	Sediment Pulp	0.41	2.39	0.30	<10	5	
013N783061	Sediment Pulp	0.14	0.89	0.12	<10	6	
013N783062	Sediment Pulp	0.22	1.29	0.16	<10	5	
013N783063	Sediment Pulp	0.10	0.55	0.07	<10	5	
013N783064	Sediment Pulp	0.38	2.25	0.27	<10	6	
013N783065	Sediment Pulp	0.36	2.14	0.27	<10	5	
013N783066	Sediment Pulp	0.25	1.57	0.23	<10	7	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783067	Sediment Pulp	3.72	15.87	3.87	56.7	143	14.5	2.9	70	0.73	0.3	5.7	0.4	0.4	22.8	0.16	0.04	0.03	22	0.31	0.045
013N783068	Sediment Pulp	29.81	59.76	6.33	143.0	589	14.6	25.0	1670	11.82	3.1	23.3	0.9	3.5	26.9	0.54	0.05	0.05	56	0.52	0.268
013N783069	Sediment Pulp	7.02	34.77	8.69	149.4	220	36.2	41.0	4557	8.34	2.4	7.0	0.7	3.6	32.2	0.41	0.05	0.08	58	0.50	0.162
013N783071	Sediment Pulp	0.75	16.93	7.58	97.8	38	36.4	16.2	316	2.93	0.8	2.3	0.5	4.0	34.7	0.11	0.04	0.07	44	0.55	0.086
013N783072	Sediment Pulp	0.58	11.89	5.18	74.4	41	28.7	14.1	312	2.68	0.7	1.5	<0.2	3.4	34.7	0.07	0.03	0.05	40	0.56	0.090
013N783073	Sediment Pulp	1.97	19.54	5.12	114.5	176	19.7	9.0	222	1.90	0.8	6.1	<0.2	0.9	56.8	0.26	0.04	0.06	46	0.56	0.276
013N783074	Sediment Pulp	1.12	20.15	3.70	81.8	81	20.4	6.6	144	1.35	0.5	1.2	0.4	0.8	44.5	0.15	0.03	0.03	29	0.68	0.101
013N783076	Sediment Pulp	7.93	27.07	6.07	85.6	99	26.6	13.2	274	2.44	3.5	3.1	<0.2	3.2	44.9	0.49	0.08	0.06	60	0.73	0.138
013N783077	Sediment Pulp	1.28	12.03	3.45	57.9	66	17.7	4.2	103	0.92	0.5	0.9	<0.2	0.9	28.1	0.17	0.03	0.03	27	0.48	0.050
013N783079	Sediment Pulp	1.04	13.80	4.78	68.0	53	23.3	7.8	127	1.23	0.8	1.1	<0.2	1.0	39.0	0.19	0.04	0.03	23	0.66	0.061
013N783080	Sediment Pulp	2.03	29.39	3.57	59.2	98	28.0	8.9	111	1.57	0.3	2.6	<0.2	0.6	30.3	0.27	0.02	0.03	34	0.57	0.063
013N783081	Sediment Pulp	3.47	15.19	3.65	54.8	137	14.0	2.7	65	0.70	0.2	5.4	<0.2	0.4	21.1	0.14	0.04	0.03	21	0.29	0.043
013N783082	Sediment Pulp	4.50	28.62	6.62	105.4	143	37.2	30.0	1058	6.90	2.2	1.3	<0.2	3.5	35.2	0.40	0.03	0.07	61	0.54	0.151
013N783086	Sediment Pulp	1.26	25.32	5.04	43.4	148	17.7	3.8	71	2.15	<0.1	2.4	<0.2	0.7	28.4	0.29	0.03	0.06	38	0.38	0.114
013N783088	Sediment Pulp	2.56	24.98	6.73	100.5	127	27.5	14.1	218	4.73	1.1	11.5	<0.2	1.8	34.4	0.37	0.04	0.05	48	0.45	0.173
013N783089	Sediment Pulp	4.06	24.45	3.92	42.8	105	19.5	4.2	48	1.46	<0.1	11.7	<0.2	0.4	22.5	0.21	0.03	0.04	31	0.33	0.050
013N783090	Sediment Pulp	8.14	18.77	2.62	69.9	169	16.2	19.8	132	3.66	0.3	2.8	<0.2	0.6	30.0	0.36	0.02	0.03	54	0.51	0.111
013N783092	Sediment Pulp	1.12	13.23	4.70	60.8	30	24.8	11.7	245	2.47	0.8	0.7	<0.2	4.4	70.4	0.10	<0.02	0.03	35	1.09	0.070
013N783097	Sediment Pulp	9.45	42.73	75.08	299.4	602	12.4	7.7	416	1.82	36.2	8.3	3.0	1.2	65.7	1.28	0.53	0.90	20	6.29	0.067
013N783101	Sediment Pulp	1.09	13.07	4.60	59.5	32	24.2	11.6	245	2.41	0.5	0.7	<0.2	4.3	70.2	0.11	<0.02	0.02	34	1.10	0.071
013N783105	Sediment Pulp	0.89	34.04	23.16	133.7	2637	47.1	28.8	1233	3.24	25.4	3.5	2.0	7.0	26.6	0.55	0.57	3.07	46	0.62	0.093
013N783111	Sediment Pulp	3.44	22.32	3.89	83.2	29	21.7	6.5	107	1.48	<0.1	1.6	<0.2	6.6	17.3	0.20	<0.02	0.02	31	0.36	0.074
013N783113	Sediment Pulp	17.36	56.03	4.37	197.3	127	42.7	14.0	221	3.54	0.3	5.2	<0.2	2.7	19.1	1.14	<0.02	0.03	45	0.42	0.116
013N783114	Sediment Pulp	3.52	12.31	3.45	75.2	64	22.2	7.3	85	2.05	<0.1	2.0	0.8	3.8	17.7	0.45	0.07	<0.02	25	0.35	0.049
013N783115	Sediment Pulp	4.84	21.15	5.60	92.4	82	24.2	12.4	207	2.44	0.5	2.7	0.6	3.1	18.5	0.40	<0.02	0.03	38	0.39	0.081
013N783116	Sediment Pulp	3.96	15.40	2.46	97.5	64	14.3	9.5	82	1.48	<0.1	2.5	0.3	1.9	21.2	0.34	0.03	<0.02	20	0.44	0.038
013N783118	Sediment Pulp	41.58	17.31	5.15	64.3	85	28.0	9.8	244	2.81	5.1	3.7	<0.2	5.5	90.5	0.88	0.06	0.05	48	1.32	0.082
013N783119	Sediment Pulp	1.55	15.32	2.63	59.5	68	16.2	3.7	70	0.74	0.3	1.1	<0.2	0.3	31.0	0.26	0.02	<0.02	20	0.52	0.048
013N783120	Sediment Pulp	5.16	32.42	5.87	102.8	230	22.7	7.0	164	1.89	<0.1	5.7	<0.2	0.3	28.5	0.52	0.03	0.05	49	0.48	0.169
013N783121	Sediment Pulp	1.58	15.92	2.73	59.7	69	17.2	3.9	75	0.79	0.3	1.1	<0.2	0.4	32.8	0.27	0.03	<0.02	21	0.55	0.048



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N783067	Sediment Pulp	33.1	16.8	0.21	75.2	0.055	<20	1.27	0.015	0.05	<0.1	1.4	0.04	0.22	135	1.7	0.11	3.8	0.35	<0.1	0.03
013N783068	Sediment Pulp	95.4	37.9	0.10	60.0	0.100	<20	4.28	0.009	0.03	<0.1	4.3	0.21	0.26	285	5.8	0.11	13.0	0.27	<0.1	<0.02
013N783069	Sediment Pulp	53.4	43.5	0.82	120.1	0.122	<20	3.44	0.040	0.26	<0.1	5.2	0.35	0.08	118	2.6	0.11	8.9	1.33	<0.1	0.03
013N783071	Sediment Pulp	24.6	38.8	1.09	94.1	0.139	<20	2.32	0.090	0.35	<0.1	5.3	0.13	0.04	93	0.6	0.10	7.4	1.16	<0.1	0.11
013N783072	Sediment Pulp	19.9	33.8	0.95	59.2	0.121	<20	1.88	0.104	0.27	<0.1	4.3	0.10	0.03	72	0.5	0.07	6.0	0.88	<0.1	0.10
013N783073	Sediment Pulp	21.0	27.8	0.61	93.4	0.086	<20	2.10	0.127	0.18	0.2	2.8	0.09	0.17	133	1.3	0.05	9.4	0.94	<0.1	0.05
013N783074	Sediment Pulp	20.3	26.9	0.48	78.3	0.087	<20	1.53	0.069	0.16	0.2	2.9	0.10	0.25	96	1.2	0.04	6.2	0.74	<0.1	0.08
013N783076	Sediment Pulp	34.8	38.6	0.72	72.8	0.120	<20	1.94	0.100	0.26	0.1	4.7	0.19	0.65	140	1.7	0.07	6.7	1.00	<0.1	0.09
013N783077	Sediment Pulp	21.1	19.5	0.33	41.5	0.071	<20	1.16	0.055	0.09	<0.1	2.0	0.06	0.19	78	1.0	0.07	4.6	0.53	<0.1	0.04
013N783079	Sediment Pulp	19.8	22.4	0.36	46.1	0.062	<20	1.43	0.091	0.10	<0.1	2.5	0.08	0.33	115	1.1	0.06	4.6	0.69	<0.1	0.04
013N783080	Sediment Pulp	25.8	32.3	0.29	36.1	0.051	<20	1.87	0.077	0.08	<0.1	1.9	0.11	0.22	99	1.5	0.08	4.4	0.59	<0.1	<0.02
013N783081	Sediment Pulp	31.1	15.8	0.20	70.3	0.050	<20	1.20	0.014	0.05	<0.1	1.3	0.04	0.21	117	1.4	0.06	3.6	0.32	<0.1	0.02
013N783082	Sediment Pulp	36.6	44.3	0.53	103.4	0.104	<20	3.15	0.106	0.19	0.2	4.4	0.31	0.17	79	2.5	<0.02	8.5	1.08	<0.1	0.04
013N783086	Sediment Pulp	28.8	27.3	0.21	64.8	0.043	<20	2.49	0.050	0.05	0.2	1.8	0.06	0.26	93	2.9	<0.02	5.7	0.60	<0.1	<0.02
013N783088	Sediment Pulp	38.2	37.1	0.39	88.5	0.064	<20	3.42	0.076	0.12	0.2	3.4	0.15	0.21	57	3.3	<0.02	7.2	1.20	<0.1	<0.02
013N783089	Sediment Pulp	29.6	19.4	0.10	36.7	0.026	<20	2.47	0.035	0.02	<0.1	1.4	0.06	0.40	83	2.7	<0.02	3.3	0.33	<0.1	<0.02
013N783090	Sediment Pulp	29.4	17.3	0.08	24.6	0.025	<20	2.14	0.030	0.02	0.1	1.3	0.16	0.32	109	2.6	<0.02	3.1	0.18	<0.1	<0.02
013N783092	Sediment Pulp	29.3	27.7	0.63	105.9	0.078	<20	2.67	0.266	0.14	<0.1	3.7	0.08	0.04	37	0.4	<0.02	6.2	0.32	<0.1	0.05
013N783097	Sediment Pulp	9.9	12.4	0.56	87.1	0.038	<20	0.42	0.026	0.05	0.5	2.2	0.22	1.55	93	1.3	<0.02	2.0	0.48	<0.1	0.03
013N783101	Sediment Pulp	28.8	27.6	0.62	103.2	0.078	<20	2.67	0.265	0.15	0.1	3.6	0.08	0.03	39	0.5	<0.02	6.1	0.32	<0.1	0.04
013N783105	Sediment Pulp	41.4	50.6	0.79	164.1	0.101	<20	1.69	0.029	0.26	0.2	5.8	0.28	0.15	270	0.9	0.04	5.5	1.36	<0.1	0.13
013N783111	Sediment Pulp	37.2	25.1	0.34	80.6	0.076	<20	1.14	0.043	0.12	0.2	3.8	0.09	0.02	32	0.5	<0.02	3.6	0.21	<0.1	0.04
013N783113	Sediment Pulp	101.6	27.3	0.29	80.7	0.054	<20	2.17	0.028	0.12	0.4	4.3	0.40	0.19	72	2.4	<0.02	2.2	0.24	<0.1	<0.02
013N783114	Sediment Pulp	32.5	19.2	0.25	59.6	0.048	<20	1.03	0.041	0.06	0.3	2.9	0.09	0.25	76	1.5	0.04	2.7	0.16	<0.1	0.03
013N783115	Sediment Pulp	49.6	24.9	0.31	54.2	0.061	<20	1.38	0.048	0.06	0.2	3.1	0.13	0.13	58	1.2	0.04	3.6	0.21	<0.1	0.03
013N783116	Sediment Pulp	66.7	11.5	0.15	46.3	0.024	<20	1.13	0.050	0.05	0.4	2.4	0.13	0.53	91	1.0	0.04	1.8	0.11	<0.1	<0.02
013N783118	Sediment Pulp	30.0	38.5	0.96	72.7	0.112	46	2.20	0.862	0.32	0.1	4.4	0.24	1.56	59	1.4	0.03	5.9	0.92	<0.1	0.18
013N783119	Sediment Pulp	13.8	17.8	0.23	42.4	0.040	<20	1.16	0.094	0.07	<0.1	1.3	0.07	0.21	84	0.8	<0.02	3.6	0.46	<0.1	<0.02
013N783120	Sediment Pulp	27.2	29.4	0.19	44.6	0.047	<20	2.71	0.045	0.04	0.1	1.7	0.06	0.30	161	3.5	0.02	6.8	0.36	<0.1	<0.02
013N783121	Sediment Pulp	14.5	19.5	0.25	44.9	0.042	<20	1.22	0.101	0.07	<0.1	1.5	0.08	0.22	81	1.0	0.02	3.8	0.49	<0.1	<0.02



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783067	Sediment Pulp	1.50	4.2	0.3	<0.05	1.3	8.00	63.5	<0.02	2	0.4	5.7	7.40	26.45	4.08	0.79	2.83	0.34	1.77	0.30	0.75
013N783068	Sediment Pulp	1.59	2.5	0.3	<0.05	0.6	29.20	197.9	0.06	3	1.2	2.5	21.31	76.00	11.75	2.27	8.34	1.10	6.07	1.04	2.70
013N783069	Sediment Pulp	1.24	20.0	0.7	<0.05	1.8	16.98	161.3	0.03	2	1.0	20.2	12.06	42.68	6.63	1.30	4.77	0.61	3.41	0.59	1.59
013N783071	Sediment Pulp	1.53	22.8	0.6	<0.05	5.3	10.04	48.9	0.02	2	0.6	22.2	5.99	21.90	3.74	0.69	2.88	0.38	2.11	0.37	0.99
013N783072	Sediment Pulp	1.41	17.2	0.5	<0.05	5.0	8.77	40.5	<0.02	1	0.5	17.1	4.93	17.89	3.08	0.56	2.36	0.31	1.77	0.31	0.83
013N783073	Sediment Pulp	1.90	12.9	0.5	<0.05	2.0	9.48	41.3	0.03	<1	0.4	12.6	5.17	19.12	3.20	0.58	2.47	0.33	1.92	0.35	0.93
013N783074	Sediment Pulp	2.03	11.8	0.4	<0.05	3.2	7.25	38.7	<0.02	<1	0.3	14.4	4.52	16.43	2.65	0.46	2.03	0.26	1.49	0.27	0.71
013N783076	Sediment Pulp	2.44	20.5	0.6	<0.05	3.9	14.44	68.8	0.03	6	0.5	15.2	8.23	30.11	4.96	0.74	3.77	0.49	2.83	0.51	1.39
013N783077	Sediment Pulp	1.46	6.9	0.3	<0.05	1.7	5.15	38.2	<0.02	1	0.2	7.7	4.54	16.59	2.46	0.37	1.69	0.20	1.10	0.20	0.52
013N783079	Sediment Pulp	1.51	7.6	0.4	<0.05	1.8	6.39	36.9	<0.02	2	0.2	9.9	4.51	16.27	2.57	0.41	1.92	0.24	1.32	0.23	0.64
013N783080	Sediment Pulp	1.23	6.8	0.3	<0.05	0.8	9.05	47.2	<0.02	1	0.3	8.3	5.83	21.35	3.28	0.53	2.48	0.31	1.73	0.31	0.82
013N783081	Sediment Pulp	1.30	3.9	0.3	<0.05	1.1	7.56	60.3	<0.02	<1	0.4	5.5	7.10	24.91	3.82	0.74	2.66	0.32	1.66	0.28	0.70
013N783082	Sediment Pulp	2.33	17.2	0.7	<0.05	1.7	15.70	83.2	0.04	<1	0.6	15.8	8.89	31.12	4.89	0.77	3.71	0.51	2.97	0.54	1.48
013N783086	Sediment Pulp	1.35	4.3	0.3	<0.05	0.5	9.19	55.9	<0.02	<1	0.4	6.7	6.83	24.09	3.77	0.64	2.73	0.33	1.82	0.32	0.85
013N783088	Sediment Pulp	1.70	10.8	0.5	<0.05	0.8	13.15	79.7	0.03	<1	0.6	16.9	8.69	30.54	4.75	0.78	3.56	0.46	2.64	0.48	1.28
013N783089	Sediment Pulp	0.85	1.6	0.2	<0.05	0.3	9.87	54.6	<0.02	<1	0.3	2.8	6.84	24.26	3.64	0.70	2.69	0.33	1.83	0.34	0.91
013N783090	Sediment Pulp	0.85	1.2	0.1	<0.05	0.2	7.76	52.6	<0.02	<1	0.2	2.1	6.94	23.64	3.25	0.58	2.20	0.25	1.44	0.26	0.70
013N783092	Sediment Pulp	1.19	11.0	0.5	<0.05	2.1	14.05	55.6	0.02	<1	0.5	10.8	6.99	24.71	4.09	0.54	3.27	0.44	2.56	0.48	1.31
013N783097	Sediment Pulp	0.67	3.4	3.2	<0.05	1.3	10.36	16.6	0.45	18	0.1	4.1	2.61	11.17	2.33	0.43	2.08	0.27	1.69	0.32	0.91
013N783101	Sediment Pulp	1.19	11.0	0.4	<0.05	2.0	13.51	54.6	<0.02	<1	0.5	10.6	6.91	24.20	3.96	0.52	3.18	0.43	2.51	0.47	1.26
013N783105	Sediment Pulp	1.91	25.1	1.1	<0.05	6.0	18.69	76.4	0.04	<1	0.7	21.9	10.01	37.65	6.39	0.93	4.76	0.61	3.45	0.64	1.79
013N783111	Sediment Pulp	1.39	9.2	0.4	<0.05	2.1	21.45	72.9	<0.02	<1	1.0	10.9	9.83	37.51	6.34	0.66	5.06	0.67	3.95	0.75	2.10
013N783113	Sediment Pulp	1.88	8.8	0.4	<0.05	0.7	40.43	224.6	0.02	2	1.5	6.1	25.16	89.64	13.86	1.80	10.21	1.30	7.34	1.39	3.92
013N783114	Sediment Pulp	1.42	4.1	0.3	<0.05	1.1	13.61	51.8	<0.02	<1	0.5	7.3	8.00	28.76	4.62	0.58	3.56	0.44	2.49	0.47	1.27
013N783115	Sediment Pulp	1.75	4.7	0.4	<0.05	1.2	20.41	94.5	<0.02	<1	0.7	7.3	12.19	45.68	7.01	0.85	5.24	0.66	3.75	0.70	1.90
013N783116	Sediment Pulp	0.79	3.4	0.2	<0.05	0.2	29.75	110.4	<0.02	2	0.5	5.5	16.10	60.60	9.04	1.09	7.07	0.91	5.29	1.02	2.87
013N783118	Sediment Pulp	1.69	18.5	0.5	<0.05	6.9	11.80	58.2	<0.02	7	0.4	16.2	7.13	24.80	4.03	0.62	3.11	0.40	2.32	0.43	1.17
013N783119	Sediment Pulp	0.95	4.3	0.2	<0.05	0.7	4.56	25.5	<0.02	<1	0.2	5.6	2.97	10.95	1.75	0.29	1.33	0.16	0.94	0.16	0.44
013N783120	Sediment Pulp	1.34	2.5	0.3	<0.05	0.6	11.08	52.3	0.02	1	0.4	4.0	6.76	24.06	3.81	0.69	2.98	0.37	2.08	0.37	0.98
013N783121	Sediment Pulp	1.00	4.5	0.2	<0.05	0.8	4.78	26.8	<0.02	<1	0.2	5.9	3.11	11.42	1.80	0.30	1.39	0.17	0.97	0.17	0.46



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N783067	Sediment Pulp		0.10	0.55	0.07	<10	5
013N783068	Sediment Pulp		0.35	2.09	0.26	<10	6
013N783069	Sediment Pulp		0.21	1.27	0.17	<10	6
013N783071	Sediment Pulp		0.13	0.80	0.11	<10	5
013N783072	Sediment Pulp		0.11	0.68	0.09	<10	4
013N783073	Sediment Pulp		0.12	0.76	0.10	<10	3
013N783074	Sediment Pulp		0.09	0.58	0.08	<10	<2
013N783076	Sediment Pulp		0.19	1.15	0.16	<10	4
013N783077	Sediment Pulp		0.07	0.41	0.05	<10	2
013N783079	Sediment Pulp		0.08	0.50	0.07	<10	3
013N783080	Sediment Pulp		0.11	0.66	0.09	<10	3
013N783081	Sediment Pulp		0.09	0.50	0.07	<10	5
013N783082	Sediment Pulp		0.20	1.26	0.17	<10	<2
013N783086	Sediment Pulp		0.11	0.67	0.09	<10	<2
013N783088	Sediment Pulp		0.17	1.07	0.15	<10	<2
013N783089	Sediment Pulp		0.12	0.74	0.10	<10	<2
013N783090	Sediment Pulp		0.09	0.58	0.08	<10	<2
013N783092	Sediment Pulp		0.17	1.04	0.14	<10	<2
013N783097	Sediment Pulp		0.12	0.83	0.12	<10	<2
013N783101	Sediment Pulp		0.17	1.04	0.14	<10	<2
013N783105	Sediment Pulp		0.24	1.59	0.23	<10	<2
013N783111	Sediment Pulp		0.28	1.80	0.25	<10	<2
013N783113	Sediment Pulp		0.53	3.44	0.50	<10	<2
013N783114	Sediment Pulp		0.17	1.08	0.15	<10	3
013N783115	Sediment Pulp		0.26	1.64	0.23	<10	<2
013N783116	Sediment Pulp		0.39	2.51	0.37	<10	<2
013N783118	Sediment Pulp		0.15	0.97	0.13	<10	<2
013N783119	Sediment Pulp		0.05	0.36	0.05	<10	<2
013N783120	Sediment Pulp		0.13	0.78	0.10	<10	<2
013N783121	Sediment Pulp		0.06	0.38	0.05	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783122	Sediment Pulp	3.36	22.24	5.75	127.3	160	43.5	19.5	295	3.14	1.1	1.6	<0.2	2.1	49.1	0.23	0.02	0.06	59	0.89	0.126
013N783124	Sediment Pulp	1.55	10.61	2.65	81.1	42	24.2	6.1	115	1.07	0.7	1.2	<0.2	0.6	38.2	0.11	0.03	<0.02	21	0.64	0.045
013N783125	Sediment Pulp	9.06	40.41	74.67	298.5	586	12.3	7.7	416	1.80	35.5	8.0	1.5	1.1	63.4	1.21	0.51	0.86	20	6.21	0.065
013N783128	Sediment Pulp	4.54	58.95	4.40	100.9	155	43.4	11.7	415	1.85	1.9	8.4	<0.2	0.9	51.7	0.46	0.05	0.04	55	0.86	0.401



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N783122	Sediment Pulp	29.3	40.6	0.57	101.1	0.097	<20	3.23	0.132	0.16	0.2	4.0	0.12	0.14	107	1.3	0.04	7.6	0.90	<0.1	0.04
013N783124	Sediment Pulp	13.2	20.5	0.33	40.5	0.050	<20	1.51	0.124	0.09	<0.1	1.8	0.06	0.19	65	0.9	0.03	3.6	0.51	<0.1	<0.02
013N783125	Sediment Pulp	9.8	12.5	0.56	86.7	0.042	<20	0.43	0.029	0.05	0.5	2.3	0.21	1.47	97	1.4	0.03	2.0	0.47	<0.1	0.03
013N783128	Sediment Pulp	34.4	36.6	0.31	93.5	0.045	<20	2.18	0.090	0.09	1.2	1.9	0.18	0.24	97	1.9	0.02	3.7	0.58	<0.1	<0.02



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783122	Sediment Pulp	2.55	13.3	0.6	<0.05	2.1	12.82	57.8	0.03	<1	0.5	16.3	7.16	25.55	4.14	0.70	3.27	0.43	2.50	0.45	1.21
013N783124	Sediment Pulp	1.11	6.0	0.3	<0.05	0.9	5.32	26.0	<0.02	<1	0.2	8.6	3.11	11.73	1.93	0.34	1.51	0.19	1.10	0.19	0.53
013N783125	Sediment Pulp	0.69	3.4	3.1	<0.05	1.3	10.52	16.5	0.45	19	0.2	4.0	2.60	11.22	2.34	0.43	2.06	0.27	1.66	0.32	0.91
013N783128	Sediment Pulp	1.32	5.7	0.3	<0.05	1.0	10.79	69.9	<0.02	10	0.3	8.6	7.92	27.38	4.30	0.71	3.17	0.39	2.17	0.38	1.00



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013N783122	Sediment Pulp	0.16	1.01	0.14	<10	<2
013N783124	Sediment Pulp	0.06	0.41	0.05	<10	<2
013N783125	Sediment Pulp	0.12	0.82	0.12	<10	<2
013N783128	Sediment Pulp	0.13	0.82	0.11	<10	<2



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QUALITY CONTROL REPORT

VAN22001767.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013N781079	Sediment Pulp	15.98	44.30	7.48	113.9	348	30.9	33.8	1450	8.42	1.2	7.0	1.5	1.2	31.7	0.80	0.03	0.07	78	0.58	0.224
REP 013N781079	QC	15.74	44.59	7.39	114.6	346	30.8	33.6	1479	8.42	1.1	7.0	1.6	1.2	31.5	0.80	0.03	0.07	77	0.58	0.220
013N781181	Sediment Pulp	5.00	22.35	3.57	55.0	78	12.0	3.7	58	1.42	0.1	2.3	<0.2	0.9	28.6	0.54	<0.02	0.06	52	0.51	0.040
REP 013N781181	QC	5.42	23.98	3.81	57.2	87	12.5	4.0	60	1.44	0.1	2.5	<0.2	0.8	29.8	0.57	0.02	0.07	54	0.52	0.044
013N781321	Sediment Pulp	6.37	17.47	4.54	33.2	194	9.6	2.9	98	1.28	<0.1	19.2	0.8	0.4	23.1	0.31	<0.02	0.05	45	0.37	0.186
REP 013N781321	QC	6.73	17.83	4.73	35.0	200	10.0	3.1	114	1.34	<0.1	19.6	0.7	0.3	24.4	0.35	<0.02	0.03	47	0.39	0.192
013N781370	Sediment Pulp	9.26	40.91	77.03	300.7	651	12.9	7.8	439	1.84	38.2	8.7	7.7	1.7	62.7	1.38	0.50	1.18	22	6.75	0.070
REP 013N781370	QC	9.82	42.85	78.23	303.8	633	13.8	8.2	444	1.87	37.4	9.2	2.9	1.7	64.9	1.49	0.51	1.05	22	6.83	0.082
013N781433	Sediment Pulp	3.32	10.81	0.77	27.3	32	12.2	4.7	23	0.29	<0.1	17.7	0.8	0.5	24.6	0.11	<0.02	<0.02	12	0.51	0.028
REP 013N781433	QC	3.16	10.06	0.74	25.9	32	11.6	4.3	20	0.29	0.2	17.5	0.8	0.5	23.8	0.12	<0.02	<0.02	12	0.51	0.030
013N781499	Sediment Pulp	0.34	26.71	1.92	36.7	25	36.4	13.4	159	1.52	0.4	0.4	0.2	2.5	89.8	0.07	<0.02	<0.02	31	1.16	0.047
REP 013N781499	QC	0.35	26.63	1.95	37.1	23	36.4	13.6	157	1.52	0.4	0.4	0.5	2.5	91.4	0.07	<0.02	<0.02	31	1.16	0.046
013N783055	Sediment Pulp	2.31	32.81	4.44	38.5	95	8.6	1.9	46	0.34	0.2	26.9	<0.2	0.5	19.3	0.28	0.04	<0.02	27	0.27	0.033
REP 013N783055	QC	2.19	31.40	4.16	34.5	90	8.0	1.8	44	0.32	<0.1	25.8	<0.2	0.5	18.7	0.26	0.04	<0.02	27	0.27	0.033
013N783116	Sediment Pulp	3.96	15.40	2.46	97.5	64	14.3	9.5	82	1.48	<0.1	2.5	0.3	1.9	21.2	0.34	0.03	<0.02	20	0.44	0.038
REP 013N783116	QC	3.88	15.07	2.50	94.1	61	13.9	9.0	79	1.46	<0.1	2.5	<0.2	2.0	20.8	0.32	0.03	<0.02	19	0.42	0.038
Reference Materials																					
STD DS11	Standard	14.34	149.48	132.42	348.6	1750	81.0	14.0	1046	3.26	42.2	2.4	46.5	7.2	68.3	2.29	5.45	11.48	46	1.06	0.071
STD DS11	Standard	14.34	149.20	124.81	344.2	1774	79.1	14.0	1030	3.18	42.6	2.6	97.3	6.9	66.0	2.28	5.41	11.06	47	1.05	0.071
STD DS11	Standard	13.64	145.33	127.31	334.9	1859	79.0	14.0	1052	3.15	44.0	2.3	59.4	6.8	66.2	2.27	5.46	10.60	47	1.07	0.070
STD DS11	Standard	13.80	141.85	135.68	340.1	1772	82.5	15.1	1025	3.06	46.5	2.6	86.1	9.0	64.3	2.58	5.48	11.66	47	1.06	0.067
STD DS11	Standard	14.19	150.13	140.84	368.9	1975	84.1	15.7	1043	3.12	46.8	2.6	75.1	9.1	67.3	2.53	5.80	11.52	49	1.08	0.075
STD DS11	Standard	14.39	142.50	128.66	319.9	2078	78.8	13.3	1042	3.08	41.8	2.5	43.0	8.6	63.1	2.44	5.23	11.28	47	1.05	0.069
STD DS11	Standard	14.84	141.18	132.15	327.3	1676	75.7	13.8	1026	3.10	44.5	2.4	53.2	7.9	64.1	2.51	5.61	10.72	48	1.06	0.071
STD DS11	Standard	13.81	143.85	130.36	334.6	1621	80.6	14.4	1031	3.04	43.9	2.2	57.8	6.9	64.0	2.23	4.76	10.87	49	1.05	0.070
STD OREAS262	Standard	0.57	118.80	52.54	158.3	472	66.3	27.4	535	3.38	35.7	1.1	47.0	8.4	35.2	0.63	1.40	0.91	21	2.96	0.040
STD OREAS262	Standard	0.59	118.83	53.26	156.0	485	66.6	28.7	545	3.46	37.3	1.1	48.6	8.7	36.1	0.64	1.31	0.96	21	2.98	0.041
STD OREAS262	Standard	0.58	113.60	53.06	152.3	476	63.7	27.2	553	3.30	36.1	1.1	53.5	8.6	34.9	0.64	1.31	0.95	21	2.98	0.040



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013N781079	Sediment Pulp	40.9	34.6	0.19	53.7	0.057	<20	4.14	0.044	0.04	0.2	2.6	0.27	0.24	172	4.5	0.03	8.6	0.55	<0.1	<0.02
REP 013N781079	QC	40.9	35.1	0.19	54.0	0.058	<20	4.19	0.042	0.04	0.2	2.6	0.27	0.23	174	4.5	<0.02	8.6	0.55	<0.1	<0.02
013N781181	Sediment Pulp	44.0	15.5	0.09	35.0	0.031	<20	2.33	0.053	0.02	0.1	1.5	0.04	0.23	110	2.0	<0.02	3.7	0.15	0.1	<0.02
REP 013N781181	QC	45.9	15.7	0.09	36.4	0.031	<20	2.39	0.057	0.03	0.1	1.5	0.04	0.23	116	1.8	<0.02	3.8	0.16	0.1	<0.02
013N781321	Sediment Pulp	24.8	19.0	0.06	79.6	0.060	<20	3.15	0.011	0.02	<0.1	1.9	0.03	0.37	165	2.7	<0.02	10.9	0.23	<0.1	0.02
REP 013N781321	QC	26.1	19.9	0.07	82.7	0.060	<20	3.27	0.011	0.02	<0.1	1.8	0.02	0.38	177	2.8	<0.02	10.8	0.24	<0.1	0.04
013N781370	Sediment Pulp	11.3	13.2	0.61	101.4	0.042	<20	0.47	0.029	0.05	0.7	2.5	0.23	1.55	98	0.9	<0.02	2.2	0.54	<0.1	0.05
REP 013N781370	QC	11.4	13.0	0.61	99.3	0.044	<20	0.47	0.029	0.05	0.6	2.7	0.23	1.55	98	0.8	0.03	2.1	0.56	<0.1	0.04
013N781433	Sediment Pulp	13.5	8.6	0.08	18.8	0.012	<20	1.17	0.039	0.01	<0.1	0.9	0.03	0.39	133	0.7	<0.02	1.4	0.07	<0.1	<0.02
REP 013N781433	QC	12.9	7.8	0.07	18.2	0.012	<20	1.18	0.039	0.01	<0.1	1.0	0.03	0.38	132	0.8	<0.02	1.3	0.07	<0.1	<0.02
013N781499	Sediment Pulp	16.5	26.8	0.63	106.6	0.052	<20	3.48	0.287	0.09	<0.1	3.7	0.06	0.05	53	<0.1	<0.02	6.0	0.17	<0.1	0.06
REP 013N781499	QC	16.7	26.2	0.62	108.9	0.053	<20	3.48	0.289	0.09	<0.1	3.6	0.06	0.05	51	<0.1	<0.02	6.0	0.17	<0.1	0.06
013N783055	Sediment Pulp	40.8	13.2	0.09	35.3	0.058	<20	1.02	0.011	0.03	<0.1	1.4	0.03	0.17	181	1.7	0.10	3.1	0.17	<0.1	0.03
REP 013N783055	QC	38.8	12.8	0.09	33.4	0.057	<20	0.99	0.011	0.03	<0.1	1.3	0.03	0.16	176	1.7	0.10	3.0	0.16	<0.1	0.03
013N783116	Sediment Pulp	66.7	11.5	0.15	46.3	0.024	<20	1.13	0.050	0.05	0.4	2.4	0.13	0.53	91	1.0	0.04	1.8	0.11	<0.1	<0.02
REP 013N783116	QC	67.4	11.1	0.14	44.0	0.024	<20	1.08	0.047	0.05	0.4	2.4	0.13	0.48	81	1.1	<0.02	1.7	0.11	<0.1	<0.02
Reference Materials																					
STD DS11	Standard	17.7	59.8	0.85	398.1	0.095	<20	1.18	0.076	0.41	2.4	3.2	4.63	0.27	265	2.7	4.79	5.0	2.70	<0.1	0.06
STD DS11	Standard	16.6	59.4	0.84	402.3	0.093	<20	1.15	0.073	0.41	2.1	3.1	4.79	0.28	248	2.4	4.61	4.9	2.70	<0.1	0.06
STD DS11	Standard	16.6	58.7	0.85	394.1	0.094	<20	1.16	0.073	0.40	2.3	3.1	4.77	0.28	257	2.5	4.63	4.9	2.69	<0.1	0.06
STD DS11	Standard	19.2	60.6	0.85	426.6	0.090	<20	1.14	0.075	0.40	2.2	3.6	4.94	0.27	288	2.0	4.43	5.4	3.11	<0.1	0.05
STD DS11	Standard	20.8	63.0	0.86	456.3	0.097	<20	1.19	0.078	0.41	2.5	3.6	4.93	0.29	294	1.9	4.49	5.3	3.11	<0.1	0.07
STD DS11	Standard	17.8	58.8	0.84	405.9	0.094	<20	1.15	0.072	0.40	2.2	3.1	4.53	0.26	246	2.2	4.14	5.1	2.88	<0.1	0.05
STD DS11	Standard	18.4	59.3	0.86	400.7	0.096	<20	1.18	0.075	0.40	2.5	3.3	4.93	0.27	267	2.0	4.38	4.8	3.00	<0.1	0.06
STD DS11	Standard	16.7	59.6	0.83	381.7	0.090	<20	1.13	0.073	0.38	2.0	3.0	4.62	0.28	265	2.1	4.51	4.5	2.64	<0.1	0.07
STD OREAS262	Standard	16.3	42.9	1.17	239.3	0.003	<20	1.31	0.068	0.32	<0.1	3.2	0.44	0.25	161	0.9	0.31	3.9	2.19	<0.1	0.16
STD OREAS262	Standard	15.8	44.0	1.20	242.9	0.003	<20	1.33	0.073	0.33	<0.1	3.1	0.47	0.25	157	0.7	0.23	3.9	2.23	<0.1	0.18
STD OREAS262	Standard	16.0	42.6	1.17	242.0	0.003	<20	1.29	0.068	0.32	<0.1	3.1	0.46	0.25	165	0.8	0.25	3.9	2.26	<0.1	0.16



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QUALITY CONTROL REPORT

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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013N781079	Sediment Pulp	1.04	3.2	0.3	<0.05	0.3	18.26	86.0	0.03	2	0.5	5.2	10.11	36.56	5.88	1.11	4.60	0.60	3.52	0.63	1.68
REP 013N781079	QC	1.02	3.2	0.3	<0.05	0.3	17.87	85.6	0.03	2	0.5	5.2	9.95	36.54	5.82	1.10	4.57	0.60	3.47	0.62	1.66
013N781181	Sediment Pulp	0.98	1.4	0.2	<0.05	0.4	12.47	81.4	<0.02	<1	0.5	2.4	10.53	37.03	5.56	0.93	3.53	0.51	2.73	0.48	1.38
REP 013N781181	QC	1.06	1.4	0.2	<0.05	0.5	13.11	84.0	<0.02	1	0.4	2.4	11.39	37.60	5.94	0.94	4.17	0.55	2.78	0.48	1.43
013N781321	Sediment Pulp	2.13	1.3	0.3	<0.05	1.1	11.23	46.3	0.03	1	0.4	1.6	6.18	23.56	4.35	0.86	3.59	0.47	3.00	0.48	1.21
REP 013N781321	QC	2.22	1.3	0.3	<0.05	1.0	11.61	50.6	0.03	1	0.5	1.5	6.64	26.14	4.61	0.98	3.80	0.54	3.26	0.48	1.24
013N781370	Sediment Pulp	0.76	3.7	3.3	<0.05	1.4	10.68	19.4	0.47	23	0.1	4.3	3.22	14.13	2.85	0.53	2.41	0.34	2.11	0.37	0.99
REP 013N781370	QC	0.81	3.9	3.3	<0.05	1.5	11.13	19.0	0.49	22	<0.1	4.3	3.13	13.50	2.81	0.52	2.48	0.34	2.09	0.36	1.06
013N781433	Sediment Pulp	0.29	0.7	0.1	<0.05	0.5	5.69	16.1	<0.02	2	<0.1	1.8	3.37	13.21	1.86	0.51	1.59	0.19	1.16	0.19	0.56
REP 013N781433	QC	0.29	0.6	0.1	<0.05	0.4	5.52	15.9	<0.02	2	<0.1	1.8	3.27	12.55	1.78	0.45	1.53	0.20	1.17	0.19	0.49
013N781499	Sediment Pulp	0.82	4.7	0.3	<0.05	2.5	9.09	33.8	<0.02	<1	0.2	5.1	4.17	15.71	2.70	0.52	2.15	0.29	1.64	0.31	0.85
REP 013N781499	QC	0.84	4.7	0.3	<0.05	2.5	9.00	32.9	<0.02	<1	0.2	5.1	4.14	15.80	2.74	0.54	2.21	0.29	1.69	0.32	0.87
013N783055	Sediment Pulp	1.66	1.8	0.2	<0.05	1.2	7.48	74.1	<0.02	1	0.3	2.0	8.47	28.29	4.19	0.76	2.78	0.34	1.73	0.29	0.72
REP 013N783055	QC	1.59	1.7	0.2	<0.05	1.2	7.12	70.2	<0.02	1	0.3	2.0	7.92	26.61	3.98	0.72	2.63	0.32	1.64	0.27	0.68
013N783116	Sediment Pulp	0.79	3.4	0.2	<0.05	0.2	29.75	110.4	<0.02	2	0.5	5.5	16.10	60.60	9.04	1.09	7.07	0.91	5.29	1.02	2.87
REP 013N783116	QC	0.78	3.4	0.2	<0.05	0.2	29.35	107.3	<0.02	1	0.5	5.3	16.27	60.06	9.08	1.08	7.01	0.90	5.24	1.01	2.89
Reference Materials																					
STD DS11	Standard	1.24	33.9	1.9	<0.05	2.9	8.16	36.2	0.23	45	0.7	23.4	3.79	14.37	2.58	0.47	2.04	0.27	1.52	0.28	0.78
STD DS11	Standard	1.18	33.5	1.8	<0.05	2.8	8.04	34.3	0.23	42	0.7	23.7	3.72	13.96	2.45	0.46	1.97	0.26	1.46	0.27	0.74
STD DS11	Standard	1.25	32.5	1.7	<0.05	2.7	7.83	34.2	0.22	43	0.7	23.2	3.59	13.76	2.45	0.44	1.95	0.25	1.44	0.27	0.74
STD DS11	Standard	1.20	32.7	1.9	<0.05	2.4	7.89	37.2	0.22	50	0.7	22.8	4.24	16.47	2.75	0.55	2.25	0.30	1.83	0.28	0.77
STD DS11	Standard	1.31	34.1	1.8	<0.05	2.3	8.34	40.2	0.25	50	0.8	23.9	4.49	16.99	2.98	0.58	2.32	0.31	2.02	0.30	0.79
STD DS11	Standard	1.22	32.9	1.7	<0.05	2.6	7.70	35.0	0.23	41	1.0	23.0	3.91	14.49	2.57	0.51	2.08	0.28	1.49	0.27	0.82
STD DS11	Standard	1.34	35.3	1.8	<0.05	2.3	8.09	37.5	0.23	49	0.8	22.2	4.33	16.48	2.66	0.52	2.27	0.29	1.84	0.28	0.83
STD DS11	Standard	1.17	32.0	1.8	<0.05	2.8	7.53	34.2	0.23	42	0.7	22.2	3.62	13.60	2.41	0.45	1.91	0.25	1.42	0.26	0.73
STD OREAS262	Standard	<0.02	19.1	0.5	<0.05	7.4	10.89	32.6	0.03	2	1.1	16.3	3.81	15.11	3.21	0.61	2.83	0.37	2.06	0.37	1.01
STD OREAS262	Standard	<0.02	19.5	0.5	<0.05	8.0	10.98	32.0	0.03	<1	1.1	17.2	3.89	14.94	3.23	0.62	2.86	0.37	2.10	0.38	1.02
STD OREAS262	Standard	<0.02	19.1	0.5	<0.05	7.5	10.66	32.2	0.03	<1	1.1	16.9	3.87	15.00	3.23	0.61	2.83	0.37	2.07	0.37	1.00



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: July 22, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22001767.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013N781079	Sediment Pulp	0.22	1.33	0.18	<10	<2
REP 013N781079	QC	0.22	1.34	0.18	<10	<2
013N781181	Sediment Pulp	0.19	1.08	0.14	<10	<2
REP 013N781181	QC	0.18	1.10	0.16	<10	<2
013N781321	Sediment Pulp	0.15	1.06	0.11	<10	<2
REP 013N781321	QC	0.16	1.09	0.10	<10	<2
013N781370	Sediment Pulp	0.13	0.98	0.14	<10	<2
REP 013N781370	QC	0.14	1.10	0.14	<10	<2
013N781433	Sediment Pulp	0.06	0.45	0.04	<10	<2
REP 013N781433	QC	0.06	0.46	0.04	<10	<2
013N781499	Sediment Pulp	0.11	0.72	0.10	<10	<2
REP 013N781499	QC	0.12	0.73	0.11	<10	<2
013N783055	Sediment Pulp	0.09	0.54	0.07	<10	4
REP 013N783055	QC	0.09	0.52	0.07	<10	5
013N783116	Sediment Pulp	0.39	2.51	0.37	<10	<2
REP 013N783116	QC	0.39	2.51	0.37	<10	<2
Reference Materials						
STD DS11	Standard	0.11	0.71	0.10	105	168
STD DS11	Standard	0.10	0.67	0.10	94	165
STD DS11	Standard	0.10	0.68	0.09	96	162
STD DS11	Standard	0.10	0.83	0.10	98	181
STD DS11	Standard	0.11	0.92	0.10	99	192
STD DS11	Standard	0.11	0.72	0.10	83	169
STD DS11	Standard	0.10	0.81	0.11	100	169
STD DS11	Standard	0.10	0.65	0.10	90	160
STD OREAS262	Standard	0.13	0.80	0.11	<10	5
STD OREAS262	Standard	0.13	0.83	0.12	<10	<2
STD OREAS262	Standard	0.13	0.82	0.11	<10	<2



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Bureau Veritas Commodities Canada Ltd.

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QUALITY CONTROL REPORT

VAN22001767.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.96	109.18	53.95	147.0	467	70.5	29.3	540	3.21	36.5	1.2	47.8	9.3	34.0	0.67	1.85	0.94	21	3.00	0.039
STD OREAS262	Standard	0.61	112.88	60.58	158.4	496	66.4	28.5	547	3.26	40.6	1.3	55.5	10.8	38.2	0.71	1.51	1.08	22	2.98	0.039
STD OREAS262	Standard	0.58	109.36	54.82	147.1	458	60.9	27.3	529	3.21	35.6	1.2	46.8	9.2	34.9	0.65	1.18	0.97	21	2.89	0.036
STD OREAS262	Standard	0.61	112.26	56.03	152.6	487	62.0	27.0	541	3.20	39.6	1.2	52.6	10.7	35.1	0.63	1.37	1.08	21	3.02	0.039
STD OREAS262	Standard	0.60	113.70	51.79	154.4	449	64.0	28.6	542	3.25	35.3	1.1	43.3	8.6	34.3	0.64	1.50	0.90	21	2.88	0.039
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	0.02	0.2	3	0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.06	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.02	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Report Date: July 22, 2022

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QUALITY CONTROL REPORT

VAN22001767.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	16.3	59.7	1.16	239.7	0.003	<20	1.21	0.068	0.30	<0.1	3.3	0.44	0.26	164	0.2	0.19	3.8	2.32	<0.1	0.13
STD OREAS262	Standard	17.1	42.1	1.19	272.5	0.003	<20	1.29	0.068	0.31	<0.1	3.4	0.52	0.27	182	<0.1	0.24	4.0	2.49	<0.1	0.15
STD OREAS262	Standard	16.6	43.0	1.14	251.6	0.003	<20	1.26	0.068	0.32	<0.1	3.3	0.43	0.25	169	0.5	0.20	4.0	2.25	<0.1	0.13
STD OREAS262	Standard	16.3	42.3	1.18	256.7	0.003	<20	1.24	0.068	0.30	<0.1	3.4	0.49	0.25	167	0.2	0.21	4.0	2.39	<0.1	0.17
STD OREAS262	Standard	14.7	43.9	1.19	233.9	0.003	<20	1.26	0.066	0.30	<0.1	3.0	0.42	0.27	150	0.4	0.22	3.6	2.03	<0.1	0.19
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	24	0.2	0.08	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	0.04	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Part: 3 of 4

QUALITY CONTROL REPORT

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		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	17.4	0.6	<0.05	5.7	10.25	31.8	0.02	<1	1.3	16.7	4.00	15.85	3.21	0.65	3.06	0.39	2.33	0.39	1.02
STD OREAS262	Standard	<0.02	19.7	0.5	<0.05	6.6	10.76	33.5	0.02	<1	0.9	18.0	4.17	16.75	3.62	0.71	3.13	0.41	2.57	0.42	1.14
STD OREAS262	Standard	<0.02	19.2	0.5	<0.05	4.7	10.26	32.8	0.03	1	0.9	19.3	4.02	15.33	3.25	0.63	2.70	0.39	1.94	0.39	1.04
STD OREAS262	Standard	<0.02	18.9	0.5	<0.05	6.3	10.75	32.8	<0.02	<1	1.0	17.9	4.03	16.69	3.59	0.69	3.33	0.44	2.48	0.41	1.10
STD OREAS262	Standard	<0.02	18.3	0.5	<0.05	8.3	10.45	29.0	0.03	<1	1.1	16.9	3.44	13.50	2.95	0.56	2.63	0.35	1.96	0.36	0.95
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.1	<0.01	<0.1	<0.02	1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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QUALITY CONTROL REPORT

VAN22001767.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.14	0.96	0.12	<10	<2
STD OREAS262	Standard	0.15	1.02	0.13	<10	<2
STD OREAS262	Standard	0.15	0.89	0.12	<10	<2
STD OREAS262	Standard	0.15	0.92	0.11	<10	<2
STD OREAS262	Standard	0.12	0.77	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	5
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Geological Survey of Canada**

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: June 16, 2022
Analysis Start: June 29, 2022
Report Date: July 22, 2022
Page: 1 of 7

CERTIFICATE OF ANALYSIS

VAN22001768.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 013N78
P.O. Number: 3000732409
Number of Samples: 162

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	162	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	161	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001768.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783129	Sediment Pulp	1.74	23.25	5.96	67.0	37	32.3	14.8	468	2.91	4.0	1.2	0.8	5.4	67.0	0.09	0.06	0.06	51	1.05	0.062
013N783130	Sediment Pulp	1.67	80.45	2.76	167.6	237	26.4	23.5	400	4.74	1.0	0.5	0.4	0.3	13.2	0.66	0.12	0.04	27	0.79	0.128
013N783131	Sediment Pulp	1.06	26.46	3.60	95.7	74	24.8	9.3	142	1.49	0.8	0.8	<0.2	1.0	31.4	0.18	0.06	0.04	27	0.68	0.059
013N783132	Sediment Pulp	1.23	11.27	3.00	64.2	78	13.0	6.2	127	0.97	0.9	1.0	<0.2	0.4	37.8	0.16	0.03	0.03	22	0.51	0.128
013N783133	Sediment Pulp	6.90	31.24	6.44	109.5	259	31.0	27.3	684	4.45	1.7	3.3	<0.2	2.4	36.3	0.30	0.03	0.08	67	0.59	0.186
013N783134	Sediment Pulp	4.69	61.50	5.71	160.1	173	22.0	6.9	182	2.89	0.5	6.0	<0.2	1.9	27.6	0.50	0.04	0.07	83	0.52	0.267
013N783135	Sediment Pulp	1.31	16.84	5.81	110.6	73	33.9	15.9	240	2.63	1.4	1.7	<0.2	2.3	41.2	0.11	0.04	0.06	42	0.68	0.108
013N783136	Sediment Pulp	1.21	23.23	9.54	114.1	97	41.1	22.7	481	3.98	2.6	1.7	<0.2	4.4	42.5	0.14	0.05	0.10	63	0.74	0.159
013N783137	Sediment Pulp	4.68	43.54	4.07	140.2	329	22.7	38.2	1218	5.62	0.9	3.9	<0.2	0.7	31.5	0.47	0.03	0.05	73	0.62	0.171
013N783138	Sediment Pulp	8.70	79.90	3.74	134.2	423	74.8	24.8	646	4.90	0.4	5.0	<0.2	1.0	28.2	0.55	0.03	0.05	44	0.64	0.245
013N783139	Sediment Pulp	5.42	29.92	6.84	145.3	184	40.4	29.0	550	4.47	2.0	3.4	<0.2	2.5	36.3	0.27	0.04	0.07	59	0.63	0.194
013N783140	Sediment Pulp	1.32	22.91	6.27	103.5	96	31.0	15.4	255	2.61	0.9	2.4	<0.2	1.9	29.1	0.16	0.05	0.06	45	0.50	0.087
013N783141	Sediment Pulp	1.21	16.55	5.90	110.2	75	33.5	15.9	233	2.59	1.5	1.7	<0.2	2.3	39.4	0.12	0.04	0.06	41	0.67	0.104
013N783142	Sediment Pulp	0.82	20.03	8.08	89.3	49	37.4	20.8	595	3.65	1.8	1.2	<0.2	5.1	36.9	0.11	0.06	0.07	52	0.67	0.103
013N783143	Sediment Pulp	1.31	18.46	6.63	79.8	50	29.7	16.6	588	3.22	2.6	1.5	1.6	4.6	33.3	0.12	0.06	0.07	56	0.59	0.117
013N783144	Sediment Pulp	0.87	33.93	22.48	131.7	2633	47.5	28.9	1239	3.11	23.8	3.4	3.1	6.4	26.7	0.52	0.49	2.92	49	0.62	0.091
013N783145	Sediment Pulp	1.42	20.43	4.78	98.6	180	32.1	12.7	193	2.01	1.0	1.6	0.9	1.3	28.2	0.16	0.04	0.05	41	0.50	0.097
013N783146	Sediment Pulp	1.40	22.20	4.88	94.4	188	32.2	12.3	198	2.06	1.1	1.6	0.6	1.3	28.5	0.15	0.04	0.06	44	0.50	0.102
013N783148	Sediment Pulp	1.26	18.30	3.22	96.2	111	16.9	5.4	82	0.83	0.7	1.3	0.4	0.5	29.2	0.35	0.04	0.03	21	0.54	0.032
013N783149	Sediment Pulp	8.41	16.89	2.09	114.1	187	11.1	8.4	230	2.95	1.3	1.7	0.6	0.2	27.8	0.37	0.04	0.03	58	0.77	0.134
013N783150	Sediment Pulp	7.61	42.29	5.54	118.7	154	15.4	21.9	4729	5.42	32.6	1.3	1.3	0.6	80.1	0.67	0.06	0.04	36	0.55	0.147
013N783151	Sediment Pulp	1.94	22.71	4.22	87.6	79	27.0	13.3	319	2.85	3.7	0.9	0.6	1.6	34.9	0.20	0.06	0.05	39	0.72	0.078
013N783152	Sediment Pulp	3.69	90.46	3.46	220.1	309	34.2	36.5	1663	11.18	22.5	1.1	1.9	1.0	22.1	0.79	0.14	0.07	46	0.78	0.314
013N783153	Sediment Pulp	1.29	9.30	2.51	79.7	30	14.6	6.0	108	0.93	1.0	1.6	0.3	0.4	32.9	0.25	0.03	<0.02	25	0.50	0.042
013N783154	Sediment Pulp	4.64	33.01	4.62	157.7	79	29.1	15.7	965	3.33	1.6	1.9	0.3	0.9	42.5	0.47	0.04	0.03	57	0.69	0.120
013N783155	Sediment Pulp	10.75	38.10	5.57	138.0	198	23.9	23.7	615	5.61	0.8	5.8	0.7	1.6	34.9	0.48	0.02	0.04	80	0.61	0.195
013N783156	Sediment Pulp	4.05	41.33	3.90	99.1	125	33.7	8.7	126	2.29	<0.1	5.8	0.3	0.5	29.8	0.52	0.03	0.03	50	0.51	0.112
013N783158	Sediment Pulp	1.60	12.87	5.00	69.0	70	23.8	13.1	599	2.49	1.5	1.2	0.4	3.1	55.8	0.15	0.02	0.04	40	0.89	0.108
013N783159	Sediment Pulp	2.70	19.09	4.32	82.5	112	23.4	33.2	4026	7.13	1.5	1.3	0.4	1.9	52.7	0.22	<0.02	0.04	39	0.78	0.087
013N783160	Sediment Pulp	8.13	47.71	5.75	91.8	70	36.3	13.5	210	2.61	0.7	7.0	0.7	2.4	62.9	0.30	<0.02	0.06	57	0.95	0.077



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N783129	Sediment Pulp	27.5	43.2	0.86	69.5	0.135	<20	2.66	0.206	0.23	<0.1	5.6	0.11	<0.02	13	0.4	<0.02	7.2	0.87	<0.1	0.11
013N783130	Sediment Pulp	10.9	37.5	0.11	23.0	0.020	<20	2.32	0.012	0.02	<0.1	3.5	0.07	0.59	156	3.4	<0.02	2.8	0.33	<0.1	<0.02
013N783131	Sediment Pulp	20.1	30.6	0.43	48.8	0.066	<20	1.77	0.072	0.10	<0.1	3.1	0.06	0.20	61	1.0	<0.02	4.2	0.58	<0.1	0.04
013N783132	Sediment Pulp	15.3	18.0	0.34	43.0	0.054	<20	1.24	0.107	0.09	0.1	1.6	0.07	0.16	83	0.7	<0.02	3.5	0.50	<0.1	0.02
013N783133	Sediment Pulp	31.8	37.2	0.57	90.2	0.112	<20	2.77	0.073	0.15	0.2	4.1	0.16	0.10	129	1.8	<0.02	8.6	0.96	<0.1	0.04
013N783134	Sediment Pulp	84.6	37.5	0.27	47.9	0.097	<20	3.81	0.026	0.07	0.3	3.8	0.10	0.26	126	4.1	0.03	7.1	0.49	<0.1	0.03
013N783135	Sediment Pulp	24.9	38.5	0.79	82.2	0.111	<20	2.49	0.153	0.24	<0.1	4.4	0.11	0.11	74	0.9	<0.02	6.7	0.99	<0.1	0.07
013N783136	Sediment Pulp	33.1	49.6	1.07	123.4	0.136	<20	3.26	0.130	0.37	<0.1	6.7	0.17	0.09	88	0.8	<0.02	9.0	1.29	<0.1	0.07
013N783137	Sediment Pulp	28.7	38.9	0.22	78.5	0.078	<20	3.30	0.020	0.04	0.1	3.2	0.11	0.18	160	3.4	<0.02	8.5	0.38	<0.1	<0.02
013N783138	Sediment Pulp	55.7	63.4	0.18	85.4	0.057	<20	4.13	0.010	0.03	<0.1	4.4	0.14	0.26	209	4.7	0.03	4.0	0.33	<0.1	0.02
013N783139	Sediment Pulp	33.6	44.5	0.77	114.6	0.115	<20	3.31	0.095	0.25	0.2	5.0	0.15	0.13	92	1.6	<0.02	7.7	1.10	<0.1	0.05
013N783140	Sediment Pulp	26.3	34.2	0.67	103.4	0.100	<20	2.46	0.055	0.21	<0.1	4.4	0.10	0.12	79	0.9	0.02	6.1	0.83	<0.1	0.09
013N783141	Sediment Pulp	25.6	38.3	0.78	83.6	0.110	<20	2.46	0.148	0.24	<0.1	4.3	0.11	0.10	65	0.9	<0.02	6.5	0.99	<0.1	0.07
013N783142	Sediment Pulp	27.2	37.8	1.02	123.2	0.144	<20	2.38	0.103	0.31	<0.1	6.0	0.14	<0.02	53	0.5	0.02	7.0	1.13	<0.1	0.13
013N783143	Sediment Pulp	24.3	34.4	0.82	99.6	0.110	<20	2.04	0.107	0.26	<0.1	4.8	0.12	0.03	52	0.2	<0.02	5.5	0.89	<0.1	0.13
013N783144	Sediment Pulp	39.6	51.5	0.80	158.5	0.101	<20	1.70	0.030	0.27	0.2	5.7	0.27	0.16	263	0.7	0.03	5.1	1.32	<0.1	0.12
013N783145	Sediment Pulp	23.8	32.4	0.54	100.1	0.087	<20	2.51	0.056	0.14	<0.1	3.4	0.09	0.13	93	0.6	<0.02	6.5	0.88	<0.1	0.07
013N783146	Sediment Pulp	24.7	32.4	0.56	100.7	0.087	<20	2.58	0.055	0.14	<0.1	3.5	0.09	0.13	101	0.7	<0.02	6.6	0.90	<0.1	0.07
013N783148	Sediment Pulp	21.5	17.0	0.24	43.9	0.049	<20	1.64	0.038	0.06	<0.1	1.9	0.06	0.21	89	0.6	<0.02	3.2	0.46	<0.1	0.03
013N783149	Sediment Pulp	21.4	24.3	0.10	45.1	0.036	<20	2.18	0.019	0.02	0.1	2.0	0.05	0.23	103	2.0	<0.02	3.5	0.18	<0.1	<0.02
013N783150	Sediment Pulp	24.1	24.7	0.16	70.8	0.029	<20	2.37	0.017	0.02	0.1	2.5	0.10	0.26	126	1.8	<0.02	2.2	0.21	<0.1	<0.02
013N783151	Sediment Pulp	17.3	37.4	0.52	95.6	0.073	<20	2.42	0.090	0.09	<0.1	3.7	0.07	0.10	62	0.8	<0.02	5.2	0.97	<0.1	0.04
013N783152	Sediment Pulp	25.0	45.6	0.14	53.0	0.032	<20	3.58	0.013	0.03	<0.1	5.2	0.14	0.28	174	4.2	<0.02	3.2	0.37	<0.1	0.03
013N783153	Sediment Pulp	17.7	15.5	0.24	28.7	0.039	<20	1.37	0.081	0.06	<0.1	1.1	0.09	0.14	35	0.4	<0.02	2.6	0.35	<0.1	<0.02
013N783154	Sediment Pulp	37.9	29.8	0.21	34.7	0.052	<20	2.93	0.038	0.06	0.2	2.3	0.16	0.33	89	2.0	<0.02	4.1	0.37	<0.1	<0.02
013N783155	Sediment Pulp	37.7	34.7	0.29	44.6	0.076	<20	3.95	0.069	0.07	0.3	3.1	0.13	0.17	114	2.9	<0.02	7.5	0.47	<0.1	<0.02
013N783156	Sediment Pulp	27.4	32.3	0.23	65.6	0.049	<20	3.30	0.045	0.05	<0.1	2.3	0.05	0.30	112	2.5	<0.02	4.9	0.38	<0.1	<0.02
013N783158	Sediment Pulp	22.7	33.1	0.57	80.3	0.093	<20	2.50	0.214	0.18	<0.1	3.5	0.11	0.05	67	0.5	<0.02	6.2	1.11	<0.1	0.04
013N783159	Sediment Pulp	19.8	31.2	0.40	68.2	0.062	<20	3.13	0.179	0.08	<0.1	2.5	0.10	0.07	62	1.0	<0.02	6.1	0.63	<0.1	<0.02
013N783160	Sediment Pulp	32.7	35.5	0.49	75.2	0.068	<20	3.53	0.216	0.11	0.3	3.5	0.12	0.12	49	0.7	<0.02	5.8	0.64	<0.1	0.02



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783129 Sediment Pulp	0.36	17.9	0.6	<0.05	5.7	12.22	58.0	0.02	<1	0.4	18.2	6.64	23.60	3.87	0.65	3.09	0.40	2.35	0.43	1.16
013N783130 Sediment Pulp	0.59	1.1	0.1	<0.05	0.3	8.43	22.3	<0.02	<1	0.2	1.5	2.64	10.63	2.07	0.53	1.88	0.26	1.56	0.29	0.80
013N783131 Sediment Pulp	1.31	7.4	0.3	<0.05	1.7	9.32	37.8	<0.02	<1	0.3	11.0	4.88	18.05	3.04	0.55	2.50	0.31	1.83	0.33	0.88
013N783132 Sediment Pulp	0.95	5.7	0.3	<0.05	1.0	6.05	30.0	<0.02	<1	0.2	8.8	3.53	13.41	2.26	0.38	1.78	0.22	1.26	0.22	0.58
013N783133 Sediment Pulp	1.91	12.3	0.6	<0.05	1.9	14.71	72.9	0.03	<1	0.5	15.3	7.89	28.29	4.74	0.80	3.79	0.50	2.87	0.52	1.37
013N783134 Sediment Pulp	3.00	5.6	0.4	<0.05	1.8	36.29	167.4	0.04	<1	1.0	6.8	19.92	75.21	12.33	1.88	10.01	1.33	7.38	1.27	3.29
013N783135 Sediment Pulp	2.04	17.7	0.6	<0.05	3.3	11.72	51.3	0.02	<1	0.5	19.0	6.51	23.57	4.01	0.70	3.16	0.41	2.34	0.42	1.13
013N783136 Sediment Pulp	2.01	26.6	0.9	<0.05	3.8	13.78	68.0	0.04	<1	0.7	26.4	7.98	29.12	4.82	0.82	3.80	0.50	2.88	0.51	1.36
013N783137 Sediment Pulp	1.38	3.0	0.3	<0.05	0.9	17.00	61.8	0.03	1	0.7	4.2	7.38	28.08	4.89	1.04	4.16	0.56	3.33	0.60	1.62
013N783138 Sediment Pulp	1.64	2.4	0.2	<0.05	1.0	31.41	117.3	0.03	2	1.0	3.1	13.99	53.97	9.28	1.84	7.86	1.09	6.37	1.10	2.89
013N783139 Sediment Pulp	1.90	18.3	0.6	<0.05	2.5	17.05	71.5	0.03	1	0.8	19.3	8.38	31.12	5.41	1.00	4.35	0.59	3.43	0.60	1.63
013N783140 Sediment Pulp	1.99	15.6	0.5	<0.05	4.3	13.31	54.9	0.03	<1	0.6	16.7	6.99	26.18	4.61	0.83	3.76	0.49	2.81	0.50	1.35
013N783141 Sediment Pulp	1.99	17.2	0.6	<0.05	3.2	11.61	52.2	0.02	<1	0.5	18.6	6.50	23.75	4.08	0.70	3.21	0.41	2.37	0.42	1.13
013N783142 Sediment Pulp	1.21	21.2	0.7	<0.05	7.1	14.27	60.5	0.03	<1	0.7	19.0	7.21	26.41	4.68	0.81	3.76	0.49	2.85	0.51	1.39
013N783143 Sediment Pulp	1.44	17.5	0.6	<0.05	6.7	12.23	55.5	0.03	1	0.6	16.3	6.17	22.95	4.03	0.67	3.24	0.43	2.42	0.44	1.21
013N783144 Sediment Pulp	1.86	24.8	1.2	<0.05	5.5	18.08	73.6	0.05	<1	0.6	19.7	9.57	36.30	6.21	0.90	4.60	0.60	3.28	0.62	1.75
013N783145 Sediment Pulp	1.95	11.9	0.5	<0.05	2.9	9.64	47.4	0.02	<1	0.4	17.3	5.90	21.78	3.70	0.62	2.93	0.38	2.05	0.36	0.93
013N783146 Sediment Pulp	1.96	12.1	0.5	<0.05	2.9	9.98	50.3	0.02	<1	0.4	17.4	6.20	22.81	3.88	0.65	3.01	0.39	2.12	0.38	0.97
013N783148 Sediment Pulp	1.14	5.3	0.3	<0.05	1.4	8.26	39.7	<0.02	<1	0.3	7.3	5.11	18.72	3.14	0.53	2.43	0.30	1.64	0.29	0.77
013N783149 Sediment Pulp	0.91	1.3	0.2	<0.05	0.4	12.17	44.5	<0.02	<1	0.4	1.6	5.57	21.06	3.66	0.72	3.01	0.40	2.26	0.42	1.17
013N783150 Sediment Pulp	0.40	1.2	0.1	<0.05	0.2	14.62	58.5	<0.02	2	0.4	2.7	6.09	22.56	4.01	0.76	3.39	0.47	2.68	0.49	1.35
013N783151 Sediment Pulp	1.47	7.7	0.4	<0.05	1.7	8.07	35.9	<0.02	1	0.3	12.8	4.25	15.84	2.72	0.50	2.14	0.29	1.58	0.29	0.78
013N783152 Sediment Pulp	0.91	1.6	0.2	<0.05	0.9	15.63	62.5	0.03	2	0.5	1.9	6.44	23.82	4.35	0.96	3.83	0.54	3.11	0.57	1.53
013N783153 Sediment Pulp	0.62	4.4	0.2	<0.05	0.3	5.43	32.9	<0.02	<1	0.2	9.1	4.08	14.36	2.21	0.38	1.61	0.20	1.06	0.19	0.51
013N783154 Sediment Pulp	1.31	5.1	0.3	<0.05	0.5	12.46	79.2	<0.02	<1	0.6	6.2	8.92	31.89	4.97	0.82	3.66	0.45	2.46	0.44	1.19
013N783155 Sediment Pulp	1.63	5.0	0.3	<0.05	0.7	14.45	80.2	0.03	2	0.6	8.6	9.10	33.11	5.18	0.91	4.00	0.53	2.97	0.53	1.41
013N783156 Sediment Pulp	1.32	3.6	0.2	<0.05	0.5	11.28	54.7	<0.02	<1	0.5	6.8	6.63	24.20	3.99	0.71	3.15	0.41	2.26	0.41	1.09
013N783158 Sediment Pulp	1.38	13.3	0.5	<0.05	1.7	9.04	47.1	0.02	<1	0.4	15.3	5.37	19.07	3.17	0.50	2.41	0.32	1.80	0.33	0.89
013N783159 Sediment Pulp	0.68	5.2	0.3	<0.05	0.6	8.46	40.7	<0.02	<1	0.3	10.7	4.77	16.94	2.77	0.55	2.15	0.28	1.62	0.29	0.78
013N783160 Sediment Pulp	1.22	6.9	0.3	<0.05	0.9	12.45	57.9	<0.02	<1	0.5	13.2	7.80	28.46	4.54	0.76	3.49	0.43	2.33	0.42	1.11



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N783129	Sediment Pulp		0.15	0.98	0.13	<10	<2
013N783130	Sediment Pulp		0.11	0.70	0.10	<10	<2
013N783131	Sediment Pulp		0.11	0.71	0.10	<10	<2
013N783132	Sediment Pulp		0.07	0.45	0.06	<10	<2
013N783133	Sediment Pulp		0.18	1.12	0.15	<10	<2
013N783134	Sediment Pulp		0.43	2.57	0.33	<10	<2
013N783135	Sediment Pulp		0.15	0.90	0.12	<10	<2
013N783136	Sediment Pulp		0.18	1.14	0.15	<10	<2
013N783137	Sediment Pulp		0.21	1.29	0.17	<10	<2
013N783138	Sediment Pulp		0.38	2.23	0.28	<10	<2
013N783139	Sediment Pulp		0.21	1.30	0.17	<10	<2
013N783140	Sediment Pulp		0.17	1.07	0.14	<10	<2
013N783141	Sediment Pulp		0.15	0.91	0.12	<10	<2
013N783142	Sediment Pulp		0.18	1.13	0.15	<10	<2
013N783143	Sediment Pulp		0.16	0.99	0.13	<10	<2
013N783144	Sediment Pulp		0.24	1.53	0.23	<10	<2
013N783145	Sediment Pulp		0.12	0.71	0.10	<10	<2
013N783146	Sediment Pulp		0.13	0.74	0.10	<10	<2
013N783148	Sediment Pulp		0.10	0.60	0.08	<10	<2
013N783149	Sediment Pulp		0.15	0.94	0.13	<10	<2
013N783150	Sediment Pulp		0.18	1.13	0.15	<10	<2
013N783151	Sediment Pulp		0.10	0.64	0.09	<10	<2
013N783152	Sediment Pulp		0.21	1.29	0.18	<10	<2
013N783153	Sediment Pulp		0.07	0.39	0.05	<10	<2
013N783154	Sediment Pulp		0.16	0.97	0.14	<10	<2
013N783155	Sediment Pulp		0.19	1.13	0.15	<10	<2
013N783156	Sediment Pulp		0.14	0.87	0.12	<10	<2
013N783158	Sediment Pulp		0.12	0.71	0.10	<10	<2
013N783159	Sediment Pulp		0.10	0.63	0.08	<10	<2
013N783160	Sediment Pulp		0.14	0.85	0.12	<10	<2



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783161 Sediment Pulp	8.20	16.86	2.08	117.4	194	11.1	8.5	233	2.99	1.2	1.7	0.4	0.2	28.1	0.36	0.03	0.03	58	0.79	0.135
013N783162 Sediment Pulp	8.26	39.91	74.46	281.8	547	11.4	7.1	409	1.68	30.5	8.0	2.3	0.9	59.4	1.17	0.47	0.82	19	5.91	0.063
013N783163 Sediment Pulp	3.91	39.34	5.34	84.3	101	27.4	46.7	3276	4.42	2.4	11.6	0.4	2.2	41.4	0.27	<0.02	0.06	35	0.64	0.092
013N783165 Sediment Pulp	12.86	67.47	3.97	141.1	197	30.4	32.1	887	4.26	160.6	6.6	0.8	0.7	17.0	0.75	0.11	0.08	41	0.48	0.137
013N783166 Sediment Pulp	8.50	62.55	3.96	133.6	218	24.8	31.0	535	4.07	150.8	6.1	0.7	0.7	15.9	0.68	0.12	0.07	39	0.43	0.145
013N783167 Sediment Pulp	0.58	13.49	4.95	60.6	32	24.9	12.3	364	2.70	1.6	1.2	0.2	5.0	81.9	0.07	<0.02	0.03	41	1.27	0.075
013N783168 Sediment Pulp	7.72	88.98	8.38	196.8	454	27.5	20.2	740	2.75	9.8	3.1	0.7	0.5	32.1	1.14	0.03	0.06	42	0.99	0.159
013N783169 Sediment Pulp	6.02	29.73	4.51	136.2	122	38.6	16.9	190	4.17	16.9	12.8	0.6	1.0	26.5	0.52	0.03	0.24	48	0.60	0.088
013N783170 Sediment Pulp	2.28	23.23	5.85	108.8	106	30.9	30.4	692	6.60	4.2	0.6	0.6	6.3	58.4	0.13	0.02	0.04	70	0.84	0.131
013N783171 Sediment Pulp	3.25	9.67	1.58	96.8	53	11.9	3.9	45	1.36	0.2	1.1	0.4	0.4	30.8	0.17	<0.02	<0.02	36	0.56	0.045
013N783173 Sediment Pulp	2.72	8.13	1.29	96.7	37	10.2	2.5	26	0.33	0.4	1.1	0.2	0.2	24.5	0.11	<0.02	<0.02	17	0.42	0.025
013N783174 Sediment Pulp	0.51	19.89	5.30	63.2	36	26.7	12.9	306	2.83	0.4	0.9	0.4	8.0	84.9	0.07	<0.02	0.03	44	1.32	0.073
013N783175 Sediment Pulp	0.74	22.23	6.13	71.9	43	27.6	14.7	489	3.21	0.7	1.1	1.1	10.4	73.3	0.07	<0.02	0.03	51	1.20	0.082
013N783176 Sediment Pulp	8.54	26.00	2.32	128.1	226	11.2	7.7	155	1.72	0.2	12.7	0.4	0.2	29.0	0.33	<0.02	<0.02	38	0.66	0.096
013N783177 Sediment Pulp	29.97	44.54	4.33	146.9	281	19.4	67.2	1732	6.40	<0.1	67.4	0.7	1.5	29.8	0.59	<0.02	0.02	61	0.70	0.190
013N783178 Sediment Pulp	0.35	15.84	3.88	49.2	25	25.5	12.6	298	2.41	0.7	0.8	0.4	5.5	100.4	0.05	<0.02	<0.02	35	1.53	0.064
013N783181 Sediment Pulp	3.38	9.87	1.63	98.3	56	12.1	4.0	46	1.38	0.2	1.1	0.3	0.5	31.8	0.17	<0.02	<0.02	36	0.57	0.048
013N783182 Sediment Pulp	13.52	10.60	1.20	53.1	20	7.9	5.1	128	2.03	0.2	1.6	0.4	2.1	105.6	0.12	<0.02	<0.02	12	0.66	0.032
013N783183 Sediment Pulp	4.24	11.67	1.34	172.6	44	8.2	3.7	39	0.97	0.5	1.1	0.5	0.5	42.8	0.19	0.02	<0.02	19	0.55	0.041
013N783185 Sediment Pulp	0.95	14.54	1.90	61.4	32	18.1	6.1	68	0.93	0.4	1.0	0.4	2.6	30.9	0.13	<0.02	<0.02	20	0.58	0.032
013N783190 Sediment Pulp	0.76	9.48	4.10	43.6	28	9.7	5.9	199	1.65	0.2	0.9	0.8	6.4	20.9	0.10	<0.02	0.02	30	0.41	0.078
013N783191 Sediment Pulp	4.69	10.84	1.43	111.7	114	5.8	3.1	88	0.54	1.0	1.7	0.7	<0.1	20.8	0.34	0.02	<0.02	12	0.32	0.071
013N783192 Sediment Pulp	26.31	46.11	4.04	181.4	285	11.4	5.3	144	1.89	1.4	11.7	1.6	1.5	44.6	0.63	0.03	0.03	55	0.82	0.341
013N783193 Sediment Pulp	0.94	33.73	26.50	133.6	2585	44.8	29.0	1224	3.17	24.6	3.6	3.3	6.7	27.6	0.52	0.51	2.83	50	0.63	0.093
013N783194 Sediment Pulp	63.03	13.10	2.27	175.6	130	9.3	25.5	2175	6.61	0.1	2.7	0.5	1.9	25.5	0.59	<0.02	<0.02	36	0.41	0.162
013N783196 Sediment Pulp	10.21	5.11	12.91	116.9	43	3.8	3.0	46	1.17	<0.1	1.5	0.3	2.3	15.4	0.67	0.03	<0.02	16	0.26	0.054
013N783199 Sediment Pulp	4.26	4.32	11.99	46.2	47	3.7	2.7	150	1.24	0.2	1.0	0.2	3.7	13.5	0.18	<0.02	0.02	17	0.34	0.098
013N783200 Sediment Pulp	7.01	16.99	9.12	83.3	32	8.7	6.3	250	2.01	2.1	2.9	0.4	10.0	19.4	0.24	0.03	0.03	29	0.47	0.121
013N783201 Sediment Pulp	10.53	5.09	13.05	115.7	43	3.7	3.0	45	1.18	<0.1	1.5	<0.2	2.0	15.7	0.71	0.03	<0.02	16	0.26	0.058
013N783202 Sediment Pulp	27.47	9.08	13.99	137.0	89	7.0	20.3	7415	8.57	3.1	2.3	3.0	7.1	15.8	0.46	0.04	0.04	31	0.32	0.132



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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013N783161	Sediment Pulp			21.4	23.9	0.10	42.8	0.036	<20	2.20	0.018	0.02	0.1	1.9	0.05	0.23	111	1.9	<0.02	3.5	0.17
013N783162	Sediment Pulp			9.3	11.7	0.55	82.4	0.034	<20	0.39	0.021	0.05	0.4	1.9	0.19	1.47	90	1.0	0.02	1.7	0.42
013N783163	Sediment Pulp			28.6	28.1	0.30	54.3	0.053	<20	2.35	0.125	0.06	0.1	2.3	0.09	0.08	50	0.7	<0.02	4.3	0.52
013N783165	Sediment Pulp			26.5	17.9	0.08	33.4	0.026	<20	2.39	0.026	0.02	0.2	1.4	0.24	0.15	125	3.0	<0.02	2.8	0.21
013N783166	Sediment Pulp			25.1	17.5	0.08	23.0	0.025	<20	2.29	0.027	0.02	0.1	1.3	0.26	0.14	103	3.0	<0.02	2.9	0.22
013N783167	Sediment Pulp			25.7	31.6	0.68	90.7	0.095	<20	3.06	0.325	0.18	<0.1	4.0	0.09	0.02	42	0.1	<0.02	6.7	0.55
013N783168	Sediment Pulp			37.4	23.0	0.12	47.1	0.037	<20	3.76	0.040	0.02	0.2	1.4	0.10	0.26	166	3.4	<0.02	5.1	0.23
013N783169	Sediment Pulp			24.6	27.6	0.17	33.8	0.035	<20	2.85	0.070	0.02	0.4	1.9	0.10	0.17	109	1.8	<0.02	4.3	0.70
013N783170	Sediment Pulp			41.3	41.8	0.71	112.6	0.099	<20	3.66	0.188	0.21	<0.1	5.4	0.12	0.10	48	0.9	<0.02	7.5	0.55
013N783171	Sediment Pulp			18.5	11.7	0.10	34.5	0.030	<20	1.08	0.038	0.02	0.2	0.9	0.06	0.24	109	0.6	<0.02	2.4	0.10
013N783173	Sediment Pulp			6.7	6.8	0.06	17.2	0.011	<20	0.59	0.031	0.01	<0.1	0.6	0.02	0.33	76	0.4	<0.02	1.1	0.08
013N783174	Sediment Pulp			40.2	31.5	0.88	131.3	0.119	<20	3.02	0.343	0.29	<0.1	5.3	0.12	0.03	45	<0.1	<0.02	6.9	0.43
013N783175	Sediment Pulp			52.2	34.6	0.90	159.3	0.137	<20	2.84	0.288	0.32	0.1	5.9	0.14	<0.02	29	0.1	<0.02	6.8	0.52
013N783176	Sediment Pulp			34.4	15.3	0.06	41.0	0.021	<20	1.96	0.014	0.01	0.1	0.9	0.10	0.32	105	1.7	<0.02	2.8	0.11
013N783177	Sediment Pulp			58.5	22.2	0.08	126.1	0.035	<20	3.68	0.017	0.02	0.1	2.5	0.42	0.23	133	3.3	<0.02	4.4	0.13
013N783178	Sediment Pulp			29.2	26.8	0.75	99.8	0.087	<20	3.20	0.409	0.20	<0.1	4.0	0.08	<0.02	28	<0.1	<0.02	6.5	0.30
013N783181	Sediment Pulp			19.1	12.1	0.10	35.2	0.031	<20	1.11	0.039	0.02	0.2	1.0	0.07	0.24	103	0.7	<0.02	2.4	0.10
013N783182	Sediment Pulp			29.0	8.2	0.11	53.2	0.020	<20	0.98	0.111	0.03	0.2	1.5	0.04	1.91	54	0.5	<0.02	1.8	0.06
013N783183	Sediment Pulp			14.8	7.3	0.06	22.8	0.012	<20	0.57	0.018	0.01	0.4	1.0	0.05	1.03	129	0.9	<0.02	0.9	0.06
013N783185	Sediment Pulp			23.2	18.3	0.19	80.4	0.036	<20	1.04	0.066	0.07	0.2	2.8	0.06	0.35	96	0.5	<0.02	2.1	0.16
013N783190	Sediment Pulp			40.5	15.8	0.30	92.0	0.064	<20	0.97	0.061	0.08	<0.1	2.1	0.07	<0.02	39	0.2	<0.02	2.9	0.21
013N783191	Sediment Pulp			50.1	6.9	0.06	56.1	0.011	<20	1.83	0.030	0.02	<0.1	0.3	<0.02	0.36	91	0.9	<0.02	2.0	0.08
013N783192	Sediment Pulp			153.6	26.5	0.18	121.9	0.029	<20	3.70	0.034	0.04	2.4	2.8	0.08	0.25	145	2.7	<0.02	3.3	0.19
013N783193	Sediment Pulp			40.1	51.2	0.82	159.5	0.107	<20	1.73	0.031	0.27	0.2	5.9	0.25	0.15	262	0.6	0.05	5.4	1.32
013N783194	Sediment Pulp			66.1	13.2	0.09	210.7	0.022	<20	2.28	0.032	0.03	0.2	2.6	0.18	0.23	97	1.6	<0.02	2.6	0.12
013N783196	Sediment Pulp			118.8	5.4	0.10	47.5	0.028	<20	0.97	0.032	0.04	0.1	1.3	0.07	0.09	46	0.8	<0.02	1.0	0.15
013N783199	Sediment Pulp			62.6	7.2	0.16	36.6	0.055	<20	0.67	0.036	0.05	<0.1	1.4	0.06	0.02	34	0.3	<0.02	2.1	0.18
013N783200	Sediment Pulp			81.2	15.6	0.28	74.1	0.089	<20	0.94	0.061	0.14	0.4	4.2	0.11	<0.02	14	0.3	<0.02	2.6	0.28
013N783201	Sediment Pulp			118.5	5.4	0.10	46.7	0.029	<20	0.96	0.029	0.04	<0.1	1.2	0.07	0.09	54	0.7	<0.02	1.0	0.15
013N783202	Sediment Pulp			130.1	14.0	0.23	103.1	0.067	<20	1.54	0.038	0.11	0.3	3.5	0.18	0.06	77	0.8	<0.02	1.7	0.43



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783161	Sediment Pulp	0.89	1.3	0.2	<0.05	0.4	12.14	43.8	<0.02	<1	0.4	1.7	5.47	20.78	3.58	0.70	2.97	0.39	2.24	0.42	1.16
013N783162	Sediment Pulp	0.54	3.1	3.0	<0.05	0.9	9.42	15.2	0.43	17	0.1	3.8	2.43	10.19	2.13	0.39	1.85	0.25	1.49	0.29	0.83
013N783163	Sediment Pulp	0.67	4.5	0.3	<0.05	0.4	12.00	56.3	<0.02	<1	0.3	10.8	6.79	24.27	3.86	0.62	3.00	0.39	2.14	0.39	1.05
013N783165	Sediment Pulp	0.62	0.9	0.1	<0.05	0.2	10.18	54.0	<0.02	8	0.4	2.1	6.19	21.31	3.24	0.52	2.51	0.33	1.76	0.32	0.84
013N783166	Sediment Pulp	0.62	1.0	0.1	<0.05	0.2	9.84	49.2	<0.02	6	0.4	2.1	5.91	20.40	3.12	0.50	2.42	0.31	1.71	0.30	0.80
013N783167	Sediment Pulp	1.23	13.9	0.5	<0.05	2.7	10.35	51.7	0.02	<1	0.3	12.9	6.14	21.59	3.48	0.51	2.64	0.36	2.02	0.37	1.02
013N783168	Sediment Pulp	1.07	1.3	0.2	<0.05	0.3	12.41	61.6	<0.02	3	0.4	2.5	8.56	29.15	4.32	0.82	3.20	0.41	2.28	0.41	1.09
013N783169	Sediment Pulp	1.19	1.6	0.2	<0.05	0.4	12.58	44.5	<0.02	<1	0.5	5.5	5.77	20.38	3.43	0.53	2.97	0.40	2.11	0.36	0.94
013N783170	Sediment Pulp	2.45	16.4	0.6	<0.05	2.4	14.89	88.0	0.03	<1	0.5	15.7	9.35	33.14	5.04	0.72	3.70	0.51	2.86	0.53	1.47
013N783171	Sediment Pulp	1.06	1.4	0.1	<0.05	0.4	5.40	34.1	<0.02	<1	0.1	1.8	4.20	15.36	2.27	0.32	1.57	0.19	1.06	0.20	0.54
013N783173	Sediment Pulp	0.26	0.8	<0.1	<0.05	0.2	2.62	12.2	<0.02	<1	<0.1	1.1	1.48	5.60	0.91	0.15	0.74	0.09	0.54	0.10	0.27
013N783174	Sediment Pulp	0.88	20.2	0.7	<0.05	5.4	16.51	80.6	0.03	<1	0.5	12.8	9.46	33.21	5.29	0.68	3.98	0.54	3.11	0.59	1.63
013N783175	Sediment Pulp	1.09	23.1	0.8	<0.05	5.8	19.10	104.0	0.04	<1	0.6	13.9	11.72	42.27	6.57	0.81	4.83	0.66	3.76	0.70	1.95
013N783176	Sediment Pulp	0.87	1.1	0.1	<0.05	0.1	12.50	48.2	<0.02	2	0.2	1.6	8.59	31.27	4.54	0.66	3.32	0.41	2.24	0.42	1.16
013N783177	Sediment Pulp	1.11	1.2	0.2	<0.05	0.5	26.84	104.4	0.02	3	0.5	1.7	14.45	53.62	8.00	1.15	6.25	0.84	4.65	0.88	2.42
013N783178	Sediment Pulp	0.70	13.3	0.5	<0.05	3.7	13.13	60.2	0.02	<1	0.4	9.7	6.98	24.67	4.09	0.57	3.15	0.43	2.49	0.47	1.30
013N783181	Sediment Pulp	1.09	1.5	0.2	<0.05	0.4	5.52	35.0	<0.02	<1	0.1	1.9	4.44	15.81	2.32	0.32	1.58	0.20	1.09	0.20	0.55
013N783182	Sediment Pulp	0.56	1.3	<0.1	<0.05	0.9	12.04	34.8	<0.02	6	0.2	3.7	7.18	25.64	3.80	0.54	2.91	0.37	2.06	0.40	1.11
013N783183	Sediment Pulp	0.35	0.6	<0.1	<0.05	0.3	6.98	25.1	<0.02	2	<0.1	1.1	3.38	12.74	2.01	0.27	1.65	0.21	1.25	0.25	0.70
013N783185	Sediment Pulp	1.09	5.3	0.2	<0.05	1.1	11.51	38.7	<0.02	1	0.2	4.1	5.76	21.58	3.57	0.45	2.85	0.38	2.15	0.41	1.16
013N783190	Sediment Pulp	1.69	7.3	0.4	<0.05	1.5	14.22	79.6	<0.02	<1	0.4	6.9	9.16	32.15	4.99	0.58	3.71	0.49	2.74	0.50	1.36
013N783191	Sediment Pulp	0.57	1.1	0.1	<0.05	<0.1	25.05	51.8	<0.02	<1	0.3	1.7	11.45	44.24	6.69	1.03	5.61	0.73	4.19	0.82	2.32
013N783192	Sediment Pulp	1.84	3.5	0.3	<0.05	0.8	94.94	211.0	0.03	14	0.9	5.1	38.55	143.27	22.60	3.29	18.58	2.57	15.42	3.04	8.86
013N783193	Sediment Pulp	1.91	25.4	1.2	<0.05	6.1	18.55	72.8	0.04	<1	0.7	20.2	9.88	36.02	6.24	0.90	4.65	0.60	3.37	0.62	1.76
013N783194	Sediment Pulp	0.62	2.0	0.2	<0.05	0.7	37.48	84.4	<0.02	<1	0.5	2.4	16.19	61.18	9.45	1.38	7.71	1.03	6.15	1.24	3.61
013N783196	Sediment Pulp	2.54	3.0	0.6	<0.05	2.3	81.04	187.1	<0.02	<1	1.6	5.3	29.78	109.13	19.12	1.12	17.24	2.58	15.41	2.96	8.07
013N783199	Sediment Pulp	5.56	4.2	1.0	<0.05	7.3	29.58	115.1	<0.02	<1	0.7	4.1	13.99	49.47	8.28	0.56	6.90	1.01	5.99	1.08	2.85
013N783200	Sediment Pulp	1.49	12.3	1.0	<0.05	14.1	48.16	151.5	0.03	<1	0.8	7.1	18.74	69.87	11.62	0.85	9.92	1.44	8.64	1.67	4.60
013N783201	Sediment Pulp	2.51	3.0	0.6	<0.05	2.1	82.14	185.4	<0.02	<1	1.6	5.4	29.36	111.43	19.12	1.12	17.40	2.59	15.63	2.98	8.15
013N783202	Sediment Pulp	3.71	10.3	1.0	<0.05	4.7	96.29	352.7	0.04	<1	2.8	9.7	31.85	116.55	20.26	1.34	18.28	2.87	18.01	3.45	9.65



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013N783161	Sediment Pulp	0.15	0.92	0.13	<10	<2
013N783162	Sediment Pulp	0.11	0.72	0.11	<10	<2
013N783163	Sediment Pulp	0.14	0.83	0.12	<10	<2
013N783165	Sediment Pulp	0.11	0.69	0.09	<10	<2
013N783166	Sediment Pulp	0.11	0.66	0.09	<10	<2
013N783167	Sediment Pulp	0.13	0.83	0.12	<10	<2
013N783168	Sediment Pulp	0.14	0.87	0.12	<10	<2
013N783169	Sediment Pulp	0.12	0.75	0.10	<10	<2
013N783170	Sediment Pulp	0.20	1.25	0.18	<10	<2
013N783171	Sediment Pulp	0.07	0.43	0.06	<10	<2
013N783173	Sediment Pulp	0.04	0.21	0.03	<10	<2
013N783174	Sediment Pulp	0.22	1.39	0.19	<10	<2
013N783175	Sediment Pulp	0.26	1.67	0.24	<10	<2
013N783176	Sediment Pulp	0.15	0.91	0.13	<10	<2
013N783177	Sediment Pulp	0.32	1.94	0.27	<10	<2
013N783178	Sediment Pulp	0.17	1.10	0.16	<10	<2
013N783181	Sediment Pulp	0.07	0.43	0.06	<10	<2
013N783182	Sediment Pulp	0.15	0.93	0.14	<10	<2
013N783183	Sediment Pulp	0.09	0.59	0.09	<10	<2
013N783185	Sediment Pulp	0.15	0.97	0.15	<10	<2
013N783190	Sediment Pulp	0.19	1.13	0.16	<10	<2
013N783191	Sediment Pulp	0.31	1.94	0.28	<10	<2
013N783192	Sediment Pulp	1.21	7.80	1.18	<10	<2
013N783193	Sediment Pulp	0.24	1.56	0.23	<10	<2
013N783194	Sediment Pulp	0.50	3.20	0.48	<10	<2
013N783196	Sediment Pulp	1.01	5.26	0.61	<10	<2
013N783199	Sediment Pulp	0.34	1.86	0.21	<10	<2
013N783200	Sediment Pulp	0.58	3.23	0.41	<10	<2
013N783201	Sediment Pulp	1.01	5.23	0.60	<10	<2
013N783202	Sediment Pulp	1.22	6.55	0.76	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783208	Sediment Pulp	13.54	25.18	6.80	94.7	79	12.1	8.4	242	2.22	0.3	2.4	1.4	4.3	14.1	0.33	<0.02	0.02	24	0.39	0.129
013N783210	Sediment Pulp	8.82	39.65	74.11	299.3	574	11.6	7.4	429	1.78	34.6	7.9	3.5	1.1	60.8	1.22	0.54	0.83	21	6.28	0.065
013N783211	Sediment Pulp	17.02	9.06	10.15	122.6	43	8.9	11.8	140	5.36	0.4	7.1	1.6	7.3	15.2	0.50	0.02	0.02	38	0.34	0.069
013N783221	Sediment Pulp	2.97	11.46	8.10	83.3	42	11.2	8.0	393	3.31	2.8	2.3	1.7	14.1	36.9	0.09	0.02	0.05	38	0.64	0.098
013N783222	Sediment Pulp	0.87	33.01	23.10	130.2	2481	43.7	28.4	1205	3.12	24.0	3.3	2.8	6.6	27.1	0.52	0.49	2.73	49	0.62	0.090
013N783223	Sediment Pulp	5.45	6.34	10.54	124.6	58	7.1	7.7	2435	2.67	7.3	6.3	0.6	6.8	34.1	0.43	<0.02	0.04	22	0.55	0.092
013N783225	Sediment Pulp	12.49	9.18	9.35	80.9	50	4.8	5.6	343	2.44	0.5	2.6	0.8	5.2	12.0	0.22	<0.02	<0.02	17	0.25	0.099
013N783228	Sediment Pulp	11.71	25.08	53.37	148.5	429	6.0	4.2	87	7.25	<0.1	7.7	1.7	4.8	15.9	0.79	0.03	0.06	29	0.18	0.268
013N783231	Sediment Pulp	2.98	12.49	7.28	123.6	80	12.9	14.8	606	4.78	0.6	1.0	2.8	5.8	19.2	0.20	<0.02	0.04	44	0.39	0.128
013N783232	Sediment Pulp	2.99	11.33	8.06	85.6	40	11.2	8.0	396	3.36	3.1	2.3	0.9	13.6	36.8	0.10	0.02	0.05	39	0.63	0.098
013N783233	Sediment Pulp	1.72	16.74	11.63	124.7	48	18.2	12.8	752	4.31	2.3	2.0	1.2	18.7	38.5	0.13	0.02	0.08	54	0.83	0.110
013N783236	Sediment Pulp	56.04	8.11	13.89	156.3	69	7.7	16.2	683	4.50	1.0	4.0	1.1	4.8	16.0	1.01	<0.02	0.03	25	0.34	0.105
013N783240	Sediment Pulp	32.05	14.69	10.97	113.9	165	9.2	27.6	4161	8.34	0.4	3.0	1.0	2.9	14.2	0.75	0.02	0.03	30	0.28	0.208
013N783241	Sediment Pulp	9.10	12.32	6.51	62.0	137	7.1	9.7	788	3.55	<0.1	3.3	0.4	1.8	17.8	0.21	<0.02	<0.02	29	0.43	0.117
013N783242	Sediment Pulp	151.85	14.15	17.39	183.3	216	6.0	15.6	511	5.35	0.5	20.8	0.5	3.1	36.2	1.32	<0.02	0.02	24	0.48	0.145
013N783248	Sediment Pulp	9.30	12.44	6.51	62.5	147	7.2	9.6	801	3.55	<0.1	3.3	0.5	1.7	17.7	0.21	<0.02	0.03	29	0.42	0.118
013N783250	Sediment Pulp	16.71	43.83	10.49	169.0	477	15.1	35.9	1146	6.99	0.4	3.6	0.8	3.1	16.7	0.88	<0.02	0.03	40	0.30	0.252
013N783252	Sediment Pulp	8.76	39.00	73.94	297.0	577	11.8	7.4	423	1.74	33.6	7.9	3.0	1.1	60.7	1.20	0.56	0.87	21	6.15	0.063
013N783254	Sediment Pulp	23.33	21.97	4.15	100.7	110	12.4	24.2	4285	6.28	4.2	2.1	3.3	4.1	21.6	0.35	<0.02	0.02	29	0.50	0.194
013N783255	Sediment Pulp	4.02	6.88	3.63	51.6	28	6.7	5.5	146	1.78	0.3	1.1	0.6	5.9	14.8	0.11	<0.02	<0.02	24	0.40	0.093
013N783257	Sediment Pulp	2.38	6.41	3.29	49.1	36	5.0	7.8	666	2.34	0.3	1.2	<0.2	4.4	9.3	0.08	<0.02	<0.02	19	0.24	0.081
013N783259	Sediment Pulp	12.32	47.14	18.34	185.3	199	16.6	18.2	417	4.53	0.6	5.2	1.0	3.9	14.9	0.85	<0.02	0.03	32	0.32	0.209
013N783261	Sediment Pulp	1.99	12.51	5.49	56.4	54	7.9	10.6	778	2.38	0.7	1.9	0.4	6.6	13.4	0.16	<0.02	0.03	29	0.35	0.103
013N783262	Sediment Pulp	3.35	16.99	6.12	59.0	91	11.1	7.4	202	2.44	0.4	1.8	0.7	2.0	16.6	0.21	<0.02	0.02	30	0.38	0.120
013N783266	Sediment Pulp	2.78	13.04	5.36	65.2	66	8.3	9.4	675	2.36	0.6	1.8	0.5	4.8	13.7	0.22	<0.02	0.02	27	0.33	0.097
013N783267	Sediment Pulp	2.04	12.81	5.71	57.5	59	8.1	10.3	792	2.38	0.7	1.9	0.4	6.7	12.9	0.16	<0.02	0.03	28	0.34	0.100
013N783268	Sediment Pulp	61.18	16.61	12.73	169.8	311	8.0	15.4	650	5.14	<0.1	2.9	1.7	2.7	41.5	1.23	<0.02	0.03	35	0.61	0.212
013N783270	Sediment Pulp	11.02	30.48	9.16	245.9	619	14.8	57.0	3635	12.21	0.2	4.0	1.4	5.2	28.4	1.14	<0.02	0.04	45	0.40	0.294
013N783272	Sediment Pulp	0.91	35.00	22.34	138.3	2955	46.5	28.7	1262	3.14	25.4	3.5	3.1	6.9	28.1	0.54	0.52	2.88	50	0.64	0.096
013N783273	Sediment Pulp	42.82	16.09	5.71	106.9	134	9.9	19.2	8945	4.24	0.7	5.1	0.6	7.6	25.6	0.36	<0.02	0.03	33	0.47	0.127



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CERTIFICATE OF ANALYSIS

VAN22001768.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N783208	Sediment Pulp	87.5	10.9	0.16	40.7	0.050	<20	0.89	0.044	0.07	0.4	2.3	0.13	0.11	46	0.5	<0.02	1.0	0.16	<0.1	0.05
013N783210	Sediment Pulp	9.8	12.5	0.59	84.0	0.042	<20	0.47	0.029	0.05	0.5	2.3	0.19	1.53	113	1.1	<0.02	1.9	0.46	<0.1	0.04
013N783211	Sediment Pulp	188.3	10.1	0.14	50.6	0.049	<20	1.49	0.030	0.03	0.4	3.0	0.17	0.16	91	1.1	<0.02	0.5	0.15	<0.1	0.10
013N783221	Sediment Pulp	80.3	23.3	0.67	83.2	0.144	20	1.29	0.216	0.40	0.2	5.9	0.15	0.80	27	<0.1	<0.02	4.7	0.78	<0.1	0.32
013N783222	Sediment Pulp	39.9	51.2	0.81	157.2	0.107	<20	1.69	0.031	0.27	0.2	5.7	0.25	0.15	251	0.6	0.04	5.2	1.33	<0.1	0.12
013N783223	Sediment Pulp	106.3	12.8	0.34	110.4	0.082	<20	1.18	0.079	0.17	1.1	3.1	0.14	0.03	17	0.1	<0.02	2.1	0.44	<0.1	0.05
013N783225	Sediment Pulp	112.8	6.6	0.14	32.2	0.045	<20	0.85	0.032	0.05	0.4	1.8	0.08	0.02	7	0.2	<0.02	0.2	0.20	<0.1	0.04
013N783228	Sediment Pulp	624.2	14.2	0.09	30.0	0.050	<20	3.28	0.011	0.03	<0.1	3.3	0.10	0.18	162	7.4	<0.02	2.8	0.28	<0.1	0.03
013N783231	Sediment Pulp	63.0	21.9	0.43	113.3	0.117	<20	1.85	0.097	0.24	0.2	5.5	0.16	0.08	70	0.8	<0.02	5.2	0.75	<0.1	0.08
013N783232	Sediment Pulp	80.0	23.1	0.68	83.3	0.145	<20	1.30	0.217	0.41	0.2	5.8	0.15	0.81	21	<0.1	<0.02	4.7	0.78	<0.1	0.33
013N783233	Sediment Pulp	109.4	36.8	0.97	141.0	0.229	<20	1.96	0.189	0.55	0.2	9.4	0.24	<0.02	75	<0.1	<0.02	7.3	1.13	<0.1	0.24
013N783236	Sediment Pulp	136.1	11.1	0.15	68.8	0.049	<20	1.36	0.036	0.06	0.3	2.7	0.19	0.11	55	1.7	<0.02	1.5	0.24	<0.1	0.07
013N783240	Sediment Pulp	153.2	12.3	0.12	61.1	0.033	<20	2.11	0.018	0.04	0.2	2.7	0.20	0.12	95	3.1	<0.02	1.4	0.17	<0.1	<0.02
013N783241	Sediment Pulp	108.7	15.9	0.19	23.5	0.042	<20	1.76	0.027	0.04	<0.1	1.8	0.07	0.07	69	1.3	<0.02	3.2	0.14	<0.1	<0.02
013N783242	Sediment Pulp	291.2	9.1	0.06	48.4	0.021	<20	2.69	0.009	0.02	1.5	2.8	0.11	0.17	144	4.5	<0.02	0.2	0.08	<0.1	0.03
013N783248	Sediment Pulp	109.2	15.9	0.19	22.1	0.041	<20	1.76	0.025	0.04	<0.1	1.7	0.07	0.07	68	1.5	<0.02	3.3	0.14	<0.1	<0.02
013N783250	Sediment Pulp	203.9	21.7	0.10	45.8	0.038	<20	4.04	0.006	0.03	0.2	3.2	0.33	0.20	223	3.2	<0.02	2.1	0.14	<0.1	<0.02
013N783252	Sediment Pulp	9.6	12.7	0.58	85.7	0.042	<20	0.45	0.026	0.05	0.5	2.2	0.20	1.49	106	1.0	<0.02	1.9	0.46	<0.1	0.03
013N783254	Sediment Pulp	72.3	14.7	0.24	96.1	0.044	<20	1.47	0.043	0.08	1.6	2.8	0.16	0.07	56	0.5	<0.02	1.8	0.16	<0.1	<0.02
013N783255	Sediment Pulp	43.2	13.1	0.25	54.1	0.066	<20	0.75	0.042	0.09	0.2	3.2	0.08	0.03	40	0.1	<0.02	2.1	0.19	<0.1	0.06
013N783257	Sediment Pulp	37.7	8.7	0.17	40.8	0.049	<20	0.68	0.024	0.05	0.1	2.0	0.06	<0.02	23	0.1	<0.02	1.6	0.15	<0.1	0.02
013N783259	Sediment Pulp	183.0	18.7	0.19	37.3	0.044	<20	3.05	0.021	0.05	0.5	4.0	0.27	0.14	128	2.5	<0.02	1.2	0.21	<0.1	<0.02
013N783261	Sediment Pulp	55.0	14.3	0.27	65.8	0.071	<20	0.93	0.026	0.09	0.2	2.9	0.10	0.04	46	0.4	<0.02	2.5	0.21	<0.1	0.04
013N783262	Sediment Pulp	46.2	18.1	0.28	48.4	0.053	<20	1.39	0.031	0.06	0.1	2.1	0.10	0.06	52	0.6	<0.02	3.6	0.23	<0.1	0.03
013N783266	Sediment Pulp	59.6	14.0	0.24	62.6	0.061	<20	1.13	0.026	0.08	0.2	2.8	0.09	0.06	55	0.5	<0.02	2.4	0.18	<0.1	0.03
013N783267	Sediment Pulp	55.8	14.2	0.27	64.8	0.071	<20	0.93	0.025	0.09	0.2	2.9	0.10	0.04	50	0.3	<0.02	2.5	0.21	<0.1	0.04
013N783268	Sediment Pulp	204.3	13.2	0.12	75.3	0.036	<20	2.47	0.018	0.03	1.5	3.1	0.19	0.37	156	3.0	<0.02	2.6	0.14	<0.1	0.02
013N783270	Sediment Pulp	170.9	17.6	0.11	116.3	0.047	<20	3.59	0.011	0.03	0.2	5.9	0.49	0.20	222	3.7	<0.02	4.4	0.18	<0.1	0.02
013N783272	Sediment Pulp	41.2	52.8	0.81	157.5	0.105	<20	1.75	0.034	0.27	0.2	6.0	0.28	0.16	290	0.6	0.04	5.7	1.42	<0.1	0.13
013N783273	Sediment Pulp	82.3	14.2	0.21	333.3	0.053	<20	1.29	0.033	0.07	0.4	3.2	0.16	0.14	73	2.0	<0.02	2.5	0.17	<0.1	0.03



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783208	Sediment Pulp	3.04	5.0	0.7	<0.05	3.1	65.47	181.5	<0.02	<1	1.0	5.2	21.76	81.11	13.86	1.00	12.31	1.88	11.72	2.31	6.43
013N783210	Sediment Pulp	0.70	3.3	3.0	<0.05	1.4	10.15	16.7	0.45	18	0.1	3.9	2.58	10.94	2.37	0.42	1.99	0.27	1.59	0.31	0.89
013N783211	Sediment Pulp	5.97	2.8	0.9	<0.05	7.0	118.80	332.4	0.03	<1	1.8	4.9	43.39	156.06	26.19	1.69	23.28	3.39	20.55	4.03	10.90
013N783221	Sediment Pulp	2.09	27.5	1.1	<0.05	12.2	33.66	160.2	0.05	<1	0.8	16.0	18.01	67.03	10.40	0.92	8.04	1.10	6.40	1.19	3.34
013N783222	Sediment Pulp	1.86	24.8	1.1	<0.05	5.8	17.88	71.9	0.04	<1	0.6	20.1	9.69	35.97	6.09	0.88	4.52	0.58	3.31	0.61	1.73
013N783223	Sediment Pulp	1.87	13.3	1.0	<0.05	3.6	59.62	241.5	0.03	<1	1.9	14.8	24.34	87.18	14.34	0.98	12.21	1.83	11.32	2.12	5.85
013N783225	Sediment Pulp	2.55	4.9	0.9	<0.05	3.0	82.33	281.5	0.02	<1	2.3	8.0	28.38	104.29	18.28	1.09	16.32	2.47	15.23	2.89	8.01
013N783228	Sediment Pulp	6.06	2.8	0.8	<0.05	2.1	443.86	920.8	0.13	<1	7.0	3.5	135.79	488.15	86.36	4.43	82.23	13.53	86.57	16.73	47.60
013N783231	Sediment Pulp	3.15	18.9	0.9	<0.05	2.9	33.25	144.6	0.05	<1	1.0	13.3	15.65	58.70	9.58	0.92	7.76	1.10	6.51	1.25	3.53
013N783232	Sediment Pulp	2.46	27.7	1.1	<0.05	12.0	33.55	161.7	0.05	<1	0.9	16.7	18.26	66.84	10.36	0.92	7.90	1.09	6.45	1.19	3.34
013N783233	Sediment Pulp	1.63	41.7	1.6	<0.05	10.4	43.02	237.8	0.07	<1	1.4	23.5	25.20	90.71	13.90	1.30	10.59	1.45	8.49	1.57	4.41
013N783236	Sediment Pulp	4.04	5.1	0.9	<0.05	4.0	91.69	244.3	0.03	1	2.8	5.9	33.00	120.61	20.17	1.30	18.09	2.69	16.59	3.20	8.75
013N783240	Sediment Pulp	1.21	2.8	0.5	<0.05	0.6	109.89	314.6	0.03	<1	9.9	4.7	37.52	136.27	24.11	1.62	21.32	3.11	19.69	3.69	10.29
013N783241	Sediment Pulp	1.44	2.9	0.4	<0.05	0.8	76.35	162.9	<0.02	1	9.4	8.7	26.78	101.01	17.86	1.19	15.71	2.29	13.92	2.65	7.32
013N783242	Sediment Pulp	1.67	1.2	0.2	<0.05	1.2	203.91	424.2	0.03	7	26.1	1.7	74.15	266.15	48.30	2.75	42.42	6.48	38.51	7.08	19.13
013N783248	Sediment Pulp	1.53	2.8	0.4	<0.05	0.9	79.04	160.6	0.02	<1	9.6	8.8	27.02	101.40	17.87	1.20	15.82	2.29	13.79	2.64	7.32
013N783250	Sediment Pulp	1.66	2.0	0.3	<0.05	0.7	123.51	418.6	0.05	2	4.6	2.8	48.54	174.53	29.66	2.36	25.91	3.93	23.93	4.65	12.56
013N783252	Sediment Pulp	0.66	3.3	3.1	<0.05	1.3	9.83	15.8	0.43	18	0.1	3.9	2.54	10.76	2.24	0.42	1.99	0.27	1.63	0.31	0.90
013N783254	Sediment Pulp	0.86	5.4	0.3	<0.05	0.7	45.06	146.8	<0.02	<1	2.7	7.6	17.76	66.20	10.72	1.00	9.20	1.30	7.99	1.54	4.40
013N783255	Sediment Pulp	1.82	7.4	0.4	<0.05	2.5	19.92	85.6	<0.02	<1	0.6	5.3	10.59	38.22	6.20	0.60	4.84	0.65	3.80	0.71	1.96
013N783257	Sediment Pulp	1.13	4.8	0.3	<0.05	1.0	16.89	85.3	<0.02	<1	0.6	6.0	9.06	33.15	5.29	0.49	4.17	0.55	3.27	0.59	1.67
013N783259	Sediment Pulp	1.81	3.9	0.4	<0.05	0.6	174.20	386.6	0.03	<1	8.4	7.3	46.14	168.46	32.15	2.29	29.89	4.86	31.35	6.18	17.66
013N783261	Sediment Pulp	1.79	7.0	0.4	<0.05	1.6	21.30	117.1	<0.02	<1	0.6	6.7	13.15	48.25	7.37	0.76	5.53	0.74	4.27	0.78	2.18
013N783262	Sediment Pulp	1.61	5.2	0.4	<0.05	1.1	16.90	89.0	0.02	<1	0.7	7.7	10.98	39.98	6.14	0.66	4.61	0.59	3.39	0.61	1.68
013N783266	Sediment Pulp	1.74	6.1	0.4	<0.05	1.2	27.99	121.0	<0.02	<1	1.0	6.2	14.65	54.08	8.68	0.84	6.90	0.94	5.57	1.05	2.94
013N783267	Sediment Pulp	1.89	6.9	0.4	<0.05	1.5	21.61	119.8	<0.02	<1	0.7	6.5	13.04	47.83	7.45	0.76	5.60	0.74	4.32	0.79	2.23
013N783268	Sediment Pulp	1.71	1.9	0.4	<0.05	0.6	136.19	415.5	0.05	2	2.8	3.5	51.64	194.25	34.64	2.17	31.66	4.65	26.89	4.97	12.73
013N783270	Sediment Pulp	1.58	2.9	0.3	<0.05	0.5	113.33	343.3	0.06	2	2.5	3.4	41.61	152.96	26.44	2.61	23.57	3.34	20.33	3.74	10.49
013N783272	Sediment Pulp	1.98	25.3	1.1	<0.05	6.2	19.19	75.1	0.04	<1	0.6	20.0	9.93	37.48	6.36	0.93	4.86	0.62	3.52	0.63	1.82
013N783273	Sediment Pulp	1.26	5.4	0.3	<0.05	0.9	33.84	172.1	0.02	2	0.8	6.8	19.25	70.93	10.78	1.14	8.41	1.09	6.25	1.15	3.25



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Project: None Given
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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013N783208	Sediment Pulp	0.82	4.54	0.55	<10	<2
013N783210	Sediment Pulp	0.12	0.80	0.12	<10	<2
013N783211	Sediment Pulp	1.33	7.06	0.85	<10	<2
013N783221	Sediment Pulp	0.46	2.80	0.39	<10	<2
013N783222	Sediment Pulp	0.23	1.50	0.22	<10	<2
013N783223	Sediment Pulp	0.74	4.08	0.48	<10	<2
013N783225	Sediment Pulp	1.02	5.62	0.67	<10	<2
013N783228	Sediment Pulp	6.14	33.39	3.95	<10	<2
013N783231	Sediment Pulp	0.49	2.96	0.41	<10	<2
013N783232	Sediment Pulp	0.45	2.78	0.38	<10	<2
013N783233	Sediment Pulp	0.60	3.79	0.53	<10	<2
013N783236	Sediment Pulp	1.10	5.87	0.69	<10	<2
013N783240	Sediment Pulp	1.33	7.30	0.88	<10	<2
013N783241	Sediment Pulp	0.93	5.18	0.65	<10	<2
013N783242	Sediment Pulp	2.37	12.86	1.52	<10	<2
013N783248	Sediment Pulp	0.93	5.23	0.65	<10	<2
013N783250	Sediment Pulp	1.64	9.56	1.22	<10	<2
013N783252	Sediment Pulp	0.12	0.81	0.12	<10	<2
013N783254	Sediment Pulp	0.59	3.56	0.48	<10	<2
013N783255	Sediment Pulp	0.26	1.60	0.22	<10	<2
013N783257	Sediment Pulp	0.22	1.33	0.18	<10	<2
013N783259	Sediment Pulp	2.38	14.02	1.74	<10	<2
013N783261	Sediment Pulp	0.30	1.82	0.25	<10	<2
013N783262	Sediment Pulp	0.22	1.40	0.19	<10	<2
013N783266	Sediment Pulp	0.39	2.32	0.31	<10	<2
013N783267	Sediment Pulp	0.30	1.84	0.25	<10	<2
013N783268	Sediment Pulp	1.48	8.15	0.93	<10	<2
013N783270	Sediment Pulp	1.38	8.59	1.12	<10	<2
013N783272	Sediment Pulp	0.24	1.61	0.23	<10	<2
013N783273	Sediment Pulp	0.43	2.74	0.37	<10	<2



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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783279	Sediment Pulp	0.95	14.12	6.16	58.2	28	22.1	12.1	348	2.54	0.5	1.0	0.8	6.6	67.8	0.07	<0.02	0.03	45	1.12	0.079
013N783280	Sediment Pulp	1.09	21.61	6.99	83.7	60	29.0	15.7	415	3.48	1.1	1.3	0.8	10.5	74.6	0.08	<0.02	0.03	61	1.20	0.123
013N783281	Sediment Pulp	2.35	7.01	1.21	36.8	19	7.0	2.1	19	0.51	<0.1	3.0	0.3	0.8	28.8	0.08	<0.02	<0.02	16	0.60	0.025
013N783282	Sediment Pulp	1.14	11.63	4.72	63.1	29	20.9	9.7	206	2.19	0.4	0.6	0.4	5.6	67.9	0.05	<0.02	0.02	41	1.12	0.073
013N783286	Sediment Pulp	0.76	12.15	4.37	55.8	27	22.0	10.3	186	1.90	0.4	0.6	0.3	3.7	75.2	0.07	<0.02	<0.02	37	1.22	0.063
013N783287	Sediment Pulp	9.21	42.85	79.55	312.9	621	12.5	7.6	439	1.80	33.8	8.6	2.9	1.2	65.9	1.26	0.54	0.79	21	6.51	0.066
013N783291	Sediment Pulp	1.65	10.68	4.43	68.5	48	9.1	6.1	81	1.20	<0.1	1.4	0.6	1.0	31.6	0.15	<0.02	0.02	40	0.45	0.058
013N783292	Sediment Pulp	2.40	7.10	1.18	37.5	19	7.1	2.1	20	0.51	<0.1	2.9	0.4	0.8	28.9	0.08	<0.02	<0.02	16	0.62	0.026
013N783297	Sediment Pulp	0.68	10.24	4.33	97.6	26	12.2	8.7	310	2.89	0.3	0.3	0.5	1.5	50.9	0.21	<0.02	<0.02	30	0.78	0.072
013N783298	Sediment Pulp	4.00	17.63	2.21	194.1	269	8.1	14.7	1471	8.99	<0.1	1.0	1.1	2.5	24.1	0.60	<0.02	<0.02	21	0.41	0.163
013N783299	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013N783300	Sediment Pulp	3.63	12.66	1.94	114.5	126	9.0	11.2	1303	3.78	<0.1	0.9	0.4	2.1	42.5	0.39	<0.02	<0.02	18	0.61	0.133
013N783301	Sediment Pulp	5.29	23.06	8.47	111.6	326	7.6	7.3	271	4.72	<0.1	5.0	0.6	3.1	12.1	0.48	0.06	0.08	28	0.23	0.197
013N783302	Sediment Pulp	0.56	8.35	1.22	63.2	32	8.9	2.3	29	0.41	<0.1	0.2	0.2	0.2	34.0	0.14	<0.02	<0.02	9	0.47	0.037
013N783303	Sediment Pulp	0.55	8.06	0.97	44.1	22	10.8	5.0	56	0.74	<0.1	0.5	<0.2	0.2	67.8	0.10	<0.02	<0.02	18	0.90	0.039
013N783306	Sediment Pulp	0.46	8.55	1.59	36.1	19	13.0	8.4	448	1.76	<0.1	0.3	0.2	1.0	56.7	0.09	<0.02	<0.02	24	0.79	0.059
013N783307	Sediment Pulp	0.70	9.84	1.75	45.7	21	12.2	6.1	182	1.38	<0.1	0.9	<0.2	1.9	69.9	0.10	<0.02	<0.02	23	0.99	0.064
013N783309	Sediment Pulp	16.17	12.25	1.65	87.3	62	12.5	22.2	3084	7.22	0.7	0.6	0.3	1.4	54.8	0.25	<0.02	<0.02	29	0.84	0.177
013N783310	Sediment Pulp	5.08	12.35	1.87	111.2	55	10.8	6.6	173	1.84	<0.1	1.1	0.8	0.6	34.1	0.36	<0.02	<0.02	36	0.61	0.074
013N783313	Sediment Pulp	4.06	9.01	1.54	83.6	90	6.8	7.8	231	2.29	<0.1	0.5	<0.2	0.3	33.2	0.35	<0.02	<0.02	25	0.58	0.135
013N783314	Sediment Pulp	10.79	12.73	1.92	83.7	119	7.9	7.2	243	1.73	0.3	3.3	1.4	0.4	20.2	0.29	<0.02	<0.02	40	0.40	0.090
013N783315	Sediment Pulp	0.88	33.31	22.80	131.1	2684	46.4	28.5	1238	3.08	24.5	3.4	2.7	6.8	27.2	0.51	0.49	2.73	50	0.63	0.091
013N783316	Sediment Pulp	3.51	10.19	2.60	72.0	54	10.4	4.4	63	0.71	<0.1	6.2	0.4	0.8	30.4	0.16	<0.02	<0.02	24	0.56	0.050
013N783318	Sediment Pulp	5.38	23.01	8.60	112.8	324	7.7	7.4	273	4.80	<0.1	5.1	0.5	3.0	12.1	0.48	0.07	0.08	28	0.24	0.199
013N783320	Sediment Pulp	14.18	22.69	16.42	199.7	406	6.3	8.4	444	4.99	0.3	6.8	0.2	6.9	15.4	1.14	<0.02	0.05	22	0.29	0.173
013N783321	Sediment Pulp	4.46	20.29	7.55	124.7	121	5.9	13.5	1348	5.74	0.3	2.2	<0.2	5.0	11.2	0.37	<0.02	0.03	31	0.29	0.294
013N783322	Sediment Pulp	5.20	13.75	10.21	119.8	134	5.5	5.1	263	3.64	0.8	5.2	0.4	5.1	13.8	0.42	<0.02	0.06	26	0.30	0.104
013N783324	Sediment Pulp	3.60	10.34	9.58	103.7	95	5.0	8.0	500	3.28	0.7	3.8	0.4	5.8	12.2	0.34	<0.02	0.05	22	0.26	0.085
013N783325	Sediment Pulp	9.25	41.40	77.18	304.3	608	12.3	7.8	454	1.83	34.4	8.2	3.5	1.2	65.9	1.25	0.61	0.83	22	6.64	0.067
013N783326	Sediment Pulp	28.18	21.81	9.75	146.3	178	7.3	6.1	221	8.89	24.2	10.4	0.3	11.1	11.6	0.38	<0.02	0.07	71	0.27	0.218



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001768.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013N783279	Sediment Pulp	39.5	30.9	0.72	113.6	0.120	<20	2.56	0.248	0.24	0.1	5.0	0.12	<0.02	25	0.2	<0.02	6.6	0.51	<0.1	0.06
013N783280	Sediment Pulp	50.8	39.5	0.94	153.7	0.144	<20	3.15	0.288	0.34	0.2	6.4	0.17	<0.02	50	0.3	<0.02	8.2	0.70	<0.1	0.10
013N783281	Sediment Pulp	15.3	10.0	0.08	27.5	0.013	22	0.58	0.051	0.02	0.1	0.9	0.04	0.80	59	0.9	<0.02	1.2	0.06	<0.1	<0.02
013N783282	Sediment Pulp	32.9	30.1	0.69	91.9	0.111	<20	2.54	0.249	0.22	0.1	4.5	0.10	0.03	42	<0.1	<0.02	6.6	0.49	<0.1	0.07
013N783286	Sediment Pulp	24.9	28.6	0.65	108.5	0.101	<20	2.94	0.280	0.16	<0.1	3.9	0.08	0.05	54	0.1	<0.02	6.9	0.40	<0.1	0.05
013N783287	Sediment Pulp	10.0	12.9	0.57	86.8	0.042	<20	0.49	0.028	0.05	0.5	2.4	0.20	1.57	106	1.1	<0.02	2.0	0.48	<0.1	0.04
013N783291	Sediment Pulp	39.6	22.6	0.23	48.8	0.040	<20	1.82	0.071	0.04	0.4	1.4	0.04	0.25	81	0.7	<0.02	4.9	0.18	<0.1	<0.02
013N783292	Sediment Pulp	14.9	10.1	0.08	27.3	0.013	<20	0.60	0.049	0.02	0.1	0.9	0.04	0.81	59	1.0	<0.02	1.2	0.06	<0.1	<0.02
013N783297	Sediment Pulp	16.8	11.3	0.28	53.8	0.036	<20	2.11	0.188	0.04	<0.1	2.4	0.03	0.05	42	0.3	<0.02	4.2	0.09	<0.1	0.03
013N783298	Sediment Pulp	66.4	9.6	0.10	96.6	0.023	<20	2.49	0.034	0.02	<0.1	4.4	0.09	0.16	132	1.9	<0.02	2.7	0.12	<0.1	0.02
013N783299	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013N783300	Sediment Pulp	34.1	11.1	0.14	86.6	0.023	<20	2.96	0.133	0.03	0.1	2.7	0.06	0.10	89	1.1	<0.02	4.4	0.11	<0.1	0.05
013N783301	Sediment Pulp	171.2	16.4	0.15	43.0	0.041	<20	2.37	0.019	0.05	0.2	3.8	0.10	0.15	111	4.3	<0.02	3.3	0.31	<0.1	0.03
013N783302	Sediment Pulp	10.8	5.8	0.07	29.4	0.010	<20	1.66	0.030	0.01	<0.1	0.8	<0.02	0.42	104	0.5	<0.02	1.9	0.07	<0.1	<0.02
013N783303	Sediment Pulp	4.9	10.3	0.18	41.3	0.016	<20	2.74	0.240	0.03	<0.1	0.7	<0.02	0.14	40	0.2	<0.02	4.7	0.07	<0.1	<0.02
013N783306	Sediment Pulp	10.2	12.4	0.29	54.5	0.030	<20	2.35	0.209	0.03	<0.1	1.9	<0.02	0.03	34	0.2	<0.02	4.3	0.08	<0.1	0.03
013N783307	Sediment Pulp	24.0	12.9	0.28	73.4	0.034	<20	2.23	0.245	0.05	<0.1	2.5	0.03	0.03	27	0.2	<0.02	4.3	0.11	<0.1	0.03
013N783309	Sediment Pulp	21.4	15.9	0.23	101.6	0.025	<20	3.15	0.193	0.04	0.3	2.7	0.04	0.09	68	0.9	<0.02	4.9	0.14	<0.1	0.04
013N783310	Sediment Pulp	31.2	12.4	0.15	53.1	0.022	<20	2.18	0.089	0.03	0.1	2.1	<0.02	0.21	68	0.4	<0.02	3.3	0.14	<0.1	<0.02
013N783313	Sediment Pulp	24.2	8.7	0.08	44.8	0.015	<20	2.48	0.049	0.02	<0.1	1.2	0.03	0.26	127	1.0	<0.02	3.1	0.09	<0.1	<0.02
013N783314	Sediment Pulp	55.1	12.5	0.10	59.4	0.019	<20	1.73	0.026	0.03	0.4	1.6	0.03	0.25	103	0.9	<0.02	2.0	0.11	<0.1	<0.02
013N783315	Sediment Pulp	39.6	50.8	0.79	153.0	0.104	<20	1.73	0.031	0.26	0.2	5.8	0.28	0.15	269	0.7	0.03	5.4	1.34	<0.1	0.13
013N783316	Sediment Pulp	60.6	14.6	0.18	66.1	0.034	<20	1.16	0.047	0.04	0.2	1.7	0.04	0.27	78	0.4	<0.02	2.3	0.14	<0.1	0.02
013N783318	Sediment Pulp	178.3	16.8	0.15	42.6	0.042	<20	2.46	0.018	0.05	0.2	3.8	0.10	0.14	129	4.0	<0.02	3.3	0.32	<0.1	0.04
013N783320	Sediment Pulp	305.4	13.8	0.12	56.8	0.041	<20	2.86	0.021	0.05	0.6	4.0	0.23	0.16	95	5.5	<0.02	1.2	0.34	<0.1	0.05
013N783321	Sediment Pulp	117.6	13.3	0.19	53.0	0.058	<20	1.82	0.026	0.08	1.0	4.2	0.12	0.06	50	1.4	<0.02	2.3	0.30	<0.1	0.03
013N783322	Sediment Pulp	114.5	11.7	0.17	59.9	0.060	<20	1.61	0.025	0.05	0.3	3.2	0.12	0.10	76	1.9	<0.02	3.3	0.36	<0.1	0.06
013N783324	Sediment Pulp	87.4	9.8	0.17	63.1	0.059	<20	1.27	0.025	0.06	0.2	2.9	0.12	0.07	57	1.2	<0.02	3.2	0.34	<0.1	0.06
013N783325	Sediment Pulp	10.0	13.4	0.59	87.2	0.042	<20	0.52	0.031	0.05	0.5	2.5	0.21	1.60	96	1.1	0.03	2.0	0.49	<0.1	0.04
013N783326	Sediment Pulp	449.0	17.7	0.12	50.2	0.048	<20	2.17	0.012	0.05	2.1	4.6	0.05	0.36	76	3.1	<0.02	8.4	0.25	<0.1	0.07



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22001768.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783279	Sediment Pulp	1.74	18.6	0.7	<0.05	2.4	14.83	84.4	0.03	<1	0.4	12.7	9.20	32.67	5.08	0.68	3.83	0.50	2.91	0.52	1.45
013N783280	Sediment Pulp	1.49	25.1	0.8	<0.05	4.5	17.56	111.3	0.03	<1	0.6	16.2	11.59	41.62	6.17	0.81	4.60	0.60	3.45	0.62	1.71
013N783281	Sediment Pulp	0.51	1.1	<0.1	<0.05	0.5	5.02	21.1	<0.02	4	<0.1	1.3	3.20	12.01	1.74	0.24	1.31	0.15	0.91	0.17	0.48
013N783282	Sediment Pulp	2.18	17.7	0.6	<0.05	2.9	12.62	66.0	0.02	<1	0.4	12.7	7.66	26.81	4.30	0.58	3.19	0.42	2.45	0.43	1.20
013N783286	Sediment Pulp	1.83	13.6	0.5	<0.05	1.9	9.75	49.1	<0.02	<1	0.4	11.2	5.87	20.61	3.31	0.51	2.49	0.32	1.82	0.32	0.91
013N783287	Sediment Pulp	0.70	3.4	3.1	<0.05	1.3	10.66	16.3	0.46	20	0.1	4.0	2.54	11.15	2.36	0.44	2.06	0.27	1.64	0.31	0.90
013N783291	Sediment Pulp	1.21	4.6	0.3	<0.05	0.5	13.25	78.7	<0.02	<1	0.4	6.2	8.55	29.61	4.48	0.65	3.45	0.44	2.53	0.44	1.25
013N783292	Sediment Pulp	0.48	1.1	<0.1	<0.05	0.5	5.16	20.8	<0.02	4	<0.1	1.3	3.12	11.86	1.75	0.24	1.30	0.15	0.90	0.16	0.47
013N783297	Sediment Pulp	0.58	1.7	0.2	<0.05	0.9	13.26	35.7	<0.02	<1	0.2	6.5	4.30	18.24	3.41	0.48	3.15	0.42	2.47	0.45	1.25
013N783298	Sediment Pulp	0.79	1.5	0.2	<0.05	0.5	47.92	128.3	0.02	<1	0.4	3.8	17.59	71.75	12.22	1.52	11.11	1.44	8.47	1.63	4.63
013N783299	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013N783300	Sediment Pulp	0.51	1.7	0.2	<0.05	1.3	24.90	59.7	<0.02	<1	0.3	6.5	8.94	36.97	6.40	0.94	5.85	0.76	4.53	0.85	2.43
013N783301	Sediment Pulp	2.02	4.3	0.6	<0.05	1.0	136.89	292.1	0.05	<1	3.6	6.0	41.64	155.24	28.90	1.97	26.98	3.97	25.84	4.98	14.24
013N783302	Sediment Pulp	0.36	0.6	<0.1	<0.05	0.4	8.09	18.5	<0.02	<1	<0.1	0.9	2.62	10.92	1.98	0.43	1.77	0.23	1.38	0.26	0.72
013N783303	Sediment Pulp	0.31	1.0	<0.1	<0.05	0.3	3.00	9.1	<0.02	<1	0.1	2.2	1.14	4.62	0.82	0.25	0.69	0.09	0.53	0.10	0.28
013N783306	Sediment Pulp	0.39	1.1	0.1	<0.05	0.9	7.37	20.3	<0.02	<1	0.1	3.3	2.53	10.50	1.91	0.35	1.70	0.22	1.32	0.24	0.69
013N783307	Sediment Pulp	0.75	2.8	0.2	<0.05	1.1	14.63	38.8	<0.02	<1	0.2	4.9	5.97	21.87	3.76	0.62	3.23	0.42	2.48	0.46	1.31
013N783309	Sediment Pulp	0.44	1.7	0.2	<0.05	1.1	14.35	34.1	<0.02	<1	0.2	3.5	5.26	19.59	3.42	0.64	3.01	0.39	2.39	0.45	1.27
013N783310	Sediment Pulp	0.68	1.9	0.1	<0.05	0.4	19.94	41.4	<0.02	<1	0.2	3.3	7.18	28.76	4.82	0.84	4.25	0.53	3.18	0.60	1.73
013N783313	Sediment Pulp	0.67	1.1	0.1	<0.05	0.4	14.03	35.4	<0.02	<1	0.2	1.4	5.98	21.95	3.52	0.63	2.83	0.36	2.20	0.41	1.19
013N783314	Sediment Pulp	0.67	1.9	0.1	<0.05	0.2	24.75	83.9	<0.02	<1	0.4	2.2	13.59	47.78	7.14	0.92	5.33	0.68	4.01	0.77	2.29
013N783315	Sediment Pulp	1.91	24.6	1.1	<0.05	6.0	18.83	73.3	0.04	<1	0.6	19.9	9.64	36.43	6.12	0.89	4.66	0.60	3.37	0.61	1.74
013N783316	Sediment Pulp	1.47	2.9	0.3	<0.05	0.7	21.85	94.1	<0.02	2	0.3	5.3	14.36	52.39	7.46	0.85	5.49	0.69	3.95	0.72	2.08
013N783318	Sediment Pulp	1.97	4.4	0.6	<0.05	1.0	137.93	299.1	0.05	<1	3.6	6.1	43.02	160.66	29.37	2.01	26.96	4.09	26.54	5.13	14.04
013N783320	Sediment Pulp	2.31	4.9	0.7	<0.05	1.0	307.40	640.5	0.09	<1	6.6	16.0	77.89	289.01	58.63	2.92	56.74	9.47	58.94	11.54	32.18
013N783321	Sediment Pulp	1.26	6.6	0.5	<0.05	0.9	80.42	274.6	0.04	<1	1.3	9.8	28.51	108.66	18.83	1.74	17.17	2.47	15.05	2.76	7.72
013N783322	Sediment Pulp	2.23	5.2	0.7	<0.05	1.8	71.44	239.6	0.04	<1	2.0	9.8	28.43	110.48	18.66	1.40	16.08	2.23	13.57	2.54	7.30
013N783324	Sediment Pulp	2.15	5.3	0.7	<0.05	2.1	54.78	184.1	0.04	<1	1.7	10.1	20.89	83.16	13.90	1.05	12.13	1.69	10.29	1.92	5.55
013N783325	Sediment Pulp	0.74	3.5	3.1	<0.05	1.4	10.80	16.7	0.46	19	0.1	4.1	2.59	11.24	2.36	0.44	2.10	0.28	1.70	0.32	0.93
013N783326	Sediment Pulp	2.34	3.9	0.4	<0.05	1.6	282.60	1026.0	0.05	<1	3.4	5.2	103.40	380.51	62.81	4.23	56.39	8.20	48.43	9.69	26.99



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N783279	Sediment Pulp	0.19	1.25	0.17	<10	<2	
013N783280	Sediment Pulp	0.23	1.48	0.21	<10	<2	
013N783281	Sediment Pulp	0.06	0.41	0.06	<10	<2	
013N783282	Sediment Pulp	0.16	1.04	0.14	<10	<2	
013N783286	Sediment Pulp	0.12	0.78	0.10	<10	<2	
013N783287	Sediment Pulp	0.12	0.81	0.12	<10	<2	
013N783291	Sediment Pulp	0.16	1.02	0.14	<10	<2	
013N783292	Sediment Pulp	0.06	0.39	0.06	<10	<2	
013N783297	Sediment Pulp	0.16	1.06	0.15	<10	<2	
013N783298	Sediment Pulp	0.62	4.09	0.60	<10	<2	
013N783299	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013N783300	Sediment Pulp	0.32	2.13	0.32	<10	<2	
013N783301	Sediment Pulp	1.85	11.77	1.53	<10	<2	
013N783302	Sediment Pulp	0.09	0.56	0.08	<10	<2	
013N783303	Sediment Pulp	0.04	0.23	0.03	<10	<2	
013N783306	Sediment Pulp	0.08	0.55	0.08	<10	<2	
013N783307	Sediment Pulp	0.17	1.13	0.16	<10	<2	
013N783309	Sediment Pulp	0.17	1.11	0.16	<10	<2	
013N783310	Sediment Pulp	0.23	1.51	0.22	<10	<2	
013N783313	Sediment Pulp	0.15	1.02	0.15	<10	<2	
013N783314	Sediment Pulp	0.30	2.05	0.29	<10	<2	
013N783315	Sediment Pulp	0.23	1.53	0.22	<10	<2	
013N783316	Sediment Pulp	0.27	1.75	0.24	<10	<2	
013N783318	Sediment Pulp	1.90	12.03	1.58	<10	<2	
013N783320	Sediment Pulp	4.20	25.85	3.14	<10	<2	
013N783321	Sediment Pulp	0.99	6.00	0.75	<10	<2	
013N783322	Sediment Pulp	0.97	6.21	0.81	<10	<2	
013N783324	Sediment Pulp	0.75	4.74	0.63	<10	<2	
013N783325	Sediment Pulp	0.12	0.83	0.13	<10	<2	
013N783326	Sediment Pulp	3.54	22.15	3.03	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783327	Sediment Pulp	3.11	14.22	3.89	67.5	17	8.0	6.4	492	1.97	1.0	4.9	0.8	9.2	13.3	0.14	<0.02	0.03	30	0.39	0.118
013N783329	Sediment Pulp	5.87	12.46	9.48	115.7	176	5.6	12.1	1059	5.17	0.6	4.0	0.5	4.3	13.0	0.55	<0.02	0.05	28	0.31	0.130
013N783330	Sediment Pulp	1.11	6.78	7.31	66.6	42	5.0	3.6	119	1.70	0.6	1.9	1.1	4.3	9.3	0.11	<0.02	0.06	23	0.25	0.108
013N783331	Sediment Pulp	4.02	16.55	8.40	135.8	192	7.4	17.4	3413	7.27	0.9	2.7	0.7	7.9	16.6	0.52	<0.02	0.05	39	0.36	0.183
013N783333	Sediment Pulp	1.34	18.34	7.37	108.6	86	8.9	8.7	316	3.09	0.7	2.1	0.7	10.0	12.4	0.16	<0.02	0.04	37	0.34	0.152
013N783335	Sediment Pulp	1.64	17.06	10.06	119.6	78	12.7	12.5	996	4.37	4.5	1.7	0.9	20.9	32.3	0.22	0.02	0.07	54	0.63	0.224
013N783337	Sediment Pulp	22.58	23.06	19.89	176.0	428	7.7	3.5	284	4.25	<0.1	4.6	1.3	3.5	19.0	1.43	<0.02	0.07	38	0.35	0.270
013N783338	Sediment Pulp	11.05	20.02	8.89	138.4	136	6.7	21.8	6934	8.44	1.5	1.9	0.4	5.7	21.8	0.50	0.03	0.04	33	0.48	0.184
013N783339	Sediment Pulp	4.62	19.74	7.82	118.6	113	5.6	13.2	1308	5.66	1.1	2.3	0.8	6.0	11.1	0.43	<0.02	0.04	30	0.27	0.296
013N783341	Sediment Pulp	15.25	14.15	8.14	104.8	52	14.6	10.3	351	3.93	8.2	3.9	1.3	17.8	46.4	0.30	0.11	0.06	58	0.77	0.142
013N783342	Sediment Pulp	0.91	33.07	23.03	125.0	2652	43.4	27.9	1168	3.03	25.1	3.8	3.0	8.4	27.0	0.59	0.52	3.10	47	0.59	0.092
013N783343	Sediment Pulp	1.88	14.29	7.90	108.8	46	12.7	10.4	327	3.50	4.0	2.1	0.7	16.2	40.0	0.15	0.04	0.05	53	0.73	0.169
013N783345	Sediment Pulp	15.49	14.50	8.06	105.8	46	14.4	10.1	360	3.97	8.0	4.0	1.1	17.3	46.5	0.31	0.10	0.06	58	0.79	0.140
013N783346	Sediment Pulp	2.97	13.55	7.98	106.0	57	11.1	9.8	521	3.26	1.5	1.6	0.7	12.2	24.8	0.22	0.02	0.06	42	0.55	0.211
013N783348	Sediment Pulp	1.57	12.37	7.21	94.1	57	9.3	8.1	227	2.47	0.5	1.2	0.6	8.2	22.5	0.17	<0.02	0.03	34	0.53	0.164
013N783352	Sediment Pulp	1.08	7.63	8.49	77.1	18	8.0	5.6	187	1.85	0.5	1.1	0.5	10.5	17.1	0.15	<0.02	0.03	26	0.43	0.095
013N783361	Sediment Pulp	0.81	11.75	7.93	75.4	38	10.8	7.9	615	2.73	1.1	1.2	0.6	16.0	23.6	0.09	<0.02	0.04	35	0.60	0.110
013N783362	Sediment Pulp	7.74	11.17	30.09	132.2	215	5.8	2.9	127	1.42	<0.1	5.1	<0.2	2.4	18.3	1.26	<0.02	0.03	23	0.38	0.136
013N783365	Sediment Pulp	4.68	3.94	8.19	57.7	17	3.3	4.2	511	1.68	0.6	1.4	0.6	6.7	8.9	0.16	<0.02	<0.02	15	0.21	0.051
013N783368	Sediment Pulp	2.12	4.47	7.70	56.0	15	4.1	3.2	314	1.59	0.6	1.2	<0.2	9.5	8.8	0.18	<0.02	<0.02	14	0.20	0.051
013N783370	Sediment Pulp	38.82	26.07	60.59	271.0	235	7.2	19.2	2153	6.07	0.6	10.7	<0.2	15.5	29.3	3.02	0.02	0.03	25	0.32	0.177
013N783371	Sediment Pulp	0.82	11.29	7.88	71.6	42	10.2	7.3	616	2.75	1.0	1.2	0.5	15.6	23.2	0.09	<0.02	0.04	36	0.60	0.109
013N783372	Sediment Pulp	9.70	42.83	80.63	298.7	616	12.8	8.3	430	1.83	37.9	9.1	4.8	2.1	66.2	1.49	0.56	1.09	21	6.24	0.069
013N783374	Sediment Pulp	42.86	21.78	31.84	242.8	304	6.0	14.9	2895	8.97	1.5	12.5	0.3	13.1	13.1	1.72	<0.02	0.03	30	0.26	0.169
013N783375	Sediment Pulp	10.08	14.80	9.52	165.8	275	6.2	4.6	120	3.43	0.1	4.7	0.6	4.3	15.5	1.08	<0.02	0.04	31	0.33	0.183
013N783376	Sediment Pulp	14.64	11.89	6.85	212.3	231	6.9	12.3	508	5.79	<0.1	4.1	0.3	3.0	17.6	1.19	<0.02	0.03	27	0.33	0.225
013N783377	Sediment Pulp	4.07	16.57	8.31	160.8	185	6.7	5.5	267	7.46	0.3	3.3	0.3	7.5	14.5	0.78	<0.02	0.03	38	0.26	0.162
013N783378	Sediment Pulp	3.01	9.55	9.07	87.9	57	7.2	5.0	140	1.46	0.4	1.8	0.3	6.0	13.5	0.65	<0.02	0.04	26	0.35	0.113
013N783379	Sediment Pulp	5.37	16.20	15.02	151.2	233	5.7	4.3	213	1.68	<0.1	4.6	0.4	2.4	19.4	0.91	<0.02	0.04	26	0.39	0.147
013N783380	Sediment Pulp	5.83	13.83	39.48	151.4	175	4.2	4.3	206	4.52	0.4	4.6	<0.2	7.2	10.9	0.80	0.03	0.06	19	0.19	0.105



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013N783327	Sediment Pulp	68.9	15.4	0.27	69.8	0.083	<20	0.81	0.028	0.11	0.2	3.3	0.14	<0.02	<5	0.2	<0.02	2.5	0.31	<0.1	0.06
013N783329	Sediment Pulp	119.6	12.3	0.14	61.5	0.053	<20	2.15	0.023	0.05	0.2	3.0	0.17	0.10	87	2.2	<0.02	4.0	0.27	<0.1	0.04
013N783330	Sediment Pulp	49.7	11.3	0.20	40.9	0.057	<20	1.00	0.019	0.06	0.2	2.2	0.05	0.03	30	0.4	<0.02	4.5	0.25	0.1	0.04
013N783331	Sediment Pulp	113.8	15.7	0.23	104.5	0.071	<20	2.33	0.030	0.10	0.3	4.5	0.18	0.08	109	1.6	<0.02	7.0	0.41	0.3	0.05
013N783333	Sediment Pulp	78.8	16.6	0.31	85.4	0.100	<20	1.76	0.035	0.15	0.1	5.9	0.12	0.03	19	0.3	<0.02	6.9	0.43	0.2	0.05
013N783335	Sediment Pulp	98.0	25.4	0.63	173.7	0.150	<20	1.80	0.105	0.37	0.8	7.7	0.21	0.04	44	0.3	<0.02	7.9	0.91	0.2	0.16
013N783337	Sediment Pulp	270.9	15.7	0.10	63.6	0.043	<20	3.05	0.011	0.03	0.3	3.8	0.06	0.22	193	5.3	<0.02	7.4	0.23	0.5	<0.02
013N783338	Sediment Pulp	99.2	14.3	0.19	138.0	0.056	<20	2.02	0.027	0.10	0.5	4.3	0.22	0.10	92	2.0	<0.02	5.0	0.38	0.3	<0.02
013N783339	Sediment Pulp	116.1	12.2	0.17	54.6	0.056	<20	1.74	0.019	0.08	0.9	4.2	0.11	0.06	48	1.0	<0.02	4.5	0.30	0.3	<0.02
013N783341	Sediment Pulp	84.4	27.0	0.79	92.4	0.169	<20	1.54	0.261	0.47	0.2	7.9	0.22	1.50	17	0.6	<0.02	7.5	1.34	0.2	0.22
013N783342	Sediment Pulp	40.0	49.6	0.78	160.6	0.102	<20	1.62	0.027	0.25	0.2	5.9	0.26	0.14	271	0.4	0.03	5.9	1.36	0.1	0.14
013N783343	Sediment Pulp	83.2	24.6	0.75	108.4	0.152	<20	1.64	0.176	0.43	0.1	7.5	0.20	0.15	39	0.2	<0.02	7.1	1.06	0.2	0.17
013N783345	Sediment Pulp	84.1	26.2	0.80	94.2	0.166	<20	1.58	0.266	0.48	0.2	8.1	0.22	1.50	20	0.6	<0.02	7.6	1.37	0.2	0.22
013N783346	Sediment Pulp	82.9	21.0	0.49	113.1	0.116	<20	1.50	0.077	0.26	1.1	5.9	0.18	0.05	42	0.5	<0.02	6.1	0.75	0.2	0.09
013N783348	Sediment Pulp	62.8	18.2	0.42	119.6	0.116	<20	1.42	0.066	0.22	0.2	5.3	0.14	0.04	32	0.3	<0.02	6.2	0.72	0.2	0.09
013N783352	Sediment Pulp	62.4	16.2	0.37	110.1	0.114	<20	0.98	0.048	0.20	0.2	4.5	0.13	<0.02	21	0.1	<0.02	5.2	0.60	0.1	0.14
013N783361	Sediment Pulp	73.0	20.7	0.56	102.8	0.138	<20	1.07	0.094	0.28	0.1	5.5	0.14	<0.02	17	<0.1	<0.02	6.0	0.62	0.2	0.27
013N783362	Sediment Pulp	267.2	9.9	0.08	64.4	0.033	<20	2.71	0.010	0.02	0.1	2.2	0.06	0.22	84	2.7	<0.02	6.0	0.13	0.5	0.02
013N783365	Sediment Pulp	65.3	8.5	0.16	45.1	0.057	<20	0.62	0.029	0.08	0.2	2.2	0.08	0.02	11	0.3	<0.02	3.3	0.28	0.2	0.06
013N783368	Sediment Pulp	68.5	8.0	0.15	56.9	0.060	<20	0.55	0.023	0.08	0.2	2.5	0.08	<0.02	27	<0.1	<0.02	2.9	0.28	0.1	0.13
013N783370	Sediment Pulp	561.1	16.2	0.12	85.5	0.055	<20	2.48	0.020	0.06	0.3	3.9	0.40	0.07	53	5.9	<0.02	7.6	0.27	1.2	<0.02
013N783371	Sediment Pulp	72.1	21.1	0.57	105.3	0.135	<20	1.08	0.096	0.28	0.1	5.3	0.14	<0.02	13	<0.1	<0.02	5.5	0.61	0.2	0.28
013N783372	Sediment Pulp	10.9	13.2	0.60	100.6	0.044	<20	0.46	0.027	0.05	0.6	2.7	0.22	1.55	100	1.0	<0.02	2.2	0.56	<0.1	0.04
013N783374	Sediment Pulp	409.6	14.8	0.09	50.8	0.053	<20	2.80	0.009	0.03	0.4	4.4	0.31	0.12	106	6.3	<0.02	7.8	0.25	0.9	<0.02
013N783375	Sediment Pulp	190.8	13.2	0.10	56.0	0.037	<20	1.81	0.013	0.03	0.2	3.7	0.11	0.19	110	2.9	<0.02	4.7	0.19	0.4	0.03
013N783376	Sediment Pulp	123.8	14.8	0.08	56.7	0.028	<20	1.75	0.013	0.03	0.2	3.4	0.14	0.23	87	3.1	<0.02	4.8	0.18	0.3	<0.02
013N783377	Sediment Pulp	195.8	14.2	0.09	66.0	0.034	<20	2.43	0.010	0.02	0.2	3.8	0.06	0.14	100	2.4	<0.02	4.8	0.14	0.3	<0.02
013N783378	Sediment Pulp	57.8	13.5	0.27	72.1	0.075	<20	1.03	0.029	0.09	0.1	2.8	0.08	0.04	39	0.3	<0.02	5.2	0.41	0.1	0.05
013N783379	Sediment Pulp	182.9	12.9	0.12	65.8	0.042	<20	2.61	0.015	0.04	0.4	2.7	0.08	0.21	114	2.4	<0.02	5.9	0.25	0.3	<0.02
013N783380	Sediment Pulp	226.9	9.9	0.11	35.4	0.038	<20	1.75	0.012	0.03	0.8	2.8	0.11	0.10	86	2.8	<0.02	5.4	0.32	0.4	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783327	Sediment Pulp	0.92	9.6	0.5	<0.05	2.4	44.16	147.3	<0.02	<1	0.7	11.2	17.17	67.73	11.02	0.95	9.36	1.30	7.90	1.53	4.50
013N783329	Sediment Pulp	2.05	4.2	0.6	<0.05	1.1	80.70	227.4	0.04	<1	2.1	6.9	27.76	104.29	17.77	1.42	15.74	2.32	14.40	2.70	7.75
013N783330	Sediment Pulp	1.68	5.9	0.6	<0.05	1.1	25.44	95.6	0.03	<1	0.7	12.0	12.93	45.72	7.92	0.76	6.86	0.92	5.35	1.02	2.74
013N783331	Sediment Pulp	1.96	9.2	0.7	<0.05	1.9	63.87	228.0	0.05	<1	1.4	10.5	27.54	95.66	17.26	1.76	14.77	2.20	13.28	2.51	7.15
013N783333	Sediment Pulp	2.42	14.4	0.9	<0.05	2.2	37.91	171.1	0.05	<1	0.7	13.5	21.46	73.39	13.52	1.43	9.84	1.45	8.38	1.49	4.51
013N783335	Sediment Pulp	3.67	30.3	1.1	<0.05	7.1	42.13	221.8	0.06	1	1.1	18.5	24.19	83.71	13.58	1.42	10.36	1.51	8.94	1.56	4.66
013N783337	Sediment Pulp	3.38	3.0	0.6	<0.05	1.5	216.91	432.3	0.07	<1	2.0	3.8	69.54	250.56	51.10	3.32	48.80	7.70	46.44	8.34	21.30
013N783338	Sediment Pulp	1.55	8.5	0.6	<0.05	1.0	65.77	242.8	0.04	<1	1.3	12.6	25.18	90.87	16.43	1.74	14.28	2.23	13.64	2.49	6.98
013N783339	Sediment Pulp	1.44	7.0	0.5	<0.05	1.0	76.23	270.4	0.03	<1	1.4	11.2	29.55	105.41	19.04	1.74	16.10	2.56	15.83	2.83	7.98
013N783341	Sediment Pulp	3.17	35.8	1.1	<0.05	8.4	32.02	162.3	0.06	8	1.0	21.6	19.25	68.20	11.24	1.18	8.90	1.14	6.87	1.25	3.44
013N783342	Sediment Pulp	1.96	24.5	1.2	<0.05	6.0	17.24	72.6	0.05	1	0.6	22.0	10.25	34.65	6.57	1.04	4.48	0.64	3.37	0.62	1.76
013N783343	Sediment Pulp	3.02	31.8	1.0	<0.05	6.5	35.88	161.1	0.05	1	0.8	19.8	20.15	70.03	11.74	1.22	8.36	1.31	7.48	1.41	3.92
013N783345	Sediment Pulp	3.06	35.5	1.1	<0.05	8.5	32.28	171.2	0.05	8	0.6	22.4	20.27	69.85	11.43	1.29	8.38	1.23	7.03	1.31	3.55
013N783346	Sediment Pulp	3.36	22.0	0.9	<0.05	3.9	36.95	179.9	0.04	2	0.9	13.6	20.35	72.43	11.96	1.18	8.88	1.32	7.68	1.41	3.79
013N783348	Sediment Pulp	3.06	19.3	0.9	<0.05	3.8	31.20	124.7	0.04	<1	0.8	13.2	15.47	57.10	9.94	0.94	7.66	1.14	6.55	1.19	3.22
013N783352	Sediment Pulp	3.24	18.5	1.0	<0.05	6.3	26.17	125.9	0.04	<1	0.9	12.0	14.97	52.47	9.00	0.80	6.24	0.99	5.32	1.06	2.81
013N783361	Sediment Pulp	0.93	23.5	1.0	<0.05	9.1	28.00	145.1	0.05	<1	0.8	13.1	17.19	59.43	10.01	0.94	6.94	1.10	6.18	1.10	3.09
013N783362	Sediment Pulp	2.51	1.8	0.5	<0.05	1.9	124.56	402.0	0.05	<1	6.6	4.2	67.59	240.17	44.72	2.81	36.66	5.27	28.64	4.94	12.37
013N783365	Sediment Pulp	1.94	7.2	0.8	<0.05	3.1	34.76	128.6	0.04	<1	0.9	7.4	15.89	57.84	10.56	0.77	8.54	1.34	7.67	1.32	3.60
013N783368	Sediment Pulp	3.45	7.8	0.8	<0.05	5.6	31.82	130.7	0.04	<1	0.5	6.7	15.79	54.92	9.87	0.71	7.34	1.10	6.89	1.26	3.33
013N783370	Sediment Pulp	2.24	4.6	0.7	<0.05	2.6	549.23	1019.2	0.07	3	5.6	11.3	141.72	499.48	105.03	6.09	106.69	17.70	111.43	21.26	58.79
013N783371	Sediment Pulp	0.86	22.3	1.0	<0.05	8.9	27.73	142.7	0.03	<1	0.8	12.9	16.94	57.48	9.60	0.88	6.91	1.03	5.94	1.12	2.98
013N783372	Sediment Pulp	0.73	3.7	3.4	<0.05	1.9	10.58	18.5	0.52	17	0.1	4.5	2.93	12.65	2.79	0.50	2.00	0.29	1.75	0.36	1.05
013N783374	Sediment Pulp	2.36	3.0	0.8	<0.05	1.7	293.97	739.6	0.08	2	7.3	7.0	104.79	382.02	77.92	4.59	70.93	11.64	64.50	11.88	30.87
013N783375	Sediment Pulp	2.33	3.1	0.7	<0.05	1.4	142.51	328.0	0.06	2	2.8	5.1	45.78	174.17	32.98	2.19	29.44	4.63	28.10	5.71	15.19
013N783376	Sediment Pulp	1.15	3.0	0.4	<0.05	0.4	82.73	255.3	0.04	1	3.3	4.8	29.36	102.85	18.57	1.67	16.54	2.52	15.68	3.14	8.89
013N783377	Sediment Pulp	1.68	2.1	0.3	<0.05	0.6	88.74	358.0	0.03	1	2.3	4.2	44.84	165.25	27.80	2.21	23.11	3.43	19.57	3.75	9.73
013N783378	Sediment Pulp	2.24	9.1	0.6	<0.05	2.2	33.15	107.0	0.03	<1	0.9	11.7	14.06	53.57	9.77	0.78	8.05	1.24	7.35	1.38	3.56
013N783379	Sediment Pulp	2.52	3.6	0.7	<0.05	1.1	119.35	345.9	0.06	<1	2.7	8.0	43.38	163.00	30.73	2.19	28.64	4.45	26.61	5.16	14.35
013N783380	Sediment Pulp	2.46	4.1	1.0	<0.05	1.2	164.30	455.0	0.08	1	3.5	7.3	56.47	213.87	41.67	2.28	37.07	6.37	38.77	7.42	20.21



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Project: None Given

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CERTIFICATE OF ANALYSIS

VAN22001768.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013N783327	Sediment Pulp		0.61	3.94	0.54	<10	<2
013N783329	Sediment Pulp		1.04	6.51	0.84	<10	<2
013N783330	Sediment Pulp		0.43	2.47	0.36	<10	<2
013N783331	Sediment Pulp		1.02	6.07	0.85	<10	<2
013N783333	Sediment Pulp		0.67	4.13	0.59	<10	<2
013N783335	Sediment Pulp		0.69	4.08	0.60	<10	<2
013N783337	Sediment Pulp		2.78	14.31	1.71	<10	3
013N783338	Sediment Pulp		1.01	5.93	0.79	<10	<2
013N783339	Sediment Pulp		1.16	6.38	0.84	<10	<2
013N783341	Sediment Pulp		0.50	3.20	0.43	<10	3
013N783342	Sediment Pulp		0.27	1.61	0.24	<10	<2
013N783343	Sediment Pulp		0.57	3.32	0.47	<10	3
013N783345	Sediment Pulp		0.52	3.24	0.47	<10	<2
013N783346	Sediment Pulp		0.57	3.44	0.48	<10	2
013N783348	Sediment Pulp		0.49	2.78	0.36	<10	<2
013N783352	Sediment Pulp		0.41	2.53	0.33	<10	<2
013N783361	Sediment Pulp		0.45	2.67	0.35	<10	<2
013N783362	Sediment Pulp		1.63	9.20	1.03	<10	3
013N783365	Sediment Pulp		0.51	2.80	0.39	<10	<2
013N783368	Sediment Pulp		0.45	2.65	0.31	<10	3
013N783370	Sediment Pulp		7.18	35.34	3.83	<10	2
013N783371	Sediment Pulp		0.43	2.68	0.36	<10	<2
013N783372	Sediment Pulp		0.13	0.91	0.14	<10	<2
013N783374	Sediment Pulp		4.06	22.14	2.55	<10	2
013N783375	Sediment Pulp		2.08	11.59	1.51	<10	<2
013N783376	Sediment Pulp		1.22	7.66	1.07	<10	<2
013N783377	Sediment Pulp		1.37	7.81	1.00	<10	<2
013N783378	Sediment Pulp		0.48	2.73	0.30	<10	<2
013N783379	Sediment Pulp		1.96	11.67	1.53	<10	<2
013N783380	Sediment Pulp		2.81	16.71	2.10	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013N783381	Sediment Pulp	2.16	27.90	20.27	52.5	854	4.9	1.1	37	0.73	<0.1	4.2	0.7	0.9	4.5	0.58	0.02	0.07	26	0.08	0.230
013N783383	Sediment Pulp	2.34	29.16	21.80	55.1	922	4.8	1.2	40	0.76	<0.1	4.4	0.5	0.9	4.9	0.61	0.03	0.08	28	0.08	0.237
013N783384	Sediment Pulp	6.31	18.30	17.80	215.0	353	5.2	3.5	213	0.96	<0.1	6.0	<0.2	2.0	11.4	2.22	<0.02	0.04	20	0.20	0.219
013N783385	Sediment Pulp	16.24	24.32	32.21	345.6	390	6.7	5.6	574	1.74	<0.1	8.9	<0.2	5.3	10.0	5.31	<0.02	0.04	30	0.17	0.245
013N783386	Sediment Pulp	33.21	18.61	21.82	248.9	407	6.9	4.0	158	4.02	0.6	9.9	0.7	6.6	30.2	1.57	0.02	0.02	31	0.58	0.203
013N783387	Sediment Pulp	43.50	14.50	19.93	217.2	375	6.1	13.7	5365	8.21	0.4	7.4	<0.2	11.3	34.3	1.67	<0.02	0.04	29	0.61	0.193
013N783388	Sediment Pulp	18.86	14.65	10.06	150.0	218	6.7	18.6	6905	8.54	2.3	4.5	0.5	10.4	15.0	0.85	0.02	0.03	27	0.28	0.138
013N783389	Sediment Pulp	0.96	33.57	27.60	127.7	2609	46.2	28.6	1203	3.07	25.2	4.0	2.4	8.5	26.6	0.57	0.56	3.33	48	0.60	0.084
013N783390	Sediment Pulp	10.67	15.25	9.15	145.0	134	9.9	16.7	7104	3.86	0.5	3.0	1.2	5.6	18.2	0.81	0.02	0.06	29	0.30	0.121
013N783391	Sediment Pulp	2.14	6.02	7.64	80.1	52	5.1	4.7	229	1.88	0.8	2.1	0.6	5.6	10.2	0.26	0.02	0.04	18	0.26	0.068
013N783392	Sediment Pulp	17.28	18.02	9.47	143.9	157	5.6	5.3	356	2.95	1.2	5.4	<0.2	6.0	10.3	0.72	0.03	0.05	16	0.18	0.132
013N783393	Sediment Pulp	9.91	18.41	8.53	205.0	184	7.9	10.5	405	5.13	1.1	4.7	0.6	5.2	15.8	1.11	0.03	0.04	28	0.35	0.159



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013N783381	Sediment Pulp	99.9	15.4	0.07	23.7	0.036	<20	1.89	0.007	0.03	0.1	1.3	0.04	0.19	157	3.1	<0.02	9.5	0.32	0.2	<0.02
013N783383	Sediment Pulp	105.9	15.9	0.08	24.7	0.038	<20	1.97	0.006	0.03	0.1	1.4	0.04	0.20	167	3.2	<0.02	10.0	0.33	0.2	0.02
013N783384	Sediment Pulp	267.7	11.4	0.08	46.6	0.031	<20	2.40	0.010	0.04	0.4	2.0	0.15	0.22	118	3.7	<0.02	5.7	0.26	0.5	<0.02
013N783385	Sediment Pulp	370.4	14.1	0.07	42.6	0.038	<20	3.29	0.009	0.03	0.6	3.2	0.18	0.20	117	5.0	<0.02	7.7	0.23	0.7	<0.02
013N783386	Sediment Pulp	384.2	17.2	0.07	52.7	0.037	<20	3.08	0.012	0.02	0.3	3.5	0.10	0.20	155	4.2	<0.02	7.3	0.14	0.6	<0.02
013N783387	Sediment Pulp	276.7	19.8	0.10	248.7	0.042	<20	2.77	0.019	0.04	0.3	3.9	0.22	0.13	153	4.0	<0.02	7.6	0.18	0.5	<0.02
013N783388	Sediment Pulp	147.4	12.6	0.12	166.0	0.044	<20	1.88	0.015	0.05	0.6	3.8	0.22	0.10	77	1.8	<0.02	4.7	0.21	0.3	<0.02
013N783389	Sediment Pulp	40.6	51.4	0.79	163.7	0.105	<20	1.65	0.028	0.26	0.2	5.5	0.28	0.15	273	0.4	0.04	5.9	1.41	<0.1	0.13
013N783390	Sediment Pulp	97.6	14.3	0.17	232.1	0.047	<20	1.67	0.034	0.06	0.2	3.6	0.24	0.11	79	1.0	<0.02	4.1	0.22	0.2	<0.02
013N783391	Sediment Pulp	59.9	9.7	0.18	45.9	0.055	<20	1.04	0.022	0.06	0.2	2.6	0.08	0.06	37	0.5	<0.02	3.5	0.28	0.1	0.05
013N783392	Sediment Pulp	181.7	10.5	0.11	28.1	0.035	<20	2.04	0.017	0.04	0.3	3.2	0.08	0.13	63	2.3	<0.02	3.9	0.20	0.3	<0.02
013N783393	Sediment Pulp	145.5	13.1	0.14	72.6	0.038	<20	2.54	0.033	0.04	0.3	4.9	0.18	0.15	109	1.8	<0.02	4.7	0.19	0.3	<0.02



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VAN22001768.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013N783381	Sediment Pulp	2.61	3.2	0.9	<0.05	1.4	61.70	182.9	0.07	<1	1.7	3.1	24.40	91.40	17.35	1.22	14.17	2.57	15.77	3.00
013N783383	Sediment Pulp	2.77	3.3	1.0	<0.05	1.5	65.73	194.4	0.10	<1	1.5	3.6	26.22	95.96	18.92	1.33	16.40	2.74	16.56	3.23
013N783384	Sediment Pulp	2.10	3.4	0.6	<0.05	0.8	211.40	487.8	0.06	2	5.9	7.0	71.31	271.54	55.47	2.84	49.17	8.11	49.11	9.36
013N783385	Sediment Pulp	2.42	3.3	0.6	<0.05	0.9	296.79	746.6	0.08	<1	10.0	7.7	100.80	382.20	77.50	4.11	72.06	11.56	69.07	12.97
013N783386	Sediment Pulp	2.70	1.8	0.5	<0.05	0.8	175.13	725.4	0.10	3	8.6	4.4	90.98	325.20	59.55	3.50	47.87	7.31	42.86	7.58
013N783387	Sediment Pulp	1.72	2.7	0.6	<0.05	1.2	153.08	573.6	0.10	2	4.8	6.1	64.59	236.89	42.86	2.69	37.90	5.90	34.15	6.60
013N783388	Sediment Pulp	1.10	4.6	0.5	<0.05	0.8	101.06	306.1	0.05	<1	2.9	10.4	38.84	145.53	27.49	1.94	22.67	3.74	22.40	4.38
013N783389	Sediment Pulp	1.95	25.2	1.1	<0.05	5.9	17.62	71.0	0.05	2	0.7	22.1	9.85	35.81	6.59	0.95	4.55	0.61	3.41	0.63
013N783390	Sediment Pulp	1.11	5.4	0.6	<0.05	0.6	55.17	207.1	0.04	<1	1.1	8.0	25.97	98.16	17.42	1.50	15.44	2.12	12.33	2.23
013N783391	Sediment Pulp	1.66	5.4	0.6	<0.05	1.7	33.56	118.2	0.03	<1	0.9	12.6	15.14	59.45	9.94	0.79	9.11	1.23	7.27	1.37
013N783392	Sediment Pulp	1.31	3.7	0.6	<0.05	0.9	144.95	453.2	0.05	<1	3.8	14.2	47.22	180.04	34.72	2.33	34.20	5.01	30.53	5.94
013N783393	Sediment Pulp	1.36	3.2	0.5	<0.05	0.6	92.74	398.4	0.05	<1	3.4	8.2	39.02	151.08	27.77	2.12	25.40	3.52	21.60	4.26



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Bureau Veritas Commodities Canada Ltd.

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Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001768.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013N783381	Sediment Pulp	1.12	6.33	0.77	<10	<2
013N783383	Sediment Pulp	1.16	6.87	0.81	<10	<2
013N783384	Sediment Pulp	3.40	19.48	2.37	<10	<2
013N783385	Sediment Pulp	4.94	27.23	3.43	<10	2
013N783386	Sediment Pulp	2.69	15.69	1.91	<10	3
013N783387	Sediment Pulp	2.32	13.18	1.64	<10	2
013N783388	Sediment Pulp	1.71	10.00	1.28	<10	<2
013N783389	Sediment Pulp	0.26	1.76	0.25	<10	4
013N783390	Sediment Pulp	0.80	4.65	0.62	<10	<2
013N783391	Sediment Pulp	0.54	3.35	0.47	<10	<2
013N783392	Sediment Pulp	2.31	12.77	1.68	<10	<2
013N783393	Sediment Pulp	1.74	10.06	1.47	<10	10



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QUALITY CONTROL REPORT

VAN22001768.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013N783158	Sediment Pulp	1.60	12.87	5.00	69.0	70	23.8	13.1	599	2.49	1.5	1.2	0.4	3.1	55.8	0.15	0.02	0.04	40	0.89	0.108
REP 013N783158	QC	1.61	12.96	4.92	69.1	67	24.1	13.0	609	2.52	1.6	1.2	<0.2	3.2	55.8	0.15	0.02	0.04	40	0.90	0.109
013N783221	Sediment Pulp	2.97	11.46	8.10	83.3	42	11.2	8.0	393	3.31	2.8	2.3	1.7	14.1	36.9	0.09	0.02	0.05	38	0.64	0.098
REP 013N783221	QC	2.96	11.56	7.97	84.3	41	11.2	8.0	394	3.33	3.0	2.2	0.8	13.3	37.0	0.09	0.02	0.05	39	0.64	0.098
013N783298	Sediment Pulp	4.00	17.63	2.21	194.1	269	8.1	14.7	1471	8.99	<0.1	1.0	1.1	2.5	24.1	0.60	<0.02	<0.02	21	0.41	0.163
REP 013N783298	QC	4.04	17.61	2.21	192.5	278	8.2	14.7	1468	8.92	<0.1	1.0	2.1	2.5	24.0	0.61	<0.02	0.02	21	0.40	0.165
013N783352	Sediment Pulp	1.08	7.63	8.49	77.1	18	8.0	5.6	187	1.85	0.5	1.1	0.5	10.5	17.1	0.15	<0.02	0.03	26	0.43	0.095
REP 013N783352	QC	1.06	7.37	8.30	77.4	23	8.2	5.3	195	1.87	0.5	1.2	0.5	11.0	17.5	0.16	<0.02	0.03	26	0.45	0.094
Reference Materials																					
STD DS11	Standard	14.34	149.20	124.81	344.2	1774	79.1	14.0	1030	3.18	42.6	2.6	97.3	6.9	66.0	2.28	5.41	11.06	47	1.05	0.071
STD DS11	Standard	12.87	129.31	125.94	319.1	1520	69.4	12.5	950	2.87	40.9	2.4	51.5	8.2	60.5	2.27	5.69	11.08	44	0.97	0.070
STD DS11	Standard	13.77	148.57	137.69	347.4	2213	82.1	13.8	1071	3.22	46.5	2.6	54.8	9.5	67.6	2.65	5.50	12.59	51	1.08	0.076
STD DS11	Standard	14.74	148.84	130.66	348.1	1686	81.4	14.5	1053	3.08	44.8	2.6	41.9	7.5	68.9	2.32	5.06	10.78	49	1.08	0.073
STD DS11	Standard	14.73	144.89	128.67	345.3	1708	80.2	14.0	1020	3.14	42.6	2.2	41.5	7.0	66.7	2.29	5.63	10.64	49	1.05	0.070
STD DS11	Standard	13.13	146.24	122.62	334.6	1751	81.8	14.2	1033	3.07	40.6	2.2	73.0	7.3	63.7	2.22	5.36	10.55	48	1.06	0.070
STD OREAS262	Standard	0.59	118.83	53.26	156.0	485	66.6	28.7	545	3.46	37.3	1.1	48.6	8.7	36.1	0.64	1.31	0.96	21	2.98	0.041
STD OREAS262	Standard	0.55	105.87	54.71	137.6	446	57.7	25.7	514	3.05	35.6	1.2	46.2	9.9	33.5	0.68	1.65	1.02	20	2.85	0.041
STD OREAS262	Standard	0.61	114.76	56.79	154.5	485	62.7	27.3	541	3.34	38.5	1.2	51.9	10.4	35.9	0.65	1.75	1.07	22	2.96	0.039
STD OREAS262	Standard	0.55	113.46	51.55	150.1	460	62.8	26.6	536	3.14	35.3	1.1	51.0	8.4	34.9	0.61	2.06	0.88	21	2.89	0.039
STD OREAS262	Standard	0.54	109.84	49.97	146.1	430	61.3	26.9	531	3.11	34.6	1.0	46.5	7.8	32.8	0.59	1.26	0.86	21	2.95	0.038
STD OREAS262	Standard	0.56	113.43	50.45	151.8	451	64.6	27.5	537	3.19	34.7	1.0	42.7	8.0	33.1	0.62	1.37	0.87	21	2.86	0.038
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	0.06	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	0.2	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.03	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.

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QUALITY CONTROL REPORT

VAN22001768.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
Pulp Duplicates																				
013N783158	Sediment Pulp	22.7	33.1	0.57	80.3	0.093	<20	2.50	0.214	0.18	<0.1	3.5	0.11	0.05	67	0.5	<0.02	6.2	1.11	<0.1
REP 013N783158	QC	22.7	33.4	0.58	80.0	0.094	<20	2.50	0.212	0.18	<0.1	3.5	0.11	0.05	65	0.5	<0.02	6.1	1.10	<0.1
013N783221	Sediment Pulp	80.3	23.3	0.67	83.2	0.144	20	1.29	0.216	0.40	0.2	5.9	0.15	0.80	27	<0.1	<0.02	4.7	0.78	<0.1
REP 013N783221	QC	79.2	23.2	0.67	83.8	0.147	<20	1.30	0.213	0.40	0.2	5.9	0.15	0.80	26	0.2	<0.02	4.8	0.76	<0.1
013N783298	Sediment Pulp	66.4	9.6	0.10	96.6	0.023	<20	2.49	0.034	0.02	<0.1	4.4	0.09	0.16	132	1.9	<0.02	2.7	0.12	<0.1
REP 013N783298	QC	66.1	9.8	0.10	95.3	0.023	<20	2.47	0.033	0.02	<0.1	4.3	0.09	0.16	128	1.8	<0.02	2.7	0.12	<0.1
013N783352	Sediment Pulp	62.4	16.2	0.37	110.1	0.114	<20	0.98	0.048	0.20	0.2	4.5	0.13	<0.02	21	0.1	<0.02	5.2	0.60	0.1
REP 013N783352	QC	64.2	16.9	0.38	112.2	0.115	<20	1.02	0.053	0.20	0.2	4.7	0.13	<0.02	22	<0.1	<0.02	5.2	0.60	0.2
Reference Materials																				
STD DS11	Standard	16.6	59.4	0.84	402.3	0.093	<20	1.15	0.073	0.41	2.1	3.1	4.79	0.28	248	2.4	4.61	4.9	2.70	<0.1
STD DS11	Standard	16.7	52.7	0.79	367.5	0.082	<20	1.04	0.065	0.37	2.3	2.8	4.59	0.26	247	1.7	4.06	4.8	2.63	<0.1
STD DS11	Standard	19.2	60.1	0.87	431.4	0.098	<20	1.20	0.075	0.41	2.2	3.4	5.02	0.30	254	2.1	4.50	5.0	3.09	<0.1
STD DS11	Standard	17.4	59.4	0.85	399.3	0.093	<20	1.18	0.077	0.40	2.7	3.2	5.01	0.28	250	2.3	4.65	4.9	2.78	<0.1
STD DS11	Standard	17.6	59.1	0.86	393.7	0.096	<20	1.15	0.074	0.41	2.4	3.2	4.50	0.28	247	2.1	4.54	4.8	2.71	<0.1
STD DS11	Standard	16.6	59.7	0.84	392.9	0.092	<20	1.14	0.072	0.40	2.4	3.1	4.53	0.29	255	2.2	4.47	4.6	2.63	<0.1
STD OREAS262	Standard	15.8	44.0	1.20	242.9	0.003	<20	1.33	0.073	0.33	<0.1	3.1	0.47	0.25	157	0.7	0.23	3.9	2.23	<0.1
STD OREAS262	Standard	14.3	37.2	1.12	244.5	0.003	<20	1.09	0.067	0.27	<0.1	3.0	0.45	0.25	151	0.3	0.20	3.8	2.21	<0.1
STD OREAS262	Standard	16.1	41.9	1.19	257.5	0.003	<20	1.22	0.067	0.30	<0.1	3.3	0.45	0.27	159	0.3	0.23	4.0	2.45	<0.1
STD OREAS262	Standard	15.5	41.6	1.14	229.0	0.003	<20	1.33	0.067	0.31	<0.1	3.1	0.45	0.26	161	0.5	0.21	3.7	2.17	<0.1
STD OREAS262	Standard	14.3	41.2	1.17	224.7	0.003	<20	1.23	0.065	0.29	<0.1	2.9	0.41	0.25	151	0.4	0.21	3.5	2.02	<0.1
STD OREAS262	Standard	13.6	42.4	1.18	232.2	0.003	<20	1.22	0.065	0.30	<0.1	3.0	0.42	0.27	154	0.4	0.22	3.5	1.95	<0.1
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8	
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	0.04	<0.1	<0.02	<0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1



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Project: None Given
Report Date: July 22, 2022

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QUALITY CONTROL REPORT

VAN22001768.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013N783158	Sediment Pulp	1.38	13.3	0.5	<0.05	1.7	9.04	47.1	0.02	<1	0.4	15.3	5.37	19.07	3.17	0.50	2.41	0.32	1.80	0.33	0.89
REP 013N783158	QC	1.36	13.2	0.5	<0.05	1.7	9.32	47.6	<0.02	<1	0.4	15.2	5.33	18.87	3.11	0.49	2.38	0.32	1.80	0.33	0.89
013N783221	Sediment Pulp	2.09	27.5	1.1	<0.05	12.2	33.66	160.2	0.05	<1	0.8	16.0	18.01	67.03	10.40	0.92	8.04	1.10	6.40	1.19	3.34
REP 013N783221	QC	2.06	27.6	1.1	<0.05	12.2	32.80	158.0	0.05	<1	0.9	16.2	17.67	64.35	10.12	0.90	7.85	1.08	6.28	1.17	3.28
013N783298	Sediment Pulp	0.79	1.5	0.2	<0.05	0.5	47.92	128.3	0.02	<1	0.4	3.8	17.59	71.75	12.22	1.52	11.11	1.44	8.47	1.63	4.63
REP 013N783298	QC	0.79	1.5	0.2	<0.05	0.6	47.45	125.4	0.02	<1	0.4	3.8	17.25	71.05	12.16	1.49	11.10	1.43	8.49	1.61	4.57
013N783352	Sediment Pulp	3.24	18.5	1.0	<0.05	6.3	26.17	125.9	0.04	<1	0.9	12.0	14.97	52.47	9.00	0.80	6.24	0.99	5.32	1.06	2.81
REP 013N783352	QC	3.43	18.5	1.1	<0.05	6.7	26.79	130.3	0.05	<1	0.6	12.0	15.39	52.60	9.36	0.79	6.95	0.98	6.00	1.05	3.05
Reference Materials																					
STD DS11	Standard	1.18	33.5	1.8	<0.05	2.8	8.04	34.3	0.23	42	0.7	23.7	3.72	13.96	2.45	0.46	1.97	0.26	1.46	0.27	0.74
STD DS11	Standard	1.17	31.4	1.6	<0.05	2.4	6.70	33.1	0.22	40	0.5	22.6	3.69	13.05	2.49	0.46	1.77	0.24	1.38	0.24	0.77
STD DS11	Standard	1.34	36.3	1.9	<0.05	2.7	8.11	38.3	0.28	53	0.6	23.0	4.01	15.79	2.74	0.57	2.20	0.28	1.70	0.31	0.84
STD DS11	Standard	1.25	34.1	1.8	<0.05	3.0	8.49	35.5	0.23	44	0.6	21.2	3.65	14.25	2.56	0.48	2.09	0.27	1.52	0.27	0.76
STD DS11	Standard	1.32	33.9	1.7	<0.05	3.0	7.98	35.4	0.23	41	0.7	21.4	3.77	14.26	2.59	0.47	2.05	0.26	1.51	0.27	0.76
STD DS11	Standard	1.26	32.4	1.6	<0.05	2.9	7.89	34.0	0.22	41	0.7	21.3	3.64	13.53	2.39	0.45	1.93	0.25	1.41	0.26	0.73
STD OREAS262	Standard	<0.02	19.5	0.5	<0.05	8.0	10.98	32.0	0.03	<1	1.1	17.2	3.89	14.94	3.23	0.62	2.86	0.37	2.10	0.38	1.02
STD OREAS262	Standard	<0.02	17.0	0.6	<0.05	7.3	9.76	28.3	0.03	2	1.0	17.2	3.47	12.83	2.88	0.61	2.67	0.37	1.97	0.35	0.94
STD OREAS262	Standard	<0.02	18.4	0.6	<0.05	7.7	10.55	31.5	0.04	<1	0.9	17.0	3.86	14.22	3.22	0.64	2.73	0.38	2.27	0.39	1.09
STD OREAS262	Standard	<0.02	18.8	0.5	<0.05	8.0	10.79	31.4	0.03	1	1.1	16.2	3.57	14.45	3.08	0.60	2.79	0.36	2.04	0.36	0.98
STD OREAS262	Standard	<0.02	17.4	0.5	<0.05	8.5	10.08	29.2	0.03	<1	1.1	16.1	3.45	13.45	2.93	0.55	2.64	0.34	1.94	0.34	0.93
STD OREAS262	Standard	<0.02	17.4	0.5	<0.05	7.7	10.21	27.5	0.03	<1	1.1	16.1	3.20	12.81	2.83	0.54	2.56	0.34	1.87	0.35	0.93
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.1	0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: July 22, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22001768.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013N783158	Sediment Pulp	0.12	0.71	0.10	<10	<2
REP 013N783158	QC	0.12	0.72	0.10	<10	<2
013N783221	Sediment Pulp	0.46	2.80	0.39	<10	<2
REP 013N783221	QC	0.45	2.76	0.38	<10	<2
013N783298	Sediment Pulp	0.62	4.09	0.60	<10	<2
REP 013N783298	QC	0.62	4.02	0.59	<10	<2
013N783352	Sediment Pulp	0.41	2.53	0.33	<10	<2
REP 013N783352	QC	0.41	2.45	0.35	<10	<2
Reference Materials						
STD DS11	Standard	0.10	0.67	0.10	94	165
STD DS11	Standard	0.10	0.68	0.10	80	162
STD DS11	Standard	0.12	0.78	0.10	94	187
STD DS11	Standard	0.10	0.71	0.10	99	161
STD DS11	Standard	0.11	0.69	0.10	95	164
STD DS11	Standard	0.10	0.66	0.10	89	159
STD OREAS262	Standard	0.13	0.83	0.12	<10	<2
STD OREAS262	Standard	0.14	0.90	0.12	<10	<2
STD OREAS262	Standard	0.15	0.87	0.13	<10	<2
STD OREAS262	Standard	0.12	0.80	0.11	<10	<2
STD OREAS262	Standard	0.12	0.75	0.11	<10	<2
STD OREAS262	Standard	0.12	0.74	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Ottawa Ontario K1A 0E8 Canada

Project: None Given

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QUALITY CONTROL REPORT

VAN22001768.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
BLK	Blank	<0.01	<0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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QUALITY CONTROL REPORT

VAN22001768.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
		BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02



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QUALITY CONTROL REPORT

VAN22001768.1

		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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QUALITY CONTROL REPORT

VAN22001768.1

		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: June 16, 2022
Analysis Start: June 27, 2022
Report Date: July 22, 2022
Page: 1 of 10

CERTIFICATE OF ANALYSIS

VAN22001769.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID: 013J77
P.O. Number: 3000732409
Number of Samples: 257

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	257	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	246	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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CERTIFICATE OF ANALYSIS

VAN22001769.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773000	Sediment Pulp	0.98	34.68	26.73	137.7	2719	47.6	28.8	1276	3.29	27.1	4.0	2.8	9.2	29.6	0.58	0.53	3.42	53	0.65	0.105
013J773001	Sediment Pulp	14.36	49.96	4.45	135.4	360	12.5	12.0	214	3.94	0.7	12.7	3.7	7.1	22.8	0.45	0.08	0.10	60	0.28	0.107
013J773002	Sediment Pulp	14.21	51.04	4.42	125.6	378	12.3	11.2	217	3.97	0.6	12.5	2.2	6.8	23.1	0.46	0.07	0.09	60	0.28	0.108
013J773003	Sediment Pulp	6.55	19.23	5.32	108.4	108	12.7	13.4	543	2.94	1.1	5.6	1.0	5.5	23.2	0.29	0.04	0.05	41	0.37	0.122
013J773004	Sediment Pulp	9.00	40.93	86.13	286.1	598	11.7	7.8	421	1.80	35.6	9.4	3.1	1.7	61.5	1.29	0.70	0.96	21	6.19	0.068
013J773005	Sediment Pulp	4.45	14.81	5.90	62.1	90	11.9	15.5	1889	5.00	3.5	4.2	0.5	10.3	26.6	0.16	0.06	0.07	44	0.36	0.154
013J773006	Sediment Pulp	4.79	16.61	6.25	61.0	89	12.8	17.4	2539	5.33	3.2	4.9	1.2	12.0	26.6	0.16	0.06	0.07	46	0.34	0.152
013J773007	Sediment Pulp	4.09	18.67	8.84	80.1	153	16.8	14.4	645	3.75	2.4	5.0	0.6	11.0	36.9	0.22	0.08	0.10	53	0.49	0.150
013J773009	Sediment Pulp	4.73	19.45	7.88	85.2	200	16.9	23.9	2033	6.23	2.7	5.6	3.0	13.2	34.8	0.27	0.05	0.08	54	0.39	0.167
013J773010	Sediment Pulp	2.73	12.76	6.28	65.7	82	13.0	13.3	631	3.59	2.1	3.6	0.5	11.7	35.6	0.11	0.06	0.06	46	0.47	0.129
013J773011	Sediment Pulp	9.07	39.61	5.73	64.6	1200	10.6	6.5	391	2.20	0.6	22.3	1.8	2.4	33.6	0.51	0.09	0.04	53	0.38	0.367
013J773012	Sediment Pulp	11.26	13.22	6.38	86.0	153	7.0	33.1	1113	12.96	3.2	4.5	1.8	9.6	12.7	0.26	0.03	0.04	69	0.13	0.123
013J773014	Sediment Pulp	3.57	12.85	2.26	30.3	209	6.4	2.3	70	0.75	0.4	2.8	1.9	0.8	18.7	0.20	0.05	<0.02	23	0.22	0.089
013J773015	Sediment Pulp	1.38	9.38	3.11	29.3	24	5.1	4.7	152	1.17	1.6	2.4	0.7	5.9	20.0	0.05	0.07	0.03	20	0.34	0.079
013J773016	Sediment Pulp	3.87	5.00	3.82	40.5	32	4.2	5.7	220	4.10	1.8	1.3	1.3	6.2	20.1	0.11	0.06	0.02	33	0.32	0.068
013J773021	Sediment Pulp	11.70	13.33	6.52	83.1	149	6.7	32.7	1116	12.91	2.9	4.5	1.5	9.6	13.1	0.24	0.03	0.04	69	0.13	0.127
013J773022	Sediment Pulp	2.94	17.36	2.72	59.4	205	11.3	3.8	96	1.50	0.4	3.5	1.3	2.4	18.3	0.22	0.04	<0.02	41	0.25	0.063
013J773024	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J773025	Sediment Pulp	5.78	25.13	3.60	95.0	146	19.2	12.9	399	4.74	0.9	7.8	0.6	6.3	17.5	0.34	0.06	0.04	48	0.26	0.126
013J773026	Sediment Pulp	1.16	15.81	2.71	28.8	185	16.1	2.5	43	0.49	<0.1	1.7	1.9	0.5	21.1	0.21	0.05	<0.02	15	0.23	0.060
013J773028	Sediment Pulp	0.91	33.40	23.86	132.1	2665	48.9	29.8	1250	3.19	25.9	3.7	2.7	8.2	26.7	0.59	0.54	3.11	50	0.63	0.097
013J773029	Sediment Pulp	15.43	47.06	3.46	137.7	300	17.3	32.6	1243	13.43	1.5	9.7	0.8	12.3	21.5	0.89	0.05	0.05	126	0.29	0.190
013J773030	Sediment Pulp	4.50	12.00	5.43	40.3	50	7.0	5.0	165	1.81	1.2	3.5	0.7	6.9	20.7	0.68	0.05	0.06	36	0.35	0.103
013J773034	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J773035	Sediment Pulp	7.62	19.59	3.71	48.2	64	8.6	9.2	233	2.21	2.0	6.5	1.1	7.5	26.2	0.15	0.08	0.03	29	0.42	0.132
013J773036	Sediment Pulp	6.41	30.92	2.40	38.8	143	6.5	3.7	84	0.84	0.7	5.7	2.4	1.4	19.2	0.12	0.06	<0.02	23	0.26	0.063
013J773039	Sediment Pulp	16.22	11.32	2.73	82.0	76	9.0	23.7	889	6.03	13.7	5.7	0.3	6.9	22.4	0.24	0.12	<0.02	35	0.29	0.058
013J773040	Sediment Pulp	4.32	13.31	2.49	47.9	161	8.0	3.8	99	1.03	0.4	2.7	0.6	0.8	23.0	0.29	0.08	<0.02	20	0.31	0.086
013J773041	Sediment Pulp	4.28	11.33	5.24	39.1	43	6.5	4.7	161	1.77	1.0	3.4	0.4	6.7	20.2	0.69	0.06	0.05	35	0.34	0.107
013J773042	Sediment Pulp	10.38	45.36	88.08	314.6	641	14.1	8.5	432	1.87	40.7	9.5	4.6	1.8	68.0	1.48	0.57	1.03	21	6.35	0.070



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013J773000	Sediment Pulp			44.3	52.9	0.83	172.5	0.113	<20	1.77	0.032	0.28	0.6	6.3	0.30	0.16	291	0.5	0.03	6.3	1.56
013J773001	Sediment Pulp			212.2	21.1	0.20	112.0	0.059	<20	1.73	0.014	0.10	0.5	5.1	0.26	0.17	118	1.9	0.02	3.8	0.86
013J773002	Sediment Pulp			217.5	20.6	0.20	112.6	0.057	<20	1.74	0.014	0.10	0.5	5.1	0.26	0.17	112	1.9	0.02	3.6	0.88
013J773003	Sediment Pulp			66.4	18.5	0.43	119.8	0.109	<20	1.38	0.031	0.20	0.4	3.4	0.24	0.08	88	0.5	<0.02	4.3	1.68
013J773004	Sediment Pulp			10.9	12.5	0.57	92.8	0.039	<20	0.44	0.026	0.05	0.5	2.4	0.21	1.53	93	0.9	<0.02	2.2	0.52
013J773005	Sediment Pulp			48.3	19.5	0.51	141.4	0.128	<20	1.23	0.025	0.31	0.4	3.5	0.25	0.03	67	0.3	<0.02	4.1	2.13
013J773006	Sediment Pulp			56.2	20.4	0.52	151.6	0.138	<20	1.30	0.025	0.32	0.6	3.8	0.25	0.03	31	0.5	<0.02	4.2	2.30
013J773007	Sediment Pulp			59.5	27.7	0.73	168.0	0.161	<20	1.62	0.041	0.44	0.5	4.7	0.27	0.05	80	0.4	<0.02	5.7	3.24
013J773009	Sediment Pulp			74.8	26.3	0.67	198.4	0.154	<20	1.61	0.042	0.42	0.5	4.6	0.28	0.05	97	0.4	<0.02	5.4	3.15
013J773010	Sediment Pulp			46.6	23.4	0.70	151.1	0.166	<20	1.32	0.034	0.45	0.4	3.9	0.24	0.03	59	0.1	<0.02	4.8	3.29
013J773011	Sediment Pulp			145.2	20.8	0.07	177.7	0.056	<20	2.53	0.011	0.03	0.4	3.2	0.11	0.33	293	2.3	<0.02	6.0	0.62
013J773012	Sediment Pulp			74.8	15.8	0.14	118.6	0.064	<20	1.49	0.008	0.07	0.9	3.6	0.13	0.06	122	0.8	<0.02	3.4	0.88
013J773014	Sediment Pulp			38.3	8.6	0.08	78.9	0.031	<20	0.62	0.009	0.04	0.5	1.3	0.05	0.13	137	0.5	<0.02	2.0	0.45
013J773015	Sediment Pulp			33.1	8.6	0.18	49.8	0.085	<20	0.58	0.023	0.12	0.4	2.4	0.08	0.03	32	<0.1	<0.02	2.1	0.86
013J773016	Sediment Pulp			36.3	9.3	0.16	56.7	0.073	<20	0.69	0.026	0.08	1.3	2.4	0.05	0.05	72	0.3	<0.02	2.2	0.67
013J773021	Sediment Pulp			75.4	16.1	0.14	118.4	0.064	<20	1.50	0.007	0.07	1.0	3.6	0.13	0.06	109	0.8	<0.02	3.2	0.91
013J773022	Sediment Pulp			68.4	14.9	0.16	77.0	0.055	<20	0.95	0.014	0.06	0.5	2.3	0.07	0.20	148	0.9	<0.02	3.1	0.72
013J773024	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773025	Sediment Pulp			98.6	39.4	0.27	78.0	0.076	<20	1.55	0.017	0.08	0.4	4.3	0.11	0.12	97	1.1	<0.02	3.3	0.69
013J773026	Sediment Pulp			26.4	16.8	0.08	100.0	0.020	<20	0.58	0.014	0.03	0.2	0.8	0.04	0.22	140	0.4	<0.02	1.9	0.25
013J773028	Sediment Pulp			42.2	51.5	0.81	164.1	0.106	<20	1.72	0.030	0.27	0.2	6.0	0.26	0.16	278	0.6	0.03	5.7	1.45
013J773029	Sediment Pulp			161.6	37.3	0.12	81.4	0.078	<20	2.62	0.008	0.04	1.0	6.0	0.28	0.15	194	2.3	0.03	4.7	0.44
013J773030	Sediment Pulp			46.9	13.4	0.26	58.8	0.102	<20	0.75	0.018	0.10	0.5	2.5	0.07	0.07	61	0.2	<0.02	3.7	0.90
013J773034	Sediment Pulp			I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773035	Sediment Pulp			55.5	13.2	0.22	59.8	0.091	<20	0.78	0.032	0.14	1.7	3.4	0.10	0.16	212	<0.1	0.04	2.4	0.82
013J773036	Sediment Pulp			90.0	11.5	0.11	45.1	0.054	<20	0.85	0.016	0.07	2.2	1.8	0.11	0.16	174	1.1	<0.02	2.7	0.72
013J773039	Sediment Pulp			58.2	15.1	0.13	92.4	0.063	<20	0.96	0.013	0.07	2.4	3.3	0.14	0.76	112	1.9	<0.02	2.3	0.86
013J773040	Sediment Pulp			56.7	9.3	0.11	43.5	0.028	<20	0.78	0.010	0.04	2.4	1.4	0.05	0.33	145	0.9	<0.02	2.1	0.58
013J773041	Sediment Pulp			45.2	12.7	0.25	56.7	0.104	<20	0.72	0.020	0.09	0.5	2.4	0.07	0.07	50	0.3	<0.02	3.4	0.85
013J773042	Sediment Pulp			11.5	14.2	0.59	100.3	0.044	<20	0.45	0.026	0.05	0.6	2.6	0.22	1.58	110	0.9	0.02	2.3	0.58



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773000	Sediment Pulp	2.17	27.7	1.2	<0.05	6.7	19.79	80.4	0.04	1	0.5	23.2	10.71	39.66	6.56	1.04	5.56	0.68	3.91	0.71	1.92
013J773001	Sediment Pulp	2.39	8.4	0.4	<0.05	1.6	63.38	323.2	0.02	1	1.4	4.9	45.15	165.66	24.76	3.00	19.16	2.36	12.80	2.39	6.19
013J773002	Sediment Pulp	2.32	8.4	0.5	<0.05	1.6	66.42	327.9	0.03	2	1.8	5.0	47.24	166.29	25.48	3.32	20.73	2.37	13.51	2.38	6.57
013J773003	Sediment Pulp	2.47	18.5	0.5	<0.05	2.1	23.42	130.5	<0.02	<1	0.7	10.5	14.96	53.07	8.18	1.20	6.70	0.82	4.65	0.84	2.38
013J773004	Sediment Pulp	0.69	3.5	3.3	<0.05	1.4	10.20	17.8	0.48	19	0.2	4.3	2.68	11.52	2.56	0.48	2.46	0.30	1.70	0.33	0.99
013J773005	Sediment Pulp	2.37	26.3	0.6	<0.05	4.4	19.46	115.6	0.03	1	0.6	12.6	11.39	40.74	6.31	1.02	5.10	0.68	3.65	0.76	1.97
013J773006	Sediment Pulp	2.04	27.3	0.7	<0.05	4.4	22.19	139.6	<0.02	<1	0.6	13.3	12.84	46.37	7.21	1.13	6.14	0.75	4.56	0.83	2.45
013J773007	Sediment Pulp	2.87	37.7	0.8	<0.05	4.8	24.51	122.3	0.03	1	0.7	18.6	13.36	47.52	7.84	1.17	6.35	0.80	4.71	0.90	2.40
013J773009	Sediment Pulp	2.52	36.2	0.7	<0.05	5.8	28.88	145.7	0.03	<1	0.7	16.6	16.68	59.84	9.29	1.37	7.07	0.91	5.58	1.00	2.94
013J773010	Sediment Pulp	2.51	38.8	0.7	<0.05	6.7	18.05	92.2	0.03	<1	0.5	17.0	10.07	37.99	5.89	0.91	4.86	0.63	3.63	0.65	1.80
013J773011	Sediment Pulp	3.85	3.2	0.4	<0.05	1.3	49.54	263.1	0.05	2	1.2	1.6	33.30	118.28	18.53	2.82	14.26	1.81	10.05	1.83	5.06
013J773012	Sediment Pulp	1.70	6.1	0.4	<0.05	1.5	27.49	182.6	0.02	<1	0.9	3.5	17.19	62.32	9.98	1.38	7.62	1.01	5.35	0.99	2.90
013J773014	Sediment Pulp	1.26	3.3	0.4	<0.05	0.7	13.97	69.2	<0.02	<1	0.3	2.2	9.17	32.87	5.25	0.80	4.20	0.48	2.66	0.50	1.34
013J773015	Sediment Pulp	2.62	9.6	0.5	<0.05	3.6	13.36	61.6	<0.02	<1	0.2	5.6	7.56	25.83	4.26	0.68	3.44	0.43	2.46	0.49	1.23
013J773016	Sediment Pulp	2.89	5.5	0.5	<0.05	3.3	13.58	69.3	<0.02	<1	0.3	4.8	8.14	28.78	4.64	0.70	3.79	0.44	2.59	0.50	1.36
013J773021	Sediment Pulp	1.69	6.4	0.4	<0.05	1.7	27.42	182.2	0.02	<1	0.8	3.3	17.79	61.65	9.98	1.44	7.46	0.98	5.55	0.96	2.91
013J773022	Sediment Pulp	2.37	4.8	0.3	<0.05	2.2	24.39	135.5	0.03	<1	0.5	4.8	16.79	60.45	9.68	1.34	7.01	0.94	5.01	0.92	2.36
013J773024	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773025	Sediment Pulp	2.16	5.9	0.5	<0.05	1.6	41.06	203.6	<0.02	2	0.9	5.2	24.18	87.23	14.64	1.98	11.53	1.47	7.75	1.45	4.22
013J773026	Sediment Pulp	0.82	1.9	0.4	<0.05	0.6	9.25	45.7	<0.02	<1	0.2	1.8	5.58	20.46	3.25	0.56	2.50	0.33	1.90	0.34	1.03
013J773028	Sediment Pulp	2.01	25.7	1.2	<0.05	5.9	18.22	75.0	0.06	<1	0.6	20.2	9.94	35.82	6.21	1.02	4.73	0.60	3.40	0.67	1.83
013J773029	Sediment Pulp	3.40	3.6	0.4	<0.05	1.5	61.95	414.8	0.04	2	1.2	2.9	38.35	141.82	21.92	2.84	16.42	2.19	12.95	2.42	6.61
013J773030	Sediment Pulp	4.04	8.4	0.8	<0.05	2.7	17.62	84.5	0.03	1	0.3	6.7	10.65	36.81	5.99	0.81	4.66	0.58	3.52	0.62	1.73
013J773034	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773035	Sediment Pulp	2.83	10.5	0.6	<0.05	2.1	20.79	107.4	0.03	<1	0.2	5.7	12.81	43.89	7.41	1.03	5.68	0.70	3.81	0.71	2.00
013J773036	Sediment Pulp	1.67	6.2	0.4	<0.05	0.8	28.35	156.6	<0.02	8	0.3	3.7	23.25	86.94	13.82	1.90	9.32	1.13	6.05	1.04	2.79
013J773039	Sediment Pulp	1.99	5.4	0.4	<0.05	1.8	21.74	120.8	0.02	8	0.7	4.6	13.11	47.33	7.30	1.08	5.43	0.73	4.10	0.69	2.04
013J773040	Sediment Pulp	1.19	4.0	0.3	<0.05	0.6	23.53	90.7	<0.02	<1	<0.1	3.2	13.67	48.86	8.17	1.38	6.58	0.77	4.50	0.81	2.13
013J773041	Sediment Pulp	3.98	7.8	0.8	<0.05	2.8	17.15	81.1	0.02	<1	0.5	7.3	10.27	35.21	5.75	0.76	4.29	0.57	3.26	0.64	1.76
013J773042	Sediment Pulp	0.73	3.9	3.2	<0.05	1.4	11.09	19.3	0.53	21	0.2	4.6	3.10	12.64	2.52	0.52	2.30	0.32	1.92	0.38	1.05



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J773000	Sediment Pulp		0.29	1.72	0.25	<10	<2
013J773001	Sediment Pulp		0.90	5.53	0.87	<10	<2
013J773002	Sediment Pulp		0.94	5.92	0.90	<10	2
013J773003	Sediment Pulp		0.32	2.16	0.34	<10	<2
013J773004	Sediment Pulp		0.14	0.97	0.14	<10	<2
013J773005	Sediment Pulp		0.32	1.89	0.29	<10	<2
013J773006	Sediment Pulp		0.35	2.16	0.34	<10	<2
013J773007	Sediment Pulp		0.35	2.32	0.32	<10	<2
013J773009	Sediment Pulp		0.41	2.64	0.41	<10	2
013J773010	Sediment Pulp		0.27	1.74	0.26	<10	<2
013J773011	Sediment Pulp		0.75	4.39	0.61	<10	<2
013J773012	Sediment Pulp		0.43	2.53	0.39	<10	<2
013J773014	Sediment Pulp		0.19	1.20	0.20	<10	<2
013J773015	Sediment Pulp		0.19	1.16	0.17	<10	<2
013J773016	Sediment Pulp		0.21	1.25	0.20	<10	<2
013J773021	Sediment Pulp		0.42	2.56	0.39	<10	<2
013J773022	Sediment Pulp		0.34	2.08	0.27	<10	<2
013J773024	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J773025	Sediment Pulp		0.58	3.73	0.55	<10	<2
013J773026	Sediment Pulp		0.12	0.81	0.14	<10	<2
013J773028	Sediment Pulp		0.25	1.67	0.25	<10	<2
013J773029	Sediment Pulp		1.06	6.47	0.97	<10	<2
013J773030	Sediment Pulp		0.24	1.59	0.26	<10	<2
013J773034	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013J773035	Sediment Pulp		0.32	1.76	0.29	<10	2
013J773036	Sediment Pulp		0.40	2.48	0.39	<10	<2
013J773039	Sediment Pulp		0.30	1.88	0.29	<10	<2
013J773040	Sediment Pulp		0.34	1.97	0.34	<10	<2
013J773041	Sediment Pulp		0.26	1.53	0.24	<10	<2
013J773042	Sediment Pulp		0.13	0.90	0.14	<10	<2



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773047	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773049	Sediment Pulp	1.77	10.34	1.61	19.9	89	4.7	1.6	33	0.52	0.1	1.3	2.1	1.1	18.1	0.13	0.04	<0.02	11	0.19	0.030
013J773051	Sediment Pulp	9.41	28.16	2.26	57.2	48	5.3	16.5	1104	5.02	0.8	9.6	0.6	5.9	16.4	0.07	0.08	0.03	44	0.27	0.077
013J773056	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773057	Sediment Pulp	0.71	4.14	3.56	16.5	35	2.7	1.1	59	0.45	0.2	0.8	0.3	0.7	17.0	0.06	0.09	<0.02	10	0.21	0.042
013J773058	Sediment Pulp	3.15	8.41	1.87	23.9	118	3.3	1.3	47	0.38	<0.1	9.3	0.8	<0.1	22.5	0.14	0.05	<0.02	13	0.25	0.059
013J773059	Sediment Pulp	2.77	11.93	2.82	28.1	155	3.8	2.0	80	0.67	<0.1	5.7	0.6	0.3	27.2	0.14	0.05	0.03	23	0.31	0.081
013J773060	Sediment Pulp	1.04	11.88	4.30	40.2	27	7.6	6.0	313	1.98	1.0	1.0	0.3	5.7	45.6	0.05	0.05	0.04	35	0.60	0.104
013J773061	Sediment Pulp	1.51	9.11	1.38	18.8	78	4.1	1.4	33	0.54	<0.1	1.1	2.7	0.7	16.2	0.10	0.03	<0.02	11	0.19	0.025
013J773062	Sediment Pulp	1.82	30.96	2.68	71.9	259	7.3	14.0	594	3.89	<0.1	2.0	0.5	1.2	27.9	0.37	0.04	0.03	59	0.33	0.164
013J773066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773067	Sediment Pulp	6.64	57.75	2.73	68.6	299	6.7	7.2	315	2.42	<0.1	2.9	1.0	0.6	41.0	0.29	0.07	0.04	70	0.49	0.179
013J773072	Sediment Pulp	8.64	8.46	1.61	26.5	47	5.1	6.6	68	1.06	0.6	1.2	0.4	2.0	16.9	0.09	0.05	<0.02	12	0.26	0.038
013J773078	Sediment Pulp	0.87	33.49	24.39	132.1	2619	46.0	29.0	1239	3.20	24.7	3.3	2.5	6.7	26.2	0.50	0.50	2.84	50	0.63	0.092
013J773081	Sediment Pulp	4.97	37.60	1.81	105.3	238	21.8	5.6	85	1.13	<0.1	6.7	0.5	0.5	21.8	0.22	0.05	<0.02	29	0.31	0.082
013J773082	Sediment Pulp	5.06	39.45	1.78	109.3	241	22.4	5.7	86	1.13	<0.1	6.6	0.3	0.5	22.4	0.22	0.05	<0.02	29	0.31	0.084
013J773083	Sediment Pulp	1.66	30.41	1.75	68.5	193	23.1	5.3	87	0.73	<0.1	4.5	0.4	0.5	23.6	0.17	0.03	<0.02	21	0.37	0.061
013J773086	Sediment Pulp	16.97	86.32	5.41	190.8	487	23.6	63.6	2232	13.30	1.0	35.5	0.6	10.7	13.5	0.62	0.08	0.07	67	0.15	0.309
013J773088	Sediment Pulp	18.92	74.99	8.73	159.2	228	30.5	24.1	1067	3.49	1.0	63.5	1.2	9.0	23.5	0.40	0.08	0.09	47	0.32	0.210
013J773089	Sediment Pulp	2.04	29.46	7.80	94.0	71	25.6	16.0	706	2.37	2.1	22.9	0.7	9.2	32.0	0.14	0.08	0.09	43	0.48	0.110
013J773090	Sediment Pulp	10.19	40.39	9.02	163.9	374	27.7	26.5	725	4.60	1.6	21.6	0.5	6.4	28.2	0.39	0.07	0.10	57	0.35	0.213
013J773092	Sediment Pulp	9.34	42.09	80.34	309.1	585	12.3	7.7	437	1.89	32.7	8.4	2.7	1.2	64.3	1.24	0.52	0.89	22	6.38	0.067
013J773093	Sediment Pulp	2.85	11.12	9.66	46.9	159	9.4	5.7	175	1.37	0.2	22.7	0.5	1.1	26.0	0.09	0.06	0.06	39	0.27	0.081
013J773094	Sediment Pulp	10.79	34.92	9.20	152.9	381	25.2	26.9	756	4.92	1.4	18.7	0.6	5.7	28.9	0.47	0.06	0.10	58	0.37	0.202
013J773096	Sediment Pulp	21.80	96.30	8.85	211.7	531	29.7	12.4	990	3.73	1.5	134.4	2.2	6.3	24.6	0.59	0.24	0.11	67	0.46	0.289
013J773097	Sediment Pulp	8.49	35.64	10.56	59.0	802	11.4	5.2	201	1.24	<0.1	11.2	0.6	1.0	136.5	0.30	0.09	0.07	51	1.08	0.343
013J773098	Sediment Pulp	23.99	56.85	7.05	198.1	584	15.0	11.2	758	4.58	1.0	18.1	2.3	3.8	57.3	1.00	0.22	0.08	53	0.59	0.239
013J773099	Sediment Pulp	9.48	61.23	24.28	282.5	905	21.3	43.2	4944	6.91	2.9	22.9	1.8	9.5	32.2	1.22	0.24	0.17	64	0.53	0.201
013J773100	Sediment Pulp	11.82	63.51	7.28	89.2	560	12.7	20.1	336	3.57	0.5	44.5	12.8	3.4	28.0	0.44	0.08	0.05	42	1.02	0.213
013J773101	Sediment Pulp	11.96	64.39	7.57	89.4	561	12.8	19.9	335	3.61	0.4	46.1	6.0	3.8	29.2	0.46	0.08	0.05	43	1.03	0.215



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Report Date: July 22, 2022

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013J773047	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J773049	Sediment Pulp	25.0	6.9	0.05	45.9	0.022	<20	0.40	0.006	0.03	0.2	1.2	0.03	0.16	123	0.6	<0.02	1.5	0.39	<0.1	<0.02
013J773051	Sediment Pulp	39.7	14.4	0.22	52.8	0.087	<20	0.92	0.010	0.11	0.7	2.6	0.08	0.02	23	0.3	<0.02	1.9	1.04	<0.1	0.04
013J773056	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J773057	Sediment Pulp	19.0	5.1	0.08	26.8	0.041	<20	0.32	0.016	0.04	0.3	0.9	0.02	0.06	55	<0.1	<0.02	1.1	0.26	<0.1	<0.02
013J773058	Sediment Pulp	51.0	7.3	0.06	21.5	0.021	<20	0.43	0.009	0.03	0.6	0.5	0.04	0.18	192	0.7	<0.02	1.0	0.28	<0.1	<0.02
013J773059	Sediment Pulp	31.9	8.6	0.09	42.9	0.048	<20	0.59	0.019	0.04	0.3	0.9	0.06	0.11	118	1.0	<0.02	2.5	0.45	<0.1	<0.02
013J773060	Sediment Pulp	30.8	15.4	0.51	102.5	0.142	<20	0.92	0.051	0.34	0.5	3.1	0.12	0.24	56	<0.1	<0.02	3.5	1.65	<0.1	0.11
013J773061	Sediment Pulp	21.6	6.0	0.05	40.7	0.021	<20	0.41	0.006	0.03	0.2	1.0	0.03	0.17	123	0.5	<0.02	0.9	0.33	<0.1	<0.02
013J773062	Sediment Pulp	84.7	15.9	0.06	113.7	0.046	<20	1.65	0.009	0.03	0.1	2.6	0.17	0.16	137	1.1	<0.02	2.4	0.30	<0.1	<0.02
013J773066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J773067	Sediment Pulp	90.4	16.5	0.10	96.3	0.058	<20	2.06	0.008	0.04	1.0	2.0	0.16	0.17	207	1.7	<0.02	2.5	0.29	<0.1	<0.02
013J773072	Sediment Pulp	22.6	5.9	0.10	38.4	0.039	<20	0.39	0.015	0.06	0.7	1.2	0.08	0.77	121	0.3	<0.02	1.0	0.52	<0.1	0.03
013J773078	Sediment Pulp	39.8	51.7	0.80	153.1	0.104	<20	1.71	0.031	0.27	0.2	5.8	0.26	0.16	262	0.6	0.04	5.3	1.30	<0.1	0.12
013J773081	Sediment Pulp	108.2	17.2	0.09	100.7	0.034	<20	1.39	0.009	0.04	0.3	1.5	0.18	0.28	141	1.4	<0.02	1.1	0.28	<0.1	<0.02
013J773082	Sediment Pulp	106.6	17.5	0.09	99.4	0.034	<20	1.40	0.009	0.04	0.3	1.6	0.17	0.28	133	1.5	<0.02	1.1	0.28	<0.1	<0.02
013J773083	Sediment Pulp	95.6	15.7	0.13	112.3	0.034	<20	1.39	0.010	0.05	0.3	1.2	0.13	0.30	136	0.9	<0.02	1.0	0.32	<0.1	<0.02
013J773086	Sediment Pulp	253.2	50.3	0.14	98.0	0.072	<20	2.95	0.009	0.08	0.6	7.1	0.47	0.20	133	4.3	0.02	<0.1	0.65	<0.1	0.02
013J773088	Sediment Pulp	175.0	37.2	0.54	129.8	0.095	<20	2.16	0.030	0.25	1.1	5.4	0.45	0.12	67	2.4	0.02	1.9	1.70	<0.1	0.04
013J773089	Sediment Pulp	64.6	34.2	0.74	140.8	0.152	<20	1.50	0.033	0.35	0.6	4.3	0.23	0.02	39	0.1	<0.02	3.7	2.07	<0.1	0.07
013J773090	Sediment Pulp	105.4	40.9	0.68	179.9	0.127	<20	2.82	0.024	0.36	0.5	4.9	0.39	0.15	106	2.2	<0.02	4.4	2.79	<0.1	0.06
013J773092	Sediment Pulp	10.5	13.2	0.60	91.3	0.043	<20	0.46	0.027	0.05	0.5	2.4	0.21	1.58	93	1.1	0.02	2.0	0.49	<0.1	0.04
013J773093	Sediment Pulp	42.2	20.0	0.34	118.4	0.104	<20	1.39	0.027	0.14	0.4	2.0	0.09	0.10	118	1.0	<0.02	4.5	1.92	<0.1	0.05
013J773094	Sediment Pulp	92.9	38.9	0.71	189.2	0.130	<20	2.90	0.029	0.39	0.5	4.9	0.34	0.15	119	2.0	<0.02	4.8	2.84	<0.1	0.05
013J773096	Sediment Pulp	171.8	49.6	0.43	214.0	0.076	<20	2.76	0.029	0.21	1.5	5.6	0.25	0.18	122	10.0	0.03	1.6	0.99	<0.1	0.04
013J773097	Sediment Pulp	84.1	26.7	0.29	207.5	0.085	<20	2.48	0.019	0.12	1.4	2.0	0.12	0.29	242	5.6	0.02	6.8	1.23	<0.1	0.05
013J773098	Sediment Pulp	150.7	32.3	0.16	245.5	0.044	<20	3.46	0.010	0.07	0.9	4.4	0.27	0.24	190	5.1	0.04	0.6	0.44	<0.1	0.02
013J773099	Sediment Pulp	133.5	39.1	0.53	742.4	0.086	<20	3.00	0.015	0.15	0.8	5.8	1.17	0.20	161	4.8	0.02	3.1	1.24	<0.1	0.05
013J773100	Sediment Pulp	155.0	28.2	0.14	109.5	0.064	<20	3.00	0.014	0.06	1.3	3.1	0.29	0.20	195	3.0	<0.02	2.0	0.57	<0.1	0.02
013J773101	Sediment Pulp	163.6	28.7	0.15	115.7	0.063	<20	3.03	0.016	0.06	1.3	3.3	0.29	0.21	184	2.9	<0.02	2.0	0.59	<0.1	0.03



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773047	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773049	Sediment Pulp	0.74	2.5	0.3	<0.05	0.4	8.05	43.7	<0.02	2	<0.1	1.4	5.45	18.75	3.13	0.46	2.31	0.28	1.54	0.29	0.79
013J773051	Sediment Pulp	1.79	10.7	0.4	<0.05	1.7	18.28	98.5	<0.02	<1	0.4	6.2	10.71	42.85	6.88	1.07	5.04	0.60	3.39	0.63	1.76
013J773056	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773057	Sediment Pulp	1.30	2.8	0.3	<0.05	0.6	6.90	34.2	<0.02	<1	0.1	2.5	4.63	17.03	2.72	0.40	2.00	0.24	1.35	0.24	0.68
013J773058	Sediment Pulp	0.52	2.7	0.2	<0.05	<0.1	16.05	57.5	<0.02	1	0.2	1.8	11.71	43.71	6.93	0.81	5.25	0.61	3.26	0.56	1.40
013J773059	Sediment Pulp	1.54	3.5	0.3	<0.05	0.6	10.49	52.8	<0.02	3	0.2	3.1	7.68	27.97	4.33	0.63	3.16	0.38	2.06	0.37	0.98
013J773060	Sediment Pulp	2.62	25.5	0.6	<0.05	5.5	12.01	60.2	<0.02	<1	0.4	12.3	7.25	25.48	4.04	0.64	2.97	0.38	2.20	0.40	1.13
013J773061	Sediment Pulp	0.66	2.2	0.2	<0.05	0.3	7.33	40.4	<0.02	1	0.1	1.3	4.96	17.94	2.78	0.41	2.06	0.24	1.41	0.25	0.70
013J773062	Sediment Pulp	1.90	2.2	0.3	<0.05	0.3	24.05	167.8	0.02	<1	0.8	1.2	19.39	73.66	10.25	1.50	6.97	0.85	4.68	0.84	2.29
013J773066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J773067	Sediment Pulp	1.75	2.2	0.3	<0.05	0.2	31.30	194.4	0.02	7	1.0	1.9	22.46	84.74	12.06	1.85	8.29	1.02	5.74	1.04	2.91
013J773072	Sediment Pulp	1.47	4.7	0.2	<0.05	1.0	8.60	43.9	<0.02	12	0.2	3.4	5.31	18.86	3.01	0.46	2.25	0.28	1.66	0.30	0.83
013J773078	Sediment Pulp	1.89	24.7	1.1	<0.05	5.9	18.27	73.4	0.04	<1	0.6	20.1	9.67	36.08	6.10	0.88	4.53	0.58	3.33	0.61	1.72
013J773081	Sediment Pulp	1.47	3.1	0.2	<0.05	0.6	38.26	185.5	<0.02	2	0.5	1.6	25.11	97.07	13.93	2.01	10.74	1.29	7.01	1.32	3.65
013J773082	Sediment Pulp	1.50	3.2	0.2	<0.05	0.7	39.45	185.4	<0.02	2	0.5	1.7	25.06	97.28	14.02	1.99	10.71	1.28	6.94	1.32	3.64
013J773083	Sediment Pulp	1.16	4.0	0.2	<0.05	0.8	28.02	172.8	<0.02	2	0.3	2.6	22.50	88.25	12.41	2.00	9.15	1.05	5.51	0.99	2.64
013J773086	Sediment Pulp	1.93	6.7	0.4	<0.05	1.0	121.25	552.2	0.03	2	2.3	4.0	56.53	207.41	32.59	3.78	25.65	3.41	21.02	4.03	12.20
013J773088	Sediment Pulp	1.86	21.1	0.5	<0.05	2.0	72.94	385.2	0.02	2	1.3	14.7	39.37	145.37	21.99	2.49	16.95	2.26	13.02	2.50	7.16
013J773089	Sediment Pulp	1.19	28.9	0.7	<0.05	4.0	27.83	163.0	0.02	<1	0.7	20.4	14.84	53.74	8.44	1.11	6.48	0.88	5.13	0.95	2.72
013J773090	Sediment Pulp	2.34	31.5	0.6	<0.05	2.7	46.03	221.3	0.03	<1	1.4	18.7	23.23	87.02	13.17	1.72	10.21	1.39	8.15	1.55	4.38
013J773092	Sediment Pulp	0.72	3.5	3.1	<0.05	1.4	10.84	17.3	0.46	19	0.1	4.2	2.74	11.65	2.41	0.44	2.11	0.28	1.75	0.34	0.95
013J773093	Sediment Pulp	2.56	11.9	0.6	<0.05	2.1	21.07	80.8	<0.02	<1	1.1	9.7	9.81	36.13	5.70	0.70	4.50	0.61	3.59	0.69	1.92
013J773094	Sediment Pulp	2.41	32.3	0.6	<0.05	2.7	44.20	193.1	0.03	1	1.5	18.9	21.22	78.06	11.97	1.61	9.35	1.30	7.60	1.47	4.12
013J773096	Sediment Pulp	2.32	15.5	0.4	<0.05	2.1	93.26	347.2	0.04	11	2.4	10.6	41.38	155.84	25.23	3.09	20.66	2.80	16.04	3.05	8.45
013J773097	Sediment Pulp	4.28	9.8	0.6	<0.05	2.2	37.51	160.9	0.05	3	1.3	10.5	19.46	73.51	11.47	1.43	8.93	1.26	7.18	1.31	3.49
013J773098	Sediment Pulp	2.17	5.4	0.2	<0.05	1.0	87.86	372.2	0.04	5	3.9	4.3	38.69	145.25	24.17	2.77	19.69	2.77	15.90	2.99	8.36
013J773099	Sediment Pulp	1.52	12.9	0.5	<0.05	2.4	72.24	277.3	0.04	2	3.5	15.3	32.74	121.23	19.46	2.13	15.36	2.14	12.48	2.43	7.04
013J773100	Sediment Pulp	2.82	4.2	0.3	<0.05	0.9	59.14	297.2	0.03	2	1.5	4.9	34.79	124.96	17.73	2.56	13.11	1.79	10.26	1.97	5.61
013J773101	Sediment Pulp	2.95	4.3	0.3	<0.05	1.0	60.43	303.1	0.03	2	1.5	4.9	35.84	128.94	18.49	2.64	13.70	1.86	10.72	2.05	5.82



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Project: None Given
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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Tm	Yb	Lu	Pd	Pt
Unit	ppm	ppm	ppm	ppb	ppb
MDL	0.02	0.02	0.02	10	2
013J773047	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J773049	Sediment Pulp	0.10	0.59	0.10	<10
013J773051	Sediment Pulp	0.23	1.48	0.23	<10
013J773056	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J773057	Sediment Pulp	0.09	0.54	0.08	<10
013J773058	Sediment Pulp	0.16	0.94	0.14	<10
013J773059	Sediment Pulp	0.12	0.73	0.10	<10
013J773060	Sediment Pulp	0.15	0.97	0.14	<10
013J773061	Sediment Pulp	0.09	0.57	0.08	<10
013J773062	Sediment Pulp	0.30	1.85	0.26	<10
013J773066	Sediment Pulp	I.S.	I.S.	I.S.	I.S.
013J773067	Sediment Pulp	0.38	2.37	0.33	<10
013J773072	Sediment Pulp	0.11	0.71	0.10	<10
013J773078	Sediment Pulp	0.24	1.52	0.23	<10
013J773081	Sediment Pulp	0.49	3.10	0.48	<10
013J773082	Sediment Pulp	0.49	3.11	0.49	<10
013J773083	Sediment Pulp	0.34	2.14	0.33	<10
013J773086	Sediment Pulp	1.71	11.50	1.77	<10
013J773088	Sediment Pulp	1.00	6.62	1.04	<10
013J773089	Sediment Pulp	0.38	2.47	0.37	<10
013J773090	Sediment Pulp	0.61	3.92	0.58	<10
013J773092	Sediment Pulp	0.13	0.85	0.13	<10
013J773093	Sediment Pulp	0.26	1.60	0.23	<10
013J773094	Sediment Pulp	0.58	3.72	0.54	<10
013J773096	Sediment Pulp	1.14	7.29	1.09	<10
013J773097	Sediment Pulp	0.47	2.83	0.38	<10
013J773098	Sediment Pulp	1.14	7.26	1.06	<10
013J773099	Sediment Pulp	1.00	6.68	1.04	<10
013J773100	Sediment Pulp	0.79	5.05	0.73	<10
013J773101	Sediment Pulp	0.81	5.22	0.76	<10



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773102 Sediment Pulp	0.90	34.65	22.34	136.4	2622	46.8	30.4	1278	3.28	24.7	3.3	2.2	6.8	27.3	0.52	0.50	2.91	51	0.65	0.094
013J773103 Sediment Pulp	3.29	27.01	10.42	129.8	173	17.8	21.9	470	2.48	1.3	11.0	1.1	4.3	29.2	0.37	0.13	0.08	43	0.51	0.103
013J773105 Sediment Pulp	0.65	17.70	9.60	73.7	42	30.9	16.9	1006	3.51	2.9	1.5	0.5	7.1	42.1	0.10	0.07	0.09	54	0.70	0.094
013J773106 Sediment Pulp	0.56	17.44	9.16	72.5	37	29.2	16.4	794	3.29	2.5	1.4	0.9	6.9	41.0	0.09	0.06	0.08	49	0.68	0.094
013J773109 Sediment Pulp	17.12	118.64	5.41	139.1	538	23.0	93.1	1950	4.95	3.1	3.2	2.3	1.6	29.6	0.67	0.04	0.04	87	1.24	0.216
013J773111 Sediment Pulp	7.92	59.05	11.24	145.3	280	29.2	52.7	1845	8.76	17.0	9.1	1.1	6.0	32.1	0.66	0.14	0.17	86	0.54	0.206
013J773112 Sediment Pulp	8.45	45.20	9.84	118.6	328	18.8	32.6	1029	4.41	8.1	7.2	1.4	2.9	35.1	0.60	0.13	0.14	79	0.68	0.185
013J773117 Sediment Pulp	15.80	45.25	5.14	135.0	194	37.0	50.2	2025	5.50	2.6	3.8	1.3	3.0	27.6	0.40	0.04	0.06	53	0.49	0.139
013J773118 Sediment Pulp	5.16	81.55	3.34	87.3	315	24.7	26.6	660	4.19	10.4	2.0	2.0	0.5	25.3	0.59	0.09	0.05	61	0.73	0.153
013J773119 Sediment Pulp	6.28	53.24	5.85	92.8	385	16.2	78.6	2362	6.91	0.2	7.7	1.0	1.7	20.0	0.63	0.03	0.05	58	0.42	0.205
013J773120 Sediment Pulp	8.77	39.17	5.43	102.1	213	17.8	53.4	2237	8.38	<0.1	14.3	1.2	2.9	15.2	0.59	0.03	0.04	57	0.33	0.209
013J773121 Sediment Pulp	8.60	38.99	5.34	99.3	210	17.5	51.2	2190	8.20	<0.1	13.9	1.0	2.9	14.8	0.57	0.03	0.04	56	0.32	0.205
013J773122 Sediment Pulp	12.62	58.94	7.58	152.4	284	25.2	27.3	637	4.80	1.7	17.1	1.1	8.4	60.7	0.38	0.05	0.06	64	0.75	0.244
013J773123 Sediment Pulp	48.45	43.27	5.69	100.5	233	11.8	23.3	828	5.44	<0.1	13.3	1.0	3.1	19.2	0.36	0.03	0.04	46	0.31	0.169
013J773124 Sediment Pulp	12.01	25.84	7.38	91.4	248	15.1	14.6	527	3.34	0.3	4.1	1.1	3.5	34.0	0.24	0.04	0.06	63	0.46	0.176
013J773125 Sediment Pulp	6.84	32.88	8.11	114.9	347	17.9	44.0	2744	7.47	1.0	10.5	1.4	3.8	26.5	0.46	0.04	0.06	58	0.38	0.231
013J773126 Sediment Pulp	5.22	36.60	8.22	99.9	414	17.3	39.6	2080	7.87	0.4	14.0	0.7	2.9	28.8	0.48	0.04	0.06	58	0.44	0.236
013J773127 Sediment Pulp	4.79	46.63	7.33	62.3	112	24.8	16.3	287	2.36	3.7	11.7	0.9	5.3	26.9	0.20	0.07	0.07	55	0.52	0.094
013J773128 Sediment Pulp	7.93	53.96	7.73	131.7	303	26.7	48.4	1606	7.03	1.5	9.2	1.3	3.8	37.6	0.59	0.04	0.08	68	0.55	0.203
013J773129 Sediment Pulp	5.04	49.58	7.50	119.5	278	23.7	33.8	1400	5.74	1.4	8.6	2.3	3.7	34.1	0.54	0.04	0.08	62	0.53	0.198
013J773131 Sediment Pulp	4.97	46.95	5.48	93.8	205	22.5	42.9	2627	6.87	0.6	3.2	0.7	3.0	20.8	0.39	0.03	0.06	60	0.29	0.164
013J773132 Sediment Pulp	5.61	111.80	3.41	84.1	386	25.2	65.3	1157	5.52	<0.1	3.9	1.3	1.2	20.9	0.49	0.02	0.06	65	0.55	0.166
013J773133 Sediment Pulp	4.24	159.31	3.47	61.1	461	16.9	12.3	286	1.55	<0.1	4.8	1.9	0.4	28.9	0.41	0.03	0.07	55	0.82	0.204
013J773134 Sediment Pulp	5.85	47.28	6.76	113.8	145	30.0	29.4	829	3.84	1.9	3.7	3.6	2.9	22.7	0.36	0.05	0.07	50	0.37	0.129
013J773135 Sediment Pulp	5.85	47.53	6.71	113.8	140	29.8	28.9	833	3.88	1.7	3.6	1.4	2.9	22.2	0.37	0.05	0.07	50	0.37	0.128
013J773136 Sediment Pulp	6.09	49.30	6.83	118.6	141	29.8	28.8	744	4.01	1.8	3.7	0.8	3.0	22.5	0.35	0.05	0.07	50	0.38	0.135
013J773138 Sediment Pulp	4.43	32.90	7.95	80.2	87	28.0	31.8	442	3.18	7.8	2.5	0.6	8.0	42.7	0.13	0.14	0.08	64	0.72	0.132
013J773140 Sediment Pulp	30.25	31.65	11.48	175.5	220	24.8	32.9	1622	6.64	6.0	24.8	0.9	10.0	32.5	0.38	0.08	0.09	61	0.45	0.185
013J773141 Sediment Pulp	29.68	31.33	11.27	174.8	222	24.5	32.8	1628	6.59	6.1	24.9	1.0	9.9	32.2	0.37	0.07	0.09	61	0.45	0.181
013J773142 Sediment Pulp	21.13	29.84	13.01	180.8	293	24.7	29.3	1885	5.99	1.6	18.1	1.1	8.4	31.2	0.44	0.08	0.10	61	0.42	0.173



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J773102	Sediment Pulp	40.4	53.5	0.82	159.9	0.107	<20	1.75	0.031	0.27	0.2	5.9	0.26	0.16	265	0.7	0.04	5.4	1.31	<0.1	0.13
013J773103	Sediment Pulp	69.9	28.5	0.57	234.3	0.116	<20	1.98	0.028	0.25	0.6	3.5	0.38	0.13	95	1.3	<0.02	4.0	1.87	<0.1	0.07
013J773105	Sediment Pulp	34.2	42.8	1.12	129.8	0.180	<20	1.89	0.089	0.35	<0.1	5.1	0.15	<0.02	45	<0.1	<0.02	6.0	1.65	<0.1	0.35
013J773106	Sediment Pulp	33.2	39.7	1.04	123.4	0.171	<20	1.78	0.083	0.32	<0.1	4.8	0.15	<0.02	32	<0.1	<0.02	5.6	1.57	<0.1	0.33
013J773109	Sediment Pulp	81.4	39.1	0.17	151.0	0.080	<20	4.02	0.018	0.04	0.6	4.3	0.23	0.30	281	4.6	<0.02	6.4	0.46	<0.1	<0.02
013J773111	Sediment Pulp	99.2	47.3	0.43	100.5	0.122	<20	3.63	0.034	0.16	1.7	4.9	0.44	0.22	122	2.6	<0.02	6.3	1.09	<0.1	0.05
013J773112	Sediment Pulp	90.1	38.7	0.33	109.7	0.100	<20	3.15	0.035	0.12	2.1	3.6	0.23	0.20	133	2.4	<0.02	6.8	0.96	<0.1	0.04
013J773117	Sediment Pulp	94.8	36.1	0.38	157.1	0.077	<20	2.90	0.026	0.13	0.7	3.7	0.41	0.19	95	2.1	<0.02	3.8	0.76	<0.1	0.03
013J773118	Sediment Pulp	44.7	41.3	0.13	74.4	0.056	<20	3.32	0.008	0.03	0.1	2.8	0.12	0.24	161	3.4	0.02	4.9	0.26	<0.1	<0.02
013J773119	Sediment Pulp	68.2	29.3	0.18	80.4	0.061	<20	2.87	0.008	0.04	0.1	2.5	0.38	0.21	166	2.7	<0.02	5.0	0.28	<0.1	<0.02
013J773120	Sediment Pulp	101.2	30.9	0.06	59.7	0.064	<20	3.57	0.010	0.02	0.1	3.5	0.39	0.22	142	3.7	<0.02	4.3	0.16	<0.1	<0.02
013J773121	Sediment Pulp	99.9	31.1	0.06	58.2	0.063	<20	3.52	0.010	0.02	0.1	3.4	0.38	0.21	150	3.5	<0.02	4.3	0.15	<0.1	<0.02
013J773122	Sediment Pulp	160.3	41.2	0.78	82.1	0.123	<20	3.65	0.070	0.29	0.7	5.4	0.41	0.99	110	1.6	<0.02	5.0	1.13	<0.1	0.07
013J773123	Sediment Pulp	93.3	21.5	0.32	61.2	0.084	<20	3.01	0.010	0.09	<0.1	2.6	0.32	0.17	125	2.3	<0.02	5.8	0.56	<0.1	0.03
013J773124	Sediment Pulp	85.6	25.7	0.56	103.8	0.128	<20	2.63	0.018	0.17	0.1	2.9	0.18	0.13	123	1.4	<0.02	8.5	0.90	<0.1	0.06
013J773125	Sediment Pulp	83.2	30.8	0.54	103.3	0.108	<20	3.46	0.037	0.19	<0.1	3.4	0.35	0.18	160	2.7	<0.02	9.4	0.82	<0.1	0.04
013J773126	Sediment Pulp	80.7	31.2	0.36	88.8	0.087	<20	3.54	0.013	0.10	<0.1	3.2	0.30	0.20	200	2.9	<0.02	10.3	0.63	<0.1	0.02
013J773127	Sediment Pulp	48.7	38.9	0.75	76.9	0.116	<20	1.70	0.045	0.28	0.2	3.9	0.26	0.50	61	0.9	<0.02	4.7	1.09	<0.1	0.10
013J773128	Sediment Pulp	86.8	40.8	0.51	94.2	0.102	<20	3.81	0.037	0.16	0.3	4.0	0.54	0.15	129	2.7	<0.02	6.4	0.99	<0.1	0.04
013J773129	Sediment Pulp	82.9	39.8	0.55	87.7	0.106	<20	3.65	0.041	0.19	0.2	4.0	0.41	0.14	114	2.5	<0.02	6.3	1.01	<0.1	0.04
013J773131	Sediment Pulp	78.9	33.5	0.28	117.3	0.083	<20	2.97	0.020	0.10	0.5	3.2	0.33	0.19	137	2.2	<0.02	5.0	0.62	<0.1	0.02
013J773132	Sediment Pulp	77.7	41.5	0.11	84.6	0.060	<20	2.99	0.009	0.03	0.2	3.1	0.31	0.26	178	3.4	<0.02	4.1	0.21	<0.1	<0.02
013J773133	Sediment Pulp	84.2	41.1	0.12	102.2	0.071	<20	3.00	0.007	0.03	0.3	2.1	0.19	0.33	290	3.1	<0.02	6.0	0.20	<0.1	<0.02
013J773134	Sediment Pulp	84.3	39.7	0.56	101.4	0.096	<20	2.85	0.031	0.19	0.3	3.7	0.31	0.13	88	1.6	<0.02	4.3	1.10	<0.1	0.04
013J773135	Sediment Pulp	82.5	39.3	0.57	98.5	0.094	<20	2.87	0.031	0.19	0.4	3.7	0.31	0.13	80	1.7	<0.02	4.3	1.08	<0.1	0.04
013J773136	Sediment Pulp	83.8	39.0	0.56	97.0	0.094	<20	2.92	0.032	0.19	0.4	3.7	0.30	0.13	87	1.8	<0.02	4.2	1.07	<0.1	0.04
013J773138	Sediment Pulp	65.4	43.7	0.97	88.0	0.141	<20	2.05	0.085	0.39	0.3	5.2	0.20	0.64	116	0.7	<0.02	5.4	1.47	<0.1	0.15
013J773140	Sediment Pulp	185.5	34.2	0.58	154.4	0.108	<20	3.12	0.033	0.23	3.3	5.1	0.52	0.33	117	1.9	<0.02	2.9	1.37	<0.1	0.06
013J773141	Sediment Pulp	181.0	33.8	0.57	154.3	0.109	<20	3.06	0.034	0.23	3.4	5.0	0.51	0.33	114	1.8	<0.02	2.9	1.35	<0.1	0.06
013J773142	Sediment Pulp	208.1	35.5	0.58	181.1	0.117	<20	3.28	0.032	0.25	0.9	5.1	0.46	0.11	121	1.9	<0.02	4.3	1.54	<0.1	0.07



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001769.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773102 Sediment Pulp	1.95	25.4	1.1	<0.05	6.2	19.10	74.1	0.05	1	0.7	20.8	9.74	37.07	6.15	0.89	4.59	0.60	3.34	0.63	1.73
013J773103 Sediment Pulp	2.55	27.2	0.5	<0.05	2.8	30.41	149.8	<0.02	<1	1.4	17.2	16.84	63.07	9.32	1.23	6.99	0.92	5.31	1.02	2.85
013J773105 Sediment Pulp	0.53	27.2	0.7	<0.05	18.1	16.16	73.6	0.02	<1	0.7	19.5	8.64	30.96	5.24	0.85	3.99	0.54	3.08	0.56	1.52
013J773106 Sediment Pulp	0.52	24.7	0.7	<0.05	17.6	15.35	71.1	0.02	<1	0.7	18.2	8.22	30.66	5.03	0.83	3.86	0.51	2.97	0.54	1.45
013J773109 Sediment Pulp	1.74	3.1	0.2	<0.05	0.9	32.53	164.2	0.05	9	0.8	4.0	19.45	73.26	10.79	2.26	8.38	1.13	6.33	1.12	2.98
013J773111 Sediment Pulp	3.21	13.1	0.7	<0.05	2.4	51.36	265.1	0.05	2	3.2	13.4	23.10	85.22	13.08	1.83	10.30	1.53	9.12	1.75	5.05
013J773112 Sediment Pulp	3.31	10.1	0.6	<0.05	2.0	44.29	197.4	0.04	3	2.6	9.6	20.94	79.33	11.86	1.72	9.26	1.34	7.99	1.51	4.32
013J773117 Sediment Pulp	1.66	12.0	0.4	<0.05	1.4	25.03	187.2	0.02	<1	0.8	11.5	20.90	74.93	10.33	1.66	7.09	0.89	4.81	0.85	2.26
013J773118 Sediment Pulp	1.77	1.8	0.2	<0.05	0.5	23.42	85.6	0.03	2	0.7	2.4	11.27	43.63	7.32	1.66	6.09	0.83	4.60	0.79	2.01
013J773119 Sediment Pulp	1.43	3.2	0.2	<0.05	0.5	22.67	166.0	0.03	2	0.7	4.4	15.69	57.68	8.18	1.55	5.98	0.78	4.39	0.79	2.10
013J773120 Sediment Pulp	1.83	1.4	0.2	<0.05	0.6	25.42	226.1	0.03	<1	0.9	1.3	21.84	77.20	10.71	1.95	7.28	0.94	5.07	0.89	2.32
013J773121 Sediment Pulp	1.81	1.3	0.2	<0.05	0.6	24.64	221.9	0.03	<1	0.9	1.3	21.47	76.72	10.44	1.92	7.08	0.91	4.98	0.87	2.29
013J773122 Sediment Pulp	3.08	24.0	0.5	<0.05	3.2	33.63	300.6	0.03	2	1.0	28.9	34.57	120.38	15.71	2.60	10.31	1.24	6.50	1.12	2.96
013J773123 Sediment Pulp	2.63	8.8	0.4	<0.05	1.0	26.84	178.5	0.03	2	0.7	9.1	19.92	70.56	9.75	1.83	6.92	0.90	4.91	0.86	2.33
013J773124 Sediment Pulp	4.05	16.6	0.7	<0.05	2.4	18.50	154.0	0.02	<1	0.7	15.2	17.55	61.72	8.00	1.45	5.44	0.67	3.60	0.64	1.70
013J773125 Sediment Pulp	2.16	16.2	0.5	<0.05	1.5	26.71	166.9	0.04	<1	0.9	14.6	17.77	63.74	9.02	1.81	6.51	0.89	5.01	0.88	2.34
013J773126 Sediment Pulp	1.80	9.6	0.4	<0.05	1.1	24.70	161.7	0.04	<1	0.9	9.5	17.16	61.10	8.87	1.82	6.37	0.86	4.75	0.84	2.22
013J773127 Sediment Pulp	2.25	23.9	0.5	<0.05	4.2	14.52	96.4	0.02	2	0.5	14.6	10.99	39.71	5.96	0.90	4.30	0.54	2.91	0.51	1.35
013J773128 Sediment Pulp	1.92	14.3	0.5	<0.05	1.5	26.99	235.4	0.03	1	1.0	13.4	19.02	67.84	9.85	1.82	7.05	0.94	5.29	0.92	2.49
013J773129 Sediment Pulp	2.02	15.9	0.5	<0.05	1.7	26.94	211.2	0.03	<1	1.0	15.8	18.00	65.96	9.51	1.75	6.88	0.92	5.18	0.91	2.43
013J773131 Sediment Pulp	1.64	9.0	0.4	<0.05	1.0	21.18	169.4	0.03	<1	0.7	8.2	17.04	62.13	8.44	1.55	5.89	0.75	4.18	0.74	1.99
013J773132 Sediment Pulp	1.19	1.9	0.1	<0.05	0.4	18.19	150.1	0.03	2	0.5	1.8	16.69	61.42	8.49	1.59	5.86	0.70	3.70	0.63	1.62
013J773133 Sediment Pulp	1.66	1.9	0.2	<0.05	0.6	17.28	143.3	0.03	2	0.5	1.9	18.53	68.59	9.46	1.76	6.40	0.74	3.78	0.61	1.52
013J773134 Sediment Pulp	2.10	17.4	0.5	<0.05	2.0	22.79	231.1	0.03	<1	0.8	17.7	18.47	65.38	9.42	1.52	6.64	0.85	4.52	0.79	2.08
013J773135 Sediment Pulp	2.08	17.5	0.5	<0.05	2.0	22.73	229.3	0.03	<1	0.8	17.6	18.33	66.06	9.36	1.51	6.48	0.83	4.53	0.79	2.08
013J773136 Sediment Pulp	2.13	17.5	0.5	<0.05	2.1	23.21	235.6	0.02	<1	0.8	17.9	18.39	66.50	9.45	1.53	6.63	0.84	4.53	0.78	2.06
013J773138 Sediment Pulp	2.38	29.2	0.7	<0.05	7.3	19.31	136.3	0.03	6	0.7	20.4	14.78	52.53	7.50	1.08	5.35	0.69	3.80	0.68	1.83
013J773140 Sediment Pulp	2.91	21.8	0.8	<0.05	3.1	88.19	506.6	0.05	2	3.4	21.2	44.14	163.46	25.57	2.91	20.04	2.72	15.98	3.12	9.01
013J773141 Sediment Pulp	2.90	21.9	0.8	<0.05	3.0	87.61	495.5	0.05	1	3.4	21.0	42.67	157.66	24.88	2.84	19.35	2.65	15.55	3.05	8.84
013J773142 Sediment Pulp	3.21	23.6	0.9	<0.05	3.0	93.70	471.0	0.06	1	2.7	20.7	47.44	173.07	26.77	3.10	20.32	2.87	17.05	3.32	9.49



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J773102	Sediment Pulp	0.24	1.55	0.23	<10	<2	
013J773103	Sediment Pulp	0.39	2.60	0.39	<10	<2	
013J773105	Sediment Pulp	0.20	1.27	0.17	<10	<2	
013J773106	Sediment Pulp	0.19	1.22	0.16	<10	<2	
013J773109	Sediment Pulp	0.39	2.41	0.33	<10	3	
013J773111	Sediment Pulp	0.72	4.68	0.65	<10	<2	
013J773112	Sediment Pulp	0.61	3.93	0.53	<10	<2	
013J773117	Sediment Pulp	0.29	1.80	0.25	<10	<2	
013J773118	Sediment Pulp	0.26	1.51	0.20	<10	<2	
013J773119	Sediment Pulp	0.28	1.76	0.23	<10	<2	
013J773120	Sediment Pulp	0.31	1.87	0.25	<10	<2	
013J773121	Sediment Pulp	0.30	1.83	0.24	<10	<2	
013J773122	Sediment Pulp	0.39	2.39	0.34	<10	<2	
013J773123	Sediment Pulp	0.31	1.89	0.25	<10	<2	
013J773124	Sediment Pulp	0.22	1.35	0.18	<10	<2	
013J773125	Sediment Pulp	0.31	1.87	0.25	<10	<2	
013J773126	Sediment Pulp	0.29	1.76	0.22	<10	<2	
013J773127	Sediment Pulp	0.18	1.09	0.15	<10	<2	
013J773128	Sediment Pulp	0.33	2.01	0.27	<10	<2	
013J773129	Sediment Pulp	0.33	1.99	0.27	<10	<2	
013J773131	Sediment Pulp	0.27	1.63	0.22	<10	<2	
013J773132	Sediment Pulp	0.21	1.25	0.17	<10	<2	
013J773133	Sediment Pulp	0.19	1.10	0.14	<10	<2	
013J773134	Sediment Pulp	0.27	1.67	0.23	<10	<2	
013J773135	Sediment Pulp	0.27	1.68	0.23	<10	<2	
013J773136	Sediment Pulp	0.27	1.68	0.23	<10	<2	
013J773138	Sediment Pulp	0.24	1.50	0.21	<10	<2	
013J773140	Sediment Pulp	1.28	8.18	1.22	<10	<2	
013J773141	Sediment Pulp	1.25	8.04	1.20	<10	<2	
013J773142	Sediment Pulp	1.35	8.52	1.22	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773143	Sediment Pulp	39.01	49.96	10.59	220.7	678	20.7	77.7	6411	13.96	7.0	26.8	3.1	7.9	16.3	0.90	0.10	0.07	82	0.24	0.321
013J773144	Sediment Pulp	0.86	33.36	21.27	128.4	2594	44.3	28.4	1203	3.06	23.4	3.4	2.7	6.5	26.2	0.51	0.51	2.75	48	0.60	0.089
013J773145	Sediment Pulp	26.62	35.77	5.28	231.2	347	33.3	99.6	>10000	10.99	18.8	16.0	0.7	4.0	16.1	0.90	0.08	0.05	52	0.20	0.220
013J773146	Sediment Pulp	7.02	23.83	3.54	58.3	308	11.1	5.9	154	1.63	2.1	7.6	0.9	0.5	20.6	0.31	0.12	0.04	46	0.29	0.108
013J773149	Sediment Pulp	9.28	50.02	5.73	179.7	617	28.2	20.6	911	4.36	1.0	23.9	1.5	2.6	23.8	0.67	0.14	0.05	42	0.36	0.187
013J773150	Sediment Pulp	7.99	53.38	10.57	262.1	775	42.2	36.0	1405	4.98	3.7	29.2	1.7	3.6	23.0	1.20	0.15	0.08	61	0.41	0.245
013J773151	Sediment Pulp	9.17	75.19	12.43	277.4	949	45.2	37.6	1852	6.15	2.9	37.0	1.5	4.7	25.9	1.22	0.19	0.09	64	0.45	0.289
013J773152	Sediment Pulp	8.75	39.66	9.16	113.9	120	32.5	11.7	361	1.96	3.4	84.4	1.4	10.3	33.8	0.20	0.23	0.10	50	0.54	0.101
013J773153	Sediment Pulp	10.72	61.99	9.36	211.6	940	68.5	70.7	7123	10.16	8.7	37.2	3.5	7.4	18.5	0.87	0.18	0.11	62	0.35	0.283
013J773155	Sediment Pulp	13.56	24.80	9.92	40.2	256	10.2	20.9	677	5.53	0.1	21.7	1.2	2.3	11.9	0.09	0.08	0.04	37	0.15	0.082
013J773158	Sediment Pulp	18.89	95.08	7.90	277.9	528	29.2	38.5	542	6.30	<0.1	57.4	4.2	5.0	16.6	1.09	0.07	0.05	52	0.23	0.277
013J773161	Sediment Pulp	19.60	101.47	8.37	286.8	534	30.0	38.8	572	6.47	<0.1	63.2	5.4	5.4	17.4	1.14	0.07	0.05	55	0.24	0.292
013J773162	Sediment Pulp	0.41	6.31	1.70	29.9	34	4.9	3.2	94	0.97	0.3	0.6	7.3	2.1	18.6	0.07	0.03	<0.02	19	0.30	0.071
013J773165	Sediment Pulp	0.99	3.74	1.50	17.0	21	2.4	1.8	66	0.65	0.2	0.7	10.2	2.1	13.8	0.03	0.02	<0.02	19	0.25	0.062
013J773166	Sediment Pulp	2.72	51.15	3.26	93.3	326	9.6	5.4	123	1.27	0.2	3.5	8.0	1.9	34.5	0.39	0.05	0.11	160	0.43	0.238
013J773167	Sediment Pulp	9.47	43.22	87.92	308.7	602	12.7	8.3	442	1.85	35.9	9.9	2.7	1.6	63.0	1.48	0.53	1.04	18	6.55	0.069
013J773169	Sediment Pulp	1.04	6.77	2.21	31.4	29	7.1	5.4	97	0.83	0.4	0.7	1.6	2.6	21.5	0.09	0.05	<0.02	20	0.32	0.061
013J773181	Sediment Pulp	0.92	6.90	2.52	30.1	29	3.7	2.4	84	0.81	0.3	1.3	7.1	2.3	17.1	0.08	0.05	0.03	17	0.26	0.064
013J773189	Sediment Pulp	0.95	31.67	25.03	128.3	2632	44.7	26.4	1218	3.11	24.8	4.0	2.9	8.1	26.7	0.60	0.54	3.27	44	0.61	0.085
013J773196	Sediment Pulp	0.46	8.21	2.41	23.8	44	3.9	3.1	63	0.60	0.3	1.5	4.2	2.6	14.1	0.07	0.02	0.03	18	0.20	0.054
013J773199	Sediment Pulp	0.94	6.92	3.63	27.9	33	3.4	2.3	78	0.81	0.4	1.3	14.0	2.4	16.3	0.08	0.27	0.02	17	0.26	0.067
013J773201	Sediment Pulp	16.59	27.56	4.71	133.4	336	15.9	6.9	176	2.74	0.3	19.4	1.3	1.1	20.6	0.50	0.10	0.04	28	0.29	0.129
013J773209	Sediment Pulp	3.33	22.61	1.80	77.0	244	14.9	3.7	60	0.87	<0.1	4.4	<0.2	0.6	18.0	0.22	0.02	0.06	28	0.24	0.115
013J773210	Sediment Pulp	4.94	34.06	6.02	105.5	302	19.6	4.5	63	0.72	<0.1	21.0	2.0	0.8	28.2	0.33	0.05	<0.02	21	0.29	0.070
013J773211	Sediment Pulp	6.85	44.99	10.56	101.1	534	17.4	3.5	72	1.01	0.1	36.2	3.3	0.7	20.7	0.56	0.08	0.04	29	0.27	0.170
013J773212	Sediment Pulp	10.33	42.05	87.85	306.7	621	13.5	8.2	437	1.84	38.5	9.9	3.5	1.7	68.4	1.38	0.49	1.05	18	6.39	0.071
013J773213	Sediment Pulp	18.21	53.22	24.47	210.4	929	19.1	45.1	2352	8.59	4.3	60.1	3.3	8.7	40.4	1.06	0.31	0.16	57	0.48	0.298
013J773214	Sediment Pulp	13.70	45.88	8.37	108.4	506	17.4	20.5	510	6.29	1.4	13.6	1.2	4.3	26.1	0.40	0.06	0.04	56	0.38	0.226
013J773215	Sediment Pulp	25.99	25.67	6.23	189.0	272	15.9	15.4	421	5.34	1.6	17.5	1.5	1.9	22.8	0.73	0.12	0.04	31	0.34	0.113
013J773216	Sediment Pulp	16.23	27.87	4.62	135.3	329	15.7	7.5	177	2.75	0.4	17.9	1.4	0.9	20.3	0.46	0.09	0.02	27	0.28	0.125



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J773143	Sediment Pulp	366.0	28.6	0.06	186.0	0.051	<20	2.92	0.011	0.04	1.5	5.0	0.61	0.28	153	4.8	<0.02	<0.1	0.40	<0.1	<0.02
013J773144	Sediment Pulp	38.4	49.6	0.80	149.3	0.101	<20	1.68	0.028	0.26	0.2	5.6	0.26	0.15	261	0.6	0.04	5.2	1.26	<0.1	0.12
013J773145	Sediment Pulp	143.9	22.0	0.05	827.5	0.030	<20	2.10	0.010	0.03	1.4	3.8	1.32	0.25	163	3.5	0.03	1.2	0.26	<0.1	<0.02
013J773146	Sediment Pulp	66.7	14.3	0.05	92.8	0.025	<20	1.40	0.009	0.02	1.0	1.4	0.09	0.24	173	1.3	<0.02	1.5	0.18	<0.1	<0.02
013J773149	Sediment Pulp	141.7	45.1	0.15	197.6	0.032	<20	2.72	0.007	0.04	1.4	2.9	0.45	0.23	148	4.1	<0.02	0.4	0.38	<0.1	<0.02
013J773150	Sediment Pulp	150.6	54.0	0.33	273.7	0.048	<20	3.33	0.008	0.09	1.2	3.9	0.63	0.20	150	5.6	<0.02	0.9	0.69	<0.1	<0.02
013J773151	Sediment Pulp	194.2	60.6	0.28	264.7	0.051	<20	3.70	0.009	0.07	0.9	4.6	0.79	0.21	188	7.1	0.03	0.4	0.61	<0.1	0.02
013J773152	Sediment Pulp	62.9	41.4	0.82	228.1	0.157	<20	1.44	0.046	0.46	1.3	4.6	0.28	0.06	35	3.3	<0.02	4.3	2.10	<0.1	0.13
013J773153	Sediment Pulp	176.1	64.2	0.26	479.4	0.055	<20	3.34	0.007	0.08	0.8	5.1	0.64	0.21	171	7.9	0.03	0.7	0.66	<0.1	<0.02
013J773155	Sediment Pulp	145.5	25.6	0.07	64.4	0.025	<20	1.33	0.009	0.03	0.5	2.1	0.05	0.17	135	2.0	<0.02	0.6	0.32	<0.1	<0.02
013J773158	Sediment Pulp	214.5	57.7	0.13	111.4	0.042	<20	2.73	0.009	0.06	0.9	4.6	0.47	0.24	138	4.1	<0.02	<0.1	0.41	<0.1	<0.02
013J773161	Sediment Pulp	231.0	59.8	0.13	118.6	0.044	<20	2.80	0.010	0.06	1.0	4.7	0.51	0.25	150	4.1	0.02	<0.1	0.43	<0.1	<0.02
013J773162	Sediment Pulp	27.9	8.6	0.17	36.4	0.061	<20	0.45	0.018	0.07	0.3	1.5	0.04	0.08	66	0.2	<0.02	1.5	0.33	<0.1	0.03
013J773165	Sediment Pulp	18.7	5.1	0.11	29.4	0.050	<20	0.35	0.019	0.05	0.3	1.2	0.03	0.05	40	0.1	<0.02	1.3	0.27	<0.1	<0.02
013J773166	Sediment Pulp	140.3	33.5	0.18	86.7	0.071	<20	1.25	0.015	0.06	0.1	3.3	0.15	0.20	186	2.1	0.02	5.1	0.40	0.3	0.03
013J773167	Sediment Pulp	10.8	13.0	0.57	95.1	0.042	<20	0.44	0.026	0.05	0.5	2.6	0.22	1.59	103	1.0	<0.02	2.0	0.52	<0.1	0.03
013J773169	Sediment Pulp	22.6	10.8	0.19	52.3	0.074	<20	0.48	0.027	0.09	0.2	2.6	0.05	0.18	76	0.5	<0.02	2.4	0.35	0.1	<0.02
013J773181	Sediment Pulp	32.7	7.7	0.11	28.0	0.054	<20	0.37	0.014	0.04	0.4	1.6	0.05	0.09	52	0.2	<0.02	1.7	0.33	<0.1	0.03
013J773189	Sediment Pulp	40.4	53.0	0.79	160.1	0.106	<20	1.66	0.030	0.26	0.3	6.1	0.28	0.15	279	0.7	0.04	5.8	1.43	0.1	0.13
013J773196	Sediment Pulp	51.3	7.3	0.10	30.1	0.049	<20	0.36	0.012	0.04	0.3	1.4	0.05	0.08	130	0.3	<0.02	1.8	0.30	0.1	0.02
013J773199	Sediment Pulp	32.1	7.6	0.11	28.0	0.052	<20	0.37	0.013	0.04	0.4	1.6	0.04	0.09	49	0.3	<0.02	1.7	0.31	<0.1	<0.02
013J773201	Sediment Pulp	114.8	20.7	0.07	78.0	0.023	<20	1.72	0.008	0.03	1.7	2.0	0.15	0.30	141	2.3	<0.02	2.4	0.26	0.2	<0.02
013J773209	Sediment Pulp	55.8	15.5	0.09	98.2	0.030	<20	0.93	0.009	0.03	0.3	1.0	0.11	0.18	148	1.1	<0.02	2.5	0.25	<0.1	<0.02
013J773210	Sediment Pulp	91.7	30.1	0.14	176.2	0.032	<20	1.01	0.009	0.05	0.3	1.0	0.10	0.29	175	1.6	<0.02	2.1	0.25	0.2	0.02
013J773211	Sediment Pulp	123.1	33.3	0.08	136.7	0.025	<20	1.61	0.008	0.03	0.9	1.1	0.09	0.26	185	2.1	<0.02	2.5	0.20	0.2	<0.02
013J773212	Sediment Pulp	11.3	13.5	0.57	97.6	0.043	<20	0.44	0.025	0.05	0.5	2.5	0.23	1.57	115	1.0	0.02	2.2	0.53	<0.1	0.03
013J773213	Sediment Pulp	172.8	42.3	0.18	311.4	0.066	<20	3.00	0.010	0.05	1.6	4.1	0.74	0.20	240	5.4	0.03	6.0	0.56	0.4	<0.02
013J773214	Sediment Pulp	152.2	42.4	0.06	142.3	0.046	<20	2.51	0.011	0.03	2.4	4.2	0.21	0.33	191	2.9	<0.02	4.0	0.28	0.2	<0.02
013J773215	Sediment Pulp	114.1	22.7	0.07	84.9	0.029	<20	2.04	0.008	0.03	1.5	2.7	0.27	0.28	171	2.0	<0.02	2.9	0.28	0.2	<0.02
013J773216	Sediment Pulp	112.7	21.1	0.07	77.8	0.023	<20	1.64	0.008	0.03	1.8	1.9	0.15	0.30	133	2.2	<0.02	2.5	0.26	0.2	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773143	Sediment Pulp	1.68	4.4	0.3	<0.05	0.6	204.77	653.8	0.05	<1	3.8	2.5	84.61	315.70	51.67	5.43	45.18	6.62	38.91	7.68	21.07
013J773144	Sediment Pulp	1.94	24.4	1.1	<0.05	5.7	18.37	70.4	0.04	<1	0.6	20.5	9.26	35.01	5.89	0.86	4.41	0.57	3.19	0.60	1.66
013J773145	Sediment Pulp	0.54	2.6	0.2	<0.05	0.3	47.97	283.2	<0.02	<1	1.5	1.2	28.62	97.66	12.90	2.22	9.45	1.26	7.43	1.52	4.57
013J773146	Sediment Pulp	0.93	1.4	0.1	<0.05	0.2	20.98	123.5	<0.02	<1	0.7	0.9	14.73	53.75	7.23	1.44	5.33	0.68	3.85	0.74	2.08
013J773149	Sediment Pulp	1.61	3.3	0.2	<0.05	0.5	66.88	298.9	0.03	1	2.6	3.9	32.81	121.07	18.77	2.25	15.02	2.06	11.86	2.28	6.52
013J773150	Sediment Pulp	1.90	7.0	0.3	<0.05	0.8	76.61	423.7	0.04	2	3.2	11.9	34.55	128.37	20.04	2.39	16.28	2.27	13.29	2.57	7.30
013J773151	Sediment Pulp	2.06	5.8	0.3	<0.05	0.9	94.83	504.3	0.05	3	3.5	10.2	44.56	158.49	25.28	2.87	19.89	2.78	16.23	3.13	8.88
013J773152	Sediment Pulp	2.67	36.1	0.7	<0.05	6.3	30.28	118.3	0.03	3	0.9	19.2	14.20	55.00	8.62	1.05	6.92	0.92	5.27	1.01	2.83
013J773153	Sediment Pulp	1.69	7.2	0.4	<0.05	0.9	85.98	482.7	0.05	4	2.7	6.6	40.25	146.34	23.31	2.66	18.48	2.56	14.90	2.83	7.91
013J773155	Sediment Pulp	0.70	2.6	0.2	<0.05	0.2	46.88	224.6	<0.02	<1	0.8	1.9	29.07	103.76	14.46	1.51	11.00	1.44	8.03	1.56	4.32
013J773158	Sediment Pulp	1.82	4.6	0.3	<0.05	0.7	116.35	432.9	0.03	2	3.0	2.8	46.58	168.98	27.26	2.91	22.38	3.15	19.47	4.05	11.90
013J773161	Sediment Pulp	1.91	4.7	0.3	<0.05	0.7	121.47	469.6	0.03	2	3.2	2.9	50.33	184.09	29.73	3.14	24.12	3.37	20.99	4.37	12.85
013J773162	Sediment Pulp	1.85	4.4	0.3	<0.05	1.0	8.40	52.3	<0.02	<1	0.2	3.5	6.31	23.06	3.46	0.52	2.41	0.28	1.55	0.28	0.75
013J773165	Sediment Pulp	1.45	3.0	0.3	<0.05	0.7	6.13	32.5	<0.02	1	0.1	2.6	4.32	15.72	2.39	0.39	1.71	0.20	1.15	0.21	0.58
013J773166	Sediment Pulp	2.90	4.7	1.1	<0.05	1.3	27.40	253.1	0.03	3	0.8	3.4	31.93	113.85	15.70	2.46	11.49	1.27	6.22	1.10	2.65
013J773167	Sediment Pulp	0.69	3.6	3.3	<0.05	1.2	10.26	17.7	0.52	19	<0.1	4.9	2.92	12.17	2.41	0.48	2.20	0.32	1.70	0.34	1.01
013J773169	Sediment Pulp	1.43	5.6	0.6	<0.05	0.6	7.13	44.2	<0.02	<1	<0.1	4.9	5.47	19.96	3.04	0.53	2.23	0.27	1.44	0.27	0.70
013J773181	Sediment Pulp	1.79	3.2	0.4	<0.05	0.7	10.37	56.4	<0.02	<1	<0.1	3.7	7.75	28.51	4.25	0.72	2.97	0.37	2.04	0.40	0.96
013J773189	Sediment Pulp	1.96	24.7	1.2	<0.05	5.5	18.19	72.3	0.05	<1	0.7	22.0	10.22	36.19	6.31	0.91	4.66	0.63	3.41	0.65	1.84
013J773196	Sediment Pulp	1.70	3.0	0.4	<0.05	0.7	13.34	89.9	<0.02	2	0.3	2.7	12.55	46.35	7.15	0.99	4.79	0.58	3.03	0.53	1.19
013J773199	Sediment Pulp	1.72	3.0	0.4	<0.05	0.7	9.87	56.3	<0.02	<1	0.3	3.7	7.82	29.12	4.33	0.66	3.03	0.38	2.05	0.39	0.96
013J773201	Sediment Pulp	0.90	2.8	0.2	<0.05	0.2	35.27	179.1	<0.02	1	1.3	2.1	24.72	86.69	11.49	2.33	8.91	1.12	6.61	1.33	3.95
013J773209	Sediment Pulp	1.11	2.7	0.3	<0.05	0.5	23.08	95.3	<0.02	<1	0.3	1.9	14.08	52.66	8.21	1.19	6.35	0.80	4.48	0.82	2.39
013J773210	Sediment Pulp	1.30	3.1	0.2	<0.05	0.7	49.56	143.5	<0.02	3	1.1	2.7	21.08	74.79	12.44	1.20	11.39	1.58	9.67	1.99	5.85
013J773211	Sediment Pulp	1.87	2.0	0.3	<0.05	0.5	55.44	211.5	0.03	2	2.3	1.7	29.67	103.62	16.30	1.75	13.36	1.91	10.19	2.08	6.02
013J773212	Sediment Pulp	0.72	3.8	3.5	<0.05	1.3	10.97	18.7	0.53	24	0.2	5.2	3.08	12.54	2.66	0.53	2.29	0.32	1.94	0.40	1.05
013J773213	Sediment Pulp	2.98	4.7	0.5	<0.05	0.9	83.74	430.0	0.05	6	3.2	8.2	39.14	134.70	21.49	2.57	17.37	2.58	14.94	3.13	9.20
013J773214	Sediment Pulp	2.21	2.9	0.2	<0.05	0.6	51.64	246.1	0.02	1	1.4	1.6	31.96	107.78	15.51	2.92	11.96	1.64	8.98	1.82	5.37
013J773215	Sediment Pulp	0.97	3.4	0.1	<0.05	0.2	39.22	187.9	<0.02	<1	1.8	2.5	25.46	85.44	12.03	2.29	8.70	1.23	7.02	1.37	4.16
013J773216	Sediment Pulp	0.87	2.8	0.1	<0.05	0.2	36.30	179.8	<0.02	<1	1.2	2.3	26.31	87.78	12.17	2.31	8.38	1.10	6.65	1.33	3.80



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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013J773143	Sediment Pulp	2.80	17.34	2.55	<10	<2	
013J773144	Sediment Pulp	0.23	1.47	0.22	<10	<2	
013J773145	Sediment Pulp	0.67	4.50	0.72	<10	<2	
013J773146	Sediment Pulp	0.29	1.85	0.28	<10	<2	
013J773149	Sediment Pulp	0.92	5.81	0.86	<10	<2	
013J773150	Sediment Pulp	1.03	6.59	0.96	<10	<2	
013J773151	Sediment Pulp	1.24	7.88	1.16	<10	<2	
013J773152	Sediment Pulp	0.39	2.51	0.38	<10	<2	
013J773153	Sediment Pulp	1.11	6.95	0.99	<10	<2	
013J773155	Sediment Pulp	0.59	3.56	0.52	<10	<2	
013J773158	Sediment Pulp	1.69	10.69	1.60	<10	<2	
013J773161	Sediment Pulp	1.82	11.59	1.72	<10	<2	
013J773162	Sediment Pulp	0.10	0.62	0.09	<10	<2	
013J773165	Sediment Pulp	0.08	0.48	0.07	<10	<2	
013J773166	Sediment Pulp	0.36	2.32	0.34	<10	<2	
013J773167	Sediment Pulp	0.14	0.96	0.13	<10	<2	
013J773169	Sediment Pulp	0.11	0.73	0.08	<10	<2	
013J773181	Sediment Pulp	0.15	0.98	0.13	<10	<2	
013J773189	Sediment Pulp	0.26	1.72	0.25	<10	<2	
013J773196	Sediment Pulp	0.16	1.06	0.15	<10	2	
013J773199	Sediment Pulp	0.15	0.95	0.14	<10	<2	
013J773201	Sediment Pulp	0.57	3.87	0.65	<10	<2	
013J773209	Sediment Pulp	0.32	2.06	0.33	<10	2	
013J773210	Sediment Pulp	0.79	4.94	0.66	<10	<2	
013J773211	Sediment Pulp	0.89	5.76	0.82	<10	2	
013J773212	Sediment Pulp	0.15	0.94	0.16	<10	<2	
013J773213	Sediment Pulp	1.38	9.18	1.40	<10	3	
013J773214	Sediment Pulp	0.82	5.42	0.82	<10	<2	
013J773215	Sediment Pulp	0.66	4.23	0.66	<10	<2	
013J773216	Sediment Pulp	0.62	3.96	0.64	<10	<2	



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Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773217	Sediment Pulp	14.47	68.04	4.42	106.0	405	15.4	16.0	122	2.94	0.2	10.6	3.7	1.2	21.0	0.41	0.04	<0.02	43	0.28	0.174
013J773221	Sediment Pulp	13.64	66.07	4.15	97.4	376	14.8	15.4	111	2.74	<0.1	10.1	2.9	1.2	19.9	0.39	0.05	<0.02	42	0.27	0.158
013J773222	Sediment Pulp	9.27	16.46	11.18	59.4	297	10.0	2.1	73	0.66	0.7	14.5	1.4	1.2	23.6	0.40	0.07	0.02	17	0.29	0.135
013J773223	Sediment Pulp	26.82	55.84	22.23	209.7	641	20.3	19.5	488	7.23	4.6	44.8	0.5	15.1	35.8	0.70	0.12	0.08	49	0.43	0.309
013J773224	Sediment Pulp	7.41	19.52	10.62	69.8	245	11.0	17.6	668	3.89	1.6	9.0	<0.2	8.2	27.7	0.23	0.09	0.07	51	0.41	0.133
013J773225	Sediment Pulp	5.73	19.28	11.57	91.0	195	20.7	13.4	302	2.63	1.5	7.0	0.9	7.0	34.6	0.20	0.07	0.08	48	0.45	0.153
013J773226	Sediment Pulp	10.76	22.11	10.82	106.7	209	21.6	24.6	715	4.50	2.4	11.6	1.0	9.0	29.1	0.29	0.08	0.09	54	0.41	0.123
013J773227	Sediment Pulp	8.17	97.96	10.81	142.8	286	22.1	38.6	760	8.82	20.5	17.3	3.2	8.1	20.1	0.77	0.13	0.12	76	0.46	0.217
013J773228	Sediment Pulp	7.52	37.21	9.11	126.9	244	10.2	20.6	1199	9.51	4.8	26.2	0.7	12.3	29.9	0.56	0.11	0.07	78	0.36	0.298
013J773229	Sediment Pulp	4.85	23.89	10.66	101.9	258	20.5	26.4	941	3.98	3.9	6.7	0.4	6.4	31.6	0.31	0.09	0.09	59	0.52	0.118
013J773230	Sediment Pulp	4.57	35.35	4.66	43.1	253	7.6	2.4	60	0.80	0.3	9.5	1.4	0.9	16.4	0.44	0.09	<0.02	30	0.36	0.079
013J773231	Sediment Pulp	9.92	17.00	5.40	60.3	150	7.6	5.4	134	1.42	0.6	5.9	0.9	2.3	18.9	0.25	0.05	<0.02	29	0.29	0.043
013J773232	Sediment Pulp	11.95	27.44	13.96	92.6	443	12.3	35.9	1474	6.92	3.7	13.3	1.1	7.1	30.4	0.43	0.09	0.15	74	0.43	0.173
013J773233	Sediment Pulp	12.00	27.15	14.05	90.2	453	12.0	27.8	1543	6.80	3.5	13.2	1.2	7.4	31.9	0.45	0.07	0.15	78	0.44	0.161
013J773234	Sediment Pulp	0.99	34.36	27.04	130.2	2629	48.6	29.5	1231	3.09	25.6	3.9	3.0	8.4	29.0	0.53	0.54	3.28	44	0.61	0.100
013J773235	Sediment Pulp	11.62	31.27	14.82	93.1	563	13.7	22.3	969	6.58	2.9	13.4	1.5	6.3	37.5	0.45	0.06	0.18	91	0.55	0.184
013J773236	Sediment Pulp	13.87	23.57	7.35	123.1	167	8.9	7.6	254	3.49	2.2	9.6	0.9	2.8	17.6	0.53	0.09	0.04	40	0.33	0.068
013J773238	Sediment Pulp	4.93	10.93	11.23	87.7	74	16.2	16.0	738	2.88	2.1	4.8	0.9	9.2	25.3	0.19	0.05	0.06	34	0.43	0.126
013J773239	Sediment Pulp	20.50	49.45	15.30	101.7	505	9.2	9.0	377	5.16	1.6	30.6	8.0	5.4	27.4	0.52	0.07	0.07	67	0.46	0.224
013J773241	Sediment Pulp	17.04	12.58	13.03	157.7	108	6.1	6.3	237	2.38	0.9	61.8	0.7	4.9	23.0	0.65	0.10	0.04	33	0.41	0.108
013J773242	Sediment Pulp	16.53	12.21	12.05	166.3	127	5.7	5.8	245	2.49	0.4	57.0	0.4	4.0	22.8	0.57	0.10	0.05	33	0.42	0.111
013J773243	Sediment Pulp	4.54	18.84	2.42	47.5	75	11.3	4.5	99	1.13	0.1	4.0	0.4	1.6	32.7	0.16	0.04	<0.02	53	0.43	0.074
013J773244	Sediment Pulp	3.92	16.92	6.85	83.2	112	12.5	4.1	130	1.22	0.3	5.2	0.7	2.0	30.8	0.16	0.06	0.03	31	0.40	0.091
013J773245	Sediment Pulp	6.20	38.47	7.12	123.0	248	17.3	16.3	413	2.55	0.8	4.4	0.4	2.2	47.1	0.31	0.09	0.05	60	0.63	0.140
013J773246	Sediment Pulp	9.19	42.38	70.35	309.3	634	11.9	7.5	430	1.84	35.4	7.9	2.5	1.1	64.3	1.30	0.50	0.85	18	6.31	0.068
013J773248	Sediment Pulp	3.70	14.72	8.83	92.3	54	7.1	5.9	212	1.78	1.5	7.3	0.3	3.6	21.6	0.22	0.08	0.05	33	0.38	0.081
013J773249	Sediment Pulp	22.74	20.13	5.76	154.5	217	7.6	8.0	224	11.54	0.4	15.1	0.3	4.7	5.9	0.06	0.05	0.04	48	0.07	0.102
013J773251	Sediment Pulp	1.88	28.83	2.17	47.1	224	13.7	9.1	154	3.41	<0.1	4.0	1.4	1.2	216.8	0.33	0.22	<0.02	14	0.75	0.056
013J773252	Sediment Pulp	6.02	13.68	5.55	75.8	114	19.7	8.9	282	3.53	0.7	6.5	1.0	1.8	18.3	0.16	0.11	0.04	33	0.24	0.068
013J773253	Sediment Pulp	11.78	30.57	4.60	105.3	392	39.3	75.9	2757	9.09	2.0	17.5	0.8	3.3	19.8	0.43	0.15	0.04	35	0.24	0.214



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J773217	Sediment Pulp	166.0	28.2	0.06	82.4	0.027	<20	1.90	0.007	0.02	0.9	1.9	0.23	0.24	179	2.5	<0.02	3.1	0.21	0.2	<0.02
013J773221	Sediment Pulp	159.0	26.1	0.06	80.9	0.025	<20	1.86	0.006	0.02	0.8	1.8	0.23	0.24	154	2.0	<0.02	2.7	0.20	0.2	<0.02
013J773222	Sediment Pulp	210.0	12.2	0.06	99.4	0.029	<20	1.23	0.009	0.03	0.5	1.2	0.08	0.20	165	1.5	<0.02	4.0	0.23	0.3	<0.02
013J773223	Sediment Pulp	336.7	38.6	0.30	88.3	0.092	<20	3.56	0.024	0.12	1.6	5.5	0.48	0.19	207	4.7	<0.02	7.9	0.98	0.5	<0.02
013J773224	Sediment Pulp	98.2	22.2	0.29	82.7	0.123	<20	1.74	0.023	0.10	1.0	3.2	0.24	0.12	125	1.7	<0.02	6.4	0.98	0.2	0.07
013J773225	Sediment Pulp	77.3	34.9	0.62	125.7	0.130	<20	2.21	0.034	0.24	0.8	3.9	0.20	0.11	113	0.8	<0.02	8.2	1.85	0.2	0.12
013J773226	Sediment Pulp	96.1	35.7	0.57	134.7	0.121	<20	2.40	0.032	0.22	1.1	4.3	0.34	0.15	127	1.4	<0.02	7.4	1.72	0.2	0.08
013J773227	Sediment Pulp	136.9	48.9	0.21	44.1	0.134	<20	3.79	0.018	0.07	0.9	6.9	0.40	0.19	580	3.9	0.02	7.4	0.69	0.4	0.05
013J773228	Sediment Pulp	339.6	32.8	0.09	62.9	0.109	<20	4.16	0.010	0.03	0.4	6.7	0.24	0.23	257	6.1	<0.02	12.4	0.34	0.6	0.04
013J773229	Sediment Pulp	72.5	35.7	0.52	127.8	0.124	<20	2.23	0.029	0.17	0.4	4.0	0.25	0.10	131	1.6	<0.02	7.6	1.65	0.1	0.09
013J773230	Sediment Pulp	61.4	10.8	0.05	45.5	0.035	<20	1.03	0.009	0.01	0.2	1.1	0.04	0.17	176	1.9	<0.02	3.5	0.20	0.2	0.03
013J773231	Sediment Pulp	77.3	10.5	0.10	46.8	0.063	<20	0.82	0.016	0.03	1.0	1.9	0.11	0.26	125	1.3	<0.02	3.6	0.28	0.2	0.04
013J773232	Sediment Pulp	121.6	23.1	0.26	98.7	0.101	<20	1.85	0.021	0.08	0.8	3.3	0.25	0.15	192	2.6	<0.02	7.5	0.84	0.3	0.03
013J773233	Sediment Pulp	121.1	23.9	0.26	99.6	0.102	<20	1.84	0.022	0.08	0.8	3.4	0.24	0.15	167	2.7	<0.02	7.6	0.86	0.3	<0.02
013J773234	Sediment Pulp	40.9	51.5	0.80	162.7	0.107	<20	1.67	0.030	0.26	0.2	5.8	0.28	0.15	252	0.5	0.04	5.6	1.40	0.1	0.14
013J773235	Sediment Pulp	120.1	28.6	0.34	97.2	0.117	<20	2.15	0.025	0.11	0.8	3.7	0.23	0.19	164	2.6	<0.02	10.0	1.06	0.3	0.06
013J773236	Sediment Pulp	74.3	17.9	0.11	45.9	0.056	<20	1.83	0.012	0.03	0.5	2.3	0.08	0.19	131	2.3	<0.02	3.8	0.35	0.2	<0.02
013J773238	Sediment Pulp	73.5	24.7	0.52	106.8	0.124	<20	1.40	0.048	0.22	0.5	3.6	0.28	0.06	108	0.8	<0.02	5.7	1.46	0.2	0.08
013J773239	Sediment Pulp	249.4	18.6	0.11	84.7	0.089	<20	2.19	0.013	0.03	0.7	3.7	0.16	0.18	387	3.9	<0.02	9.2	0.30	0.4	0.06
013J773241	Sediment Pulp	150.2	16.7	0.17	61.3	0.066	<20	1.64	0.018	0.04	0.9	2.2	0.10	0.14	88	3.2	<0.02	4.6	0.41	0.3	0.04
013J773242	Sediment Pulp	145.4	16.8	0.18	56.2	0.066	<20	1.66	0.020	0.05	0.5	2.2	0.10	0.14	93	2.9	<0.02	2.6	0.37	<0.1	0.07
013J773243	Sediment Pulp	34.9	27.0	0.25	72.8	0.066	<20	1.05	0.032	0.07	1.7	2.2	0.07	0.18	134	0.8	<0.02	2.6	0.36	<0.1	0.05
013J773244	Sediment Pulp	66.2	23.8	0.33	87.6	0.080	<20	1.11	0.029	0.14	0.6	2.3	0.11	0.18	188	1.3	<0.02	4.0	0.98	<0.1	0.07
013J773245	Sediment Pulp	57.8	39.0	0.29	120.7	0.095	<20	1.99	0.038	0.10	1.0	3.3	0.17	0.17	169	1.5	<0.02	4.8	0.73	<0.1	0.07
013J773246	Sediment Pulp	9.4	12.5	0.55	83.6	0.038	<20	0.44	0.026	0.05	0.5	2.3	0.19	1.59	107	1.2	0.02	2.0	0.44	<0.1	0.03
013J773248	Sediment Pulp	43.5	20.2	0.28	33.8	0.094	<20	0.77	0.023	0.06	0.6	2.0	0.07	0.05	73	0.8	<0.02	2.7	0.45	<0.1	0.10
013J773249	Sediment Pulp	144.2	25.8	0.18	30.3	0.047	<20	1.70	0.009	0.05	1.2	3.7	0.05	0.07	119	1.5	<0.02	1.2	0.53	<0.1	0.03
013J773251	Sediment Pulp	69.8	17.7	0.07	108.4	0.017	<20	1.42	0.021	0.02	7.1	1.6	0.16	3.41	208	1.5	<0.02	0.3	0.13	<0.1	<0.02
013J773252	Sediment Pulp	64.7	42.2	0.23	54.3	0.046	<20	1.53	0.014	0.04	0.8	2.1	0.06	0.17	97	1.2	<0.02	1.8	0.43	<0.1	0.02
013J773253	Sediment Pulp	96.3	34.6	0.11	150.1	0.037	<20	2.03	0.008	0.03	1.2	2.8	0.64	0.23	180	3.1	<0.02	1.5	0.40	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773217	Sediment Pulp	1.14	2.1	0.2	<0.05	0.3	40.43	280.2	<0.02	<1	1.0	1.3	35.99	118.97	15.27	1.88	10.81	1.40	7.28	1.45	4.41
013J773221	Sediment Pulp	1.11	1.9	0.2	<0.05	0.3	37.81	265.1	<0.02	<1	0.9	1.3	34.55	112.49	15.06	1.80	10.66	1.36	6.96	1.40	4.02
013J773222	Sediment Pulp	1.94	4.3	0.4	<0.05	0.5	38.72	372.7	0.02	<1	1.7	2.1	46.57	144.26	18.69	2.35	11.82	1.61	8.81	1.63	4.61
013J773223	Sediment Pulp	4.26	14.0	0.7	<0.05	1.5	123.04	743.2	0.06	<1	7.6	14.4	82.58	275.75	42.73	4.77	31.42	4.78	25.61	5.11	14.58
013J773224	Sediment Pulp	5.16	10.8	1.1	<0.05	2.6	41.57	193.0	0.03	<1	1.9	10.8	23.01	75.46	11.69	1.59	9.53	1.42	7.88	1.56	4.57
013J773225	Sediment Pulp	4.68	23.7	1.0	<0.05	3.9	32.62	149.6	0.05	1	1.4	22.1	18.87	63.63	10.59	1.35	7.75	1.14	6.50	1.29	3.67
013J773226	Sediment Pulp	3.85	21.2	1.1	<0.05	3.3	42.70	218.4	0.04	3	2.3	20.4	23.54	77.60	12.98	1.56	10.33	1.53	8.48	1.70	4.89
013J773227	Sediment Pulp	3.97	6.4	0.6	0.07	1.5	74.57	310.2	0.06	3	2.9	7.4	34.34	120.85	21.40	3.13	18.80	2.61	14.69	2.75	7.82
013J773228	Sediment Pulp	6.85	2.6	0.8	0.06	2.0	176.77	726.3	0.09	1	7.7	2.4	75.75	253.70	44.95	5.80	35.94	5.91	34.04	6.74	19.14
013J773229	Sediment Pulp	3.96	16.9	0.9	<0.05	3.0	28.53	158.8	0.04	<1	1.5	17.7	16.98	55.93	9.66	1.35	6.49	1.06	5.89	1.08	3.11
013J773230	Sediment Pulp	1.93	1.4	0.5	<0.05	0.6	22.69	118.1	0.02	<1	1.2	2.1	14.77	47.91	7.94	0.98	5.95	0.86	4.68	0.88	2.47
013J773231	Sediment Pulp	2.92	2.6	0.6	<0.05	1.1	26.53	138.2	<0.02	<1	0.8	5.3	18.25	61.44	9.67	1.15	7.35	1.04	5.64	1.08	3.15
013J773232	Sediment Pulp	4.64	8.1	0.9	<0.05	1.7	48.39	247.5	0.04	1	1.6	8.8	29.08	97.41	15.07	1.86	11.50	1.66	9.66	1.91	5.38
013J773233	Sediment Pulp	4.50	8.5	1.0	<0.05	1.7	48.70	244.2	0.04	2	1.5	8.7	29.40	96.54	15.67	1.90	12.04	1.81	9.67	1.90	5.28
013J773234	Sediment Pulp	2.10	24.9	1.2	<0.05	5.5	17.92	74.2	0.04	<1	0.5	23.2	10.42	35.69	6.12	1.07	4.97	0.63	3.53	0.65	1.78
013J773235	Sediment Pulp	5.12	10.5	1.0	<0.05	2.7	50.31	226.8	0.06	1	2.2	9.7	27.55	94.98	15.11	2.02	11.83	1.68	10.06	2.00	5.91
013J773236	Sediment Pulp	2.93	3.1	0.6	<0.05	1.1	35.54	149.0	0.03	2	1.7	4.8	18.58	64.27	10.72	1.48	8.02	1.19	6.54	1.29	3.85
013J773238	Sediment Pulp	3.48	23.5	1.0	<0.05	3.0	28.71	157.2	0.03	<1	1.1	18.8	16.99	55.76	9.47	1.18	6.49	1.05	5.79	1.11	3.02
013J773239	Sediment Pulp	4.83	2.9	0.7	<0.05	1.5	70.18	465.7	0.08	2	2.6	3.6	54.80	176.08	25.94	2.95	19.62	2.87	14.92	2.78	7.73
013J773241	Sediment Pulp	4.99	4.8	1.0	<0.05	1.8	110.62	245.3	0.05	2	6.6	7.1	35.65	119.09	21.53	2.03	21.13	3.20	18.32	4.01	12.23
013J773242	Sediment Pulp	5.02	4.6	0.9	<0.05	2.0	115.41	242.0	0.04	<1	7.0	7.0	33.38	121.96	20.22	1.68	18.62	2.79	17.93	3.62	11.17
013J773243	Sediment Pulp	2.56	4.7	0.4	<0.05	1.8	18.51	70.2	<0.02	<1	0.5	4.8	8.10	28.75	4.67	0.62	3.85	0.54	3.28	0.62	1.85
013J773244	Sediment Pulp	3.25	13.6	0.6	<0.05	2.4	58.99	126.2	0.03	<1	1.7	9.4	15.56	57.73	10.17	0.78	9.51	1.47	9.55	1.87	5.67
013J773245	Sediment Pulp	4.15	10.1	0.7	<0.05	2.2	42.27	112.9	0.03	<1	1.5	7.6	13.96	52.24	8.64	1.02	7.60	1.14	7.38	1.45	4.46
013J773246	Sediment Pulp	0.63	3.3	3.1	<0.05	1.2	10.29	16.0	0.46	16	0.1	4.1	2.44	10.55	2.23	0.42	1.98	0.25	1.59	0.30	0.88
013J773248	Sediment Pulp	3.75	5.3	0.8	<0.05	3.2	31.68	90.8	<0.02	<1	1.8	6.7	10.38	38.91	6.57	0.67	5.82	0.86	5.41	1.07	3.23
013J773249	Sediment Pulp	1.53	4.9	0.3	<0.05	0.9	85.75	272.1	0.03	<1	1.9	5.5	34.01	129.74	21.26	1.82	18.30	2.45	14.77	2.91	8.75
013J773251	Sediment Pulp	1.03	1.1	<0.1	<0.05	0.2	26.13	130.8	<0.02	<1	0.6	1.6	15.50	56.18	8.32	1.22	6.37	0.80	4.66	0.87	2.57
013J773252	Sediment Pulp	1.40	3.7	0.4	<0.05	0.7	38.96	128.3	<0.02	<1	2.3	5.3	16.75	64.73	10.04	1.23	8.30	1.12	6.91	1.37	4.22
013J773253	Sediment Pulp	1.08	3.2	0.2	<0.05	0.4	53.25	227.3	<0.02	<1	2.6	2.9	23.13	85.11	13.40	1.71	10.87	1.50	9.28	1.83	5.62



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J773217	Sediment Pulp		0.66	3.83	0.60	<10	<2
013J773221	Sediment Pulp		0.57	3.68	0.55	<10	<2
013J773222	Sediment Pulp		0.71	4.23	0.64	<10	<2
013J773223	Sediment Pulp		2.20	14.04	1.97	<10	<2
013J773224	Sediment Pulp		0.68	4.32	0.64	<10	<2
013J773225	Sediment Pulp		0.54	3.50	0.46	<10	<2
013J773226	Sediment Pulp		0.73	4.50	0.66	<10	<2
013J773227	Sediment Pulp		1.13	6.97	0.92	<10	<2
013J773228	Sediment Pulp		2.87	17.82	2.65	<10	<2
013J773229	Sediment Pulp		0.44	2.91	0.40	<10	<2
013J773230	Sediment Pulp		0.34	2.27	0.30	<10	<2
013J773231	Sediment Pulp		0.47	2.70	0.36	<10	<2
013J773232	Sediment Pulp		0.82	5.22	0.77	<10	3
013J773233	Sediment Pulp		0.84	5.15	0.77	<10	2
013J773234	Sediment Pulp		0.26	1.74	0.25	<10	<2
013J773235	Sediment Pulp		0.91	5.59	0.79	<10	<2
013J773236	Sediment Pulp		0.57	3.81	0.51	<10	<2
013J773238	Sediment Pulp		0.45	2.97	0.46	<10	<2
013J773239	Sediment Pulp		1.23	7.72	1.06	<10	<2
013J773241	Sediment Pulp		1.75	10.91	1.55	<10	<2
013J773242	Sediment Pulp		1.57	10.04	1.40	<10	<2
013J773243	Sediment Pulp		0.26	1.64	0.23	<10	<2
013J773244	Sediment Pulp		0.78	4.79	0.63	<10	<2
013J773245	Sediment Pulp		0.63	3.96	0.54	<10	<2
013J773246	Sediment Pulp		0.12	0.78	0.12	<10	<2
013J773248	Sediment Pulp		0.45	2.90	0.40	<10	<2
013J773249	Sediment Pulp		1.19	7.69	1.17	<10	<2
013J773251	Sediment Pulp		0.35	2.34	0.34	<10	<2
013J773252	Sediment Pulp		0.60	3.84	0.56	<10	<2
013J773253	Sediment Pulp		0.80	5.16	0.74	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773254	Sediment Pulp	7.51	47.22	6.32	57.9	514	17.0	7.8	295	1.02	0.9	24.7	1.0	1.5	51.2	0.43	0.17	0.05	40	1.14	0.316
013J773255	Sediment Pulp	10.44	25.72	5.64	53.3	383	11.0	2.9	49	0.60	1.9	25.8	1.3	0.2	24.2	0.32	0.29	0.03	17	0.37	0.067
013J773256	Sediment Pulp	4.74	14.74	10.65	54.9	108	8.5	5.0	164	1.19	2.3	10.6	0.7	2.6	26.2	0.20	0.16	0.07	29	0.39	0.096
013J773258	Sediment Pulp	11.68	21.78	3.12	46.2	217	5.2	5.1	165	1.16	<0.1	12.8	0.5	0.7	17.0	0.21	0.15	<0.02	17	0.22	0.060
013J773259	Sediment Pulp	21.28	10.35	7.30	47.2	114	5.6	58.7	5842	6.20	1.5	16.0	0.6	4.4	8.2	0.06	0.10	0.03	21	0.11	0.060
013J773260	Sediment Pulp	70.50	25.65	11.63	200.7	599	11.4	28.1	2212	6.19	<0.1	17.2	1.3	5.2	14.0	0.59	0.07	0.04	11	0.20	0.224
013J773261	Sediment Pulp	67.87	25.97	11.84	197.4	600	11.4	27.3	2231	6.19	<0.1	17.3	0.9	5.2	14.1	0.58	0.07	0.03	11	0.20	0.224
013J773262	Sediment Pulp	13.47	11.06	10.67	78.5	131	11.8	36.2	7460	6.01	1.3	8.1	0.5	4.7	13.4	0.23	0.06	0.05	22	0.19	0.092
013J773263	Sediment Pulp	9.65	27.15	22.30	247.4	358	5.6	1.8	90	0.58	<0.1	33.9	0.3	0.6	25.9	1.10	0.07	0.05	16	0.51	0.158
013J773264	Sediment Pulp	15.54	37.06	7.42	144.6	375	10.7	27.0	589	9.27	1.3	20.4	0.4	6.9	21.5	0.51	0.12	0.05	47	0.28	0.220
013J773265	Sediment Pulp	33.47	30.89	11.45	157.0	732	12.4	45.5	4245	9.28	4.1	36.6	0.4	6.2	24.4	0.76	0.16	0.08	32	0.35	0.240
013J773270	Sediment Pulp	34.97	57.50	29.62	247.4	863	12.1	20.2	496	8.02	<0.1	81.0	1.0	7.6	23.5	0.98	0.14	0.10	54	0.38	0.307
013J773271	Sediment Pulp	17.42	68.88	5.58	76.3	745	12.4	8.1	216	2.28	1.2	18.4	0.6	0.8	30.3	0.46	0.08	0.03	86	0.57	0.299
013J773273	Sediment Pulp	0.90	33.61	23.14	134.5	2713	45.5	28.8	1268	3.11	24.0	3.4	2.4	6.7	26.6	0.51	0.52	2.73	44	0.63	0.094
013J773275	Sediment Pulp	15.03	36.82	12.47	124.8	217	10.8	4.2	90	1.12	1.0	43.1	0.6	1.7	23.7	0.62	0.17	0.04	36	0.43	0.118
013J773276	Sediment Pulp	14.13	32.03	15.60	163.6	276	13.7	9.7	164	4.36	1.1	25.6	3.3	2.4	17.9	0.62	0.13	0.07	50	0.28	0.135
013J773277	Sediment Pulp	8.55	21.92	5.20	191.1	286	12.9	10.5	279	3.20	1.7	17.7	1.2	1.6	28.5	0.36	0.18	0.04	42	0.30	0.117
013J773278	Sediment Pulp	14.11	27.09	4.46	231.3	330	16.7	11.6	165	4.23	1.9	15.8	1.0	1.9	24.0	0.35	0.05	0.03	46	0.34	0.118
013J773279	Sediment Pulp	20.82	60.16	4.79	299.1	194	25.9	21.8	258	4.22	0.7	28.0	1.8	5.6	20.8	0.30	0.07	0.04	41	0.35	0.167
013J773280	Sediment Pulp	6.29	36.56	1.65	90.6	257	22.9	7.3	97	1.21	<0.1	7.4	1.1	1.0	25.8	0.20	0.06	<0.02	41	0.35	0.071
013J773281	Sediment Pulp	10.93	52.82	2.94	225.2	238	33.0	37.0	683	8.94	<0.1	16.2	0.3	6.2	15.5	0.69	0.04	0.04	75	0.27	0.214
013J773282	Sediment Pulp	10.62	50.10	2.81	219.2	235	32.0	35.4	667	8.74	<0.1	15.5	0.6	5.9	15.1	0.66	0.04	0.03	73	0.26	0.206
013J773283	Sediment Pulp	9.36	43.10	81.79	314.5	646	12.8	7.9	452	1.85	33.8	8.5	2.7	1.2	64.9	1.26	0.56	0.83	19	6.54	0.068
013J773284	Sediment Pulp	19.09	58.12	6.33	300.2	303	53.3	106.7	1134	12.39	1.0	16.6	0.5	10.6	16.7	0.81	0.04	0.04	89	0.21	0.238
013J773285	Sediment Pulp	8.65	16.92	2.70	90.3	174	10.3	9.4	204	2.04	<0.1	4.7	0.5	0.6	14.0	0.36	0.03	<0.02	42	0.17	0.105
013J773286	Sediment Pulp	15.92	28.61	6.38	249.8	469	21.4	59.0	1398	14.42	3.1	17.2	0.6	6.6	18.7	0.48	0.11	0.05	69	0.22	0.226
013J773287	Sediment Pulp	5.46	13.79	4.13	56.3	114	9.6	4.0	82	1.44	0.1	9.7	0.9	0.5	16.0	0.21	0.05	0.03	42	0.25	0.081
013J773288	Sediment Pulp	2.30	54.36	5.93	32.0	374	7.0	1.1	38	0.31	<0.1	6.8	0.9	0.1	16.2	0.28	0.05	<0.02	25	0.25	0.154
013J773289	Sediment Pulp	31.38	57.64	16.06	191.7	704	15.3	70.9	4726	12.55	1.3	40.7	1.1	8.0	16.9	0.77	0.10	0.06	76	0.25	0.243
013J773290	Sediment Pulp	19.91	27.38	7.47	148.1	259	11.2	23.4	505	3.04	0.4	21.0	0.9	1.6	17.0	0.65	0.08	0.03	44	0.25	0.123



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J773254	Sediment Pulp	128.2	28.0	0.14	73.9	0.085	<20	3.12	0.010	0.04	1.4	1.9	0.21	0.26	207	2.6	<0.02	4.0	0.38	<0.1	0.05
013J773255	Sediment Pulp	85.3	10.7	0.04	99.0	0.020	<20	1.39	0.009	0.01	1.9	0.7	0.06	0.26	160	2.0	<0.02	0.7	0.14	<0.1	<0.02
013J773256	Sediment Pulp	59.2	17.7	0.26	53.2	0.091	<20	1.09	0.026	0.08	0.7	2.3	0.10	0.09	89	1.1	<0.02	3.0	0.65	<0.1	0.08
013J773258	Sediment Pulp	96.5	5.4	0.04	77.8	0.030	<20	1.61	0.010	0.01	0.2	1.5	0.07	0.20	146	1.9	<0.02	0.8	0.12	<0.1	<0.02
013J773259	Sediment Pulp	118.0	11.9	0.11	32.5	0.047	<20	1.73	0.010	0.04	0.8	2.4	0.32	0.10	147	1.3	<0.02	1.2	0.42	<0.1	<0.02
013J773260	Sediment Pulp	423.5	10.9	0.04	112.0	0.032	<20	2.42	0.008	0.02	0.8	3.3	0.48	0.21	190	4.0	<0.02	<0.1	0.14	<0.1	<0.02
013J773261	Sediment Pulp	423.2	11.4	0.04	111.3	0.032	<20	2.39	0.010	0.02	0.7	3.3	0.48	0.20	195	3.6	<0.02	<0.1	0.14	<0.1	<0.02
013J773262	Sediment Pulp	97.3	17.6	0.26	90.0	0.075	<20	1.51	0.017	0.10	0.5	2.6	0.31	0.09	124	1.2	<0.02	3.4	0.99	<0.1	0.03
013J773263	Sediment Pulp	233.9	9.0	0.09	47.7	0.036	<20	1.66	0.012	0.02	0.3	0.8	0.11	0.31	142	4.5	<0.02	1.7	0.27	<0.1	0.03
013J773264	Sediment Pulp	171.6	24.6	0.13	55.5	0.073	<20	3.39	0.015	0.05	0.7	4.4	0.28	0.23	138	4.8	<0.02	2.4	0.40	<0.1	0.03
013J773265	Sediment Pulp	210.7	18.7	0.12	139.9	0.077	<20	3.05	0.011	0.05	0.8	4.0	0.53	0.18	180	4.2	<0.02	2.8	0.43	<0.1	0.03
013J773270	Sediment Pulp	360.9	36.6	0.12	73.1	0.073	<20	4.28	0.009	0.04	0.8	4.5	0.42	0.23	170	7.6	<0.02	2.5	0.49	<0.1	0.05
013J773271	Sediment Pulp	85.0	40.9	0.09	109.0	0.041	<20	2.23	0.012	0.02	0.7	2.1	0.11	0.26	193	2.6	<0.02	4.1	0.27	<0.1	0.02
013J773273	Sediment Pulp	39.7	51.5	0.81	153.6	0.105	<20	1.74	0.029	0.26	0.4	5.8	0.28	0.15	285	0.8	0.05	5.4	1.36	<0.1	0.13
013J773275	Sediment Pulp	139.1	18.5	0.10	78.3	0.061	<20	2.22	0.010	0.03	0.9	2.0	0.08	0.26	161	2.0	<0.02	1.8	0.33	<0.1	0.05
013J773276	Sediment Pulp	124.1	30.9	0.15	74.5	0.048	<20	2.82	0.008	0.04	0.8	3.0	0.09	0.24	122	3.4	<0.02	1.6	0.39	<0.1	0.03
013J773277	Sediment Pulp	105.0	27.8	0.24	175.2	0.045	<20	1.52	0.010	0.06	1.2	2.1	0.17	0.20	155	2.2	<0.02	1.6	0.40	<0.1	0.03
013J773278	Sediment Pulp	134.7	27.6	0.15	103.5	0.036	<20	1.47	0.013	0.05	5.9	2.9	0.21	0.35	175	3.3	<0.02	1.2	0.40	<0.1	0.03
013J773279	Sediment Pulp	135.6	33.5	0.30	99.6	0.072	<20	1.60	0.021	0.14	1.7	3.8	0.50	0.18	98	2.1	<0.02	1.5	0.63	<0.1	0.06
013J773280	Sediment Pulp	76.5	21.0	0.11	125.0	0.041	<20	1.03	0.010	0.03	0.8	1.9	0.24	0.27	181	1.4	<0.02	1.2	0.28	<0.1	0.03
013J773281	Sediment Pulp	156.2	40.4	0.28	97.0	0.073	<20	2.49	0.017	0.09	0.6	6.1	0.58	0.15	123	2.2	<0.02	1.4	0.40	<0.1	0.03
013J773282	Sediment Pulp	150.1	39.9	0.27	92.8	0.071	<20	2.40	0.018	0.09	0.6	5.9	0.55	0.15	122	2.0	<0.02	1.5	0.39	<0.1	0.03
013J773283	Sediment Pulp	10.1	13.4	0.58	87.8	0.042	<20	0.45	0.028	0.05	1.0	2.3	0.22	1.56	115	1.1	0.02	2.1	0.49	<0.1	0.03
013J773284	Sediment Pulp	188.0	43.7	0.25	122.6	0.085	<20	2.25	0.009	0.14	0.7	5.5	1.02	0.13	103	2.9	0.02	0.3	0.72	<0.1	0.06
013J773285	Sediment Pulp	61.3	17.6	0.10	89.8	0.029	<20	1.00	0.008	0.03	1.4	1.2	0.12	0.16	173	1.1	<0.02	1.3	0.28	<0.1	<0.02
013J773286	Sediment Pulp	130.4	46.8	0.20	132.1	0.067	<20	2.46	0.010	0.05	0.9	4.4	0.38	0.15	149	2.9	0.02	2.3	0.41	<0.1	0.04
013J773287	Sediment Pulp	51.2	15.8	0.11	61.8	0.036	<20	1.02	0.010	0.03	0.7	1.1	0.07	0.19	130	1.3	<0.02	1.7	0.26	<0.1	0.02
013J773288	Sediment Pulp	51.1	15.1	0.04	68.8	0.023	<20	1.22	0.012	0.01	0.1	0.5	0.03	0.20	174	1.5	<0.02	1.7	0.14	<0.1	<0.02
013J773289	Sediment Pulp	288.2	33.6	0.08	116.7	0.057	<20	3.14	0.012	0.03	0.8	3.8	0.66	0.22	181	5.3	<0.02	2.7	0.34	<0.1	0.03
013J773290	Sediment Pulp	142.9	21.6	0.11	68.3	0.036	<20	1.92	0.010	0.03	0.7	1.8	0.31	0.19	133	2.5	<0.02	1.3	0.25	<0.1	0.02



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773254	Sediment Pulp	4.19	2.9	0.4	<0.05	1.9	47.11	251.2	0.04	<1	1.9	3.2	30.03	108.32	16.85	2.45	12.82	1.69	9.72	1.71	4.85
013J773255	Sediment Pulp	0.94	1.1	0.1	<0.05	0.3	31.21	145.5	<0.02	<1	1.5	1.0	21.17	78.98	11.91	1.47	9.00	1.14	6.42	1.15	3.21
013J773256	Sediment Pulp	3.30	7.1	0.6	<0.05	2.7	24.35	109.4	<0.02	<1	1.8	7.9	13.82	50.51	7.84	0.95	6.09	0.81	4.69	0.87	2.53
013J773258	Sediment Pulp	1.32	0.9	0.2	<0.05	0.3	51.60	184.5	<0.02	<1	4.3	0.8	22.36	83.96	13.33	2.10	11.18	1.54	9.33	1.77	5.14
013J773259	Sediment Pulp	1.03	5.3	0.4	<0.05	0.4	74.71	270.3	0.02	<1	3.8	4.4	29.23	108.23	17.30	1.93	14.41	2.05	12.70	2.50	7.53
013J773260	Sediment Pulp	1.62	1.9	0.3	<0.05	0.3	108.18	824.2	0.05	<1	3.6	1.0	83.05	279.11	40.53	3.46	29.57	3.78	21.62	3.91	11.11
013J773261	Sediment Pulp	1.66	1.9	0.3	<0.05	0.3	107.67	838.5	0.05	<1	3.7	1.0	84.21	280.49	40.94	3.48	29.79	3.92	22.08	3.93	11.28
013J773262	Sediment Pulp	1.71	13.4	0.6	<0.05	1.0	37.13	203.0	0.03	<1	1.6	9.7	22.30	79.10	11.45	1.33	8.84	1.19	7.01	1.32	3.88
013J773263	Sediment Pulp	3.23	2.7	0.5	<0.05	0.8	236.43	346.5	0.07	<1	5.1	2.9	55.60	209.82	41.20	2.25	41.80	6.86	43.15	8.75	24.29
013J773264	Sediment Pulp	3.66	5.4	0.5	<0.05	0.9	137.30	409.3	0.05	<1	5.1	4.7	40.91	150.52	25.15	3.15	22.84	3.42	22.87	4.76	14.33
013J773265	Sediment Pulp	2.51	4.8	0.5	<0.05	0.8	119.78	523.0	0.06	<1	6.2	4.1	49.74	178.78	28.82	3.28	23.83	3.49	21.73	4.16	12.46
013J773270	Sediment Pulp	5.13	4.6	0.8	<0.05	1.3	355.04	681.3	0.08	2	13.6	3.9	88.48	329.22	61.44	3.54	56.95	9.70	63.33	12.85	38.06
013J773271	Sediment Pulp	2.25	1.9	0.3	<0.05	0.7	40.57	157.6	0.03	1	1.6	1.6	19.19	69.93	10.30	1.35	8.41	1.15	7.13	1.40	4.20
013J773273	Sediment Pulp	1.92	24.0	1.1	<0.05	6.0	18.30	73.2	0.04	<1	0.7	21.0	9.69	36.13	6.17	0.91	4.62	0.59	3.38	0.61	1.76
013J773275	Sediment Pulp	3.06	2.6	0.4	<0.05	1.6	70.38	257.0	0.03	2	3.6	3.6	32.77	121.21	19.37	1.92	15.84	2.23	13.38	2.52	7.41
013J773276	Sediment Pulp	2.70	3.9	0.5	<0.05	1.0	117.97	264.5	0.03	<1	14.6	4.5	32.00	121.26	22.06	1.90	20.18	3.14	20.47	4.10	12.57
013J773277	Sediment Pulp	1.62	4.8	0.3	<0.05	0.9	53.34	191.9	<0.02	1	2.2	8.3	23.80	88.13	13.59	1.39	11.34	1.51	9.32	1.83	5.57
013J773278	Sediment Pulp	1.56	4.4	0.2	<0.05	1.0	54.39	243.1	0.02	5	1.2	5.1	28.77	105.77	15.72	1.99	12.64	1.61	9.44	1.83	5.38
013J773279	Sediment Pulp	2.58	11.0	0.4	<0.05	2.1	72.18	244.3	0.02	4	1.2	8.3	32.87	123.79	20.18	2.16	16.60	2.18	12.79	2.45	7.26
013J773280	Sediment Pulp	1.51	2.4	0.2	<0.05	0.9	28.45	144.9	<0.02	2	0.3	2.3	18.44	71.43	10.64	1.47	7.99	0.97	5.36	0.99	2.80
013J773281	Sediment Pulp	1.62	5.0	0.3	<0.05	1.0	50.75	333.9	0.02	1	1.3	3.7	35.49	129.25	18.70	2.20	13.55	1.70	9.46	1.74	5.07
013J773282	Sediment Pulp	1.59	4.9	0.3	<0.05	1.0	48.98	316.0	0.02	1	1.2	3.7	33.38	122.49	18.03	2.12	13.05	1.62	9.06	1.65	4.83
013J773283	Sediment Pulp	0.68	3.4	3.1	<0.05	1.3	10.60	16.7	0.45	19	0.1	4.2	2.56	11.09	2.36	0.44	2.06	0.28	1.69	0.32	0.93
013J773284	Sediment Pulp	2.48	11.0	0.4	<0.05	2.0	65.30	562.8	0.03	4	1.4	5.4	43.68	160.24	22.79	2.48	17.15	2.19	12.47	2.35	6.91
013J773285	Sediment Pulp	0.80	2.9	0.2	<0.05	0.3	21.08	112.0	<0.02	<1	0.4	2.5	13.52	50.19	7.16	0.84	5.46	0.69	3.98	0.74	2.12
013J773286	Sediment Pulp	2.68	4.8	0.4	<0.05	1.2	79.84	270.0	0.04	2	3.3	4.7	29.88	111.63	17.37	1.71	14.90	2.16	13.64	2.77	8.49
013J773287	Sediment Pulp	1.55	2.5	0.3	<0.05	0.8	31.13	105.6	<0.02	<1	1.3	2.8	12.54	46.01	7.28	0.76	6.09	0.86	5.38	1.06	3.19
013J773288	Sediment Pulp	1.27	0.9	0.2	<0.05	0.3	18.85	96.0	<0.02	<1	0.7	0.6	11.34	39.76	5.92	0.77	4.66	0.62	3.68	0.67	1.90
013J773289	Sediment Pulp	2.62	3.0	0.5	<0.05	0.8	214.32	544.3	0.06	1	6.8	2.1	67.88	249.40	42.61	2.83	38.52	6.10	38.54	7.95	23.39
013J773290	Sediment Pulp	2.01	2.8	0.3	<0.05	0.5	96.97	266.5	0.03	<1	4.4	2.8	33.56	121.46	19.81	1.44	17.40	2.60	16.59	3.26	9.70



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J773254	Sediment Pulp	0.66	4.08	0.53	<10	<2
013J773255	Sediment Pulp	0.42	2.59	0.35	<10	<2
013J773256	Sediment Pulp	0.34	2.19	0.31	<10	<2
013J773258	Sediment Pulp	0.71	4.38	0.59	<10	<2
013J773259	Sediment Pulp	1.06	6.91	0.95	<10	<2
013J773260	Sediment Pulp	1.45	9.04	1.24	<10	<2
013J773261	Sediment Pulp	1.47	9.09	1.25	<10	<2
013J773262	Sediment Pulp	0.52	3.33	0.46	<10	<2
013J773263	Sediment Pulp	3.10	18.66	2.38	<10	<2
013J773264	Sediment Pulp	1.96	12.93	1.77	<10	<2
013J773265	Sediment Pulp	1.74	11.21	1.52	<10	<2
013J773270	Sediment Pulp	5.52	34.45	4.38	<10	<2
013J773271	Sediment Pulp	0.59	3.86	0.53	<10	<2
013J773273	Sediment Pulp	0.23	1.53	0.22	<10	<2
013J773275	Sediment Pulp	1.02	6.50	0.87	<10	<2
013J773276	Sediment Pulp	1.80	11.53	1.56	<10	<2
013J773277	Sediment Pulp	0.77	5.05	0.74	<10	<2
013J773278	Sediment Pulp	0.73	4.85	0.76	<10	<2
013J773279	Sediment Pulp	0.98	6.57	1.03	<10	<2
013J773280	Sediment Pulp	0.37	2.43	0.36	<10	<2
013J773281	Sediment Pulp	0.68	4.62	0.69	<10	<2
013J773282	Sediment Pulp	0.65	4.38	0.66	<10	<2
013J773283	Sediment Pulp	0.12	0.84	0.12	<10	<2
013J773284	Sediment Pulp	0.95	6.32	0.96	<10	<2
013J773285	Sediment Pulp	0.28	1.81	0.26	<10	<2
013J773286	Sediment Pulp	1.19	7.75	1.12	<10	<2
013J773287	Sediment Pulp	0.45	2.91	0.41	<10	<2
013J773288	Sediment Pulp	0.26	1.61	0.21	<10	<2
013J773289	Sediment Pulp	3.16	20.01	2.64	<10	<2
013J773290	Sediment Pulp	1.34	8.42	1.12	<10	<2



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773291	Sediment Pulp	13.01	41.88	3.33	62.4	369	11.4	7.5	114	2.62	0.2	5.8	1.4	1.0	22.0	0.35	0.08	0.03	85	0.32	0.167
013J773293	Sediment Pulp	16.53	15.68	4.37	92.4	185	9.6	4.0	31	1.10	<0.1	9.2	1.3	0.6	29.2	0.30	0.08	<0.02	14	0.81	0.071
013J773294	Sediment Pulp	7.84	10.34	8.55	84.0	78	5.6	6.3	169	2.85	2.5	7.4	0.6	3.3	19.0	0.22	0.11	0.05	47	0.35	0.117
013J773295	Sediment Pulp	9.43	31.98	7.91	86.1	746	7.5	13.0	374	3.94	1.4	12.8	2.2	2.5	23.4	0.35	0.11	0.05	57	0.37	0.271
013J773296	Sediment Pulp	5.85	132.24	4.12	75.3	217	6.0	3.5	87	1.81	0.9	7.4	2.2	0.5	16.2	0.23	0.10	0.03	29	0.23	0.103
013J773297	Sediment Pulp	5.37	11.51	4.54	77.0	196	6.2	3.5	94	1.68	0.4	7.6	1.2	0.6	17.5	0.25	0.06	0.02	28	0.24	0.108
013J773298	Sediment Pulp	35.66	20.19	8.84	355.8	197	9.8	3.6	107	2.65	<0.1	49.3	0.2	1.8	22.0	1.11	0.08	0.04	29	0.42	0.108
013J773300	Sediment Pulp	40.08	28.24	19.37	605.2	501	9.0	25.0	781	10.66	<0.1	156.3	0.8	5.4	24.7	2.14	0.12	0.06	45	0.40	0.187
013J773301	Sediment Pulp	25.34	29.08	17.24	399.1	415	12.0	33.6	3293	11.00	0.6	56.0	1.2	8.7	26.7	1.50	0.08	0.08	49	0.45	0.180
013J773302	Sediment Pulp	25.18	28.84	16.88	389.6	418	11.8	33.6	3256	11.04	0.4	54.7	0.8	8.3	25.9	1.48	0.08	0.08	49	0.44	0.176
013J773303	Sediment Pulp	30.19	25.64	16.42	357.1	333	12.1	36.8	4473	10.26	0.6	47.2	0.5	9.3	22.0	1.36	0.07	0.07	45	0.41	0.167
013J773304	Sediment Pulp	35.14	20.45	9.92	322.3	294	8.9	22.1	1331	9.27	<0.1	37.8	0.4	4.6	17.5	1.10	0.08	0.06	41	0.26	0.188
013J773305	Sediment Pulp	51.88	20.06	10.55	434.1	257	8.4	22.2	624	5.91	<0.1	43.2	0.4	2.4	13.8	1.43	0.09	0.04	32	0.20	0.172
013J773306	Sediment Pulp	0.94	33.50	21.62	129.5	2682	44.9	28.9	1239	3.10	23.9	3.3	2.5	6.1	25.2	0.49	0.55	2.69	47	0.59	0.093
013J773307	Sediment Pulp	20.07	19.13	7.46	274.4	175	9.1	4.9	161	4.81	<0.1	21.7	0.2	2.0	15.9	0.63	0.08	0.04	37	0.24	0.087
013J773308	Sediment Pulp	29.14	23.46	23.98	375.3	180	7.7	4.8	144	4.77	<0.1	60.0	0.8	5.2	19.9	1.09	0.08	0.08	38	0.34	0.114
013J773309	Sediment Pulp	7.88	14.45	10.11	149.6	135	5.5	7.8	1111	3.51	1.9	25.2	0.5	7.4	19.1	0.52	0.09	0.07	29	0.38	0.104
013J773310	Sediment Pulp	30.55	30.07	16.93	159.4	204	7.3	7.3	144	3.10	<0.1	140.7	0.5	5.5	14.5	0.44	0.11	0.09	33	0.28	0.085
013J773311	Sediment Pulp	35.39	29.97	16.71	160.9	187	7.2	6.5	144	3.83	<0.1	145.2	0.7	6.0	14.4	0.33	0.11	0.08	34	0.28	0.084
013J773312	Sediment Pulp	23.27	22.50	12.39	303.8	236	8.2	22.0	3308	7.36	2.2	38.5	0.9	6.2	26.3	1.08	0.12	0.08	38	0.42	0.134
013J773313	Sediment Pulp	48.51	49.17	24.67	428.4	578	11.0	27.8	6746	8.10	6.4	60.6	1.3	4.5	23.5	1.84	0.21	0.18	45	0.27	0.175
013J773314	Sediment Pulp	23.61	47.10	22.59	533.0	677	9.5	6.1	245	2.34	<0.1	31.3	1.3	1.7	22.9	2.57	0.17	0.10	31	0.37	0.092
013J773315	Sediment Pulp	44.63	64.87	29.25	634.8	711	18.8	39.2	1593	9.29	8.0	132.8	1.4	7.3	33.6	2.57	0.27	0.11	75	0.44	0.215
013J773316	Sediment Pulp	4.31	49.55	8.09	118.9	360	25.0	43.4	1844	6.90	1.6	4.2	0.6	2.3	43.9	0.59	0.07	0.05	99	0.63	0.164
013J773317	Sediment Pulp	6.48	46.45	5.83	84.6	169	28.2	30.3	837	4.87	10.4	4.3	1.0	4.2	67.6	0.37	0.24	0.05	110	0.73	0.283
013J773318	Sediment Pulp	3.43	76.51	4.84	116.5	283	36.6	57.9	2337	14.91	1.7	3.1	3.1	3.0	38.4	0.46	0.04	0.04	124	0.49	0.236
013J773319	Sediment Pulp	3.87	22.33	6.62	73.5	87	12.9	15.9	935	3.69	1.7	10.2	0.6	4.4	56.4	0.24	0.10	0.04	44	0.45	0.098
013J773320	Sediment Pulp	3.60	23.42	4.70	56.5	157	9.2	2.9	76	0.66	0.7	5.9	1.8	0.4	20.2	0.35	0.11	0.02	36	0.32	0.089
013J773321	Sediment Pulp	3.39	22.31	4.56	49.4	160	8.8	2.7	67	0.63	0.7	5.6	1.4	0.4	19.1	0.34	0.11	0.02	35	0.31	0.086
013J773322	Sediment Pulp	33.28	44.73	8.05	125.8	128	8.1	7.5	342	2.28	6.5	76.4	2.0	7.7	26.6	0.26	0.34	0.05	38	0.46	0.108



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J773291	Sediment Pulp	72.7	28.8	0.08	77.7	0.044	<20	1.31	0.011	0.02	0.6	2.1	0.14	0.18	253	2.3	<0.02	2.5	0.24	<0.1	0.02
013J773293	Sediment Pulp	151.0	9.1	0.05	63.2	0.020	<20	1.35	0.012	0.02	0.7	1.0	0.10	1.15	158	2.0	<0.02	0.9	0.10	<0.1	<0.02
013J773294	Sediment Pulp	58.3	12.5	0.23	34.7	0.085	<20	1.06	0.024	0.05	0.4	2.2	0.09	0.12	109	1.2	<0.02	3.3	0.44	<0.1	0.06
013J773295	Sediment Pulp	164.9	14.5	0.07	77.6	0.064	<20	3.22	0.010	0.02	0.8	3.1	0.21	0.29	242	3.3	<0.02	4.1	0.23	<0.1	0.03
013J773296	Sediment Pulp	55.7	7.6	0.08	35.2	0.033	<20	1.28	0.036	0.02	0.4	1.0	0.07	0.19	183	1.4	<0.02	1.9	0.21	<0.1	<0.02
013J773297	Sediment Pulp	58.6	8.3	0.09	38.0	0.034	<20	1.28	0.042	0.02	0.4	1.0	0.07	0.17	157	1.3	<0.02	2.0	0.22	<0.1	<0.02
013J773298	Sediment Pulp	277.9	14.5	0.12	57.2	0.037	<20	2.21	0.015	0.04	0.9	1.9	0.06	0.28	104	4.6	<0.02	0.8	0.27	<0.1	0.03
013J773300	Sediment Pulp	265.4	17.1	0.09	136.7	0.047	<20	2.73	0.016	0.02	0.6	2.9	0.35	0.17	159	7.3	<0.02	1.8	0.29	<0.1	0.03
013J773301	Sediment Pulp	246.3	22.3	0.23	139.9	0.082	<20	2.90	0.017	0.10	0.6	3.5	0.47	0.19	159	5.8	0.02	3.7	0.74	<0.1	0.05
013J773302	Sediment Pulp	241.7	22.4	0.23	135.4	0.082	<20	2.88	0.017	0.10	0.6	3.5	0.44	0.19	149	6.1	<0.02	3.8	0.72	<0.1	0.04
013J773303	Sediment Pulp	216.9	21.7	0.25	186.7	0.086	<20	2.57	0.019	0.10	0.6	3.4	0.48	0.18	138	5.2	<0.02	3.6	0.78	<0.1	0.05
013J773304	Sediment Pulp	251.6	17.7	0.14	70.5	0.051	<20	2.67	0.016	0.06	0.5	2.8	0.25	0.19	131	6.2	<0.02	1.6	0.39	<0.1	0.03
013J773305	Sediment Pulp	240.0	15.3	0.06	48.6	0.029	<20	3.08	0.014	0.02	0.4	2.1	0.28	0.27	146	6.7	<0.02	0.2	0.21	<0.1	0.03
013J773306	Sediment Pulp	38.3	49.7	0.77	144.5	0.099	<20	1.60	0.025	0.25	0.2	5.5	0.27	0.16	280	0.8	0.04	5.2	1.29	<0.1	0.13
013J773307	Sediment Pulp	178.0	19.5	0.07	48.5	0.028	<20	2.14	0.016	0.02	0.4	2.4	0.07	0.29	147	3.0	<0.02	0.7	0.23	<0.1	<0.02
013J773308	Sediment Pulp	230.5	19.5	0.15	53.6	0.053	<20	1.98	0.016	0.04	0.3	2.6	0.10	0.17	95	5.9	<0.02	2.1	0.45	<0.1	0.05
013J773309	Sediment Pulp	91.9	14.8	0.18	70.6	0.078	<20	0.91	0.021	0.05	0.4	2.4	0.14	0.05	142	1.8	<0.02	1.8	0.42	<0.1	0.07
013J773310	Sediment Pulp	203.6	19.9	0.15	48.8	0.061	<20	1.80	0.015	0.03	0.5	2.8	0.07	0.17	120	5.0	<0.02	2.0	0.42	<0.1	0.07
013J773311	Sediment Pulp	211.9	19.4	0.15	48.7	0.061	<20	1.87	0.019	0.03	0.5	2.9	0.07	0.17	84	5.1	<0.02	2.0	0.42	<0.1	0.06
013J773312	Sediment Pulp	129.4	20.0	0.17	125.2	0.066	<20	1.50	0.024	0.05	0.5	2.9	0.20	0.12	82	3.5	<0.02	1.6	0.39	<0.1	0.05
013J773313	Sediment Pulp	152.4	28.9	0.18	107.9	0.070	<20	2.43	0.012	0.05	0.8	3.4	0.42	0.15	130	5.0	<0.02	2.8	0.74	<0.1	0.04
013J773314	Sediment Pulp	187.4	23.1	0.10	49.6	0.038	<20	2.13	0.037	0.03	0.9	2.3	0.14	0.31	114	6.5	<0.02	1.0	0.30	<0.1	0.03
013J773315	Sediment Pulp	204.6	36.2	0.17	87.9	0.081	<20	3.28	0.013	0.03	1.3	4.0	0.38	0.23	166	7.5	<0.02	3.7	0.42	<0.1	0.05
013J773316	Sediment Pulp	66.8	53.5	0.25	136.3	0.077	<20	2.79	0.022	0.05	0.6	4.6	0.21	0.17	195	2.8	<0.02	4.5	0.36	<0.1	0.03
013J773317	Sediment Pulp	53.9	54.9	0.49	91.4	0.098	<20	2.26	0.092	0.22	1.6	4.5	0.20	1.10	107	2.6	<0.02	3.8	0.84	<0.1	0.06
013J773318	Sediment Pulp	54.1	76.3	0.25	85.3	0.100	<20	3.58	0.023	0.06	0.4	5.1	0.21	0.27	144	4.0	0.02	4.6	0.40	<0.1	0.03
013J773319	Sediment Pulp	46.1	30.3	0.29	67.9	0.101	<20	0.90	0.042	0.07	0.7	2.3	0.03	0.10	43	1.1	<0.02	2.7	0.37	<0.1	0.07
013J773320	Sediment Pulp	37.4	21.5	0.11	52.8	0.039	<20	0.84	0.015	0.02	0.2	1.2	0.09	0.20	148	1.4	<0.02	2.2	0.22	<0.1	0.03
013J773321	Sediment Pulp	35.4	20.9	0.11	51.4	0.037	<20	0.82	0.016	0.02	0.2	1.1	0.07	0.19	133	1.1	<0.02	2.1	0.22	<0.1	0.03
013J773322	Sediment Pulp	59.6	21.6	0.22	53.3	0.115	<20	0.79	0.028	0.08	1.3	3.7	0.09	0.02	27	1.1	<0.02	2.3	0.47	<0.1	0.09



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773291	Sediment Pulp	2.39	1.8	0.3	<0.05	0.8	30.53	134.3	<0.02	<1	0.9	1.3	15.91	56.92	8.35	1.02	6.56	0.90	5.47	1.08	3.25
013J773293	Sediment Pulp	1.58	1.0	0.2	<0.05	0.3	76.34	249.6	0.03	1	1.8	1.2	35.73	130.00	20.59	1.46	16.99	2.34	14.20	2.70	7.79
013J773294	Sediment Pulp	3.36	5.3	0.6	<0.05	2.0	33.60	117.0	0.02	<1	1.0	8.4	13.33	49.63	7.66	0.99	6.40	0.88	5.50	1.09	3.27
013J773295	Sediment Pulp	3.48	2.1	0.4	<0.05	0.8	81.20	316.4	0.05	<1	2.7	1.8	37.49	132.01	20.28	3.16	16.39	2.27	13.83	2.64	7.86
013J773296	Sediment Pulp	1.37	1.9	0.3	<0.05	0.3	34.83	99.8	<0.02	1	0.9	2.7	13.25	49.64	7.66	1.06	6.70	0.91	5.73	1.14	3.38
013J773297	Sediment Pulp	1.49	2.0	0.3	<0.05	0.4	35.89	105.4	<0.02	<1	1.0	2.8	14.19	53.45	8.28	1.14	7.18	0.98	6.06	1.21	3.61
013J773298	Sediment Pulp	2.48	4.0	0.4	<0.05	0.6	261.28	352.7	0.04	<1	7.0	4.5	64.07	240.80	44.16	2.95	43.63	6.75	42.71	8.58	24.83
013J773300	Sediment Pulp	3.50	2.4	0.6	<0.05	0.7	272.12	482.4	0.07	3	10.1	2.9	59.40	218.64	37.74	2.97	37.48	5.99	40.65	8.92	25.98
013J773301	Sediment Pulp	4.35	10.2	0.8	<0.05	1.3	225.90	479.8	0.08	<1	6.9	8.2	54.29	199.36	35.18	2.72	34.40	5.58	36.52	7.60	22.76
013J773302	Sediment Pulp	4.20	10.4	0.8	<0.05	1.2	222.58	469.5	0.08	1	6.8	8.0	53.89	193.72	33.45	2.63	32.98	5.46	35.63	7.43	21.60
013J773303	Sediment Pulp	4.09	11.6	0.7	<0.05	1.4	188.05	407.4	0.07	1	5.7	9.9	48.01	176.16	31.35	2.38	29.68	4.81	30.13	6.27	18.21
013J773304	Sediment Pulp	2.82	5.6	0.5	<0.05	0.6	229.21	477.2	0.05	1	8.6	5.1	55.45	200.19	35.39	2.66	33.97	5.48	34.80	7.47	22.12
013J773305	Sediment Pulp	1.76	1.8	0.3	<0.05	0.4	293.24	550.0	0.05	<1	11.0	1.9	53.46	191.42	36.53	2.58	37.56	6.43	44.39	9.50	28.95
013J773306	Sediment Pulp	1.96	23.4	1.0	<0.05	5.7	17.64	70.0	0.04	<1	0.6	20.3	9.41	34.24	5.92	0.87	4.49	0.57	3.28	0.58	1.69
013J773307	Sediment Pulp	1.68	1.9	0.3	<0.05	0.3	97.74	281.1	0.03	<1	6.2	2.3	40.26	150.22	21.88	2.10	18.47	2.53	15.75	3.15	9.65
013J773308	Sediment Pulp	3.98	3.6	0.8	<0.05	1.3	303.95	334.9	0.05	<1	18.5	5.6	54.78	206.87	40.51	2.48	43.42	7.26	47.65	10.24	30.51
013J773309	Sediment Pulp	4.29	5.2	1.0	<0.05	2.2	76.86	176.2	0.04	<1	3.6	6.3	21.33	79.29	13.56	1.18	12.60	1.92	12.52	2.50	7.57
013J773310	Sediment Pulp	4.95	3.4	1.2	<0.05	1.9	198.47	328.2	0.05	1	11.2	7.2	51.25	197.09	36.12	2.60	33.85	5.27	33.02	6.83	20.32
013J773311	Sediment Pulp	4.76	3.3	1.2	<0.05	1.8	207.13	332.7	0.05	1	12.2	7.2	52.35	196.73	37.09	2.64	35.08	5.47	33.47	7.09	20.84
013J773312	Sediment Pulp	2.94	4.5	0.8	<0.05	1.5	115.04	271.8	0.04	<1	6.0	5.8	29.62	113.39	19.12	1.59	18.06	2.73	17.85	3.63	11.01
013J773313	Sediment Pulp	2.27	4.7	0.7	<0.05	1.1	168.18	429.1	0.08	1	6.9	6.1	41.59	162.42	31.01	3.39	30.70	4.69	28.75	5.81	16.29
013J773314	Sediment Pulp	2.74	2.5	0.4	<0.05	0.8	207.78	308.6	0.05	<1	8.8	3.3	48.32	191.09	37.52	3.70	38.33	5.73	33.84	6.75	18.89
013J773315	Sediment Pulp	4.65	2.7	0.6	<0.05	1.5	213.25	498.7	0.10	4	7.8	6.0	51.18	195.05	37.27	3.69	36.16	5.56	34.96	7.16	20.54
013J773316	Sediment Pulp	2.92	3.7	0.5	<0.05	1.2	43.90	157.6	0.04	1	1.1	5.5	15.98	60.62	9.94	1.37	8.46	1.25	7.82	1.50	4.44
013J773317	Sediment Pulp	2.77	14.0	0.5	<0.05	2.7	28.43	123.5	0.03	10	0.8	10.7	12.59	47.05	7.46	1.06	6.18	0.84	5.15	0.95	2.75
013J773318	Sediment Pulp	2.17	4.8	0.4	<0.05	1.1	36.45	124.6	0.04	1	1.0	5.1	13.24	49.61	8.17	1.34	7.04	1.01	6.31	1.18	3.47
013J773319	Sediment Pulp	3.39	5.1	0.8	<0.05	2.6	31.75	91.8	<0.02	<1	1.0	7.1	10.69	38.92	6.49	0.72	5.63	0.81	5.12	1.00	2.99
013J773320	Sediment Pulp	2.12	1.9	0.4	<0.05	1.1	27.35	74.5	<0.02	<1	0.9	2.2	8.78	31.02	5.37	0.57	4.68	0.70	4.54	0.90	2.71
013J773321	Sediment Pulp	1.87	1.8	0.4	<0.05	0.9	25.18	69.6	<0.02	<1	0.8	2.0	8.50	29.59	5.11	0.54	4.46	0.67	4.33	0.86	2.57
013J773322	Sediment Pulp	3.17	6.3	1.0	<0.05	4.0	63.13	133.9	0.03	<1	1.5	5.8	15.89	61.69	11.05	1.08	10.55	1.61	10.61	2.17	6.57



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J773291	Sediment Pulp		0.46	3.03	0.43	<10	<2
013J773293	Sediment Pulp		1.06	6.64	0.90	<10	<2
013J773294	Sediment Pulp		0.45	2.96	0.43	<10	<2
013J773295	Sediment Pulp		1.10	7.04	0.95	<10	<2
013J773296	Sediment Pulp		0.47	2.94	0.41	<10	<2
013J773297	Sediment Pulp		0.49	3.12	0.43	<10	<2
013J773298	Sediment Pulp		3.17	19.18	2.54	<10	<2
013J773300	Sediment Pulp		3.49	21.84	2.94	<10	<2
013J773301	Sediment Pulp		2.99	18.77	2.44	<10	<2
013J773302	Sediment Pulp		2.91	18.19	2.39	<10	<2
013J773303	Sediment Pulp		2.43	15.14	1.99	<10	<2
013J773304	Sediment Pulp		2.98	18.84	2.58	<10	<2
013J773305	Sediment Pulp		3.96	25.40	3.35	<10	<2
013J773306	Sediment Pulp		0.22	1.47	0.21	<10	<2
013J773307	Sediment Pulp		1.35	9.02	1.34	<10	<2
013J773308	Sediment Pulp		4.35	26.59	3.54	<10	<2
013J773309	Sediment Pulp		1.07	7.04	0.97	<10	<2
013J773310	Sediment Pulp		2.88	19.33	2.77	<10	<2
013J773311	Sediment Pulp		2.94	19.91	2.83	<10	<2
013J773312	Sediment Pulp		1.54	10.03	1.39	<10	<2
013J773313	Sediment Pulp		2.19	14.38	1.98	<10	<2
013J773314	Sediment Pulp		2.41	15.24	2.13	<10	<2
013J773315	Sediment Pulp		2.85	18.90	2.59	<10	<2
013J773316	Sediment Pulp		0.62	3.95	0.52	<10	<2
013J773317	Sediment Pulp		0.38	2.46	0.33	<10	<2
013J773318	Sediment Pulp		0.48	3.18	0.43	<10	<2
013J773319	Sediment Pulp		0.41	2.65	0.37	<10	<2
013J773320	Sediment Pulp		0.37	2.38	0.32	<10	<2
013J773321	Sediment Pulp		0.35	2.26	0.29	<10	<2
013J773322	Sediment Pulp		0.91	6.03	0.86	<10	<2



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J773323	Sediment Pulp	34.74	25.78	9.46	430.7	227	9.6	9.9	238	6.06	2.5	28.2	0.7	3.7	25.6	0.79	0.30	0.03	69	0.45	0.068
013J773324	Sediment Pulp	24.45	25.23	9.79	292.5	265	9.1	6.9	176	3.26	1.0	25.3	9.2	2.3	28.6	0.75	0.27	0.03	58	0.47	0.068
013J773325	Sediment Pulp	13.48	23.13	12.04	226.1	111	7.6	7.5	315	3.03	2.3	20.5	<0.2	6.0	22.3	0.73	0.11	0.09	34	0.40	0.117
013J773326	Sediment Pulp	69.08	23.99	6.18	391.3	209	7.1	15.5	416	5.15	1.3	28.9	0.5	3.0	36.8	0.99	0.05	0.05	48	0.93	0.136
013J773327	Sediment Pulp	32.11	63.07	9.40	168.8	394	11.4	9.5	334	5.35	1.7	38.4	1.6	9.8	22.9	0.62	0.06	0.06	62	0.43	0.224
013J773328	Sediment Pulp	8.69	28.87	2.16	45.6	236	16.9	10.1	128	2.06	0.2	3.6	<0.2	1.2	14.8	0.26	0.04	<0.02	49	0.20	0.123
013J773329	Sediment Pulp	9.05	9.51	6.71	76.9	35	9.3	11.3	234	2.37	1.1	6.0	<0.2	3.4	15.2	0.17	0.05	0.03	30	0.27	0.063
013J773330	Sediment Pulp	24.75	42.98	5.16	140.8	717	18.8	67.7	2635	10.05	0.1	18.4	0.3	7.9	21.3	0.57	0.05	0.05	61	0.25	0.229
013J773331	Sediment Pulp	6.92	44.96	2.20	60.0	526	9.4	7.3	95	2.89	0.3	10.6	0.3	1.7	28.8	0.32	0.04	0.03	94	0.38	0.267
013J773332	Sediment Pulp	4.19	25.76	1.74	50.5	210	11.3	2.8	54	0.64	0.1	8.2	<0.2	0.7	18.2	0.18	0.05	0.02	24	0.23	0.080
013J771410	Sediment Pulp	2.99	17.68	2.50	30.6	98	4.1	1.3	35	0.33	0.1	2.9	2.0	0.3	17.4	0.10	0.03	<0.02	16	0.17	0.031
013J771411	Sediment Pulp	0.69	10.25	1.95	28.9	69	3.8	1.4	51	0.35	<0.1	1.5	0.5	0.4	18.5	0.13	0.04	<0.02	14	0.19	0.038
013J771412	Sediment Pulp	4.40	35.03	1.75	68.0	106	7.5	3.3	81	1.05	<0.1	2.9	4.3	0.9	23.8	0.14	0.04	<0.02	45	0.23	0.047
013J771413	Sediment Pulp	1.77	7.80	1.71	18.7	30	2.4	2.3	81	1.06	0.2	1.2	0.4	1.7	12.4	0.03	0.02	<0.02	21	0.16	0.036
013J771414	Sediment Pulp	1.44	14.17	1.45	19.9	16	2.5	2.9	72	0.75	0.2	4.1	0.6	3.5	12.7	0.06	0.02	<0.02	19	0.23	0.077
013J771415	Sediment Pulp	3.87	33.80	2.19	72.3	132	5.1	8.4	76	1.10	0.3	2.9	1.3	1.3	20.5	0.32	0.04	<0.02	31	0.28	0.054
013J771416	Sediment Pulp	4.41	34.08	1.81	80.0	148	8.5	4.4	130	1.33	<0.1	4.7	5.0	0.7	20.8	0.23	0.04	<0.02	29	0.25	0.076
013J771417	Sediment Pulp	3.47	83.55	1.97	102.1	322	9.2	10.3	296	2.79	<0.1	6.1	3.5	1.4	59.9	0.37	0.04	0.02	62	0.78	0.214
013J771418	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771419	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771421	Sediment Pulp	1.14	20.06	2.41	51.1	75	5.4	2.4	85	0.60	<0.1	2.4	1.5	1.1	17.1	0.10	0.03	<0.02	26	0.19	0.049
013J771422	Sediment Pulp	0.52	17.08	3.18	26.5	86	4.0	1.4	52	0.54	<0.1	1.6	0.8	0.8	17.1	0.13	0.03	<0.02	24	0.16	0.028
013J771423	Sediment Pulp	0.83	38.53	3.24	76.8	34	8.3	4.2	168	1.58	0.2	3.4	2.4	3.8	17.4	0.36	0.04	<0.02	46	0.26	0.073
013J771426	Sediment Pulp	1.63	30.59	6.16	138.7	124	14.0	18.8	1020	4.90	0.1	3.8	0.2	4.8	20.7	0.65	0.03	0.03	79	0.25	0.093
013J771429	Sediment Pulp	2.76	18.08	6.03	59.0	34	17.9	9.8	325	2.88	6.9	1.9	0.8	9.4	68.2	0.09	0.10	0.04	51	0.62	0.227
013J771431	Sediment Pulp	0.87	13.84	4.44	62.3	37	13.8	10.4	420	2.34	0.9	2.3	0.8	6.1	29.2	0.14	0.04	0.03	59	0.44	0.143
013J771432	Sediment Pulp	1.02	20.29	5.12	67.4	86	15.6	11.0	398	2.63	0.5	3.4	0.7	6.0	39.7	0.18	0.03	0.02	54	0.49	0.133
013J771436	Sediment Pulp	3.64	17.28	5.43	57.5	77	14.8	6.4	177	1.22	0.3	3.2	39.8	3.4	22.6	0.14	0.03	0.02	38	0.35	0.087
013J771437	Sediment Pulp	0.67	14.17	5.64	77.5	315	21.6	13.0	318	2.41	0.6	1.4	3.9	7.0	37.2	0.11	0.02	0.07	52	0.52	0.116
013J771440	Sediment Pulp	1.52	19.58	5.36	57.9	70	13.2	11.9	630	3.15	4.4	2.6	2.8	7.0	31.5	0.13	0.08	0.05	64	0.45	0.138



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001769.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J773323	Sediment Pulp	123.1	23.6	0.10	67.6	0.053	<20	2.16	0.013	0.02	1.0	2.7	0.12	0.17	159	2.7	<0.02	2.3	0.20	<0.1	0.04
013J773324	Sediment Pulp	119.0	22.1	0.09	66.4	0.049	<20	1.62	0.012	0.02	0.5	2.3	0.10	0.17	364	2.6	<0.02	2.2	0.20	<0.1	0.04
013J773325	Sediment Pulp	75.5	19.7	0.20	77.3	0.086	<20	1.26	0.019	0.06	0.6	3.0	0.09	0.07	40	1.3	<0.02	3.6	0.48	0.2	0.04
013J773326	Sediment Pulp	135.0	19.2	0.11	94.1	0.033	<20	1.80	0.021	0.05	6.0	2.2	0.16	1.73	148	2.1	<0.02	3.6	0.22	0.3	<0.02
013J773327	Sediment Pulp	417.0	24.6	0.08	60.7	0.055	<20	2.64	0.015	0.02	1.3	4.2	0.18	0.20	177	3.5	<0.02	6.8	0.21	0.6	<0.02
013J773328	Sediment Pulp	43.5	43.3	0.14	53.0	0.038	<20	1.16	0.008	0.02	1.1	1.6	0.11	0.12	112	1.1	<0.02	2.4	0.17	<0.1	<0.02
013J773329	Sediment Pulp	43.1	19.0	0.19	34.9	0.066	<20	0.95	0.016	0.04	1.0	1.6	0.06	0.05	55	0.5	<0.02	2.6	0.30	<0.1	0.03
013J773330	Sediment Pulp	252.0	25.6	0.07	136.6	0.060	<20	2.32	0.007	0.03	0.7	4.5	0.59	0.15	208	2.8	<0.02	5.9	0.27	0.5	<0.02
013J773331	Sediment Pulp	105.0	18.1	0.06	136.2	0.050	<20	1.53	0.006	0.02	0.3	2.8	0.17	0.37	144	2.2	<0.02	4.3	0.19	0.2	<0.02
013J773332	Sediment Pulp	73.8	12.9	0.08	84.7	0.029	<20	0.85	0.009	0.03	0.5	1.1	0.10	0.17	150	1.0	<0.02	2.5	0.21	<0.1	0.02
013J771410	Sediment Pulp	48.9	7.2	0.07	42.6	0.026	<20	0.41	0.007	0.03	0.1	0.8	0.05	0.24	158	0.6	<0.02	1.9	0.25	<0.1	<0.02
013J771411	Sediment Pulp	22.1	7.0	0.09	38.0	0.034	<20	0.36	0.014	0.04	0.2	1.0	0.05	0.10	131	0.7	<0.02	1.7	0.27	<0.1	<0.02
013J771412	Sediment Pulp	78.0	10.1	0.13	51.3	0.043	<20	0.80	0.013	0.05	0.4	1.6	0.12	0.20	206	1.3	<0.02	2.7	0.37	0.2	<0.02
013J771413	Sediment Pulp	19.2	5.5	0.11	24.5	0.048	<20	0.38	0.019	0.05	0.2	1.4	0.02	0.03	53	0.2	<0.02	1.7	0.30	<0.1	<0.02
013J771414	Sediment Pulp	29.9	5.6	0.10	22.5	0.047	<20	0.28	0.010	0.05	0.3	1.4	0.05	0.05	163	<0.1	<0.02	1.4	0.29	<0.1	<0.02
013J771415	Sediment Pulp	53.5	7.9	0.09	32.4	0.049	<20	0.38	0.019	0.04	0.1	1.6	0.24	0.74	219	0.6	<0.02	2.1	0.29	<0.1	<0.02
013J771416	Sediment Pulp	115.5	12.0	0.11	41.1	0.036	<20	0.91	0.010	0.04	0.1	1.8	0.10	0.20	162	1.3	<0.02	2.7	0.38	0.2	<0.02
013J771417	Sediment Pulp	124.9	20.4	0.07	75.7	0.049	<20	1.55	0.012	0.03	0.2	2.7	0.18	1.57	297	1.9	<0.02	4.2	0.28	0.2	<0.02
013J771418	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771419	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771421	Sediment Pulp	47.1	9.2	0.16	48.1	0.057	<20	0.49	0.013	0.06	0.2	1.5	0.06	0.10	91	0.6	<0.02	2.6	0.49	0.1	0.03
013J771422	Sediment Pulp	24.6	8.1	0.08	113.9	0.022	<20	0.37	0.013	0.02	0.1	1.3	0.06	0.13	143	0.6	<0.02	1.5	0.30	<0.1	<0.02
013J771423	Sediment Pulp	76.9	20.7	0.15	77.9	0.056	<20	1.16	0.021	0.06	<0.1	3.6	0.09	0.10	159	0.9	<0.02	2.4	0.21	0.2	<0.02
013J771426	Sediment Pulp	101.6	27.4	0.21	160.6	0.063	<20	2.17	0.016	0.07	<0.1	4.4	0.23	0.15	147	1.8	<0.02	5.0	0.47	0.3	<0.02
013J771429	Sediment Pulp	37.1	33.1	0.92	112.5	0.161	34	1.43	0.689	0.51	0.1	5.3	0.19	0.49	67	0.3	<0.02	5.9	1.77	0.1	0.24
013J771431	Sediment Pulp	38.3	24.9	0.49	138.2	0.109	<20	1.42	0.037	0.25	0.4	3.8	0.18	0.07	121	0.4	<0.02	4.5	1.24	<0.1	0.04
013J771432	Sediment Pulp	45.3	31.2	0.53	173.3	0.139	<20	1.71	0.034	0.26	0.3	4.5	0.15	0.05	104	0.6	<0.02	5.8	1.53	<0.1	0.03
013J771436	Sediment Pulp	25.2	27.9	0.48	105.9	0.135	<20	1.31	0.034	0.24	<0.1	3.7	0.13	0.07	132	0.2	<0.02	6.3	1.85	<0.1	0.07
013J771437	Sediment Pulp	33.6	38.0	0.80	147.3	0.175	<20	1.75	0.060	0.39	0.1	5.1	0.19	0.17	84	0.3	<0.02	7.3	2.14	0.1	0.10
013J771440	Sediment Pulp	49.8	26.4	0.46	138.9	0.108	<20	1.50	0.038	0.25	0.4	4.0	0.15	0.10	109	0.9	<0.02	4.9	1.15	0.1	0.04



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J773323	Sediment Pulp	3.76	2.6	0.5	<0.05	1.1	96.77	236.4	0.04	2	6.0	2.7	30.29	114.65	19.30	1.58	17.28	2.49	15.61	3.07	9.20
013J773324	Sediment Pulp	3.35	2.2	0.5	<0.05	1.1	86.24	229.9	0.04	1	4.0	2.4	30.25	113.13	18.70	1.53	16.47	2.37	14.81	2.89	8.45
013J773325	Sediment Pulp	3.48	5.7	1.0	<0.05	2.0	60.91	193.1	0.04	<1	3.3	6.9	19.94	77.44	12.96	1.41	11.68	1.80	11.24	2.45	6.97
013J773326	Sediment Pulp	1.73	1.8	0.4	<0.05	0.5	79.62	273.4	0.03	10	4.5	2.8	34.35	126.41	20.25	2.08	17.42	2.58	14.90	3.09	9.15
013J773327	Sediment Pulp	3.87	1.9	0.4	<0.05	1.2	112.52	829.0	0.07	2	3.4	2.2	98.60	338.51	49.91	4.66	36.18	5.25	29.43	5.50	14.69
013J773328	Sediment Pulp	1.44	1.7	0.2	<0.05	0.4	18.13	85.4	<0.02	<1	0.5	1.7	10.53	36.86	5.77	0.73	4.31	0.63	3.84	0.73	2.17
013J773329	Sediment Pulp	2.41	3.3	0.5	<0.05	1.2	25.42	72.1	<0.02	<1	1.6	6.2	10.66	40.14	6.60	0.65	5.89	0.82	5.16	1.06	2.99
013J773330	Sediment Pulp	2.78	3.1	0.4	<0.05	0.5	79.50	468.5	0.06	2	1.9	1.8	58.27	204.72	31.03	2.81	22.32	2.95	16.95	3.17	9.05
013J773331	Sediment Pulp	2.32	1.5	0.3	<0.05	0.6	33.17	190.0	0.02	2	0.9	0.9	23.17	80.57	12.45	1.84	8.25	1.12	6.50	1.31	3.62
013J773332	Sediment Pulp	1.40	2.2	0.3	<0.05	0.5	23.85	142.9	<0.02	2	0.3	2.1	18.44	66.96	10.27	1.32	7.48	0.97	5.07	0.93	2.43
013J771410	Sediment Pulp	0.67	2.2	0.3	<0.05	0.2	11.27	81.5	<0.02	6	0.1	1.8	11.58	42.42	6.51	1.10	3.98	0.48	2.30	0.43	1.06
013J771411	Sediment Pulp	0.82	2.9	0.2	<0.05	0.2	5.53	35.1	<0.02	2	0.1	1.8	4.96	18.12	2.95	0.48	1.91	0.22	1.20	0.20	0.55
013J771412	Sediment Pulp	1.17	4.1	0.3	<0.05	0.3	16.46	131.8	<0.02	4	0.4	3.1	19.45	70.15	10.29	1.69	7.33	0.80	3.95	0.64	1.72
013J771413	Sediment Pulp	1.21	3.1	0.3	<0.05	0.3	6.12	36.4	<0.02	<1	<0.1	2.5	4.74	16.39	2.60	0.48	1.96	0.25	1.40	0.24	0.63
013J771414	Sediment Pulp	1.40	3.7	0.3	<0.05	0.3	9.78	55.3	<0.02	1	0.2	2.9	7.01	25.78	4.21	0.68	3.04	0.35	1.94	0.36	1.05
013J771415	Sediment Pulp	1.30	2.8	0.3	<0.05	0.3	11.86	90.7	<0.02	6	0.3	1.8	12.25	44.30	6.24	0.99	4.57	0.46	2.63	0.43	1.17
013J771416	Sediment Pulp	0.92	3.7	0.2	<0.05	0.2	28.84	187.3	<0.02	3	0.4	3.0	27.81	102.24	15.16	2.29	10.74	1.32	6.68	1.15	2.63
013J771417	Sediment Pulp	1.79	2.1	0.3	<0.05	0.3	35.60	249.4	0.02	6	0.6	1.6	30.94	112.71	17.94	3.19	12.25	1.59	7.96	1.47	3.62
013J771418	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771419	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771421	Sediment Pulp	1.61	5.1	0.3	<0.05	0.6	12.61	81.3	<0.02	2	0.4	4.3	10.71	38.43	5.89	0.91	4.15	0.50	2.43	0.50	1.17
013J771422	Sediment Pulp	0.47	2.1	0.2	<0.05	<0.1	7.24	45.0	<0.02	<1	0.2	1.3	5.93	21.97	3.43	0.62	2.33	0.31	1.72	0.27	0.69
013J771423	Sediment Pulp	1.63	3.6	0.4	<0.05	0.7	43.27	162.2	<0.02	2	1.4	3.8	21.35	82.26	13.37	2.32	11.29	1.55	8.90	1.69	5.02
013J771426	Sediment Pulp	1.91	6.2	0.5	<0.05	0.6	62.81	251.3	0.04	<1	2.1	4.5	26.40	99.26	17.46	2.33	15.07	2.15	12.09	2.60	7.41
013J771429	Sediment Pulp	2.84	33.4	0.8	<0.05	7.9	14.08	73.6	0.02	3	0.6	19.6	8.90	32.08	5.31	0.88	4.31	0.55	3.14	0.53	1.63
013J771431	Sediment Pulp	2.49	18.8	0.6	<0.05	2.2	17.59	80.6	0.02	2	0.6	11.0	9.55	34.32	6.01	0.85	4.39	0.67	3.47	0.69	1.92
013J771432	Sediment Pulp	2.88	20.6	0.7	<0.05	1.8	24.40	86.5	0.03	2	0.9	12.6	10.99	40.27	7.17	1.03	6.47	0.85	5.17	1.05	2.78
013J771436	Sediment Pulp	2.98	19.5	0.7	<0.05	2.4	9.97	48.6	0.03	<1	0.5	10.3	6.03	21.68	3.72	0.56	2.86	0.41	2.24	0.42	1.07
013J771437	Sediment Pulp	2.70	30.9	0.8	<0.05	3.8	12.20	66.1	0.03	<1	0.3	15.9	8.10	27.90	4.88	0.78	3.42	0.49	2.67	0.47	1.27
013J771440	Sediment Pulp	2.19	18.3	0.6	<0.05	1.8	19.40	115.6	0.03	2	0.6	12.4	12.12	42.84	6.46	1.14	4.91	0.69	4.02	0.73	2.02



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Project: None Given

Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001769.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013J773323	Sediment Pulp	1.23	7.81	1.07	<10	<2	
013J773324	Sediment Pulp	1.15	7.17	0.97	<10	<2	
013J773325	Sediment Pulp	1.01	6.45	1.02	<10	3	
013J773326	Sediment Pulp	1.31	8.68	1.31	<10	<2	
013J773327	Sediment Pulp	2.07	13.26	1.87	<10	<2	
013J773328	Sediment Pulp	0.32	1.96	0.31	<10	<2	
013J773329	Sediment Pulp	0.44	2.58	0.36	<10	<2	
013J773330	Sediment Pulp	1.31	8.29	1.18	<10	<2	
013J773331	Sediment Pulp	0.53	3.49	0.50	<10	<2	
013J773332	Sediment Pulp	0.37	2.37	0.33	<10	<2	
013J771410	Sediment Pulp	0.15	0.95	0.12	<10	3	
013J771411	Sediment Pulp	0.08	0.49	0.07	<10	<2	
013J771412	Sediment Pulp	0.21	1.16	0.17	<10	<2	
013J771413	Sediment Pulp	0.09	0.54	0.09	<10	<2	
013J771414	Sediment Pulp	0.13	0.89	0.15	<10	<2	
013J771415	Sediment Pulp	0.16	1.05	0.13	<10	2	
013J771416	Sediment Pulp	0.33	1.96	0.26	<10	<2	
013J771417	Sediment Pulp	0.48	2.94	0.42	<10	<2	
013J771418	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771419	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013J771421	Sediment Pulp	0.16	1.07	0.15	<10	<2	
013J771422	Sediment Pulp	0.12	0.59	0.08	<10	<2	
013J771423	Sediment Pulp	0.70	4.22	0.62	<10	<2	
013J771426	Sediment Pulp	1.01	5.93	0.86	<10	<2	
013J771429	Sediment Pulp	0.21	1.29	0.18	<10	<2	
013J771431	Sediment Pulp	0.28	1.71	0.24	<10	<2	
013J771432	Sediment Pulp	0.37	2.17	0.30	<10	4	
013J771436	Sediment Pulp	0.15	0.85	0.12	<10	<2	
013J771437	Sediment Pulp	0.17	1.04	0.12	<10	<2	
013J771440	Sediment Pulp	0.30	1.67	0.23	<10	<2	



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Project: None Given
Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001769.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013J771441 Sediment Pulp	0.89	13.63	4.61	59.6	36	13.7	10.6	408	2.32	0.9	2.4	0.6	6.2	30.3	0.14	0.04	0.04	58	0.43	0.155
013J771444 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771445 Sediment Pulp	1.25	19.92	4.86	69.6	63	15.5	12.9	598	4.30	0.8	1.7	1.1	5.5	26.3	0.16	0.04	0.04	55	0.38	0.132
013J771446 Sediment Pulp	0.82	34.78	2.95	73.7	75	19.3	10.2	275	3.71	<0.1	2.0	1.7	3.0	35.9	0.22	0.03	<0.02	38	0.53	0.063
013J771447 Sediment Pulp	2.40	49.35	9.27	82.9	177	15.8	15.2	533	3.33	0.8	6.4	0.8	3.8	39.7	0.37	0.03	0.04	82	0.44	0.163
013J771453 Sediment Pulp	4.19	40.99	5.69	92.5	283	10.3	14.5	740	4.03	<0.1	19.7	1.5	2.1	41.5	0.39	<0.02	0.04	76	0.74	0.174
013J771454 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771455 Sediment Pulp	9.25	39.67	77.05	288.1	573	11.7	7.7	391	1.59	32.1	8.4	2.3	1.5	61.6	1.40	0.47	0.92	16	5.66	0.061
013J771456 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771457 Sediment Pulp	0.29	3.09	2.85	14.7	20	4.2	2.0	68	0.62	<0.1	0.8	0.5	1.2	15.0	0.05	0.09	<0.02	16	0.20	0.030
013J771459 Sediment Pulp	0.49	11.96	2.85	33.1	19	13.1	5.1	123	1.02	0.5	0.7	0.5	2.6	21.6	0.10	0.04	0.02	60	0.32	0.064
013J771461 Sediment Pulp	2.27	45.03	8.03	84.5	157	14.6	14.3	553	3.41	0.4	5.6	1.1	2.9	37.8	0.33	0.03	0.04	88	0.44	0.157
013J771467 Sediment Pulp	3.52	21.85	4.09	68.1	105	14.6	6.3	158	2.60	1.0	4.3	2.0	1.6	95.7	0.72	0.40	0.03	67	1.81	0.069
013J771468 Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771469 Sediment Pulp	1.40	33.65	4.19	66.2	201	12.7	31.8	515	3.87	<0.1	5.4	2.1	1.8	24.8	0.31	0.03	0.03	80	0.28	0.152
013J771471 Sediment Pulp	0.34	13.11	3.46	54.5	51	11.6	5.8	177	1.28	0.1	0.7	0.7	2.5	22.3	0.09	0.03	0.02	36	0.38	0.069
013J771472 Sediment Pulp	0.26	16.68	4.51	37.2	52	10.4	4.1	128	1.10	0.1	0.8	1.5	1.3	24.2	0.09	0.05	<0.02	28	0.30	0.062



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22001769.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013J771441	Sediment Pulp	38.8	25.2	0.47	139.9	0.115	<20	1.36	0.039	0.25	0.4	4.0	0.18	0.07	115	0.4	<0.02	4.5	1.27	<0.1
013J771444	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771445	Sediment Pulp	42.1	29.1	0.48	154.5	0.120	<20	1.73	0.034	0.25	0.1	4.4	0.15	0.06	84	0.9	<0.02	4.9	1.14	<0.1
013J771446	Sediment Pulp	65.9	22.1	0.09	125.6	0.041	<20	1.72	0.015	0.03	0.3	3.1	0.08	0.22	134	1.0	<0.02	3.1	0.27	0.2
013J771447	Sediment Pulp	68.0	36.2	0.35	163.1	0.122	<20	2.24	0.030	0.16	0.3	3.9	0.23	0.13	133	1.2	<0.02	7.8	1.40	0.2
013J771453	Sediment Pulp	51.9	34.6	0.08	146.3	0.051	<20	2.87	0.016	0.02	0.1	3.9	0.19	0.21	220	2.9	<0.02	5.5	0.34	<0.1
013J771454	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771455	Sediment Pulp	10.3	11.3	0.49	87.4	0.037	<20	0.37	0.021	0.04	0.9	2.1	0.19	1.36	87	0.9	0.02	1.9	0.47	<0.1
013J771456	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771457	Sediment Pulp	13.4	10.3	0.15	28.4	0.051	<20	0.48	0.026	0.05	<0.1	1.3	0.03	0.07	62	0.2	<0.02	2.1	0.50	<0.1
013J771459	Sediment Pulp	22.8	28.4	0.27	57.6	0.074	<20	0.62	0.023	0.15	0.1	2.4	0.07	0.31	100	0.5	<0.02	2.4	0.55	<0.1
013J771461	Sediment Pulp	62.7	34.4	0.35	145.1	0.117	<20	2.20	0.030	0.15	0.2	3.8	0.18	0.13	121	1.3	<0.02	7.2	1.24	<0.1
013J771467	Sediment Pulp	34.4	16.8	0.48	292.4	0.047	<20	1.02	0.017	0.04	<0.1	1.8	0.18	0.07	107	0.9	<0.02	2.5	0.53	<0.1
013J771468	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771469	Sediment Pulp	53.5	34.0	0.08	84.9	0.048	<20	1.94	0.023	0.03	<0.1	2.5	0.22	0.16	177	2.0	<0.02	3.6	0.39	<0.1
013J771471	Sediment Pulp	23.9	21.0	0.41	98.3	0.106	<20	1.12	0.035	0.17	<0.1	3.0	0.10	0.06	150	0.4	<0.02	4.2	1.04	<0.1
013J771472	Sediment Pulp	21.6	20.6	0.31	76.7	0.086	<20	0.94	0.024	0.10	<0.1	2.4	0.06	0.12	146	0.6	<0.02	4.2	0.96	<0.1



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Project: None Given

Report Date: July 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22001769.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013J771441	Sediment Pulp	2.48	19.1	0.7	<0.05	3.2	18.12	82.5	0.02	<1	1.0	10.7	9.50	35.05	5.79	0.90	4.59	0.65	3.58	0.72	1.92
013J771444	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771445	Sediment Pulp	2.45	18.7	0.7	<0.05	1.8	18.13	86.5	0.03	<1	0.6	10.9	10.25	37.05	5.92	0.97	4.30	0.62	3.41	0.66	1.96
013J771446	Sediment Pulp	1.29	2.4	0.2	<0.05	0.7	16.64	118.1	<0.02	<1	0.6	1.8	15.03	52.27	7.83	1.00	5.37	0.62	3.39	0.60	1.59
013J771447	Sediment Pulp	3.06	13.9	0.7	<0.05	1.7	22.79	133.7	0.04	<1	0.8	9.0	15.92	55.09	7.79	1.40	6.21	0.85	4.62	0.88	2.54
013J771453	Sediment Pulp	2.13	2.1	0.2	<0.05	0.3	35.29	100.5	0.05	<1	1.2	1.2	14.12	50.74	9.17	1.54	7.73	1.24	7.05	1.42	3.92
013J771454	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771455	Sediment Pulp	0.58	3.2	3.0	<0.05	1.2	9.15	16.8	0.48	18	0.1	3.5	2.71	11.33	2.18	0.44	2.12	0.27	1.62	0.33	0.84
013J771456	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771457	Sediment Pulp	1.12	3.4	0.4	<0.05	0.7	7.03	26.2	<0.02	<1	0.2	2.9	3.04	12.18	2.11	0.33	1.72	0.22	1.31	0.23	0.65
013J771459	Sediment Pulp	1.84	11.8	0.5	<0.05	3.9	10.73	42.7	<0.02	<1	0.4	4.4	4.80	17.24	2.88	0.47	2.38	0.31	1.82	0.33	0.93
013J771461	Sediment Pulp	2.89	13.5	0.7	<0.05	1.7	23.38	124.2	0.04	<1	1.0	8.2	14.27	53.00	7.74	1.29	5.90	0.78	4.51	0.82	2.38
013J771467	Sediment Pulp	0.77	3.0	0.4	<0.05	0.5	12.26	64.4	<0.02	4	0.4	2.4	8.01	29.00	4.65	0.64	3.50	0.44	2.37	0.41	1.12
013J771468	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013J771469	Sediment Pulp	1.42	2.0	0.3	<0.05	0.3	19.28	107.3	0.02	<1	0.8	1.0	12.13	44.79	6.46	1.00	4.96	0.66	3.82	0.70	2.02
013J771471	Sediment Pulp	2.09	14.0	0.6	<0.05	1.9	9.00	49.7	<0.02	<1	0.4	8.5	5.81	21.47	3.52	0.57	2.65	0.33	1.85	0.32	0.88
013J771472	Sediment Pulp	2.01	9.3	0.5	<0.05	1.4	7.32	42.7	<0.02	<1	0.3	6.5	5.06	18.15	2.91	0.48	2.14	0.27	1.48	0.26	0.71



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22001769.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013J771441	Sediment Pulp	0.29	1.62	0.24	<10	<2
013J771444	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771445	Sediment Pulp	0.27	1.64	0.23	<10	<2
013J771446	Sediment Pulp	0.22	1.32	0.21	<10	<2
013J771447	Sediment Pulp	0.37	2.15	0.28	<10	<2
013J771453	Sediment Pulp	0.58	3.24	0.41	<10	<2
013J771454	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771455	Sediment Pulp	0.12	0.88	0.13	<10	<2
013J771456	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771457	Sediment Pulp	0.08	0.51	0.07	<10	<2
013J771459	Sediment Pulp	0.12	0.75	0.11	<10	<2
013J771461	Sediment Pulp	0.31	1.91	0.26	<10	<2
013J771467	Sediment Pulp	0.14	0.84	0.11	<10	<2
013J771468	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.
013J771469	Sediment Pulp	0.26	1.61	0.22	<10	<2
013J771471	Sediment Pulp	0.11	0.69	0.09	<10	<2
013J771472	Sediment Pulp	0.09	0.55	0.07	<10	<2



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QUALITY CONTROL REPORT

VAN22001769.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013J773010	Sediment Pulp	2.73	12.76	6.28	65.7	82	13.0	13.3	631	3.59	2.1	3.6	0.5	11.7	35.6	0.11	0.06	0.06	46	0.47	0.129
REP 013J773010	QC	2.73	12.79	6.24	61.1	78	13.2	12.6	637	3.63	2.2	3.6	0.8	11.4	34.5	0.10	0.06	0.06	46	0.47	0.123
013J773082	Sediment Pulp	5.06	39.45	1.78	109.3	241	22.4	5.7	86	1.13	<0.1	6.6	0.3	0.5	22.4	0.22	0.05	<0.02	29	0.31	0.084
REP 013J773082	QC	5.04	38.17	1.77	107.0	237	22.2	5.7	86	1.14	<0.1	6.6	0.6	0.5	21.7	0.22	0.05	<0.02	29	0.31	0.084
013J773132	Sediment Pulp	5.61	111.80	3.41	84.1	386	25.2	65.3	1157	5.52	<0.1	3.9	1.3	1.2	20.9	0.49	0.02	0.06	65	0.55	0.166
REP 013J773132	QC	5.72	112.97	3.58	84.9	395	25.8	67.5	1180	5.61	<0.1	4.2	1.2	1.3	21.2	0.48	0.02	0.06	65	0.55	0.171
013J773214	Sediment Pulp	13.70	45.88	8.37	108.4	506	17.4	20.5	510	6.29	1.4	13.6	1.2	4.3	26.1	0.40	0.06	0.04	56	0.38	0.226
REP 013J773214	QC	14.20	47.34	8.69	111.4	543	18.5	21.5	516	6.46	1.7	14.1	2.8	4.5	27.0	0.36	0.07	0.04	57	0.38	0.248
013J773258	Sediment Pulp	11.68	21.78	3.12	46.2	217	5.2	5.1	165	1.16	<0.1	12.8	0.5	0.7	17.0	0.21	0.15	<0.02	17	0.22	0.060
REP 013J773258	QC	11.59	22.26	3.04	46.4	225	5.3	5.1	166	1.16	<0.1	12.3	0.4	0.7	17.3	0.20	0.14	<0.02	16	0.22	0.058
013J773302	Sediment Pulp	25.18	28.84	16.88	389.6	418	11.8	33.6	3256	11.04	0.4	54.7	0.8	8.3	25.9	1.48	0.08	0.08	49	0.44	0.176
REP 013J773302	QC	24.96	28.44	16.63	387.2	422	11.9	33.7	3231	10.93	0.6	54.3	0.5	8.1	25.3	1.48	0.08	0.08	48	0.44	0.178
013J771413	Sediment Pulp	1.77	7.80	1.71	18.7	30	2.4	2.3	81	1.06	0.2	1.2	0.4	1.7	12.4	0.03	0.02	<0.02	21	0.16	0.036
REP 013J771413	QC	1.90	8.32	1.83	20.2	25	2.5	2.4	83	1.04	0.1	1.3	<0.2	1.9	12.9	0.04	0.02	<0.02	21	0.16	0.040
013J771461	Sediment Pulp	2.27	45.03	8.03	84.5	157	14.6	14.3	553	3.41	0.4	5.6	1.1	2.9	37.8	0.33	0.03	0.04	88	0.44	0.157
REP 013J771461	QC	2.37	46.91	8.32	88.1	165	15.1	14.6	563	3.48	0.4	5.8	1.8	2.9	38.7	0.34	0.03	0.04	90	0.45	0.163
Reference Materials																					
STD DS11	Standard	13.07	136.66	120.53	322.3	1497	77.0	12.7	1003	2.98	40.0	2.1	105.7	6.7	61.9	2.05	5.79	10.32	46	0.99	0.065
STD DS11	Standard	13.74	146.77	129.18	349.6	1675	80.4	14.8	1051	3.21	41.6	2.2	42.4	7.0	67.3	2.29	5.63	10.69	50	1.07	0.072
STD DS11	Standard	14.25	144.51	133.68	322.2	1694	74.7	13.8	988	2.90	43.9	2.4	49.7	8.5	63.0	2.53	5.84	11.41	41	1.01	0.071
STD DS11	Standard	13.64	144.77	130.35	333.5	1642	79.1	13.7	1014	3.05	42.6	2.2	40.5	6.9	64.8	2.31	5.85	10.63	48	1.02	0.070
STD DS11	Standard	13.86	133.08	131.91	317.1	1616	74.4	13.3	977	2.93	43.7	2.4	106.7	8.0	60.9	2.29	5.80	12.14	42	0.99	0.065
STD DS11	Standard	13.77	148.57	137.69	347.4	2213	82.1	13.8	1071	3.22	46.5	2.6	54.8	9.5	67.6	2.65	5.50	12.59	51	1.08	0.076
STD DS11	Standard	13.68	142.49	122.23	326.6	1715	78.9	14.1	1045	3.08	42.6	2.1	84.5	6.7	63.2	2.17	5.47	10.06	47	1.03	0.071
STD DS11	Standard	12.38	141.97	126.24	324.4	1608	76.0	13.2	993	2.99	41.6	2.2	156.3	6.8	63.0	2.16	5.05	10.49	41	1.00	0.068
STD OREAS262	Standard	0.58	108.12	49.60	146.7	434	62.2	26.6	523	3.15	33.7	1.0	57.5	7.9	32.8	0.60	1.65	0.84	20	2.91	0.038
STD OREAS262	Standard	0.60	117.58	55.66	158.7	455	65.0	28.9	551	3.45	36.3	1.1	49.7	8.9	35.5	0.62	1.49	0.97	23	3.08	0.041
STD OREAS262	Standard	0.61	114.93	56.20	142.2	460	62.1	27.0	517	3.07	36.3	1.2	49.4	10.3	35.1	0.67	1.66	1.01	17	2.77	0.038



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Project:

None Given

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013J773010	Sediment Pulp	46.6	23.4	0.70	151.1	0.166	<20	1.32	0.034	0.45	0.4	3.9	0.24	0.03	59	0.1	<0.02	4.8	3.29	0.2	0.17
REP 013J773010	QC	44.4	23.2	0.71	147.2	0.164	<20	1.33	0.036	0.45	0.4	3.8	0.23	0.03	59	0.1	<0.02	4.6	3.16	0.1	0.14
013J773082	Sediment Pulp	106.6	17.5	0.09	99.4	0.034	<20	1.40	0.009	0.04	0.3	1.6	0.17	0.28	133	1.5	<0.02	1.1	0.28	<0.1	<0.02
REP 013J773082	QC	107.5	17.6	0.09	96.9	0.034	<20	1.40	0.010	0.04	0.2	1.5	0.17	0.29	144	1.4	<0.02	1.1	0.28	<0.1	<0.02
013J773132	Sediment Pulp	77.7	41.5	0.11	84.6	0.060	<20	2.99	0.009	0.03	0.2	3.1	0.31	0.26	178	3.4	<0.02	4.1	0.21	<0.1	<0.02
REP 013J773132	QC	81.7	41.8	0.11	87.4	0.061	<20	3.04	0.009	0.03	0.2	3.2	0.33	0.27	184	3.5	<0.02	4.2	0.22	<0.1	<0.02
013J773214	Sediment Pulp	152.2	42.4	0.06	142.3	0.046	<20	2.51	0.011	0.03	2.4	4.2	0.21	0.33	191	2.9	<0.02	4.0	0.28	0.2	<0.02
REP 013J773214	QC	159.9	43.7	0.06	152.3	0.047	<20	2.55	0.009	0.03	2.4	4.3	0.22	0.33	200	2.7	<0.02	3.9	0.29	0.2	<0.02
013J773258	Sediment Pulp	96.5	5.4	0.04	77.8	0.030	<20	1.61	0.010	0.01	0.2	1.5	0.07	0.20	146	1.9	<0.02	0.8	0.12	<0.1	<0.02
REP 013J773258	QC	94.8	5.4	0.04	75.9	0.029	<20	1.62	0.008	0.01	0.2	1.5	0.07	0.20	140	1.9	<0.02	0.9	0.11	<0.1	<0.02
013J773302	Sediment Pulp	241.7	22.4	0.23	135.4	0.082	<20	2.88	0.017	0.10	0.6	3.5	0.44	0.19	149	6.1	<0.02	3.8	0.72	<0.1	0.04
REP 013J773302	QC	239.4	21.9	0.23	135.0	0.082	<20	2.85	0.018	0.10	0.6	3.5	0.44	0.19	152	5.8	<0.02	3.7	0.72	<0.1	0.04
013J771413	Sediment Pulp	19.2	5.5	0.11	24.5	0.048	<20	0.38	0.019	0.05	0.2	1.4	0.02	0.03	53	0.2	<0.02	1.7	0.30	<0.1	<0.02
REP 013J771413	QC	20.0	5.9	0.11	25.5	0.052	<20	0.37	0.019	0.04	0.2	1.4	0.03	0.03	44	0.3	<0.02	1.8	0.32	<0.1	<0.02
013J771461	Sediment Pulp	62.7	34.4	0.35	145.1	0.117	<20	2.20	0.030	0.15	0.2	3.8	0.18	0.13	121	1.3	<0.02	7.2	1.24	<0.1	0.05
REP 013J771461	QC	66.1	35.5	0.35	153.0	0.123	<20	2.23	0.031	0.16	0.2	3.9	0.21	0.13	128	1.2	<0.02	7.4	1.31	<0.1	0.05
Reference Materials																					
STD DS11	Standard	15.6	56.4	0.81	366.6	0.087	<20	1.07	0.067	0.38	2.5	2.9	4.38	0.28	240	2.2	4.53	4.5	2.47	<0.1	0.06
STD DS11	Standard	16.7	61.8	0.86	391.9	0.095	<20	1.16	0.072	0.41	2.3	3.1	4.55	0.30	248	2.4	5.02	4.8	2.59	<0.1	0.06
STD DS11	Standard	17.2	56.2	0.79	395.5	0.092	<20	1.09	0.068	0.39	2.8	2.9	4.63	0.26	260	2.0	4.40	4.6	2.83	<0.1	0.05
STD DS11	Standard	15.9	58.1	0.85	375.1	0.090	<20	1.11	0.071	0.39	2.2	3.0	4.63	0.28	248	2.2	4.87	4.6	2.46	<0.1	0.07
STD DS11	Standard	16.7	57.8	0.78	377.5	0.086	<20	1.03	0.065	0.37	2.6	3.0	4.66	0.27	287	2.0	4.19	4.5	2.64	<0.1	0.06
STD DS11	Standard	19.2	60.1	0.87	431.4	0.098	<20	1.20	0.075	0.41	2.2	3.4	5.02	0.30	254	2.1	4.50	5.0	3.09	<0.1	0.07
STD DS11	Standard	16.1	56.6	0.83	369.1	0.091	<20	1.11	0.067	0.39	2.4	3.0	4.60	0.29	231	2.2	4.43	4.7	2.61	<0.1	0.06
STD DS11	Standard	16.2	56.7	0.81	383.0	0.085	<20	1.07	0.067	0.38	2.3	3.0	4.67	0.26	259	2.2	4.39	4.6	2.60	<0.1	0.07
STD OREAS262	Standard	14.1	40.1	1.13	219.7	0.003	<20	1.18	0.066	0.29	<0.1	2.9	0.41	0.26	149	0.4	0.23	3.6	1.97	<0.1	0.20
STD OREAS262	Standard	16.3	44.3	1.22	248.5	0.003	<20	1.29	0.069	0.32	<0.1	3.1	0.43	0.28	161	0.4	0.23	3.8	2.26	<0.1	0.22
STD OREAS262	Standard	17.1	40.5	1.09	243.9	0.003	<20	1.16	0.064	0.30	<0.1	3.2	0.44	0.24	152	0.7	0.20	3.6	2.37	<0.1	0.18



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013J773010	Sediment Pulp	2.51	38.8	0.7	<0.05	6.7	18.05	92.2	0.03	<1	0.5	17.0	10.07	37.99	5.89	0.91	4.86	0.63	3.63	0.65	1.80
REP 013J773010	QC	2.36	38.0	0.7	<0.05	6.6	17.41	90.0	0.03	<1	0.5	16.5	10.26	36.04	5.66	0.90	4.11	0.57	3.69	0.67	1.74
013J773082	Sediment Pulp	1.50	3.2	0.2	<0.05	0.7	39.45	185.4	<0.02	2	0.5	1.7	25.06	97.28	14.02	1.99	10.71	1.28	6.94	1.32	3.64
REP 013J773082	QC	1.56	3.1	0.2	<0.05	0.7	39.53	183.4	<0.02	2	0.5	1.7	25.09	96.18	13.86	1.96	10.53	1.27	6.93	1.31	3.62
013J773132	Sediment Pulp	1.19	1.9	0.1	<0.05	0.4	18.19	150.1	0.03	2	0.5	1.8	16.69	61.42	8.49	1.59	5.86	0.70	3.70	0.63	1.62
REP 013J773132	QC	1.20	1.9	0.1	<0.05	0.4	18.60	157.1	0.03	2	0.5	1.9	17.57	64.54	8.83	1.67	6.12	0.74	3.90	0.66	1.70
013J773214	Sediment Pulp	2.21	2.9	0.2	<0.05	0.6	51.64	246.1	0.02	1	1.4	1.6	31.96	107.78	15.51	2.92	11.96	1.64	8.98	1.82	5.37
REP 013J773214	QC	2.37	2.9	0.2	<0.05	0.7	52.05	264.0	0.03	2	1.1	1.6	34.30	116.39	16.98	3.15	12.78	1.72	9.52	1.97	5.72
013J773258	Sediment Pulp	1.32	0.9	0.2	<0.05	0.3	51.60	184.5	<0.02	<1	4.3	0.8	22.36	83.96	13.33	2.10	11.18	1.54	9.33	1.77	5.14
REP 013J773258	QC	1.34	0.9	0.2	<0.05	0.4	51.59	178.3	<0.02	<1	4.3	0.8	21.68	82.23	12.95	2.05	10.95	1.50	9.06	1.73	5.03
013J773302	Sediment Pulp	4.20	10.4	0.8	<0.05	1.2	222.58	469.5	0.08	1	6.8	8.0	53.89	193.72	33.45	2.63	32.98	5.46	35.63	7.43	21.60
REP 013J773302	QC	4.27	10.1	0.7	<0.05	1.2	219.92	465.1	0.08	1	6.8	8.0	52.95	192.08	34.08	2.62	32.78	5.42	35.56	7.51	21.46
013J771413	Sediment Pulp	1.21	3.1	0.3	<0.05	0.3	6.12	36.4	<0.02	<1	<0.1	2.5	4.74	16.39	2.60	0.48	1.96	0.25	1.40	0.24	0.63
REP 013J771413	QC	1.31	3.1	0.3	<0.05	0.3	6.19	37.7	<0.02	<1	0.2	2.5	4.71	17.33	2.91	0.48	1.88	0.25	1.40	0.24	0.65
013J771461	Sediment Pulp	2.89	13.5	0.7	<0.05	1.7	23.38	124.2	0.04	<1	1.0	8.2	14.27	53.00	7.74	1.29	5.90	0.78	4.51	0.82	2.38
REP 013J771461	QC	2.96	14.2	0.7	<0.05	1.6	24.11	130.0	0.04	<1	1.1	8.4	14.74	55.70	8.14	1.35	6.25	0.82	4.71	0.85	2.47
Reference Materials																					
STD DS11	Standard	1.17	31.8	1.5	<0.05	2.7	7.53	32.2	0.21	41	0.7	21.7	3.51	13.03	2.32	0.45	1.88	0.24	1.38	0.25	0.72
STD DS11	Standard	1.32	34.5	1.7	<0.05	3.0	7.89	33.5	0.23	43	0.7	22.4	3.59	13.26	2.34	0.43	1.90	0.24	1.41	0.26	0.72
STD DS11	Standard	1.19	32.1	1.6	<0.05	2.4	7.34	34.4	0.23	48	0.7	21.7	3.80	13.36	2.45	0.48	2.08	0.26	1.55	0.25	0.73
STD DS11	Standard	1.24	32.8	1.7	<0.05	2.9	7.93	32.1	0.23	42	0.7	23.1	3.41	12.88	2.29	0.43	1.87	0.24	1.38	0.25	0.70
STD DS11	Standard	1.19	31.6	1.6	<0.05	2.3	7.22	32.4	0.22	44	1.0	23.6	3.48	13.25	2.34	0.46	1.88	0.25	1.46	0.27	0.66
STD DS11	Standard	1.34	36.3	1.9	<0.05	2.7	8.11	38.3	0.28	53	0.6	23.0	4.01	15.79	2.74	0.57	2.20	0.28	1.70	0.31	0.84
STD DS11	Standard	1.26	31.6	1.6	<0.05	2.8	7.58	32.9	0.21	44	0.7	22.2	3.33	13.09	2.33	0.44	1.93	0.24	1.39	0.24	0.70
STD DS11	Standard	1.18	31.5	1.7	<0.05	2.8	7.55	33.0	0.21	40	0.6	21.3	3.37	13.12	2.35	0.45	1.96	0.25	1.43	0.25	0.73
STD OREAS262	Standard	<0.02	17.5	0.5	<0.05	9.0	10.20	28.1	0.03	<1	1.1	15.6	3.40	13.28	2.86	0.58	2.60	0.34	1.89	0.34	0.94
STD OREAS262	Standard	<0.02	19.2	0.5	<0.05	9.5	10.90	32.1	0.03	<1	1.1	16.7	3.83	14.99	3.21	0.62	2.91	0.37	2.10	0.39	1.03
STD OREAS262	Standard	<0.02	18.3	0.5	<0.05	7.1	10.19	33.0	0.04	<1	0.9	17.0	4.01	14.96	3.30	0.63	2.86	0.39	2.10	0.38	0.99



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: July 22, 2022

Page: 1 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22001769.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
Pulp Duplicates							
013J773010	Sediment Pulp		0.27	1.74	0.26	<10	<2
REP 013J773010	QC		0.27	1.65	0.25	<10	<2
013J773082	Sediment Pulp		0.49	3.11	0.49	<10	<2
REP 013J773082	QC		0.48	3.07	0.48	<10	<2
013J773132	Sediment Pulp		0.21	1.25	0.17	<10	<2
REP 013J773132	QC		0.22	1.30	0.17	<10	<2
013J773214	Sediment Pulp		0.82	5.42	0.82	<10	<2
REP 013J773214	QC		0.82	5.55	0.82	<10	<2
013J773258	Sediment Pulp		0.71	4.38	0.59	<10	<2
REP 013J773258	QC		0.69	4.32	0.58	<10	<2
013J773302	Sediment Pulp		2.91	18.19	2.39	<10	<2
REP 013J773302	QC		2.89	18.05	2.38	<10	<2
013J771413	Sediment Pulp		0.09	0.54	0.09	<10	<2
REP 013J771413	QC		0.10	0.61	0.08	<10	<2
013J771461	Sediment Pulp		0.31	1.91	0.26	<10	<2
REP 013J771461	QC		0.33	2.01	0.27	<10	<2
Reference Materials							
STD DS11	Standard		0.10	0.63	0.09	95	152
STD DS11	Standard		0.10	0.65	0.09	102	160
STD DS11	Standard		0.11	0.68	0.10	88	167
STD DS11	Standard		0.10	0.64	0.09	97	158
STD DS11	Standard		0.11	0.71	0.10	94	164
STD DS11	Standard		0.12	0.78	0.10	94	187
STD DS11	Standard		0.09	0.63	0.09	99	154
STD DS11	Standard		0.10	0.65	0.09	92	157
STD OREAS262	Standard		0.12	0.73	0.11	<10	<2
STD OREAS262	Standard		0.13	0.84	0.12	<10	<2
STD OREAS262	Standard		0.13	0.86	0.12	<10	3



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MINERAL LABORATORIES
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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: July 22, 2022

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Page: 2 of 2

Part: 1 of 4

QUALITY CONTROL REPORT

VAN22001769.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.56	112.78	52.00	147.9	429	62.0	27.6	538	3.19	33.5	1.1	47.3	8.4	34.0	0.59	1.44	0.87	21	2.99	0.038
STD OREAS262	Standard	0.61	117.18	54.07	144.6	458	64.9	28.7	535	3.24	37.4	1.2	51.1	9.7	36.1	0.69	1.65	1.01	17	2.93	0.041
STD OREAS262	Standard	0.61	114.76	56.79	154.5	485	62.7	27.3	541	3.34	38.5	1.2	51.9	10.4	35.9	0.65	1.75	1.07	22	2.96	0.039
STD OREAS262	Standard	0.61	113.43	53.84	152.0	489	65.3	27.3	548	3.25	36.1	1.1	46.9	8.6	34.7	0.62	1.47	0.90	20	3.04	0.039
STD OREAS262	Standard	0.60	113.10	51.96	151.8	471	62.3	27.7	542	3.31	35.4	1.1	44.0	8.4	34.2	0.63	1.47	0.88	22	2.97	0.039
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.03	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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MINERAL LABORATORIES
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Ottawa Ontario K1A 0E8 Canada

Project: None Given
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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Page: 2 of 2

Part: 2 of 4

QUALITY CONTROL REPORT

VAN22001769.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	15.3	40.9	1.19	228.2	0.003	<20	1.22	0.068	0.30	<0.1	2.9	0.43	0.25	143	0.4	0.23	3.5	2.11	<0.1	0.21
STD OREAS262	Standard	16.7	40.9	1.13	248.7	0.003	<20	1.17	0.065	0.30	<0.1	3.0	0.43	0.25	164	0.5	0.22	4.0	2.37	<0.1	0.19
STD OREAS262	Standard	16.1	41.9	1.19	257.5	0.003	<20	1.22	0.067	0.30	<0.1	3.3	0.45	0.27	159	0.3	0.23	4.0	2.45	<0.1	0.20
STD OREAS262	Standard	14.3	41.8	1.16	227.4	0.003	<20	1.19	0.068	0.29	<0.1	3.0	0.46	0.27	162	0.6	0.24	3.7	2.19	<0.1	0.23
STD OREAS262	Standard	14.4	40.3	1.16	231.1	0.003	<20	1.15	0.067	0.30	<0.1	3.0	0.43	0.25	154	0.5	0.21	3.6	2.13	<0.1	0.22
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: July 22, 2022

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Page: 2 of 2

Part: 3 of 4

QUALITY CONTROL REPORT

VAN22001769.1

		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	18.0	0.5	<0.05	9.4	10.45	29.9	0.03	<1	1.1	16.2	3.61	13.72	2.92	0.57	2.64	0.35	1.95	0.35	0.94
STD OREAS262	Standard	<0.02	18.3	0.6	<0.05	7.0	10.36	31.7	0.04	<1	1.2	18.2	3.89	14.27	3.15	0.69	3.11	0.39	2.07	0.38	1.00
STD OREAS262	Standard	<0.02	18.4	0.6	<0.05	7.7	10.55	31.5	0.04	<1	0.9	17.0	3.86	14.22	3.22	0.64	2.73	0.38	2.27	0.39	1.09
STD OREAS262	Standard	<0.02	17.6	0.5	<0.05	9.7	10.68	29.0	0.03	<1	1.1	16.4	3.29	13.44	2.99	0.59	2.75	0.36	2.02	0.36	0.99
STD OREAS262	Standard	<0.02	17.5	0.5	<0.05	9.3	10.71	29.5	0.03	1	1.0	16.4	3.31	13.62	2.98	0.59	2.74	0.35	1.99	0.35	0.98
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	0.1	0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: July 22, 2022

Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22001769.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.13	0.75	0.11	<10	<2
STD OREAS262	Standard	0.14	0.84	0.12	<10	<2
STD OREAS262	Standard	0.15	0.87	0.13	<10	<2
STD OREAS262	Standard	0.13	0.80	0.11	<10	<2
STD OREAS262	Standard	0.13	0.78	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Client:

Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: June 28, 2022
Analysis Start: June 30, 2022
Report Date: July 27, 2022
Page: 1 of 11

CERTIFICATE OF ANALYSIS

VAN22001886.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 272

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	267	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	267	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



BUREAU MINERAL LABORATORIES
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Page: 2 of 11

Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22001886.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833342	Sediment Pulp	0.55	11.92	3.46	21.8	103	3.5	1.2	53	0.26	<0.1	5.9	0.8	0.1	16.6	0.12	0.03	0.07	11	0.27	0.038
013K833343	Sediment Pulp	2.41	53.49	5.84	80.4	540	8.9	6.9	331	3.33	0.8	9.6	1.7	1.3	29.1	0.34	0.05	0.06	54	0.75	0.256
013K833344	Sediment Pulp	3.62	48.94	5.89	80.6	541	10.9	13.8	364	3.22	0.6	8.7	1.0	1.0	28.1	0.40	0.05	0.06	60	0.56	0.263
013K833345	Sediment Pulp	0.94	26.13	2.94	50.2	121	8.2	4.8	31	0.92	0.2	5.4	0.9	0.5	16.9	0.18	0.09	0.04	15	0.38	0.040
013K833346	Sediment Pulp	0.79	12.19	2.91	44.4	91	6.9	4.8	73	0.81	0.3	1.3	0.4	0.6	23.5	0.18	0.03	0.04	13	0.25	0.044
013K833347	Sediment Pulp	0.93	32.61	24.55	127.6	2623	43.8	28.7	1197	3.04	24.9	3.8	3.1	6.5	25.5	0.56	0.60	3.23	44	0.58	0.086
013K833348	Sediment Pulp	0.60	12.61	3.40	39.0	85	6.4	2.4	62	0.78	0.2	1.0	0.6	0.5	18.5	0.12	0.02	0.04	18	0.22	0.057
013K833349	Sediment Pulp	0.97	22.08	2.89	49.5	145	6.1	2.2	62	0.69	<0.1	1.7	0.9	0.3	20.1	0.22	0.03	0.04	26	0.25	0.059
013K833350	Sediment Pulp	1.82	8.17	5.89	20.9	60	2.7	1.6	59	0.36	0.2	1.2	0.4	0.3	15.9	0.10	0.03	0.03	12	0.19	0.027
013K833351	Sediment Pulp	0.59	12.73	6.63	38.5	98	4.8	1.9	63	0.60	0.3	1.1	0.3	0.5	15.3	0.11	0.02	0.02	12	0.17	0.050
013K833352	Sediment Pulp	8.09	41.70	12.51	166.2	272	12.4	34.6	1163	4.82	0.3	3.2	0.3	1.3	20.9	0.90	0.03	0.03	37	0.33	0.169
013K833353	Sediment Pulp	6.00	37.42	5.35	68.0	95	9.9	5.0	6291	1.28	6.7	52.6	1.2	0.7	68.5	0.68	0.05	0.04	26	0.98	0.095
013K833354	Sediment Pulp	3.09	74.54	7.93	56.9	42	19.0	7.9	196	1.58	2.3	6.2	1.3	3.7	37.0	0.29	0.07	0.06	33	0.59	0.063
013K833355	Sediment Pulp	1.46	18.07	6.91	56.9	46	18.4	11.1	2273	2.79	2.2	2.2	0.4	5.1	22.9	0.19	0.05	0.07	35	0.41	0.111
013K833356	Sediment Pulp	5.83	30.81	4.90	83.9	216	13.0	25.1	1102	2.53	0.7	1.9	1.0	0.8	24.1	0.60	0.04	0.02	30	0.33	0.103
013K833357	Sediment Pulp	6.86	32.91	6.49	80.2	175	12.4	7.3	472	1.50	0.4	3.9	0.4	0.3	26.1	0.68	0.06	0.04	30	0.54	0.126
013K833358	Sediment Pulp	8.69	64.62	4.98	94.8	469	14.5	11.2	326	2.61	0.4	2.5	0.3	0.6	36.6	0.77	0.06	0.03	39	0.93	0.217
013K833359	Sediment Pulp	2.15	23.08	2.44	84.4	117	18.5	13.6	235	3.14	0.3	1.3	0.4	0.6	58.3	0.31	<0.02	0.02	60	0.90	0.162
013K833360	Sediment Pulp	1.08	23.77	1.54	63.4	115	10.2	9.7	225	1.69	<0.1	0.5	0.6	0.1	24.3	0.35	0.02	<0.02	45	0.42	0.107
013K833361	Sediment Pulp	5.90	37.24	5.16	69.0	89	9.6	5.3	6413	1.32	6.6	50.7	1.7	0.7	64.7	0.67	0.05	0.03	26	0.98	0.092
013K833362	Sediment Pulp	0.67	13.28	2.55	56.4	52	19.0	10.6	189	1.81	0.3	0.5	<0.2	0.8	44.0	0.25	<0.02	0.04	38	0.66	0.077
013K833363	Sediment Pulp	2.96	36.59	3.17	185.3	375	30.6	26.6	5866	6.01	1.0	1.1	0.3	1.7	35.9	0.95	0.03	0.05	51	0.54	0.449
013K833364	Sediment Pulp	1.90	40.31	2.90	181.2	239	19.1	33.2	3220	4.57	0.2	0.7	0.3	1.3	31.3	1.09	0.03	0.04	46	0.51	0.340
013K833365	Sediment Pulp	0.59	22.67	1.85	87.5	73	10.7	3.3	101	0.43	<0.1	0.4	<0.2	0.2	25.1	0.41	<0.02	0.02	25	0.40	0.136
013K833366	Sediment Pulp	9.06	42.66	75.18	291.5	638	12.4	7.7	417	1.76	36.1	8.9	2.6	1.3	62.7	1.42	0.50	0.99	19	6.23	0.065
013K833367	Sediment Pulp	4.36	15.83	3.16	115.9	150	12.1	51.4	5843	5.07	<0.1	0.5	0.2	0.7	24.1	0.76	0.02	0.03	30	0.29	0.209
013K833368	Sediment Pulp	2.81	14.36	2.33	128.9	102	11.9	7.8	372	2.66	<0.1	0.7	2.7	0.4	25.0	0.75	0.02	0.02	44	0.39	0.184
013K833369	Sediment Pulp	2.67	13.51	2.74	138.6	99	13.3	15.1	349	4.85	<0.1	0.6	0.6	0.6	19.8	0.67	0.03	0.02	58	0.36	0.127
013K833370	Sediment Pulp	0.87	11.90	1.31	96.0	61	9.9	4.9	74	0.43	<0.1	0.5	0.7	<0.1	22.4	0.28	0.03	<0.02	25	0.44	0.059
013K833371	Sediment Pulp	0.86	11.98	1.30	90.6	63	9.9	5.1	68	0.46	<0.1	0.5	0.3	<0.1	23.5	0.24	<0.02	<0.02	26	0.46	0.068



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833342	Sediment Pulp	30.2	5.3	0.05	54.9	0.026	<20	0.53	0.008	0.02	<0.1	0.5	0.06	0.10	39	0.4	<0.02	2.1	0.67	<0.1	<0.02
013K833343	Sediment Pulp	109.8	23.9	0.08	100.4	0.064	<20	2.78	0.006	0.03	0.3	2.7	0.22	0.20	174	1.7	<0.02	5.7	0.56	0.2	0.05
013K833344	Sediment Pulp	107.9	22.1	0.06	117.4	0.053	<20	2.38	0.005	0.02	0.2	2.6	0.27	0.25	195	1.9	<0.02	5.6	0.47	0.2	0.07
013K833345	Sediment Pulp	56.9	9.2	0.05	47.4	0.025	<20	0.71	0.005	0.02	0.6	1.0	0.18	0.90	52	0.8	<0.02	1.8	0.26	0.1	0.03
013K833346	Sediment Pulp	32.8	10.2	0.09	56.9	0.032	<20	0.65	0.007	0.03	0.6	1.0	0.11	0.22	51	0.5	<0.02	2.0	0.49	<0.1	0.05
013K833347	Sediment Pulp	41.0	47.8	0.78	165.8	0.095	<20	1.58	0.026	0.25	0.2	5.6	0.27	0.15	260	0.7	0.04	5.5	1.40	0.1	0.13
013K833348	Sediment Pulp	23.9	8.9	0.13	62.1	0.043	<20	0.55	0.009	0.05	0.7	0.9	0.09	0.11	46	0.5	<0.02	1.9	0.51	<0.1	0.07
013K833349	Sediment Pulp	31.1	11.1	0.09	71.2	0.032	<20	0.65	0.007	0.03	0.3	0.8	0.09	0.12	59	0.8	<0.02	2.0	0.44	<0.1	0.05
013K833350	Sediment Pulp	18.4	4.7	0.05	34.2	0.029	<20	0.27	0.008	0.02	0.5	0.6	0.06	0.09	32	0.3	<0.02	1.4	0.45	<0.1	0.05
013K833351	Sediment Pulp	29.6	7.3	0.09	53.1	0.044	<20	0.63	0.008	0.03	<0.1	1.0	0.05	0.08	40	0.5	<0.02	2.5	0.44	<0.1	0.05
013K833352	Sediment Pulp	91.5	14.0	0.07	151.5	0.036	<20	2.12	0.004	0.03	0.2	3.4	0.45	0.13	104	1.8	<0.02	3.7	0.37	0.2	0.03
013K833353	Sediment Pulp	34.2	14.2	0.18	162.1	0.016	<20	0.94	0.022	0.06	<0.1	2.5	0.16	1.04	66	1.5	<0.02	1.6	0.79	<0.1	0.04
013K833354	Sediment Pulp	33.1	22.0	0.50	129.6	0.073	<20	0.88	0.028	0.11	0.1	3.7	0.12	0.28	26	0.9	<0.02	3.1	0.87	<0.1	0.24
013K833355	Sediment Pulp	34.8	22.8	0.48	143.2	0.085	<20	1.03	0.034	0.08	0.1	3.2	0.09	0.02	12	0.2	<0.02	3.4	0.73	<0.1	0.07
013K833356	Sediment Pulp	51.5	17.7	0.10	145.3	0.027	<20	1.97	0.006	0.03	0.1	2.4	0.15	0.14	104	1.5	<0.02	2.5	0.33	0.1	0.02
013K833357	Sediment Pulp	35.1	17.4	0.13	178.3	0.022	<20	2.01	0.006	0.04	0.2	1.7	0.07	0.21	84	1.8	<0.02	2.3	0.38	0.1	0.03
013K833358	Sediment Pulp	65.1	21.8	0.12	257.8	0.031	<20	2.65	0.006	0.02	0.1	2.8	0.16	0.26	255	2.1	<0.02	2.9	0.27	0.1	0.04
013K833359	Sediment Pulp	18.1	18.1	0.32	70.3	0.032	<20	3.60	0.166	0.04	<0.1	2.9	0.07	0.17	72	1.3	<0.02	5.5	0.20	<0.1	0.02
013K833360	Sediment Pulp	11.5	13.5	0.09	35.9	0.012	<20	2.46	0.018	0.01	<0.1	1.7	0.04	0.29	80	1.5	<0.02	2.4	0.11	<0.1	<0.02
013K833361	Sediment Pulp	33.2	14.6	0.18	151.7	0.016	<20	0.95	0.021	0.06	<0.1	2.5	0.16	1.06	73	1.6	<0.02	1.8	0.76	<0.1	0.02
013K833362	Sediment Pulp	14.6	18.9	0.33	71.0	0.039	<20	2.97	0.134	0.05	<0.1	2.3	0.04	0.09	29	0.5	<0.02	5.5	0.31	<0.1	<0.02
013K833363	Sediment Pulp	43.0	23.1	0.20	196.0	0.039	<20	4.97	0.040	0.06	0.1	4.6	0.38	0.23	184	2.7	<0.02	5.4	0.35	0.1	0.07
013K833364	Sediment Pulp	36.5	19.6	0.16	66.4	0.033	<20	5.60	0.049	0.03	0.1	5.9	0.27	0.29	190	3.2	<0.02	6.3	0.30	0.1	0.07
013K833365	Sediment Pulp	23.1	11.4	0.10	51.3	0.011	<20	2.12	0.026	0.02	<0.1	0.9	0.03	0.21	63	0.9	<0.02	2.1	0.15	<0.1	0.02
013K833366	Sediment Pulp	10.7	12.9	0.58	96.5	0.038	<20	0.43	0.024	0.05	0.5	2.5	0.22	1.50	99	1.2	0.03	1.9	0.52	<0.1	0.04
013K833367	Sediment Pulp	23.1	14.4	0.13	146.5	0.020	<20	2.53	0.031	0.03	0.1	4.6	0.15	0.18	100	1.5	<0.02	3.6	0.24	<0.1	0.03
013K833368	Sediment Pulp	29.9	16.1	0.15	83.8	0.022	<20	2.87	0.027	0.03	<0.1	2.9	0.05	0.25	59	1.2	<0.02	3.7	0.31	0.1	<0.02
013K833369	Sediment Pulp	22.5	21.0	0.18	90.0	0.028	<20	2.43	0.024	0.03	<0.1	3.1	0.11	0.18	54	1.3	<0.02	4.1	0.30	0.1	<0.02
013K833370	Sediment Pulp	25.6	20.2	0.14	31.4	0.016	<20	1.10	0.021	0.02	<0.1	1.5	0.05	0.28	40	0.7	<0.02	2.0	0.26	<0.1	<0.02
013K833371	Sediment Pulp	26.3	19.3	0.14	27.0	0.016	<20	1.09	0.021	0.02	<0.1	1.6	0.05	0.30	35	0.6	<0.02	2.1	0.26	<0.1	<0.02



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833342	Sediment Pulp	1.15	2.9	0.5	<0.05	0.9	13.92	54.6	<0.02	<1	0.4	2.2	7.37	24.56	3.94	0.54	3.17	0.47	2.83	0.54	1.50
013K833343	Sediment Pulp	4.28	3.0	0.4	<0.05	3.9	58.86	237.2	0.03	1	2.1	2.3	30.13	103.49	16.69	2.50	14.81	2.09	12.20	2.37	6.98
013K833344	Sediment Pulp	4.05	2.4	0.4	<0.05	3.6	55.30	212.0	0.03	2	2.0	2.0	28.26	102.07	16.58	2.38	15.17	2.13	11.62	2.23	6.69
013K833345	Sediment Pulp	1.37	1.6	0.4	<0.05	2.6	30.99	118.4	<0.02	4	1.0	2.5	15.71	56.93	9.41	1.24	8.18	1.15	6.69	1.27	3.50
013K833346	Sediment Pulp	1.79	3.0	0.4	<0.05	3.2	18.95	68.9	<0.02	<1	0.4	3.5	8.47	29.36	5.45	0.74	4.30	0.69	3.87	0.76	2.21
013K833347	Sediment Pulp	2.21	23.3	1.1	<0.05	5.5	18.03	73.8	0.04	<1	0.5	21.1	10.34	35.76	6.10	0.95	4.71	0.63	3.65	0.60	1.73
013K833348	Sediment Pulp	1.95	3.8	0.3	<0.05	3.4	12.65	48.1	<0.02	<1	0.4	3.6	5.99	21.21	3.60	0.58	2.92	0.43	2.64	0.49	1.54
013K833349	Sediment Pulp	1.69	2.8	0.3	<0.05	3.1	17.94	65.5	<0.02	<1	0.7	2.6	8.05	28.46	4.73	0.74	4.38	0.65	3.71	0.74	2.15
013K833350	Sediment Pulp	1.56	1.9	0.4	<0.05	2.6	10.04	34.6	<0.02	<1	0.2	1.4	4.54	15.78	2.65	0.35	2.14	0.32	1.91	0.39	1.08
013K833351	Sediment Pulp	1.98	3.6	0.4	<0.05	2.5	14.30	58.9	<0.02	<1	0.8	3.4	7.52	27.32	4.62	0.70	4.05	0.55	3.17	0.59	1.54
013K833352	Sediment Pulp	1.59	3.4	0.2	<0.05	1.4	40.39	240.8	0.03	7	2.0	2.2	23.64	80.93	13.52	1.90	10.61	1.58	8.72	1.71	4.98
013K833353	Sediment Pulp	0.58	3.6	0.2	<0.05	1.9	37.10	47.3	<0.02	1	0.8	4.0	8.79	32.04	5.77	1.07	6.49	0.97	6.13	1.32	3.71
013K833354	Sediment Pulp	2.57	9.4	0.5	<0.05	15.1	26.71	59.9	<0.02	2	0.9	8.4	8.55	31.27	5.76	0.97	5.51	0.80	4.66	0.93	2.96
013K833355	Sediment Pulp	1.10	7.0	0.4	<0.05	3.6	16.85	75.8	<0.02	<1	0.7	9.9	8.76	31.06	5.46	0.89	4.35	0.59	3.33	0.63	1.85
013K833356	Sediment Pulp	1.33	3.2	0.2	<0.05	1.2	32.42	133.0	<0.02	3	2.0	3.4	14.30	52.77	9.48	1.42	8.11	1.17	6.94	1.29	3.61
013K833357	Sediment Pulp	1.03	3.9	0.2	<0.05	1.2	25.86	71.8	<0.02	26	1.1	3.4	9.81	36.12	6.36	1.12	5.59	0.88	5.00	0.97	2.66
013K833358	Sediment Pulp	1.73	2.3	0.2	<0.05	2.1	43.36	105.5	0.02	6	1.8	2.5	18.52	66.09	12.04	1.98	10.12	1.57	8.21	1.61	4.72
013K833359	Sediment Pulp	0.50	2.2	0.2	<0.05	0.8	11.95	32.0	<0.02	<1	0.2	3.9	4.91	18.98	3.42	0.76	3.01	0.41	2.34	0.42	1.20
013K833360	Sediment Pulp	0.24	0.9	0.1	<0.05	0.2	8.93	20.7	<0.02	<1	<0.1	1.2	3.12	12.08	2.27	0.56	2.20	0.30	1.70	0.34	0.87
013K833361	Sediment Pulp	0.56	3.5	0.2	<0.05	1.7	34.86	44.9	<0.02	<1	1.0	3.9	8.45	31.51	5.90	1.04	6.35	0.97	5.99	1.25	3.67
013K833362	Sediment Pulp	0.69	2.9	0.2	<0.05	0.9	7.70	31.2	<0.02	<1	0.2	5.8	4.29	16.07	2.84	0.66	2.23	0.30	1.63	0.30	0.81
013K833363	Sediment Pulp	0.73	4.0	0.2	<0.05	2.2	27.36	80.1	0.02	<1	0.7	4.5	11.72	44.53	7.42	1.79	6.92	0.99	5.51	1.07	2.85
013K833364	Sediment Pulp	0.68	2.3	0.2	<0.05	2.0	31.01	73.2	<0.02	<1	0.3	3.3	10.88	41.14	7.55	1.87	7.34	1.00	6.22	1.13	3.14
013K833365	Sediment Pulp	0.34	1.3	0.1	<0.05	1.2	18.92	38.3	<0.02	<1	0.1	1.7	7.01	28.13	5.12	1.10	4.51	0.66	3.65	0.68	1.95
013K833366	Sediment Pulp	0.61	3.4	3.2	<0.05	1.2	9.49	17.6	0.50	17	<0.1	4.1	2.79	11.77	2.44	0.47	2.20	0.31	1.70	0.34	0.88
013K833367	Sediment Pulp	0.27	1.9	0.2	<0.05	0.9	19.08	47.1	<0.02	<1	0.2	3.2	6.78	26.73	5.04	1.00	4.58	0.65	3.81	0.71	2.17
013K833368	Sediment Pulp	0.53	2.3	0.2	<0.05	0.6	21.87	51.3	<0.02	<1	0.4	3.4	9.27	34.20	6.18	1.43	5.64	0.76	4.32	0.84	2.46
013K833369	Sediment Pulp	0.56	2.7	0.2	<0.05	0.4	15.36	38.6	<0.02	<1	0.4	3.7	6.58	25.58	4.52	1.08	4.23	0.53	2.96	0.58	1.54
013K833370	Sediment Pulp	0.37	2.1	0.1	<0.05	0.4	19.30	28.1	<0.02	<1	0.1	2.5	8.00	30.47	5.31	1.67	4.46	0.58	3.67	0.72	2.10
013K833371	Sediment Pulp	0.37	2.1	0.1	<0.05	0.3	20.33	29.4	<0.02	<1	0.2	2.5	8.25	31.62	5.71	1.71	5.03	0.64	3.89	0.76	2.31



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Project: None Given
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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K833342	Sediment Pulp	0.20	1.22	0.16	<10	<2	
013K833343	Sediment Pulp	1.00	5.78	0.71	<10	<2	
013K833344	Sediment Pulp	0.95	5.37	0.76	<10	<2	
013K833345	Sediment Pulp	0.50	2.89	0.40	<10	<2	
013K833346	Sediment Pulp	0.32	1.64	0.21	<10	<2	
013K833347	Sediment Pulp	0.26	1.64	0.25	<10	<2	
013K833348	Sediment Pulp	0.20	1.12	0.16	<10	<2	
013K833349	Sediment Pulp	0.30	1.79	0.22	<10	<2	
013K833350	Sediment Pulp	0.14	0.90	0.13	<10	<2	
013K833351	Sediment Pulp	0.21	1.17	0.16	<10	<2	
013K833352	Sediment Pulp	0.63	4.14	0.55	<10	<2	
013K833353	Sediment Pulp	0.52	3.26	0.47	<10	10	
013K833354	Sediment Pulp	0.36	2.52	0.40	<10	4	
013K833355	Sediment Pulp	0.25	1.55	0.21	<10	<2	
013K833356	Sediment Pulp	0.51	2.98	0.40	<10	<2	
013K833357	Sediment Pulp	0.39	2.42	0.32	<10	2	
013K833358	Sediment Pulp	0.67	3.90	0.55	<10	<2	
013K833359	Sediment Pulp	0.17	0.95	0.15	<10	<2	
013K833360	Sediment Pulp	0.13	0.77	0.11	<10	<2	
013K833361	Sediment Pulp	0.50	3.22	0.46	<10	10	
013K833362	Sediment Pulp	0.12	0.67	0.09	<10	<2	
013K833363	Sediment Pulp	0.41	2.59	0.35	<10	<2	
013K833364	Sediment Pulp	0.45	2.85	0.37	<10	<2	
013K833365	Sediment Pulp	0.27	1.68	0.23	<10	<2	
013K833366	Sediment Pulp	0.12	0.88	0.13	<10	<2	
013K833367	Sediment Pulp	0.32	1.91	0.28	<10	3	
013K833368	Sediment Pulp	0.30	2.01	0.30	<10	<2	
013K833369	Sediment Pulp	0.23	1.53	0.21	<10	<2	
013K833370	Sediment Pulp	0.27	1.76	0.29	<10	<2	
013K833371	Sediment Pulp	0.31	1.87	0.29	<10	<2	



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CERTIFICATE OF ANALYSIS

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833372	Sediment Pulp	0.76	13.71	0.98	72.9	66	10.3	3.9	57	0.30	0.1	0.4	0.6	<0.1	19.3	0.24	0.02	<0.02	14	0.47	0.056
013K833373	Sediment Pulp	0.84	8.01	1.80	64.2	44	8.6	4.4	81	0.57	0.2	0.3	0.3	<0.1	18.4	0.23	<0.02	<0.02	21	0.40	0.072
013K833374	Sediment Pulp	1.13	9.72	1.21	110.7	61	10.5	5.5	122	1.15	<0.1	0.6	0.5	0.2	20.4	0.35	<0.02	<0.02	38	0.40	0.063
013K833375	Sediment Pulp	4.19	26.65	3.49	116.4	254	21.5	12.8	358	3.50	0.5	1.4	0.4	1.0	42.8	0.50	0.02	0.04	66	0.67	0.214
013K833376	Sediment Pulp	1.81	12.79	2.70	131.1	100	15.3	15.7	682	4.23	0.5	0.7	<0.2	0.8	23.8	0.48	<0.02	0.02	66	0.42	0.126
013K833377	Sediment Pulp	0.45	7.55	1.52	60.8	34	10.5	4.7	184	1.06	0.4	0.3	0.2	0.3	16.8	0.14	<0.02	<0.02	34	0.32	0.094
013K833378	Sediment Pulp	1.49	16.13	3.43	107.3	145	20.2	13.6	431	2.75	0.9	1.1	0.4	0.6	25.1	0.33	0.04	0.04	129	0.50	0.144
013K833379	Sediment Pulp	3.28	26.38	3.84	119.7	239	23.4	29.3	1847	5.20	2.8	1.5	0.5	1.7	28.5	0.72	0.03	0.04	78	0.64	0.211
013K833380	Sediment Pulp	4.17	33.61	2.66	118.0	309	14.8	21.2	1222	7.10	1.9	1.6	0.7	1.6	29.1	0.67	0.03	0.04	75	0.59	0.231
013K833381	Sediment Pulp	1.55	16.31	3.46	109.6	149	20.6	13.9	442	2.81	0.9	1.1	0.6	0.6	25.8	0.31	0.04	0.04	132	0.51	0.147
013K833382	Sediment Pulp	2.43	52.51	4.13	78.9	40	27.6	12.7	194	1.93	0.7	9.7	0.9	3.9	24.2	0.21	0.07	0.03	66	0.59	0.044
013K833383	Sediment Pulp	2.71	29.54	8.19	76.0	144	31.0	19.3	2076	3.93	3.5	2.6	0.3	4.9	27.4	0.27	0.04	0.07	84	0.45	0.136
013K833384	Sediment Pulp	0.98	32.45	25.80	127.8	2831	47.4	29.2	1202	3.01	25.2	3.8	2.6	8.1	26.6	0.55	0.52	3.16	45	0.61	0.090
013K833385	Sediment Pulp	2.03	21.52	4.72	42.5	31	26.1	10.8	283	2.18	3.5	2.0	0.3	2.6	21.2	0.11	0.06	0.03	62	0.49	0.067
013K833386	Sediment Pulp	2.17	29.58	5.19	94.0	76	17.3	9.6	182	1.53	0.3	2.8	0.5	1.1	29.0	0.33	0.03	<0.02	36	0.51	0.067
013K833387	Sediment Pulp	2.53	28.98	5.22	86.0	68	16.9	9.1	204	1.53	0.5	2.7	<0.2	1.0	26.8	0.31	0.05	<0.02	35	0.49	0.075
013K833388	Sediment Pulp	2.71	163.99	2.77	101.5	100	27.4	8.9	129	1.21	0.5	2.7	1.1	4.9	21.2	0.42	0.06	0.02	29	0.73	0.045
013K833389	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833390	Sediment Pulp	4.70	85.81	2.87	90.0	188	12.7	7.3	321	1.97	0.5	1.6	1.1	0.8	20.9	0.56	0.03	0.04	38	0.52	0.080
013K833391	Sediment Pulp	0.71	29.00	4.56	50.4	39	18.9	9.4	319	2.12	1.5	1.6	2.1	3.6	22.0	0.09	0.03	0.05	37	0.44	0.086
013K833392	Sediment Pulp	1.41	37.10	4.81	50.6	58	21.7	12.4	649	2.58	1.3	5.6	0.5	4.1	38.1	0.13	0.03	0.04	41	0.50	0.104
013K833393	Sediment Pulp	2.44	37.47	2.22	124.3	186	17.0	18.7	455	5.08	0.7	0.8	0.5	1.3	28.8	0.55	0.03	<0.02	37	0.42	0.143
013K833394	Sediment Pulp	6.84	25.61	2.11	108.0	221	14.1	13.0	606	4.04	0.6	1.1	0.6	0.8	24.9	0.45	0.03	<0.02	26	0.38	0.133
013K833395	Sediment Pulp	3.77	41.31	2.96	111.0	192	19.4	21.8	1682	2.88	1.4	1.3	1.0	0.6	27.0	0.67	0.05	0.03	26	0.40	0.182
013K833396	Sediment Pulp	2.45	30.63	2.99	114.0	262	13.9	8.1	271	1.73	0.7	1.4	0.6	0.6	31.7	0.56	0.04	0.03	33	0.51	0.156
013K833397	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833398	Sediment Pulp	1.67	29.56	4.71	60.5	24	23.6	10.0	187	1.72	1.1	2.2	0.3	4.6	27.4	0.13	0.06	0.04	35	0.58	0.063
013K833399	Sediment Pulp	4.04	45.53	5.51	82.3	100	16.9	10.9	721	2.08	2.5	7.7	1.1	3.4	21.1	0.38	0.07	0.04	41	0.38	0.141
013K833400	Sediment Pulp	43.86	66.43	19.12	222.6	507	22.5	24.3	617	5.83	8.7	3.9	0.5	3.1	45.8	0.81	0.08	0.08	51	0.57	0.221
013K833401	Sediment Pulp	17.18	59.42	10.36	255.8	292	50.9	39.0	5779	4.87	5.4	7.8	0.8	2.9	46.8	1.36	0.10	0.05	41	0.54	0.196



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833372	Sediment Pulp	25.0	12.3	0.08	38.0	0.011	<20	0.87	0.013	0.02	<0.1	1.1	0.04	0.31	51	0.6	<0.02	1.4	0.21	<0.1	<0.02
013K833373	Sediment Pulp	12.2	11.4	0.13	39.0	0.014	<20	0.90	0.030	0.02	<0.1	0.9	0.03	0.18	35	0.4	<0.02	1.6	0.21	<0.1	<0.02
013K833374	Sediment Pulp	22.9	15.8	0.12	55.9	0.015	<20	1.42	0.015	0.02	<0.1	1.8	0.05	0.25	44	0.5	<0.02	2.1	0.24	<0.1	<0.02
013K833375	Sediment Pulp	39.0	27.4	0.39	172.1	0.044	<20	3.05	0.042	0.10	0.5	3.5	0.10	0.14	113	1.0	<0.02	4.6	0.52	0.1	<0.02
013K833376	Sediment Pulp	21.4	26.7	0.29	131.6	0.037	<20	1.90	0.037	0.05	<0.1	3.2	0.12	0.14	59	0.6	<0.02	4.0	0.39	<0.1	<0.02
013K833377	Sediment Pulp	12.3	16.5	0.21	40.1	0.033	<20	1.01	0.035	0.02	<0.1	1.5	0.02	0.10	19	0.1	<0.02	2.2	0.18	<0.1	<0.02
013K833378	Sediment Pulp	21.8	36.8	0.41	123.3	0.043	<20	2.21	0.025	0.09	<0.1	3.3	0.10	0.19	60	0.9	<0.02	4.4	0.44	<0.1	0.03
013K833379	Sediment Pulp	38.8	31.5	0.33	309.7	0.048	<20	3.10	0.024	0.06	<0.1	4.6	0.28	0.14	119	1.4	<0.02	4.6	0.44	0.1	0.04
013K833380	Sediment Pulp	45.7	29.3	0.15	120.7	0.033	<20	3.65	0.016	0.04	0.2	4.7	0.17	0.22	132	1.7	<0.02	3.7	0.26	0.1	0.05
013K833381	Sediment Pulp	22.1	38.2	0.41	124.5	0.044	<20	2.27	0.025	0.09	<0.1	3.4	0.10	0.19	56	0.9	<0.02	4.4	0.45	<0.1	0.03
013K833382	Sediment Pulp	23.5	32.5	0.55	199.5	0.075	<20	1.14	0.035	0.08	<0.1	6.7	0.12	0.77	30	0.9	<0.02	3.6	0.31	<0.1	0.21
013K833383	Sediment Pulp	29.3	32.9	0.72	298.2	0.082	<20	1.78	0.062	0.17	<0.1	5.3	0.14	0.13	47	0.8	<0.02	5.9	0.73	0.1	0.10
013K833384	Sediment Pulp	40.4	51.3	0.78	162.1	0.108	<20	1.66	0.026	0.25	0.2	5.7	0.28	0.14	286	0.8	0.04	6.0	1.36	<0.1	0.13
013K833385	Sediment Pulp	15.5	32.1	0.62	119.5	0.085	<20	1.22	0.049	0.09	<0.1	3.5	0.07	0.14	10	0.9	<0.02	4.1	0.39	<0.1	0.08
013K833386	Sediment Pulp	34.6	20.0	0.26	134.4	0.039	<20	1.52	0.020	0.04	<0.1	3.2	0.11	0.14	42	0.6	<0.02	2.6	0.34	<0.1	0.03
013K833387	Sediment Pulp	31.5	19.7	0.26	128.5	0.040	<20	1.47	0.025	0.05	<0.1	3.0	0.11	0.12	34	0.5	<0.02	2.5	0.33	<0.1	0.02
013K833388	Sediment Pulp	24.7	26.7	0.28	131.3	0.042	<20	0.75	0.027	0.05	<0.1	6.9	0.12	0.67	79	1.3	<0.02	2.1	0.32	<0.1	0.15
013K833389	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833390	Sediment Pulp	37.5	19.9	0.13	123.8	0.022	<20	1.89	0.009	0.03	<0.1	4.0	0.16	0.22	99	1.3	<0.02	2.0	0.26	0.1	<0.02
013K833391	Sediment Pulp	27.6	23.9	0.48	121.4	0.087	<20	1.40	0.032	0.15	<0.1	4.1	0.09	0.04	13	0.2	<0.02	3.9	0.58	<0.1	0.05
013K833392	Sediment Pulp	29.3	25.8	0.50	131.1	0.084	<20	1.33	0.042	0.11	0.1	4.1	0.10	0.02	11	0.1	<0.02	3.9	0.46	<0.1	0.03
013K833393	Sediment Pulp	35.4	23.6	0.09	103.2	0.030	<20	3.18	0.004	0.03	<0.1	3.9	0.19	0.18	101	1.5	<0.02	2.4	0.20	0.1	0.03
013K833394	Sediment Pulp	27.5	16.8	0.10	140.8	0.022	<20	1.93	0.006	0.03	0.1	2.9	0.11	0.16	87	1.1	<0.02	2.0	0.21	<0.1	0.02
013K833395	Sediment Pulp	28.0	22.1	0.18	160.4	0.028	<20	2.49	0.009	0.05	0.1	2.5	0.17	0.21	60	1.7	<0.02	2.6	0.35	<0.1	<0.02
013K833396	Sediment Pulp	22.1	20.2	0.22	138.4	0.035	<20	2.38	0.009	0.07	0.1	1.9	0.08	0.21	94	1.2	<0.02	3.0	0.38	<0.1	0.03
013K833397	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833398	Sediment Pulp	26.6	22.5	0.56	113.5	0.104	<20	1.13	0.044	0.10	0.1	3.4	0.09	0.08	13	0.3	<0.02	3.8	0.49	<0.1	0.17
013K833399	Sediment Pulp	48.0	22.2	0.26	148.0	0.060	<20	1.24	0.014	0.08	0.2	3.1	0.15	0.07	34	1.1	<0.02	3.0	0.58	0.1	<0.02
013K833400	Sediment Pulp	108.6	26.6	0.33	180.6	0.059	<20	2.72	0.018	0.13	1.1	4.0	0.31	0.16	180	3.0	<0.02	5.7	1.31	0.3	0.08
013K833401	Sediment Pulp	84.0	18.4	0.21	835.9	0.029	<20	2.30	0.010	0.08	0.3	3.8	0.73	0.20	107	3.7	<0.02	3.6	0.64	0.3	0.09



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833372	Sediment Pulp	0.33	1.6	<0.1	<0.05	0.4	17.29	31.9	<0.02	<1	<0.1	1.6	7.20	28.57	5.07	1.39	4.43	0.57	3.23	0.64	1.77
013K833373	Sediment Pulp	0.24	1.8	0.1	<0.05	0.1	9.17	21.2	<0.02	<1	0.1	2.3	3.39	13.19	2.43	0.57	2.12	0.28	1.68	0.33	1.03
013K833374	Sediment Pulp	0.33	1.8	0.1	<0.05	0.3	14.31	36.7	<0.02	<1	0.2	2.7	6.97	27.54	4.66	1.10	3.99	0.50	2.74	0.55	1.57
013K833375	Sediment Pulp	1.07	7.0	0.3	<0.05	1.0	20.70	83.8	<0.02	3	0.4	10.7	10.90	43.45	6.95	1.42	5.68	0.79	4.18	0.77	2.18
013K833376	Sediment Pulp	0.58	3.9	0.3	<0.05	0.5	13.24	39.0	<0.02	<1	0.4	6.9	6.17	24.62	3.99	0.98	3.51	0.43	2.58	0.53	1.42
013K833377	Sediment Pulp	0.27	1.8	0.2	<0.05	0.3	7.79	24.0	<0.02	<1	0.3	4.7	3.33	12.87	2.27	0.57	2.10	0.27	1.53	0.30	0.89
013K833378	Sediment Pulp	0.97	6.2	0.3	<0.05	1.3	14.69	43.4	0.02	1	0.4	7.9	6.28	24.73	4.44	0.96	3.66	0.49	2.76	0.52	1.44
013K833379	Sediment Pulp	0.69	5.2	0.3	<0.05	1.1	22.73	80.3	0.03	<1	0.6	9.9	11.61	42.10	7.26	1.59	6.23	0.86	4.55	0.88	2.50
013K833380	Sediment Pulp	0.72	3.0	0.2	<0.05	1.4	28.76	92.2	0.02	1	0.5	4.2	13.95	50.47	9.10	2.00	6.85	1.02	5.64	1.10	3.06
013K833381	Sediment Pulp	0.99	6.4	0.3	<0.05	1.3	15.13	43.6	0.02	<1	0.4	8.0	6.37	25.16	4.50	0.97	3.69	0.49	2.81	0.52	1.47
013K833382	Sediment Pulp	0.96	5.7	0.3	<0.05	9.3	29.91	36.4	0.02	4	0.6	8.2	6.99	28.51	6.05	1.32	5.94	0.83	4.83	1.00	2.83
013K833383	Sediment Pulp	0.81	13.0	0.6	<0.05	4.1	14.36	62.6	0.03	<1	0.3	16.7	8.27	29.21	5.26	1.01	4.09	0.59	3.07	0.56	1.50
013K833384	Sediment Pulp	1.91	24.6	1.2	<0.05	5.7	17.68	74.6	0.04	<1	0.6	24.4	10.51	34.98	6.44	0.98	4.34	0.62	3.51	0.65	1.97
013K833385	Sediment Pulp	0.73	7.0	0.4	<0.05	3.7	9.92	33.6	0.02	2	0.3	10.4	4.46	16.36	3.04	0.55	2.63	0.37	2.03	0.35	1.12
013K833386	Sediment Pulp	0.75	4.4	0.2	<0.05	1.6	20.49	54.9	<0.02	<1	0.8	7.2	9.23	33.91	6.12	1.23	5.71	0.69	4.21	0.76	2.20
013K833387	Sediment Pulp	0.71	4.5	0.3	<0.05	1.4	19.92	49.4	<0.02	2	0.7	7.7	8.57	33.03	5.92	1.15	4.90	0.68	3.68	0.67	2.04
013K833388	Sediment Pulp	0.94	4.6	0.2	<0.05	7.0	25.45	33.8	<0.02	5	0.2	4.5	7.18	28.47	5.64	1.19	5.08	0.75	4.46	0.89	2.67
013K833389	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833390	Sediment Pulp	0.52	2.7	0.1	<0.05	0.7	29.75	42.2	<0.02	2	0.5	3.0	10.42	40.45	7.08	1.57	6.20	0.90	5.34	1.01	2.96
013K833391	Sediment Pulp	0.95	10.2	0.4	<0.05	2.0	14.98	58.8	<0.02	<1	0.5	11.3	7.44	25.47	4.61	0.91	3.79	0.55	2.82	0.52	1.61
013K833392	Sediment Pulp	0.74	8.8	0.4	<0.05	1.6	16.25	62.3	<0.02	<1	0.4	11.7	8.10	30.16	5.50	0.83	4.23	0.61	3.32	0.62	1.69
013K833393	Sediment Pulp	0.81	2.2	0.1	<0.05	1.1	23.28	92.0	<0.02	<1	1.0	2.5	10.46	37.67	7.05	1.45	5.26	0.81	4.44	0.90	2.45
013K833394	Sediment Pulp	0.48	2.4	0.1	<0.05	0.6	18.60	53.4	<0.02	<1	0.5	2.5	7.62	28.36	5.24	1.14	4.22	0.59	3.74	0.72	1.93
013K833395	Sediment Pulp	0.40	3.5	0.2	<0.05	0.6	19.43	58.6	<0.02	2	0.7	4.7	7.71	29.38	5.32	1.17	4.59	0.68	4.03	0.74	2.33
013K833396	Sediment Pulp	0.86	4.7	0.2	<0.05	1.4	15.34	44.3	<0.02	<1	0.6	4.8	6.09	22.57	4.48	0.90	3.38	0.52	3.03	0.61	1.65
013K833397	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833398	Sediment Pulp	1.57	6.8	0.5	<0.05	6.0	14.39	49.4	<0.02	4	0.4	8.8	7.02	25.83	4.42	0.78	3.95	0.54	3.00	0.57	1.58
013K833399	Sediment Pulp	1.34	7.2	0.4	<0.05	1.6	35.63	118.5	<0.02	1	1.8	8.1	14.09	50.78	9.69	1.47	8.14	1.18	6.77	1.27	3.81
013K833400	Sediment Pulp	3.44	14.3	0.7	<0.05	5.2	96.45	260.2	0.03	28	6.1	11.3	30.00	111.78	22.20	3.04	19.80	3.21	19.44	3.90	10.63
013K833401	Sediment Pulp	1.09	8.4	0.3	<0.05	4.2	75.00	225.0	<0.02	5	4.1	6.0	23.50	87.55	17.94	2.41	16.19	2.65	15.29	3.15	8.62



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833372	Sediment Pulp		0.24	1.49	0.20	<10	<2
013K833373	Sediment Pulp		0.14	0.82	0.13	<10	<2
013K833374	Sediment Pulp		0.22	1.35	0.19	<10	<2
013K833375	Sediment Pulp		0.28	1.78	0.24	<10	<2
013K833376	Sediment Pulp		0.19	1.19	0.19	<10	<2
013K833377	Sediment Pulp		0.12	0.81	0.12	<10	<2
013K833378	Sediment Pulp		0.20	1.21	0.18	<10	<2
013K833379	Sediment Pulp		0.34	2.01	0.28	<10	<2
013K833380	Sediment Pulp		0.42	2.67	0.36	<10	<2
013K833381	Sediment Pulp		0.20	1.23	0.18	<10	<2
013K833382	Sediment Pulp		0.39	2.59	0.39	<10	4
013K833383	Sediment Pulp		0.22	1.23	0.18	<10	<2
013K833384	Sediment Pulp		0.28	1.66	0.24	<10	<2
013K833385	Sediment Pulp		0.14	0.83	0.12	<10	<2
013K833386	Sediment Pulp		0.29	1.77	0.27	<10	<2
013K833387	Sediment Pulp		0.27	1.69	0.24	<10	<2
013K833388	Sediment Pulp		0.37	2.39	0.37	<10	<2
013K833389	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833390	Sediment Pulp		0.40	2.65	0.37	<10	<2
013K833391	Sediment Pulp		0.22	1.39	0.19	<10	<2
013K833392	Sediment Pulp		0.23	1.52	0.19	<10	<2
013K833393	Sediment Pulp		0.32	1.91	0.26	<10	<2
013K833394	Sediment Pulp		0.27	1.76	0.24	<10	<2
013K833395	Sediment Pulp		0.30	1.94	0.28	<10	<2
013K833396	Sediment Pulp		0.22	1.49	0.20	<10	<2
013K833397	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833398	Sediment Pulp		0.23	1.34	0.17	<10	<2
013K833399	Sediment Pulp		0.51	3.35	0.49	<10	2
013K833400	Sediment Pulp		1.37	8.17	1.04	<10	3
013K833401	Sediment Pulp		1.07	6.66	0.84	<10	2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833402	Sediment Pulp	17.79	60.80	10.79	266.9	309	51.9	38.6	5846	4.90	5.9	8.1	0.5	3.0	50.3	1.41	0.10	0.05	41	0.55	0.203
013K833403	Sediment Pulp	0.86	10.36	3.49	39.9	38	10.5	6.3	174	1.77	1.7	1.4	<0.2	5.1	15.8	0.11	0.03	0.04	30	0.34	0.086
013K833404	Sediment Pulp	0.85	10.16	3.27	37.8	40	10.3	5.9	173	1.50	1.7	1.5	0.3	4.6	16.9	0.11	0.03	0.03	31	0.36	0.071
013K833405	Sediment Pulp	3.66	20.96	3.65	54.6	39	17.4	7.3	333	1.53	2.3	2.7	0.5	3.2	22.6	0.20	0.04	0.03	28	0.44	0.084
013K833406	Sediment Pulp	7.00	58.68	3.32	99.8	152	24.0	22.0	5877	3.91	2.8	2.5	0.5	1.4	28.7	0.77	0.04	0.02	28	0.39	0.154
013K833407	Sediment Pulp	1.30	36.32	1.82	66.8	228	15.1	7.2	103	2.13	0.2	0.9	0.5	0.5	26.7	0.38	0.03	<0.02	32	0.59	0.067
013K833408	Sediment Pulp	0.76	73.38	4.28	68.4	57	22.9	8.8	222	1.73	0.6	10.0	1.0	2.3	27.1	0.40	0.07	<0.02	37	0.55	0.111
013K833409	Sediment Pulp	0.50	14.54	4.89	49.5	28	25.4	11.6	228	2.27	0.7	1.4	0.7	3.1	24.1	0.10	0.04	0.04	40	0.51	0.064
013K833410	Sediment Pulp	0.84	14.83	3.56	44.2	29	20.9	9.2	122	1.35	0.5	0.8	<0.2	1.8	15.6	0.10	0.04	0.03	32	0.34	0.065
013K833411	Sediment Pulp	0.42	7.69	3.18	31.0	18	17.2	8.0	191	1.93	2.2	1.0	<0.2	1.9	17.2	0.05	0.03	0.02	53	0.37	0.075
013K833412	Sediment Pulp	0.46	20.02	5.44	52.5	30	27.8	12.4	223	2.28	0.7	0.7	0.6	3.1	27.5	0.16	0.03	0.04	41	0.60	0.064
013K833413	Sediment Pulp	3.47	19.47	2.12	95.9	221	11.5	13.2	502	5.69	0.7	0.9	0.3	0.6	25.0	0.43	0.03	0.03	57	0.44	0.200
013K833414	Sediment Pulp	1.49	14.36	2.82	88.4	166	14.3	24.5	694	2.98	0.5	0.7	0.4	0.6	25.4	0.51	<0.02	<0.02	43	0.41	0.132
013K833415	Sediment Pulp	0.94	18.45	1.91	65.3	249	11.8	7.6	221	1.86	0.4	0.6	0.3	0.3	27.5	0.90	0.02	<0.02	32	0.40	0.124
013K833416	Sediment Pulp	8.97	38.39	79.85	290.4	574	12.2	7.4	432	1.75	35.0	8.8	2.7	1.5	63.6	1.30	0.50	0.95	21	6.09	0.064
013K833417	Sediment Pulp	1.73	20.78	3.68	111.3	256	17.8	26.7	783	6.02	0.8	1.0	0.4	1.3	36.7	0.58	0.02	0.04	61	0.47	0.196
013K833418	Sediment Pulp	1.06	18.54	3.97	99.7	128	20.6	23.9	1411	3.69	0.6	0.8	<0.2	1.5	32.1	0.45	0.02	0.03	46	0.45	0.104
013K833419	Sediment Pulp	1.77	15.48	3.48	85.3	108	20.4	24.3	1200	4.71	0.8	0.8	<0.2	1.6	28.5	0.35	0.02	0.03	50	0.45	0.118
013K833420	Sediment Pulp	1.55	22.46	4.21	118.1	122	26.8	18.6	752	2.84	0.9	1.4	0.5	1.6	34.4	0.52	0.03	0.03	51	0.55	0.170
013K833421	Sediment Pulp	0.74	17.81	4.99	56.6	48	27.2	15.3	953	3.34	1.8	0.9	0.2	4.1	29.8	0.17	0.03	0.04	58	0.52	0.105
013K833422	Sediment Pulp	2.23	14.20	1.72	49.4	76	14.0	8.1	152	1.78	0.6	0.8	<0.2	0.5	26.6	0.31	<0.02	<0.02	35	0.49	0.079
013K833423	Sediment Pulp	1.63	53.98	3.12	91.4	331	23.4	18.4	702	2.73	0.5	1.5	0.5	1.0	42.4	0.78	0.03	0.03	61	0.82	0.363
013K833424	Sediment Pulp	0.73	17.69	5.02	59.1	51	27.4	16.0	945	3.29	1.6	0.9	<0.2	4.0	29.0	0.19	0.03	0.04	57	0.51	0.106
013K833425	Sediment Pulp	1.65	15.78	4.59	49.1	33	25.0	13.4	173	2.17	1.2	1.1	0.5	3.7	32.1	0.10	0.03	0.03	43	0.55	0.071
013K833426	Sediment Pulp	4.56	43.17	4.93	103.1	211	21.9	16.7	1100	3.93	0.8	2.5	0.4	1.4	62.4	0.54	0.03	0.03	44	0.70	0.187
013K833427	Sediment Pulp	1.25	28.49	1.84	60.4	132	10.6	3.6	116	0.78	0.5	1.2	<0.2	0.3	39.0	0.45	0.04	<0.02	21	0.48	0.112
013K833428	Sediment Pulp	0.45	21.23	8.67	61.8	48	36.4	17.6	653	3.42	1.5	1.2	0.4	5.4	37.3	0.11	0.04	0.06	55	0.66	0.084
013K833429	Sediment Pulp	7.10	23.02	2.69	76.8	182	13.3	9.6	303	2.91	1.3	10.4	0.4	1.2	33.6	0.52	0.03	<0.02	44	0.43	0.129
013K833430	Sediment Pulp	3.12	17.04	2.17	69.0	137	10.8	6.9	371	1.63	0.7	2.1	0.2	0.4	19.9	0.40	0.02	<0.02	26	0.31	0.155
013K833431	Sediment Pulp	0.71	23.96	6.68	55.0	47	35.1	16.8	1369	3.58	2.1	1.0	0.5	4.9	31.5	0.11	0.04	0.05	58	0.57	0.103



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833402	Sediment Pulp	89.5	18.2	0.22	838.5	0.030	<20	2.32	0.009	0.08	0.3	4.0	0.74	0.21	129	3.9	<0.02	3.6	0.68	0.2	0.10
013K833403	Sediment Pulp	23.4	17.3	0.29	54.5	0.060	<20	0.65	0.019	0.04	0.4	1.9	0.03	0.07	18	0.5	<0.02	2.1	0.42	<0.1	0.14
013K833404	Sediment Pulp	22.9	17.5	0.28	58.6	0.060	<20	0.66	0.019	0.04	0.5	2.0	0.05	0.07	15	0.5	<0.02	2.1	0.41	<0.1	0.12
013K833405	Sediment Pulp	25.4	20.0	0.32	65.9	0.075	<20	1.00	0.027	0.06	0.3	2.5	0.07	0.22	16	0.2	<0.02	2.8	0.32	<0.1	0.04
013K833406	Sediment Pulp	40.4	22.7	0.19	278.5	0.036	<20	2.15	0.009	0.05	0.2	3.8	0.22	0.15	62	1.5	<0.02	2.9	0.38	0.1	<0.02
013K833407	Sediment Pulp	26.1	13.2	0.08	100.0	0.022	<20	1.95	0.007	0.02	<0.1	1.9	0.09	0.28	163	0.9	<0.02	2.1	0.16	0.1	<0.02
013K833408	Sediment Pulp	37.2	25.0	0.46	123.4	0.071	<20	1.38	0.036	0.08	<0.1	3.7	0.15	0.06	30	1.1	<0.02	3.4	0.38	<0.1	0.07
013K833409	Sediment Pulp	18.5	25.6	0.66	169.1	0.085	<20	1.43	0.058	0.11	<0.1	4.2	0.09	0.04	16	0.3	<0.02	4.5	0.49	<0.1	0.14
013K833410	Sediment Pulp	14.1	21.2	0.48	155.1	0.069	<20	1.13	0.027	0.06	<0.1	2.7	0.08	0.08	12	0.3	<0.02	3.7	0.42	<0.1	0.05
013K833411	Sediment Pulp	12.0	22.9	0.43	81.1	0.063	<20	0.89	0.042	0.06	<0.1	2.2	0.05	0.04	8	0.4	<0.02	2.9	0.28	<0.1	0.08
013K833412	Sediment Pulp	23.0	27.5	0.74	133.5	0.083	<20	1.82	0.066	0.16	<0.1	5.0	0.12	0.08	20	0.1	<0.02	5.1	0.61	<0.1	0.10
013K833413	Sediment Pulp	34.1	17.4	0.15	82.2	0.025	<20	2.61	0.024	0.04	0.1	2.7	0.11	0.17	102	1.6	<0.02	2.7	0.26	<0.1	<0.02
013K833414	Sediment Pulp	28.3	17.8	0.24	134.9	0.035	<20	2.33	0.024	0.04	<0.1	2.1	0.09	0.14	77	1.0	<0.02	4.6	0.36	0.1	<0.02
013K833415	Sediment Pulp	29.0	15.1	0.13	98.9	0.021	<20	1.79	0.012	0.03	<0.1	1.5	0.05	0.16	98	0.9	<0.02	2.5	0.23	0.1	<0.02
013K833416	Sediment Pulp	9.9	12.5	0.58	90.1	0.040	<20	0.45	0.027	0.05	0.5	2.4	0.20	1.52	94	1.1	0.02	2.1	0.48	<0.1	0.04
013K833417	Sediment Pulp	33.9	22.8	0.29	110.3	0.050	<20	2.85	0.030	0.05	<0.1	3.1	0.17	0.12	100	1.2	<0.02	5.4	0.52	<0.1	<0.02
013K833418	Sediment Pulp	28.6	24.5	0.40	163.8	0.056	<20	2.26	0.051	0.07	<0.1	3.3	0.14	0.12	88	0.8	<0.02	4.6	0.47	<0.1	0.02
013K833419	Sediment Pulp	21.9	20.0	0.33	97.8	0.049	<20	2.59	0.052	0.06	<0.1	3.5	0.12	0.08	70	0.6	<0.02	4.1	0.38	<0.1	0.03
013K833420	Sediment Pulp	31.3	22.1	0.38	126.8	0.058	<20	2.80	0.063	0.11	0.2	4.0	0.13	0.12	79	0.8	<0.02	4.5	0.46	0.1	0.03
013K833421	Sediment Pulp	21.5	29.1	0.67	180.4	0.089	<20	1.76	0.084	0.12	<0.1	4.5	0.12	0.03	22	0.2	<0.02	5.0	0.53	<0.1	0.09
013K833422	Sediment Pulp	14.2	12.4	0.12	65.3	0.021	<20	2.21	0.021	0.02	<0.1	1.7	0.04	0.22	67	0.7	<0.02	2.4	0.19	<0.1	<0.02
013K833423	Sediment Pulp	53.5	25.4	0.16	154.3	0.034	<20	4.24	0.026	0.03	0.2	4.0	0.14	0.26	224	2.0	<0.02	4.9	0.25	0.2	<0.02
013K833424	Sediment Pulp	21.3	29.6	0.66	178.3	0.088	<20	1.70	0.081	0.12	<0.1	4.2	0.12	0.03	22	<0.1	<0.02	4.9	0.49	<0.1	0.08
013K833425	Sediment Pulp	19.2	25.8	0.59	117.8	0.083	<20	1.25	0.057	0.10	<0.1	3.9	0.10	0.21	13	<0.1	<0.02	4.3	0.52	<0.1	0.13
013K833426	Sediment Pulp	31.4	24.0	0.30	180.5	0.045	<20	2.59	0.024	0.05	<0.1	3.5	0.14	0.14	98	1.4	<0.02	3.6	0.52	<0.1	0.02
013K833427	Sediment Pulp	21.2	13.7	0.12	101.2	0.019	<20	1.49	0.012	0.03	<0.1	1.2	0.05	0.17	66	0.9	<0.02	1.6	0.19	<0.1	<0.02
013K833428	Sediment Pulp	24.4	33.6	0.96	183.1	0.121	<20	1.94	0.107	0.23	<0.1	6.1	0.14	<0.02	16	<0.1	<0.02	6.4	0.81	<0.1	0.21
013K833429	Sediment Pulp	33.0	19.6	0.12	338.0	0.020	<20	1.43	0.019	0.04	0.1	2.6	0.10	0.18	69	1.4	<0.02	1.8	0.23	<0.1	0.02
013K833430	Sediment Pulp	22.3	13.6	0.12	150.3	0.020	<20	1.46	0.013	0.03	<0.1	1.7	0.08	0.10	69	0.7	<0.02	2.0	0.23	<0.1	<0.02
013K833431	Sediment Pulp	22.4	34.9	0.83	314.0	0.108	<20	1.81	0.088	0.16	<0.1	5.6	0.12	0.02	21	0.1	<0.02	5.8	0.59	<0.1	0.20



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833402	Sediment Pulp	1.18	8.8	0.4	<0.05	4.8	78.40	242.6	0.03	11	5.0	6.1	24.99	92.80	19.31	2.45	15.80	2.74	15.92	3.14	8.82
013K833403	Sediment Pulp	1.62	3.8	0.3	<0.05	5.7	11.48	45.6	<0.02	1	0.3	6.6	5.69	21.20	3.61	0.55	2.84	0.37	2.09	0.41	1.13
013K833404	Sediment Pulp	1.65	3.7	0.3	<0.05	5.0	11.49	44.5	<0.02	1	0.3	6.5	5.59	20.81	3.61	0.55	2.88	0.37	2.08	0.40	1.13
013K833405	Sediment Pulp	1.26	4.7	0.3	<0.05	2.0	14.08	52.4	<0.02	12	0.3	8.3	6.78	24.50	4.42	0.74	3.47	0.48	2.81	0.55	1.47
013K833406	Sediment Pulp	0.43	4.4	0.2	<0.05	0.6	26.31	81.5	<0.02	2	0.7	8.3	10.94	40.04	6.83	1.40	5.58	0.84	5.07	0.98	2.81
013K833407	Sediment Pulp	0.80	1.8	0.1	<0.05	0.9	14.89	48.4	<0.02	<1	0.4	1.7	6.83	25.12	4.59	0.91	3.81	0.49	3.00	0.56	1.45
013K833408	Sediment Pulp	1.26	6.3	0.3	<0.05	2.9	25.58	59.6	<0.02	2	0.7	9.8	9.83	35.62	6.24	1.20	5.15	0.75	4.14	0.81	2.56
013K833409	Sediment Pulp	1.12	10.1	0.4	<0.05	6.2	11.35	38.6	<0.02	<1	0.4	9.6	5.04	19.98	3.71	0.63	3.04	0.40	2.28	0.41	1.09
013K833410	Sediment Pulp	0.92	6.1	0.4	<0.05	2.3	7.93	29.4	<0.02	2	0.3	9.1	3.80	14.94	2.73	0.44	2.24	0.29	1.57	0.29	0.75
013K833411	Sediment Pulp	0.68	4.8	0.3	<0.05	3.1	6.86	25.7	<0.02	<1	0.2	6.4	3.22	12.65	2.31	0.40	1.89	0.25	1.39	0.26	0.67
013K833412	Sediment Pulp	1.11	12.9	0.5	<0.05	4.6	12.15	39.8	0.02	<1	0.5	11.5	6.28	23.42	4.23	0.83	3.28	0.45	2.52	0.47	1.23
013K833413	Sediment Pulp	0.60	2.6	0.2	<0.05	0.5	20.01	74.5	<0.02	<1	0.4	3.0	9.81	37.73	6.40	1.28	5.07	0.67	3.70	0.69	1.90
013K833414	Sediment Pulp	0.78	3.4	0.2	<0.05	0.4	13.80	59.8	<0.02	<1	0.4	5.6	7.87	29.48	5.17	1.05	3.65	0.50	2.70	0.57	1.49
013K833415	Sediment Pulp	0.61	2.5	0.1	<0.05	0.3	14.87	58.7	<0.02	<1	0.6	3.0	8.27	31.45	5.28	0.96	4.37	0.53	3.02	0.58	1.55
013K833416	Sediment Pulp	0.65	3.4	3.1	<0.05	1.2	9.93	16.2	0.50	18	<0.1	4.6	2.65	11.08	2.56	0.43	2.06	0.29	1.74	0.36	0.95
013K833417	Sediment Pulp	1.02	4.2	0.3	<0.05	0.7	17.04	79.8	<0.02	<1	0.6	8.5	9.88	37.26	6.25	1.28	4.32	0.69	3.80	0.69	1.78
013K833418	Sediment Pulp	0.81	5.1	0.3	<0.05	1.0	13.93	60.3	<0.02	<1	0.4	8.4	8.11	31.62	5.07	1.07	4.13	0.53	2.86	0.51	1.42
013K833419	Sediment Pulp	0.66	3.9	0.3	<0.05	0.9	13.23	43.3	<0.02	<1	0.5	6.5	6.37	22.60	4.04	0.86	3.52	0.48	2.68	0.47	1.34
013K833420	Sediment Pulp	0.96	7.1	0.3	<0.05	1.1	18.40	63.1	<0.02	<1	0.4	9.7	8.93	34.22	5.80	1.16	4.74	0.67	3.78	0.70	1.84
013K833421	Sediment Pulp	0.81	10.1	0.5	<0.05	3.7	12.17	47.8	0.02	<1	0.5	12.0	6.39	24.22	4.34	0.78	3.35	0.46	2.60	0.48	1.25
013K833422	Sediment Pulp	0.47	1.5	0.1	<0.05	0.6	10.13	29.3	<0.02	1	<0.1	2.3	4.12	15.92	2.96	0.62	2.46	0.36	1.83	0.39	0.95
013K833423	Sediment Pulp	1.32	2.5	0.2	<0.05	1.1	30.92	112.3	0.03	<1	0.6	3.5	16.09	58.60	10.01	2.03	8.55	1.18	6.65	1.22	3.15
013K833424	Sediment Pulp	0.84	9.8	0.4	<0.05	3.7	11.86	45.8	<0.02	<1	0.5	12.1	5.92	22.97	3.96	0.76	3.27	0.45	2.54	0.46	1.18
013K833425	Sediment Pulp	0.96	8.9	0.5	<0.05	5.8	10.80	38.9	<0.02	4	0.4	10.8	5.26	20.09	3.74	0.64	3.00	0.40	2.22	0.41	1.05
013K833426	Sediment Pulp	0.81	5.0	0.2	<0.05	1.2	21.86	65.8	<0.02	2	0.8	9.5	9.09	33.57	6.29	1.20	5.25	0.75	4.14	0.80	2.16
013K833427	Sediment Pulp	0.61	2.3	0.1	<0.05	0.5	13.63	37.2	<0.02	2	0.5	3.0	6.11	21.96	4.10	0.85	3.47	0.50	2.92	0.50	1.29
013K833428	Sediment Pulp	0.31	17.8	0.7	<0.05	9.3	14.01	52.7	<0.02	<1	0.6	16.9	7.04	26.57	4.90	0.92	3.62	0.52	2.90	0.55	1.36
013K833429	Sediment Pulp	0.38	2.9	0.1	<0.05	1.4	28.97	57.9	<0.02	11	1.2	3.8	9.58	37.46	6.88	1.38	5.80	0.78	4.32	0.94	2.72
013K833430	Sediment Pulp	0.39	2.8	0.1	<0.05	0.4	14.37	45.4	<0.02	1	0.8	4.2	6.67	23.78	4.22	0.90	3.68	0.51	2.92	0.54	1.55
013K833431	Sediment Pulp	0.54	12.9	0.5	<0.05	8.3	13.57	49.2	0.03	<1	0.5	13.9	6.65	25.01	4.58	0.86	3.67	0.57	2.96	0.53	1.35



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Project: None Given

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K833402	Sediment Pulp	1.16	7.07	0.84	<10	3
013K833403	Sediment Pulp	0.15	0.96	0.14	<10	<2
013K833404	Sediment Pulp	0.16	0.96	0.14	<10	<2
013K833405	Sediment Pulp	0.19	1.25	0.17	<10	<2
013K833406	Sediment Pulp	0.39	2.47	0.35	<10	3
013K833407	Sediment Pulp	0.20	1.33	0.17	<10	<2
013K833408	Sediment Pulp	0.34	2.11	0.32	<10	<2
013K833409	Sediment Pulp	0.14	0.88	0.12	<10	<2
013K833410	Sediment Pulp	0.10	0.60	0.08	<10	<2
013K833411	Sediment Pulp	0.08	0.51	0.07	<10	<2
013K833412	Sediment Pulp	0.17	1.03	0.14	<10	2
013K833413	Sediment Pulp	0.25	1.56	0.22	<10	4
013K833414	Sediment Pulp	0.17	1.15	0.17	<10	<2
013K833415	Sediment Pulp	0.20	1.25	0.17	<10	<2
013K833416	Sediment Pulp	0.12	0.88	0.12	<10	<2
013K833417	Sediment Pulp	0.25	1.53	0.19	<10	<2
013K833418	Sediment Pulp	0.19	1.32	0.17	<10	<2
013K833419	Sediment Pulp	0.18	1.16	0.17	<10	<2
013K833420	Sediment Pulp	0.27	1.65	0.24	<10	<2
013K833421	Sediment Pulp	0.17	1.02	0.14	<10	2
013K833422	Sediment Pulp	0.14	0.90	0.11	<10	<2
013K833423	Sediment Pulp	0.47	2.94	0.40	<10	<2
013K833424	Sediment Pulp	0.15	0.99	0.14	<10	<2
013K833425	Sediment Pulp	0.16	0.94	0.13	<10	<2
013K833426	Sediment Pulp	0.31	2.07	0.28	<10	<2
013K833427	Sediment Pulp	0.18	1.18	0.16	<10	<2
013K833428	Sediment Pulp	0.19	1.23	0.18	<10	<2
013K833429	Sediment Pulp	0.36	2.50	0.41	<10	2
013K833430	Sediment Pulp	0.20	1.24	0.18	<10	<2
013K833431	Sediment Pulp	0.19	1.17	0.16	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833432	Sediment Pulp	0.35	30.47	6.34	48.8	46	33.0	14.1	266	2.65	1.1	0.6	0.3	4.2	21.0	0.12	0.04	0.05	53	0.42	0.080
013K833433	Sediment Pulp	0.96	33.21	26.15	127.9	2716	45.0	27.8	1216	3.07	25.4	3.7	4.3	8.1	26.4	0.58	0.53	3.20	48	0.60	0.091
013K833434	Sediment Pulp	6.59	27.83	2.53	99.5	222	14.7	20.8	899	5.23	0.7	3.6	0.5	1.7	39.9	0.68	0.02	0.03	75	0.79	0.126
013K833435	Sediment Pulp	5.72	8.16	0.87	53.2	41	9.3	5.3	60	0.53	1.1	6.8	0.5	0.4	25.7	0.36	0.02	<0.02	14	0.58	0.028
013K833436	Sediment Pulp	11.11	11.47	1.34	46.9	62	8.6	3.8	27	0.33	0.2	13.0	<0.2	0.5	34.4	0.48	0.02	<0.02	11	0.51	0.030
013K833437	Sediment Pulp	0.60	18.67	7.78	55.3	36	31.9	16.5	665	3.09	1.8	1.4	0.4	5.1	40.6	0.09	0.03	0.06	55	0.73	0.078
013K833438	Sediment Pulp	0.45	24.43	7.72	55.8	41	35.1	18.3	668	3.33	1.7	1.0	<0.2	6.0	47.0	0.11	0.04	0.07	54	0.99	0.080
013K833439	Sediment Pulp	3.96	37.02	3.80	85.5	449	15.6	9.1	478	2.69	1.0	3.5	0.7	1.0	37.8	0.53	0.04	0.03	59	0.95	0.217
013K833440	Sediment Pulp	3.40	18.26	2.10	48.2	145	10.6	6.7	277	0.69	0.3	2.2	<0.2	0.3	24.4	0.43	0.04	<0.02	25	0.46	0.057
013K833441	Sediment Pulp	0.44	23.50	7.50	51.4	41	34.2	16.9	655	3.14	1.8	0.9	<0.2	5.5	44.2	0.09	0.05	0.06	50	0.91	0.079
013K833442	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833443	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833444	Sediment Pulp	1.75	85.99	4.00	98.2	260	12.8	5.3	164	1.11	8.7	4.6	1.0	0.5	28.9	0.62	0.34	0.03	40	0.74	0.128
013K833445	Sediment Pulp	3.23	31.16	5.33	62.4	45	15.5	7.7	1965	1.75	4.6	7.1	0.5	4.0	19.8	0.34	0.05	0.03	57	0.41	0.113
013K833446	Sediment Pulp	3.43	32.70	6.98	93.5	76	14.5	14.6	739	2.53	2.1	18.6	0.6	6.5	30.1	0.26	0.04	0.04	37	0.38	0.126
013K833447	Sediment Pulp	6.54	37.26	15.04	380.2	64	15.2	17.6	2065	3.13	2.4	13.2	<0.2	10.2	23.6	0.96	0.08	0.05	33	0.37	0.118
013K833448	Sediment Pulp	8.38	23.77	16.58	136.6	464	8.6	19.9	509	4.11	1.4	4.8	<0.2	2.4	131.3	0.65	0.05	0.05	70	1.24	0.219
013K833449	Sediment Pulp	8.94	40.15	73.26	275.0	573	12.2	7.5	417	1.70	35.3	8.4	2.3	1.4	58.3	1.27	0.48	0.92	20	5.87	0.062
013K833450	Sediment Pulp	7.32	19.64	11.23	138.9	362	9.8	22.9	717	4.13	0.7	4.2	<0.2	2.9	26.4	0.67	0.04	0.03	48	0.37	0.189
013K833451	Sediment Pulp	1.38	34.46	4.50	100.4	323	13.1	27.8	547	6.95	0.7	2.2	<0.2	2.4	49.8	0.45	0.02	0.02	61	0.49	0.189
013K833452	Sediment Pulp	1.15	62.00	4.81	55.3	605	9.5	5.1	190	1.56	0.2	4.0	0.7	1.1	39.5	0.30	0.04	0.03	72	0.51	0.228
013K833453	Sediment Pulp	2.37	12.71	3.71	17.2	95	5.3	1.0	27	0.26	<0.1	6.9	<0.2	0.2	16.0	0.14	0.04	<0.02	20	0.21	0.033
013K833454	Sediment Pulp	4.84	26.88	2.50	50.7	269	4.9	2.3	66	0.94	<0.1	6.2	<0.2	0.2	10.1	0.76	0.09	0.02	28	0.13	0.114
013K833455	Sediment Pulp	2.62	25.63	4.83	61.4	256	8.7	10.7	143	3.72	<0.1	4.5	0.3	1.9	33.6	0.32	0.05	0.08	40	1.08	0.213
013K833456	Sediment Pulp	0.53	4.97	3.59	25.7	17	4.1	4.1	64	0.54	0.2	1.1	<0.2	2.9	18.9	0.09	0.11	0.03	9	0.28	0.059
013K833457	Sediment Pulp	12.26	21.46	4.59	139.5	236	8.5	11.2	382	3.83	0.4	3.6	0.3	2.4	43.0	0.58	0.04	0.04	46	0.47	0.162
013K833458	Sediment Pulp	18.10	44.34	28.70	193.3	514	16.6	39.5	1175	10.60	1.2	7.3	<0.2	4.4	26.3	0.94	0.09	0.06	80	0.34	0.252
013K833459	Sediment Pulp	7.41	19.58	3.12	88.0	223	6.7	7.9	106	0.77	<0.1	4.4	<0.2	0.2	31.2	0.44	0.06	0.03	21	0.67	0.108
013K833460	Sediment Pulp	1.31	17.65	6.70	52.7	141	6.0	2.5	84	0.78	<0.1	1.4	<0.2	0.7	19.0	0.24	0.03	<0.02	25	0.24	0.080
013K833461	Sediment Pulp	2.00	24.83	8.81	96.1	149	7.2	11.5	288	2.65	0.8	2.2	<0.2	1.8	27.3	0.28	0.03	0.04	44	0.33	0.113



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Project: None Given
Report Date: July 27, 2022

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CERTIFICATE OF ANALYSIS

VAN22001886.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833432	Sediment Pulp	20.8	31.5	0.75	138.5	0.097	<20	1.72	0.049	0.13	<0.1	5.0	0.10	0.02	13	0.2	<0.02	5.6	0.49	<0.1	0.10
013K833433	Sediment Pulp	40.7	50.5	0.78	163.8	0.102	<20	1.62	0.028	0.26	0.2	5.7	0.27	0.16	270	0.8	0.03	6.0	1.37	0.1	0.15
013K833434	Sediment Pulp	40.6	29.1	0.16	222.0	0.038	<20	3.19	0.024	0.03	0.2	5.1	0.22	0.18	164	2.2	<0.02	3.6	0.25	0.1	0.04
013K833435	Sediment Pulp	13.3	8.6	0.06	128.2	0.011	<20	0.74	0.008	0.01	<0.1	1.4	0.04	0.42	53	1.8	<0.02	0.8	0.16	<0.1	<0.02
013K833436	Sediment Pulp	63.2	8.1	0.05	170.0	0.012	<20	0.64	0.010	0.01	0.2	1.2	0.06	0.45	45	1.7	<0.02	1.2	0.20	<0.1	<0.02
013K833437	Sediment Pulp	27.3	31.9	0.86	166.2	0.116	<20	1.79	0.101	0.23	<0.1	5.9	0.15	<0.02	<5	0.1	<0.02	6.1	0.87	<0.1	0.13
013K833438	Sediment Pulp	26.1	33.4	1.06	170.7	0.118	<20	1.96	0.111	0.28	<0.1	5.9	0.14	<0.02	<5	<0.1	<0.02	6.2	0.90	<0.1	0.21
013K833439	Sediment Pulp	38.3	23.2	0.24	251.8	0.035	<20	2.50	0.017	0.07	0.1	3.8	0.09	0.21	278	1.6	<0.02	3.3	0.49	0.1	0.04
013K833440	Sediment Pulp	20.4	12.4	0.08	128.7	0.016	<20	1.42	0.006	0.02	<0.1	1.3	0.04	0.22	80	1.0	<0.02	1.7	0.19	<0.1	0.03
013K833441	Sediment Pulp	25.9	30.9	0.98	166.8	0.108	<20	1.73	0.099	0.23	<0.1	5.3	0.13	<0.02	<5	<0.1	<0.02	5.9	0.80	<0.1	0.25
013K833442	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833443	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833444	Sediment Pulp	41.5	20.1	0.25	166.0	0.026	<20	1.06	0.026	0.05	0.3	2.8	0.13	0.50	77	3.4	<0.02	2.3	0.66	0.1	0.05
013K833445	Sediment Pulp	42.0	20.6	0.29	175.6	0.072	<20	0.83	0.021	0.07	0.1	3.1	0.11	0.10	11	0.7	<0.02	2.9	0.51	0.1	0.05
013K833446	Sediment Pulp	50.7	21.5	0.28	78.3	0.081	<20	1.04	0.020	0.09	0.1	2.5	0.18	0.25	19	0.5	<0.02	3.3	0.56	0.1	0.08
013K833447	Sediment Pulp	99.6	17.7	0.26	105.1	0.092	<20	0.96	0.018	0.11	0.1	2.7	0.53	0.18	17	1.0	<0.02	4.0	2.67	0.2	0.11
013K833448	Sediment Pulp	105.2	19.8	0.12	160.5	0.056	<20	2.00	0.015	0.05	0.3	2.1	0.24	1.43	156	1.9	<0.02	5.2	0.58	0.3	0.06
013K833449	Sediment Pulp	10.3	12.7	0.56	88.6	0.040	<20	0.44	0.028	0.05	0.5	2.3	0.20	1.46	95	1.1	<0.02	2.0	0.47	<0.1	0.04
013K833450	Sediment Pulp	99.0	19.0	0.08	112.4	0.052	<20	1.84	0.006	0.04	0.2	2.3	0.45	0.14	114	1.6	<0.02	3.8	0.54	0.2	0.07
013K833451	Sediment Pulp	68.4	25.4	0.09	100.9	0.058	<20	2.93	0.004	0.03	0.2	3.4	0.38	0.81	133	1.7	<0.02	4.9	0.36	0.2	0.03
013K833452	Sediment Pulp	104.5	26.9	0.06	134.7	0.066	<20	2.84	0.004	0.02	0.2	2.6	0.14	0.32	183	2.0	<0.02	6.3	0.26	0.2	0.09
013K833453	Sediment Pulp	27.7	7.5	0.04	40.4	0.030	<20	0.58	0.005	0.02	0.2	0.5	0.05	0.17	55	0.6	<0.02	2.4	0.53	<0.1	0.03
013K833454	Sediment Pulp	57.9	9.9	0.02	27.8	0.015	<20	1.11	0.001	0.01	<0.1	1.0	0.08	0.15	51	4.6	<0.02	2.1	0.21	0.1	<0.02
013K833455	Sediment Pulp	62.9	17.2	0.07	78.2	0.044	<20	1.13	0.020	0.04	0.5	2.0	0.24	3.58	77	1.3	<0.02	3.5	0.49	0.2	0.08
013K833456	Sediment Pulp	25.9	6.4	0.10	35.4	0.062	<20	0.36	0.011	0.04	0.3	1.2	0.08	0.16	10	<0.1	<0.02	1.4	0.40	<0.1	0.19
013K833457	Sediment Pulp	72.5	22.3	0.10	76.2	0.039	<20	1.80	0.014	0.04	3.8	2.4	0.24	0.17	106	1.3	<0.02	2.9	0.45	0.2	0.06
013K833458	Sediment Pulp	138.0	28.7	0.08	102.5	0.054	<20	2.27	0.004	0.04	0.9	3.8	0.63	0.17	148	3.3	0.03	5.3	0.51	0.3	0.08
013K833459	Sediment Pulp	60.7	9.1	0.07	73.0	0.013	<20	1.19	0.008	0.03	1.0	0.8	0.14	0.39	66	1.6	<0.02	1.8	0.19	<0.1	<0.02
013K833460	Sediment Pulp	40.4	11.1	0.10	63.8	0.051	<20	0.87	0.007	0.04	0.1	1.3	0.07	0.09	53	0.7	<0.02	2.8	0.38	0.1	0.08
013K833461	Sediment Pulp	57.8	16.3	0.10	56.0	0.062	<20	1.69	0.009	0.04	0.2	2.3	0.20	0.21	71	1.2	<0.02	3.8	0.38	0.1	0.08



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Report Date: July 27, 2022

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833432	Sediment Pulp	0.80	9.8	0.5	<0.05	5.0	13.22	45.6	<0.02	<1	0.5	11.5	6.20	22.82	3.96	0.81	3.54	0.49	2.74	0.52	1.35
013K833433	Sediment Pulp	1.90	24.4	1.2	<0.05	6.1	17.92	73.3	0.04	1	0.4	22.2	10.20	37.32	6.50	0.95	4.87	0.62	3.57	0.64	1.74
013K833434	Sediment Pulp	0.94	2.9	0.2	<0.05	1.6	31.62	79.3	0.02	3	0.6	3.9	12.22	45.77	8.13	1.66	7.10	1.02	5.83	1.12	3.17
013K833435	Sediment Pulp	0.29	0.8	<0.1	<0.05	0.8	10.55	24.4	<0.02	5	0.2	1.3	3.60	13.29	2.55	0.47	2.32	0.30	1.81	0.35	1.02
013K833436	Sediment Pulp	0.33	1.2	0.1	<0.05	0.6	34.09	82.9	<0.02	18	0.6	1.7	15.60	55.61	9.22	0.94	8.10	1.08	6.29	1.21	3.40
013K833437	Sediment Pulp	0.40	18.3	0.7	<0.05	6.7	14.09	58.1	0.03	<1	0.6	15.7	7.52	28.82	5.10	0.93	3.95	0.55	2.92	0.56	1.49
013K833438	Sediment Pulp	0.08	17.6	0.7	<0.05	9.4	14.53	59.5	0.04	<1	0.6	15.3	7.66	28.30	5.46	1.01	3.93	0.58	3.16	0.56	1.61
013K833439	Sediment Pulp	1.24	5.6	0.2	<0.05	2.2	26.84	58.4	0.02	2	0.5	6.8	10.70	40.49	7.31	1.59	6.22	0.90	5.17	0.97	2.72
013K833440	Sediment Pulp	0.52	1.7	0.1	<0.05	1.0	14.26	47.5	<0.02	2	0.4	2.1	6.16	23.14	4.48	1.03	3.97	0.53	3.15	0.57	1.59
013K833441	Sediment Pulp	0.07	16.1	0.6	<0.05	9.5	14.09	57.1	0.03	<1	0.4	14.5	7.23	27.24	5.45	1.01	3.97	0.60	3.16	0.54	1.49
013K833442	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833443	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833444	Sediment Pulp	0.50	4.4	0.2	<0.05	2.5	25.19	31.1	<0.02	3	0.6	7.3	10.47	39.09	6.59	1.30	5.54	0.74	4.00	0.77	2.18
013K833445	Sediment Pulp	1.21	6.4	0.5	<0.05	2.1	28.41	89.7	<0.02	<1	1.1	9.3	11.20	40.13	7.32	1.15	6.11	0.93	5.38	1.05	3.12
013K833446	Sediment Pulp	2.04	8.1	0.5	<0.05	3.8	33.01	124.7	<0.02	<1	2.6	11.1	13.97	48.48	9.45	1.26	7.75	1.17	6.67	1.28	3.65
013K833447	Sediment Pulp	3.09	13.8	0.7	<0.05	7.0	55.54	277.5	<0.02	<1	12.8	11.6	26.52	94.89	19.14	2.02	15.12	2.11	11.09	2.07	5.48
013K833448	Sediment Pulp	4.08	5.9	0.5	<0.05	4.2	72.01	237.8	0.03	1	6.4	5.5	28.93	104.00	19.13	2.29	17.06	2.67	15.76	3.01	8.58
013K833449	Sediment Pulp	0.69	3.3	3.1	<0.05	1.4	9.59	16.5	0.44	16	<0.1	4.3	2.72	11.21	2.39	0.44	1.89	0.28	1.67	0.32	0.88
013K833450	Sediment Pulp	3.58	4.7	0.5	<0.05	3.9	57.19	242.7	0.04	3	5.7	3.8	27.09	93.82	17.78	1.96	14.81	2.18	12.92	2.41	6.24
013K833451	Sediment Pulp	3.13	3.1	0.3	<0.05	1.7	39.07	169.4	0.02	<1	1.6	2.4	19.79	68.04	12.10	2.01	9.32	1.45	8.28	1.65	4.37
013K833452	Sediment Pulp	5.11	2.0	0.4	<0.05	4.3	51.90	212.8	0.03	<1	1.5	1.6	27.58	95.66	17.03	2.67	13.58	1.95	11.40	2.11	5.98
013K833453	Sediment Pulp	1.44	2.2	0.3	<0.05	1.8	13.89	52.9	<0.02	<1	0.5	2.2	7.36	25.52	4.35	0.66	3.61	0.53	3.07	0.59	1.54
013K833454	Sediment Pulp	0.72	1.4	0.1	<0.05	0.4	37.39	96.2	<0.02	3	2.4	0.7	14.40	55.39	9.11	1.25	7.76	1.16	6.96	1.39	3.92
013K833455	Sediment Pulp	2.75	3.1	0.4	<0.05	4.2	37.01	127.8	<0.02	<1	1.3	4.5	16.68	63.38	9.98	1.48	9.34	1.24	6.99	1.49	4.13
013K833456	Sediment Pulp	3.37	3.9	0.6	<0.05	9.4	12.75	53.0	<0.02	<1	0.4	3.7	6.58	24.25	4.06	0.58	3.42	0.45	2.49	0.48	1.35
013K833457	Sediment Pulp	2.96	3.5	0.4	<0.05	4.8	52.87	173.0	<0.02	1	2.7	3.4	19.15	71.66	12.62	1.75	12.08	1.84	10.99	2.15	6.37
013K833458	Sediment Pulp	2.94	3.7	0.4	<0.05	4.9	97.45	327.4	0.03	3	4.7	2.5	36.64	137.42	24.53	3.36	21.76	3.44	20.25	3.92	11.30
013K833459	Sediment Pulp	1.06	1.6	0.2	<0.05	1.1	45.12	101.8	<0.02	5	3.0	1.9	14.16	52.69	9.23	1.37	8.56	1.27	8.18	1.67	4.65
013K833460	Sediment Pulp	2.51	4.6	0.4	<0.05	4.1	20.40	82.7	<0.02	<1	1.4	3.5	10.79	42.37	7.38	1.00	6.15	0.83	4.71	0.85	2.24
013K833461	Sediment Pulp	2.72	4.0	0.4	<0.05	3.5	31.25	125.1	0.02	3	2.2	3.6	15.79	59.89	10.50	1.66	8.64	1.19	7.13	1.29	3.63



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K833432	Sediment Pulp	0.18	1.10	0.15	<10	<2	
013K833433	Sediment Pulp	0.25	1.64	0.23	<10	<2	
013K833434	Sediment Pulp	0.44	2.77	0.39	<10	<2	
013K833435	Sediment Pulp	0.13	0.83	0.11	<10	<2	
013K833436	Sediment Pulp	0.43	2.80	0.42	<10	<2	
013K833437	Sediment Pulp	0.21	1.28	0.18	<10	<2	
013K833438	Sediment Pulp	0.20	1.29	0.18	<10	<2	
013K833439	Sediment Pulp	0.37	2.24	0.33	<10	<2	
013K833440	Sediment Pulp	0.21	1.20	0.18	<10	<2	
013K833441	Sediment Pulp	0.21	1.28	0.16	<10	<2	
013K833442	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833443	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833444	Sediment Pulp	0.32	2.14	0.32	<10	<2	
013K833445	Sediment Pulp	0.43	2.75	0.39	<10	<2	
013K833446	Sediment Pulp	0.48	2.87	0.35	<10	<2	
013K833447	Sediment Pulp	0.75	4.42	0.55	<10	<2	
013K833448	Sediment Pulp	1.13	6.46	0.76	<10	<2	
013K833449	Sediment Pulp	0.12	0.88	0.11	<10	<2	
013K833450	Sediment Pulp	0.89	5.10	0.63	<10	<2	
013K833451	Sediment Pulp	0.69	4.25	0.52	<10	<2	
013K833452	Sediment Pulp	0.87	4.89	0.62	<10	3	
013K833453	Sediment Pulp	0.21	1.34	0.15	<10	<2	
013K833454	Sediment Pulp	0.58	3.23	0.43	<10	<2	
013K833455	Sediment Pulp	0.61	3.46	0.44	<10	3	
013K833456	Sediment Pulp	0.19	1.28	0.16	<10	<2	
013K833457	Sediment Pulp	0.94	5.64	0.72	<10	<2	
013K833458	Sediment Pulp	1.64	9.16	1.23	<10	<2	
013K833459	Sediment Pulp	0.63	3.76	0.49	<10	<2	
013K833460	Sediment Pulp	0.30	1.85	0.22	<10	<2	
013K833461	Sediment Pulp	0.51	2.92	0.41	<10	<2	



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K833462	Sediment Pulp	2.04	25.33	8.99	98.5	142	7.5	11.7	299	2.77	0.9	2.2	<0.2	1.8	27.7	0.32	0.03	0.03	46	0.34	0.117
013K833463	Sediment Pulp	3.84	32.98	9.06	95.1	143	12.7	8.0	205	1.32	1.0	5.1	<0.2	0.8	25.6	0.37	0.11	0.03	35	0.59	0.111
013K833464	Sediment Pulp	5.28	29.89	6.15	76.9	103	19.1	8.0	155	2.97	5.2	5.9	<0.2	3.4	31.1	0.42	0.07	0.06	48	0.83	0.050
013K833465	Sediment Pulp	7.29	65.02	8.37	147.6	633	16.3	10.9	704	2.85	1.0	5.1	0.3	1.7	29.2	0.90	0.06	0.05	62	0.74	0.230
013K833466	Sediment Pulp	2.75	41.65	4.77	53.3	62	15.1	8.1	1673	1.79	2.7	17.9	0.3	1.8	21.2	0.28	0.03	0.03	27	0.46	0.111
013K833467	Sediment Pulp	9.19	62.89	4.44	122.0	190	17.0	13.8	7644	2.04	1.1	14.6	<0.2	1.2	52.0	0.72	0.04	<0.02	60	0.93	0.140
013K833468	Sediment Pulp	10.30	57.71	3.30	113.6	160	16.8	18.4	>10000	3.64	2.1	10.1	0.4	1.8	41.1	0.75	0.02	<0.02	42	0.89	0.145
013K833469	Sediment Pulp	2.83	29.15	5.99	40.1	25	22.3	10.5	248	2.05	1.8	4.6	0.2	4.9	108.1	0.09	0.05	0.05	37	3.01	0.075
013K833470	Sediment Pulp	0.95	20.83	5.31	49.5	38	26.3	11.3	206	2.11	1.3	1.0	<0.2	3.3	22.0	0.14	0.07	0.05	37	0.45	0.070
013K833471	Sediment Pulp	1.51	40.17	3.11	40.7	257	12.8	6.5	212	1.68	0.3	1.0	<0.2	0.4	31.4	0.39	0.03	0.03	53	0.55	0.216
013K833472	Sediment Pulp	2.56	51.00	4.83	128.2	372	31.9	52.4	6605	9.17	0.7	1.1	0.4	1.2	25.5	1.20	0.03	0.05	61	0.44	0.284
013K833473	Sediment Pulp	1.01	33.85	27.55	131.6	2778	45.7	29.0	1242	3.13	26.4	3.8	23.0	8.2	28.9	0.60	0.50	3.32	50	0.63	0.096
013K833474	Sediment Pulp	6.08	55.89	5.62	99.9	210	23.5	8.7	806	2.00	6.3	6.8	0.3	1.0	27.0	0.91	0.08	0.05	37	0.46	0.153
013K833475	Sediment Pulp	7.99	51.85	8.41	201.2	393	43.5	12.0	258	1.81	2.5	1.8	1.1	0.2	30.0	2.18	0.14	<0.02	26	0.86	0.098
013K833476	Sediment Pulp	1.48	17.65	8.54	91.9	42	20.2	10.2	266	2.35	1.5	1.9	<0.2	6.4	40.0	0.14	0.05	0.06	36	0.58	0.075
013K833477	Sediment Pulp	54.26	29.29	13.24	199.0	266	20.4	61.4	>10000	11.20	15.9	20.1	3.1	4.7	161.6	0.89	0.06	0.05	110	1.11	0.200
013K833478	Sediment Pulp	8.03	39.30	11.10	173.6	194	17.9	14.7	444	1.46	0.4	1.1	0.4	0.7	17.2	1.42	0.05	0.03	31	0.37	0.056
013K833479	Sediment Pulp	0.34	11.94	5.81	32.5	22	10.9	6.5	423	2.04	1.5	1.1	0.8	5.9	20.2	0.08	0.04	0.05	32	0.45	0.093
013K833480	Sediment Pulp	9.02	13.65	2.61	68.2	93	17.2	11.0	439	1.57	1.2	2.7	<0.2	1.2	20.1	0.29	0.04	<0.02	24	0.41	0.082
013K833481	Sediment Pulp	0.51	29.28	5.15	47.3	57	25.6	10.5	190	1.73	0.8	2.6	0.2	4.3	20.2	0.09	0.05	0.05	35	0.43	0.111
013K833482	Sediment Pulp	2.66	31.04	4.01	96.8	274	15.0	27.5	1168	4.26	1.3	1.3	<0.2	1.0	29.3	0.63	0.04	0.04	38	0.51	0.158
013K833483	Sediment Pulp	52.38	43.21	4.35	174.2	367	36.9	46.9	8543	7.01	2.8	3.3	0.4	2.6	30.6	0.93	0.09	0.04	43	0.47	0.239
013K833484	Sediment Pulp	0.51	29.13	5.20	50.1	64	24.6	10.9	193	1.75	0.9	2.5	<0.2	4.3	21.0	0.10	0.04	0.05	36	0.44	0.111
013K833485	Sediment Pulp	2.99	45.20	7.37	73.5	123	23.5	12.0	674	2.70	3.4	8.0	0.4	4.8	28.0	0.26	0.06	0.07	45	0.50	0.132
013K833486	Sediment Pulp	26.56	54.15	13.25	166.5	395	20.8	10.7	786	3.07	0.7	4.7	0.7	1.9	34.8	1.22	0.06	0.06	51	0.53	0.230
013K833487	Sediment Pulp	9.27	78.60	16.20	195.3	802	32.0	27.8	2547	6.20	3.9	4.6	<0.2	3.1	28.9	1.01	0.08	0.08	57	0.48	0.309
013K833488	Sediment Pulp	9.58	40.43	79.47	302.7	627	12.2	7.7	432	1.78	35.9	9.1	3.0	1.5	64.9	1.42	0.50	0.98	21	6.19	0.066
013K833489	Sediment Pulp	2.56	82.39	8.81	101.7	248	30.2	15.4	301	2.61	2.3	3.3	0.4	2.8	27.8	0.46	0.05	0.06	42	0.55	0.172
013K833490	Sediment Pulp	9.38	40.48	16.83	83.9	149	20.5	5.8	173	1.47	1.3	2.8	0.2	0.6	23.9	0.49	0.05	0.04	34	0.49	0.123
013K833491	Sediment Pulp	56.26	43.45	4.76	103.1	273	26.9	16.2	508	3.86	3.5	7.3	0.6	1.3	40.3	0.69	0.10	0.04	50	0.75	0.149



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K833462	Sediment Pulp	57.4	17.2	0.10	55.6	0.062	<20	1.75	0.008	0.04	0.2	2.1	0.20	0.21	60	1.0	<0.02	3.9	0.39	0.1	0.07
013K833463	Sediment Pulp	78.2	16.9	0.16	155.2	0.040	<20	1.90	0.009	0.06	0.2	2.2	0.11	0.23	57	1.4	<0.02	2.9	0.45	0.1	0.05
013K833464	Sediment Pulp	56.0	21.4	0.26	36.1	0.042	<20	1.34	0.012	0.05	0.1	4.1	0.13	3.36	141	3.1	<0.02	2.6	0.81	0.1	0.15
013K833465	Sediment Pulp	105.2	30.2	0.20	149.5	0.029	<20	3.16	0.007	0.05	0.2	3.6	0.15	0.29	213	2.9	<0.02	3.7	0.50	0.2	0.05
013K833466	Sediment Pulp	39.5	17.3	0.28	79.8	0.048	<20	0.91	0.018	0.05	0.1	2.7	0.09	0.05	28	0.9	<0.02	2.5	0.57	0.1	0.03
013K833467	Sediment Pulp	63.8	17.5	0.17	696.2	0.019	<20	1.46	0.017	0.04	0.1	3.5	0.18	0.30	107	6.2	<0.02	2.6	0.47	0.2	0.04
013K833468	Sediment Pulp	55.8	13.0	0.12	2230.4	0.015	<20	1.24	0.015	0.03	<0.1	3.7	0.22	0.15	68	5.8	<0.02	3.7	0.34	0.2	0.04
013K833469	Sediment Pulp	25.0	24.4	0.65	197.7	0.112	<20	1.07	0.050	0.15	<0.1	3.3	0.09	0.19	7	0.6	<0.02	4.1	0.69	<0.1	0.36
013K833470	Sediment Pulp	26.4	24.9	0.48	126.9	0.090	<20	1.42	0.026	0.07	<0.1	3.4	0.07	0.05	21	0.2	<0.02	3.9	0.54	<0.1	0.09
013K833471	Sediment Pulp	24.3	20.4	0.13	229.6	0.049	<20	2.36	0.010	0.02	<0.1	2.0	0.04	0.19	158	1.5	<0.02	5.2	0.27	<0.1	0.04
013K833472	Sediment Pulp	29.3	27.7	0.15	267.8	0.050	<20	3.30	0.009	0.03	0.1	3.6	0.16	0.18	168	3.0	<0.02	5.5	0.38	0.1	0.04
013K833473	Sediment Pulp	40.8	50.7	0.81	166.6	0.106	<20	1.73	0.031	0.27	0.2	6.0	0.29	0.15	278	0.9	0.04	6.6	1.46	0.1	0.15
013K833474	Sediment Pulp	34.5	28.2	0.34	147.8	0.043	<20	1.43	0.030	0.08	0.2	3.8	0.15	0.13	41	1.5	<0.02	3.3	0.76	<0.1	0.02
013K833475	Sediment Pulp	36.9	25.9	0.23	92.1	0.017	<20	1.91	0.007	0.03	0.3	2.5	0.29	1.29	68	2.0	<0.02	2.2	0.43	0.1	<0.02
013K833476	Sediment Pulp	38.7	26.5	0.61	144.5	0.130	<20	1.35	0.036	0.16	<0.1	4.6	0.13	0.06	21	0.3	<0.02	4.9	1.15	<0.1	0.27
013K833477	Sediment Pulp	96.9	24.6	0.14	123.0	0.032	<20	2.25	0.015	0.07	1.4	4.4	0.42	0.60	154	7.6	0.04	4.9	0.63	0.3	0.09
013K833478	Sediment Pulp	65.2	17.6	0.06	99.0	0.028	<20	2.01	0.007	0.03	<0.1	2.1	0.17	0.20	84	1.5	<0.02	3.5	0.29	0.1	0.05
013K833479	Sediment Pulp	27.4	18.0	0.37	60.1	0.097	<20	0.67	0.024	0.08	0.1	2.3	0.05	<0.02	11	<0.1	<0.02	3.2	0.54	<0.1	0.19
013K833480	Sediment Pulp	22.3	16.2	0.20	91.3	0.049	<20	1.43	0.021	0.04	0.3	2.1	0.08	0.09	53	1.1	<0.02	2.7	0.26	<0.1	0.03
013K833481	Sediment Pulp	25.8	24.5	0.49	63.0	0.094	<20	1.27	0.032	0.12	<0.1	3.4	0.07	0.02	19	<0.1	<0.02	4.5	0.54	<0.1	0.07
013K833482	Sediment Pulp	27.3	21.4	0.17	138.7	0.038	<20	2.53	0.018	0.04	0.2	3.0	0.13	0.22	87	1.9	<0.02	3.4	0.31	<0.1	0.03
013K833483	Sediment Pulp	50.8	22.7	0.15	1253.4	0.043	<20	3.12	0.019	0.04	0.3	4.9	0.25	0.19	150	3.0	<0.02	4.2	0.29	0.2	0.10
013K833484	Sediment Pulp	26.6	24.4	0.50	64.5	0.098	<20	1.30	0.033	0.13	<0.1	3.4	0.07	0.02	18	0.2	<0.02	4.7	0.55	0.1	0.06
013K833485	Sediment Pulp	41.6	26.3	0.49	130.5	0.090	<20	1.43	0.033	0.15	0.1	4.3	0.11	0.04	26	0.5	<0.02	4.9	0.74	0.1	0.06
013K833486	Sediment Pulp	87.5	25.9	0.15	137.1	0.028	<20	3.05	0.013	0.07	0.3	3.7	0.10	0.24	146	3.0	<0.02	3.9	0.49	0.2	0.10
013K833487	Sediment Pulp	110.0	32.1	0.31	210.2	0.049	<20	3.52	0.017	0.12	0.2	4.7	0.37	0.21	218	3.8	<0.02	6.4	0.98	0.2	0.04
013K833488	Sediment Pulp	10.3	12.7	0.58	96.3	0.045	<20	0.47	0.028	0.05	0.8	2.4	0.22	1.51	88	1.4	0.02	2.3	0.54	<0.1	0.03
013K833489	Sediment Pulp	51.6	26.8	0.50	108.7	0.070	<20	2.09	0.038	0.15	0.2	4.1	0.17	0.09	91	1.4	<0.02	5.0	0.73	0.1	0.07
013K833490	Sediment Pulp	29.0	22.5	0.23	92.8	0.035	<20	1.79	0.019	0.04	0.4	2.3	0.07	0.20	50	1.6	<0.02	2.9	0.32	<0.1	<0.02
013K833491	Sediment Pulp	34.0	25.2	0.28	236.0	0.045	<20	2.40	0.025	0.05	0.3	3.7	0.14	0.17	120	7.0	<0.02	3.6	0.46	0.1	0.03



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833462	Sediment Pulp	2.82	4.0	0.4	<0.05	3.4	31.77	126.0	<0.02	3	1.9	3.6	15.71	60.31	10.44	1.54	8.06	1.16	6.90	1.30	3.57
013K833463	Sediment Pulp	2.24	6.1	0.3	<0.05	2.9	34.02	155.9	0.02	6	2.4	6.2	19.79	73.09	12.12	1.64	9.89	1.31	7.33	1.34	3.72
013K833464	Sediment Pulp	2.29	5.3	0.6	<0.05	9.0	44.12	75.6	<0.02	5	1.5	10.6	14.85	57.76	11.29	1.78	10.85	1.53	8.41	1.72	4.60
013K833465	Sediment Pulp	2.51	4.9	0.3	<0.05	3.7	69.95	188.2	0.03	1	5.7	5.8	28.91	105.87	19.66	2.90	17.61	2.62	16.09	2.89	8.23
013K833466	Sediment Pulp	0.89	4.8	0.4	<0.05	1.5	25.35	76.2	<0.02	<1	1.4	7.0	10.02	37.17	6.79	1.02	5.82	0.88	4.83	0.97	2.52
013K833467	Sediment Pulp	0.63	4.0	0.2	<0.05	1.5	44.03	84.1	<0.02	12	1.8	4.1	15.96	64.08	11.81	1.80	10.46	1.47	8.08	1.60	4.37
013K833468	Sediment Pulp	0.35	3.1	0.1	<0.05	1.8	36.45	71.7	<0.02	8	1.3	3.2	14.21	52.03	9.43	1.38	8.22	1.21	6.50	1.29	3.67
013K833469	Sediment Pulp	1.01	10.3	0.5	<0.05	15.6	14.22	52.0	0.02	<1	0.4	10.2	6.76	24.45	4.77	0.71	3.70	0.51	3.26	0.54	1.57
013K833470	Sediment Pulp	1.63	6.3	0.6	<0.05	4.7	14.11	55.3	<0.02	<1	0.4	9.7	7.05	26.79	4.78	0.89	3.84	0.54	3.08	0.56	1.49
013K833471	Sediment Pulp	1.64	2.3	0.3	<0.05	1.9	16.68	54.2	0.02	<1	0.6	2.4	7.14	27.93	5.34	1.13	4.45	0.69	3.94	0.66	1.72
013K833472	Sediment Pulp	0.96	3.0	0.3	<0.05	0.9	25.14	73.6	0.03	<1	0.9	3.6	8.48	31.39	5.90	1.31	5.37	0.86	4.88	0.95	2.77
013K833473	Sediment Pulp	1.84	26.1	1.2	<0.05	6.6	18.28	76.6	0.05	<1	0.7	23.3	9.97	36.44	6.61	1.02	4.63	0.69	3.56	0.70	1.83
013K833474	Sediment Pulp	0.62	6.7	0.3	<0.05	1.1	24.70	50.1	0.02	<1	0.6	9.5	9.22	32.80	5.81	1.13	5.22	0.78	4.30	0.88	2.48
013K833475	Sediment Pulp	0.60	3.0	0.1	<0.05	0.5	24.13	45.9	<0.02	6	0.4	6.5	9.54	36.06	6.49	1.35	5.66	0.80	4.53	0.87	2.40
013K833476	Sediment Pulp	1.78	14.9	0.7	<0.05	11.3	20.62	70.4	<0.02	<1	0.8	14.2	9.81	35.07	6.36	1.00	4.95	0.73	4.05	0.78	2.13
013K833477	Sediment Pulp	1.50	8.2	0.4	<0.05	5.5	71.78	231.9	0.03	24	4.2	5.0	26.87	97.52	18.95	2.30	16.73	2.67	14.87	2.96	7.84
013K833478	Sediment Pulp	1.81	3.4	0.3	<0.05	2.0	42.06	188.4	0.02	6	3.5	2.0	18.71	69.19	12.85	1.59	11.02	1.73	9.70	1.84	4.84
013K833479	Sediment Pulp	0.77	6.1	0.5	<0.05	8.1	11.90	57.4	<0.02	<1	0.3	8.7	7.25	25.92	4.60	0.74	3.39	0.45	2.68	0.45	1.29
013K833480	Sediment Pulp	1.10	2.8	0.3	<0.05	1.3	13.35	47.9	<0.02	16	0.3	5.3	6.27	24.38	4.26	0.86	3.77	0.52	2.72	0.50	1.41
013K833481	Sediment Pulp	1.32	8.9	0.5	<0.05	3.2	13.50	54.6	<0.02	<1	0.3	10.5	6.77	25.45	4.39	0.75	3.36	0.50	2.86	0.53	1.41
013K833482	Sediment Pulp	0.96	3.3	0.2	<0.05	0.8	19.53	61.8	<0.02	1	0.6	4.1	7.56	28.92	5.35	1.11	4.25	0.70	3.74	0.73	1.94
013K833483	Sediment Pulp	1.01	3.5	0.3	<0.05	2.5	34.12	100.4	0.02	7	1.4	4.1	14.05	50.90	9.46	1.84	7.55	1.14	6.58	1.30	3.73
013K833484	Sediment Pulp	1.26	9.2	0.5	<0.05	3.8	13.78	56.7	0.02	<1	0.4	10.3	7.18	25.24	4.70	0.75	3.58	0.50	2.94	0.51	1.45
013K833485	Sediment Pulp	1.15	12.3	0.6	<0.05	2.8	28.25	84.4	0.03	2	0.9	11.6	11.29	41.55	7.86	1.13	5.96	0.94	5.34	1.03	2.89
013K833486	Sediment Pulp	2.32	6.4	0.3	<0.05	4.5	73.60	225.2	0.03	3	5.5	4.6	25.71	94.17	19.55	2.40	17.30	2.75	15.00	2.96	8.31
013K833487	Sediment Pulp	1.91	12.5	0.6	<0.05	4.1	94.47	246.3	0.04	3	4.5	9.6	28.94	104.49	21.79	2.74	19.24	3.28	19.43	3.68	10.10
013K833488	Sediment Pulp	0.77	3.7	3.2	<0.05	1.6	10.69	17.5	0.48	17	<0.1	4.6	2.90	11.74	2.50	0.51	2.07	0.32	1.74	0.35	0.99
013K833489	Sediment Pulp	1.81	12.4	0.5	<0.05	3.6	44.88	108.8	<0.02	1	1.3	10.2	14.13	51.04	10.31	1.43	8.51	1.44	8.34	1.53	4.45
013K833490	Sediment Pulp	1.07	3.6	0.3	<0.05	1.0	20.04	58.4	<0.02	25	0.4	5.7	8.02	28.81	5.53	1.08	4.75	0.69	3.90	0.74	2.05
013K833491	Sediment Pulp	1.33	5.4	0.4	<0.05	1.2	24.09	67.2	0.02	86	0.7	8.5	9.22	33.57	6.38	1.22	5.08	0.84	4.53	0.88	2.51



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833462	Sediment Pulp		0.51	2.93	0.41	<10	<2
013K833463	Sediment Pulp		0.53	3.25	0.44	<10	<2
013K833464	Sediment Pulp		0.60	3.65	0.49	<10	3
013K833465	Sediment Pulp		1.05	5.91	0.75	<10	3
013K833466	Sediment Pulp		0.35	2.21	0.28	<10	7
013K833467	Sediment Pulp		0.62	3.68	0.50	<10	3
013K833468	Sediment Pulp		0.50	2.93	0.38	<10	<2
013K833469	Sediment Pulp		0.21	1.29	0.17	<10	<2
013K833470	Sediment Pulp		0.20	1.35	0.17	<10	<2
013K833471	Sediment Pulp		0.26	1.50	0.17	<10	<2
013K833472	Sediment Pulp		0.41	2.32	0.33	<10	<2
013K833473	Sediment Pulp		0.28	1.74	0.28	<10	<2
013K833474	Sediment Pulp		0.33	2.09	0.34	<10	<2
013K833475	Sediment Pulp		0.30	2.02	0.28	<10	<2
013K833476	Sediment Pulp		0.28	1.87	0.24	<10	<2
013K833477	Sediment Pulp		1.10	5.82	0.75	<10	<2
013K833478	Sediment Pulp		0.65	3.38	0.40	<10	<2
013K833479	Sediment Pulp		0.17	1.15	0.15	<10	<2
013K833480	Sediment Pulp		0.19	1.25	0.17	<10	<2
013K833481	Sediment Pulp		0.19	1.11	0.17	<10	<2
013K833482	Sediment Pulp		0.29	1.73	0.26	<10	<2
013K833483	Sediment Pulp		0.49	3.21	0.44	<10	2
013K833484	Sediment Pulp		0.19	1.21	0.16	<10	<2
013K833485	Sediment Pulp		0.41	2.52	0.36	<10	<2
013K833486	Sediment Pulp		1.13	6.31	0.79	<10	<2
013K833487	Sediment Pulp		1.37	7.65	0.96	<10	3
013K833488	Sediment Pulp		0.14	0.86	0.14	<10	<2
013K833489	Sediment Pulp		0.61	3.75	0.51	<10	<2
013K833490	Sediment Pulp		0.28	1.98	0.28	<10	<2
013K833491	Sediment Pulp		0.35	2.20	0.32	<10	2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013K833492	Sediment Pulp	1.56	32.93	6.12	60.3	60	28.2	14.6	839	2.85	2.5	2.5	0.6	4.6	44.0	0.16	0.04	0.05	52	0.54	0.101
013K833493	Sediment Pulp	2.11	47.40	5.45	103.7	385	21.7	12.7	554	4.20	1.0	1.7	<0.2	1.6	42.6	0.66	0.04	0.04	52	0.56	0.204
013K833494	Sediment Pulp	17.58	65.63	3.32	105.0	184	23.4	8.2	192	1.20	1.3	3.7	0.4	0.7	35.0	0.95	0.05	<0.02	34	0.66	0.113
013K833495	Sediment Pulp	10.59	33.76	4.91	60.7	47	31.9	16.5	239	2.58	7.2	13.3	<0.2	3.8	41.0	0.27	0.05	0.04	45	0.69	0.082
013K833496	Sediment Pulp	13.64	35.88	3.27	85.1	190	16.3	12.5	364	2.02	0.4	1.2	<0.2	0.5	15.3	0.63	0.04	0.02	30	0.31	0.109
013K833497	Sediment Pulp	8.36	56.02	5.06	99.3	285	15.6	7.0	178	1.26	0.9	4.7	0.4	0.4	32.6	0.78	0.10	0.03	27	0.75	0.115
013K833498	Sediment Pulp	5.53	18.95	7.47	81.3	74	18.1	11.5	5588	3.42	3.0	2.5	0.3	5.6	27.7	0.19	0.05	0.08	40	0.48	0.121
013K833499	Sediment Pulp	1.58	25.72	5.23	46.3	28	27.8	13.1	367	2.36	1.3	3.6	0.3	5.1	24.1	0.12	0.04	0.05	49	0.45	0.086
013K833500	Sediment Pulp	3.74	87.81	9.21	120.4	658	20.2	24.2	1166	7.34	1.6	2.1	0.6	3.5	36.8	0.86	0.04	0.05	59	0.64	0.334
013K833501	Sediment Pulp	2.75	33.33	5.10	70.8	239	14.1	7.0	174	1.85	0.7	1.4	0.4	0.8	29.0	0.48	0.03	0.03	42	0.54	0.131
013K833502	Sediment Pulp	2.73	32.23	5.13	69.2	241	14.3	7.3	175	1.90	0.5	1.4	0.5	0.8	29.9	0.44	0.03	0.03	43	0.55	0.130
013K833503	Sediment Pulp	1.04	32.91	26.99	137.1	2764	46.3	28.2	1245	3.19	26.6	4.2	2.2	8.6	29.8	0.61	0.51	3.43	53	0.64	0.098
013K833504	Sediment Pulp	6.87	45.98	5.35	114.1	267	20.6	13.3	320	3.43	2.0	3.1	0.7	1.4	59.1	0.58	0.04	0.05	45	0.55	0.224
013K833505	Sediment Pulp	1.67	54.48	2.48	41.9	206	9.0	3.7	128	0.75	0.6	6.5	<0.2	0.5	18.2	0.38	0.02	<0.02	36	0.35	0.098
013K833506	Sediment Pulp	4.25	62.51	2.88	74.0	272	9.5	6.0	221	1.81	1.7	7.2	0.7	0.8	19.4	0.39	0.03	<0.02	41	0.38	0.136
013K833507	Sediment Pulp	0.87	21.82	7.04	55.3	60	30.0	16.0	1533	3.28	3.9	1.7	0.5	5.4	34.1	0.10	0.04	0.07	64	0.60	0.110
013K833508	Sediment Pulp	1.91	33.75	4.84	106.4	100	21.1	9.7	324	1.77	4.6	5.2	0.5	1.8	61.7	0.55	0.07	0.04	131	0.78	0.102
013K833509	Sediment Pulp	3.99	27.92	3.01	60.2	116	8.8	3.4	75	0.35	5.3	8.6	0.3	0.5	42.6	0.29	0.08	0.02	57	0.74	0.051
013K833510	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K833511	Sediment Pulp	4.04	45.98	10.38	306.9	429	52.0	7.3	517	1.92	2.4	2.1	1.1	0.5	25.2	2.63	0.12	0.03	32	0.62	0.137
013K833512	Sediment Pulp	1.33	34.37	6.86	222.3	211	51.5	8.8	267	1.74	2.1	2.4	0.4	1.0	24.0	2.24	0.11	0.04	35	0.60	0.091
013K833513	Sediment Pulp	8.48	59.23	7.47	258.1	629	45.9	11.9	503	3.03	7.7	6.8	1.2	0.6	31.2	2.90	0.15	0.04	29	0.87	0.154
013K833514	Sediment Pulp	5.23	74.35	8.98	167.1	420	33.7	9.7	158	0.73	1.2	11.9	0.9	1.2	43.3	2.44	0.35	0.05	21	1.01	0.053
013K833515	Sediment Pulp	6.95	199.67	16.31	668.7	780	195.8	40.3	2019	6.08	19.2	7.2	5.5	2.7	24.9	5.51	0.39	0.05	38	0.56	0.182
013K833516	Sediment Pulp	1.93	74.95	9.93	217.6	678	56.4	9.2	227	1.22	1.9	4.4	1.7	0.8	46.0	3.42	0.23	0.05	23	1.23	0.095
013K833517	Sediment Pulp	3.85	99.21	9.06	320.9	491	64.0	12.7	457	2.37	8.6	4.6	1.8	0.7	32.2	3.59	0.31	0.05	38	1.04	0.110
013K833518	Sediment Pulp	2.40	70.08	8.95	164.7	276	41.8	16.1	388	2.67	5.0	6.3	1.2	3.9	30.6	0.65	0.13	0.07	43	0.64	0.106
013K921000	Sediment Pulp	8.18	58.23	6.39	174.8	589	70.8	21.1	807	3.68	21.5	42.4	2.1	1.4	216.0	1.22	0.54	0.04	28	1.12	0.195
013K921001	Sediment Pulp	10.26	45.40	86.68	324.0	641	13.4	8.3	464	1.89	40.3	9.5	3.5	1.5	70.9	1.53	0.57	1.10	23	6.85	0.072
013K921002	Sediment Pulp	8.28	59.97	6.36	184.7	594	73.6	21.7	787	3.75	22.4	44.2	1.8	1.4	214.0	1.25	0.54	0.04	28	1.11	0.199



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K833492	Sediment Pulp	25.6	28.1	0.68	200.3	0.106	<20	1.68	0.048	0.20	0.1	5.0	0.12	0.09	14	0.3	<0.02	5.5	0.76	<0.1	0.06
013K833493	Sediment Pulp	47.4	29.1	0.31	225.9	0.060	<20	3.28	0.023	0.06	<0.1	4.2	0.16	0.14	189	1.7	<0.02	6.0	0.69	0.1	0.04
013K833494	Sediment Pulp	56.1	20.4	0.16	124.5	0.027	<20	2.48	0.017	0.04	0.6	2.6	0.20	0.32	89	2.1	<0.02	2.6	0.23	0.1	<0.02
013K833495	Sediment Pulp	29.0	27.6	0.64	109.8	0.088	<20	1.61	0.069	0.15	0.2	4.0	0.20	0.74	24	0.5	<0.02	4.5	0.45	<0.1	0.08
013K833496	Sediment Pulp	26.1	20.0	0.10	76.7	0.021	<20	2.15	0.010	0.02	<0.1	2.1	0.11	0.21	59	1.7	<0.02	2.4	0.22	<0.1	<0.02
013K833497	Sediment Pulp	43.4	15.9	0.12	186.2	0.020	<20	1.91	0.009	0.03	0.1	1.9	0.13	0.22	137	2.5	<0.02	2.3	0.27	<0.1	0.02
013K833498	Sediment Pulp	40.0	24.7	0.50	159.4	0.098	<20	1.21	0.037	0.11	0.2	3.7	0.09	0.03	23	0.4	<0.02	4.1	0.89	0.1	0.08
013K833499	Sediment Pulp	24.3	29.3	0.60	258.1	0.105	<20	1.54	0.040	0.12	<0.1	5.2	0.08	<0.02	5	<0.1	<0.02	5.0	0.49	<0.1	0.12
013K833500	Sediment Pulp	79.4	36.6	0.19	189.6	0.070	<20	5.52	0.012	0.04	0.1	5.3	0.25	0.22	302	3.9	<0.02	6.3	0.43	0.2	0.11
013K833501	Sediment Pulp	44.7	20.2	0.25	127.6	0.044	<20	2.34	0.020	0.06	0.1	2.6	0.12	0.10	86	1.2	<0.02	4.0	0.62	0.1	<0.02
013K833502	Sediment Pulp	45.5	19.8	0.25	130.8	0.045	<20	2.35	0.021	0.06	<0.1	2.5	0.12	0.11	93	1.1	<0.02	3.8	0.62	0.1	<0.02
013K833503	Sediment Pulp	41.4	53.0	0.80	168.1	0.111	<20	1.77	0.033	0.27	0.2	6.1	0.29	0.15	267	0.9	0.03	6.5	1.46	0.1	0.15
013K833504	Sediment Pulp	54.2	27.8	0.31	157.3	0.050	<20	2.75	0.027	0.09	0.3	4.0	0.16	0.17	99	1.7	<0.02	4.2	0.60	0.1	<0.02
013K833505	Sediment Pulp	44.5	15.1	0.07	272.3	0.017	<20	1.74	0.009	0.02	<0.1	1.9	0.06	0.17	101	1.4	<0.02	1.8	0.19	0.1	0.02
013K833506	Sediment Pulp	48.9	16.9	0.08	322.9	0.021	<20	2.09	0.008	0.02	<0.1	3.1	0.13	0.16	135	1.9	<0.02	1.8	0.21	0.1	0.04
013K833507	Sediment Pulp	29.9	30.5	0.77	182.2	0.118	<20	1.72	0.079	0.21	<0.1	5.4	0.13	0.03	17	0.2	<0.02	6.0	0.80	<0.1	0.12
013K833508	Sediment Pulp	49.1	25.8	0.35	222.8	0.064	<20	2.28	0.036	0.10	0.1	4.8	0.15	0.16	82	1.6	<0.02	3.6	0.47	<0.1	0.05
013K833509	Sediment Pulp	44.7	17.8	0.13	142.7	0.017	<20	0.55	0.018	0.04	0.2	2.3	0.07	0.48	90	2.7	<0.02	1.6	0.50	<0.1	0.06
013K833510	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833511	Sediment Pulp	41.4	24.3	0.29	175.8	0.034	<20	1.84	0.022	0.06	<0.1	3.5	0.17	0.23	89	2.1	<0.02	2.8	0.54	<0.1	<0.02
013K833512	Sediment Pulp	41.1	25.1	0.45	150.1	0.061	<20	1.33	0.024	0.10	<0.1	4.2	0.15	0.13	58	1.3	<0.02	2.8	0.71	<0.1	0.03
013K833513	Sediment Pulp	54.0	28.7	0.21	205.4	0.024	22	2.07	0.015	0.05	0.2	4.3	0.14	0.43	208	3.7	<0.02	2.4	0.53	<0.1	0.03
013K833514	Sediment Pulp	57.4	39.2	0.28	445.5	0.034	<20	1.30	0.024	0.07	0.1	5.0	0.17	0.38	150	2.9	<0.02	2.5	0.77	0.1	0.08
013K833515	Sediment Pulp	39.2	56.3	0.42	213.6	0.047	<20	2.34	0.033	0.09	<0.1	7.5	0.60	0.99	369	5.8	0.03	3.4	0.90	0.1	0.06
013K833516	Sediment Pulp	37.6	45.1	0.37	344.5	0.028	<20	1.72	0.023	0.08	0.2	5.3	0.22	0.30	280	3.7	<0.02	2.6	0.95	<0.1	0.06
013K833517	Sediment Pulp	46.3	47.9	0.28	211.0	0.024	<20	2.47	0.012	0.06	0.1	5.6	0.43	0.30	216	2.8	<0.02	2.7	0.74	0.1	0.04
013K833518	Sediment Pulp	33.7	34.3	0.74	112.4	0.100	<20	1.52	0.060	0.13	<0.1	4.4	0.36	0.52	50	1.2	<0.02	4.8	0.70	<0.1	0.07
013K921000	Sediment Pulp	40.2	81.9	0.26	290.4	0.022	<20	2.80	0.013	0.05	3.4	5.6	0.16	0.30	353	8.4	0.02	2.3	0.70	0.1	0.09
013K921001	Sediment Pulp	11.2	14.1	0.59	101.3	0.049	<20	0.48	0.031	0.05	0.6	2.8	0.23	1.57	110	1.4	<0.02	2.4	0.57	<0.1	0.05
013K921002	Sediment Pulp	40.8	83.1	0.27	293.6	0.022	<20	2.72	0.013	0.05	3.4	5.7	0.17	0.31	389	8.2	<0.02	2.4	0.71	0.1	0.08



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K833492	Sediment Pulp	0.63	14.5	0.5	<0.05	3.2	16.01	53.3	<0.02	<1	0.6	13.4	7.10	25.87	4.80	0.87	3.84	0.56	3.07	0.58	1.65
013K833493	Sediment Pulp	1.61	7.1	0.4	<0.05	1.5	30.37	101.3	0.03	<1	1.2	9.4	13.65	51.44	9.04	1.80	7.36	1.15	6.34	1.16	3.19
013K833494	Sediment Pulp	1.03	3.1	0.2	<0.05	0.9	39.55	107.8	<0.02	52	1.7	4.6	16.41	59.68	10.98	1.84	9.87	1.40	7.43	1.40	4.12
013K833495	Sediment Pulp	1.02	8.5	0.4	<0.05	4.2	18.92	58.4	<0.02	93	0.7	12.3	8.25	30.63	5.79	1.00	4.47	0.70	3.83	0.73	2.00
013K833496	Sediment Pulp	0.84	2.1	0.2	<0.05	0.5	19.13	59.2	<0.02	5	0.8	2.9	7.45	26.78	5.13	0.96	4.49	0.63	3.45	0.70	1.91
013K833497	Sediment Pulp	1.03	3.2	0.2	<0.05	1.2	35.33	72.0	<0.02	19	2.0	2.8	11.89	44.52	8.98	1.37	7.92	1.20	6.99	1.38	3.73
013K833498	Sediment Pulp	0.99	9.0	0.5	<0.05	4.0	21.64	79.0	<0.02	<1	1.2	12.2	10.35	37.37	6.53	1.03	5.39	0.73	4.26	0.84	2.23
013K833499	Sediment Pulp	0.25	9.7	0.6	<0.05	6.0	13.66	51.0	0.02	1	0.4	10.8	6.96	24.73	4.49	0.80	3.63	0.53	2.79	0.50	1.32
013K833500	Sediment Pulp	2.53	4.8	0.4	<0.05	4.2	61.16	178.7	0.04	2	2.8	4.6	22.58	83.74	16.40	2.76	14.56	2.27	12.80	2.44	5.84
013K833501	Sediment Pulp	1.25	6.3	0.3	<0.05	1.4	25.58	93.8	<0.02	2	1.6	7.5	13.09	49.44	8.38	1.39	6.17	0.99	5.29	1.01	2.70
013K833502	Sediment Pulp	1.20	6.2	0.4	<0.05	1.3	27.37	91.2	<0.02	1	1.7	7.8	12.88	46.63	8.02	1.32	6.36	0.98	5.49	1.03	2.77
013K833503	Sediment Pulp	1.78	26.3	1.5	<0.05	6.1	18.98	77.3	0.04	<1	0.5	23.8	10.60	37.06	6.72	1.00	4.72	0.64	3.51	0.72	1.94
013K833504	Sediment Pulp	1.34	7.6	0.4	<0.05	1.4	40.29	133.2	<0.02	2	1.5	8.1	15.54	57.37	11.11	1.85	9.10	1.39	7.78	1.47	4.10
013K833505	Sediment Pulp	0.53	2.1	0.1	<0.05	1.1	36.64	57.8	<0.02	1	1.7	2.3	13.58	51.96	10.06	1.99	8.17	1.27	7.09	1.30	3.54
013K833506	Sediment Pulp	0.61	2.2	0.1	<0.05	1.2	42.05	66.6	<0.02	2	2.1	2.7	14.60	55.27	10.70	2.12	9.51	1.35	7.85	1.58	4.35
013K833507	Sediment Pulp	0.53	15.1	0.6	<0.05	6.0	16.07	66.1	0.03	<1	0.5	14.1	8.07	30.41	5.23	0.97	4.34	0.61	3.37	0.59	1.57
013K833508	Sediment Pulp	1.75	6.4	0.4	<0.05	2.7	38.36	99.6	0.02	1	1.5	7.1	14.03	52.68	9.75	1.72	8.62	1.26	7.17	1.38	3.73
013K833509	Sediment Pulp	0.83	4.0	0.2	<0.05	2.7	32.65	23.6	<0.02	1	0.4	3.0	11.40	44.09	7.93	1.34	6.25	0.86	4.97	0.94	2.50
013K833510	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K833511	Sediment Pulp	0.71	4.7	0.3	<0.05	0.8	26.67	45.5	<0.02	4	0.7	6.8	10.14	37.99	6.81	1.43	5.57	0.78	4.78	0.93	2.43
013K833512	Sediment Pulp	0.97	6.7	0.4	<0.05	1.9	23.95	46.9	<0.02	2	0.8	9.9	9.76	36.79	6.32	1.38	5.79	0.79	4.18	0.88	2.22
013K833513	Sediment Pulp	0.86	4.3	0.2	<0.05	1.1	35.66	55.7	<0.02	3	0.8	5.6	13.53	49.38	9.04	1.91	7.73	1.11	6.16	1.19	3.23
013K833514	Sediment Pulp	1.23	5.8	0.3	<0.05	3.6	35.49	47.6	<0.02	10	0.6	6.7	13.57	48.67	8.74	1.79	7.22	1.12	6.02	1.25	3.28
013K833515	Sediment Pulp	0.80	7.3	0.3	<0.05	2.4	31.12	60.2	0.02	4	1.3	9.6	10.51	39.09	7.55	1.80	6.83	1.01	5.78	1.18	3.00
013K833516	Sediment Pulp	0.90	7.3	0.2	<0.05	2.2	26.58	40.3	<0.02	6	0.7	11.5	9.68	35.66	6.57	1.52	5.27	0.85	4.71	0.91	2.42
013K833517	Sediment Pulp	1.07	5.8	0.2	<0.05	1.6	34.20	55.0	<0.02	11	0.7	6.9	11.48	42.94	7.78	1.81	7.40	1.07	6.04	1.21	3.20
013K833518	Sediment Pulp	1.35	8.7	0.5	<0.05	3.7	18.50	59.7	0.02	3	0.8	12.6	8.51	30.33	5.69	1.05	4.33	0.65	3.55	0.68	1.87
013K921000	Sediment Pulp	0.76	3.4	0.3	<0.05	2.4	28.37	68.3	0.02	14	1.1	4.3	10.60	39.07	7.14	1.59	6.19	1.00	5.40	1.06	2.78
013K921001	Sediment Pulp	0.85	3.9	3.6	<0.05	1.6	11.18	18.1	0.54	23	0.2	5.0	3.08	12.16	2.76	0.50	2.35	0.32	1.96	0.36	1.03
013K921002	Sediment Pulp	0.76	3.4	0.2	<0.05	2.4	28.58	69.1	0.03	14	1.1	4.8	10.88	40.56	7.15	1.57	6.66	0.99	5.68	1.03	2.71



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K833492	Sediment Pulp		0.22	1.45	0.21	<10	<2
013K833493	Sediment Pulp		0.48	2.78	0.40	<10	<2
013K833494	Sediment Pulp		0.58	3.45	0.45	<10	<2
013K833495	Sediment Pulp		0.27	1.56	0.23	<10	<2
013K833496	Sediment Pulp		0.27	1.75	0.24	<10	<2
013K833497	Sediment Pulp		0.52	3.05	0.43	<10	<2
013K833498	Sediment Pulp		0.34	1.89	0.27	<10	<2
013K833499	Sediment Pulp		0.19	1.19	0.18	<10	<2
013K833500	Sediment Pulp		0.80	4.83	0.61	<10	<2
013K833501	Sediment Pulp		0.39	2.34	0.31	<10	<2
013K833502	Sediment Pulp		0.37	2.18	0.31	<10	<2
013K833503	Sediment Pulp		0.29	1.74	0.26	<10	2
013K833504	Sediment Pulp		0.55	3.39	0.47	<10	<2
013K833505	Sediment Pulp		0.50	2.89	0.37	<10	<2
013K833506	Sediment Pulp		0.57	3.60	0.51	<10	<2
013K833507	Sediment Pulp		0.21	1.36	0.22	<10	<2
013K833508	Sediment Pulp		0.50	3.41	0.48	<10	<2
013K833509	Sediment Pulp		0.34	2.25	0.32	<10	<2
013K833510	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K833511	Sediment Pulp		0.36	2.25	0.32	<10	<2
013K833512	Sediment Pulp		0.31	1.99	0.29	<10	<2
013K833513	Sediment Pulp		0.42	2.66	0.39	<10	<2
013K833514	Sediment Pulp		0.41	2.89	0.42	<10	<2
013K833515	Sediment Pulp		0.43	2.74	0.38	<10	3
013K833516	Sediment Pulp		0.33	2.10	0.28	<10	2
013K833517	Sediment Pulp		0.47	2.85	0.42	<10	2
013K833518	Sediment Pulp		0.28	1.59	0.23	<10	<2
013K921000	Sediment Pulp		0.36	2.48	0.32	<10	2
013K921001	Sediment Pulp		0.15	0.93	0.15	<10	<2
013K921002	Sediment Pulp		0.41	2.72	0.31	<10	4



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921003	Sediment Pulp	10.43	36.97	6.33	124.5	190	24.1	11.6	466	1.72	2.5	3.5	1.1	0.5	190.8	1.05	0.18	0.05	27	1.52	0.083
013K921004	Sediment Pulp	19.22	21.84	4.66	78.4	121	16.5	8.3	216	1.16	0.9	38.2	0.8	0.5	503.6	0.57	0.16	0.02	26	2.02	0.054
013K921005	Sediment Pulp	8.81	49.01	10.04	83.8	233	25.6	12.1	326	1.51	2.1	38.3	0.5	1.3	58.0	0.50	0.27	0.08	35	0.94	0.160
013K921006	Sediment Pulp	8.84	46.59	10.36	89.9	358	20.5	17.8	376	1.89	1.5	33.2	1.1	0.7	77.2	0.65	0.22	0.08	26	1.15	0.211
013K921007	Sediment Pulp	0.82	17.59	6.59	48.5	129	15.8	2.9	105	0.32	0.1	10.3	0.4	0.2	54.8	0.32	0.05	0.02	18	0.64	0.060
013K921008	Sediment Pulp	24.50	33.12	4.62	159.9	281	18.1	18.1	637	4.76	3.5	22.8	1.6	1.4	404.4	0.72	0.15	0.07	29	1.88	0.175
013K921009	Sediment Pulp	2.33	24.56	2.47	98.3	309	15.5	6.7	225	0.59	0.4	3.9	1.4	0.3	66.5	0.66	0.30	0.05	13	0.77	0.067
013K921010	Sediment Pulp	6.11	113.02	4.78	117.2	198	31.3	6.8	51	1.67	6.3	5.5	1.5	2.0	22.2	1.05	0.26	0.03	8	0.67	0.024
013K921011	Sediment Pulp	4.12	48.21	6.29	94.9	228	19.7	13.0	399	2.46	2.7	9.6	1.9	2.1	33.5	0.43	0.04	0.06	65	0.75	0.210
013K921012	Sediment Pulp	7.28	36.23	6.95	156.9	200	18.7	26.6	2558	3.35	3.1	7.7	0.7	0.9	20.3	0.92	0.08	0.05	29	0.56	0.150
013K921013	Sediment Pulp	11.57	35.17	9.36	154.6	500	15.2	19.3	722	4.08	1.1	6.9	<0.2	1.0	29.5	0.80	0.05	0.04	48	0.86	0.201
013K921014	Sediment Pulp	4.17	48.34	6.17	96.1	233	19.4	13.1	398	2.46	2.7	9.8	0.6	2.1	33.2	0.43	0.04	0.05	65	0.76	0.216
013K921015	Sediment Pulp	2.85	31.69	6.40	68.3	251	11.2	2.7	58	0.36	0.2	4.9	0.3	0.2	18.2	0.56	0.02	0.03	14	0.45	0.042
013K921016	Sediment Pulp	41.35	40.30	5.96	122.7	356	11.0	11.5	399	5.96	0.9	92.3	<0.2	3.0	30.1	0.67	0.03	0.06	118	0.75	0.141
013K921017	Sediment Pulp	17.62	33.93	7.24	126.6	358	17.2	12.1	513	3.53	1.0	26.7	0.6	1.4	22.6	0.75	0.03	0.09	49	0.48	0.174
013K921018	Sediment Pulp	6.54	17.15	3.87	77.5	165	10.2	5.6	199	1.58	<0.1	23.8	<0.2	0.6	20.8	0.40	0.03	0.04	30	0.45	0.087
013K921019	Sediment Pulp	10.41	18.52	8.49	70.5	184	9.6	5.4	104	0.73	0.2	20.1	<0.2	0.2	25.1	0.46	0.03	0.05	24	0.51	0.098
013K921020	Sediment Pulp	24.25	33.88	5.22	106.1	302	9.4	10.1	201	2.71	1.5	66.2	<0.2	0.4	22.0	0.55	0.06	0.04	56	0.83	0.106
013K921021	Sediment Pulp	0.94	32.92	27.26	141.7	2766	46.8	28.6	1242	3.16	25.4	4.0	2.9	8.5	28.6	0.57	0.57	3.28	49	0.64	0.095
013K921022	Sediment Pulp	3.49	24.34	5.90	85.1	81	18.6	9.4	177	1.19	21.1	5.7	0.4	0.6	17.8	0.46	0.06	0.07	34	0.53	0.052
013K921023	Sediment Pulp	2.11	86.56	4.45	85.6	249	20.9	6.4	145	0.95	1.7	3.1	0.7	0.4	23.4	0.59	0.14	0.05	33	0.98	0.141
013K921024	Sediment Pulp	2.68	101.70	5.24	114.6	284	23.6	7.7	162	1.04	1.9	3.4	1.0	0.4	27.7	0.73	0.09	0.06	35	1.08	0.182
013K921025	Sediment Pulp	1.18	62.51	2.03	85.1	117	20.3	10.8	240	1.05	9.0	0.9	1.0	0.2	12.1	0.39	0.19	0.03	21	0.98	0.073
013K921026	Sediment Pulp	4.92	43.58	7.20	195.8	506	20.2	56.3	3637	8.04	0.4	14.9	<0.2	1.8	37.3	0.79	0.04	0.06	57	0.60	0.244
013K921027	Sediment Pulp	2.62	21.89	3.54	85.0	98	14.2	6.4	95	0.92	0.1	15.1	<0.2	0.2	22.9	0.34	<0.02	0.02	21	0.45	0.056
013K921028	Sediment Pulp	0.71	48.52	4.27	80.0	221	11.2	2.6	132	1.11	<0.1	1.6	<0.2	0.3	27.4	0.39	0.04	0.04	38	0.48	0.233
013K921029	Sediment Pulp	2.61	25.84	3.01	96.2	253	14.1	4.6	61	0.62	0.1	14.6	<0.2	0.2	30.6	0.40	0.03	<0.02	26	0.54	0.067
013K921030	Sediment Pulp	4.83	75.66	5.50	96.3	824	15.5	6.8	219	1.82	0.2	14.4	0.2	0.8	47.5	0.52	0.04	0.05	54	0.91	0.334
013K921031	Sediment Pulp	5.68	100.53	6.21	110.2	457	18.2	57.8	2708	11.18	0.4	12.1	<0.2	1.5	33.4	0.75	0.04	0.05	84	0.66	0.259
013K921032	Sediment Pulp	0.68	47.59	4.19	81.6	233	11.2	2.7	137	1.14	<0.1	1.7	<0.2	0.3	27.9	0.39	0.04	0.04	40	0.50	0.226



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K921003	Sediment Pulp	30.1	31.2	0.22	451.6	0.018	<20	2.29	0.026	0.04	1.0	2.5	0.12	0.77	284	1.9	<0.02	1.9	0.37	<0.1	0.03
013K921004	Sediment Pulp	36.7	24.7	0.10	367.6	0.021	21	2.38	0.020	0.05	0.5	2.2	0.08	0.88	181	3.1	<0.02	2.4	0.22	<0.1	0.03
013K921005	Sediment Pulp	44.4	43.0	0.46	155.0	0.064	<20	2.00	0.046	0.14	0.5	3.2	0.15	0.30	194	1.6	<0.02	4.2	0.72	0.1	0.08
013K921006	Sediment Pulp	47.6	37.6	0.21	182.3	0.040	<20	2.17	0.026	0.05	1.1	2.3	0.18	1.28	333	2.3	<0.02	3.8	0.42	0.1	<0.02
013K921007	Sediment Pulp	27.2	19.0	0.05	232.6	0.019	<20	1.67	0.010	0.02	<0.1	0.8	0.02	0.34	133	1.9	<0.02	2.5	0.23	<0.1	<0.02
013K921008	Sediment Pulp	28.4	33.0	0.13	448.2	0.029	<20	3.58	0.017	0.03	0.2	3.9	0.15	0.65	186	4.5	<0.02	3.1	0.29	0.1	0.05
013K921009	Sediment Pulp	25.0	21.2	0.09	257.4	0.011	<20	1.57	0.011	0.03	<0.1	1.1	0.08	0.32	202	1.7	<0.02	1.2	0.29	<0.1	<0.02
013K921010	Sediment Pulp	68.3	18.9	0.10	90.7	0.014	<20	0.86	0.019	0.03	<0.1	6.2	0.11	1.97	474	2.1	<0.02	1.2	0.39	0.1	0.03
013K921011	Sediment Pulp	38.7	31.5	0.41	92.0	0.075	<20	2.31	0.073	0.08	0.2	3.5	0.08	0.17	189	1.1	<0.02	4.7	0.35	0.1	0.03
013K921012	Sediment Pulp	57.2	26.7	0.15	219.5	0.025	<20	2.43	0.020	0.03	0.1	2.9	0.15	0.23	264	2.7	<0.02	3.4	0.43	0.1	<0.02
013K921013	Sediment Pulp	51.3	31.5	0.15	147.7	0.039	<20	3.47	0.040	0.04	0.1	3.4	0.13	0.24	235	3.1	<0.02	4.5	0.33	0.1	<0.02
013K921014	Sediment Pulp	40.0	32.2	0.40	92.6	0.076	<20	2.33	0.071	0.08	0.2	3.3	0.08	0.17	199	1.4	<0.02	4.6	0.35	<0.1	0.03
013K921015	Sediment Pulp	15.4	12.4	0.06	67.5	0.022	<20	1.25	0.018	0.02	<0.1	0.8	0.03	0.22	192	1.0	<0.02	2.6	0.27	<0.1	<0.02
013K921016	Sediment Pulp	132.3	34.0	0.06	149.3	0.039	<20	2.96	0.032	0.02	0.6	5.5	0.07	0.24	196	2.3	<0.02	5.3	0.27	0.3	<0.02
013K921017	Sediment Pulp	59.7	30.5	0.20	84.8	0.046	<20	2.56	0.026	0.03	0.2	3.2	0.14	0.18	178	1.9	<0.02	3.9	0.41	0.2	<0.02
013K921018	Sediment Pulp	23.5	17.3	0.04	82.8	0.026	<20	2.59	0.008	0.02	0.1	1.7	0.04	0.32	187	1.5	<0.02	3.6	0.17	<0.1	0.02
013K921019	Sediment Pulp	31.6	16.0	0.06	79.1	0.021	<20	1.62	0.010	0.01	0.2	1.0	0.05	0.26	156	1.4	<0.02	3.3	0.29	<0.1	<0.02
013K921020	Sediment Pulp	31.6	22.9	0.04	74.0	0.020	<20	2.13	0.011	0.02	0.5	1.9	0.07	0.25	283	3.3	<0.02	3.0	0.15	<0.1	<0.02
013K921021	Sediment Pulp	42.3	53.1	0.82	170.5	0.111	<20	1.76	0.033	0.27	0.2	6.0	0.31	0.15	281	0.8	0.03	6.4	1.47	0.1	0.13
013K921022	Sediment Pulp	25.5	31.4	0.23	54.4	0.038	<20	1.53	0.023	0.03	<0.1	2.1	0.09	0.22	170	1.8	<0.02	3.5	0.46	<0.1	<0.02
013K921023	Sediment Pulp	30.0	25.6	0.13	94.5	0.030	<20	2.01	0.021	0.03	0.2	1.4	0.09	0.26	229	1.9	<0.02	3.2	0.27	<0.1	<0.02
013K921024	Sediment Pulp	36.0	29.9	0.15	111.2	0.036	<20	2.14	0.022	0.03	0.2	1.8	0.12	0.26	259	1.9	<0.02	3.5	0.32	0.1	0.02
013K921025	Sediment Pulp	13.1	29.1	0.09	26.1	0.015	<20	1.44	0.021	0.02	<0.1	1.5	0.05	0.36	180	2.3	<0.02	1.7	0.19	<0.1	<0.02
013K921026	Sediment Pulp	61.2	33.0	0.13	119.9	0.046	<20	3.94	0.026	0.04	0.1	4.3	0.20	0.26	389	4.2	<0.02	5.6	0.36	0.2	0.02
013K921027	Sediment Pulp	33.1	12.9	0.08	62.6	0.019	<20	1.45	0.019	0.03	<0.1	1.2	0.05	0.27	150	1.1	<0.02	2.3	0.32	<0.1	<0.02
013K921028	Sediment Pulp	30.6	27.6	0.06	94.0	0.049	<20	3.57	0.015	0.04	<0.1	2.1	0.04	0.49	249	3.8	<0.02	6.4	0.16	0.1	0.02
013K921029	Sediment Pulp	35.4	16.9	0.07	68.6	0.024	<20	2.07	0.014	0.02	<0.1	1.3	0.05	0.29	214	1.1	<0.02	2.7	0.18	<0.1	<0.02
013K921030	Sediment Pulp	86.4	29.8	0.16	124.4	0.049	<20	4.37	0.023	0.05	0.1	3.5	0.10	0.37	419	2.9	<0.02	6.0	0.30	0.3	<0.02
013K921031	Sediment Pulp	53.4	29.0	0.07	90.3	0.060	<20	3.76	0.015	0.05	0.2	3.8	0.18	0.26	385	3.4	<0.02	8.5	0.23	0.2	<0.02
013K921032	Sediment Pulp	31.5	25.6	0.07	97.9	0.050	<20	3.72	0.017	0.04	0.1	2.4	0.04	0.51	231	3.9	<0.02	6.8	0.17	0.1	0.02



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921003	Sediment Pulp	0.69	1.8	0.2	<0.05	1.0	18.84	71.0	<0.02	4	0.9	1.9	7.89	28.86	5.36	1.09	4.76	0.71	3.92	0.71
013K921004	Sediment Pulp	0.83	1.6	0.2	<0.05	1.0	15.43	72.8	<0.02	6	0.8	1.8	8.95	30.99	5.17	1.20	3.92	0.61	3.26	0.61
013K921005	Sediment Pulp	1.90	8.9	0.4	<0.05	3.1	28.05	82.8	<0.02	1	1.0	7.6	12.24	44.53	7.95	1.12	6.50	0.98	5.25	1.02
013K921006	Sediment Pulp	1.61	4.2	0.3	<0.05	1.3	30.38	87.7	0.02	<1	1.2	4.4	12.98	46.63	9.01	1.36	6.77	1.08	6.14	1.08
013K921007	Sediment Pulp	0.95	1.6	0.2	<0.05	1.0	10.30	51.8	<0.02	<1	0.5	1.3	5.95	20.65	3.61	0.80	3.00	0.44	2.42	0.45
013K921008	Sediment Pulp	0.89	1.8	0.3	<0.05	1.8	20.33	57.3	0.03	4	0.9	2.2	7.36	26.03	5.05	1.23	4.69	0.71	3.93	0.78
013K921009	Sediment Pulp	0.59	1.5	0.3	<0.05	0.5	21.15	37.6	<0.02	4	0.7	1.4	6.87	26.02	4.99	1.01	4.21	0.67	3.88	0.77
013K921010	Sediment Pulp	0.43	2.1	0.3	<0.05	2.4	39.31	44.9	<0.02	14	0.5	4.4	15.49	56.77	10.00	2.51	9.27	1.20	7.08	1.42
013K921011	Sediment Pulp	1.11	4.7	0.4	<0.05	1.5	21.03	79.9	0.02	5	0.6	9.1	10.07	35.53	6.57	1.16	5.48	0.78	4.17	0.81
013K921012	Sediment Pulp	0.61	2.7	0.2	<0.05	0.8	26.52	106.1	<0.02	1	1.0	4.9	14.43	54.43	9.12	1.97	7.21	0.97	5.19	1.01
013K921013	Sediment Pulp	0.89	2.7	0.3	<0.05	0.7	26.14	82.5	0.02	2	1.0	4.9	12.81	48.96	7.97	1.75	6.20	0.85	4.88	0.95
013K921014	Sediment Pulp	1.10	4.6	0.4	<0.05	1.5	20.71	81.0	<0.02	2	0.7	8.7	10.22	36.25	6.39	1.19	4.95	0.74	4.34	0.77
013K921015	Sediment Pulp	0.53	1.2	0.3	<0.05	0.5	7.35	29.3	<0.02	1	<0.1	1.8	3.85	14.67	2.65	0.61	2.00	0.31	1.69	0.30
013K921016	Sediment Pulp	1.00	1.5	0.3	<0.05	1.3	49.22	248.9	0.03	3	0.9	1.7	30.39	110.63	17.32	2.63	12.70	1.67	9.45	1.73
013K921017	Sediment Pulp	0.89	3.0	0.3	<0.05	0.6	26.44	98.9	0.03	<1	1.0	6.3	15.77	57.78	9.86	1.54	7.53	1.02	5.54	0.99
013K921018	Sediment Pulp	0.85	0.9	0.2	<0.05	1.0	14.54	46.5	<0.02	<1	1.0	1.3	6.03	22.80	4.16	0.87	3.24	0.49	2.67	0.52
013K921019	Sediment Pulp	0.61	1.1	0.2	<0.05	0.4	17.03	57.6	<0.02	3	0.8	2.5	8.83	32.90	6.21	0.96	5.17	0.66	3.56	0.67
013K921020	Sediment Pulp	0.66	1.0	0.2	<0.05	0.3	20.23	48.5	0.02	15	0.7	1.1	7.94	28.39	5.42	0.87	4.42	0.62	3.72	0.73
013K921021	Sediment Pulp	1.98	26.1	1.2	<0.05	6.1	19.32	77.1	0.06	<1	0.9	23.0	10.49	36.46	6.44	1.04	4.63	0.64	3.89	0.70
013K921022	Sediment Pulp	0.96	2.2	0.3	<0.05	1.1	12.95	46.3	<0.02	<1	0.4	6.8	7.09	26.45	4.60	0.80	3.43	0.48	2.63	0.49
013K921023	Sediment Pulp	1.18	2.3	0.2	<0.05	0.9	15.72	54.9	0.02	2	0.7	3.4	7.83	28.27	4.84	0.87	4.19	0.61	3.10	0.58
013K921024	Sediment Pulp	1.44	2.7	0.3	<0.05	1.1	19.87	69.1	<0.02	3	0.6	4.1	9.59	36.68	6.41	1.07	5.15	0.74	3.81	0.72
013K921025	Sediment Pulp	0.42	1.0	0.2	<0.05	0.2	9.54	24.8	<0.02	2	0.3	1.9	3.47	12.94	2.38	0.51	2.04	0.29	1.67	0.35
013K921026	Sediment Pulp	0.80	2.9	0.3	<0.05	0.7	34.45	128.0	0.03	1	0.7	4.1	15.68	56.73	10.05	2.06	7.95	1.19	6.82	1.27
013K921027	Sediment Pulp	0.64	1.9	0.2	<0.05	0.4	12.02	59.2	<0.02	<1	0.5	3.6	8.53	29.73	4.97	0.88	3.90	0.47	2.45	0.44
013K921028	Sediment Pulp	1.97	1.5	0.4	<0.05	1.1	14.83	59.9	0.03	<1	0.7	1.5	7.91	28.66	5.24	1.02	3.93	0.62	3.39	0.65
013K921029	Sediment Pulp	0.87	1.3	0.2	<0.05	0.5	15.45	66.5	<0.02	1	0.7	2.1	9.29	32.39	5.71	1.16	4.37	0.61	3.26	0.61
013K921030	Sediment Pulp	1.59	3.2	0.3	<0.05	1.2	37.71	151.3	0.03	1	1.1	4.2	22.63	80.55	14.21	2.56	11.43	1.53	8.08	1.46
013K921031	Sediment Pulp	1.03	1.8	0.3	<0.05	0.3	24.87	107.8	0.04	<1	1.0	1.9	14.39	52.19	8.54	1.75	6.72	0.95	5.19	0.99
013K921032	Sediment Pulp	1.96	1.6	0.4	<0.05	1.0	15.31	62.4	0.03	<1	0.7	1.6	8.13	28.90	5.21	1.13	4.48	0.62	3.56	0.62



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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921003	Sediment Pulp	0.27	1.65	0.23	<10	<2	
013K921004	Sediment Pulp	0.21	1.40	0.16	<10	<2	
013K921005	Sediment Pulp	0.39	2.48	0.35	<10	<2	
013K921006	Sediment Pulp	0.42	2.63	0.32	<10	<2	
013K921007	Sediment Pulp	0.14	0.85	0.12	<10	<2	
013K921008	Sediment Pulp	0.29	1.72	0.24	<10	4	
013K921009	Sediment Pulp	0.28	1.67	0.21	<10	2	
013K921010	Sediment Pulp	0.49	3.26	0.49	<10	3	
013K921011	Sediment Pulp	0.31	1.84	0.25	<10	<2	
013K921012	Sediment Pulp	0.34	2.08	0.28	<10	<2	
013K921013	Sediment Pulp	0.35	2.14	0.27	<10	<2	
013K921014	Sediment Pulp	0.29	1.85	0.24	<10	<2	
013K921015	Sediment Pulp	0.08	0.57	0.07	<10	<2	
013K921016	Sediment Pulp	0.64	3.80	0.57	<10	<2	
013K921017	Sediment Pulp	0.35	2.19	0.31	<10	<2	
013K921018	Sediment Pulp	0.22	1.28	0.18	<10	<2	
013K921019	Sediment Pulp	0.22	1.38	0.16	<10	<2	
013K921020	Sediment Pulp	0.25	1.70	0.23	<10	<2	
013K921021	Sediment Pulp	0.27	1.80	0.26	<10	2	
013K921022	Sediment Pulp	0.19	1.07	0.15	<10	<2	
013K921023	Sediment Pulp	0.24	1.41	0.20	<10	<2	
013K921024	Sediment Pulp	0.29	1.61	0.24	<10	3	
013K921025	Sediment Pulp	0.15	0.87	0.13	<10	2	
013K921026	Sediment Pulp	0.49	3.00	0.39	<10	<2	
013K921027	Sediment Pulp	0.16	1.02	0.13	<10	2	
013K921028	Sediment Pulp	0.23	1.27	0.18	<10	<2	
013K921029	Sediment Pulp	0.21	1.25	0.18	<10	<2	
013K921030	Sediment Pulp	0.52	3.05	0.37	<10	2	
013K921031	Sediment Pulp	0.38	2.24	0.29	<10	2	
013K921032	Sediment Pulp	0.21	1.32	0.18	<10	<2	



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921033	Sediment Pulp	7.40	24.10	5.30	84.5	237	10.5	17.1	578	5.02	0.1	94.5	<0.2	1.4	36.0	0.46	0.02	0.08	43	0.88	0.193
013K921034	Sediment Pulp	1.79	100.79	4.00	89.2	320	25.1	6.3	74	1.10	13.9	3.5	1.7	0.4	9.4	0.45	1.51	0.11	19	0.73	0.073
013K921035	Sediment Pulp	2.18	39.20	2.39	69.5	101	29.5	5.4	66	0.70	17.6	1.5	0.2	0.2	12.9	0.36	0.19	0.05	18	0.66	0.044
013K921036	Sediment Pulp	1.83	39.50	4.02	89.8	353	15.7	8.1	159	1.61	76.7	1.4	0.8	0.3	24.7	0.45	0.29	0.11	30	0.92	0.098
013K921037	Sediment Pulp	15.43	64.26	5.68	104.2	507	14.7	27.8	388	4.16	27.2	10.6	0.3	0.9	44.8	0.64	0.07	0.06	67	1.18	0.251
013K921038	Sediment Pulp	8.23	50.02	6.49	143.2	549	23.9	79.6	1022	5.80	54.4	3.6	0.5	1.0	26.7	0.98	0.05	0.06	65	0.67	0.212
013K921039	Sediment Pulp	1.56	16.20	7.13	64.4	73	12.2	10.1	198	0.92	4.4	3.0	<0.2	0.3	20.4	0.37	0.03	0.03	19	0.42	0.050
013K921040	Sediment Pulp	2.90	46.75	8.22	216.1	229	34.4	8.2	127	2.03	4.2	2.0	0.3	0.7	18.1	1.97	0.17	0.03	17	0.62	0.092
013K921041	Sediment Pulp	9.17	39.81	82.28	292.9	580	12.9	7.7	418	1.74	35.3	9.1	2.7	1.5	60.5	1.36	0.55	0.96	20	6.34	0.071
013K921042	Sediment Pulp	3.15	76.39	7.37	233.2	505	42.4	10.0	261	1.92	6.5	3.1	1.5	0.5	27.0	2.08	0.28	0.05	28	1.00	0.094
013K921043	Sediment Pulp	3.12	68.93	7.38	193.1	485	38.2	9.6	240	1.94	6.4	3.2	0.7	0.5	25.0	2.14	0.24	0.04	28	0.96	0.100
013K921044	Sediment Pulp	2.92	58.51	5.83	120.9	258	28.7	5.2	47	0.69	1.8	18.4	1.1	0.4	14.1	1.06	0.18	<0.02	10	0.53	0.039
013K921045	Sediment Pulp	6.49	103.98	10.61	224.8	1167	42.7	15.2	615	2.16	4.2	10.7	2.4	0.6	29.6	3.08	0.40	0.02	22	1.01	0.142
013K921046	Sediment Pulp	20.83	89.99	8.36	282.4	1839	113.4	38.1	>10000	5.84	13.3	6.0	1.4	1.0	20.7	3.39	0.20	0.03	23	0.63	0.214
013K921047	Sediment Pulp	2.12	36.44	5.33	105.0	269	44.8	11.9	732	1.69	2.0	4.5	0.7	0.5	67.3	0.95	0.07	<0.02	30	0.79	0.111
013K921048	Sediment Pulp	2.12	32.86	5.53	101.0	210	23.4	6.8	2927	2.40	13.1	2.9	0.6	1.2	45.1	0.65	0.14	0.03	25	0.45	0.138
013K921049	Sediment Pulp	6.03	59.05	7.95	112.4	357	52.7	15.9	2060	9.97	12.5	2.4	<0.2	2.7	85.0	0.73	0.11	0.02	78	0.99	0.166
013K921050	Sediment Pulp	1.38	61.76	4.45	80.9	185	36.5	8.5	225	1.18	1.7	3.4	0.4	1.0	65.6	0.46	0.09	<0.02	31	1.01	0.068
013K921051	Sediment Pulp	2.31	34.07	4.71	57.0	279	16.2	5.9	179	1.37	1.4	1.9	0.4	0.3	29.2	0.31	0.08	<0.02	24	0.45	0.143
013K921052	Sediment Pulp	1.85	53.89	6.35	101.9	181	44.5	34.1	>10000	7.87	18.4	3.4	0.8	2.0	26.0	0.37	0.08	<0.02	42	0.35	0.154
013K921053	Sediment Pulp	3.03	33.53	7.38	88.3	195	30.3	17.4	1410	2.81	4.1	4.1	0.4	1.2	32.5	0.31	0.07	<0.02	43	0.46	0.161
013K921054	Sediment Pulp	8.53	47.84	10.07	119.9	393	23.7	11.6	1195	5.72	34.1	4.8	0.3	1.4	45.2	0.65	0.07	<0.02	56	0.67	0.198
013K921055	Sediment Pulp	8.72	109.16	9.46	168.3	575	51.2	15.8	1266	4.12	14.4	15.7	1.6	2.1	68.7	0.85	0.15	0.03	44	0.74	0.342
013K921057	Sediment Pulp	8.45	123.07	12.04	211.6	1752	49.9	14.4	771	5.38	16.1	17.6	2.2	1.2	43.1	2.44	0.29	0.05	40	0.80	0.342
013K921058	Sediment Pulp	18.02	123.12	12.72	326.7	1861	67.3	50.5	3731	9.05	104.6	65.5	2.2	2.1	31.7	4.41	0.91	0.03	39	0.94	0.319
013K921059	Sediment Pulp	6.38	44.82	5.49	155.6	781	30.5	8.3	607	1.81	2.2	18.7	1.0	0.5	40.2	1.68	0.28	<0.02	18	0.50	0.101
013K921060	Sediment Pulp	3.51	61.90	8.64	182.3	1502	35.5	7.8	333	1.36	4.0	10.0	1.6	0.4	51.2	1.14	0.60	0.04	25	0.84	0.160
013K921061	Sediment Pulp	7.58	148.85	6.93	173.3	642	59.3	9.8	1826	2.01	10.9	24.3	2.5	1.3	34.4	2.05	0.61	0.10	27	0.61	0.186
013K921062	Sediment Pulp	35.27	93.60	16.42	116.6	1256	20.1	56.5	588	3.57	84.4	39.1	1.6	1.1	32.2	1.06	0.28	0.32	43	0.99	0.163
013K921063	Sediment Pulp	30.18	87.23	16.09	103.2	810	18.1	23.2	395	2.25	62.0	43.4	1.3	0.7	31.8	1.00	0.32	0.29	36	0.98	0.112



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K921033	Sediment Pulp	47.6	20.2	0.06	48.6	0.046	<20	3.59	0.018	0.02	0.2	3.2	0.10	0.21	253	2.4	<0.02	6.5	0.25	0.2	<0.02
013K921034	Sediment Pulp	46.7	30.6	0.09	14.9	0.014	<20	1.54	0.027	0.02	<0.1	2.2	0.10	0.33	190	2.6	<0.02	1.9	0.27	<0.1	<0.02
013K921035	Sediment Pulp	11.4	49.1	0.15	25.2	0.017	<20	1.10	0.027	0.02	<0.1	1.2	0.04	0.43	159	1.6	<0.02	1.9	0.26	<0.1	<0.02
013K921036	Sediment Pulp	23.1	24.4	0.08	79.9	0.023	<20	2.28	0.023	0.02	0.1	1.6	0.08	0.34	212	1.9	<0.02	2.8	0.19	<0.1	<0.02
013K921037	Sediment Pulp	49.9	30.7	0.12	166.5	0.043	<20	3.14	0.034	0.04	0.6	3.4	0.11	0.25	277	3.0	<0.02	5.5	0.33	0.1	<0.02
013K921038	Sediment Pulp	40.2	30.6	0.11	127.6	0.042	<20	2.89	0.027	0.03	0.1	3.2	0.28	0.26	321	3.1	<0.02	6.0	0.30	<0.1	<0.02
013K921039	Sediment Pulp	19.5	17.6	0.17	55.4	0.035	<20	1.15	0.022	0.03	<0.1	1.4	0.05	0.22	198	1.2	<0.02	3.3	0.36	<0.1	0.02
013K921040	Sediment Pulp	28.8	31.4	0.29	85.0	0.027	<20	1.02	0.018	0.06	<0.1	3.7	0.10	0.60	220	2.4	<0.02	2.1	0.93	<0.1	0.03
013K921041	Sediment Pulp	10.6	12.9	0.58	93.0	0.043	<20	0.44	0.027	0.05	0.5	2.4	0.22	1.48	94	1.1	<0.02	2.1	0.51	<0.1	0.02
013K921042	Sediment Pulp	33.2	44.4	0.25	153.0	0.019	<20	1.88	0.014	0.05	0.1	3.9	0.16	0.31	198	2.8	<0.02	2.3	0.74	<0.1	0.03
013K921043	Sediment Pulp	31.4	44.1	0.24	130.5	0.020	<20	1.82	0.022	0.05	0.1	3.9	0.16	0.29	211	2.9	<0.02	2.1	0.70	<0.1	0.04
013K921044	Sediment Pulp	47.4	29.8	0.17	83.9	0.015	<20	0.90	0.016	0.03	<0.1	3.4	0.08	0.71	206	2.6	<0.02	1.3	0.73	<0.1	0.04
013K921045	Sediment Pulp	42.8	46.8	0.22	155.8	0.017	<20	2.03	0.014	0.04	0.1	3.7	0.20	0.68	437	3.7	<0.02	2.0	0.59	<0.1	0.05
013K921046	Sediment Pulp	37.9	49.2	0.24	1983.0	0.023	<20	2.19	0.019	0.06	<0.1	5.1	0.27	0.26	492	4.2	0.03	3.4	0.65	<0.1	0.05
013K921047	Sediment Pulp	32.9	82.1	0.06	414.1	0.018	<20	2.93	0.007	0.02	<0.1	2.7	0.17	0.24	233	1.9	<0.02	2.1	0.20	<0.1	0.03
013K921048	Sediment Pulp	31.7	53.5	0.20	672.5	0.018	20	2.39	0.016	0.04	0.1	3.6	0.09	0.29	280	1.6	0.02	1.9	0.40	<0.1	0.11
013K921049	Sediment Pulp	42.6	176.9	0.42	302.9	0.035	<20	3.06	0.017	0.05	0.7	7.5	0.15	0.22	227	2.3	<0.02	3.0	1.12	0.1	0.19
013K921050	Sediment Pulp	42.6	80.7	0.27	143.9	0.035	<20	2.43	0.017	0.03	0.3	3.2	0.07	0.26	148	1.5	<0.02	2.6	0.44	<0.1	0.08
013K921051	Sediment Pulp	40.2	33.8	0.12	85.7	0.026	<20	2.25	0.022	0.04	0.2	1.5	0.03	0.27	216	1.4	<0.02	2.7	0.41	<0.1	0.04
013K921052	Sediment Pulp	38.9	114.2	0.70	259.6	0.061	<20	2.89	0.028	0.09	0.1	4.3	0.12	0.14	242	1.0	<0.02	4.6	1.14	<0.1	0.03
013K921053	Sediment Pulp	45.6	69.2	0.51	110.1	0.059	<20	2.45	0.034	0.08	0.2	3.3	0.12	0.15	195	1.8	<0.02	4.0	0.92	<0.1	0.04
013K921054	Sediment Pulp	50.7	71.2	0.15	320.8	0.036	<20	3.83	0.031	0.03	0.2	4.8	0.06	0.21	256	3.0	0.02	3.7	0.43	<0.1	0.06
013K921055	Sediment Pulp	68.4	88.1	0.30	286.5	0.039	22	3.67	0.050	0.09	0.3	6.1	0.17	0.27	292	3.7	0.03	3.4	0.85	0.1	0.08
013K921057	Sediment Pulp	55.1	96.9	0.31	204.9	0.030	<20	3.43	0.022	0.08	0.1	5.6	0.15	0.25	551	6.3	0.03	3.5	0.95	<0.1	0.06
013K921058	Sediment Pulp	60.1	59.5	0.25	465.0	0.029	25	2.78	0.017	0.06	0.2	8.6	0.37	0.43	527	13.4	<0.02	3.0	1.15	0.1	0.15
013K921059	Sediment Pulp	49.0	33.8	0.14	239.3	0.013	<20	2.02	0.014	0.04	<0.1	2.5	0.12	0.28	301	2.2	<0.02	1.6	0.36	<0.1	0.04
013K921060	Sediment Pulp	60.5	78.5	0.29	240.4	0.022	26	2.60	0.026	0.06	0.1	2.7	0.11	0.36	290	4.0	<0.02	2.3	0.73	<0.1	0.03
013K921061	Sediment Pulp	60.8	48.5	0.26	173.8	0.023	25	1.94	0.021	0.07	0.2	4.8	0.29	0.24	505	4.2	<0.02	2.1	0.88	<0.1	0.03
013K921062	Sediment Pulp	53.4	37.1	0.09	118.1	0.033	39	2.81	0.013	0.03	1.8	3.3	0.14	0.44	317	2.8	0.02	2.7	1.15	<0.1	0.03
013K921063	Sediment Pulp	48.7	34.3	0.09	121.2	0.029	33	2.62	0.018	0.03	2.3	2.6	0.15	0.39	280	2.4	<0.02	2.7	1.24	<0.1	<0.02



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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921033	Sediment Pulp	1.32	1.3	0.2	<0.05	0.6	26.64	99.4	0.03	<1	1.1	1.7	12.75	45.15	8.08	1.51	6.76	1.00	5.34	1.02	2.73
013K921034	Sediment Pulp	0.49	1.4	0.2	<0.05	0.4	16.42	21.7	<0.02	2	0.4	2.3	10.55	36.31	5.72	1.05	4.35	0.57	2.90	0.59	1.62
013K921035	Sediment Pulp	0.54	1.2	0.1	<0.05	0.4	8.13	22.2	<0.02	1	0.1	2.4	2.93	11.52	1.96	0.48	2.33	0.28	1.61	0.31	0.90
013K921036	Sediment Pulp	0.83	1.2	0.2	<0.05	0.5	11.40	41.3	<0.02	1	0.4	1.8	5.70	20.73	3.77	0.69	3.11	0.42	2.32	0.42	1.20
013K921037	Sediment Pulp	1.37	2.1	0.2	<0.05	0.7	27.42	96.8	0.02	3	1.2	3.6	13.95	50.28	8.91	1.68	7.82	1.05	5.58	1.10	2.87
013K921038	Sediment Pulp	0.99	2.0	0.2	<0.05	0.5	26.40	86.1	0.04	1	0.6	2.7	10.53	39.23	7.24	1.32	5.59	0.93	4.91	0.98	2.68
013K921039	Sediment Pulp	0.85	2.1	0.3	<0.05	1.0	9.08	39.3	<0.02	<1	0.2	4.7	5.03	18.71	3.22	0.56	2.35	0.34	1.96	0.36	0.93
013K921040	Sediment Pulp	0.89	6.0	0.2	<0.05	1.8	18.28	29.1	<0.02	2	0.4	7.7	7.03	25.39	4.62	0.99	4.51	0.62	3.24	0.65	1.79
013K921041	Sediment Pulp	0.69	3.5	3.2	<0.05	1.2	10.09	17.5	0.48	16	0.2	5.0	2.95	11.71	2.46	0.48	2.14	0.30	1.79	0.33	1.00
013K921042	Sediment Pulp	0.82	4.5	0.2	<0.05	1.4	23.00	38.3	<0.02	8	0.7	5.5	8.40	29.49	5.79	1.28	4.52	0.72	4.12	0.80	2.20
013K921043	Sediment Pulp	0.74	4.5	0.2	<0.05	1.3	21.62	37.2	<0.02	8	0.7	6.2	7.95	28.36	5.23	1.17	4.54	0.66	3.79	0.77	2.09
013K921044	Sediment Pulp	0.50	3.4	0.2	<0.05	1.4	29.82	33.7	<0.02	6	0.3	4.8	11.95	50.66	8.45	1.80	7.58	1.00	5.39	1.02	2.83
013K921045	Sediment Pulp	0.81	3.7	0.2	<0.05	1.6	30.01	41.1	<0.02	7	0.4	5.0	10.96	45.98	7.40	1.74	7.45	1.00	5.39	1.02	2.92
013K921046	Sediment Pulp	0.36	4.9	0.2	<0.05	1.4	24.61	51.2	<0.02	4	0.7	6.1	9.35	40.52	6.92	1.48	5.84	0.83	4.56	0.81	2.36
013K921047	Sediment Pulp	0.73	1.0	0.1	<0.05	1.2	28.67	84.1	<0.02	1	0.9	0.6	8.83	36.64	7.00	1.41	6.61	0.99	5.97	1.01	2.80
013K921048	Sediment Pulp	0.52	2.4	0.2	<0.05	3.5	29.18	46.1	<0.02	<1	1.1	2.7	8.34	36.08	6.67	1.42	6.40	0.89	5.14	0.92	2.52
013K921049	Sediment Pulp	0.92	4.3	0.3	<0.05	8.6	34.15	84.0	<0.02	<1	1.5	4.1	11.70	47.69	8.31	1.54	7.29	1.02	5.91	1.14	3.24
013K921050	Sediment Pulp	1.36	2.0	0.2	<0.05	3.5	23.74	85.7	<0.02	<1	1.0	3.5	11.80	50.20	8.14	1.44	7.05	0.89	4.96	0.89	2.22
013K921051	Sediment Pulp	1.06	2.4	0.2	<0.05	1.1	22.37	78.7	<0.02	<1	0.7	2.3	11.60	48.30	8.20	1.31	7.62	0.91	5.01	0.89	2.33
013K921052	Sediment Pulp	0.82	6.9	0.4	<0.05	1.7	22.01	109.6	<0.02	<1	1.6	10.2	10.90	45.11	7.31	1.18	6.01	0.83	5.06	0.85	2.19
013K921053	Sediment Pulp	1.23	5.7	0.4	<0.05	1.6	23.41	98.0	<0.02	<1	1.3	8.8	11.95	49.53	8.18	1.26	6.67	0.83	5.13	0.81	2.22
013K921054	Sediment Pulp	1.26	2.1	0.2	<0.05	2.5	30.54	117.8	<0.02	<1	2.0	2.5	13.12	55.76	9.55	1.68	8.45	1.17	6.52	1.09	2.98
013K921055	Sediment Pulp	1.49	5.8	0.3	<0.05	3.3	51.42	105.5	<0.02	3	1.7	4.8	16.99	70.78	12.65	2.34	12.07	1.73	10.43	1.84	4.88
013K921057	Sediment Pulp	1.11	5.8	0.3	<0.05	2.2	39.79	91.4	0.03	10	1.4	6.3	14.03	56.88	10.84	2.16	10.28	1.41	8.89	1.43	4.07
013K921058	Sediment Pulp	0.92	5.7	0.2	<0.05	4.5	43.21	69.3	<0.02	29	1.1	7.1	14.98	63.64	10.56	2.29	10.22	1.37	8.11	1.44	3.95
013K921059	Sediment Pulp	0.60	2.8	0.1	<0.05	1.2	32.65	70.2	<0.02	2	0.8	3.0	12.55	54.60	9.98	1.85	8.74	1.13	7.05	1.23	3.28
013K921060	Sediment Pulp	1.07	4.5	0.3	<0.05	1.3	39.92	58.1	<0.02	3	1.5	4.6	16.20	68.31	12.00	2.07	10.93	1.43	8.41	1.42	3.79
013K921061	Sediment Pulp	0.69	5.7	0.2	<0.05	1.6	48.82	68.5	<0.02	9	1.4	6.2	15.36	64.14	11.30	2.12	10.57	1.47	9.77	1.78	5.03
013K921062	Sediment Pulp	1.34	1.8	0.2	<0.05	1.1	25.86	101.6	<0.02	3	1.0	1.7	13.54	52.91	8.68	1.44	7.62	1.01	5.82	1.00	2.75
013K921063	Sediment Pulp	1.32	1.9	0.4	<0.05	1.1	24.75	96.5	<0.02	4	1.1	1.7	12.06	48.94	8.08	1.33	6.90	0.94	5.90	0.96	2.64



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921033	Sediment Pulp		0.39	2.26	0.28	<10	<2
013K921034	Sediment Pulp		0.23	1.43	0.23	<10	<2
013K921035	Sediment Pulp		0.12	0.73	0.09	<10	<2
013K921036	Sediment Pulp		0.15	0.96	0.13	<10	<2
013K921037	Sediment Pulp		0.39	2.28	0.31	<10	<2
013K921038	Sediment Pulp		0.39	2.29	0.31	<10	2
013K921039	Sediment Pulp		0.12	0.78	0.10	<10	<2
013K921040	Sediment Pulp		0.24	1.49	0.20	<10	<2
013K921041	Sediment Pulp		0.14	0.89	0.15	<10	<2
013K921042	Sediment Pulp		0.31	1.88	0.28	<10	3
013K921043	Sediment Pulp		0.30	1.76	0.28	<10	2
013K921044	Sediment Pulp		0.38	2.65	0.35	<10	<2
013K921045	Sediment Pulp		0.36	2.72	0.36	<10	<2
013K921046	Sediment Pulp		0.32	2.28	0.28	<10	4
013K921047	Sediment Pulp		0.40	2.60	0.32	<10	<2
013K921048	Sediment Pulp		0.37	2.57	0.35	<10	<2
013K921049	Sediment Pulp		0.48	3.45	0.50	<10	3
013K921050	Sediment Pulp		0.30	1.94	0.25	<10	<2
013K921051	Sediment Pulp		0.34	2.02	0.24	<10	<2
013K921052	Sediment Pulp		0.31	1.97	0.26	<10	<2
013K921053	Sediment Pulp		0.31	2.04	0.23	<10	<2
013K921054	Sediment Pulp		0.43	2.68	0.36	<10	<2
013K921055	Sediment Pulp		0.74	4.62	0.61	<10	4
013K921057	Sediment Pulp		0.53	3.71	0.47	<10	5
013K921058	Sediment Pulp		0.54	3.81	0.50	<10	6
013K921059	Sediment Pulp		0.44	3.00	0.36	<10	<2
013K921060	Sediment Pulp		0.53	3.40	0.44	<10	3
013K921061	Sediment Pulp		0.71	4.59	0.60	<10	4
013K921062	Sediment Pulp		0.37	2.39	0.26	<10	<2
013K921063	Sediment Pulp		0.35	2.30	0.28	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921064	Sediment Pulp	7.59	143.96	6.65	168.5	629	59.6	9.8	1824	2.01	11.1	24.3	2.5	0.9	33.3	1.89	0.57	0.03	27	0.61	0.180
013K921065	Sediment Pulp	6.33	76.54	10.51	186.7	1548	36.1	9.2	464	1.60	14.9	27.5	2.2	0.6	72.4	1.81	0.96	0.05	27	1.23	0.216
013K921066	Sediment Pulp	2.17	29.43	1.96	68.2	203	54.0	6.3	174	0.36	5.3	9.6	1.2	0.2	96.9	0.36	0.22	<0.02	12	0.76	0.056
013K921067	Sediment Pulp	15.52	83.28	21.89	190.4	1223	69.5	21.5	1017	3.06	91.5	26.7	2.1	1.0	211.6	2.49	0.25	0.05	36	1.52	0.230
013K921068	Sediment Pulp	1.69	55.73	3.60	68.4	217	29.7	4.8	67	0.34	1.5	8.6	1.0	0.3	24.9	0.64	0.11	<0.02	8	0.53	0.044
013K921069	Sediment Pulp	0.93	30.86	26.70	119.3	2666	44.0	28.2	1223	3.10	25.5	3.7	2.9	8.3	26.7	0.52	0.51	3.09	49	0.61	0.087
013K921070	Sediment Pulp	4.95	124.81	2.01	103.1	118	34.6	8.6	51	0.49	7.1	2.6	1.2	1.0	67.2	0.47	0.11	0.05	9	0.80	0.040
013K921071	Sediment Pulp	5.01	38.54	7.53	111.2	159	39.1	15.9	360	2.80	6.2	6.6	1.0	3.0	26.4	0.36	0.10	0.04	37	0.86	0.096
013K921072	Sediment Pulp	1.55	100.38	6.86	120.4	275	41.0	13.8	227	2.45	2.8	2.7	1.7	0.7	28.9	0.61	0.19	0.02	29	1.31	0.140
013K921073	Sediment Pulp	4.00	52.57	4.35	94.4	241	34.3	16.5	243	3.10	5.5	2.8	0.9	0.8	30.6	0.73	0.19	<0.02	44	0.95	0.098
013K921074	Sediment Pulp	1.36	32.03	6.64	85.1	130	35.6	19.3	1167	4.64	3.0	1.2	1.1	4.3	24.0	0.37	0.07	0.03	57	0.52	0.097
013K921075	Sediment Pulp	1.65	35.97	2.47	90.2	132	20.6	7.1	88	1.25	0.6	2.5	0.5	1.0	24.3	0.49	0.10	<0.02	14	0.61	0.034
013K921076	Sediment Pulp	1.61	35.48	3.78	80.4	83	37.3	8.4	91	1.00	0.9	1.2	0.7	0.7	17.0	0.45	0.07	<0.02	10	0.69	0.037
013K921077	Sediment Pulp	2.81	17.12	1.65	48.3	58	7.8	2.8	34	0.36	0.4	7.7	0.7	0.6	21.3	0.22	<0.02	<0.02	16	0.40	0.022
013K921078	Sediment Pulp	1.85	118.33	6.45	187.3	621	28.7	24.4	629	3.95	42.8	3.5	2.2	1.6	35.2	1.65	0.49	<0.02	22	1.38	0.100
013K921079	Sediment Pulp	1.54	21.80	5.95	59.8	45	19.4	7.0	72	0.84	0.7	3.1	0.4	0.8	26.9	0.29	0.06	<0.02	15	0.52	0.029
013K921080	Sediment Pulp	4.02	43.11	8.33	116.8	335	37.0	30.0	335	3.31	3.8	9.3	1.1	2.3	51.5	0.48	0.11	0.05	50	1.26	0.098
013K921081	Sediment Pulp	0.73	8.45	3.81	46.8	20	16.4	7.2	133	1.52	0.5	0.5	0.3	0.7	29.0	0.09	0.04	0.03	31	0.45	0.054
013K921082	Sediment Pulp	1.36	117.02	5.98	132.7	526	21.0	6.1	178	0.91	7.0	5.8	2.8	0.1	24.3	0.80	0.21	0.05	17	0.93	0.139
013K921083	Sediment Pulp	1.52	150.35	6.40	140.4	579	21.3	5.6	190	1.12	9.8	6.4	2.0	0.2	23.9	0.80	0.22	0.05	21	0.95	0.172
013K921084	Sediment Pulp	0.89	18.06	3.95	92.5	71	17.2	6.9	82	0.59	3.2	1.7	<0.2	0.1	30.7	0.41	0.14	0.03	12	0.59	0.043
013K921085	Sediment Pulp	9.32	43.00	75.10	304.3	841	12.8	7.8	426	1.83	33.4	8.3	2.4	1.2	63.1	1.28	0.55	0.86	21	6.31	0.065
013K921086	Sediment Pulp	12.78	95.27	11.84	167.4	289	21.4	8.9	630	1.82	1.7	17.6	<0.2	0.4	23.6	1.15	0.05	0.08	28	0.66	0.152
013K921087	Sediment Pulp	0.38	12.58	5.85	30.4	67	11.8	1.9	39	0.36	0.4	0.4	<0.2	0.2	9.4	0.19	0.04	0.05	15	0.13	0.048
013K921088	Sediment Pulp	0.70	8.07	3.79	45.2	17	15.9	7.0	129	1.48	0.4	0.5	<0.2	0.7	28.0	0.09	0.03	0.03	30	0.43	0.051
013K921089	Sediment Pulp	0.22	11.38	4.77	56.6	13	21.8	9.4	198	2.63	0.6	0.4	<0.2	1.3	18.6	0.04	0.03	0.04	45	0.31	0.089
013K921090	Sediment Pulp	0.39	5.77	2.26	57.9	54	3.1	0.6	36	0.18	0.1	0.1	<0.2	<0.1	24.7	0.33	0.03	0.02	4	0.26	0.030
013K921091	Sediment Pulp	1.98	36.55	3.17	44.7	134	19.8	2.2	69	0.45	0.4	1.7	<0.2	<0.1	17.3	0.31	0.12	0.03	22	0.46	0.074
013K921092	Sediment Pulp	7.37	65.96	6.26	105.4	375	33.2	33.8	1721	8.29	1.3	9.6	<0.2	1.7	23.0	0.55	0.05	0.05	65	0.59	0.285
013K921093	Sediment Pulp	11.39	50.36	4.58	91.8	466	17.7	8.2	184	1.93	0.9	68.9	<0.2	0.2	34.3	0.44	0.06	0.05	46	0.89	0.207



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K921064	Sediment Pulp	56.3	49.4	0.26	164.6	0.022	21	1.93	0.020	0.07	0.1	5.4	0.29	0.24	496	4.2	0.02	2.3	0.83	<0.1	0.03
013K921065	Sediment Pulp	55.9	69.4	0.21	223.0	0.022	25	3.01	0.016	0.05	0.2	3.3	0.17	0.39	406	9.7	<0.02	2.4	0.73	<0.1	0.03
013K921066	Sediment Pulp	15.3	69.1	0.07	187.9	0.008	25	1.22	0.012	0.02	<0.1	1.0	0.10	0.31	181	1.9	<0.02	0.6	0.12	<0.1	<0.02
013K921067	Sediment Pulp	41.5	76.7	0.58	58.5	0.034	43	2.34	0.059	0.10	9.3	4.9	0.31	2.10	518	5.4	<0.02	3.1	1.00	<0.1	0.03
013K921068	Sediment Pulp	28.7	41.3	0.08	170.6	0.009	32	0.59	0.016	0.03	<0.1	2.4	0.05	0.51	233	2.1	<0.02	0.7	0.32	<0.1	0.02
013K921069	Sediment Pulp	40.5	49.0	0.79	162.1	0.100	22	1.68	0.034	0.26	0.2	6.5	0.27	0.15	260	0.7	0.04	5.6	1.43	<0.1	0.13
013K921070	Sediment Pulp	19.9	18.4	0.11	55.0	0.016	35	0.54	0.029	0.03	0.4	3.3	0.07	0.97	160	2.0	<0.02	0.7	0.24	<0.1	0.05
013K921071	Sediment Pulp	27.1	50.5	0.65	100.1	0.077	<20	2.12	0.050	0.18	0.2	5.6	0.10	0.25	119	1.8	<0.02	4.6	1.12	<0.1	0.09
013K921072	Sediment Pulp	31.0	41.9	0.32	124.8	0.035	20	2.51	0.027	0.09	0.4	3.8	0.07	0.33	210	3.4	0.03	3.5	1.16	<0.1	0.03
013K921073	Sediment Pulp	24.5	37.5	0.20	80.8	0.033	21	2.16	0.023	0.03	<0.1	4.2	0.09	0.36	204	2.1	<0.02	3.1	0.50	<0.1	0.02
013K921074	Sediment Pulp	25.3	42.3	0.72	151.7	0.093	<20	1.94	0.063	0.12	<0.1	5.6	0.12	0.13	142	0.9	<0.02	5.3	0.80	<0.1	0.08
013K921075	Sediment Pulp	19.5	19.3	0.14	50.3	0.020	21	0.63	0.053	0.03	<0.1	2.8	0.06	1.47	290	1.7	<0.02	1.3	0.21	<0.1	<0.02
013K921076	Sediment Pulp	13.1	22.4	0.15	39.3	0.015	23	0.60	0.033	0.03	0.2	2.1	0.05	1.11	199	1.4	<0.02	1.1	0.45	<0.1	0.02
013K921077	Sediment Pulp	41.9	22.0	0.10	64.5	0.021	<20	0.60	0.019	0.02	<0.1	3.9	0.04	0.45	130	0.8	<0.02	1.3	0.25	<0.1	0.03
013K921078	Sediment Pulp	36.5	24.1	0.10	94.8	0.025	24	2.44	0.018	0.03	0.1	5.0	0.07	0.36	254	2.8	<0.02	2.1	0.37	<0.1	0.05
013K921079	Sediment Pulp	20.1	18.9	0.24	109.1	0.037	30	0.88	0.025	0.05	<0.1	2.8	0.06	0.51	126	0.7	<0.02	2.3	0.53	<0.1	0.03
013K921080	Sediment Pulp	30.5	43.5	0.64	204.6	0.079	36	2.56	0.070	0.17	0.2	5.3	0.11	0.26	163	1.8	<0.02	5.9	0.81	<0.1	0.09
013K921081	Sediment Pulp	11.7	21.8	0.42	44.8	0.092	<20	1.43	0.088	0.08	<0.1	2.3	0.04	0.10	52	0.4	<0.02	4.5	0.21	<0.1	0.05
013K921082	Sediment Pulp	25.1	27.6	0.19	81.6	0.015	<20	2.24	0.012	0.03	<0.1	1.4	0.07	0.32	238	3.4	0.02	1.6	0.34	<0.1	<0.02
013K921083	Sediment Pulp	30.0	30.9	0.17	78.8	0.016	<20	2.47	0.017	0.03	0.1	1.7	0.08	0.32	219	3.7	0.03	1.6	0.34	<0.1	<0.02
013K921084	Sediment Pulp	23.4	19.4	0.16	57.4	0.028	<20	0.96	0.023	0.03	<0.1	1.4	0.05	0.40	105	1.0	<0.02	2.4	0.42	<0.1	<0.02
013K921085	Sediment Pulp	10.2	12.9	0.58	85.4	0.043	<20	0.45	0.031	0.05	0.6	2.4	0.21	1.53	92	1.3	0.02	2.1	0.48	<0.1	0.04
013K921086	Sediment Pulp	42.6	27.1	0.19	83.7	0.022	<20	2.29	0.024	0.05	<0.1	3.0	0.19	0.27	216	2.5	<0.02	2.0	0.32	<0.1	0.02
013K921087	Sediment Pulp	7.2	20.6	0.12	56.0	0.051	<20	1.14	0.019	0.05	<0.1	1.5	0.03	0.23	149	1.3	<0.02	4.6	0.42	<0.1	0.08
013K921088	Sediment Pulp	11.2	21.5	0.41	44.1	0.088	<20	1.38	0.085	0.08	<0.1	2.3	0.04	0.10	41	0.3	<0.02	4.4	0.21	<0.1	0.05
013K921089	Sediment Pulp	11.1	27.6	0.56	48.3	0.099	<20	1.83	0.056	0.11	<0.1	2.5	0.06	0.03	16	0.2	<0.02	6.1	0.49	<0.1	0.04
013K921090	Sediment Pulp	2.1	6.0	0.03	58.7	0.008	<20	0.30	0.021	0.02	<0.1	0.2	<0.02	0.35	68	2.4	<0.02	0.7	0.12	<0.1	<0.02
013K921091	Sediment Pulp	19.8	20.6	0.10	86.2	0.036	<20	1.78	0.014	0.03	<0.1	0.9	0.03	0.25	171	1.7	<0.02	3.9	0.31	<0.1	<0.02
013K921092	Sediment Pulp	57.3	46.9	0.14	79.6	0.074	<20	4.15	0.016	0.03	0.1	4.7	0.17	0.20	248	4.0	<0.02	7.4	0.33	<0.1	0.03
013K921093	Sediment Pulp	37.2	29.8	0.13	90.3	0.047	<20	2.81	0.029	0.04	0.3	2.0	0.05	0.31	264	3.5	<0.02	7.0	0.29	<0.1	<0.02



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Project: None Given

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CERTIFICATE OF ANALYSIS

VAN22001886.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921064	Sediment Pulp	0.69	5.8	0.2	<0.05	1.5	49.04	65.5	<0.02	8	1.1	6.0	14.94	59.93	10.39	2.04	10.37	1.49	9.08	1.66	4.80
013K921065	Sediment Pulp	1.11	3.6	0.2	<0.05	1.6	39.74	82.4	<0.02	11	1.4	3.9	14.90	60.63	10.50	2.08	9.52	1.34	7.93	1.41	3.73
013K921066	Sediment Pulp	0.33	1.0	0.1	<0.05	0.7	9.29	28.7	<0.02	3	<0.1	0.6	3.89	15.77	2.60	0.50	2.47	0.33	1.96	0.33	0.92
013K921067	Sediment Pulp	1.11	5.9	0.3	<0.05	1.5	29.43	61.8	<0.02	10	1.0	8.8	10.61	43.51	7.72	1.47	6.78	0.96	5.92	1.04	2.80
013K921068	Sediment Pulp	0.36	1.9	0.1	<0.05	1.2	24.62	17.3	<0.02	2	0.4	1.5	7.22	29.81	5.44	1.10	5.46	0.75	4.59	0.79	2.41
013K921069	Sediment Pulp	1.83	23.7	1.2	<0.05	5.9	17.67	76.4	0.03	<1	0.7	21.5	9.93	40.35	6.44	0.93	5.03	0.65	4.03	0.64	1.87
013K921070	Sediment Pulp	0.53	1.1	0.2	<0.05	2.4	14.06	28.9	<0.02	9	<0.1	2.1	5.02	20.62	3.56	0.64	3.23	0.44	2.92	0.48	1.38
013K921071	Sediment Pulp	1.80	12.7	0.5	<0.05	4.2	16.23	47.3	<0.02	3	0.6	14.5	6.61	27.49	4.77	0.86	4.18	0.54	3.27	0.55	1.64
013K921072	Sediment Pulp	1.17	6.0	0.3	<0.05	1.4	16.07	46.0	<0.02	6	0.3	9.1	7.53	30.42	4.79	1.01	4.14	0.56	3.29	0.54	1.56
013K921073	Sediment Pulp	0.89	2.7	0.3	<0.05	1.1	14.42	40.3	<0.02	5	0.7	5.0	6.32	25.48	4.27	0.88	3.71	0.50	3.03	0.51	1.50
013K921074	Sediment Pulp	1.03	7.8	0.5	<0.05	4.1	13.97	50.6	<0.02	<1	0.6	12.9	6.38	26.30	4.60	0.90	3.78	0.51	3.13	0.51	1.47
013K921075	Sediment Pulp	0.40	2.0	0.1	<0.05	1.3	11.38	18.2	<0.02	3	0.3	2.9	4.86	20.75	3.09	0.65	2.80	0.34	2.38	0.34	1.08
013K921076	Sediment Pulp	0.42	2.0	0.1	<0.05	1.1	5.36	20.9	<0.02	2	0.1	2.8	3.10	12.27	1.87	0.40	1.64	0.20	1.30	0.18	0.53
013K921077	Sediment Pulp	0.39	2.0	0.1	<0.05	0.9	25.71	25.2	<0.02	4	<0.1	2.5	11.26	48.91	7.23	1.47	6.45	0.70	4.38	0.75	2.25
013K921078	Sediment Pulp	0.67	1.6	0.2	<0.05	1.8	19.22	49.5	<0.02	4	0.6	3.8	8.72	35.11	5.68	1.40	4.85	0.62	3.99	0.65	1.70
013K921079	Sediment Pulp	0.65	4.1	0.3	<0.05	1.5	11.05	28.7	<0.02	1	0.3	6.1	5.19	22.78	3.58	0.75	3.10	0.40	2.46	0.43	1.04
013K921080	Sediment Pulp	1.80	11.8	0.4	<0.05	3.8	14.60	62.9	<0.02	5	0.8	16.4	8.06	32.12	5.13	1.07	4.44	0.56	3.62	0.56	1.42
013K921081	Sediment Pulp	0.86	4.5	0.4	<0.05	2.3	7.61	21.3	<0.02	<1	0.3	6.8	2.94	12.03	2.20	0.46	1.90	0.24	1.44	0.27	0.71
013K921082	Sediment Pulp	0.63	2.2	0.2	<0.05	0.6	20.45	32.1	<0.02	4	0.5	2.9	6.30	24.37	4.39	1.00	3.98	0.53	3.26	0.63	1.74
013K921083	Sediment Pulp	0.67	2.2	0.1	<0.05	0.7	23.67	37.2	<0.02	5	0.6	2.7	7.65	29.02	5.20	1.18	4.70	0.64	3.89	0.75	2.06
013K921084	Sediment Pulp	0.64	2.7	0.2	<0.05	0.9	11.83	31.9	<0.02	<1	0.3	5.1	5.86	22.37	3.71	0.87	3.02	0.36	2.10	0.38	1.01
013K921085	Sediment Pulp	0.76	3.4	3.1	<0.05	1.4	10.59	16.4	0.47	18	0.2	4.3	2.58	11.10	2.30	0.43	2.04	0.27	1.68	0.33	0.93
013K921086	Sediment Pulp	0.64	2.9	0.2	<0.05	0.8	25.80	58.8	<0.02	2	0.6	4.0	10.24	40.10	6.72	1.36	5.63	0.72	4.28	0.81	2.25
013K921087	Sediment Pulp	1.10	3.5	0.4	<0.05	3.2	3.84	15.4	<0.02	<1	0.1	2.7	1.72	6.93	1.34	0.29	1.15	0.15	0.94	0.17	0.44
013K921088	Sediment Pulp	0.80	4.4	0.4	<0.05	2.4	7.43	20.7	<0.02	<1	0.3	6.5	2.92	11.83	2.15	0.46	1.85	0.24	1.42	0.26	0.70
013K921089	Sediment Pulp	0.95	9.2	0.5	<0.05	2.1	6.07	22.9	<0.02	<1	0.3	9.5	2.85	11.58	2.10	0.41	1.75	0.22	1.32	0.23	0.60
013K921090	Sediment Pulp	0.22	1.0	0.1	<0.05	0.6	1.09	4.2	<0.02	<1	<0.1	0.2	0.48	1.88	0.34	0.06	0.28	0.03	0.21	0.04	0.10
013K921091	Sediment Pulp	1.25	1.7	0.2	<0.05	0.9	8.88	40.4	<0.02	<1	0.4	2.4	5.12	19.46	3.42	0.70	2.79	0.35	2.05	0.35	0.86
013K921092	Sediment Pulp	1.80	2.3	0.3	<0.05	1.4	31.26	138.3	0.04	<1	1.2	2.9	14.03	53.22	9.31	1.68	7.69	1.06	6.21	1.11	2.93
013K921093	Sediment Pulp	1.60	2.4	0.3	<0.05	0.9	23.57	72.8	0.03	5	0.8	2.5	9.65	37.96	6.47	1.27	5.49	0.75	4.56	0.84	2.19



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Project: None Given

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CERTIFICATE OF ANALYSIS

VAN22001886.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921064	Sediment Pulp		0.63	4.51	0.59	<10	3
013K921065	Sediment Pulp		0.53	3.42	0.43	<10	3
013K921066	Sediment Pulp		0.12	0.79	0.10	<10	<2
013K921067	Sediment Pulp		0.43	2.67	0.33	<10	3
013K921068	Sediment Pulp		0.28	1.89	0.24	<10	<2
013K921069	Sediment Pulp		0.26	1.75	0.23	<10	<2
013K921070	Sediment Pulp		0.19	1.36	0.16	<10	<2
013K921071	Sediment Pulp		0.21	1.47	0.20	<10	<2
013K921072	Sediment Pulp		0.20	1.37	0.16	<10	7
013K921073	Sediment Pulp		0.18	1.36	0.16	<10	<2
013K921074	Sediment Pulp		0.19	1.26	0.16	<10	<2
013K921075	Sediment Pulp		0.14	0.91	0.10	<10	<2
013K921076	Sediment Pulp		0.06	0.47	0.04	<10	<2
013K921077	Sediment Pulp		0.30	2.07	0.30	<10	<2
013K921078	Sediment Pulp		0.20	1.56	0.19	<10	<2
013K921079	Sediment Pulp		0.13	0.89	0.11	<10	<2
013K921080	Sediment Pulp		0.20	1.34	0.16	<10	2
013K921081	Sediment Pulp		0.10	0.58	0.08	<10	<2
013K921082	Sediment Pulp		0.24	1.48	0.21	<10	<2
013K921083	Sediment Pulp		0.28	1.79	0.25	<10	<2
013K921084	Sediment Pulp		0.13	0.81	0.11	<10	<2
013K921085	Sediment Pulp		0.13	0.85	0.12	<10	<2
013K921086	Sediment Pulp		0.31	1.99	0.29	<10	<2
013K921087	Sediment Pulp		0.06	0.34	0.05	<10	<2
013K921088	Sediment Pulp		0.09	0.57	0.07	<10	<2
013K921089	Sediment Pulp		0.08	0.47	0.06	<10	<2
013K921090	Sediment Pulp		<0.02	0.09	<0.02	<10	<2
013K921091	Sediment Pulp		0.11	0.64	0.08	<10	<2
013K921092	Sediment Pulp		0.39	2.30	0.29	<10	<2
013K921093	Sediment Pulp		0.29	1.70	0.22	<10	<2



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921094 Sediment Pulp	0.67	31.29	6.91	67.1	159	25.1	9.3	158	2.33	1.0	1.4	<0.2	0.9	45.2	0.17	0.06	0.08	40	0.62	0.127
013K921095 Sediment Pulp	1.33	14.39	2.12	37.0	76	9.7	1.2	24	0.19	<0.1	5.8	<0.2	<0.1	14.0	0.23	0.04	<0.02	9	0.28	0.032



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K921094	Sediment Pulp	22.7	30.3	0.58	119.7	0.090	<20	2.59	0.066	0.15	0.1	3.4	0.09	0.13	161	1.0	<0.02	10.3	0.97	<0.1	0.08
013K921095	Sediment Pulp	10.3	9.0	0.05	54.6	0.024	<20	0.79	0.020	0.02	<0.1	0.5	<0.02	0.19	136	1.0	<0.02	3.3	0.18	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

VAN22001886.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921094	Sediment Pulp	2.24	12.5	0.6	<0.05	4.0	12.09	45.8	0.03	<1	0.6	13.4	5.51	20.68	3.65	0.69	2.98	0.41	2.36	0.43
013K921095	Sediment Pulp	0.80	1.2	0.1	<0.05	0.4	4.11	19.9	<0.02	<1	0.2	1.5	2.29	8.85	1.54	0.31	1.24	0.16	0.95	0.17



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CERTIFICATE OF ANALYSIS

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	Method	AQ250				
		Tm	Yb	Lu	Pd	Pt
	Analyte					
	Unit	ppm	ppm	ppm	ppb	ppb
MDL		0.02	0.02	0.02	10	2
013K921094	Sediment Pulp	0.15	0.88	0.11	<10	<2
013K921095	Sediment Pulp	0.05	0.32	0.04	<10	<2



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QUALITY CONTROL REPORT

VAN22001886.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013K833355	Sediment Pulp	1.46	18.07	6.91	56.9	46	18.4	11.1	2273	2.79	2.2	2.2	0.4	5.1	22.9	0.19	0.05	0.07	35	0.41	0.111
REP 013K833355	QC	1.44	17.78	6.65	57.6	55	17.7	11.0	2254	2.77	2.2	2.2	<0.2	5.0	22.7	0.18	0.05	0.06	35	0.40	0.109
013K833392	Sediment Pulp	1.41	37.10	4.81	50.6	58	21.7	12.4	649	2.58	1.3	5.6	0.5	4.1	38.1	0.13	0.03	0.04	41	0.50	0.104
REP 013K833392	QC	1.36	37.66	4.68	50.0	55	20.4	12.0	660	2.58	1.4	5.6	0.7	4.0	37.7	0.15	0.03	0.03	42	0.50	0.102
013K833411	Sediment Pulp	0.42	7.69	3.18	31.0	18	17.2	8.0	191	1.93	2.2	1.0	<0.2	1.9	17.2	0.05	0.03	0.02	53	0.37	0.075
REP 013K833411	QC	0.43	8.36	3.45	33.4	15	18.6	8.5	204	2.05	2.4	1.1	<0.2	1.9	18.5	0.05	0.03	0.02	56	0.40	0.076
013K833429	Sediment Pulp	7.10	23.02	2.69	76.8	182	13.3	9.6	303	2.91	1.3	10.4	0.4	1.2	33.6	0.52	0.03	<0.02	44	0.43	0.129
REP 013K833429	QC	6.96	22.62	2.63	73.2	183	13.2	8.8	289	2.81	1.5	10.0	<0.2	1.0	34.5	0.51	0.03	<0.02	43	0.42	0.128
013K833467	Sediment Pulp	9.19	62.89	4.44	122.0	190	17.0	13.8	7644	2.04	1.1	14.6	<0.2	1.2	52.0	0.72	0.04	<0.02	60	0.93	0.140
REP 013K833467	QC	9.30	61.05	4.30	114.6	192	17.3	13.6	7601	2.03	1.1	14.3	0.2	1.1	49.8	0.69	0.04	<0.02	60	0.92	0.135
013K833503	Sediment Pulp	1.04	32.91	26.99	137.1	2764	46.3	28.2	1245	3.19	26.6	4.2	2.2	8.6	29.8	0.61	0.51	3.43	53	0.64	0.098
REP 013K833503	QC	0.95	30.63	25.67	130.3	2585	43.9	26.9	1162	3.04	25.2	3.8	2.5	8.0	28.8	0.57	0.49	3.13	50	0.61	0.087
013K921021	Sediment Pulp	0.94	32.92	27.26	141.7	2766	46.8	28.6	1242	3.16	25.4	4.0	2.9	8.5	28.6	0.57	0.57	3.28	49	0.64	0.095
REP 013K921021	QC	1.07	34.44	25.56	135.6	2684	46.8	29.3	1244	3.17	25.3	4.2	2.2	8.5	28.4	0.61	0.53	3.27	48	0.63	0.091
013K921058	Sediment Pulp	18.02	123.12	12.72	326.7	1861	67.3	50.5	3731	9.05	104.6	65.5	2.2	2.1	31.7	4.41	0.91	0.03	39	0.94	0.319
REP 013K921058	QC	17.76	127.48	12.82	331.5	1934	67.4	52.2	3723	8.85	107.1	70.9	1.8	2.1	31.5	4.56	0.96	0.03	39	0.94	0.333
013K921094	Sediment Pulp	0.67	31.29	6.91	67.1	159	25.1	9.3	158	2.33	1.0	1.4	<0.2	0.9	45.2	0.17	0.06	0.08	40	0.62	0.127
REP 013K921094	QC	0.68	31.79	7.17	68.4	170	25.7	9.7	163	2.42	1.0	1.5	<0.2	0.9	47.7	0.16	0.05	0.08	40	0.65	0.130
Reference Materials																					
STD DS11	Standard	13.32	145.15	122.24	334.1	1699	80.2	13.9	1010	3.13	40.9	2.2	61.9	7.0	66.6	2.24	4.59	10.65	45	1.04	0.068
STD DS11	Standard	13.63	146.46	137.42	346.3	1639	78.9	14.0	1004	3.04	45.4	2.6	66.6	7.9	67.4	2.53	5.94	11.89	45	1.03	0.070
STD DS11	Standard	13.74	142.36	136.36	346.0	1735	76.9	13.4	995	3.06	43.5	2.8	57.6	8.0	66.7	2.53	5.20	11.90	50	1.01	0.066
STD DS11	Standard	14.39	145.41	131.98	348.6	1555	77.1	14.0	1026	3.00	44.9	2.5	62.5	8.1	67.2	2.47	5.42	11.30	48	1.05	0.066
STD DS11	Standard	14.70	143.33	143.75	333.0	2177	77.2	14.3	1020	3.02	47.8	2.8	432.9	8.5	66.2	2.53	5.77	12.23	47	1.03	0.068
STD DS11	Standard	13.97	137.17	132.19	317.9	1543	76.5	13.8	1004	3.06	42.3	2.5	81.9	8.0	62.1	2.34	5.59	12.06	47	1.03	0.070
STD DS11	Standard	14.96	142.29	140.47	327.3	1833	77.9	13.4	997	3.03	45.5	2.8	49.2	8.4	66.9	2.48	5.56	11.77	46	1.04	0.070
STD DS11	Standard	14.52	135.56	133.46	317.7	1779	75.6	13.3	999	2.95	45.6	2.5	62.0	8.2	62.4	2.70	5.80	12.00	47	1.01	0.072
STD DS11	Standard	12.26	131.26	119.18	319.8	1491	74.1	12.5	948	2.81	40.5	2.4	79.2	6.7	57.2	2.15	5.37	9.65	44	0.94	0.061



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K833355	Sediment Pulp	34.8	22.8	0.48	143.2	0.085	<20	1.03	0.034	0.08	0.1	3.2	0.09	0.02	12	0.2	<0.02	3.4	0.73	<0.1	0.07
REP 013K833355	QC	33.8	22.9	0.47	139.3	0.083	<20	1.02	0.034	0.08	0.1	3.0	0.09	0.02	15	0.3	<0.02	3.5	0.73	0.1	0.08
013K833392	Sediment Pulp	29.3	25.8	0.50	131.1	0.084	<20	1.33	0.042	0.11	0.1	4.1	0.10	0.02	11	0.1	<0.02	3.9	0.46	<0.1	0.03
REP 013K833392	QC	29.6	25.8	0.50	128.3	0.082	<20	1.32	0.042	0.11	<0.1	3.9	0.10	0.02	15	0.2	<0.02	4.0	0.43	<0.1	0.02
013K833411	Sediment Pulp	12.0	22.9	0.43	81.1	0.063	<20	0.89	0.042	0.06	<0.1	2.2	0.05	0.04	8	0.4	<0.02	2.9	0.28	<0.1	0.08
REP 013K833411	QC	12.4	24.3	0.46	86.4	0.070	<20	0.98	0.049	0.07	0.1	2.5	0.05	0.04	<5	0.5	<0.02	3.2	0.34	<0.1	0.08
013K833429	Sediment Pulp	33.0	19.6	0.12	338.0	0.020	<20	1.43	0.019	0.04	0.1	2.6	0.10	0.18	69	1.4	<0.02	1.8	0.23	<0.1	0.02
REP 013K833429	QC	33.2	19.6	0.12	341.0	0.020	<20	1.39	0.020	0.03	<0.1	2.7	0.10	0.18	74	1.5	<0.02	1.9	0.23	<0.1	0.03
013K833467	Sediment Pulp	63.8	17.5	0.17	696.2	0.019	<20	1.46	0.017	0.04	0.1	3.5	0.18	0.30	107	6.2	<0.02	2.6	0.47	0.2	0.04
REP 013K833467	QC	65.5	18.0	0.16	691.1	0.020	<20	1.46	0.015	0.04	0.1	3.5	0.17	0.29	93	6.5	<0.02	2.3	0.46	0.1	0.03
013K833503	Sediment Pulp	41.4	53.0	0.80	168.1	0.111	<20	1.77	0.033	0.27	0.2	6.1	0.29	0.15	267	0.9	0.03	6.5	1.46	0.1	0.15
REP 013K833503	QC	40.5	48.4	0.76	159.1	0.108	<20	1.69	0.032	0.27	0.2	5.7	0.27	0.15	260	1.0	0.04	6.0	1.44	0.1	0.12
013K921021	Sediment Pulp	42.3	53.1	0.82	170.5	0.111	<20	1.76	0.033	0.27	0.2	6.0	0.31	0.15	281	0.8	0.03	6.4	1.47	0.1	0.13
REP 013K921021	QC	41.7	53.6	0.82	170.4	0.109	<20	1.77	0.032	0.27	0.2	6.1	0.29	0.15	288	0.8	0.04	6.2	1.46	0.2	0.14
013K921058	Sediment Pulp	60.1	59.5	0.25	465.0	0.029	25	2.78	0.017	0.06	0.2	8.6	0.37	0.43	527	13.4	<0.02	3.0	1.15	0.1	0.15
REP 013K921058	QC	60.5	60.7	0.25	458.8	0.029	20	2.77	0.016	0.06	0.1	8.4	0.39	0.44	513	13.6	<0.02	3.0	1.16	0.1	0.14
013K921094	Sediment Pulp	22.7	30.3	0.58	119.7	0.090	<20	2.59	0.066	0.15	0.1	3.4	0.09	0.13	161	1.0	<0.02	10.3	0.97	<0.1	0.08
REP 013K921094	QC	23.5	31.5	0.60	125.9	0.095	<20	2.68	0.068	0.15	0.1	3.5	0.09	0.13	170	1.0	<0.02	10.6	1.03	<0.1	0.09
Reference Materials																					
STD DS11	Standard	17.2	57.0	0.82	389.8	0.091	<20	1.14	0.074	0.39	2.0	3.1	4.65	0.27	300	2.5	4.57	4.9	2.67	<0.1	0.06
STD DS11	Standard	17.5	59.7	0.85	421.5	0.094	<20	1.13	0.075	0.39	2.4	3.2	5.20	0.27	245	2.2	4.44	5.0	2.94	<0.1	0.07
STD DS11	Standard	17.8	57.4	0.81	391.9	0.094	<20	1.13	0.073	0.39	2.2	3.1	4.79	0.26	1011	2.1	4.33	5.2	2.84	<0.1	0.06
STD DS11	Standard	19.1	58.5	0.83	411.0	0.094	<20	1.15	0.073	0.39	2.6	3.3	5.05	0.27	288	2.1	4.45	5.1	2.95	<0.1	0.07
STD DS11	Standard	18.4	58.5	0.82	408.3	0.093	<20	1.12	0.069	0.39	2.5	3.1	4.79	0.28	267	2.0	4.45	5.1	2.86	<0.1	0.06
STD DS11	Standard	17.9	58.4	0.84	408.3	0.094	<20	1.15	0.073	0.39	2.7	3.0	5.00	0.28	259	1.9	4.29	5.1	2.83	<0.1	0.06
STD DS11	Standard	18.5	60.2	0.84	394.8	0.097	<20	1.15	0.072	0.39	2.5	3.3	4.92	0.27	254	2.1	4.33	4.9	2.78	<0.1	0.06
STD DS11	Standard	19.1	58.7	0.81	408.6	0.093	<20	1.10	0.072	0.38	2.7	3.2	4.82	0.27	240	1.9	4.42	4.9	3.00	<0.1	0.05
STD DS11	Standard	15.4	52.7	0.78	358.3	0.078	<20	0.99	0.063	0.36	2.4	2.8	4.52	0.26	232	2.2	4.28	4.4	2.56	<0.1	0.06



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Project: None Given

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K833355	Sediment Pulp	1.10	7.0	0.4	<0.05	3.6	16.85	75.8	<0.02	<1	0.7	9.9	8.76	31.06	5.46	0.89	4.35	0.59	3.33	0.63	1.85
REP 013K833355	QC	1.09	6.9	0.4	<0.05	3.7	16.41	73.0	<0.02	<1	0.8	9.7	8.78	30.74	5.37	0.83	4.47	0.60	3.30	0.62	1.74
013K833392	Sediment Pulp	0.74	8.8	0.4	<0.05	1.6	16.25	62.3	<0.02	<1	0.4	11.7	8.10	30.16	5.50	0.83	4.23	0.61	3.32	0.62	1.69
REP 013K833392	QC	0.67	8.3	0.4	<0.05	1.5	16.01	62.1	<0.02	<1	0.5	12.1	7.85	28.80	5.26	0.87	4.03	0.58	3.11	0.61	1.62
013K833411	Sediment Pulp	0.68	4.8	0.3	<0.05	3.1	6.86	25.7	<0.02	<1	0.2	6.4	3.22	12.65	2.31	0.40	1.89	0.25	1.39	0.26	0.67
REP 013K833411	QC	0.72	5.7	0.3	<0.05	3.5	7.16	26.4	<0.02	<1	0.2	6.9	3.31	12.75	2.34	0.40	1.91	0.25	1.42	0.26	0.70
013K833429	Sediment Pulp	0.38	2.9	0.1	<0.05	1.4	28.97	57.9	<0.02	11	1.2	3.8	9.58	37.46	6.88	1.38	5.80	0.78	4.32	0.94	2.72
REP 013K833429	QC	0.36	2.9	0.1	<0.05	1.1	27.75	57.4	<0.02	7	0.9	4.0	9.44	37.93	6.58	1.35	5.98	0.75	4.27	0.95	2.84
013K833467	Sediment Pulp	0.63	4.0	0.2	<0.05	1.5	44.03	84.1	<0.02	12	1.8	4.1	15.96	64.08	11.81	1.80	10.46	1.47	8.08	1.60	4.37
REP 013K833467	QC	0.62	3.9	0.2	<0.05	1.4	44.29	82.7	<0.02	9	1.8	4.0	16.46	63.19	11.62	1.80	9.96	1.43	8.62	1.62	4.47
013K833503	Sediment Pulp	1.78	26.3	1.5	<0.05	6.1	18.98	77.3	0.04	<1	0.5	23.8	10.60	37.06	6.72	1.00	4.72	0.64	3.51	0.72	1.94
REP 013K833503	QC	1.81	24.5	1.1	<0.05	6.0	17.93	72.4	0.05	<1	0.6	21.4	10.11	36.43	6.49	0.99	4.53	0.65	3.66	0.63	1.76
013K921021	Sediment Pulp	1.98	26.1	1.2	<0.05	6.1	19.32	77.1	0.06	<1	0.9	23.0	10.49	36.46	6.44	1.04	4.63	0.64	3.89	0.70	2.06
REP 013K921021	QC	1.88	25.9	1.3	<0.05	5.9	19.00	75.8	0.05	<1	0.6	23.3	10.58	38.00	6.75	1.00	4.54	0.63	3.67	0.70	2.04
013K921058	Sediment Pulp	0.92	5.7	0.2	<0.05	4.5	43.21	69.3	<0.02	29	1.1	7.1	14.98	63.64	10.56	2.29	10.22	1.37	8.11	1.44	3.95
REP 013K921058	QC	0.86	5.8	0.2	<0.05	4.0	43.83	69.2	<0.02	32	1.1	7.4	15.13	63.30	10.90	2.35	10.26	1.41	8.21	1.52	4.35
013K921094	Sediment Pulp	2.24	12.5	0.6	<0.05	4.0	12.09	45.8	0.03	<1	0.6	13.4	5.51	20.68	3.65	0.69	2.98	0.41	2.36	0.43	1.11
REP 013K921094	QC	2.32	13.0	0.6	<0.05	4.0	12.36	48.7	0.03	<1	0.6	13.6	5.81	21.76	3.81	0.72	3.13	0.42	2.51	0.45	1.18
Reference Materials																					
STD DS11	Standard	1.18	32.9	1.7	<0.05	2.8	7.97	34.8	0.22	42	0.7	22.6	3.63	13.89	2.46	0.45	1.97	0.25	1.47	0.27	0.74
STD DS11	Standard	1.33	33.8	1.7	<0.05	2.5	7.94	36.0	0.25	52	0.6	25.3	3.79	13.90	2.68	0.51	2.32	0.29	1.61	0.28	0.84
STD DS11	Standard	1.13	33.0	1.7	<0.05	2.4	7.66	36.2	0.24	43	0.7	23.0	4.03	14.22	2.71	0.50	2.04	0.29	1.61	0.28	0.78
STD DS11	Standard	1.25	33.7	1.7	<0.05	2.6	8.00	38.0	0.25	49	0.7	25.5	4.06	14.98	2.64	0.48	2.41	0.30	1.64	0.30	0.83
STD DS11	Standard	1.16	33.7	1.7	<0.05	2.5	7.50	35.6	0.23	46	0.8	25.6	4.11	14.82	2.53	0.53	2.10	0.29	1.62	0.29	0.74
STD DS11	Standard	1.19	32.9	1.7	<0.05	2.3	7.45	35.9	0.24	47	0.7	24.9	4.13	14.05	2.58	0.50	1.87	0.29	1.55	0.30	0.82
STD DS11	Standard	1.29	33.9	1.9	<0.05	2.4	7.69	36.1	0.25	43	0.6	24.6	4.13	14.92	2.65	0.52	2.32	0.28	1.78	0.31	0.84
STD DS11	Standard	1.23	32.8	1.9	<0.05	2.5	8.09	37.1	0.25	46	0.7	23.1	4.09	16.40	2.56	0.52	2.13	0.29	1.73	0.28	0.82
STD DS11	Standard	1.15	30.1	1.5	<0.05	2.7	6.83	30.7	0.21	41	0.6	19.7	3.22	12.19	2.21	0.42	1.80	0.24	1.30	0.24	0.67



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013K833355	Sediment Pulp	0.25	1.55	0.21	<10	<2
REP 013K833355	QC	0.22	1.42	0.20	<10	3
013K833392	Sediment Pulp	0.23	1.52	0.19	<10	<2
REP 013K833392	QC	0.22	1.35	0.18	<10	<2
013K833411	Sediment Pulp	0.08	0.51	0.07	<10	<2
REP 013K833411	QC	0.09	0.56	0.08	<10	<2
013K833429	Sediment Pulp	0.36	2.50	0.41	<10	2
REP 013K833429	QC	0.42	2.49	0.42	<10	3
013K833467	Sediment Pulp	0.62	3.68	0.50	<10	3
REP 013K833467	QC	0.59	3.65	0.49	<10	4
013K833503	Sediment Pulp	0.29	1.74	0.26	<10	2
REP 013K833503	QC	0.25	1.72	0.24	<10	<2
013K921021	Sediment Pulp	0.27	1.80	0.26	<10	2
REP 013K921021	QC	0.26	1.72	0.26	<10	2
013K921058	Sediment Pulp	0.54	3.81	0.50	<10	6
REP 013K921058	QC	0.57	3.79	0.54	<10	5
013K921094	Sediment Pulp	0.15	0.88	0.11	<10	<2
REP 013K921094	QC	0.15	0.93	0.12	<10	<2
Reference Materials						
STD DS11	Standard	0.10	0.68	0.10	97	158
STD DS11	Standard	0.12	0.74	0.11	94	177
STD DS11	Standard	0.13	0.74	0.11	78	177
STD DS11	Standard	0.12	0.78	0.11	98	167
STD DS11	Standard	0.12	0.72	0.11	93	167
STD DS11	Standard	0.12	0.75	0.11	85	163
STD DS11	Standard	0.12	0.83	0.10	79	174
STD DS11	Standard	0.11	0.77	0.10	94	182
STD DS11	Standard	0.09	0.59	0.09	86	153



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: July 27, 2022

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Part: 1 of 4

QUALITY CONTROL REPORT

VAN22001886.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.58	115.24	52.14	153.9	461	64.8	27.6	523	3.35	36.7	1.1	51.7	8.4	35.2	0.65	1.64	0.95	21	2.94	0.041
STD OREAS262	Standard	0.61	112.03	57.80	150.3	478	66.6	28.0	541	3.21	37.7	1.2	51.9	9.3	36.4	0.67	1.71	1.07	20	3.01	0.041
STD OREAS262	Standard	0.60	115.10	57.45	148.1	470	62.7	26.8	541	3.23	38.1	1.2	44.2	9.7	36.3	0.69	1.36	1.07	22	2.95	0.039
STD OREAS262	Standard	0.59	116.21	57.24	153.1	487	64.5	27.0	539	3.23	38.3	1.2	47.7	9.7	35.9	0.73	1.28	1.04	22	3.01	0.041
STD OREAS262	Standard	0.60	113.18	56.16	139.3	463	61.3	27.1	529	3.16	36.5	1.2	45.6	9.6	34.2	0.65	1.35	0.99	21	2.96	0.040
STD OREAS262	Standard	0.63	109.85	54.35	151.4	460	62.5	26.7	520	3.10	36.6	1.2	44.4	9.7	34.2	0.70	1.36	1.02	20	2.95	0.039
STD OREAS262	Standard	0.62	111.51	57.51	149.7	472	63.8	27.5	527	3.14	37.0	1.3	49.2	10.1	35.4	0.67	1.39	1.05	20	2.98	0.039
STD OREAS262	Standard	0.57	105.70	51.76	142.6	457	60.3	27.4	530	3.15	37.6	1.1	48.0	8.8	33.0	0.65	1.65	0.94	20	2.91	0.036
STD OREAS262	Standard	0.56	113.40	51.32	148.4	446	62.1	27.0	535	3.11	34.5	1.1	45.2	8.2	31.9	0.60	1.86	0.86	20	2.87	0.035
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.01	0.02	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.01	0.2	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.02	0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.02	0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.4	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.

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Project: None Given
Report Date: July 27, 2022

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Part: 2 of 4

QUALITY CONTROL REPORT

VAN22001886.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	15.7	41.8	1.16	239.0	0.003	<20	1.27	0.069	0.31	<0.1	3.1	0.47	0.25	173	0.8	0.30	3.8	2.21	<0.1	0.19
STD OREAS262	Standard	16.0	42.4	1.19	251.8	0.003	<20	1.18	0.070	0.29	<0.1	3.2	0.46	0.26	183	0.3	0.21	3.8	2.32	<0.1	0.18
STD OREAS262	Standard	16.8	42.4	1.15	256.0	0.003	<20	1.25	0.065	0.31	<0.1	3.2	0.47	0.25	166	0.6	0.22	4.3	2.32	<0.1	0.14
STD OREAS262	Standard	17.4	44.0	1.16	256.0	0.003	<20	1.33	0.069	0.32	<0.1	3.4	0.48	0.27	175	0.3	0.20	4.4	2.45	<0.1	0.13
STD OREAS262	Standard	16.9	43.3	1.14	246.7	0.003	<20	1.24	0.066	0.30	<0.1	3.3	0.45	0.27	161	0.4	0.19	4.1	2.25	<0.1	0.14
STD OREAS262	Standard	16.2	41.8	1.15	254.0	0.003	<20	1.21	0.066	0.30	<0.1	3.2	0.46	0.26	151	0.3	0.21	3.9	2.20	<0.1	0.13
STD OREAS262	Standard	17.1	44.3	1.18	246.8	0.003	<20	1.26	0.064	0.31	0.1	3.3	0.47	0.25	146	0.4	0.19	4.1	2.31	<0.1	0.15
STD OREAS262	Standard	17.0	43.7	1.14	235.8	0.003	<20	1.19	0.069	0.30	<0.1	3.1	0.42	0.25	152	0.1	0.20	3.7	2.30	<0.1	0.18
STD OREAS262	Standard	13.8	38.5	1.13	217.1	0.003	<20	1.11	0.066	0.28	<0.1	2.9	0.43	0.25	141	0.5	0.20	3.5	2.13	<0.1	0.23
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	7	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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QUALITY CONTROL REPORT

VAN22001886.1

		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	19.0	0.5	<0.05	8.3	10.78	31.7	0.03	1	1.2	16.8	3.88	14.66	3.18	0.61	2.83	0.36	2.07	0.37	1.00
STD OREAS262	Standard	<0.02	17.7	0.5	<0.05	7.2	10.50	31.9	0.03	2	1.1	18.8	3.82	14.47	2.99	0.64	2.73	0.40	2.13	0.39	1.06
STD OREAS262	Standard	<0.02	19.7	0.6	<0.05	5.4	10.62	33.1	0.03	<1	1.1	18.1	4.13	14.86	3.49	0.68	2.67	0.42	2.19	0.39	1.05
STD OREAS262	Standard	<0.02	19.9	0.6	<0.05	5.0	10.89	34.4	0.04	<1	1.4	18.7	4.22	15.58	3.37	0.63	3.20	0.41	2.19	0.39	1.11
STD OREAS262	Standard	<0.02	18.7	0.5	<0.05	5.3	10.25	32.5	0.02	1	0.8	17.5	3.89	14.69	3.37	0.64	2.81	0.40	2.18	0.41	1.00
STD OREAS262	Standard	<0.02	18.3	0.5	<0.05	5.3	10.49	31.9	0.03	<1	1.3	18.1	3.87	14.22	3.18	0.62	2.67	0.38	1.99	0.39	1.11
STD OREAS262	Standard	<0.02	19.2	0.6	<0.05	5.7	10.61	33.0	0.03	1	1.0	19.2	4.14	14.67	3.30	0.70	2.80	0.40	2.13	0.40	1.09
STD OREAS262	Standard	<0.02	17.6	0.5	<0.05	6.2	10.26	32.5	0.02	<1	1.2	17.1	3.94	16.25	3.37	0.60	3.08	0.40	2.24	0.36	0.99
STD OREAS262	Standard	<0.02	16.2	0.5	<0.05	9.7	10.03	27.2	0.03	1	1.0	15.5	3.24	12.84	2.86	0.56	2.60	0.35	1.93	0.35	0.95
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: July 27, 2022

Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22001886.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.13	0.81	0.11	<10	4
STD OREAS262	Standard	0.14	0.88	0.12	<10	<2
STD OREAS262	Standard	0.15	0.92	0.13	<10	<2
STD OREAS262	Standard	0.14	0.92	0.12	<10	<2
STD OREAS262	Standard	0.14	0.88	0.12	<10	<2
STD OREAS262	Standard	0.14	0.91	0.12	<10	<2
STD OREAS262	Standard	0.15	0.96	0.12	<10	2
STD OREAS262	Standard	0.13	0.92	0.10	<10	<2
STD OREAS262	Standard	0.13	0.76	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Client:

Geological Survey of Canada

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Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: September 06, 2022
Analysis Start: September 09, 2022
Report Date: September 27, 2022
Page: 1 of 11

CERTIFICATE OF ANALYSIS

VAN22002721.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 272

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	272	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	271	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL


IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: September 27, 2022

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CERTIFICATE OF ANALYSIS

VAN22002721.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921096	Sediment Pulp	2.33	22.60	4.82	57.9	213	14.3	3.8	80	0.83	0.2	9.9	2.1	0.4	32.4	0.31	0.07	0.18	26	0.70	0.152
013K921097	Sediment Pulp	0.31	9.11	6.00	53.5	14	28.4	8.5	173	1.56	0.7	0.7	0.4	1.5	16.3	0.06	0.05	0.09	26	0.31	0.060
013K921098	Sediment Pulp	6.42	31.46	6.65	89.8	163	23.9	10.4	111	4.72	3.2	153.7	0.7	0.8	55.1	0.40	0.21	0.07	50	1.66	0.153
013K921099	Sediment Pulp	0.98	7.11	2.41	54.9	49	6.5	3.2	45	0.55	0.4	1.9	<0.2	<0.1	15.6	0.21	0.10	0.05	41	0.38	0.059
013K921100	Sediment Pulp	7.67	107.94	4.72	90.6	419	23.2	5.3	128	1.33	5.0	4.1	2.5	0.2	25.5	0.64	0.30	0.07	24	1.15	0.190
013K921101	Sediment Pulp	7.56	106.22	4.54	90.3	417	23.7	5.3	128	1.33	4.9	4.1	1.8	0.2	25.6	0.56	0.28	0.04	24	1.17	0.191
013K921102	Sediment Pulp	1.54	29.07	3.73	74.7	61	29.5	9.4	116	1.31	0.3	1.5	0.5	0.6	20.6	0.21	0.04	0.03	25	0.57	0.043
013K921103	Sediment Pulp	1.47	22.51	6.06	82.5	105	44.0	13.6	219	2.25	0.7	1.5	1.2	1.9	21.8	0.19	0.04	0.04	33	0.61	0.080
013K921104	Sediment Pulp	24.16	476.77	17.08	>10000	900	298.1	20.2	479	1.78	49.5	26.6	3.0	1.1	94.2	54.06	1.14	0.04	25	1.89	0.068
013K921105	Sediment Pulp	1.96	96.28	8.93	314.2	684	54.4	11.8	155	1.25	10.2	4.1	2.8	0.2	34.6	2.68	0.68	0.04	21	1.07	0.083
013K921106	Sediment Pulp	2.38	133.84	8.31	171.2	806	54.2	12.6	436	2.50	3.0	2.7	2.4	0.7	26.9	1.68	0.20	0.06	40	0.89	0.151
013K921107	Sediment Pulp	5.11	186.44	7.60	219.8	496	45.9	13.2	559	2.21	6.3	13.0	1.8	1.7	31.5	1.38	0.30	0.08	39	0.79	0.202
013K921108	Sediment Pulp	0.90	33.32	24.48	133.8	2846	48.7	30.4	1291	3.26	25.4	3.5	2.3	7.1	25.2	0.57	0.54	3.11	52	0.64	0.092
013K921109	Sediment Pulp	5.79	232.79	9.73	330.2	941	44.8	14.7	1321	3.07	9.3	18.1	3.7	1.0	34.4	2.08	0.35	0.06	31	0.83	0.316
013K921110	Sediment Pulp	1.22	23.24	3.50	78.0	97	13.7	3.6	58	0.33	0.4	2.8	0.8	0.3	17.7	0.28	0.05	0.03	9	0.48	0.035
013K921111	Sediment Pulp	1.91	41.86	6.03	100.7	187	19.5	5.1	66	0.38	0.4	2.0	0.4	0.1	21.4	0.45	0.35	0.03	14	0.50	0.040
013K921112	Sediment Pulp	1.73	31.71	4.00	83.2	199	20.5	6.3	67	0.36	0.5	3.1	<0.2	0.1	21.5	0.50	0.08	0.03	15	0.61	0.051
013K921113	Sediment Pulp	2.42	38.85	3.55	78.1	139	17.6	5.6	52	0.31	0.5	6.1	0.3	0.2	19.0	0.47	0.08	<0.02	9	0.61	0.040
013K921114	Sediment Pulp	1.57	19.41	3.97	79.3	110	13.5	6.4	99	0.50	<0.1	4.2	<0.2	0.2	17.3	0.39	0.05	0.04	14	0.52	0.049
013K921115	Sediment Pulp	14.40	46.57	6.24	148.6	857	18.5	32.5	606	4.83	7.9	7.9	<0.2	0.9	32.1	0.95	0.16	0.04	90	0.87	0.197
013K921116	Sediment Pulp	4.50	78.83	11.69	143.4	1107	18.1	20.4	1124	2.32	1.5	5.9	1.1	0.8	38.9	1.01	0.09	0.07	58	1.20	0.383
013K921117	Sediment Pulp	4.09	26.38	4.55	84.7	198	13.5	7.9	188	0.97	1.3	8.4	0.4	0.2	21.7	0.49	0.12	0.03	27	0.75	0.093
013K921118	Sediment Pulp	1.74	23.64	3.81	78.7	241	13.5	7.7	248	0.68	0.4	3.4	<0.2	<0.1	23.8	0.42	0.20	<0.02	22	0.67	0.086
013K921119	Sediment Pulp	3.77	33.44	11.98	117.3	93	17.2	6.5	255	0.69	1.4	5.3	0.5	0.1	46.7	0.46	0.71	<0.02	24	0.67	0.043
013K921120	Sediment Pulp	6.13	48.62	16.76	122.4	314	18.0	7.8	514	1.37	1.5	10.6	0.4	0.3	47.4	0.60	1.86	<0.02	40	0.81	0.101
013K921121	Sediment Pulp	1.56	70.05	10.17	91.1	379	27.4	18.7	981	3.29	6.3	2.8	0.2	2.2	39.1	0.41	0.09	0.04	54	0.59	0.193
013K921122	Sediment Pulp	2.43	118.45	8.02	121.3	391	25.8	9.7	252	2.31	2.2	9.0	1.5	2.0	31.1	0.47	0.07	0.03	59	0.62	0.308
013K921123	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	
013K921124	Sediment Pulp	11.90	47.12	9.77	114.4	481	13.3	24.3	1918	6.61	4.1	9.2	0.3	2.2	31.0	0.45	0.05	0.03	46	0.49	0.261
013K921125	Sediment Pulp	2.19	24.81	6.21	66.7	441	7.9	3.5	392	0.91	5.0	4.6	1.1	0.6	23.7	0.64	0.11	<0.02	21	0.47	0.109



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K921096	Sediment Pulp	29.2	18.7	0.19	92.1	0.046	<20	1.85	0.025	0.05	0.2	1.4	0.04	0.22	316	1.1	0.03	7.5	0.43	<0.1	0.06
013K921097	Sediment Pulp	12.8	38.8	0.60	55.7	0.097	<20	1.63	0.029	0.08	<0.1	2.8	0.07	0.03	38	0.2	<0.02	6.0	1.02	<0.1	0.07
013K921098	Sediment Pulp	30.4	26.0	0.19	105.6	0.042	<20	2.49	0.021	0.05	0.3	2.5	0.07	0.36	213	3.3	0.03	5.9	0.44	<0.1	0.05
013K921099	Sediment Pulp	8.7	19.5	0.15	59.9	0.017	<20	0.89	0.031	0.03	<0.1	0.7	0.04	0.39	64	0.9	<0.02	4.7	0.28	<0.1	<0.02
013K921100	Sediment Pulp	50.0	34.3	0.15	90.1	0.016	<20	2.67	0.020	0.03	0.3	1.7	0.10	0.40	293	4.0	<0.02	2.4	0.30	0.1	0.03
013K921101	Sediment Pulp	48.8	33.0	0.15	92.2	0.016	<20	2.68	0.020	0.03	0.3	1.7	0.10	0.40	261	4.0	0.02	2.3	0.29	<0.1	<0.02
013K921102	Sediment Pulp	22.9	21.8	0.38	121.6	0.039	<20	1.57	0.020	0.07	<0.1	2.7	0.08	0.30	120	0.4	<0.02	3.4	0.55	<0.1	0.05
013K921103	Sediment Pulp	23.3	32.2	0.71	148.4	0.096	<20	2.12	0.034	0.13	<0.1	4.4	0.10	0.12	98	0.5	0.02	5.6	0.74	<0.1	0.15
013K921104	Sediment Pulp	35.7	53.9	0.35	39.5	0.019	84	1.63	0.024	0.06	0.3	11.9	0.55	2.77	754	12.2	0.02	2.3	1.88	0.6	0.10
013K921105	Sediment Pulp	22.0	47.9	0.19	90.4	0.010	<20	1.37	0.023	0.03	<0.1	2.1	0.22	1.11	283	3.1	0.03	1.5	0.35	<0.1	0.02
013K921106	Sediment Pulp	42.2	64.5	0.55	94.5	0.039	<20	2.13	0.034	0.09	<0.1	6.0	0.17	0.19	536	2.8	<0.02	3.7	0.81	<0.1	0.03
013K921107	Sediment Pulp	54.4	40.1	0.49	141.0	0.056	<20	1.85	0.065	0.11	0.2	6.0	0.41	0.48	377	3.8	0.04	3.6	0.66	0.1	0.05
013K921108	Sediment Pulp	41.7	52.3	0.82	166.3	0.106	<20	1.74	0.032	0.27	0.3	6.0	0.30	0.16	288	0.8	0.06	6.1	1.45	<0.1	0.15
013K921109	Sediment Pulp	72.3	48.0	0.30	198.1	0.027	<20	2.74	0.020	0.07	0.2	5.7	0.65	0.35	414	5.7	0.03	3.0	0.52	<0.1	0.08
013K921110	Sediment Pulp	47.0	15.5	0.15	99.6	0.015	<20	0.83	0.022	0.04	<0.1	2.0	0.05	0.34	169	1.2	0.02	1.3	0.41	<0.1	<0.02
013K921111	Sediment Pulp	41.7	22.6	0.11	96.7	0.015	<20	1.22	0.014	0.04	0.1	1.2	0.07	0.36	214	1.3	0.02	1.5	0.28	<0.1	0.02
013K921112	Sediment Pulp	52.8	24.6	0.14	105.1	0.015	<20	0.95	0.015	0.03	<0.1	1.3	0.07	0.38	174	1.9	<0.02	1.7	0.39	0.1	0.03
013K921113	Sediment Pulp	53.1	19.1	0.11	71.9	0.015	<20	0.90	0.024	0.03	<0.1	1.6	0.06	0.48	219	1.5	<0.02	1.3	0.26	<0.1	0.03
013K921114	Sediment Pulp	48.8	17.5	0.09	68.3	0.012	<20	1.23	0.016	0.02	<0.1	1.5	0.06	0.45	183	1.5	<0.02	1.3	0.28	<0.1	<0.02
013K921115	Sediment Pulp	55.7	38.9	0.13	165.2	0.020	<20	2.71	0.021	0.04	0.7	4.1	0.16	0.67	333	5.5	0.02	2.5	0.28	0.1	0.05
013K921116	Sediment Pulp	93.3	32.0	0.20	244.8	0.045	<20	4.13	0.029	0.05	0.2	3.5	0.11	0.32	532	3.4	0.03	6.2	0.48	0.1	0.04
013K921117	Sediment Pulp	52.1	16.7	0.10	102.6	0.017	<20	1.87	0.017	0.02	0.1	1.7	0.06	0.36	222	2.4	<0.02	2.3	0.25	0.1	<0.02
013K921118	Sediment Pulp	39.1	17.2	0.10	118.1	0.014	<20	2.12	0.012	0.03	<0.1	1.2	0.04	0.35	164	2.1	<0.02	1.7	0.21	<0.1	<0.02
013K921119	Sediment Pulp	39.5	32.1	0.08	148.5	0.017	<20	1.51	0.027	0.02	<0.1	1.6	0.08	0.50	143	1.8	<0.02	1.6	0.39	<0.1	0.03
013K921120	Sediment Pulp	42.8	44.3	0.13	169.5	0.025	<20	2.81	0.023	0.03	0.5	2.5	0.11	0.34	219	3.6	<0.02	2.6	0.37	<0.1	<0.02
013K921121	Sediment Pulp	54.6	78.7	0.61	134.3	0.071	<20	2.74	0.024	0.12	0.2	3.5	0.23	0.11	185	1.7	0.02	5.0	1.46	<0.1	0.06
013K921122	Sediment Pulp	77.2	48.7	0.46	131.8	0.065	<20	2.93	0.040	0.14	0.3	4.6	0.17	0.18	266	2.8	<0.02	4.7	0.96	0.2	0.07
013K921123	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K921124	Sediment Pulp	94.5	30.3	0.09	123.8	0.044	<20	4.15	0.015	0.03	0.3	4.1	0.09	0.26	317	2.7	<0.02	5.0	0.44	0.1	0.06
013K921125	Sediment Pulp	116.4	18.3	0.05	87.4	0.020	<20	2.49	0.011	0.02	0.1	1.5	0.06	0.27	244	1.5	<0.02	2.6	0.34	<0.1	<0.02



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921096	Sediment Pulp	1.68	3.3	0.9	<0.05	1.5	13.30	59.3	0.04	<1	0.4	6.0	8.05	29.65	5.14	1.01	4.08	0.59	3.31	0.53
013K921097	Sediment Pulp	1.54	7.4	0.6	<0.05	2.5	5.64	25.3	<0.02	<1	0.5	14.1	3.14	12.08	2.27	0.37	1.91	0.24	1.38	0.24
013K921098	Sediment Pulp	1.65	3.0	0.4	<0.05	2.3	18.30	62.0	0.03	3	0.8	5.5	7.93	30.05	5.68	0.92	4.58	0.65	3.87	0.71
013K921099	Sediment Pulp	0.26	2.8	0.4	<0.05	0.2	5.91	15.5	<0.02	<1	0.2	4.5	2.22	8.70	1.59	0.29	1.66	0.20	1.07	0.22
013K921100	Sediment Pulp	0.90	2.3	0.4	<0.05	1.0	27.72	41.6	0.02	5	0.6	3.3	13.13	49.55	9.26	1.45	7.92	0.98	5.35	0.98
013K921101	Sediment Pulp	0.89	2.2	0.4	<0.05	0.9	26.91	41.2	<0.02	4	0.6	3.4	13.07	49.02	9.22	1.51	7.50	0.99	5.47	0.97
013K921102	Sediment Pulp	0.93	7.1	0.3	<0.05	2.0	12.17	37.8	<0.02	<1	0.4	7.9	6.42	24.56	4.34	0.76	3.38	0.43	2.55	0.44
013K921103	Sediment Pulp	1.51	10.5	0.6	<0.05	4.5	13.04	38.0	0.03	<1	0.5	13.5	6.59	24.75	4.52	0.79	3.83	0.47	2.76	0.51
013K921104	Sediment Pulp	0.86	4.7	0.3	<0.05	5.3	34.18	33.3	<0.02	46	0.5	11.2	8.86	35.69	7.06	2.14	7.00	1.01	5.57	1.18
013K921105	Sediment Pulp	0.65	2.6	0.3	<0.05	1.0	18.50	30.6	<0.02	7	0.5	4.3	5.66	21.62	4.22	1.11	4.05	0.57	3.75	0.67
013K921106	Sediment Pulp	1.18	6.2	0.3	<0.05	2.2	27.76	56.5	0.02	7	1.2	10.0	11.35	42.76	7.74	1.80	7.10	0.91	5.43	1.04
013K921107	Sediment Pulp	1.54	8.0	0.4	<0.05	2.9	36.29	88.2	0.02	6	0.7	8.2	13.93	52.72	9.57	1.73	7.95	1.14	6.88	1.23
013K921108	Sediment Pulp	2.11	24.3	1.1	<0.05	6.0	17.70	74.4	0.04	1	0.4	21.7	10.29	39.49	6.71	0.95	4.96	0.65	3.32	0.64
013K921109	Sediment Pulp	0.99	5.2	0.2	<0.05	2.1	55.18	121.3	0.03	5	1.3	6.2	18.82	70.44	13.01	2.84	11.53	1.65	9.15	1.84
013K921110	Sediment Pulp	0.45	3.6	0.2	<0.05	1.2	22.77	48.0	<0.02	<1	0.3	3.4	12.25	48.71	8.26	1.56	6.90	0.84	4.72	0.85
013K921111	Sediment Pulp	0.70	2.4	0.2	<0.05	1.1	24.02	65.7	<0.02	2	0.7	2.5	11.62	48.89	8.35	1.54	6.38	0.88	5.02	0.96
013K921112	Sediment Pulp	0.66	2.8	0.2	<0.05	1.4	26.88	78.6	<0.02	1	0.8	3.4	13.95	56.83	8.93	1.68	7.92	0.99	5.55	1.02
013K921113	Sediment Pulp	0.50	1.8	0.2	<0.05	1.0	23.52	68.2	<0.02	<1	0.3	2.8	13.83	55.25	8.37	1.56	6.70	0.86	4.47	0.88
013K921114	Sediment Pulp	0.47	1.8	0.2	<0.05	0.6	21.64	64.5	<0.02	<1	0.8	2.3	12.96	50.69	8.49	1.56	6.52	0.81	4.57	0.79
013K921115	Sediment Pulp	0.87	2.6	0.1	<0.05	1.7	34.67	85.8	<0.02	4	0.6	2.6	15.98	61.44	10.72	2.09	8.33	1.14	6.51	1.29
013K921116	Sediment Pulp	2.22	4.1	0.4	<0.05	1.8	43.68	175.6	0.05	2	2.2	5.6	22.76	89.90	15.87	2.93	13.22	1.75	9.79	1.59
013K921117	Sediment Pulp	0.82	1.7	0.2	<0.05	0.7	20.08	99.6	<0.02	5	1.2	2.4	14.16	52.32	9.10	1.53	6.83	0.85	4.60	0.75
013K921118	Sediment Pulp	0.77	1.8	0.2	<0.05	0.6	23.82	76.2	<0.02	2	0.8	2.0	11.01	44.29	7.86	1.46	7.50	0.87	5.15	0.89
013K921119	Sediment Pulp	0.69	1.7	0.2	<0.05	1.2	19.96	68.9	<0.02	2	0.8	1.7	10.78	41.73	7.12	1.27	5.67	0.75	4.50	0.78
013K921120	Sediment Pulp	1.09	1.9	0.2	<0.05	1.3	25.83	84.8	0.03	<1	1.2	2.4	12.67	48.58	8.51	1.47	7.29	0.93	5.33	0.93
013K921121	Sediment Pulp	1.64	8.9	0.3	<0.05	3.5	24.78	128.6	0.02	<1	1.4	10.9	14.06	52.86	8.86	1.23	6.82	0.94	5.32	0.93
013K921122	Sediment Pulp	2.32	9.9	0.4	<0.05	4.7	53.94	140.9	0.02	2	2.0	8.0	20.80	82.46	14.21	2.23	12.73	1.76	10.25	1.98
013K921123	Sediment Pulp	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
013K921124	Sediment Pulp	1.74	2.5	0.3	<0.05	1.9	38.71	188.1	0.03	2	1.9	2.2	24.05	85.44	14.60	2.28	11.95	1.52	8.49	1.45
013K921125	Sediment Pulp	1.17	1.5	0.1	<0.05	0.7	35.90	265.2	0.02	<1	3.0	1.0	28.81	106.06	16.86	1.95	11.86	1.57	8.27	1.44



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921096	Sediment Pulp		0.18	1.14	0.14	<10	3
013K921097	Sediment Pulp		0.07	0.57	0.07	<10	<2
013K921098	Sediment Pulp		0.26	1.60	0.21	<10	3
013K921099	Sediment Pulp		0.08	0.49	0.07	<10	2
013K921100	Sediment Pulp		0.31	2.21	0.30	<10	4
013K921101	Sediment Pulp		0.34	2.07	0.33	<10	3
013K921102	Sediment Pulp		0.14	0.95	0.14	<10	4
013K921103	Sediment Pulp		0.17	1.05	0.15	<10	<2
013K921104	Sediment Pulp		0.41	2.76	0.40	<10	2
013K921105	Sediment Pulp		0.25	1.54	0.22	<10	3
013K921106	Sediment Pulp		0.37	2.49	0.29	<10	6
013K921107	Sediment Pulp		0.47	3.24	0.41	<10	4
013K921108	Sediment Pulp		0.25	1.73	0.24	<10	2
013K921109	Sediment Pulp		0.73	4.42	0.60	<10	3
013K921110	Sediment Pulp		0.28	1.80	0.23	<10	2
013K921111	Sediment Pulp		0.31	1.99	0.25	<10	<2
013K921112	Sediment Pulp		0.34	2.09	0.30	<10	<2
013K921113	Sediment Pulp		0.29	2.00	0.24	<10	4
013K921114	Sediment Pulp		0.27	1.92	0.27	<10	<2
013K921115	Sediment Pulp		0.48	3.21	0.41	<10	<2
013K921116	Sediment Pulp		0.58	3.43	0.44	<10	3
013K921117	Sediment Pulp		0.28	1.68	0.22	<10	2
013K921118	Sediment Pulp		0.34	2.01	0.23	<10	<2
013K921119	Sediment Pulp		0.27	1.67	0.20	<10	<2
013K921120	Sediment Pulp		0.33	2.19	0.28	<10	3
013K921121	Sediment Pulp		0.42	2.25	0.32	<10	<2
013K921122	Sediment Pulp		0.78	4.66	0.68	<10	<2
013K921123	Sediment Pulp		I.S.	I.S.	I.S.	I.S.	I.S.
013K921124	Sediment Pulp		0.56	3.38	0.43	<10	2
013K921125	Sediment Pulp		0.50	3.14	0.36	<10	2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921126	Sediment Pulp	0.86	33.79	1.56	49.8	215	15.3	3.3	54	0.39	0.9	1.0	1.0	<0.1	22.1	0.15	0.11	<0.02	12	0.45	0.110
013K921127	Sediment Pulp	1.16	54.80	3.06	83.7	199	18.6	5.8	140	0.72	1.5	3.0	1.2	0.4	33.0	0.24	0.12	<0.02	23	0.62	0.066
013K921128	Sediment Pulp	0.82	36.02	5.07	52.3	131	14.0	4.2	116	0.56	0.4	1.3	1.0	0.4	27.9	0.17	0.06	<0.02	14	0.44	0.047
013K921129	Sediment Pulp	1.65	71.04	10.22	99.8	397	30.3	18.8	994	3.33	6.5	2.9	1.1	2.3	41.0	0.48	0.09	0.04	55	0.59	0.198
013K921130	Sediment Pulp	3.94	34.30	6.75	96.3	70	34.1	14.4	283	1.66	4.7	3.0	0.3	2.8	102.0	0.25	0.13	0.02	35	0.65	0.080
013K921131	Sediment Pulp	3.53	37.84	10.60	102.4	163	29.7	12.5	443	2.03	6.1	6.4	<0.2	1.1	40.1	0.42	0.14	0.04	38	0.45	0.116
013K921132	Sediment Pulp	3.22	29.49	5.63	89.8	164	17.2	4.9	144	0.74	0.9	4.0	4.1	0.3	50.1	0.42	0.15	0.15	29	0.64	0.079
013K921133	Sediment Pulp	13.47	18.61	5.71	50.4	111	11.2	1.5	24	0.13	1.2	17.9	2.5	0.3	35.0	0.24	0.40	0.07	6	0.47	0.032
013K921134	Sediment Pulp	1.14	36.85	5.39	39.4	336	10.0	2.2	61	0.34	0.6	2.8	2.5	<0.1	28.3	0.24	0.24	0.04	12	0.48	0.086
013K921135	Sediment Pulp	1.92	20.41	4.00	63.9	267	10.1	3.6	68	0.51	0.5	2.6	1.5	0.1	21.2	0.24	0.20	0.02	17	0.50	0.070
013K921136	Sediment Pulp	2.62	57.90	5.87	68.9	652	17.7	6.1	232	1.12	0.7	3.0	2.7	0.4	57.4	0.47	0.10	0.03	50	0.79	0.279
013K921137	Sediment Pulp	6.91	64.81	6.55	112.1	473	78.8	61.0	6724	7.23	5.8	3.0	2.0	2.4	64.4	0.55	0.11	<0.02	54	0.54	0.186
013K921138	Sediment Pulp	3.13	75.46	10.95	69.7	512	32.1	9.6	590	1.68	3.2	2.4	2.0	0.5	59.4	0.74	0.12	<0.02	32	0.56	0.141
013K921139	Sediment Pulp	10.37	43.44	88.89	293.3	636	11.9	9.0	414	1.75	33.3	10.1	3.8	1.6	65.2	1.37	0.52	1.12	20	6.10	0.070
013K921140	Sediment Pulp	3.19	56.12	6.28	122.6	284	23.9	16.4	911	1.87	1.9	2.6	0.9	0.6	45.8	0.69	0.17	<0.02	42	0.56	0.108
013K921141	Sediment Pulp	1.95	18.21	5.51	32.8	172	16.9	2.3	50	0.25	0.5	2.8	0.5	0.2	19.8	0.27	0.07	<0.02	8	0.29	0.044
013K921142	Sediment Pulp	2.10	30.37	6.82	101.5	112	23.4	9.7	323	1.53	2.6	2.2	<0.2	2.1	49.3	0.43	0.12	<0.02	39	0.51	0.067
013K921143	Sediment Pulp	6.12	53.73	4.59	92.8	398	26.4	11.1	120	1.34	17.8	14.9	1.2	0.8	492.7	0.32	0.57	<0.02	25	1.41	0.145
013K921144	Sediment Pulp	2.65	36.82	2.17	69.3	227	24.9	4.1	73	0.28	0.6	2.7	0.6	0.1	28.0	0.25	0.16	<0.02	19	0.51	0.069
013K921145	Sediment Pulp	1.16	25.50	3.63	48.7	212	12.1	2.2	60	0.26	0.4	5.1	0.5	0.1	19.5	0.20	0.04	<0.02	8	0.42	0.049
013K921146	Sediment Pulp	1.26	26.05	8.96	45.6	216	11.1	4.0	336	0.47	0.8	1.6	0.3	0.1	73.4	0.39	0.07	0.02	26	0.65	0.071
013K921147	Sediment Pulp	1.11	16.04	14.61	56.1	177	14.2	2.0	85	0.30	3.5	1.1	1.8	0.3	106.0	0.64	0.09	<0.02	9	0.59	0.043
013K921148	Sediment Pulp	1.02	32.19	14.86	85.9	294	23.1	9.4	299	1.42	8.3	5.8	0.8	0.4	36.2	0.48	0.41	0.02	30	0.56	0.127
013K921149	Sediment Pulp	12.68	25.70	12.94	118.6	300	21.2	15.5	572	2.70	1.1	27.2	0.8	0.8	300.4	0.62	0.14	0.05	29	1.24	0.132
013K921150	Sediment Pulp	10.49	26.19	11.19	108.0	299	21.1	14.3	525	2.35	1.0	27.6	0.9	0.8	341.3	0.63	0.12	0.04	29	1.24	0.146
013K921151	Sediment Pulp	6.59	89.57	10.39	186.6	1317	47.7	22.8	2475	5.77	78.0	11.5	1.7	1.5	47.0	1.48	0.44	0.08	37	0.74	0.283
013K921152	Sediment Pulp	6.94	34.63	6.73	65.0	534	15.4	6.6	165	1.54	1.5	5.0	0.8	0.6	41.4	0.29	0.10	0.05	32	0.70	0.237
013K921153	Sediment Pulp	3.86	32.18	5.59	60.3	123	16.8	8.8	140	0.78	1.5	4.1	0.4	0.6	39.8	0.31	0.12	<0.02	21	0.61	0.062
013K921154	Sediment Pulp	5.86	43.73	15.21	133.6	237	21.4	18.3	835	2.94	3.0	5.1	0.6	2.8	28.6	0.75	0.10	0.04	51	0.46	0.197
013K921155	Sediment Pulp	5.09	61.49	31.64	111.3	829	12.5	11.8	837	2.77	3.6	4.1	0.4	1.3	39.1	0.83	0.13	0.04	71	0.85	0.350



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K921126	Sediment Pulp	16.1	27.0	0.13	81.9	0.014	<20	0.77	0.012	0.03	<0.1	0.5	0.07	0.26	174	1.0	<0.02	1.1	0.28	<0.1	<0.02
013K921127	Sediment Pulp	57.5	43.8	0.24	77.7	0.029	<20	1.55	0.013	0.05	0.2	1.9	0.21	0.27	158	1.3	<0.02	1.9	0.51	<0.1	0.03
013K921128	Sediment Pulp	38.9	25.4	0.19	83.6	0.023	<20	1.03	0.012	0.03	<0.1	1.3	0.07	0.28	172	1.2	<0.02	1.5	0.57	<0.1	0.05
013K921129	Sediment Pulp	54.7	82.5	0.62	141.4	0.076	<20	2.75	0.025	0.12	0.2	3.7	0.24	0.11	174	1.8	0.02	5.4	1.56	<0.1	0.06
013K921130	Sediment Pulp	56.4	71.9	0.67	121.0	0.085	<20	1.60	0.027	0.08	0.6	4.3	0.13	0.20	77	1.0	<0.02	3.4	1.13	0.1	0.14
013K921131	Sediment Pulp	46.7	79.3	0.60	106.9	0.061	<20	2.16	0.021	0.09	0.2	2.9	0.13	0.16	133	2.0	<0.02	4.1	1.64	<0.1	0.08
013K921132	Sediment Pulp	40.0	32.7	0.13	102.1	0.025	<20	2.33	0.023	0.03	0.1	1.2	0.07	0.28	156	1.1	<0.02	2.2	0.44	<0.1	0.05
013K921133	Sediment Pulp	43.1	13.5	0.03	76.4	0.011	<20	0.69	0.013	0.02	0.1	0.9	0.03	0.34	153	1.3	<0.02	0.8	0.13	<0.1	0.04
013K921134	Sediment Pulp	23.6	17.2	0.08	76.4	0.024	<20	1.21	0.013	0.03	<0.1	0.6	0.04	0.22	227	0.9	<0.02	2.5	0.50	<0.1	0.04
013K921135	Sediment Pulp	25.4	15.9	0.12	78.2	0.020	<20	1.02	0.022	0.05	0.2	0.7	0.07	0.25	218	1.6	<0.02	1.8	0.38	<0.1	0.04
013K921136	Sediment Pulp	52.8	61.0	0.14	157.6	0.044	<20	2.53	0.020	0.04	0.4	1.5	0.12	0.28	347	2.1	<0.02	4.8	0.47	<0.1	0.06
013K921137	Sediment Pulp	49.0	195.4	0.82	480.6	0.057	<20	2.93	0.016	0.11	0.5	3.6	0.77	0.16	353	2.4	<0.02	4.4	1.06	0.1	0.06
013K921138	Sediment Pulp	29.1	97.1	0.35	141.6	0.029	<20	2.04	0.012	0.05	0.3	1.5	0.17	0.19	286	1.9	<0.02	2.1	0.61	<0.1	0.03
013K921139	Sediment Pulp	11.0	11.5	0.56	94.4	0.041	<20	0.42	0.026	0.05	0.6	2.4	0.25	1.48	106	1.3	<0.02	2.3	0.52	<0.1	0.04
013K921140	Sediment Pulp	44.8	64.2	0.14	149.1	0.035	<20	2.59	0.006	0.04	0.3	1.9	0.31	0.21	255	1.6	<0.02	2.7	0.36	0.1	0.03
013K921141	Sediment Pulp	31.5	12.3	0.05	150.8	0.021	<20	1.08	0.015	0.02	<0.1	0.9	0.03	0.24	179	1.2	<0.02	2.0	0.34	<0.1	0.03
013K921142	Sediment Pulp	41.7	65.6	0.44	92.2	0.072	<20	1.82	0.019	0.09	0.3	2.7	0.19	0.16	128	0.8	<0.02	2.7	0.42	<0.1	0.14
013K921143	Sediment Pulp	49.8	54.2	0.14	194.2	0.028	<20	1.97	0.024	0.05	1.1	1.6	0.27	0.78	299	2.0	0.02	2.1	0.65	<0.1	0.05
013K921144	Sediment Pulp	42.9	50.8	0.07	76.4	0.013	<20	1.20	0.014	0.02	0.1	0.5	0.10	0.37	166	1.6	<0.02	1.2	0.20	<0.1	0.03
013K921145	Sediment Pulp	28.1	11.4	0.06	92.1	0.017	<20	0.77	0.016	0.03	0.2	0.5	0.07	0.23	211	1.2	<0.02	1.7	0.41	<0.1	0.02
013K921146	Sediment Pulp	26.4	24.1	0.07	113.1	0.022	<20	1.08	0.008	0.03	0.1	0.6	0.05	0.24	212	1.1	<0.02	2.4	0.29	<0.1	0.02
013K921147	Sediment Pulp	11.8	15.4	0.09	150.6	0.021	<20	0.52	0.025	0.04	<0.1	1.1	0.03	0.30	136	1.3	<0.02	1.6	0.75	<0.1	0.06
013K921148	Sediment Pulp	40.5	42.3	0.24	119.5	0.035	<20	2.28	0.016	0.06	0.1	1.7	0.07	0.22	197	1.5	<0.02	3.5	0.51	<0.1	0.03
013K921149	Sediment Pulp	41.8	37.2	0.26	265.5	0.034	<20	2.66	0.033	0.06	0.2	2.3	0.11	0.56	196	2.5	<0.02	3.2	0.59	<0.1	0.03
013K921150	Sediment Pulp	42.9	36.4	0.25	314.2	0.034	<20	2.63	0.032	0.06	0.2	2.3	0.12	0.26	188	2.4	0.02	3.2	0.60	<0.1	0.05
013K921151	Sediment Pulp	54.4	73.9	0.35	184.3	0.034	<20	3.81	0.021	0.08	0.3	3.8	0.27	0.31	434	6.0	<0.02	3.6	1.09	0.1	0.05
013K921152	Sediment Pulp	50.5	27.1	0.20	151.8	0.050	<20	2.72	0.021	0.06	0.3	2.0	0.08	0.25	279	2.2	<0.02	4.0	0.74	<0.1	0.06
013K921153	Sediment Pulp	43.4	27.3	0.32	68.9	0.045	<20	1.14	0.017	0.04	0.1	1.9	0.07	0.30	173	1.5	<0.02	2.2	1.10	<0.1	0.09
013K921154	Sediment Pulp	78.6	36.7	0.24	73.4	0.054	<20	3.80	0.022	0.07	0.2	3.8	0.24	0.19	243	1.6	<0.02	4.4	0.67	0.1	0.06
013K921155	Sediment Pulp	101.2	37.1	0.08	169.8	0.060	<20	4.09	0.013	0.03	0.2	2.9	0.10	0.33	389	2.8	<0.02	7.6	0.63	0.1	0.04



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921126	Sediment Pulp	0.37	2.3	0.1	<0.05	0.6	7.23	28.2	<0.02	<1	0.3	2.2	4.05	15.60	2.55	0.47	2.20	0.30	1.49	0.28	0.82
013K921127	Sediment Pulp	1.17	4.0	0.2	<0.05	3.2	27.64	92.5	<0.02	<1	0.9	4.4	15.94	61.54	10.22	1.45	8.80	1.04	5.35	1.11	2.97
013K921128	Sediment Pulp	0.60	3.4	0.1	<0.05	2.3	16.87	45.6	<0.02	<1	0.9	3.1	11.22	42.90	7.18	1.08	5.55	0.68	3.80	0.69	1.97
013K921129	Sediment Pulp	1.67	9.3	0.4	<0.05	3.7	26.12	132.4	0.02	<1	1.9	11.1	14.97	51.74	8.88	1.19	7.10	0.98	5.73	0.95	2.87
013K921130	Sediment Pulp	1.85	6.6	0.3	<0.05	6.6	25.19	110.4	<0.02	3	1.1	11.1	14.46	55.11	9.36	1.47	7.33	0.93	4.86	0.98	2.60
013K921131	Sediment Pulp	1.60	7.6	0.4	<0.05	4.2	21.37	100.5	<0.02	<1	1.6	9.9	12.43	49.06	7.86	1.26	6.41	0.80	4.41	0.78	2.32
013K921132	Sediment Pulp	1.30	2.3	0.7	<0.05	1.7	18.91	86.1	<0.02	1	0.9	3.0	10.75	44.91	7.79	1.29	6.01	0.82	4.21	0.78	2.08
013K921133	Sediment Pulp	0.52	1.0	0.5	<0.05	1.2	14.48	60.0	<0.02	2	0.2	0.7	11.07	47.08	7.16	1.00	5.08	0.61	3.12	0.57	1.45
013K921134	Sediment Pulp	0.97	2.2	0.5	<0.05	1.1	8.20	45.4	<0.02	<1	0.4	2.5	5.71	23.14	3.80	0.61	2.96	0.39	2.09	0.36	0.96
013K921135	Sediment Pulp	0.85	2.9	0.4	<0.05	1.2	11.35	49.3	<0.02	<1	0.4	3.5	6.61	26.85	4.65	0.68	3.52	0.45	2.47	0.46	1.28
013K921136	Sediment Pulp	2.41	3.3	0.4	<0.05	2.1	21.39	93.5	0.02	<1	1.1	2.7	12.81	53.95	8.61	1.39	6.66	0.87	4.79	0.95	2.48
013K921137	Sediment Pulp	0.95	6.4	0.3	<0.05	2.2	22.13	101.8	<0.02	1	1.0	7.9	12.40	49.71	7.94	1.34	6.00	0.81	4.21	0.86	2.43
013K921138	Sediment Pulp	0.82	3.7	0.2	<0.05	1.1	12.40	69.5	<0.02	<1	0.6	4.6	8.11	33.12	5.28	0.86	3.76	0.49	2.62	0.49	1.31
013K921139	Sediment Pulp	0.78	3.4	3.4	<0.05	1.4	10.52	18.1	0.49	21	0.2	4.2	3.04	14.09	2.84	0.50	2.38	0.33	1.87	0.37	1.10
013K921140	Sediment Pulp	1.45	2.6	0.2	<0.05	1.1	18.63	112.4	0.02	<1	0.9	2.0	11.17	45.51	7.37	1.22	5.79	0.73	4.03	0.76	2.15
013K921141	Sediment Pulp	1.15	1.8	0.3	<0.05	1.6	12.47	66.6	<0.02	<1	0.3	1.5	8.33	34.33	5.90	0.84	4.64	0.60	3.13	0.53	1.42
013K921142	Sediment Pulp	2.00	5.3	0.3	<0.05	5.8	16.92	83.4	<0.02	<1	0.9	5.8	10.29	42.39	6.88	1.10	5.42	0.68	3.53	0.67	1.82
013K921143	Sediment Pulp	1.25	3.6	0.2	<0.05	2.2	18.95	84.1	<0.02	6	0.6	4.0	11.70	46.76	7.52	1.10	5.54	0.72	3.84	0.71	2.04
013K921144	Sediment Pulp	0.82	1.4	0.2	<0.05	1.3	17.49	69.1	<0.02	1	0.5	1.4	10.81	44.81	7.41	1.14	5.61	0.70	3.67	0.68	1.89
013K921145	Sediment Pulp	0.72	2.6	0.2	<0.05	0.8	8.66	55.0	<0.02	<1	0.4	1.8	6.42	24.93	3.78	0.46	2.52	0.36	1.92	0.38	0.97
013K921146	Sediment Pulp	1.05	1.9	0.2	<0.05	1.0	9.47	58.8	<0.02	<1	0.3	1.7	6.49	26.94	4.27	0.73	3.37	0.40	2.07	0.39	1.10
013K921147	Sediment Pulp	0.74	2.7	0.3	<0.05	2.2	5.08	22.0	<0.02	<1	0.3	1.8	2.73	11.28	1.89	0.37	1.56	0.19	1.10	0.21	0.56
013K921148	Sediment Pulp	1.50	3.8	0.3	<0.05	1.6	19.75	85.1	0.03	<1	0.9	3.8	10.90	46.64	8.28	1.44	6.49	0.85	4.17	0.79	2.14
013K921149	Sediment Pulp	1.35	3.9	0.3	<0.05	1.4	18.72	75.5	0.02	4	0.9	4.7	9.68	39.75	6.76	1.22	5.12	0.70	3.94	0.73	2.02
013K921150	Sediment Pulp	1.33	3.7	0.3	<0.05	1.4	18.59	78.4	0.02	4	0.7	4.7	10.17	42.44	6.89	1.27	5.33	0.76	4.08	0.75	2.03
013K921151	Sediment Pulp	0.92	5.6	0.3	<0.05	1.8	36.55	97.2	0.04	2	1.7	6.6	12.99	55.21	9.79	1.80	8.27	1.22	6.95	1.34	3.62
013K921152	Sediment Pulp	2.10	4.5	0.3	<0.05	2.7	24.79	91.3	0.03	2	1.0	4.6	12.32	53.24	9.26	1.48	7.38	0.97	5.33	0.98	2.52
013K921153	Sediment Pulp	1.23	2.9	0.3	<0.05	3.8	16.83	62.5	<0.02	1	1.0	5.5	10.57	45.85	7.11	0.99	4.87	0.59	3.42	0.64	1.75
013K921154	Sediment Pulp	2.33	4.9	0.3	<0.05	2.4	35.15	162.5	0.03	<1	2.1	4.8	17.95	79.02	13.12	1.92	9.87	1.35	7.16	1.32	3.70
013K921155	Sediment Pulp	3.06	2.3	0.3	<0.05	2.0	39.89	184.4	0.05	<1	2.4	2.0	21.84	95.96	16.01	2.26	11.76	1.71	9.32	1.69	4.45



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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921126	Sediment Pulp		0.08	0.61	0.09	<10	2
013K921127	Sediment Pulp		0.40	2.63	0.37	<10	2
013K921128	Sediment Pulp		0.24	1.46	0.21	<10	3
013K921129	Sediment Pulp		0.35	2.37	0.30	<10	<2
013K921130	Sediment Pulp		0.32	2.31	0.29	<10	<2
013K921131	Sediment Pulp		0.30	1.76	0.26	<10	<2
013K921132	Sediment Pulp		0.27	1.75	0.21	<10	<2
013K921133	Sediment Pulp		0.21	1.21	0.18	<10	<2
013K921134	Sediment Pulp		0.12	0.74	0.08	<10	<2
013K921135	Sediment Pulp		0.17	1.09	0.13	<10	<2
013K921136	Sediment Pulp		0.36	2.22	0.26	<10	<2
013K921137	Sediment Pulp		0.35	2.20	0.28	<10	<2
013K921138	Sediment Pulp		0.20	1.21	0.15	<10	3
013K921139	Sediment Pulp		0.15	0.96	0.13	<10	<2
013K921140	Sediment Pulp		0.30	1.84	0.22	<10	3
013K921141	Sediment Pulp		0.19	1.09	0.12	<10	<2
013K921142	Sediment Pulp		0.24	1.59	0.20	<10	<2
013K921143	Sediment Pulp		0.29	1.88	0.22	<10	<2
013K921144	Sediment Pulp		0.26	1.67	0.21	<10	<2
013K921145	Sediment Pulp		0.13	0.88	0.11	<10	<2
013K921146	Sediment Pulp		0.14	0.90	0.11	<10	<2
013K921147	Sediment Pulp		0.08	0.55	0.07	<10	<2
013K921148	Sediment Pulp		0.29	1.91	0.22	<10	<2
013K921149	Sediment Pulp		0.27	1.85	0.22	<10	<2
013K921150	Sediment Pulp		0.30	1.87	0.23	<10	<2
013K921151	Sediment Pulp		0.53	3.58	0.43	<10	3
013K921152	Sediment Pulp		0.34	2.22	0.28	<10	<2
013K921153	Sediment Pulp		0.22	1.58	0.19	<10	<2
013K921154	Sediment Pulp		0.50	3.34	0.40	<10	<2
013K921155	Sediment Pulp		0.68	4.09	0.43	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921156	Sediment Pulp	9.57	36.80	10.26	140.2	675	22.8	41.2	3542	8.53	4.8	5.0	0.5	2.7	23.1	0.83	0.12	<0.02	44	0.42	0.286
013K921157	Sediment Pulp	2.10	19.36	5.30	33.2	170	17.4	2.4	52	0.26	0.3	2.8	0.3	0.3	20.0	0.27	0.07	<0.02	8	0.30	0.042
013K921158	Sediment Pulp	8.18	34.34	11.63	74.6	614	12.8	10.9	379	2.05	4.3	8.9	1.0	1.2	24.3	0.42	0.12	0.03	41	0.47	0.208
013K921159	Sediment Pulp	1.07	33.13	24.23	125.9	2679	46.1	28.4	1248	3.17	22.5	3.8	2.4	8.4	23.9	0.52	0.51	3.06	50	0.62	0.091
013K921160	Sediment Pulp	21.36	53.72	49.30	201.2	1096	14.8	43.5	4050	5.60	8.6	8.6	1.1	5.4	32.4	1.62	0.22	0.08	41	0.46	0.211
013K921161	Sediment Pulp	5.36	28.20	4.22	77.8	210	13.8	12.4	236	2.03	0.8	6.1	<0.2	2.7	21.6	0.17	0.06	<0.02	33	0.37	0.133
013K921162	Sediment Pulp	1.40	29.79	3.57	53.3	429	10.7	2.8	53	0.55	0.7	7.1	0.4	0.3	52.2	0.22	0.11	<0.02	14	0.51	0.145
013K921163	Sediment Pulp	1.19	27.45	3.13	39.8	394	9.9	2.6	41	0.38	0.5	6.3	0.4	0.1	42.2	0.21	0.10	<0.02	12	0.45	0.124
013K921164	Sediment Pulp	1.28	25.32	3.34	43.8	211	6.3	3.4	49	0.36	0.6	0.9	0.4	0.1	15.7	0.13	0.04	<0.02	11	0.27	0.038
013K921165	Sediment Pulp	4.84	28.36	4.24	78.1	212	13.6	12.3	236	2.03	0.8	6.4	<0.2	2.1	20.9	0.15	0.05	<0.02	33	0.37	0.127
013K921166	Sediment Pulp	13.72	152.99	6.56	250.1	364	19.2	23.1	338	4.32	6.2	22.7	0.9	5.1	21.6	0.58	0.29	0.02	47	0.37	0.118
013K921167	Sediment Pulp	6.49	51.21	4.23	88.5	630	8.2	7.2	287	2.06	1.5	6.4	0.5	1.6	21.0	0.33	0.17	<0.02	28	0.43	0.165
013K921168	Sediment Pulp	8.51	38.79	75.55	285.4	540	11.4	7.2	426	1.71	32.3	7.6	3.5	1.0	58.6	1.12	0.56	0.82	20	5.93	0.062
013K921169	Sediment Pulp	14.49	39.76	19.89	344.9	1171	16.6	41.5	3488	8.16	4.5	7.8	0.3	5.5	18.8	0.85	0.15	0.09	35	0.30	0.206
013K921170	Sediment Pulp	2.57	14.49	2.55	37.5	256	7.3	1.3	63	0.30	0.2	4.2	<0.2	0.3	17.3	0.17	0.09	<0.02	14	0.21	0.034
013K921171	Sediment Pulp	2.02	6.32	2.03	26.3	126	4.5	0.8	28	0.24	0.2	3.5	<0.2	0.3	12.6	0.10	0.05	<0.02	6	0.15	0.024
013K921172	Sediment Pulp	1.75	10.45	1.76	33.6	132	5.3	1.0	21	0.30	0.4	1.8	<0.2	<0.1	14.9	0.11	0.07	<0.02	12	0.17	0.031
013K921173	Sediment Pulp	2.23	36.70	1.54	64.6	324	14.6	2.1	38	0.31	0.3	2.6	<0.2	<0.1	24.6	0.19	0.12	<0.02	19	0.39	0.045
013K921174	Sediment Pulp	1.14	14.13	5.64	51.2	171	8.1	0.9	29	0.21	0.2	3.2	<0.2	0.2	12.6	0.17	0.06	0.04	5	0.18	0.041
013K921175	Sediment Pulp	3.01	18.43	2.76	54.4	260	7.0	4.9	151	0.45	0.5	2.7	<0.2	<0.1	24.2	0.16	0.07	<0.02	10	0.47	0.064
013K921176	Sediment Pulp	39.78	40.70	4.85	147.9	530	36.8	89.4	4834	10.65	5.1	8.7	<0.2	5.4	18.5	0.44	0.09	0.05	53	0.23	0.206
013K921177	Sediment Pulp	3.79	25.36	7.17	69.5	240	24.7	5.4	46	0.98	0.9	5.1	<0.2	0.3	26.3	0.27	0.18	<0.02	22	0.33	0.042
013K921178	Sediment Pulp	2.05	21.78	2.49	59.0	379	17.1	3.5	38	0.62	<0.1	4.6	<0.2	0.3	21.4	0.16	0.15	<0.02	16	0.34	0.044
013K921179	Sediment Pulp	6.61	68.84	5.44	99.3	886	11.1	11.8	330	2.16	2.8	8.1	0.5	2.1	30.3	0.32	0.22	0.04	53	0.57	0.261
013K921180	Sediment Pulp	15.14	79.34	4.29	140.9	369	18.0	17.6	323	3.00	1.8	11.7	<0.2	2.3	22.1	0.34	0.26	0.04	48	0.34	0.112
013K921181	Sediment Pulp	9.37	32.12	7.10	156.9	233	18.5	43.4	846	6.73	3.4	7.2	<0.2	6.9	23.7	0.28	0.08	0.04	53	0.30	0.153
013K921182	Sediment Pulp	9.66	32.67	7.32	161.9	245	18.9	44.5	864	6.89	3.6	7.3	0.3	7.3	24.4	0.27	0.08	0.04	55	0.31	0.157
013K921183	Sediment Pulp	9.45	29.73	7.14	146.5	247	19.0	50.0	872	6.77	3.5	6.7	0.3	6.7	23.7	0.24	0.08	0.04	54	0.30	0.156
013K921184	Sediment Pulp	8.53	23.60	3.17	63.3	277	8.6	4.9	123	1.16	0.8	5.7	<0.2	0.4	24.9	0.19	0.14	0.03	30	0.37	0.108
013K921185	Sediment Pulp	8.04	48.39	15.30	108.0	722	11.2	12.8	329	2.46	7.8	15.9	0.4	2.6	26.9	0.49	0.23	0.08	73	0.50	0.169



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K921156	Sediment Pulp	82.7	30.7	0.10	183.3	0.049	<20	3.35	0.014	0.05	0.2	3.8	0.43	0.25	388	2.9	<0.02	5.7	0.67	0.2	0.03
013K921157	Sediment Pulp	32.5	12.9	0.06	154.1	0.024	<20	1.12	0.016	0.02	<0.1	1.0	0.03	0.25	180	1.3	<0.02	2.1	0.35	<0.1	0.02
013K921158	Sediment Pulp	83.0	27.9	0.15	85.9	0.048	<20	2.74	0.014	0.05	0.3	2.4	0.12	0.19	230	1.5	<0.02	4.6	0.60	0.1	0.05
013K921159	Sediment Pulp	42.2	51.2	0.81	150.7	0.108	<20	1.69	0.032	0.27	0.2	5.7	0.28	0.16	299	0.8	0.04	5.8	1.31	0.1	0.13
013K921160	Sediment Pulp	108.2	23.0	0.14	563.7	0.053	<20	2.89	0.017	0.06	1.1	4.1	0.88	0.19	253	2.1	0.03	3.8	0.73	0.2	0.04
013K921161	Sediment Pulp	68.5	21.0	0.35	114.3	0.078	<20	1.48	0.021	0.12	0.7	2.2	0.17	0.14	151	0.9	<0.02	3.3	1.04	0.2	0.07
013K921162	Sediment Pulp	44.1	11.8	0.04	146.3	0.023	<20	1.44	0.009	0.01	0.2	0.8	0.08	0.30	207	1.7	<0.02	2.2	0.22	<0.1	0.03
013K921163	Sediment Pulp	36.7	10.6	0.03	121.6	0.020	<20	1.30	0.008	0.01	0.1	0.6	0.07	0.27	180	1.4	<0.02	1.9	0.21	<0.1	<0.02
013K921164	Sediment Pulp	12.1	18.3	0.10	171.1	0.033	<20	0.55	0.017	0.04	<0.1	0.5	0.11	0.19	206	0.6	<0.02	1.6	0.42	<0.1	<0.02
013K921165	Sediment Pulp	67.7	20.9	0.35	112.6	0.075	<20	1.49	0.021	0.12	0.6	2.0	0.17	0.14	146	0.9	<0.02	3.3	1.01	0.1	0.08
013K921166	Sediment Pulp	142.4	27.7	0.17	103.8	0.042	<20	2.28	0.030	0.08	0.7	4.9	0.53	0.30	157	1.6	0.03	2.9	0.58	0.2	0.05
013K921167	Sediment Pulp	102.8	15.5	0.07	104.8	0.034	<20	1.79	0.009	0.04	0.6	2.2	0.14	0.25	233	1.9	0.03	2.6	0.65	0.2	0.03
013K921168	Sediment Pulp	9.0	11.4	0.57	79.0	0.035	<20	0.42	0.025	0.05	0.5	2.0	0.21	1.50	86	1.2	0.02	1.9	0.44	<0.1	0.03
013K921169	Sediment Pulp	158.7	18.4	0.18	211.2	0.048	<20	2.27	0.015	0.10	0.7	4.9	0.70	0.21	199	2.1	0.22	1.1	1.09	<0.1	0.03
013K921170	Sediment Pulp	58.6	5.2	0.03	87.0	0.015	<20	0.51	0.014	0.02	0.1	0.7	<0.02	0.21	123	0.8	<0.02	0.5	0.29	<0.1	<0.02
013K921171	Sediment Pulp	38.0	3.9	0.03	45.9	0.014	<20	0.34	0.010	0.02	0.1	0.6	0.03	0.16	74	0.5	<0.02	0.6	0.26	<0.1	<0.02
013K921172	Sediment Pulp	21.4	4.8	0.03	55.9	0.016	<20	0.40	0.009	0.02	<0.1	0.5	0.04	0.16	97	0.7	<0.02	1.1	0.29	<0.1	<0.02
013K921173	Sediment Pulp	36.7	7.8	0.05	122.7	0.014	<20	0.76	0.009	0.02	0.1	0.6	0.11	0.30	220	1.0	<0.02	1.0	0.13	<0.1	<0.02
013K921174	Sediment Pulp	31.7	5.6	0.05	94.0	0.015	<20	0.55	0.013	0.04	0.1	0.6	0.03	0.21	141	0.9	<0.02	1.1	0.53	<0.1	<0.02
013K921175	Sediment Pulp	23.6	11.7	0.08	150.6	0.016	<20	0.60	0.012	0.05	0.4	0.3	0.13	0.55	195	0.7	<0.02	1.0	0.45	<0.1	<0.02
013K921176	Sediment Pulp	109.6	24.4	0.16	323.7	0.047	<20	2.48	0.014	0.10	0.4	4.6	0.46	0.22	170	2.2	0.03	1.7	1.01	<0.1	0.02
013K921177	Sediment Pulp	87.4	11.5	0.03	100.8	0.011	<20	0.99	0.010	0.02	<0.1	1.1	0.08	0.39	218	1.5	<0.02	0.3	0.20	<0.1	<0.02
013K921178	Sediment Pulp	64.0	8.3	0.04	90.2	0.015	<20	0.99	0.007	0.02	<0.1	1.0	0.07	0.27	151	0.8	<0.02	0.8	0.25	<0.1	<0.02
013K921179	Sediment Pulp	105.0	32.2	0.17	176.1	0.056	<20	2.00	0.014	0.08	1.0	2.9	0.44	0.16	271	1.7	0.04	2.2	1.08	<0.1	0.06
013K921180	Sediment Pulp	124.3	36.2	0.17	127.3	0.035	<20	2.25	0.018	0.08	0.5	3.6	0.51	0.25	125	1.9	0.03	0.9	0.63	<0.1	0.04
013K921181	Sediment Pulp	76.3	27.8	0.29	118.8	0.081	<20	1.82	0.013	0.15	0.7	4.3	0.48	0.14	134	1.2	0.03	2.3	2.04	<0.1	0.08
013K921182	Sediment Pulp	78.9	28.3	0.29	122.4	0.084	<20	1.89	0.014	0.15	0.7	4.4	0.50	0.14	150	1.2	0.02	2.3	2.10	<0.1	0.08
013K921183	Sediment Pulp	76.1	27.4	0.29	117.7	0.085	<20	1.83	0.014	0.15	0.7	4.2	0.37	0.15	194	1.1	0.02	2.3	2.07	<0.1	0.07
013K921184	Sediment Pulp	65.7	10.7	0.11	100.3	0.034	<20	1.27	0.015	0.05	0.7	1.1	0.13	0.19	117	1.3	<0.02	1.6	0.68	<0.1	0.03
013K921185	Sediment Pulp	167.7	30.5	0.13	199.4	0.039	<20	2.08	0.026	0.05	0.7	2.8	0.23	0.35	276	2.6	<0.02	1.3	0.72	<0.1	0.04



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921156	Sediment Pulp	1.66	3.5	0.3	<0.05	1.4	38.66	178.9	0.04	<1	2.0	2.7	18.80	80.84	13.67	2.07	10.57	1.50	8.37	1.51	3.90
013K921157	Sediment Pulp	1.13	1.9	0.2	<0.05	1.7	12.81	68.2	<0.02	<1	0.6	1.6	8.40	34.77	6.13	0.84	4.29	0.56	3.12	0.50	1.33
013K921158	Sediment Pulp	2.34	3.6	0.3	<0.05	2.1	32.79	165.7	0.03	<1	1.7	3.6	19.66	90.17	14.64	2.01	11.16	1.40	7.37	1.34	3.43
013K921159	Sediment Pulp	2.12	22.6	1.0	<0.05	6.1	17.64	73.2	0.04	<1	0.6	21.2	9.55	39.68	6.56	0.94	4.82	0.60	3.46	0.62	1.73
013K921160	Sediment Pulp	1.60	6.2	0.3	<0.05	1.6	44.95	217.3	0.03	2	2.2	3.7	23.54	102.52	15.52	2.37	11.87	1.49	8.28	1.60	4.73
013K921161	Sediment Pulp	2.06	9.3	0.3	<0.05	2.5	28.00	123.3	<0.02	<1	0.6	6.3	15.49	68.88	10.82	1.51	7.66	0.96	5.23	1.01	2.79
013K921162	Sediment Pulp	1.17	1.2	0.2	<0.05	1.0	17.36	76.4	<0.02	<1	1.2	0.9	9.96	41.48	6.67	1.06	4.63	0.66	3.42	0.63	1.83
013K921163	Sediment Pulp	0.92	1.1	0.2	<0.05	0.7	15.35	67.8	<0.02	<1	1.1	0.8	8.61	36.91	5.84	0.91	4.46	0.57	3.17	0.58	1.60
013K921164	Sediment Pulp	0.74	2.9	0.2	<0.05	0.9	4.75	23.5	<0.02	<1	0.2	2.1	2.89	11.69	1.96	0.31	1.34	0.20	1.05	0.20	0.53
013K921165	Sediment Pulp	1.95	9.0	0.3	<0.05	2.4	27.07	121.4	<0.02	<1	0.5	6.1	15.70	66.08	10.31	1.49	7.31	0.95	5.04	1.02	2.79
013K921166	Sediment Pulp	1.85	5.8	0.3	<0.05	2.5	69.65	214.7	0.02	4	2.1	4.0	27.01	121.00	19.21	2.82	13.67	1.85	10.73	2.22	6.85
013K921167	Sediment Pulp	2.04	2.9	0.2	<0.05	1.6	34.28	174.0	<0.02	1	1.2	1.9	21.06	93.42	13.72	2.04	9.52	1.25	6.76	1.22	3.61
013K921168	Sediment Pulp	0.58	3.1	2.9	<0.05	1.1	9.42	15.0	0.43	16	0.1	4.0	2.39	10.21	2.15	0.39	1.85	0.24	1.50	0.29	0.84
013K921169	Sediment Pulp	1.41	8.0	0.3	<0.05	2.0	67.95	342.4	0.03	3	2.0	4.2	36.84	136.45	21.60	3.12	16.63	2.13	12.05	2.18	5.97
013K921170	Sediment Pulp	0.90	1.7	0.2	<0.05	0.7	19.39	104.3	<0.02	<1	0.4	0.7	11.96	43.55	7.05	1.03	5.38	0.69	3.94	0.69	1.82
013K921171	Sediment Pulp	0.55	1.2	0.1	<0.05	0.3	11.85	65.6	<0.02	<1	0.2	0.8	8.38	31.00	4.97	0.63	3.73	0.45	2.51	0.43	1.11
013K921172	Sediment Pulp	0.62	1.9	0.1	<0.05	0.4	7.69	39.0	<0.02	<1	0.2	0.8	4.67	17.28	2.78	0.41	2.08	0.25	1.50	0.27	0.75
013K921173	Sediment Pulp	0.71	1.1	0.1	<0.05	0.4	13.72	65.6	<0.02	1	0.2	0.4	8.33	30.21	4.75	0.79	3.56	0.44	2.66	0.50	1.39
013K921174	Sediment Pulp	0.85	3.3	0.2	<0.05	0.6	11.82	58.3	<0.02	<1	0.4	1.0	6.37	22.02	3.51	0.46	2.66	0.36	2.24	0.42	1.21
013K921175	Sediment Pulp	0.58	2.8	0.2	<0.05	0.3	8.65	46.6	<0.02	1	0.3	2.3	5.09	18.24	2.82	0.42	2.09	0.26	1.62	0.31	0.89
013K921176	Sediment Pulp	1.13	8.1	0.3	<0.05	1.1	44.36	239.9	0.02	2	1.1	4.4	24.55	87.49	13.73	1.96	10.44	1.36	7.93	1.49	4.29
013K921177	Sediment Pulp	0.75	1.3	0.1	<0.05	0.4	30.06	148.4	<0.02	1	0.5	0.7	17.97	64.72	9.58	1.33	7.14	0.87	5.00	0.93	2.63
013K921178	Sediment Pulp	0.90	1.4	0.1	<0.05	0.6	24.45	109.8	<0.02	<1	0.4	0.7	14.63	55.03	8.68	1.28	6.68	0.82	4.73	0.86	2.34
013K921179	Sediment Pulp	2.55	6.8	0.3	<0.05	3.0	40.88	215.9	<0.02	2	1.1	4.0	24.85	92.20	14.47	2.11	10.91	1.39	7.88	1.44	4.02
013K921180	Sediment Pulp	1.58	5.8	0.2	<0.05	2.4	56.19	232.0	<0.02	2	1.5	3.4	31.53	117.84	18.86	2.75	14.43	1.78	10.02	1.85	5.25
013K921181	Sediment Pulp	2.43	13.5	0.4	<0.05	3.9	32.76	151.0	<0.02	2	1.4	6.7	16.43	59.65	9.18	1.35	7.13	0.94	5.61	1.09	3.21
013K921182	Sediment Pulp	2.49	13.7	0.4	<0.05	4.1	33.51	156.1	<0.02	2	1.4	6.9	16.95	61.71	9.49	1.39	7.37	0.97	5.82	1.12	3.33
013K921183	Sediment Pulp	2.44	13.5	0.4	<0.05	3.7	32.01	149.3	<0.02	1	1.4	6.8	16.21	58.86	9.09	1.32	6.95	0.92	5.49	1.06	3.15
013K921184	Sediment Pulp	1.46	4.7	0.2	<0.05	1.1	29.64	123.6	<0.02	1	0.6	2.8	15.81	61.45	9.39	1.55	7.29	0.86	5.00	0.95	2.75
013K921185	Sediment Pulp	1.81	5.4	0.2	<0.05	2.3	62.69	319.2	<0.02	<1	1.7	4.4	37.80	131.72	19.67	2.45	14.58	1.85	10.76	2.02	5.82



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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921156	Sediment Pulp		0.59	3.77	0.40	<10	<2
013K921157	Sediment Pulp		0.18	1.21	0.12	<10	<2
013K921158	Sediment Pulp		0.49	3.19	0.36	<10	<2
013K921159	Sediment Pulp		0.25	1.81	0.23	<10	<2
013K921160	Sediment Pulp		0.67	4.78	0.64	<10	<2
013K921161	Sediment Pulp		0.43	3.05	0.37	<10	<2
013K921162	Sediment Pulp		0.26	1.66	0.19	<10	<2
013K921163	Sediment Pulp		0.22	1.51	0.17	<10	<2
013K921164	Sediment Pulp		0.08	0.59	0.07	<10	<2
013K921165	Sediment Pulp		0.42	2.98	0.39	<10	<2
013K921166	Sediment Pulp		1.03	7.60	1.09	<10	<2
013K921167	Sediment Pulp		0.50	3.64	0.48	<10	<2
013K921168	Sediment Pulp		0.11	0.72	0.11	<10	<2
013K921169	Sediment Pulp		0.78	4.74	0.68	<10	<2
013K921170	Sediment Pulp		0.23	1.38	0.19	<10	<2
013K921171	Sediment Pulp		0.13	0.79	0.11	<10	<2
013K921172	Sediment Pulp		0.10	0.60	0.08	<10	<2
013K921173	Sediment Pulp		0.18	1.16	0.16	<10	<2
013K921174	Sediment Pulp		0.17	1.09	0.15	<10	<2
013K921175	Sediment Pulp		0.12	0.80	0.11	<10	<2
013K921176	Sediment Pulp		0.58	3.72	0.55	<10	<2
013K921177	Sediment Pulp		0.34	2.18	0.32	<10	<2
013K921178	Sediment Pulp		0.31	1.90	0.27	<10	<2
013K921179	Sediment Pulp		0.55	3.43	0.49	<10	<2
013K921180	Sediment Pulp		0.71	4.62	0.71	<10	<2
013K921181	Sediment Pulp		0.45	3.00	0.46	<10	<2
013K921182	Sediment Pulp		0.46	3.05	0.48	<10	<2
013K921183	Sediment Pulp		0.44	2.86	0.44	<10	<2
013K921184	Sediment Pulp		0.38	2.41	0.36	<10	<2
013K921185	Sediment Pulp		0.80	5.05	0.75	<10	<2



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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921186	Sediment Pulp	7.60	48.96	18.37	103.5	1190	9.4	7.0	280	2.29	3.1	3.2	0.8	0.7	44.7	0.54	0.24	0.30	28	0.86	0.186
013K921187	Sediment Pulp	3.18	24.77	12.54	97.6	239	15.1	15.4	790	1.74	5.1	3.6	<0.2	0.6	79.6	0.42	0.16	0.05	28	0.61	0.130
013K921188	Sediment Pulp	2.14	48.21	12.55	94.5	413	15.3	21.2	1307	8.65	20.2	4.8	<0.2	3.8	32.2	0.43	0.10	0.06	58	0.49	0.275
013K921189	Sediment Pulp	5.28	93.89	3.16	88.4	281	18.1	5.3	72	0.32	3.3	10.1	0.7	0.5	14.9	1.00	0.37	0.02	8	0.64	0.034
013K921190	Sediment Pulp	3.65	81.38	5.05	194.8	524	37.2	28.6	658	3.09	9.9	3.0	0.9	0.5	18.2	1.41	0.30	0.04	44	0.93	0.157
013K921191	Sediment Pulp	3.96	62.77	7.43	142.6	335	48.8	18.4	346	5.46	21.3	4.8	1.2	1.6	27.0	0.82	0.80	0.07	40	0.82	0.092
013K921192	Sediment Pulp	4.65	38.33	5.15	127.8	237	28.4	33.8	564	3.76	4.4	7.7	<0.2	0.6	98.6	0.85	0.38	0.04	39	0.97	0.104
013K921193	Sediment Pulp	0.74	36.65	2.50	78.9	194	17.5	3.9	56	0.42	<0.1	0.9	<0.2	<0.1	13.9	0.47	0.29	<0.02	15	0.54	0.048
013K921194	Sediment Pulp	0.87	33.44	23.68	134.0	2654	47.3	29.1	1306	3.26	25.6	3.4	2.6	6.6	26.8	0.52	0.53	2.83	50	0.65	0.094
013K921195	Sediment Pulp	2.56	85.20	5.91	159.3	712	27.7	9.3	327	3.12	1.6	2.5	<0.2	0.4	37.0	1.26	0.19	0.05	44	1.11	0.255
013K921196	Sediment Pulp	11.67	74.77	3.95	149.5	312	25.6	12.0	536	1.30	1.5	8.6	1.2	0.2	42.3	0.68	0.20	0.03	19	1.38	0.117
013K921198	Sediment Pulp	0.77	25.92	5.47	103.6	88	26.3	14.3	293	1.79	1.7	1.9	0.3	1.1	30.8	0.36	0.12	0.04	29	0.65	0.048
013K921199	Sediment Pulp	0.78	44.76	10.59	151.6	317	49.8	23.0	443	1.98	1.9	2.8	1.3	0.4	50.9	0.57	0.24	0.08	21	1.15	0.106
013K921200	Sediment Pulp	1.26	69.71	5.76	117.7	803	22.8	7.0	185	1.54	1.3	0.9	1.9	0.1	21.9	1.02	0.24	0.04	32	0.85	0.126
013K921201	Sediment Pulp	2.77	84.73	4.66	166.5	313	41.2	12.4	341	5.26	12.1	2.7	0.9	1.9	26.1	1.23	0.27	0.04	53	0.79	0.083
013K921202	Sediment Pulp	4.37	111.44	5.28	257.6	548	40.2	11.0	434	7.23	16.3	3.4	1.5	1.5	32.6	1.84	0.34	0.04	48	1.04	0.084
013K921203	Sediment Pulp	2.72	83.97	4.71	166.1	317	40.4	12.3	338	5.20	12.1	2.6	1.1	1.9	25.8	1.22	0.27	0.04	53	0.79	0.082
013K921204	Sediment Pulp	1.43	53.51	4.89	158.6	941	23.4	13.9	569	2.16	2.5	1.9	0.6	0.2	26.3	1.28	0.32	0.04	33	0.90	0.174
013K921205	Sediment Pulp	8.61	76.03	8.39	198.6	552	27.9	19.5	788	4.31	14.6	26.2	1.6	1.1	79.4	0.98	1.51	0.12	26	1.08	0.222
013K921206	Sediment Pulp	8.82	39.72	8.36	154.3	211	40.1	24.1	1716	2.71	20.2	13.0	4.0	0.9	130.0	1.03	0.35	0.10	28	0.89	0.125
013K921207	Sediment Pulp	9.27	39.60	82.07	293.9	618	12.2	7.7	416	1.76	31.5	8.5	5.1	1.4	59.7	1.23	0.53	0.95	20	5.98	0.069
013K921208	Sediment Pulp	3.21	32.52	8.95	104.0	111	31.1	15.4	858	1.98	7.2	4.8	0.5	1.3	37.0	0.47	0.12	0.05	32	0.43	0.092
013K921209	Sediment Pulp	1.76	68.25	9.65	63.7	380	114.4	22.4	665	2.73	1.2	2.1	1.9	0.6	162.4	0.27	0.07	0.03	61	1.04	0.155
013K921210	Sediment Pulp	3.00	43.39	3.20	47.6	167	10.1	1.8	53	0.24	0.5	2.3	0.9	0.2	21.7	0.27	0.13	0.04	11	0.44	0.044
013K921211	Sediment Pulp	0.40	23.41	4.30	42.4	98	12.7	1.2	26	0.30	0.7	1.0	0.5	0.2	18.5	0.20	0.05	0.05	6	0.19	0.044
013K921212	Sediment Pulp	2.03	38.66	10.70	68.6	1282	10.9	3.8	141	1.08	2.2	7.1	0.4	1.0	30.3	0.35	0.11	0.15	24	0.46	0.252
013K921213	Sediment Pulp	53.50	67.61	9.54	171.8	812	14.4	47.6	1569	9.19	4.2	35.8	<0.2	8.7	21.8	0.47	0.15	0.17	53	0.33	0.251
013K921214	Sediment Pulp	4.61	18.03	7.18	44.1	189	6.6	1.1	32	0.29	0.7	7.9	0.5	1.0	19.2	0.20	0.07	0.10	9	0.20	0.039
013K921215	Sediment Pulp	8.24	11.30	8.46	81.2	137	10.0	13.0	385	2.60	1.4	5.1	<0.2	3.8	19.6	0.20	0.07	0.09	25	0.29	0.064
013K921216	Sediment Pulp	5.22	13.47	5.96	61.3	265	6.0	1.1	23	0.15	<0.1	3.1	0.6	0.3	16.9	0.24	0.12	0.03	7	0.19	0.032



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Project: None Given

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K921186	Sediment Pulp	62.3	23.1	0.12	217.4	0.036	<20	2.39	0.022	0.05	0.2	2.3	0.13	0.23	251	1.8	<0.02	2.3	0.59	<0.1	0.03
013K921187	Sediment Pulp	56.3	30.7	0.29	127.5	0.041	<20	2.34	0.018	0.06	0.1	2.0	0.19	0.19	211	1.7	<0.02	2.9	1.07	<0.1	0.03
013K921188	Sediment Pulp	92.6	37.2	0.29	89.4	0.084	<20	3.58	0.023	0.11	0.2	4.5	0.15	0.14	246	2.3	<0.02	5.5	0.97	<0.1	0.06
013K921189	Sediment Pulp	53.7	19.8	0.07	117.8	0.008	<20	0.62	0.015	0.02	<0.1	4.4	0.09	0.56	251	3.2	<0.02	0.6	0.25	<0.1	0.04
013K921190	Sediment Pulp	48.9	46.8	0.25	97.8	0.023	<20	2.61	0.016	0.03	0.1	4.7	0.22	0.40	334	4.9	<0.02	2.6	0.50	<0.1	0.03
013K921191	Sediment Pulp	15.6	39.6	0.28	97.5	0.011	<20	1.42	0.017	0.06	<0.1	8.5	0.12	0.90	156	3.2	0.05	2.7	1.03	<0.1	0.09
013K921192	Sediment Pulp	36.8	46.8	0.36	214.7	0.033	<20	1.99	0.025	0.06	<0.1	4.4	0.13	0.43	307	8.5	<0.02	2.9	0.89	<0.1	0.03
013K921193	Sediment Pulp	36.4	28.2	0.10	61.4	0.011	<20	1.10	0.010	0.03	<0.1	0.9	0.08	0.36	166	1.3	<0.02	1.1	0.26	<0.1	<0.02
013K921194	Sediment Pulp	40.1	52.7	0.84	153.4	0.104	<20	1.74	0.033	0.28	0.2	6.1	0.30	0.16	249	0.8	0.05	5.7	1.39	<0.1	0.13
013K921195	Sediment Pulp	51.9	57.5	0.28	136.4	0.026	<20	3.24	0.020	0.06	0.1	3.9	0.11	0.26	333	4.8	0.02	3.0	0.64	<0.1	0.03
013K921196	Sediment Pulp	29.2	33.1	0.15	149.4	0.015	22	2.04	0.028	0.06	0.3	2.7	0.13	0.61	181	2.8	<0.02	1.6	0.26	<0.1	<0.02
013K921198	Sediment Pulp	26.3	33.2	0.40	98.4	0.047	<20	1.35	0.024	0.06	<0.1	4.3	0.08	0.40	131	0.9	<0.02	2.6	0.75	<0.1	0.05
013K921199	Sediment Pulp	26.0	29.1	0.24	103.6	0.025	<20	2.08	0.039	0.06	<0.1	2.5	0.10	0.92	277	1.3	<0.02	2.6	0.93	<0.1	0.02
013K921200	Sediment Pulp	36.8	36.9	0.22	87.7	0.021	<20	2.60	0.035	0.06	<0.1	2.1	0.10	0.31	384	2.7	<0.02	2.7	0.65	<0.1	<0.02
013K921201	Sediment Pulp	29.8	43.2	0.46	71.6	0.048	<20	1.90	0.043	0.08	<0.1	7.3	0.18	0.27	202	1.5	<0.02	3.3	0.54	<0.1	0.05
013K921202	Sediment Pulp	33.4	40.7	0.20	81.1	0.019	<20	2.37	0.018	0.04	0.1	10.0	0.18	0.45	260	2.5	<0.02	2.1	0.90	<0.1	0.08
013K921203	Sediment Pulp	29.6	42.2	0.46	72.1	0.046	<20	1.90	0.043	0.08	<0.1	7.2	0.18	0.27	198	1.6	<0.02	3.2	0.52	<0.1	0.05
013K921204	Sediment Pulp	39.5	40.6	0.19	94.5	0.021	<20	2.75	0.022	0.04	<0.1	2.4	0.16	0.40	347	3.2	<0.02	2.6	0.44	<0.1	<0.02
013K921205	Sediment Pulp	32.3	35.1	0.16	146.7	0.015	<20	2.20	0.024	0.04	0.2	5.6	0.15	0.62	278	3.3	0.03	1.8	0.43	<0.1	0.06
013K921206	Sediment Pulp	39.0	47.0	0.35	320.8	0.034	<20	1.96	0.027	0.06	0.2	2.7	0.28	0.26	188	4.4	<0.02	2.6	0.77	<0.1	0.02
013K921207	Sediment Pulp	10.4	12.6	0.56	91.6	0.042	<20	0.42	0.025	0.05	0.8	2.4	0.22	1.50	115	1.2	<0.02	1.9	0.53	<0.1	0.03
013K921208	Sediment Pulp	43.0	69.7	0.55	116.5	0.062	<20	1.87	0.012	0.07	0.2	2.9	0.16	0.15	148	1.6	<0.02	3.2	1.33	<0.1	0.10
013K921209	Sediment Pulp	30.0	341.7	1.59	442.5	0.066	<20	2.47	0.009	0.15	0.2	2.1	0.18	0.23	241	1.8	<0.02	5.5	2.39	<0.1	0.09
013K921210	Sediment Pulp	30.6	11.5	0.05	57.8	0.017	<20	1.39	0.009	0.02	<0.1	0.7	0.03	0.33	181	1.9	<0.02	1.1	0.21	<0.1	0.02
013K921211	Sediment Pulp	14.6	8.7	0.04	77.5	0.014	<20	0.55	0.009	0.02	<0.1	0.9	<0.02	0.32	207	1.6	<0.02	0.9	0.20	<0.1	0.02
013K921212	Sediment Pulp	121.7	26.2	0.11	171.8	0.049	<20	2.29	0.015	0.04	0.5	2.3	0.07	0.27	314	2.5	0.03	4.9	0.87	0.2	0.03
013K921213	Sediment Pulp	187.5	29.9	0.09	144.0	0.050	<20	2.99	0.008	0.04	0.5	5.3	0.57	0.19	249	3.4	0.04	4.0	0.57	0.2	0.07
013K921214	Sediment Pulp	52.9	5.8	0.04	148.3	0.018	<20	0.48	0.010	0.03	0.2	1.3	0.04	0.23	152	1.1	0.03	1.2	0.50	0.1	0.05
013K921215	Sediment Pulp	72.0	19.7	0.20	80.1	0.063	<20	1.49	0.021	0.06	0.6	2.6	0.11	0.14	115	1.1	<0.02	2.8	0.82	0.1	0.05
013K921216	Sediment Pulp	31.1	4.9	0.03	124.0	0.021	<20	0.37	0.010	0.02	<0.1	0.7	0.03	0.22	120	2.3	<0.02	1.2	0.45	<0.1	<0.02



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921186	Sediment Pulp	1.77	4.9	0.2	<0.05	1.5	33.09	108.8	0.02	2	1.2	3.3	16.18	62.45	10.31	1.59	7.91	1.00	5.82	1.08	3.06
013K921187	Sediment Pulp	1.37	5.3	0.3	<0.05	1.5	26.31	126.0	<0.02	<1	1.3	7.4	15.04	58.44	9.47	1.43	7.21	0.89	4.97	0.89	2.41
013K921188	Sediment Pulp	2.51	8.5	0.4	<0.05	3.7	46.95	193.5	0.04	<1	2.6	6.6	23.19	84.71	14.24	2.05	11.07	1.56	9.23	1.60	4.39
013K921189	Sediment Pulp	0.27	1.6	0.1	<0.05	2.1	59.34	35.0	<0.02	3	0.5	1.6	12.00	48.29	9.10	2.23	9.57	1.28	7.92	1.58	4.59
013K921190	Sediment Pulp	0.92	3.0	0.2	<0.05	1.3	30.81	66.6	0.02	4	0.8	5.0	11.68	45.39	7.85	1.68	6.77	0.88	5.19	0.98	2.74
013K921191	Sediment Pulp	0.51	7.3	0.2	<0.05	3.8	15.62	21.9	0.02	7	0.6	9.0	3.88	15.97	3.27	0.92	3.26	0.42	2.53	0.47	1.35
013K921192	Sediment Pulp	1.10	4.5	0.3	<0.05	1.5	24.81	49.7	<0.02	5	0.7	6.8	9.12	35.75	6.19	1.18	5.29	0.69	4.17	0.79	2.23
013K921193	Sediment Pulp	0.54	2.4	0.1	<0.05	0.8	26.13	38.3	<0.02	1	0.5	1.9	8.86	35.20	6.20	1.17	5.46	0.71	4.32	0.83	2.35
013K921194	Sediment Pulp	2.02	25.1	1.1	<0.05	6.5	19.01	74.8	0.04	<1	0.7	20.9	9.54	36.37	6.26	0.90	4.61	0.57	3.36	0.62	1.78
013K921195	Sediment Pulp	1.17	4.5	0.2	<0.05	1.6	37.22	77.7	0.02	4	1.0	5.2	12.93	50.97	8.91	1.82	7.91	1.05	6.36	1.20	3.37
013K921196	Sediment Pulp	0.60	2.6	0.2	<0.05	0.9	19.48	40.3	<0.02	5	0.7	2.4	6.63	25.33	4.31	0.92	3.74	0.49	3.06	0.59	1.73
013K921198	Sediment Pulp	1.10	4.5	0.3	<0.05	2.5	16.50	40.2	<0.02	<1	0.5	6.9	6.22	24.54	4.33	0.89	3.74	0.47	2.81	0.54	1.51
013K921199	Sediment Pulp	0.97	4.5	0.3	<0.05	1.2	15.88	41.9	<0.02	1	0.5	11.7	6.15	23.88	4.26	1.00	3.73	0.47	2.81	0.51	1.43
013K921200	Sediment Pulp	0.99	4.5	0.2	<0.05	0.9	23.88	52.5	0.02	3	0.7	5.4	9.43	37.48	6.62	1.38	5.66	0.74	4.43	0.81	2.23
013K921201	Sediment Pulp	0.94	4.4	0.3	<0.05	2.3	23.30	49.7	<0.02	4	0.7	9.9	7.33	29.28	5.33	1.30	4.92	0.64	3.81	0.72	2.04
013K921202	Sediment Pulp	0.68	3.5	0.2	<0.05	3.2	30.57	46.4	0.02	3	1.1	4.8	8.21	33.36	6.29	1.71	6.06	0.81	4.87	0.91	2.57
013K921203	Sediment Pulp	0.94	4.3	0.3	<0.05	2.4	23.15	49.6	<0.02	3	0.7	9.7	7.27	29.12	5.35	1.29	4.92	0.64	3.83	0.71	2.03
013K921204	Sediment Pulp	1.07	3.2	0.2	<0.05	0.9	27.53	61.7	0.02	1	0.8	3.4	10.02	39.71	7.00	1.45	6.20	0.82	4.90	0.91	2.57
013K921205	Sediment Pulp	0.68	2.6	0.3	<0.05	2.2	26.72	35.4	<0.02	6	0.7	3.6	8.22	32.64	6.14	1.45	5.53	0.80	4.29	0.88	2.71
013K921206	Sediment Pulp	1.07	4.0	0.4	<0.05	1.4	20.23	70.9	<0.02	2	0.7	6.5	9.55	35.73	5.94	1.08	5.63	0.71	4.42	0.74	2.19
013K921207	Sediment Pulp	0.74	3.3	4.1	<0.05	1.3	9.75	17.4	0.49	20	0.3	4.3	2.85	12.32	2.43	0.43	2.28	0.31	1.91	0.36	1.03
013K921208	Sediment Pulp	1.45	5.9	0.4	<0.05	3.9	19.60	95.8	<0.02	<1	1.0	9.6	11.19	42.27	6.89	1.17	5.68	0.76	3.95	0.72	2.07
013K921209	Sediment Pulp	1.22	9.4	0.4	<0.05	4.8	10.86	62.9	0.02	1	0.5	11.6	7.29	27.27	4.20	0.73	3.59	0.41	2.15	0.42	1.09
013K921210	Sediment Pulp	0.74	1.0	0.4	<0.05	0.8	14.19	53.6	<0.02	<1	0.7	0.9	8.34	29.18	5.21	0.83	4.67	0.61	3.44	0.56	1.77
013K921211	Sediment Pulp	0.71	0.8	0.6	<0.05	0.8	6.14	26.8	<0.02	1	<0.1	0.4	3.11	10.42	1.82	0.29	1.54	0.21	1.24	0.25	0.76
013K921212	Sediment Pulp	3.47	3.7	0.6	<0.05	1.9	42.76	207.9	0.04	<1	1.6	3.3	26.37	95.15	14.87	1.92	12.04	1.67	10.03	1.71	4.96
013K921213	Sediment Pulp	2.41	3.6	0.3	<0.05	1.8	77.89	386.9	0.03	4	3.9	1.4	38.42	147.27	24.24	3.03	20.23	2.65	15.30	2.87	8.92
013K921214	Sediment Pulp	1.07	2.4	0.4	<0.05	1.4	15.78	92.0	<0.02	1	0.3	0.8	10.58	37.13	5.47	0.72	4.50	0.57	3.13	0.58	1.82
013K921215	Sediment Pulp	2.07	5.4	0.5	<0.05	2.3	26.64	152.0	<0.02	<1	1.2	4.4	18.16	63.14	10.42	1.39	7.95	0.98	5.28	0.95	3.02
013K921216	Sediment Pulp	0.83	2.2	0.3	<0.05	0.8	10.08	47.1	<0.02	3	0.3	0.8	7.06	25.07	3.84	0.55	2.72	0.41	2.27	0.38	1.10



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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921186	Sediment Pulp		0.42	2.56	0.35	<10	<2
013K921187	Sediment Pulp		0.31	1.90	0.25	<10	<2
013K921188	Sediment Pulp		0.58	3.48	0.44	<10	<2
013K921189	Sediment Pulp		0.60	3.86	0.60	<10	<2
013K921190	Sediment Pulp		0.35	2.19	0.31	<10	2
013K921191	Sediment Pulp		0.17	1.11	0.16	<10	2
013K921192	Sediment Pulp		0.29	1.79	0.25	<10	3
013K921193	Sediment Pulp		0.30	1.87	0.26	<10	<2
013K921194	Sediment Pulp		0.24	1.55	0.23	<10	<2
013K921195	Sediment Pulp		0.44	2.70	0.37	<10	<2
013K921196	Sediment Pulp		0.23	1.51	0.23	<10	<2
013K921198	Sediment Pulp		0.19	1.25	0.17	<10	<2
013K921199	Sediment Pulp		0.18	1.13	0.15	<10	<2
013K921200	Sediment Pulp		0.28	1.73	0.23	<10	<2
013K921201	Sediment Pulp		0.26	1.67	0.24	<10	<2
013K921202	Sediment Pulp		0.33	2.11	0.31	<10	<2
013K921203	Sediment Pulp		0.26	1.69	0.25	<10	<2
013K921204	Sediment Pulp		0.33	2.01	0.27	<10	<2
013K921205	Sediment Pulp		0.33	2.31	0.31	<10	5
013K921206	Sediment Pulp		0.27	1.79	0.27	<10	3
013K921207	Sediment Pulp		0.15	0.89	0.12	<10	<2
013K921208	Sediment Pulp		0.27	1.71	0.23	<10	3
013K921209	Sediment Pulp		0.17	0.99	0.16	<10	<2
013K921210	Sediment Pulp		0.18	1.07	0.14	<10	3
013K921211	Sediment Pulp		0.09	0.57	0.08	<10	2
013K921212	Sediment Pulp		0.66	4.48	0.57	<10	<2
013K921213	Sediment Pulp		1.26	8.39	1.30	<10	<2
013K921214	Sediment Pulp		0.23	1.49	0.24	<10	<2
013K921215	Sediment Pulp		0.38	2.60	0.38	<10	4
013K921216	Sediment Pulp		0.12	0.82	0.10	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K921217	Sediment Pulp	1.74	9.76	5.30	25.2	160	5.1	1.2	25	0.34	0.4	1.2	<0.2	0.2	9.4	0.08	0.06	0.02	8	0.11	0.047
013K921218	Sediment Pulp	2.30	26.75	6.75	68.6	198	19.6	13.9	690	3.27	3.2	2.0	0.9	3.0	24.7	0.21	0.08	0.04	42	0.46	0.129
013K921219	Sediment Pulp	1.91	45.53	13.90	59.4	534	9.2	3.9	934	1.71	7.0	5.2	0.5	0.6	21.6	1.06	0.15	<0.02	19	0.30	0.224
013K921220	Sediment Pulp	0.70	88.11	4.71	60.6	449	15.1	4.6	204	1.09	1.2	1.8	1.3	0.3	33.4	0.51	0.08	0.02	44	0.54	0.198
013K921221	Sediment Pulp	0.62	28.72	5.51	64.7	43	23.8	8.4	206	1.71	1.3	4.6	1.2	3.6	26.6	0.32	0.05	0.03	33	0.53	0.101
013K921222	Sediment Pulp	10.78	122.27	17.03	420.0	1030	73.0	36.0	2014	8.75	15.6	6.4	1.9	3.1	40.1	4.59	0.18	0.08	29	1.13	0.140
013K921223	Sediment Pulp	6.67	147.03	16.45	491.3	1442	134.9	35.3	1758	7.04	15.2	4.8	3.0	1.3	23.3	4.20	0.42	0.05	35	0.62	0.247
013K921224	Sediment Pulp	10.07	146.94	18.67	428.5	1380	105.5	27.9	818	7.47	75.5	6.8	3.6	1.1	28.1	3.17	0.76	0.05	39	0.72	0.242
013K921225	Sediment Pulp	13.34	126.69	13.05	484.0	1526	111.9	37.9	498	6.76	43.5	4.1	2.9	1.0	25.9	4.65	0.40	0.04	24	0.91	0.134
013K921226	Sediment Pulp	10.50	162.54	10.21	299.1	1571	89.8	40.3	517	6.77	15.7	6.7	3.7	1.7	55.9	3.11	0.66	0.04	40	1.44	0.127
013K921227	Sediment Pulp	1.01	21.24	3.19	83.4	169	21.1	4.5	88	0.82	0.4	2.0	0.2	0.5	21.0	0.27	0.05	<0.02	16	0.44	0.083
013K921228	Sediment Pulp	2.50	26.03	7.09	65.3	268	18.6	7.0	202	1.98	2.0	19.9	0.4	1.5	38.6	0.24	0.10	0.03	32	0.61	0.216
013K921229	Sediment Pulp	4.09	29.46	4.98	107.8	195	17.9	20.8	1106	5.64	5.6	8.0	0.2	1.9	15.7	0.62	0.07	<0.02	34	0.23	0.211
013K921230	Sediment Pulp	1.27	19.68	3.99	37.3	92	13.1	2.8	141	0.24	0.3	6.0	0.6	0.4	25.4	0.24	0.03	<0.02	8	0.58	0.041
013K921231	Sediment Pulp	4.08	20.10	3.22	80.6	160	20.4	15.6	267	4.89	5.5	12.7	<0.2	1.4	37.6	0.36	0.08	<0.02	31	0.58	0.155
013K921232	Sediment Pulp	0.99	32.83	25.08	131.4	2654	49.0	30.5	1254	3.17	24.7	3.6	2.4	7.7	26.1	0.54	0.57	3.04	50	0.63	0.097
013K921233	Sediment Pulp	6.86	19.94	2.10	63.7	98	14.4	3.9	35	0.21	2.5	9.2	<0.2	0.3	26.5	0.17	0.10	<0.02	8	0.49	0.039
013K921234	Sediment Pulp	0.62	31.29	5.79	66.3	47	25.6	9.3	219	1.82	1.2	4.8	0.2	4.0	29.0	0.32	0.05	0.03	35	0.55	0.107
013K921235	Sediment Pulp	4.00	93.65	8.85	153.0	595	25.6	16.0	688	5.13	3.1	5.9	1.2	1.9	31.1	0.98	0.06	0.05	64	0.67	0.423
013K921236	Sediment Pulp	18.63	45.81	6.67	150.9	544	18.3	9.2	1399	2.09	7.7	30.5	0.4	1.5	35.5	0.71	0.13	0.02	40	0.63	0.364
013K921237	Sediment Pulp	6.96	40.68	3.67	116.8	259	13.6	5.9	276	1.16	2.7	12.4	<0.2	0.9	42.9	0.53	0.21	<0.02	24	0.94	0.063
013K921238	Sediment Pulp	4.25	57.84	10.55	124.0	510	20.1	15.8	1684	4.27	7.7	4.7	0.9	1.9	19.7	0.60	0.14	0.05	40	0.35	0.376
013K921239	Sediment Pulp	9.47	29.61	10.68	72.1	604	15.2	5.9	176	1.24	4.0	20.7	0.7	0.4	35.4	0.39	0.32	0.03	32	0.54	0.265
013K921240	Sediment Pulp	4.31	27.78	6.82	57.8	499	11.1	4.5	162	0.91	0.9	5.8	0.5	0.2	32.8	0.57	0.19	<0.02	23	0.62	0.220
013K921241	Sediment Pulp	6.34	21.76	3.55	122.8	390	13.0	14.4	396	1.95	19.0	60.1	0.7	1.1	35.0	0.77	0.62	0.07	82	0.82	0.180
013K921242	Sediment Pulp	6.05	21.15	3.42	116.6	397	13.9	14.2	392	1.95	19.1	59.9	0.4	1.1	34.9	0.73	0.60	0.04	82	0.81	0.174
013K922000	Sediment Pulp	10.27	44.87	90.84	335.3	633	13.6	8.2	463	1.95	36.9	9.8	4.2	1.9	65.9	1.41	0.55	0.97	23	6.75	0.066
013K922001	Sediment Pulp	4.64	25.06	8.61	94.4	209	14.9	7.5	156	1.08	0.6	17.0	1.0	0.4	22.9	0.57	0.03	0.08	30	0.55	0.095
013K922002	Sediment Pulp	8.48	22.60	3.42	148.1	177	19.5	66.0	6504	3.84	0.6	1.9	0.3	1.3	19.1	0.68	<0.02	<0.02	27	0.40	0.102
013K922003	Sediment Pulp	1.31	18.81	2.86	82.3	337	24.8	4.5	46	0.17	0.3	1.2	0.8	0.3	20.0	0.64	0.06	0.05	12	0.39	0.046



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K921217	Sediment Pulp	21.3	8.7	0.05	73.9	0.021	<20	0.41	0.014	0.03	<0.1	0.7	0.03	0.15	94	0.7	<0.02	1.2	0.58	<0.1	0.02
013K921218	Sediment Pulp	42.6	33.4	0.47	74.2	0.089	<20	1.86	0.034	0.12	0.2	3.4	0.13	0.08	114	0.9	<0.02	3.6	0.83	0.1	0.07
013K921219	Sediment Pulp	82.1	25.6	0.07	75.1	0.020	<20	2.66	0.019	0.03	0.1	1.5	0.04	0.30	314	2.4	<0.02	2.6	0.52	0.2	<0.02
013K921220	Sediment Pulp	38.6	53.6	0.14	79.3	0.039	<20	2.26	0.017	0.04	0.2	1.5	0.06	0.27	291	2.5	<0.02	3.9	0.45	<0.1	0.05
013K921221	Sediment Pulp	66.2	30.1	0.52	90.1	0.106	<20	1.34	0.039	0.10	0.1	4.6	0.08	0.07	114	0.5	<0.02	3.8	0.90	0.1	0.15
013K921222	Sediment Pulp	76.4	52.4	0.38	142.3	0.031	<20	2.23	0.019	0.06	0.2	9.7	0.14	1.01	423	5.6	<0.02	3.4	1.06	0.2	0.16
013K921223	Sediment Pulp	37.8	67.3	0.30	220.2	0.026	<20	2.90	0.016	0.07	0.2	7.2	0.49	0.48	560	6.3	0.03	2.8	0.83	0.1	0.10
013K921224	Sediment Pulp	34.7	71.5	0.34	141.3	0.023	<20	2.80	0.021	0.07	0.1	7.0	0.35	0.30	490	6.4	0.02	3.0	0.84	<0.1	0.08
013K921225	Sediment Pulp	29.7	51.2	0.20	153.6	0.015	<20	2.09	0.030	0.05	0.1	6.1	0.54	0.79	499	6.2	<0.02	2.0	0.51	<0.1	0.07
013K921226	Sediment Pulp	52.1	76.7	0.44	128.8	0.041	<20	2.44	0.025	0.08	0.3	7.4	0.25	1.68	777	6.2	0.02	3.4	1.12	0.1	0.07
013K921227	Sediment Pulp	55.8	22.2	0.08	83.6	0.032	<20	2.67	0.016	0.02	0.2	1.9	0.04	0.24	166	1.6	<0.02	3.0	0.42	<0.1	0.03
013K921228	Sediment Pulp	70.4	32.2	0.26	100.2	0.058	<20	2.64	0.021	0.06	0.2	3.0	0.08	0.18	247	2.2	<0.02	4.6	1.02	0.1	0.08
013K921229	Sediment Pulp	70.2	38.7	0.11	40.9	0.037	<20	3.94	0.019	0.03	<0.1	3.8	0.14	0.29	256	2.8	<0.02	3.6	0.50	0.1	0.05
013K921230	Sediment Pulp	50.1	10.5	0.05	68.0	0.015	<20	0.88	0.011	0.02	<0.1	1.3	0.03	0.27	186	1.2	<0.02	1.0	0.28	0.1	0.04
013K921231	Sediment Pulp	47.9	30.5	0.08	39.0	0.032	<20	3.14	0.018	0.02	<0.1	2.9	0.07	0.29	217	1.9	<0.02	2.8	0.35	<0.1	0.04
013K921232	Sediment Pulp	40.5	53.5	0.82	158.1	0.111	<20	1.70	0.033	0.27	0.2	6.2	0.27	0.16	297	1.2	0.05	6.1	1.47	0.1	0.14
013K921233	Sediment Pulp	35.0	25.9	0.06	62.1	0.015	<20	0.83	0.012	0.01	<0.1	1.4	0.03	0.33	113	3.3	<0.02	1.0	0.32	<0.1	0.03
013K921234	Sediment Pulp	68.7	31.4	0.55	89.0	0.108	<20	1.41	0.042	0.11	0.2	4.7	0.08	0.07	88	0.7	<0.02	3.9	0.91	0.1	0.13
013K921235	Sediment Pulp	112.6	58.1	0.25	93.1	0.052	<20	4.70	0.023	0.07	0.3	5.9	0.15	0.31	253	4.4	<0.02	5.2	1.23	0.2	0.05
013K921236	Sediment Pulp	200.5	46.8	0.20	141.6	0.034	<20	3.17	0.022	0.06	0.3	4.4	0.11	0.26	377	5.9	<0.02	3.8	0.69	0.3	0.03
013K921237	Sediment Pulp	124.9	26.5	0.14	66.1	0.020	<20	1.23	0.022	0.04	0.2	3.4	0.06	0.60	89	3.3	<0.02	1.7	0.49	0.2	0.06
013K921238	Sediment Pulp	96.9	53.3	0.18	60.4	0.050	<20	4.93	0.015	0.06	0.2	4.6	0.19	0.40	262	4.2	<0.02	5.3	0.90	0.2	0.05
013K921239	Sediment Pulp	71.4	31.3	0.17	104.3	0.036	<20	2.40	0.015	0.04	1.5	2.0	0.06	0.25	303	3.3	<0.02	4.1	0.67	0.1	0.02
013K921240	Sediment Pulp	64.7	20.9	0.10	78.3	0.019	<20	2.50	0.015	0.03	<0.1	1.0	0.05	0.30	207	1.6	<0.02	2.2	0.30	0.1	<0.02
013K921241	Sediment Pulp	86.7	35.6	0.06	117.9	0.020	<20	3.15	0.010	0.02	1.0	2.4	0.09	0.32	281	4.7	<0.02	2.8	0.24	0.1	0.03
013K921242	Sediment Pulp	83.6	38.2	0.06	119.1	0.021	<20	3.13	0.010	0.02	1.1	2.4	0.09	0.33	265	4.7	<0.02	2.8	0.23	0.2	<0.02
013K922000	Sediment Pulp	11.5	13.8	0.63	99.0	0.046	<20	0.49	0.028	0.05	0.6	2.7	0.24	1.64	119	1.6	0.03	2.2	0.55	<0.1	0.05
013K922001	Sediment Pulp	25.7	18.7	0.15	77.6	0.038	<20	1.79	0.020	0.03	0.1	1.4	0.06	0.26	155	2.1	0.04	3.6	0.40	<0.1	<0.02
013K922002	Sediment Pulp	37.7	16.1	0.06	375.7	0.027	<20	2.61	0.010	0.02	<0.1	3.1	0.24	0.15	388	2.1	<0.02	2.6	0.18	0.1	0.03
013K922003	Sediment Pulp	19.5	12.2	0.04	106.6	0.014	<20	0.95	0.020	0.02	<0.1	0.9	0.02	0.43	77	2.4	<0.02	1.3	0.24	0.1	0.02



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Client: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: September 27, 2022

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CERTIFICATE OF ANALYSIS

VAN22002721.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K921217	Sediment Pulp	0.63	2.7	0.3	<0.05	0.6	7.02	41.2	<0.02	<1	0.2	1.5	4.86	17.89	2.84	0.48	2.00	0.33	1.55	0.27	0.91
013K921218	Sediment Pulp	1.71	8.7	0.5	<0.05	3.0	20.59	87.7	<0.02	<1	1.5	8.7	11.33	42.27	6.79	1.05	5.91	0.77	4.23	0.77	2.30
013K921219	Sediment Pulp	1.09	2.1	0.2	<0.05	0.6	32.44	189.6	<0.02	<1	2.5	2.2	22.15	85.94	13.52	2.12	10.88	1.39	7.66	1.33	3.51
013K921220	Sediment Pulp	1.88	2.8	0.3	<0.05	2.0	18.55	82.4	<0.02	<1	1.1	2.4	10.44	38.94	6.86	1.12	5.46	0.73	4.15	0.77	2.09
013K921221	Sediment Pulp	2.02	7.3	0.5	<0.05	5.9	29.30	105.3	0.02	<1	1.1	10.4	16.92	64.96	10.26	1.65	8.69	1.07	6.39	1.06	3.07
013K921222	Sediment Pulp	0.82	6.2	0.3	<0.05	4.9	45.52	46.2	0.02	6	1.1	12.0	16.31	61.06	10.25	3.10	10.39	1.30	7.54	1.39	3.98
013K921223	Sediment Pulp	0.73	5.2	0.2	<0.05	3.1	31.45	52.3	0.03	8	1.1	7.8	9.70	38.60	7.50	1.85	7.01	1.02	5.80	1.10	3.20
013K921224	Sediment Pulp	0.70	5.3	0.2	<0.05	2.3	28.15	47.1	0.03	7	0.9	8.6	8.87	34.32	6.57	1.76	6.38	0.89	5.00	0.93	2.81
013K921225	Sediment Pulp	0.54	3.8	0.2	<0.05	2.8	25.97	35.6	<0.02	11	0.7	5.8	7.36	28.26	5.78	1.50	5.78	0.78	4.38	0.79	2.34
013K921226	Sediment Pulp	1.64	6.9	0.3	<0.05	4.2	29.98	50.9	0.03	13	0.6	10.3	12.39	47.77	8.27	1.95	8.01	1.00	5.90	1.06	2.91
013K921227	Sediment Pulp	1.55	1.9	0.3	<0.05	1.8	30.21	127.6	<0.02	<1	2.4	1.9	15.98	61.07	10.57	1.41	8.40	1.24	6.85	1.16	3.16
013K921228	Sediment Pulp	2.16	5.9	0.4	<0.05	4.1	34.43	138.7	0.02	<1	2.5	6.3	19.21	73.52	11.81	1.77	9.57	1.29	7.57	1.25	3.60
013K921229	Sediment Pulp	1.13	2.5	0.2	<0.05	1.4	34.87	177.3	0.03	<1	2.7	2.6	18.05	64.72	11.33	1.53	8.84	1.28	7.38	1.27	3.76
013K921230	Sediment Pulp	0.69	1.2	0.2	<0.05	3.0	26.91	88.7	<0.02	1	0.9	1.8	14.05	57.05	10.20	1.32	8.08	1.10	6.18	1.13	3.01
013K921231	Sediment Pulp	1.40	1.6	0.2	<0.05	1.8	22.16	102.3	0.03	<1	1.5	1.2	12.38	47.22	7.26	1.16	5.82	0.82	4.52	0.79	2.07
013K921232	Sediment Pulp	2.30	25.0	1.2	<0.05	6.5	18.84	73.9	0.04	<1	0.5	22.6	9.75	36.82	6.34	0.99	4.82	0.64	3.71	0.64	1.85
013K921233	Sediment Pulp	0.56	1.2	0.2	<0.05	1.4	18.02	53.0	<0.02	3	0.4	1.4	10.06	40.71	6.58	0.99	5.44	0.65	3.69	0.66	1.83
013K921234	Sediment Pulp	2.10	7.7	0.6	<0.05	6.6	31.04	109.6	<0.02	<1	1.1	10.2	18.00	69.26	11.26	1.76	8.38	1.14	6.01	1.07	3.24
013K921235	Sediment Pulp	2.67	5.2	0.4	<0.05	2.3	60.70	213.1	0.04	1	2.1	6.1	28.53	104.79	18.80	3.01	14.71	2.21	13.55	2.25	6.76
013K921236	Sediment Pulp	1.20	4.1	0.3	<0.05	2.1	75.07	225.3	<0.02	1	3.2	5.3	53.98	207.81	33.70	5.16	25.09	2.91	15.76	2.54	7.09
013K921237	Sediment Pulp	1.18	2.2	0.3	<0.05	3.1	58.66	113.7	<0.02	2	1.8	2.2	30.25	115.37	19.04	2.95	14.98	1.95	10.81	1.99	5.62
013K921238	Sediment Pulp	2.00	4.8	0.4	<0.05	1.7	48.14	190.5	0.03	<1	2.5	5.4	23.03	85.07	15.41	2.37	12.30	1.93	10.91	1.92	5.08
013K921239	Sediment Pulp	2.02	3.4	0.3	<0.05	1.9	32.63	144.9	<0.02	<1	1.2	3.7	19.57	73.30	12.41	1.88	9.15	1.31	7.41	1.23	3.51
013K921240	Sediment Pulp	1.32	2.0	0.2	<0.05	0.9	31.23	106.6	<0.02	<1	1.6	1.9	17.21	61.81	10.59	1.67	8.38	1.22	7.23	1.24	3.29
013K921241	Sediment Pulp	1.41	1.4	0.5	<0.05	1.1	41.74	166.1	<0.02	4	2.2	1.3	21.12	76.61	12.39	1.92	10.90	1.49	8.26	1.52	4.12
013K921242	Sediment Pulp	1.37	1.4	0.4	<0.05	1.0	40.81	161.5	0.02	5	2.4	1.2	21.14	79.47	13.29	1.91	10.81	1.47	7.77	1.34	4.01
013K922000	Sediment Pulp	0.76	3.8	3.7	<0.05	1.4	10.85	19.0	0.53	14	<0.1	4.9	3.05	12.82	2.58	0.53	2.13	0.31	1.81	0.35	1.10
013K922001	Sediment Pulp	0.94	2.0	0.4	<0.05	0.8	12.25	51.3	<0.02	1	0.7	4.3	6.51	24.99	4.46	0.90	4.06	0.47	2.58	0.45	1.10
013K922002	Sediment Pulp	0.37	1.9	0.1	<0.05	0.9	14.92	105.5	0.02	4	0.5	1.4	8.64	29.86	4.83	1.01	4.53	0.56	3.61	0.60	1.59
013K922003	Sediment Pulp	0.56	1.5	0.5	<0.05	0.7	10.22	24.3	<0.02	<1	0.1	0.9	4.85	19.66	3.19	0.70	3.20	0.33	1.86	0.35	0.96



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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K921217	Sediment Pulp		0.09	0.64	0.09	<10	2
013K921218	Sediment Pulp		0.27	1.76	0.22	<10	<2
013K921219	Sediment Pulp		0.46	2.91	0.37	<10	<2
013K921220	Sediment Pulp		0.27	1.70	0.22	<10	2
013K921221	Sediment Pulp		0.38	2.55	0.31	<10	3
013K921222	Sediment Pulp		0.49	3.29	0.48	<10	3
013K921223	Sediment Pulp		0.39	2.54	0.36	<10	2
013K921224	Sediment Pulp		0.34	2.27	0.30	<10	3
013K921225	Sediment Pulp		0.29	1.90	0.23	<10	2
013K921226	Sediment Pulp		0.36	2.38	0.32	<10	3
013K921227	Sediment Pulp		0.41	2.46	0.30	<10	3
013K921228	Sediment Pulp		0.45	2.50	0.32	<10	4
013K921229	Sediment Pulp		0.49	2.99	0.35	<10	<2
013K921230	Sediment Pulp		0.35	2.23	0.25	<10	<2
013K921231	Sediment Pulp		0.27	1.74	0.22	<10	<2
013K921232	Sediment Pulp		0.27	1.78	0.25	<10	3
013K921233	Sediment Pulp		0.25	1.39	0.18	<10	2
013K921234	Sediment Pulp		0.40	2.57	0.32	<10	3
013K921235	Sediment Pulp		0.84	5.38	0.66	<10	2
013K921236	Sediment Pulp		0.93	5.65	0.75	<10	4
013K921237	Sediment Pulp		0.73	4.83	0.67	<10	<2
013K921238	Sediment Pulp		0.68	3.97	0.47	<10	<2
013K921239	Sediment Pulp		0.43	2.56	0.29	<10	<2
013K921240	Sediment Pulp		0.44	2.64	0.30	<10	3
013K921241	Sediment Pulp		0.49	3.49	0.42	<10	3
013K921242	Sediment Pulp		0.54	3.17	0.42	<10	2
013K922000	Sediment Pulp		0.15	1.07	0.14	<10	4
013K922001	Sediment Pulp		0.16	0.98	0.13	<10	3
013K922002	Sediment Pulp		0.21	1.31	0.17	<10	<2
013K922003	Sediment Pulp		0.14	0.85	0.11	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922004	Sediment Pulp	1.27	18.70	3.16	82.8	331	24.3	4.5	45	0.19	0.6	1.2	3.1	0.2	19.0	0.70	0.02	0.03	12	0.38	0.044
013K922005	Sediment Pulp	7.24	34.89	6.01	158.8	164	17.1	7.0	129	0.92	1.0	11.8	0.4	0.2	23.5	1.16	0.03	<0.02	44	0.63	0.053
013K922006	Sediment Pulp	4.89	24.73	8.23	94.1	212	15.1	8.0	159	1.10	0.7	17.3	0.4	0.3	23.0	0.59	0.03	0.04	30	0.55	0.099
013K922007	Sediment Pulp	2.91	14.44	1.93	56.2	164	9.5	1.5	29	0.23	0.6	11.4	0.3	<0.1	15.8	0.33	0.03	<0.02	11	0.50	0.045
013K922008	Sediment Pulp	5.57	27.28	5.24	123.7	164	18.2	2.8	39	0.16	0.5	13.6	0.3	<0.1	23.6	0.83	0.05	<0.02	7	0.52	0.036
013K922009	Sediment Pulp	14.96	29.02	5.43	66.4	435	11.7	4.6	112	1.43	0.6	174.3	<0.2	0.2	37.0	0.57	0.04	0.02	26	0.85	0.148
013K922010	Sediment Pulp	1.06	34.51	27.28	142.3	2823	49.8	32.7	1275	3.30	26.1	3.9	4.0	9.2	27.8	0.51	0.57	3.25	52	0.65	0.097
013K922011	Sediment Pulp	9.12	24.79	7.93	72.5	212	12.3	8.7	187	1.83	0.5	23.6	0.8	0.9	33.0	0.41	0.02	0.06	46	0.64	0.107
013K922012	Sediment Pulp	6.07	34.75	3.17	78.6	371	7.1	5.1	128	2.07	0.4	11.0	<0.2	0.6	16.7	0.59	0.03	0.08	34	0.26	0.102
013K922013	Sediment Pulp	1.94	35.69	2.76	54.5	151	9.3	9.3	215	2.41	0.2	7.8	<0.2	0.3	23.0	0.42	0.02	<0.02	48	0.42	0.082
013K922014	Sediment Pulp	3.27	27.37	3.73	95.2	372	14.2	33.4	646	3.15	0.2	12.8	<0.2	0.5	56.2	0.45	0.03	0.02	61	0.86	0.216
013K922015	Sediment Pulp	2.35	16.27	2.00	50.3	178	7.7	6.0	118	0.67	0.2	13.6	<0.2	0.2	27.8	0.32	<0.02	<0.02	33	0.49	0.096
013K922016	Sediment Pulp	9.47	27.30	6.49	168.6	328	23.0	62.4	1158	8.79	1.3	16.9	<0.2	1.7	35.4	0.71	0.03	0.03	85	0.57	0.198
013K922017	Sediment Pulp	3.38	24.01	5.95	114.2	265	14.1	11.8	62	2.11	0.8	24.2	<0.2	0.4	35.0	0.53	0.06	<0.02	65	0.65	0.138
013K922018	Sediment Pulp	1.87	20.15	3.76	90.0	283	12.8	9.7	236	1.42	0.6	7.9	0.4	0.3	36.6	0.46	0.03	<0.02	37	0.55	0.122
013K922019	Sediment Pulp	1.43	12.46	2.52	57.6	97	11.9	4.4	64	0.57	<0.1	12.6	<0.2	0.2	33.8	0.26	<0.02	<0.02	20	0.51	0.061
013K922020	Sediment Pulp	3.32	13.94	3.12	100.1	105	12.9	19.1	322	2.30	0.2	11.8	1.0	0.3	32.4	0.44	0.02	<0.02	59	0.46	0.088
013K922021	Sediment Pulp	1.69	112.89	1.72	85.1	116	36.6	12.1	109	1.01	11.2	1.8	2.3	0.5	11.4	0.47	0.26	<0.02	13	0.83	0.047
013K922022	Sediment Pulp	6.27	49.44	9.44	278.6	573	14.6	20.4	418	3.34	0.7	11.7	0.4	0.6	43.9	1.13	0.02	<0.02	72	1.05	0.178
013K922023	Sediment Pulp	1.73	108.81	1.74	78.5	115	35.0	11.9	109	1.01	10.9	1.7	1.8	0.4	11.1	0.45	0.27	<0.02	13	0.84	0.044
013K922024	Sediment Pulp	1.55	103.60	1.83	71.2	110	31.3	10.4	111	0.90	9.8	1.6	1.2	0.4	10.4	0.39	0.26	<0.02	13	0.86	0.043
013K922025	Sediment Pulp	3.37	82.41	5.77	131.1	346	33.5	15.5	330	2.15	13.7	1.9	1.6	0.5	69.5	0.96	0.11	0.02	45	1.53	0.136
013K922026	Sediment Pulp	6.00	50.47	2.85	100.3	224	9.6	8.0	152	2.17	1.2	10.3	0.3	0.9	34.9	0.51	<0.02	<0.02	53	1.25	0.157
013K922027	Sediment Pulp	1.99	23.91	7.33	102.3	156	29.2	17.4	335	3.28	1.0	2.5	1.0	3.0	28.5	0.38	0.04	0.05	56	0.70	0.104
013K922028	Sediment Pulp	1.73	24.73	7.55	100.0	167	30.4	17.6	322	3.16	1.1	2.4	<0.2	3.1	29.5	0.29	0.04	0.05	55	0.70	0.114
013K922029	Sediment Pulp	0.64	14.32	8.34	55.8	73	14.3	4.4	85	1.00	0.5	1.4	1.0	0.4	19.5	0.23	0.18	<0.02	32	0.44	0.047
013K922030	Sediment Pulp	2.61	18.89	7.16	87.6	58	30.0	16.3	2019	3.46	1.6	4.0	0.4	4.5	25.6	0.24	0.03	0.04	48	0.54	0.094
013K922031	Sediment Pulp	8.32	29.77	1.28	82.4	120	20.8	5.3	79	0.35	5.4	3.2	0.3	0.5	17.3	0.59	0.14	<0.02	11	0.73	0.052
013K922032	Sediment Pulp	2.47	38.02	1.53	87.5	88	84.6	4.9	42	0.27	7.6	1.7	<0.2	0.8	11.4	0.63	0.37	0.07	14	0.59	0.027
013K922033	Sediment Pulp	6.95	65.04	2.94	112.1	170	64.9	13.5	119	0.71	19.7	1.9	0.2	0.5	17.9	0.48	2.15	<0.02	35	0.98	0.071



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K922004	Sediment Pulp	19.5	11.6	0.04	98.9	0.014	<20	0.95	0.026	0.02	0.1	0.9	0.02	0.44	72	2.4	<0.02	1.4	0.23	<0.1	<0.02
013K922005	Sediment Pulp	37.6	20.4	0.10	99.8	0.028	<20	2.07	0.014	0.02	<0.1	1.5	0.08	0.26	154	1.8	<0.02	3.1	0.30	0.1	<0.02
013K922006	Sediment Pulp	26.7	19.4	0.14	78.2	0.037	<20	1.80	0.021	0.03	0.1	1.7	0.05	0.26	173	1.8	<0.02	3.9	0.41	<0.1	<0.02
013K922007	Sediment Pulp	11.7	6.1	0.03	53.5	0.012	<20	0.71	0.009	0.02	<0.1	0.6	<0.02	0.26	163	1.2	<0.02	1.8	0.12	<0.1	<0.02
013K922008	Sediment Pulp	17.0	8.4	0.04	60.4	0.016	<20	0.78	0.013	0.02	<0.1	0.6	0.04	0.33	176	1.8	<0.02	1.4	0.24	<0.1	<0.02
013K922009	Sediment Pulp	36.5	12.8	0.05	136.4	0.030	<20	2.41	0.008	0.02	0.1	1.9	0.06	0.34	322	2.8	0.02	4.2	0.21	<0.1	<0.02
013K922010	Sediment Pulp	42.8	55.3	0.85	174.9	0.114	<20	1.81	0.031	0.28	0.3	6.7	0.29	0.16	284	1.1	0.05	6.2	1.54	0.1	0.13
013K922011	Sediment Pulp	36.5	23.2	0.09	109.9	0.051	<20	3.24	0.021	0.02	<0.1	2.5	0.05	0.24	233	1.5	<0.02	5.5	0.30	<0.1	<0.02
013K922012	Sediment Pulp	88.2	14.9	0.04	32.1	0.014	<20	1.83	0.010	0.01	<0.1	1.7	0.05	0.27	165	2.0	<0.02	2.2	0.20	0.1	<0.02
013K922013	Sediment Pulp	23.0	14.7	0.06	74.7	0.022	<20	2.41	0.019	0.02	<0.1	1.8	0.04	0.27	149	2.1	<0.02	2.3	0.14	0.1	<0.02
013K922014	Sediment Pulp	38.4	21.1	0.13	206.4	0.041	<20	3.70	0.028	0.04	0.2	2.4	0.11	0.25	294	3.1	<0.02	6.0	0.30	0.1	0.02
013K922015	Sediment Pulp	17.0	10.2	0.08	67.9	0.018	<20	1.80	0.017	0.02	0.2	0.9	0.02	0.20	140	1.5	<0.02	2.4	0.14	<0.1	<0.02
013K922016	Sediment Pulp	32.0	25.7	0.25	129.1	0.053	<20	3.65	0.038	0.06	0.3	3.4	0.23	0.19	199	3.3	<0.02	7.2	0.42	<0.1	0.04
013K922017	Sediment Pulp	29.4	21.9	0.10	29.8	0.032	<20	2.73	0.023	0.03	0.2	1.5	0.12	0.46	216	5.1	<0.02	5.9	0.23	<0.1	0.02
013K922018	Sediment Pulp	27.6	17.7	0.10	114.4	0.031	<20	2.79	0.016	0.03	<0.1	1.7	0.05	0.37	190	3.0	<0.02	3.9	0.29	0.1	0.04
013K922019	Sediment Pulp	15.5	10.0	0.09	71.0	0.021	<20	1.33	0.021	0.02	<0.1	0.7	0.04	0.29	140	1.6	<0.02	2.6	0.27	<0.1	0.02
013K922020	Sediment Pulp	18.5	17.1	0.13	85.1	0.030	<20	2.28	0.043	0.03	0.2	1.8	0.09	0.21	132	2.0	<0.02	3.5	0.23	<0.1	<0.02
013K922021	Sediment Pulp	20.3	25.3	0.13	23.2	0.015	<20	0.82	0.023	0.02	<0.1	3.9	0.06	1.00	159	4.2	<0.02	1.4	0.27	<0.1	<0.02
013K922022	Sediment Pulp	43.0	24.5	0.13	133.1	0.044	<20	3.92	0.012	0.03	0.2	3.8	0.09	0.35	240	4.4	<0.02	5.1	0.27	<0.1	<0.02
013K922023	Sediment Pulp	19.2	23.9	0.12	22.7	0.014	<20	0.81	0.023	0.02	<0.1	3.5	0.05	1.00	158	4.1	<0.02	1.3	0.26	<0.1	<0.02
013K922024	Sediment Pulp	18.0	24.2	0.12	20.8	0.015	<20	0.86	0.042	0.03	<0.1	3.2	0.05	0.90	147	3.0	<0.02	1.2	0.26	<0.1	<0.02
013K922025	Sediment Pulp	33.2	39.6	0.39	215.6	0.036	<20	2.32	0.028	0.05	0.4	3.3	0.18	0.78	223	2.1	<0.02	3.9	0.82	<0.1	0.02
013K922026	Sediment Pulp	84.5	19.0	0.08	353.6	0.025	<20	3.08	0.009	0.02	0.4	3.1	0.10	0.21	190	3.2	<0.02	3.0	0.13	0.2	0.03
013K922027	Sediment Pulp	27.9	37.5	0.74	157.2	0.104	<20	2.32	0.058	0.13	<0.1	4.8	0.09	0.09	104	1.4	<0.02	5.6	0.82	<0.1	0.06
013K922028	Sediment Pulp	29.9	37.0	0.76	159.8	0.108	<20	2.35	0.059	0.13	<0.1	4.8	0.09	0.09	117	1.4	<0.02	5.9	0.85	<0.1	0.08
013K922029	Sediment Pulp	26.5	19.3	0.10	92.5	0.030	<20	1.91	0.014	0.02	<0.1	2.0	0.06	0.26	145	1.5	0.02	2.3	0.40	<0.1	<0.02
013K922030	Sediment Pulp	24.5	36.0	0.77	144.4	0.129	<20	1.84	0.070	0.13	<0.1	4.6	0.11	0.04	147	1.0	<0.02	5.2	1.04	<0.1	0.06
013K922031	Sediment Pulp	16.1	11.8	0.04	75.5	0.009	<20	0.87	0.022	0.01	0.1	1.4	0.04	0.44	135	1.9	<0.02	0.7	0.14	<0.1	0.03
013K922032	Sediment Pulp	16.1	24.8	0.08	57.6	0.011	<20	0.47	0.007	0.02	<0.1	2.7	0.06	0.50	153	1.7	<0.02	0.7	0.34	<0.1	0.04
013K922033	Sediment Pulp	14.8	33.9	0.08	54.1	0.012	<20	1.09	0.013	0.02	0.2	2.3	0.07	0.68	194	3.4	<0.02	1.2	0.14	<0.1	0.05



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922004	Sediment Pulp	0.55	1.4	0.4	<0.05	0.6	10.20	23.2	<0.02	1	0.3	1.1	4.76	19.41	3.66	0.72	2.76	0.32	1.91	0.35	1.04
013K922005	Sediment Pulp	0.82	1.5	0.3	<0.05	0.6	16.36	68.6	<0.02	2	0.5	2.8	10.12	37.49	6.74	1.28	5.21	0.65	3.83	0.57	1.55
013K922006	Sediment Pulp	0.99	2.0	0.3	<0.05	0.8	12.81	50.3	<0.02	<1	0.5	4.9	6.62	25.66	4.44	0.89	4.00	0.47	2.82	0.47	1.31
013K922007	Sediment Pulp	0.30	0.8	0.3	<0.05	0.2	4.82	22.1	<0.02	2	0.2	0.6	2.76	10.12	1.66	0.40	1.56	0.18	0.93	0.16	0.56
013K922008	Sediment Pulp	0.44	1.0	0.2	<0.05	0.6	9.82	30.2	<0.02	3	0.1	1.4	4.35	17.82	3.31	0.78	3.24	0.42	2.11	0.39	1.08
013K922009	Sediment Pulp	0.78	1.0	0.2	<0.05	0.5	15.60	59.0	<0.02	6	0.3	1.5	9.09	33.91	5.79	1.13	4.68	0.57	3.21	0.55	1.44
013K922010	Sediment Pulp	2.05	26.9	1.3	<0.05	6.2	18.82	81.2	0.06	<1	0.8	23.7	10.48	38.77	6.93	1.02	5.48	0.66	3.72	0.68	2.14
013K922011	Sediment Pulp	1.42	1.5	0.2	<0.05	1.1	17.76	76.3	0.02	3	0.9	2.2	8.78	34.59	5.99	1.03	4.66	0.69	3.60	0.67	1.76
013K922012	Sediment Pulp	0.53	1.0	0.2	<0.05	0.2	23.70	116.0	<0.02	2	0.6	0.9	22.22	83.00	12.52	1.91	9.03	0.90	4.71	0.78	2.02
013K922013	Sediment Pulp	0.55	1.1	0.2	<0.05	0.2	12.34	47.9	<0.02	2	0.6	1.5	6.10	25.07	4.18	1.17	4.20	0.49	2.81	0.45	1.22
013K922014	Sediment Pulp	1.19	2.4	0.2	<0.05	0.6	21.33	73.2	0.02	2	0.6	3.2	10.13	39.71	6.62	1.51	5.95	0.77	4.61	0.77	2.21
013K922015	Sediment Pulp	0.60	1.3	0.2	<0.05	0.2	9.56	34.7	<0.02	<1	0.4	1.7	4.75	18.77	3.16	0.72	2.65	0.33	1.94	0.37	0.97
013K922016	Sediment Pulp	1.16	4.3	0.3	<0.05	1.6	22.06	73.0	<0.02	1	0.7	6.3	9.34	34.08	6.57	1.33	5.93	0.77	4.01	0.78	2.41
013K922017	Sediment Pulp	0.84	1.7	0.2	<0.05	1.0	16.84	55.0	<0.02	4	0.7	2.9	7.99	32.37	5.73	1.17	4.48	0.58	3.40	0.60	1.75
013K922018	Sediment Pulp	1.09	2.3	0.3	<0.05	1.0	16.53	52.9	<0.02	3	0.7	2.7	7.78	27.80	5.02	1.04	4.71	0.59	3.39	0.63	1.79
013K922019	Sediment Pulp	0.54	1.5	0.2	<0.05	0.6	8.29	30.0	<0.02	<1	0.5	2.8	4.39	16.80	2.92	0.65	2.53	0.30	1.60	0.30	0.94
013K922020	Sediment Pulp	0.60	1.9	0.1	<0.05	0.3	11.02	42.6	<0.02	<1	0.6	3.0	5.05	19.57	3.51	0.71	2.99	0.37	2.30	0.42	1.13
013K922021	Sediment Pulp	0.41	1.2	0.2	<0.05	0.5	13.56	23.9	<0.02	6	0.2	2.5	4.93	19.38	3.31	0.77	3.01	0.45	2.43	0.49	1.43
013K922022	Sediment Pulp	1.34	2.1	0.3	<0.05	0.8	26.69	78.0	<0.02	2	0.7	3.5	11.63	45.40	7.17	1.65	6.71	0.90	5.22	0.93	2.65
013K922023	Sediment Pulp	0.42	1.2	0.1	<0.05	0.5	13.16	22.8	<0.02	6	<0.1	2.6	4.85	19.27	3.42	0.72	3.22	0.38	2.26	0.42	1.27
013K922024	Sediment Pulp	0.38	1.3	0.1	<0.05	0.5	12.77	22.3	<0.02	5	0.3	2.6	4.50	18.45	3.19	0.70	3.01	0.35	2.33	0.45	1.12
013K922025	Sediment Pulp	1.10	3.9	0.3	<0.05	1.2	18.26	52.9	<0.02	9	0.8	10.4	8.45	32.96	5.76	1.25	4.90	0.65	3.46	0.63	1.80
013K922026	Sediment Pulp	0.74	1.3	0.1	<0.05	1.4	30.47	113.4	0.02	5	0.6	1.4	19.19	72.04	11.05	2.13	8.57	0.99	5.22	0.97	2.85
013K922027	Sediment Pulp	1.53	9.4	0.5	<0.05	3.6	15.80	52.9	0.02	<1	0.4	13.7	7.62	29.20	5.16	0.94	3.92	0.55	3.25	0.57	1.72
013K922028	Sediment Pulp	1.58	9.6	0.5	<0.05	3.8	16.52	55.5	0.02	2	0.7	13.4	7.79	31.12	5.27	1.13	4.76	0.56	3.30	0.61	1.57
013K922029	Sediment Pulp	0.71	2.0	0.4	<0.05	0.7	19.22	54.2	<0.02	<1	0.9	2.3	8.17	31.96	6.05	1.33	4.99	0.75	4.17	0.70	2.12
013K922030	Sediment Pulp	0.91	9.6	0.5	<0.05	2.9	13.37	53.9	<0.02	<1	0.5	14.1	6.61	25.13	4.60	0.79	3.82	0.49	2.99	0.52	1.50
013K922031	Sediment Pulp	0.26	0.9	0.1	<0.05	0.9	12.03	18.5	<0.02	2	0.2	0.6	4.50	17.94	3.26	0.64	3.12	0.37	2.03	0.43	1.13
013K922032	Sediment Pulp	0.21	1.6	<0.1	<0.05	1.3	13.98	9.7	<0.02	2	<0.1	1.3	4.10	17.35	2.81	0.58	2.71	0.36	1.96	0.38	1.16
013K922033	Sediment Pulp	0.32	1.2	0.2	<0.05	0.9	10.82	16.9	<0.02	4	0.1	1.1	3.72	14.75	2.62	0.55	2.41	0.30	1.86	0.34	0.96



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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K922004	Sediment Pulp		0.16	0.90	0.12	<10	5
013K922005	Sediment Pulp		0.23	1.38	0.17	<10	<2
013K922006	Sediment Pulp		0.17	1.07	0.15	<10	<2
013K922007	Sediment Pulp		0.05	0.44	0.05	<10	<2
013K922008	Sediment Pulp		0.12	0.74	0.10	<10	<2
013K922009	Sediment Pulp		0.16	1.20	0.17	<10	<2
013K922010	Sediment Pulp		0.29	1.80	0.24	<10	<2
013K922011	Sediment Pulp		0.25	1.58	0.19	<10	2
013K922012	Sediment Pulp		0.29	1.85	0.24	<10	2
013K922013	Sediment Pulp		0.18	1.01	0.12	<10	<2
013K922014	Sediment Pulp		0.28	1.69	0.20	<10	2
013K922015	Sediment Pulp		0.13	0.80	0.10	<10	<2
013K922016	Sediment Pulp		0.30	1.86	0.23	<10	<2
013K922017	Sediment Pulp		0.25	1.38	0.16	<10	4
013K922018	Sediment Pulp		0.23	1.32	0.18	<10	3
013K922019	Sediment Pulp		0.11	0.67	0.08	<10	<2
013K922020	Sediment Pulp		0.14	0.92	0.13	<10	<2
013K922021	Sediment Pulp		0.15	1.29	0.17	<10	<2
013K922022	Sediment Pulp		0.37	2.21	0.26	<10	<2
013K922023	Sediment Pulp		0.18	1.12	0.19	<10	3
013K922024	Sediment Pulp		0.14	1.11	0.16	<10	<2
013K922025	Sediment Pulp		0.25	1.49	0.18	<10	3
013K922026	Sediment Pulp		0.32	2.20	0.32	<10	<2
013K922027	Sediment Pulp		0.20	1.40	0.17	<10	<2
013K922028	Sediment Pulp		0.23	1.38	0.17	<10	<2
013K922029	Sediment Pulp		0.24	1.36	0.19	<10	2
013K922030	Sediment Pulp		0.18	1.26	0.17	<10	4
013K922031	Sediment Pulp		0.14	0.91	0.14	<10	2
013K922032	Sediment Pulp		0.15	1.09	0.17	<10	<2
013K922033	Sediment Pulp		0.12	0.80	0.11	<10	<2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922034	Sediment Pulp	4.00	57.42	1.72	83.9	170	18.6	8.6	89	0.63	1.6	1.6	1.2	0.4	16.3	0.58	0.69	0.11	17	0.92	0.075
013K922035	Sediment Pulp	3.65	13.71	2.28	79.3	94	5.3	3.4	38	0.41	1.2	3.5	0.5	0.2	13.8	0.38	0.08	0.05	21	0.59	0.044
013K922036	Sediment Pulp	12.20	31.71	3.94	90.6	329	14.1	5.9	97	1.48	0.7	25.8	1.2	0.3	47.9	0.51	0.05	0.04	42	1.87	0.133
013K922037	Sediment Pulp	1.15	15.22	5.72	56.0	65	17.8	7.9	174	1.35	1.0	4.9	<0.2	2.5	20.3	0.19	0.02	0.03	32	0.44	0.062
013K922038	Sediment Pulp	14.08	50.49	2.16	118.3	138	32.0	5.0	63	0.11	2.2	0.9	1.4	0.3	12.6	0.59	0.13	<0.02	6	0.81	0.035
013K922039	Sediment Pulp	9.90	42.87	88.47	329.6	607	13.2	8.4	462	1.93	37.1	8.9	3.3	1.4	65.3	1.37	0.59	1.00	23	6.64	0.072
013K922040	Sediment Pulp	5.63	53.58	2.79	76.8	108	39.1	4.7	32	0.33	2.9	1.2	<0.2	0.1	15.9	0.44	0.15	0.03	21	0.85	0.043
013K922041	Sediment Pulp	2.40	28.66	16.61	64.2	352	12.8	5.0	190	0.59	1.2	6.7	1.1	0.1	71.8	0.67	0.25	0.04	18	1.35	0.158
013K922042	Sediment Pulp	1.83	13.31	1.43	64.0	81	7.2	4.8	25	0.21	0.8	2.6	<0.2	0.2	14.8	0.31	<0.02	<0.02	16	0.62	0.035
013K922043	Sediment Pulp	70.57	39.17	27.79	149.4	560	16.8	24.3	1488	5.41	3.0	28.8	<0.2	1.5	41.3	1.12	0.18	0.21	70	0.83	0.273
013K922044	Sediment Pulp	2.46	27.97	17.19	65.5	351	13.1	5.3	187	0.59	1.1	7.0	0.5	0.2	73.3	0.71	0.23	0.04	18	1.33	0.163
013K922045	Sediment Pulp	2.92	36.87	13.16	76.6	250	19.6	8.0	285	1.00	1.7	9.5	1.2	0.6	75.8	0.56	0.29	0.04	27	1.31	0.130
013K922046	Sediment Pulp	1.24	31.88	9.57	79.3	158	32.7	12.3	314	2.58	16.0	5.0	<0.2	3.4	62.5	0.28	0.29	0.05	45	0.61	0.107
013K922047	Sediment Pulp	0.93	11.69	7.33	29.6	110	13.9	4.6	149	0.80	6.9	2.6	1.2	1.3	26.8	0.19	0.22	0.03	16	0.39	0.046
013K922048	Sediment Pulp	0.76	24.13	6.54	38.0	145	18.0	2.9	63	0.33	2.5	1.9	0.3	0.4	84.2	0.31	0.20	<0.02	8	0.57	0.034
013K922049	Sediment Pulp	2.38	13.11	5.55	56.6	176	12.4	1.6	35	0.10	3.7	4.0	<0.2	0.3	25.6	0.35	0.45	<0.02	7	0.37	0.031
013K922050	Sediment Pulp	0.79	30.63	14.75	53.5	760	12.1	2.5	180	0.41	5.9	6.1	1.5	0.2	83.1	0.59	0.39	0.05	16	1.00	0.109
013K922051	Sediment Pulp	1.66	21.73	9.04	64.9	163	18.7	2.9	64	0.24	1.3	4.0	0.6	0.2	71.4	0.80	0.39	0.03	8	0.74	0.042
013K922052	Sediment Pulp	36.29	61.28	50.52	195.2	793	27.0	42.6	3407	7.10	36.7	22.6	2.7	2.8	69.7	1.55	1.02	0.21	55	0.84	0.217
013K922053	Sediment Pulp	2.02	30.70	7.31	52.7	340	10.1	3.9	166	0.50	1.1	4.3	<0.2	0.2	48.0	0.45	0.08	0.04	23	0.58	0.094
013K922054	Sediment Pulp	2.01	9.40	9.21	46.6	81	14.6	4.7	89	0.78	1.0	6.9	<0.2	1.1	22.5	0.17	0.05	0.03	16	0.28	0.046
013K922055	Sediment Pulp	6.31	44.59	25.31	87.3	1010	18.0	4.5	211	1.63	4.5	10.3	1.1	0.4	73.7	0.60	0.17	0.10	42	1.36	0.201
013K922056	Sediment Pulp	4.41	20.51	10.88	61.3	175	11.5	2.6	268	0.29	5.8	2.3	0.3	<0.1	1129.1	0.43	0.08	0.03	21	1.79	0.102
013K922057	Sediment Pulp	7.26	45.11	29.33	132.3	236	25.5	16.5	1064	2.20	7.5	16.9	0.9	0.7	46.8	1.05	0.22	0.27	31	0.87	0.076
013K922058	Sediment Pulp	0.98	35.47	29.46	142.9	2793	50.4	30.9	1287	3.34	26.3	3.9	2.5	9.1	27.8	0.57	0.68	3.28	54	0.65	0.096
013K922059	Sediment Pulp	6.55	82.38	29.59	91.3	615	13.7	9.0	639	1.27	4.4	8.8	1.8	0.9	133.5	1.16	2.92	0.19	43	1.65	0.179
013K922060	Sediment Pulp	4.60	15.50	18.21	46.2	171	11.9	2.4	86	0.33	0.1	31.3	1.0	<0.1	92.7	0.32	0.10	0.05	15	0.97	0.053
013K922061	Sediment Pulp	1.60	383.04	1.36	108.9	425	35.8	9.7	193	0.44	1.1	1.1	2.4	0.1	10.1	1.48	0.24	<0.02	17	0.97	0.044
013K922062	Sediment Pulp	7.41	55.57	20.24	122.9	585	15.6	7.6	525	1.18	0.2	24.6	1.7	0.3	118.7	0.79	0.25	0.14	39	1.69	0.139
013K922063	Sediment Pulp	7.81	52.90	21.12	125.7	614	15.7	8.5	567	1.24	0.3	24.6	1.4	0.3	121.4	0.78	0.26	0.15	41	1.72	0.143



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Project: None Given
Report Date: September 27, 2022

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CERTIFICATE OF ANALYSIS

VAN22002721.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K922034	Sediment Pulp	18.7	12.5	0.04	51.2	0.012	<20	1.05	0.009	0.01	<0.1	1.4	0.10	0.83	285	2.3	<0.02	1.3	0.14	<0.1	<0.02
013K922035	Sediment Pulp	5.1	18.3	0.05	81.9	0.015	<20	0.42	0.016	0.02	<0.1	1.1	0.04	0.66	122	2.2	<0.02	1.2	0.22	<0.1	0.02
013K922036	Sediment Pulp	24.5	12.8	0.06	277.7	0.027	<20	2.05	0.012	0.02	0.2	2.0	0.06	0.87	194	2.5	<0.02	6.0	0.10	<0.1	0.02
013K922037	Sediment Pulp	26.0	25.9	0.43	62.5	0.089	<20	1.08	0.037	0.06	0.1	2.4	0.06	0.06	67	0.7	<0.02	3.7	0.60	0.1	0.08
013K922038	Sediment Pulp	7.9	10.9	0.03	35.3	0.008	<20	0.44	0.009	0.01	<0.1	1.6	0.04	0.59	177	1.3	<0.02	0.3	0.11	<0.1	0.04
013K922039	Sediment Pulp	11.0	13.0	0.63	97.4	0.045	<20	0.46	0.028	0.06	0.8	2.5	0.23	1.65	125	1.7	<0.02	2.2	0.53	<0.1	0.03
013K922040	Sediment Pulp	15.7	17.1	0.05	63.7	0.013	<20	0.93	0.012	0.01	<0.1	1.0	0.04	0.45	205	2.0	<0.02	1.6	0.15	<0.1	<0.02
013K922041	Sediment Pulp	32.6	25.3	0.14	166.1	0.025	<20	1.44	0.017	0.04	0.2	1.0	0.09	0.28	314	2.3	<0.02	5.0	0.70	0.1	0.02
013K922042	Sediment Pulp	16.0	17.3	0.04	138.8	0.010	<20	0.58	0.012	0.01	<0.1	1.3	0.03	0.48	129	1.6	<0.02	1.0	0.15	<0.1	<0.02
013K922043	Sediment Pulp	47.6	42.2	0.15	137.5	0.054	<20	3.81	0.010	0.05	0.3	3.2	0.21	0.26	301	4.2	<0.02	7.3	0.44	<0.1	0.04
013K922044	Sediment Pulp	32.6	24.5	0.15	170.0	0.026	<20	1.45	0.018	0.04	0.2	1.0	0.09	0.27	338	2.2	<0.02	5.5	0.71	<0.1	0.04
013K922045	Sediment Pulp	38.0	34.1	0.36	178.2	0.047	<20	1.58	0.038	0.10	0.2	1.9	0.12	0.38	310	2.1	<0.02	4.6	0.73	<0.1	0.07
013K922046	Sediment Pulp	36.4	62.2	0.63	162.9	0.090	<20	1.84	0.042	0.16	0.2	3.6	0.10	0.11	151	1.2	<0.02	5.1	0.89	0.1	0.16
013K922047	Sediment Pulp	20.7	39.5	0.28	72.6	0.043	<20	0.74	0.016	0.07	0.1	1.5	0.06	0.13	127	0.8	<0.02	2.5	0.70	<0.1	0.11
013K922048	Sediment Pulp	18.3	16.8	0.10	153.6	0.023	<20	0.78	0.015	0.03	<0.1	1.5	0.04	0.32	206	1.9	<0.02	1.6	0.50	<0.1	0.03
013K922049	Sediment Pulp	13.8	7.5	0.03	195.0	0.015	<20	0.55	0.010	0.02	<0.1	0.9	<0.02	0.30	204	1.7	<0.02	1.2	0.22	<0.1	<0.02
013K922050	Sediment Pulp	29.2	17.6	0.10	185.1	0.025	<20	1.12	0.014	0.03	0.3	0.8	0.04	0.24	332	2.2	0.03	4.6	0.40	<0.1	0.03
013K922051	Sediment Pulp	19.4	14.2	0.08	175.3	0.021	<20	0.73	0.012	0.02	0.1	0.9	0.03	0.34	181	1.8	<0.02	1.4	0.31	<0.1	0.04
013K922052	Sediment Pulp	62.3	50.2	0.40	229.8	0.050	<20	3.24	0.021	0.09	0.3	3.8	0.20	0.18	446	4.3	<0.02	6.2	1.05	0.1	0.04
013K922053	Sediment Pulp	35.3	21.0	0.13	122.2	0.036	<20	1.30	0.014	0.05	0.4	1.2	0.08	0.24	185	1.8	<0.02	3.2	0.63	0.1	0.04
013K922054	Sediment Pulp	39.4	26.7	0.24	80.8	0.063	<20	1.31	0.013	0.06	0.2	1.7	0.10	0.22	97	1.0	<0.02	3.2	1.23	<0.1	0.09
013K922055	Sediment Pulp	67.4	36.6	0.12	213.3	0.047	<20	2.38	0.016	0.04	0.4	1.6	0.10	0.48	264	3.4	0.02	8.6	0.66	0.1	0.05
013K922056	Sediment Pulp	19.2	19.4	0.07	164.4	0.015	<20	1.24	0.015	0.04	1.6	0.4	0.03	0.35	141	2.7	<0.02	3.8	0.35	<0.1	<0.02
013K922057	Sediment Pulp	26.7	42.6	0.34	181.3	0.031	<20	1.90	0.007	0.03	0.2	2.5	0.10	0.38	291	2.9	<0.02	4.2	0.77	<0.1	<0.02
013K922058	Sediment Pulp	43.7	53.5	0.86	174.8	0.117	<20	1.76	0.034	0.28	0.2	6.4	0.30	0.17	315	1.3	0.04	6.5	1.56	0.2	0.11
013K922059	Sediment Pulp	64.7	35.0	0.15	228.1	0.037	<20	3.12	0.022	0.04	0.4	2.3	0.05	0.32	403	3.1	0.02	6.4	1.00	0.1	0.04
013K922060	Sediment Pulp	13.2	12.7	0.09	161.4	0.018	<20	1.33	0.012	0.02	<0.1	0.4	0.03	0.37	125	1.4	<0.02	2.1	0.16	<0.1	<0.02
013K922061	Sediment Pulp	15.7	30.8	0.11	25.5	0.015	<20	0.85	0.008	0.02	<0.1	5.8	0.10	0.51	319	4.0	<0.02	1.0	0.37	<0.1	<0.02
013K922062	Sediment Pulp	39.2	37.1	0.17	291.9	0.041	<20	3.23	0.010	0.03	0.1	1.7	0.07	0.41	233	3.8	0.03	4.5	0.30	<0.1	0.03
013K922063	Sediment Pulp	40.4	38.0	0.17	310.6	0.039	<20	3.30	0.010	0.03	0.1	1.6	0.08	0.41	241	4.2	0.03	4.6	0.28	<0.1	0.03



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922034	Sediment Pulp	0.52	1.1	0.9	<0.05	0.4	11.35	20.4	<0.02	4	0.2	1.0	4.92	18.84	3.26	0.59	2.95	0.38	2.01	0.39	1.07
013K922035	Sediment Pulp	0.37	1.6	0.5	<0.05	0.4	4.76	7.0	<0.02	1	0.1	1.6	1.26	5.56	0.84	0.22	1.00	0.12	0.65	0.14	0.37
013K922036	Sediment Pulp	0.67	0.9	0.5	<0.05	1.0	14.27	46.8	0.03	4	0.4	0.8	6.20	23.79	4.12	0.97	4.03	0.55	2.86	0.51	1.35
013K922037	Sediment Pulp	1.15	4.5	0.4	<0.05	2.7	9.46	49.2	<0.02	1	0.2	8.9	5.67	20.55	3.09	0.62	2.97	0.34	1.87	0.35	0.97
013K922038	Sediment Pulp	0.26	0.7	0.3	<0.05	1.5	7.72	12.3	<0.02	2	<0.1	0.3	2.38	10.71	1.95	0.46	1.97	0.28	1.79	0.29	0.85
013K922039	Sediment Pulp	0.75	3.8	3.3	<0.05	1.4	10.76	18.0	0.51	21	<0.1	3.7	2.99	12.62	2.69	0.50	2.31	0.29	1.85	0.35	0.96
013K922040	Sediment Pulp	0.43	0.8	0.2	<0.05	0.5	10.26	27.7	<0.02	3	0.1	1.3	4.14	16.42	3.20	0.58	2.74	0.36	1.98	0.36	1.02
013K922041	Sediment Pulp	1.18	3.8	0.4	<0.05	1.4	15.53	70.6	<0.02	<1	0.4	4.5	8.50	32.42	5.60	0.86	4.98	0.63	3.52	0.58	1.65
013K922042	Sediment Pulp	0.22	0.8	0.2	<0.05	0.5	9.80	19.4	<0.02	2	0.1	1.4	4.07	16.24	2.72	0.64	2.79	0.28	1.66	0.30	0.86
013K922043	Sediment Pulp	1.73	3.6	0.3	<0.05	1.1	34.63	108.5	0.06	4	2.0	3.2	12.56	48.22	8.68	1.42	8.21	1.15	7.05	1.27	3.35
013K922044	Sediment Pulp	1.28	4.0	0.3	<0.05	1.5	16.65	70.5	0.03	1	1.1	5.3	8.35	31.37	5.59	0.89	4.57	0.66	3.67	0.58	1.64
013K922045	Sediment Pulp	1.60	7.0	0.3	<0.05	2.7	19.47	78.7	<0.02	2	0.7	8.1	9.89	39.57	6.96	0.97	5.57	0.73	3.83	0.73	1.92
013K922046	Sediment Pulp	2.14	10.1	0.4	<0.05	6.9	19.07	71.5	<0.02	3	0.9	8.1	9.15	36.02	5.93	1.10	5.88	0.68	3.88	0.71	1.90
013K922047	Sediment Pulp	1.21	5.1	0.3	<0.05	4.8	8.77	42.6	<0.02	<1	0.2	4.1	5.18	19.34	3.46	0.55	2.66	0.34	2.07	0.34	0.88
013K922048	Sediment Pulp	0.74	2.9	0.2	<0.05	2.1	9.53	34.4	<0.02	2	0.2	2.3	4.78	19.45	3.43	0.63	2.78	0.39	2.35	0.38	1.13
013K922049	Sediment Pulp	0.39	1.6	0.1	<0.05	0.9	5.28	25.1	<0.02	2	<0.1	1.0	3.05	12.31	2.04	0.36	1.73	0.23	1.22	0.20	0.53
013K922050	Sediment Pulp	1.02	3.1	0.3	<0.05	1.3	11.88	57.1	0.03	2	0.7	2.8	7.09	26.08	4.69	0.76	3.77	0.51	2.76	0.52	1.23
013K922051	Sediment Pulp	0.57	1.6	0.2	<0.05	1.5	9.29	36.2	<0.02	2	0.3	1.7	4.78	19.67	3.55	0.67	2.93	0.41	2.20	0.38	1.05
013K922052	Sediment Pulp	1.15	7.1	0.5	<0.05	1.6	28.96	119.4	0.03	2	1.1	8.1	15.52	57.75	10.07	1.88	8.69	1.12	5.91	1.02	3.02
013K922053	Sediment Pulp	1.49	4.7	0.4	<0.05	1.8	14.95	69.5	<0.02	<1	0.7	4.4	8.57	31.67	5.05	0.82	4.12	0.55	3.29	0.54	1.51
013K922054	Sediment Pulp	1.70	7.3	0.4	<0.05	2.8	14.20	80.2	<0.02	<1	0.5	8.1	10.62	38.62	6.58	0.83	4.63	0.61	3.26	0.53	1.65
013K922055	Sediment Pulp	2.12	4.3	0.4	<0.05	2.3	27.94	121.9	0.03	<1	0.7	2.8	15.09	57.71	8.85	1.47	8.47	1.03	5.86	1.06	2.85
013K922056	Sediment Pulp	0.93	1.8	0.2	<0.05	0.8	7.61	47.0	<0.02	2	0.3	2.1	4.94	19.50	3.29	0.68	2.62	0.33	1.86	0.33	0.75
013K922057	Sediment Pulp	0.95	3.0	0.2	<0.05	0.8	13.62	61.7	<0.02	4	0.6	6.0	6.55	25.30	4.31	0.93	4.09	0.48	2.95	0.49	1.37
013K922058	Sediment Pulp	2.14	27.0	1.2	<0.05	6.4	19.66	81.6	0.05	<1	0.5	22.1	10.82	39.63	7.35	1.15	5.82	0.66	3.71	0.65	1.96
013K922059	Sediment Pulp	1.63	2.7	0.2	<0.05	2.2	21.83	127.1	0.05	3	0.8	3.8	15.44	56.54	9.10	1.83	7.19	0.92	4.89	0.86	2.19
013K922060	Sediment Pulp	1.01	1.3	0.1	0.08	0.5	8.44	28.2	<0.02	2	0.3	1.3	2.95	11.70	2.21	0.46	2.03	0.27	1.64	0.29	0.80
013K922061	Sediment Pulp	0.33	1.4	<0.1	<0.05	0.9	18.98	7.9	<0.02	4	0.2	1.7	3.49	14.69	2.87	0.65	3.01	0.40	2.63	0.54	1.60
013K922062	Sediment Pulp	1.69	2.2	0.2	<0.05	1.6	19.72	74.6	0.04	4	0.9	2.6	9.35	32.30	5.72	1.15	4.84	0.64	3.67	0.64	1.73
013K922063	Sediment Pulp	1.63	2.1	0.2	<0.05	1.6	20.41	78.2	0.04	4	0.9	2.3	9.84	33.56	5.89	1.20	4.99	0.66	3.81	0.66	1.82



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K922034	Sediment Pulp	0.17	0.96	0.12	<10	<2	
013K922035	Sediment Pulp	0.05	0.30	0.05	<10	<2	
013K922036	Sediment Pulp	0.19	1.16	0.15	<10	<2	
013K922037	Sediment Pulp	0.12	0.77	0.13	<10	<2	
013K922038	Sediment Pulp	0.10	0.66	0.09	<10	<2	
013K922039	Sediment Pulp	0.14	0.97	0.16	<10	<2	
013K922040	Sediment Pulp	0.13	0.86	0.12	<10	<2	
013K922041	Sediment Pulp	0.24	1.40	0.16	<10	<2	
013K922042	Sediment Pulp	0.09	0.70	0.11	<10	<2	
013K922043	Sediment Pulp	0.50	2.98	0.36	<10	<2	
013K922044	Sediment Pulp	0.22	1.33	0.19	<10	<2	
013K922045	Sediment Pulp	0.30	1.65	0.27	<10	<2	
013K922046	Sediment Pulp	0.25	1.50	0.23	<10	<2	
013K922047	Sediment Pulp	0.13	0.77	0.10	<10	<2	
013K922048	Sediment Pulp	0.15	0.82	0.12	<10	<2	
013K922049	Sediment Pulp	0.06	0.41	0.07	<10	<2	
013K922050	Sediment Pulp	0.17	1.10	0.14	<10	<2	
013K922051	Sediment Pulp	0.10	0.81	0.10	<10	<2	
013K922052	Sediment Pulp	0.35	2.48	0.33	<10	<2	
013K922053	Sediment Pulp	0.20	1.28	0.15	<10	<2	
013K922054	Sediment Pulp	0.19	1.17	0.14	<10	<2	
013K922055	Sediment Pulp	0.36	2.12	0.30	<10	<2	
013K922056	Sediment Pulp	0.12	0.78	0.09	<10	<2	
013K922057	Sediment Pulp	0.20	1.13	0.20	<10	<2	
013K922058	Sediment Pulp	0.30	1.89	0.25	<10	2	
013K922059	Sediment Pulp	0.29	1.98	0.26	<10	3	
013K922060	Sediment Pulp	0.10	0.62	0.08	<10	8	
013K922061	Sediment Pulp	0.21	1.46	0.23	30	8	
013K922062	Sediment Pulp	0.22	1.40	0.18	<10	2	
013K922063	Sediment Pulp	0.23	1.45	0.19	<10	2	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922064	Sediment Pulp	2.23	50.97	6.29	112.0	644	78.9	9.4	481	2.16	4.7	11.6	1.4	0.4	63.0	0.70	0.18	0.06	44	0.88	0.249
013K922065	Sediment Pulp	1.69	393.55	1.62	107.0	408	38.7	11.4	195	0.46	1.8	1.3	2.2	0.2	9.8	1.68	0.25	<0.02	19	0.99	0.041
013K922066	Sediment Pulp	5.26	84.71	5.47	142.3	455	31.6	10.7	1119	2.11	8.0	10.0	1.6	0.8	59.0	1.09	1.21	0.03	26	1.30	0.167
013K922067	Sediment Pulp	28.89	113.48	7.19	194.4	525	57.5	57.7	6319	6.12	53.7	20.0	1.5	2.2	118.8	1.53	1.02	0.04	41	1.51	0.203
013K922068	Sediment Pulp	81.71	107.68	7.02	165.9	502	52.0	80.6	>10000	11.15	295.2	36.7	1.3	2.1	119.3	1.37	1.63	0.04	54	1.35	0.220
013K922069	Sediment Pulp	9.95	42.07	80.86	297.4	598	12.2	7.9	429	1.79	34.7	8.6	1.9	1.6	60.6	1.38	0.57	0.97	22	6.27	0.065
013K922070	Sediment Pulp	3.75	71.91	5.10	97.8	269	26.2	20.8	375	1.54	2.6	2.3	2.0	1.3	27.9	0.69	0.14	0.12	27	1.38	0.124
013K922071	Sediment Pulp	5.95	248.99	2.25	173.0	277	26.0	115.8	9801	12.38	229.1	1.6	3.4	2.8	39.1	1.39	0.50	<0.02	36	1.63	0.336
013K922072	Sediment Pulp	4.51	32.13	3.47	76.7	115	19.8	5.1	137	0.82	1.7	11.9	1.1	0.5	32.7	0.38	0.08	0.06	19	0.96	0.109
013K922073	Sediment Pulp	1.27	33.87	12.14	91.4	207	34.6	14.0	355	3.05	1.5	1.7	0.9	4.8	42.4	0.14	0.09	0.10	51	0.66	0.080
013K922074	Sediment Pulp	2.16	79.11	6.21	218.2	1505	23.7	7.2	67	0.71	1.8	0.7	0.6	0.5	22.7	1.38	0.20	0.05	31	0.60	0.147
013K922075	Sediment Pulp	8.28	211.62	6.22	230.6	202	168.2	12.5	40	0.32	3.3	2.0	2.2	0.6	14.6	1.46	0.19	<0.02	7	0.74	0.029
013K922076	Sediment Pulp	3.78	191.22	4.52	109.5	207	45.1	8.3	57	0.70	12.6	1.2	0.9	0.7	13.6	1.10	0.17	<0.02	9	0.65	0.029
013K922077	Sediment Pulp	14.31	108.26	9.90	204.2	463	106.8	51.0	6664	4.48	22.8	4.6	2.5	1.5	33.3	1.29	0.26	0.07	47	0.72	0.162
013K922078	Sediment Pulp	3.12	48.06	5.78	89.9	163	27.3	9.8	166	1.17	2.1	3.8	0.7	1.1	37.7	0.46	0.18	0.03	12	0.92	0.060
013K922079	Sediment Pulp	5.50	81.80	3.99	130.2	285	73.3	19.6	165	1.97	3.1	1.5	1.5	0.9	21.5	0.68	0.15	<0.02	31	0.94	0.088
013K922080	Sediment Pulp	24.92	64.85	3.21	103.2	273	28.1	10.9	69	0.47	1.1	12.0	0.8	0.3	34.2	0.68	0.20	<0.02	12	1.21	0.072
013K922081	Sediment Pulp	1.64	58.73	9.79	85.1	87	53.9	20.8	422	3.45	6.5	1.6	1.3	6.4	30.7	0.16	0.16	0.06	65	0.69	0.075
013K922082	Sediment Pulp	9.03	69.88	3.71	112.5	410	23.6	11.7	202	0.76	2.1	6.1	0.8	0.6	33.3	0.89	0.15	<0.02	26	1.01	0.117
013K922083	Sediment Pulp	8.14	69.68	3.45	103.7	391	23.0	10.1	172	0.81	1.7	5.8	<0.2	0.2	32.0	0.70	0.14	<0.02	25	0.98	0.110
013K922084	Sediment Pulp	1.72	58.63	9.59	81.5	81	52.1	19.8	414	3.36	6.4	1.6	1.4	6.2	29.4	0.16	0.15	0.06	63	0.67	0.077
013K922085	Sediment Pulp	8.14	38.20	10.21	109.2	169	55.6	26.7	3207	4.91	3.1	2.8	1.5	5.3	27.5	0.31	0.07	0.07	61	0.60	0.102
013K922086	Sediment Pulp	3.47	32.99	6.35	91.3	114	34.8	15.4	286	2.02	1.9	3.7	0.5	1.9	29.8	0.43	0.10	0.03	35	1.15	0.093
013K922087	Sediment Pulp	1.66	117.21	6.35	140.9	406	33.6	38.5	829	4.80	1.2	1.0	1.0	1.0	19.1	0.96	0.08	<0.02	42	0.60	0.165
013K922088	Sediment Pulp	0.90	52.60	4.96	74.3	82	42.6	6.1	78	1.49	0.3	1.9	0.5	1.7	29.9	0.38	0.10	<0.02	9	0.67	0.026
013K922089	Sediment Pulp	0.73	50.00	4.97	109.8	120	25.1	12.8	232	1.51	15.0	1.4	1.7	0.5	16.2	0.56	0.25	<0.02	35	0.85	0.068
013K922090	Sediment Pulp	1.03	34.71	27.93	141.8	2840	49.5	30.5	1298	3.28	26.4	4.0	9.5	9.4	28.7	0.62	0.62	3.29	52	0.64	0.098
013K922091	Sediment Pulp	3.70	143.20	4.03	165.2	406	91.7	52.5	>10000	7.54	27.1	1.8	3.1	1.8	19.7	1.14	0.68	0.07	29	0.89	0.136
013K922092	Sediment Pulp	0.98	16.80	2.94	79.0	175	9.2	2.3	67	0.28	<0.1	2.6	<0.2	0.2	40.9	0.39	0.03	<0.02	11	0.48	0.049
013K922093	Sediment Pulp	1.70	20.62	3.76	119.5	251	14.7	11.2	300	1.18	3.4	4.2	1.5	0.8	48.6	0.69	0.19	<0.02	17	0.92	0.066



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K922064	Sediment Pulp	33.8	132.9	0.35	202.9	0.032	<20	2.85	0.019	0.06	0.2	2.5	0.09	0.21	319	4.3	<0.02	2.3	0.66	<0.1	0.03
013K922065	Sediment Pulp	15.9	23.1	0.10	28.5	0.016	<20	0.87	0.008	0.02	<0.1	6.5	0.09	0.53	339	3.8	<0.02	1.2	0.40	<0.1	<0.02
013K922066	Sediment Pulp	35.1	35.4	0.25	339.2	0.024	<20	1.97	0.018	0.05	0.1	4.7	0.15	0.26	365	4.6	0.02	2.7	0.76	<0.1	0.04
013K922067	Sediment Pulp	55.6	48.1	0.23	591.6	0.037	<20	3.88	0.009	0.04	0.1	6.8	0.30	0.31	476	6.4	<0.02	3.3	0.63	0.1	0.09
013K922068	Sediment Pulp	41.7	41.7	0.19	113.8	0.032	<20	3.08	0.009	0.04	0.4	6.2	0.20	0.89	510	18.9	0.03	3.2	0.81	0.1	0.08
013K922069	Sediment Pulp	10.7	12.4	0.59	93.4	0.042	<20	0.43	0.025	0.05	0.5	2.9	0.21	1.56	95	2.0	0.03	2.2	0.52	<0.1	0.03
013K922070	Sediment Pulp	37.1	40.7	0.21	140.9	0.033	<20	3.42	0.008	0.04	<0.1	3.2	0.12	0.32	273	1.6	<0.02	3.2	0.91	<0.1	0.03
013K922071	Sediment Pulp	26.0	35.1	0.09	238.2	0.022	<20	2.70	0.009	0.02	0.2	6.5	0.06	1.02	317	6.8	0.03	1.4	0.25	<0.1	0.15
013K922072	Sediment Pulp	23.2	22.0	0.05	141.9	0.020	<20	1.90	0.009	0.01	<0.1	1.1	0.03	0.43	205	1.6	<0.02	3.5	0.15	<0.1	0.04
013K922073	Sediment Pulp	29.9	44.8	0.98	179.7	0.152	<20	2.71	0.050	0.34	0.1	5.1	0.19	0.09	100	0.5	0.02	9.5	2.06	<0.1	0.20
013K922074	Sediment Pulp	22.0	22.1	0.07	97.4	0.015	<20	1.45	0.011	0.02	<0.1	1.1	0.11	0.72	210	2.2	<0.02	2.8	0.20	<0.1	0.04
013K922075	Sediment Pulp	16.8	20.9	0.05	49.2	0.009	<20	0.53	0.007	0.02	<0.1	3.5	0.10	0.96	222	2.9	<0.02	0.5	0.17	<0.1	0.04
013K922076	Sediment Pulp	18.8	21.0	0.12	35.8	0.016	<20	0.75	0.010	0.03	<0.1	4.2	0.08	0.94	190	2.5	<0.02	1.2	0.43	<0.1	0.03
013K922077	Sediment Pulp	26.1	50.4	0.72	585.6	0.049	<20	2.70	0.023	0.16	0.2	5.4	0.17	0.27	246	4.0	<0.02	5.1	1.03	<0.1	0.04
013K922078	Sediment Pulp	14.9	21.0	0.19	75.1	0.015	<20	0.80	0.012	0.04	<0.1	3.7	0.07	1.27	117	1.2	<0.02	1.5	0.81	<0.1	0.07
013K922079	Sediment Pulp	20.7	37.4	0.16	42.4	0.023	<20	1.96	0.011	0.05	<0.1	4.0	0.09	0.80	179	2.2	<0.02	2.0	0.45	<0.1	0.03
013K922080	Sediment Pulp	23.1	21.9	0.14	62.6	0.018	<20	1.06	0.013	0.03	0.1	2.0	0.07	0.57	257	3.0	<0.02	1.7	0.58	<0.1	0.03
013K922081	Sediment Pulp	32.6	57.7	1.28	138.4	0.157	<20	2.18	0.043	0.27	<0.1	6.3	0.13	0.27	75	0.7	<0.02	7.0	1.35	<0.1	0.23
013K922082	Sediment Pulp	29.1	27.3	0.12	103.3	0.022	<20	2.02	0.008	0.03	0.1	1.9	0.10	0.34	247	3.2	<0.02	2.4	0.38	<0.1	0.03
013K922083	Sediment Pulp	28.0	25.8	0.11	99.7	0.021	<20	1.93	0.007	0.03	0.1	1.7	0.09	0.32	278	3.1	0.03	2.2	0.37	<0.1	<0.02
013K922084	Sediment Pulp	31.6	55.9	1.26	131.2	0.150	<20	2.12	0.042	0.26	<0.1	6.2	0.13	0.27	78	0.4	0.02	6.9	1.28	<0.1	0.20
013K922085	Sediment Pulp	32.3	53.5	1.02	258.8	0.117	<20	2.98	0.044	0.27	0.1	7.5	0.16	0.11	112	1.2	<0.02	7.9	1.34	<0.1	0.11
013K922086	Sediment Pulp	20.4	33.9	0.67	104.1	0.071	<20	1.94	0.046	0.16	<0.1	4.3	0.10	0.25	221	1.1	<0.02	5.4	1.10	<0.1	0.14
013K922087	Sediment Pulp	24.3	54.7	0.13	80.2	0.040	<20	3.87	0.008	0.03	<0.1	5.5	0.14	0.24	366	4.1	<0.02	3.7	0.42	0.1	0.03
013K922088	Sediment Pulp	15.7	15.3	0.21	78.1	0.032	<20	0.69	0.019	0.04	<0.1	3.5	0.09	1.67	122	1.2	<0.02	1.6	0.62	<0.1	0.07
013K922089	Sediment Pulp	26.4	32.2	0.24	43.2	0.033	<20	1.79	0.018	0.03	<0.1	3.3	0.07	0.36	191	3.2	<0.02	3.0	0.70	<0.1	<0.02
013K922090	Sediment Pulp	44.9	53.9	0.85	177.1	0.115	<20	1.79	0.031	0.28	0.2	6.2	0.31	0.16	299	0.9	0.04	6.4	1.51	<0.1	0.10
013K922091	Sediment Pulp	30.5	28.4	0.09	789.7	0.018	<20	2.18	0.015	0.02	<0.1	6.3	0.22	0.35	297	4.1	<0.02	1.9	0.36	<0.1	0.04
013K922092	Sediment Pulp	11.1	11.4	0.08	60.6	0.018	<20	0.77	0.016	0.02	<0.1	0.9	0.03	0.60	40	2.9	<0.02	1.8	0.33	<0.1	<0.02
013K922093	Sediment Pulp	30.5	15.2	0.06	109.7	0.014	<20	2.02	0.011	0.02	<0.1	2.0	0.06	0.51	117	2.2	<0.02	1.6	0.15	<0.1	0.03



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CERTIFICATE OF ANALYSIS

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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922064	Sediment Pulp	1.15	4.2	0.2	<0.05	1.2	22.40	74.9	0.03	2	0.8	4.9	8.96	31.47	5.75	1.12	5.15	0.69	4.12	0.73
013K922065	Sediment Pulp	0.30	1.6	<0.1	<0.05	1.0	18.23	8.3	<0.02	5	0.3	2.1	3.80	15.22	3.23	0.69	3.56	0.46	2.76	0.58
013K922066	Sediment Pulp	0.86	4.4	0.2	<0.05	1.7	28.43	49.5	<0.02	10	0.4	5.5	8.55	33.13	6.21	1.41	6.63	0.85	5.09	0.92
013K922067	Sediment Pulp	1.03	3.6	0.2	<0.05	3.4	37.97	83.2	0.02	23	1.5	4.3	12.89	49.63	9.18	1.99	8.70	1.24	7.40	1.38
013K922068	Sediment Pulp	0.78	3.4	0.2	<0.05	3.1	29.70	61.8	<0.02	38	0.6	5.6	10.46	40.13	7.44	1.56	7.19	1.00	5.59	1.06
013K922069	Sediment Pulp	0.69	3.5	3.2	<0.05	1.3	10.17	17.6	0.49	26	0.2	4.0	2.72	11.61	2.42	0.51	2.23	0.28	1.62	0.35
013K922070	Sediment Pulp	1.44	3.6	0.6	<0.05	1.9	24.00	78.7	0.03	3	0.9	6.3	10.00	40.94	7.51	1.36	6.54	0.92	5.04	0.92
013K922071	Sediment Pulp	0.60	1.1	0.2	<0.05	5.3	19.27	43.4	0.02	3	0.8	1.4	6.36	23.98	4.37	0.91	4.04	0.56	3.77	0.69
013K922072	Sediment Pulp	0.81	0.8	0.6	<0.05	1.2	13.98	44.4	<0.02	<1	0.4	0.8	5.76	22.37	3.98	0.93	3.31	0.50	2.87	0.54
013K922073	Sediment Pulp	3.12	29.0	1.0	<0.05	8.8	11.61	57.4	0.04	<1	1.1	23.9	7.30	25.61	4.37	0.75	3.17	0.42	2.71	0.44
013K922074	Sediment Pulp	0.88	1.6	0.6	<0.05	1.5	12.06	43.5	<0.02	3	0.6	1.5	5.35	19.76	3.82	0.68	3.21	0.44	2.34	0.50
013K922075	Sediment Pulp	0.22	1.0	0.3	<0.05	1.5	13.13	15.3	<0.02	6	0.2	0.9	4.24	16.50	2.93	0.54	2.48	0.33	2.27	0.43
013K922076	Sediment Pulp	0.39	2.3	0.3	<0.05	1.5	16.03	21.8	<0.02	15	<0.1	3.6	4.98	20.24	3.69	0.82	3.42	0.46	2.72	0.52
013K922077	Sediment Pulp	0.74	10.7	0.4	<0.05	1.6	16.38	46.4	0.02	6	0.3	14.8	6.42	24.58	4.33	0.88	3.67	0.50	3.04	0.57
013K922078	Sediment Pulp	0.38	5.2	0.2	<0.05	2.6	13.36	19.2	<0.02	7	0.2	5.6	3.84	14.91	2.78	0.74	2.74	0.40	2.36	0.45
013K922079	Sediment Pulp	0.73	3.4	0.2	<0.05	2.2	15.11	30.8	<0.02	5	0.4	3.3	5.23	20.14	3.69	0.74	3.32	0.44	2.66	0.51
013K922080	Sediment Pulp	0.56	2.9	0.3	<0.05	1.2	17.09	33.1	<0.02	13	0.3	3.9	6.07	24.00	4.38	0.82	3.81	0.54	2.77	0.61
013K922081	Sediment Pulp	2.02	17.8	0.7	<0.05	11.5	18.41	62.9	0.03	<1	0.6	20.0	7.84	30.93	5.68	0.92	4.43	0.59	3.80	0.66
013K922082	Sediment Pulp	0.94	2.6	0.2	<0.05	1.7	18.83	51.8	<0.02	6	0.7	3.5	7.75	30.21	5.51	1.00	4.52	0.64	3.65	0.70
013K922083	Sediment Pulp	0.87	2.4	0.2	<0.05	0.9	17.74	49.0	<0.02	6	0.6	2.7	7.26	28.55	5.05	0.93	4.21	0.59	3.63	0.66
013K922084	Sediment Pulp	1.94	17.3	0.7	<0.05	11.6	17.40	62.1	0.02	2	0.9	18.8	7.83	29.85	5.31	0.95	4.53	0.60	3.61	0.66
013K922085	Sediment Pulp	1.39	20.3	0.8	<0.05	5.2	17.20	65.1	0.03	2	0.9	22.9	8.00	30.57	5.36	0.98	4.68	0.61	3.63	0.72
013K922086	Sediment Pulp	1.79	12.7	0.5	<0.05	6.2	10.00	41.7	0.02	3	0.4	14.8	5.06	18.47	3.49	0.61	2.88	0.37	2.31	0.36
013K922087	Sediment Pulp	1.02	2.4	0.2	<0.05	1.3	19.45	54.2	0.04	2	0.8	3.7	6.47	24.12	4.82	1.23	4.28	0.63	3.98	0.74
013K922088	Sediment Pulp	0.63	4.2	0.2	<0.05	3.0	9.50	20.6	<0.02	1	0.2	5.6	4.01	16.06	3.04	0.67	2.56	0.32	1.81	0.34
013K922089	Sediment Pulp	0.94	2.5	0.2	<0.05	1.4	14.11	44.2	<0.02	3	0.4	6.7	6.78	25.92	4.75	0.90	3.66	0.46	2.91	0.49
013K922090	Sediment Pulp	2.15	26.3	1.3	<0.05	6.0	19.70	79.7	0.04	1	0.8	22.9	11.04	40.77	6.75	0.95	5.34	0.64	3.58	0.69
013K922091	Sediment Pulp	0.27	1.6	0.1	<0.05	1.5	20.31	32.5	<0.02	3	0.4	1.9	7.03	27.03	5.01	1.06	4.18	0.58	3.17	0.66
013K922092	Sediment Pulp	0.44	1.7	0.2	<0.05	0.6	4.20	18.2	<0.02	<1	<0.1	1.6	2.30	9.00	1.52	0.30	1.32	0.13	0.80	0.13
013K922093	Sediment Pulp	0.44	1.0	0.1	<0.05	0.6	14.33	41.7	<0.02	2	0.4	0.9	7.15	26.70	4.44	1.00	3.47	0.48	2.59	0.51



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K922064	Sediment Pulp	0.26	1.68	0.22	<10	2	
013K922065	Sediment Pulp	0.26	1.60	0.24	<10	6	
013K922066	Sediment Pulp	0.38	2.19	0.28	<10	<2	
013K922067	Sediment Pulp	0.51	3.27	0.43	<10	<2	
013K922068	Sediment Pulp	0.39	2.53	0.32	<10	5	
013K922069	Sediment Pulp	0.15	0.90	0.15	<10	<2	
013K922070	Sediment Pulp	0.32	1.95	0.27	<10	<2	
013K922071	Sediment Pulp	0.29	1.68	0.25	<10	4	
013K922072	Sediment Pulp	0.20	1.15	0.14	<10	<2	
013K922073	Sediment Pulp	0.17	1.02	0.13	<10	<2	
013K922074	Sediment Pulp	0.17	1.08	0.12	<10	<2	
013K922075	Sediment Pulp	0.17	1.12	0.18	<10	<2	
013K922076	Sediment Pulp	0.20	1.28	0.20	<10	<2	
013K922077	Sediment Pulp	0.23	1.37	0.20	<10	<2	
013K922078	Sediment Pulp	0.17	1.15	0.16	<10	<2	
013K922079	Sediment Pulp	0.23	1.36	0.20	<10	<2	
013K922080	Sediment Pulp	0.21	1.38	0.20	<10	4	
013K922081	Sediment Pulp	0.26	1.53	0.23	<10	2	
013K922082	Sediment Pulp	0.24	1.66	0.21	<10	2	
013K922083	Sediment Pulp	0.25	1.55	0.22	<10	2	
013K922084	Sediment Pulp	0.25	1.71	0.25	<10	5	
013K922085	Sediment Pulp	0.29	1.59	0.20	<10	<2	
013K922086	Sediment Pulp	0.15	0.90	0.11	<10	<2	
013K922087	Sediment Pulp	0.28	1.73	0.21	<10	9	
013K922088	Sediment Pulp	0.13	0.74	0.10	<10	<2	
013K922089	Sediment Pulp	0.21	1.10	0.19	<10	7	
013K922090	Sediment Pulp	0.28	1.83	0.26	<10	3	
013K922091	Sediment Pulp	0.26	1.55	0.22	<10	5	
013K922092	Sediment Pulp	0.05	0.30	0.05	<10	2	
013K922093	Sediment Pulp	0.18	1.15	0.17	<10	<2	



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922094	Sediment Pulp	1.73	37.38	3.38	86.1	78	38.8	5.7	92	0.65	0.3	1.2	1.1	0.7	18.8	0.39	0.05	<0.02	9	0.81	0.036
013K922095	Sediment Pulp	9.70	44.70	88.80	313.6	662	13.3	7.9	461	1.92	35.9	9.0	3.9	1.5	66.3	1.40	0.54	0.98	23	6.61	0.069
013K922096	Sediment Pulp	40.48	52.03	3.90	103.8	481	27.0	92.1	188	5.67	2.9	11.3	1.0	1.1	34.1	0.64	0.14	<0.02	42	1.80	0.096
013K922097	Sediment Pulp	5.92	29.26	90.68	206.3	212	8.0	5.3	84	0.72	0.1	10.2	<0.2	0.2	22.5	1.89	0.03	<0.02	24	0.60	0.096
013K922098	Sediment Pulp	2.29	24.29	16.48	105.2	101	9.8	7.7	257	0.98	2.4	9.3	0.4	0.4	23.7	1.00	0.07	0.03	33	0.72	0.068
013K922099	Sediment Pulp	3.17	33.39	6.46	75.7	174	9.8	10.7	696	2.32	7.0	5.5	<0.2	0.5	17.7	0.72	0.04	<0.02	57	0.54	0.095
013K922100	Sediment Pulp	0.97	29.49	2.28	48.6	170	13.5	1.9	44	0.27	1.7	1.0	0.8	0.1	18.8	0.44	0.03	<0.02	10	0.49	0.045
013K922101	Sediment Pulp	1.38	25.32	2.98	49.7	178	13.2	2.4	76	0.44	<0.1	2.3	1.2	<0.1	24.8	0.31	<0.02	<0.02	18	0.70	0.060
013K922102	Sediment Pulp	1.89	13.34	4.71	51.3	116	12.4	4.9	87	0.59	2.7	2.7	0.6	<0.1	21.7	0.22	0.03	<0.02	23	0.40	0.051
013K922103	Sediment Pulp	26.91	37.02	6.49	104.5	287	11.4	18.6	543	4.02	10.8	5.5	0.7	0.8	24.4	0.57	0.03	0.08	41	0.68	0.115
013K922104	Sediment Pulp	14.82	46.66	7.30	109.6	419	13.0	7.1	163	1.57	4.0	5.8	1.3	0.4	35.3	0.58	0.02	0.10	40	1.07	0.155
013K922105	Sediment Pulp	3.36	31.19	7.70	58.4	359	10.4	5.8	168	1.12	7.3	3.0	<0.2	0.2	28.9	0.53	<0.02	0.08	46	0.78	0.182
013K922106	Sediment Pulp	1.36	25.16	3.01	49.5	169	13.0	2.5	78	0.43	<0.1	2.3	<0.2	0.6	25.2	0.30	0.02	0.07	19	0.72	0.067
013K922107	Sediment Pulp	0.96	34.23	26.75	139.2	2806	50.3	30.0	1319	3.28	25.9	3.7	4.5	7.8	24.9	0.54	0.64	3.27	52	0.64	0.101
013K922108	Sediment Pulp	2.99	18.69	2.97	77.5	79	20.7	7.5	83	0.82	1.0	4.2	<0.2	0.7	21.8	0.20	0.02	0.04	17	0.53	0.042
013K922109	Sediment Pulp	2.13	35.74	4.83	83.0	445	14.5	4.6	160	1.69	0.2	2.0	<0.2	0.8	54.1	0.37	0.03	0.04	38	1.46	0.217
013K922110	Sediment Pulp	4.94	39.54	2.95	67.6	140	17.3	2.8	102	0.48	0.6	2.0	<0.2	0.3	24.5	0.32	0.04	0.03	35	0.81	0.088
013K922111	Sediment Pulp	11.44	32.86	4.88	82.0	160	11.7	19.5	401	4.29	0.3	13.6	<0.2	0.6	20.6	0.48	0.02	0.05	45	0.60	0.131
013K922112	Sediment Pulp	5.13	25.60	7.01	50.7	183	10.8	2.3	147	0.75	<0.1	22.6	<0.2	0.5	57.7	0.30	0.03	0.05	32	1.80	0.174
013K922113	Sediment Pulp	3.78	12.33	3.53	45.1	108	8.8	4.5	92	0.86	<0.1	4.1	<0.2	0.2	23.7	0.22	<0.02	<0.02	37	0.63	0.056
013K922114	Sediment Pulp	0.85	94.50	2.17	81.6	105	24.6	8.2	92	0.69	1.4	1.1	0.5	0.4	18.2	0.50	0.27	<0.02	19	0.91	0.052
013K922115	Sediment Pulp	1.42	141.35	3.57	182.3	328	26.5	19.3	749	2.08	77.2	0.9	3.6	0.5	15.9	0.84	0.89	0.04	35	1.15	0.157
013K922116	Sediment Pulp	4.51	189.94	5.95	246.2	629	61.1	30.1	984	6.57	482.1	2.6	5.6	1.4	21.6	1.22	6.39	0.10	48	1.03	0.257
013K922117	Sediment Pulp	6.67	106.88	3.59	129.4	189	45.7	25.0	304	5.20	309.4	3.4	2.1	1.7	19.1	0.58	1.58	0.04	32	1.09	0.108
013K922118	Sediment Pulp	3.36	43.20	4.74	102.8	295	17.6	19.0	228	2.50	5.6	28.2	0.4	0.7	34.9	0.48	0.15	0.02	33	1.33	0.127
013K922119	Sediment Pulp	3.11	37.90	2.82	105.5	93	24.9	6.4	96	0.99	2.1	1.8	0.7	0.5	23.8	0.34	0.07	0.06	23	0.81	0.057
013K922120	Sediment Pulp	17.19	35.33	4.86	121.5	431	15.0	22.1	344	4.79	39.7	28.5	<0.2	0.7	62.6	0.54	0.11	0.05	56	1.57	0.221
013K922121	Sediment Pulp	1.70	60.52	2.61	87.4	130	66.6	6.3	88	0.53	9.2	2.2	0.3	0.5	17.1	0.45	0.46	<0.02	18	0.70	0.056
013K922122	Sediment Pulp	41.06	41.53	2.51	99.1	177	18.5	6.4	18	0.38	11.5	62.6	<0.2	0.3	23.2	0.67	0.29	<0.02	57	1.06	0.059
013K922123	Sediment Pulp	4.65	26.87	1.73	62.5	155	6.2	2.9	73	0.50	3.1	3.7	0.9	0.2	16.7	0.24	0.05	<0.02	15	0.65	0.070



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CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013K922094	Sediment Pulp			14.2	14.7	0.13	58.0	0.015	<20	0.55	0.009	0.02	<0.1	2.0	0.04	0.97	138	1.1	<0.02	1.0	0.47
013K922095	Sediment Pulp			11.2	13.3	0.63	100.8	0.043	<20	0.48	0.027	0.05	0.6	2.7	0.22	1.62	91	1.7	<0.02	2.2	0.51
013K922096	Sediment Pulp			28.7	32.9	0.08	48.6	0.029	<20	2.57	0.007	0.03	0.4	4.0	0.07	1.58	261	6.2	<0.02	2.4	0.39
013K922097	Sediment Pulp			26.8	12.8	0.04	105.6	0.020	<20	1.98	0.005	0.01	<0.1	1.2	0.05	0.27	178	2.2	<0.02	2.4	0.13
013K922098	Sediment Pulp			37.0	25.4	0.09	69.6	0.023	<20	2.00	0.013	0.02	0.1	1.8	0.06	0.33	207	2.6	<0.02	3.0	0.33
013K922099	Sediment Pulp			31.9	25.2	0.05	59.2	0.019	<20	2.23	0.009	0.01	0.2	1.8	0.04	0.22	171	2.3	<0.02	2.7	0.14
013K922100	Sediment Pulp			23.0	10.5	0.03	58.1	0.016	<20	1.38	0.004	0.01	<0.1	0.7	0.02	0.34	137	1.9	<0.02	2.3	0.13
013K922101	Sediment Pulp			35.7	12.5	0.04	119.2	0.021	<20	1.73	0.005	0.01	<0.1	0.8	0.03	0.36	162	1.8	<0.02	2.8	0.15
013K922102	Sediment Pulp			24.9	14.2	0.08	68.5	0.022	<20	1.37	0.009	0.02	<0.1	0.9	0.03	0.27	110	1.5	<0.02	2.4	0.25
013K922103	Sediment Pulp			38.4	19.5	0.07	85.8	0.037	<20	2.80	0.009	0.02	0.2	2.5	0.10	0.23	241	2.5	<0.02	5.0	0.26
013K922104	Sediment Pulp			43.8	20.0	0.09	105.7	0.046	<20	2.85	0.010	0.02	0.2	1.9	0.08	0.30	247	2.3	<0.02	6.7	0.32
013K922105	Sediment Pulp			28.2	15.5	0.10	87.0	0.047	<20	1.88	0.013	0.02	0.2	1.2	0.05	0.22	295	2.1	<0.02	9.4	0.46
013K922106	Sediment Pulp			34.2	12.9	0.05	116.3	0.020	<20	1.74	0.007	0.01	<0.1	1.2	0.03	0.35	165	2.0	<0.02	2.8	0.15
013K922107	Sediment Pulp			42.7	54.5	0.84	167.7	0.112	<20	1.67	0.032	0.27	0.3	6.2	0.30	0.17	283	0.8	0.05	6.3	1.47
013K922108	Sediment Pulp			28.8	17.4	0.23	47.0	0.034	<20	1.69	0.017	0.04	<0.1	1.8	0.06	0.37	91	0.8	<0.02	3.0	0.50
013K922109	Sediment Pulp			34.1	16.0	0.07	249.9	0.040	<20	2.27	0.010	0.01	0.2	1.7	0.08	0.56	241	2.1	<0.02	9.3	0.13
013K922110	Sediment Pulp			32.9	18.9	0.08	96.3	0.029	<20	2.42	0.008	0.01	<0.1	1.3	0.06	0.33	202	1.9	<0.02	3.0	0.17
013K922111	Sediment Pulp			37.0	21.3	0.08	56.3	0.031	<20	2.65	0.019	0.01	0.1	2.3	0.07	0.22	252	2.7	<0.02	4.3	0.16
013K922112	Sediment Pulp			38.0	18.6	0.14	168.9	0.065	<20	3.10	0.018	0.02	0.1	2.1	0.05	0.32	265	2.3	<0.02	9.0	0.39
013K922113	Sediment Pulp			23.3	14.7	0.10	56.6	0.033	<20	1.46	0.016	0.02	<0.1	1.2	0.04	0.18	119	1.0	<0.02	3.4	0.30
013K922114	Sediment Pulp			29.1	25.0	0.14	41.1	0.017	<20	1.71	0.018	0.01	<0.1	2.3	0.10	0.54	200	2.2	<0.02	1.7	0.25
013K922115	Sediment Pulp			24.8	42.5	0.18	54.7	0.026	<20	2.91	0.017	0.02	<0.1	3.7	0.10	0.42	366	3.6	0.08	3.8	0.39
013K922116	Sediment Pulp			33.8	68.4	0.38	73.3	0.030	<20	3.78	0.029	0.05	0.6	6.9	0.16	0.29	402	7.1	0.06	4.5	0.95
013K922117	Sediment Pulp			19.1	52.5	0.40	43.2	0.042	<20	2.25	0.047	0.06	0.2	6.0	0.08	0.65	168	3.9	<0.02	3.7	0.80
013K922118	Sediment Pulp			41.8	26.6	0.10	143.0	0.039	<20	3.52	0.016	0.02	0.1	3.3	0.07	0.43	195	3.8	0.03	3.9	0.21
013K922119	Sediment Pulp			22.5	17.2	0.08	61.7	0.021	<20	1.97	0.013	0.02	<0.1	1.3	0.06	0.39	107	1.8	<0.02	2.3	0.24
013K922120	Sediment Pulp			40.4	23.0	0.07	267.1	0.045	<20	3.80	0.014	0.02	0.7	2.8	0.07	0.58	229	4.0	<0.02	6.6	0.21
013K922121	Sediment Pulp			17.4	51.0	0.24	54.6	0.021	<20	1.14	0.039	0.03	<0.1	2.3	0.06	0.26	162	2.0	<0.02	1.6	0.39
013K922122	Sediment Pulp			43.1	14.9	0.06	29.2	0.022	<20	1.94	0.016	0.02	0.1	1.6	0.14	0.63	196	7.3	<0.02	2.4	0.21
013K922123	Sediment Pulp			31.4	7.3	0.06	51.3	0.015	<20	1.59	0.015	0.01	<0.1	1.0	0.04	0.28	219	1.6	<0.02	1.8	0.13



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Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922094	Sediment Pulp	0.34	1.6	0.2	<0.05	1.3	5.37	22.1	<0.02	3	0.2	2.6	3.07	12.55	2.18	0.43	1.46	0.18	1.04	0.21
013K922095	Sediment Pulp	0.66	3.5	3.3	<0.05	1.3	10.45	17.5	0.49	21	0.5	4.3	2.83	11.49	2.65	0.51	2.43	0.32	1.88	0.36
013K922096	Sediment Pulp	0.89	2.0	0.1	<0.05	2.1	17.50	54.6	<0.02	10	0.9	2.1	6.99	26.58	4.76	0.88	4.50	0.53	3.16	0.61
013K922097	Sediment Pulp	0.51	0.7	<0.1	<0.05	0.3	14.98	36.8	<0.02	4	0.7	0.7	6.89	27.39	4.91	0.90	3.84	0.50	2.78	0.52
013K922098	Sediment Pulp	0.68	1.3	0.3	<0.05	0.5	16.98	45.2	<0.02	<1	0.7	3.7	9.19	33.25	5.37	1.07	4.43	0.58	3.24	0.53
013K922099	Sediment Pulp	0.44	0.8	<0.1	<0.05	0.4	14.62	51.0	<0.02	1	0.6	1.6	7.84	30.61	5.46	0.94	4.08	0.53	2.82	0.49
013K922100	Sediment Pulp	0.45	0.7	0.1	<0.05	0.3	8.00	38.6	<0.02	<1	0.3	1.1	5.13	18.62	3.38	0.62	2.49	0.30	1.51	0.29
013K922101	Sediment Pulp	0.87	0.9	0.1	<0.05	0.4	14.33	67.6	<0.02	3	0.9	1.1	7.90	29.90	5.24	0.93	3.74	0.51	3.35	0.56
013K922102	Sediment Pulp	0.61	1.5	0.2	<0.05	0.5	13.07	49.9	<0.02	<1	0.5	2.4	6.82	25.60	4.22	0.83	3.52	0.45	2.62	0.52
013K922103	Sediment Pulp	1.05	1.4	0.2	<0.05	0.5	18.48	72.1	<0.02	7	1.0	2.4	9.46	35.03	6.56	1.05	5.35	0.66	3.97	0.68
013K922104	Sediment Pulp	1.60	1.6	0.3	<0.05	1.1	22.41	75.6	<0.02	<1	0.7	2.6	11.32	43.20	7.89	1.32	5.83	0.76	4.71	0.78
013K922105	Sediment Pulp	1.53	1.9	0.4	<0.05	1.1	11.19	51.2	0.04	<1	0.5	3.4	6.34	23.05	4.35	0.79	3.44	0.45	2.52	0.43
013K922106	Sediment Pulp	0.94	0.9	0.5	<0.05	0.7	14.62	68.1	<0.02	1	0.5	1.0	8.02	29.21	5.10	0.86	3.89	0.56	3.20	0.59
013K922107	Sediment Pulp	2.36	25.4	1.2	<0.05	6.0	19.35	77.4	0.05	<1	0.8	23.1	10.98	38.51	6.66	0.94	5.02	0.67	4.00	0.70
013K922108	Sediment Pulp	0.85	3.7	0.3	<0.05	1.1	12.14	49.3	<0.02	<1	0.3	7.0	7.69	30.26	4.93	0.93	3.82	0.50	2.84	0.47
013K922109	Sediment Pulp	1.10	0.8	0.3	<0.05	1.8	15.63	66.1	0.04	<1	0.3	0.8	7.86	31.00	4.85	1.08	3.99	0.61	3.43	0.63
013K922110	Sediment Pulp	1.39	1.0	0.3	<0.05	1.1	16.68	66.9	<0.02	<1	0.7	1.8	8.69	32.32	5.32	1.05	4.35	0.66	3.98	0.70
013K922111	Sediment Pulp	0.98	0.9	0.2	<0.05	0.4	17.35	73.5	0.03	6	0.7	1.6	9.08	35.28	6.13	1.18	4.69	0.70	3.80	0.64
013K922112	Sediment Pulp	2.33	2.0	0.5	<0.05	1.6	13.38	69.4	<0.02	2	1.1	4.0	8.69	30.95	5.17	1.04	4.36	0.62	3.34	0.57
013K922113	Sediment Pulp	0.99	1.5	0.2	<0.05	0.6	8.60	50.2	<0.02	<1	0.3	2.7	6.00	21.90	3.80	0.80	2.96	0.34	2.00	0.35
013K922114	Sediment Pulp	0.81	1.1	0.2	<0.05	0.6	16.46	38.9	<0.02	<1	0.5	2.3	7.49	28.15	4.98	0.84	4.25	0.59	3.24	0.60
013K922115	Sediment Pulp	1.27	1.8	0.2	<0.05	0.6	15.72	51.9	0.03	2	0.7	3.0	6.65	25.04	4.66	1.08	4.40	0.62	3.34	0.62
013K922116	Sediment Pulp	1.05	3.6	0.2	<0.05	1.4	19.00	58.0	0.04	12	0.5	9.1	8.35	31.78	5.76	1.21	4.71	0.70	3.80	0.71
013K922117	Sediment Pulp	1.05	4.3	0.3	<0.05	1.5	11.01	32.5	<0.02	5	0.2	10.4	4.77	17.36	3.07	0.69	2.82	0.34	1.90	0.35
013K922118	Sediment Pulp	1.28	1.5	0.2	<0.05	1.5	20.56	67.2	0.02	1	1.1	2.2	9.85	36.63	6.00	1.21	5.05	0.75	4.24	0.78
013K922119	Sediment Pulp	0.89	1.3	0.2	<0.05	0.8	13.42	46.2	<0.02	<1	0.4	1.9	6.05	23.94	4.28	0.83	3.58	0.48	2.55	0.48
013K922120	Sediment Pulp	1.41	1.2	0.3	<0.05	1.0	24.65	78.0	0.03	4	1.0	1.8	10.05	40.18	6.94	1.32	5.64	0.80	4.48	0.92
013K922121	Sediment Pulp	0.43	2.2	0.1	<0.05	0.8	10.76	20.6	<0.02	1	0.2	3.0	4.46	18.25	3.22	0.65	2.58	0.34	1.93	0.34
013K922122	Sediment Pulp	0.82	1.1	0.1	<0.05	0.9	20.74	71.7	<0.02	37	0.5	1.8	11.21	42.03	7.31	1.39	6.03	0.80	4.48	0.78
013K922123	Sediment Pulp	0.46	0.9	0.1	<0.05	0.4	11.29	33.2	<0.02	2	0.6	1.4	7.63	29.30	4.44	0.78	3.28	0.39	2.26	0.40



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Project: None Given

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CERTIFICATE OF ANALYSIS

VAN22002721.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K922094	Sediment Pulp		0.08	0.45	0.06	<10	<2
013K922095	Sediment Pulp		0.12	0.89	0.16	<10	3
013K922096	Sediment Pulp		0.24	1.51	0.25	<10	3
013K922097	Sediment Pulp		0.20	1.12	0.14	<10	<2
013K922098	Sediment Pulp		0.19	1.21	0.14	<10	2
013K922099	Sediment Pulp		0.16	1.05	0.14	<10	2
013K922100	Sediment Pulp		0.11	0.59	0.08	<10	2
013K922101	Sediment Pulp		0.18	1.03	0.16	<10	<2
013K922102	Sediment Pulp		0.16	1.05	0.13	<10	2
013K922103	Sediment Pulp		0.21	1.43	0.19	<10	<2
013K922104	Sediment Pulp		0.29	1.69	0.21	<10	3
013K922105	Sediment Pulp		0.16	0.98	0.14	<10	2
013K922106	Sediment Pulp		0.18	1.21	0.13	<10	3
013K922107	Sediment Pulp		0.25	1.69	0.24	<10	<2
013K922108	Sediment Pulp		0.15	1.04	0.12	<10	<2
013K922109	Sediment Pulp		0.23	1.38	0.17	<10	3
013K922110	Sediment Pulp		0.22	1.47	0.17	<10	<2
013K922111	Sediment Pulp		0.23	1.49	0.18	<10	2
013K922112	Sediment Pulp		0.19	1.09	0.12	<10	2
013K922113	Sediment Pulp		0.11	0.70	0.08	<10	4
013K922114	Sediment Pulp		0.22	1.52	0.22	<10	<2
013K922115	Sediment Pulp		0.24	1.47	0.19	<10	<2
013K922116	Sediment Pulp		0.27	1.76	0.26	<10	3
013K922117	Sediment Pulp		0.13	0.92	0.13	<10	<2
013K922118	Sediment Pulp		0.29	1.64	0.21	<10	<2
013K922119	Sediment Pulp		0.16	1.14	0.15	<10	3
013K922120	Sediment Pulp		0.29	2.07	0.23	<10	<2
013K922121	Sediment Pulp		0.13	0.81	0.12	<10	<2
013K922122	Sediment Pulp		0.26	1.61	0.20	<10	<2
013K922123	Sediment Pulp		0.14	0.91	0.11	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
013K922124	Sediment Pulp	9.31	42.98	82.72	308.3	625	13.2	8.3	455	1.90	35.8	8.9	1.5	1.6	61.9	1.37	0.54	0.97	23	6.70
013K922125	Sediment Pulp	8.48	270.43	7.53	206.0	735	157.5	25.4	1181	4.07	34.7	2.7	3.9	0.9	19.0	1.58	0.46	0.03	43	1.18



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CERTIFICATE OF ANALYSIS

VAN22002721.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K922124	Sediment Pulp	10.9	13.1	0.62	93.9	0.044	<20	0.45	0.029	0.06	0.6	2.6	0.23	1.63	86	1.6	0.04	2.3	0.56	<0.1	0.04
013K922125	Sediment Pulp	39.5	83.3	0.18	59.1	0.029	<20	3.67	0.022	0.02	0.2	4.6	0.20	0.35	453	8.5	0.04	3.2	0.30	0.1	0.05



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922124	Sediment Pulp	0.76	3.6	3.3	<0.05	1.4	10.50	18.8	0.52	23	<0.1	4.3	3.15	12.82	2.72	0.48	2.62	0.29	1.86	0.36	1.09
013K922125	Sediment Pulp	0.87	1.5	0.2	<0.05	1.1	26.69	54.7	0.02	15	0.9	2.7	10.00	39.64	7.14	1.30	5.90	0.84	5.06	0.95	2.52



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K922124	Sediment Pulp	0.15	0.93	0.13	<10	<2
013K922125	Sediment Pulp	0.32	2.38	0.32	<10	<2



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QUALITY CONTROL REPORT

VAN22002721.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013K921120	Sediment Pulp	6.13	48.62	16.76	122.4	314	18.0	7.8	514	1.37	1.5	10.6	0.4	0.3	47.4	0.60	1.86	<0.02	40	0.81	0.101
REP 013K921120	QC	6.13	49.98	17.14	129.1	315	17.4	7.7	535	1.42	1.9	10.5	0.6	0.4	45.4	0.59	1.87	<0.02	41	0.83	0.106
013K921159	Sediment Pulp	1.07	33.13	24.23	125.9	2679	46.1	28.4	1248	3.17	22.5	3.8	2.4	8.4	23.9	0.52	0.51	3.06	50	0.62	0.091
REP 013K921159	QC	1.06	32.34	22.91	132.8	2647	45.6	28.3	1244	3.15	22.2	3.7	1.9	8.6	23.6	0.52	0.49	2.95	50	0.62	0.092
013K921195	Sediment Pulp	2.56	85.20	5.91	159.3	712	27.7	9.3	327	3.12	1.6	2.5	<0.2	0.4	37.0	1.26	0.19	0.05	44	1.11	0.255
REP 013K921195	QC	2.63	88.32	6.17	164.0	743	28.7	9.5	337	3.20	1.5	2.6	1.1	0.4	38.7	1.29	0.20	0.05	45	1.14	0.263
013K921232	Sediment Pulp	0.99	32.83	25.08	131.4	2654	49.0	30.5	1254	3.17	24.7	3.6	2.4	7.7	26.1	0.54	0.57	3.04	50	0.63	0.097
REP 013K921232	QC	0.92	33.91	26.09	137.2	2791	51.0	30.6	1282	3.24	26.2	3.7	2.4	8.3	27.6	0.49	0.59	3.19	52	0.65	0.097
013K922025	Sediment Pulp	3.37	82.41	5.77	131.1	346	33.5	15.5	330	2.15	13.7	1.9	1.6	0.5	69.5	0.96	0.11	0.02	45	1.53	0.136
REP 013K922025	QC	3.63	82.47	6.15	128.5	381	37.0	16.6	356	2.34	15.1	2.0	0.8	0.7	76.6	1.05	0.11	0.02	49	1.64	0.139
013K922097	Sediment Pulp	5.92	29.26	90.68	206.3	212	8.0	5.3	84	0.72	0.1	10.2	<0.2	0.2	22.5	1.89	0.03	<0.02	24	0.60	0.096
REP 013K922097	QC	6.10	31.17	92.31	211.0	220	8.2	5.2	83	0.75	<0.1	10.6	0.7	0.1	23.0	1.97	0.02	<0.02	24	0.61	0.098
Reference Materials																					
STD DS11	Standard	15.33	153.91	147.08	359.6	1688	85.1	14.6	1074	3.26	45.0	2.6	52.8	9.2	68.2	2.47	6.65	11.67	52	1.12	0.077
STD DS11	Standard	14.13	150.14	140.22	356.3	1852	81.2	15.0	1063	3.24	45.6	2.6	69.5	8.9	67.9	2.54	6.39	11.82	51	1.10	0.073
STD DS11	Standard	14.92	149.07	138.91	363.1	1629	83.2	14.7	1030	3.10	44.1	2.4	42.0	8.1	64.4	2.47	6.31	11.41	50	1.05	0.071
STD DS11	Standard	13.97	149.33	130.75	348.6	1608	80.0	13.8	1085	3.18	45.9	2.5	56.3	7.2	66.7	2.24	5.92	10.33	50	1.08	0.070
STD DS11	Standard	15.40	159.19	139.58	363.6	2082	88.7	14.9	1128	3.35	45.7	2.5	66.2	7.9	66.7	2.62	6.60	12.58	53	1.12	0.076
STD DS11	Standard	16.34	151.15	148.06	351.0	2043	82.2	14.1	1076	3.20	41.9	2.7	51.7	8.8	67.1	2.59	6.37	12.29	51	1.07	0.076
STD DS11	Standard	13.77	143.89	133.11	331.7	1647	80.4	13.7	1017	3.02	41.1	2.3	41.6	7.4	62.6	2.30	6.15	11.08	48	1.03	0.068
STD DS11	Standard	14.58	149.26	142.68	357.1	1700	81.8	13.8	1047	3.15	43.6	2.5	50.1	8.4	63.7	2.34	5.99	11.60	52	1.08	0.076
STD DS11	Standard	13.52	146.21	136.29	338.9	1889	80.0	14.0	1051	3.13	42.9	2.1	40.7	6.6	67.6	2.14	6.42	11.20	50	1.07	0.072
STD OREAS262	Standard	0.58	117.66	57.76	157.6	472	67.2	27.9	550	3.27	36.6	1.2	54.7	9.9	34.8	0.63	2.13	1.00	22	3.11	0.039
STD OREAS262	Standard	0.67	118.45	58.81	155.6	478	66.9	29.2	565	3.38	38.4	1.2	56.4	10.7	35.5	0.65	2.11	1.02	22	3.16	0.040
STD OREAS262	Standard	0.64	120.21	60.56	165.9	496	68.9	30.7	580	3.43	38.6	1.2	57.6	10.5	35.6	0.70	1.88	1.05	23	3.08	0.042
STD OREAS262	Standard	0.54	112.61	50.99	148.8	449	62.3	26.9	544	3.19	36.3	1.1	47.6	8.1	33.1	0.58	1.82	0.87	21	3.03	0.037
STD OREAS262	Standard	0.66	119.76	57.28	161.3	512	69.7	29.0	574	3.45	37.1	1.2	53.3	9.2	34.9	0.60	1.46	1.05	23	3.12	0.040
STD OREAS262	Standard	0.73	120.54	60.95	153.5	492	65.4	27.6	551	3.35	37.3	1.3	55.6	10.0	34.2	0.64	1.81	1.10	22	2.97	0.039



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Project: None Given

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K921120	Sediment Pulp	42.8	44.3	0.13	169.5	0.025	<20	2.81	0.023	0.03	0.5	2.5	0.11	0.34	219	3.6	<0.02	2.6	0.37	<0.1	<0.02
REP 013K921120	QC	43.8	45.3	0.13	177.5	0.025	<20	2.90	0.024	0.03	0.4	2.3	0.11	0.35	219	3.7	<0.02	2.4	0.37	0.1	0.03
013K921159	Sediment Pulp	42.2	51.2	0.81	150.7	0.108	<20	1.69	0.032	0.27	0.2	5.7	0.28	0.16	299	0.8	0.04	5.8	1.31	0.1	0.13
REP 013K921159	QC	41.9	50.6	0.80	149.6	0.107	<20	1.69	0.032	0.27	0.2	5.6	0.28	0.16	279	0.9	0.04	5.7	1.31	0.1	0.14
013K921195	Sediment Pulp	51.9	57.5	0.28	136.4	0.026	<20	3.24	0.020	0.06	0.1	3.9	0.11	0.26	333	4.8	0.02	3.0	0.64	<0.1	0.03
REP 013K921195	QC	54.0	58.6	0.28	140.8	0.026	<20	3.30	0.020	0.06	0.1	4.2	0.12	0.27	322	4.9	<0.02	3.1	0.65	<0.1	0.03
013K921232	Sediment Pulp	40.5	53.5	0.82	158.1	0.111	<20	1.70	0.033	0.27	0.2	6.2	0.27	0.16	297	1.2	0.05	6.1	1.47	0.1	0.14
REP 013K921232	QC	43.3	55.0	0.84	166.0	0.119	<20	1.76	0.035	0.28	0.2	6.7	0.30	0.16	281	0.9	0.04	6.4	1.57	<0.1	0.17
013K922025	Sediment Pulp	33.2	39.6	0.39	215.6	0.036	<20	2.32	0.028	0.05	0.4	3.3	0.18	0.78	223	2.1	<0.02	3.9	0.82	<0.1	0.02
REP 013K922025	QC	35.0	43.0	0.42	216.8	0.043	<20	2.48	0.032	0.05	0.4	3.9	0.19	0.84	253	2.2	<0.02	4.2	0.90	<0.1	0.03
013K922097	Sediment Pulp	26.8	12.8	0.04	105.6	0.020	<20	1.98	0.005	0.01	<0.1	1.2	0.05	0.27	178	2.2	<0.02	2.4	0.13	<0.1	<0.02
REP 013K922097	QC	27.2	13.2	0.04	107.3	0.020	<20	2.02	0.006	0.01	0.1	1.2	0.04	0.28	174	2.4	<0.02	2.7	0.13	<0.1	<0.02
Reference Materials																					
STD DS11	Standard	19.8	63.3	0.91	441.1	0.102	<20	1.21	0.078	0.42	2.8	3.5	5.18	0.30	301	2.4	4.87	5.3	3.07	<0.1	0.05
STD DS11	Standard	18.8	61.7	0.90	438.3	0.099	<20	1.19	0.075	0.42	2.5	3.5	5.04	0.29	261	2.7	4.72	5.4	3.02	<0.1	0.07
STD DS11	Standard	17.4	59.5	0.85	420.0	0.096	<20	1.11	0.073	0.40	2.7	3.1	4.90	0.30	265	2.8	4.59	5.0	2.89	<0.1	0.05
STD DS11	Standard	17.0	58.8	0.88	387.7	0.093	<20	1.13	0.074	0.41	2.5	3.2	5.20	0.30	261	2.5	4.79	5.0	2.81	<0.1	0.07
STD DS11	Standard	18.2	65.1	0.90	427.3	0.099	<20	1.22	0.078	0.43	2.7	3.8	5.41	0.31	292	2.4	4.86	5.5	3.09	<0.1	0.08
STD DS11	Standard	18.7	61.4	0.87	431.4	0.099	<20	1.17	0.075	0.41	2.8	3.4	5.38	0.30	305	2.3	4.67	5.1	2.90	<0.1	0.07
STD DS11	Standard	17.7	62.5	0.83	314.3	0.095	<20	1.09	0.071	0.39	2.9	3.4	4.92	0.28	282	2.4	4.69	4.9	2.91	<0.1	0.06
STD DS11	Standard	18.0	61.4	0.87	423.2	0.097	<20	1.16	0.078	0.40	2.4	3.4	5.17	0.29	274	2.4	4.82	5.2	3.01	<0.1	0.06
STD DS11	Standard	17.8	58.6	0.85	388.7	0.094	<20	1.15	0.075	0.41	2.9	2.9	5.42	0.29	249	2.6	4.87	4.5	2.65	<0.1	0.06
STD OREAS262	Standard	17.0	42.3	1.21	254.3	0.003	<20	1.23	0.068	0.31	<0.1	3.3	0.46	0.27	175	0.4	0.26	3.9	2.47	<0.1	0.17
STD OREAS262	Standard	16.8	43.4	1.24	258.0	0.003	<20	1.25	0.069	0.32	0.1	3.5	0.50	0.27	178	1.0	0.24	4.2	2.60	<0.1	0.16
STD OREAS262	Standard	16.2	46.3	1.29	264.1	0.003	<20	1.36	0.073	0.33	0.1	3.5	0.51	0.29	171	0.7	0.24	4.5	2.57	<0.1	0.10
STD OREAS262	Standard	14.6	42.2	1.15	228.2	0.003	<20	1.19	0.070	0.31	<0.1	3.0	0.46	0.27	148	0.6	0.23	3.7	2.22	<0.1	0.21
STD OREAS262	Standard	16.3	45.8	1.26	259.4	0.003	<20	1.33	0.073	0.32	<0.1	3.6	0.51	0.28	178	0.6	0.21	4.0	2.43	<0.1	0.14
STD OREAS262	Standard	16.2	43.5	1.21	246.1	0.003	<20	1.27	0.071	0.31	0.1	3.3	0.53	0.28	188	0.5	0.26	4.2	2.39	<0.1	0.18



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K921120	Sediment Pulp	1.09	1.9	0.2	<0.05	1.3	25.83	84.8	0.03	<1	1.2	2.4	12.67	48.58	8.51	1.47	7.29	0.93	5.33	0.93	2.66
REP 013K921120	QC	1.00	1.8	0.2	<0.05	1.5	25.04	85.5	<0.02	2	1.3	2.2	11.98	48.76	7.70	1.46	7.01	0.91	5.08	1.04	2.85
013K921159	Sediment Pulp	2.12	22.6	1.0	<0.05	6.1	17.64	73.2	0.04	<1	0.6	21.2	9.55	39.68	6.56	0.94	4.82	0.60	3.46	0.62	1.73
REP 013K921159	QC	2.10	21.9	1.1	<0.05	6.1	17.59	73.6	0.04	<1	0.7	20.2	9.57	38.60	6.41	0.94	4.48	0.60	3.21	0.59	1.71
013K921195	Sediment Pulp	1.17	4.5	0.2	<0.05	1.6	37.22	77.7	0.02	4	1.0	5.2	12.93	50.97	8.91	1.82	7.91	1.05	6.36	1.20	3.37
REP 013K921195	QC	1.21	4.6	0.3	<0.05	1.6	38.19	80.1	0.02	4	1.0	5.4	13.35	52.36	9.23	1.87	8.07	1.08	6.50	1.22	3.43
013K921232	Sediment Pulp	2.30	25.0	1.2	<0.05	6.5	18.84	73.9	0.04	<1	0.5	22.6	9.75	36.82	6.34	0.99	4.82	0.64	3.71	0.64	1.85
REP 013K921232	QC	2.30	25.5	1.2	<0.05	6.9	18.96	76.9	0.05	<1	0.5	21.3	10.76	38.45	6.73	1.05	5.25	0.68	4.11	0.69	1.89
013K922025	Sediment Pulp	1.10	3.9	0.3	<0.05	1.2	18.26	52.9	<0.02	9	0.8	10.4	8.45	32.96	5.76	1.25	4.90	0.65	3.46	0.63	1.80
REP 013K922025	QC	1.13	4.5	0.3	<0.05	1.3	19.54	56.7	0.02	11	0.8	10.4	9.04	33.75	5.79	1.44	5.02	0.69	3.81	0.70	1.72
013K922097	Sediment Pulp	0.51	0.7	<0.1	<0.05	0.3	14.98	36.8	<0.02	4	0.7	0.7	6.89	27.39	4.91	0.90	3.84	0.50	2.78	0.52	1.54
REP 013K922097	QC	0.51	0.7	<0.1	<0.05	0.3	15.52	38.6	<0.02	3	0.4	0.9	7.08	29.18	5.31	0.91	4.28	0.50	3.09	0.56	1.50
Reference Materials																					
STD DS11	Standard	1.29	34.7	1.9	<0.05	2.5	7.95	38.5	0.24	42	0.9	23.2	3.99	15.04	2.53	0.51	2.28	0.25	1.61	0.28	0.84
STD DS11	Standard	1.25	35.4	1.9	<0.05	2.4	7.87	38.1	0.21	44	0.4	24.6	4.17	16.55	2.71	0.54	2.44	0.29	1.64	0.33	0.73
STD DS11	Standard	1.23	33.4	1.7	<0.05	2.2	7.56	35.0	0.27	50	0.4	22.6	3.54	13.86	2.42	0.48	2.16	0.28	1.50	0.26	0.72
STD DS11	Standard	1.30	33.6	1.7	<0.05	3.1	7.94	35.1	0.24	41	0.7	22.7	3.58	13.87	2.47	0.44	1.98	0.25	1.45	0.26	0.75
STD DS11	Standard	1.43	35.0	1.8	<0.05	2.7	8.13	38.0	0.25	46	0.7	25.4	4.12	15.66	2.89	0.54	2.67	0.29	1.60	0.28	0.90
STD DS11	Standard	1.43	31.7	1.8	<0.05	2.5	7.99	37.5	0.25	53	0.6	24.0	4.25	16.89	2.88	0.52	1.85	0.28	1.47	0.28	0.77
STD DS11	Standard	1.38	31.8	1.8	<0.05	2.5	7.68	35.0	0.26	44	0.6	22.5	3.79	14.25	2.44	0.48	2.03	0.29	1.42	0.26	0.81
STD DS11	Standard	1.34	33.6	1.8	<0.05	2.5	7.77	36.8	0.23	45	0.9	25.0	3.96	15.29	2.70	0.41	2.19	0.30	1.45	0.28	0.94
STD DS11	Standard	1.26	34.6	1.7	<0.05	2.7	8.07	35.4	0.22	44	0.7	22.2	3.51	13.60	2.44	0.48	2.06	0.25	1.45	0.26	0.74
STD OREAS262	Standard	<0.02	18.6	0.6	<0.05	5.5	10.50	33.4	0.03	<1	1.0	18.2	4.01	15.95	3.55	0.61	3.11	0.38	2.19	0.37	1.26
STD OREAS262	Standard	<0.02	19.2	0.5	<0.05	6.1	11.00	34.0	0.03	2	0.7	18.3	3.91	16.63	3.55	0.68	3.14	0.39	2.33	0.38	0.97
STD OREAS262	Standard	<0.02	20.3	0.5	<0.05	5.0	10.95	33.9	0.05	2	1.0	18.3	4.02	15.61	3.61	0.64	2.98	0.43	2.25	0.45	1.11
STD OREAS262	Standard	<0.02	17.8	0.5	<0.05	9.0	10.34	29.8	0.03	<1	1.1	16.0	3.42	13.68	3.02	0.57	2.69	0.33	1.97	0.35	0.95
STD OREAS262	Standard	<0.02	18.8	0.5	<0.05	6.1	10.58	33.5	0.04	2	1.2	19.2	4.07	15.40	3.48	0.63	3.34	0.40	2.21	0.38	1.04
STD OREAS262	Standard	<0.02	17.9	0.6	<0.05	6.2	11.02	30.9	0.03	<1	1.1	17.0	4.01	17.12	3.58	0.70	3.02	0.41	2.15	0.40	1.09



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Project: None Given

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QUALITY CONTROL REPORT

VAN22002721.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
Pulp Duplicates						
013K921120	Sediment Pulp	0.33	2.19	0.28	<10	3
REP 013K921120	QC	0.32	2.14	0.27	<10	3
013K921159	Sediment Pulp	0.25	1.81	0.23	<10	<2
REP 013K921159	QC	0.24	1.83	0.21	<10	<2
013K921195	Sediment Pulp	0.44	2.70	0.37	<10	<2
REP 013K921195	QC	0.45	2.79	0.39	<10	<2
013K921232	Sediment Pulp	0.27	1.78	0.25	<10	3
REP 013K921232	QC	0.26	1.74	0.27	<10	3
013K922025	Sediment Pulp	0.25	1.49	0.18	<10	3
REP 013K922025	QC	0.26	1.52	0.19	<10	2
013K922097	Sediment Pulp	0.20	1.12	0.14	<10	<2
REP 013K922097	QC	0.21	1.12	0.17	<10	3
Reference Materials						
STD DS11	Standard	0.12	0.74	0.12	91	189
STD DS11	Standard	0.12	0.83	0.11	86	186
STD DS11	Standard	0.09	0.76	0.10	91	171
STD DS11	Standard	0.10	0.66	0.10	102	159
STD DS11	Standard	0.11	0.84	0.11	97	182
STD DS11	Standard	0.13	0.85	0.12	96	182
STD DS11	Standard	0.11	0.72	0.10	84	180
STD DS11	Standard	0.11	0.72	0.10	81	177
STD DS11	Standard	0.10	0.68	0.09	98	162
STD OREAS262	Standard	0.11	0.92	0.15	<10	<2
STD OREAS262	Standard	0.13	0.94	0.12	<10	4
STD OREAS262	Standard	0.15	1.03	0.14	<10	<2
STD OREAS262	Standard	0.12	0.76	0.11	<10	<2
STD OREAS262	Standard	0.13	0.90	0.12	<10	3
STD OREAS262	Standard	0.15	1.01	0.12	<10	<2



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MINERAL LABORATORIES
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Client: **Geological Survey of Canada**
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: September 27, 2022

Bureau Veritas Commodities Canada Ltd.

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Page: 2 of 2

Part: 1 of 4

QUALITY CONTROL REPORT

VAN22002721.1

		AQ250 Mo ppm 0.01	AQ250 Cu ppm 0.01	AQ250 Pb ppm 0.01	AQ250 Zn ppm 0.1	AQ250 Ag ppb 2	AQ250 Ni ppm 0.1	AQ250 Co ppm 0.1	AQ250 Mn ppm 1	AQ250 Fe % 0.01	AQ250 As ppm 0.1	AQ250 U ppm 0.1	AQ250 Au ppb 0.2	AQ250 Th ppm 0.1	AQ250 Sr ppm 0.5	AQ250 Cd ppm 0.01	AQ250 Sb ppm 0.02	AQ250 Bi ppm 0.02	AQ250 V ppm 1	AQ250 Ca % 0.01	AQ250 P % 0.001
STD OREAS262	Standard	0.66	116.01	57.06	154.8	464	68.9	28.5	558	3.27	35.7	1.2	52.9	9.5	33.2	0.66	2.01	0.98	22	2.94	0.040
STD OREAS262	Standard	0.61	118.85	59.30	157.6	491	68.0	29.5	572	3.39	38.0	1.2	52.5	9.7	34.5	0.65	1.97	1.02	23	2.96	0.045
STD OREAS262	Standard	0.56	112.51	55.63	152.3	463	64.1	27.6	550	3.31	39.3	1.0	42.4	8.9	35.6	0.62	1.96	0.88	22	2.93	0.041
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	0.1	<2	<0.1	<0.1	<1	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	0.03	<0.1	<2	<0.1	<0.1	<1	<0.01	0.4	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.02	<0.01	0.1	<2	<0.1	<0.1	<1	<0.01	0.4	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	0.4	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	0.1	<0.1	<1	<0.01	0.3	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	0.02	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Project: None Given
Report Date: September 27, 2022

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Page: 2 of 2

Part: 2 of 4

QUALITY CONTROL REPORT

VAN22002721.1

		AQ250 La ppm 0.5	AQ250 Cr ppm 0.5	AQ250 Mg % 0.01	AQ250 Ba ppm 0.5	AQ250 Ti % 0.001	AQ250 B ppm 20	AQ250 Al % 0.01	AQ250 Na % 0.001	AQ250 K % 0.01	AQ250 W ppm 0.1	AQ250 Sc ppm 0.1	AQ250 Ti ppm 0.02	AQ250 S % 0.02	AQ250 Hg ppb 5	AQ250 Se ppm 0.1	AQ250 Te ppm 0.02	AQ250 Ga ppm 0.1	AQ250 Cs ppm 0.02	AQ250 Ge ppm 0.1	AQ250 Hf ppm 0.02
STD OREAS262	Standard	17.7	46.3	1.21	235.8	0.003	<20	1.26	0.073	0.32	0.1	3.4	0.46	0.28	177	0.6	0.23	4.3	2.52	<0.1	0.19
STD OREAS262	Standard	15.0	45.4	1.26	246.1	0.003	<20	1.24	0.073	0.31	0.1	3.2	0.50	0.28	173	0.5	0.25	4.1	2.36	<0.1	0.17
STD OREAS262	Standard	16.5	42.4	1.19	237.6	0.003	<20	1.30	0.070	0.32	0.1	2.9	0.50	0.28	175	0.8	0.24	3.6	2.26	<0.1	0.18
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	6	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	7	0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	0.2	<0.02	<0.02	17	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	0.2	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	0.1	<0.02	<0.02	6	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	0.1	<0.02	<0.1	<0.02	<0.1	<0.02



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Ottawa Ontario K1A 0E8 Canada

Project: None Given
Report Date: September 27, 2022

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Page: 2 of 2

Part: 3 of 4

QUALITY CONTROL REPORT

VAN22002721.1

		AQ250 Nb ppm 0.02	AQ250 Rb ppm 0.1	AQ250 Sn ppm 0.1	AQ250 Ta ppm 0.05	AQ250 Zr ppm 0.1	AQ250 Y ppm 0.01	AQ250 Ce ppm 0.1	AQ250 In ppm 0.02	AQ250 Re ppb 1	AQ250 Be ppm 0.1	AQ250 Li ppm 0.1	AQ250 Pr ppm 0.02	AQ250 Nd ppm 0.02	AQ250 Sm ppm 0.02	AQ250 Eu ppm 0.02	AQ250 Gd ppm 0.02	AQ250 Tb ppm 0.02	AQ250 Dy ppm 0.02	AQ250 Ho ppm 0.02	AQ250 Er ppm 0.02
STD OREAS262	Standard	<0.02	18.6	0.6	<0.05	7.1	10.77	35.0	0.03	<1	1.2	16.6	4.22	16.52	3.43	0.66	3.14	0.41	2.28	0.43	1.18
STD OREAS262	Standard	<0.02	17.7	0.6	<0.05	7.2	10.45	30.5	0.03	<1	0.8	17.7	3.63	14.24	3.28	0.63	3.04	0.39	2.25	0.38	1.10
STD OREAS262	Standard	<0.02	19.5	0.5	<0.05	7.7	11.27	32.3	0.03	1	1.1	16.8	3.58	14.36	3.10	0.61	2.81	0.36	2.06	0.36	0.98
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	2	<0.1	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	0.01	<0.1	<0.02	<1	0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: September 27, 2022

Page: 2 of 2

Part: 4 of 4

QUALITY CONTROL REPORT

VAN22002721.1

		AQ250 Tm ppm 0.02	AQ250 Yb ppm 0.02	AQ250 Lu ppm 0.02	AQ250 Pd ppb 10	AQ250 Pt ppb 2
STD OREAS262	Standard	0.15	0.93	0.12	<10	3
STD OREAS262	Standard	0.14	0.86	0.13	<10	3
STD OREAS262	Standard	0.13	0.79	0.11	<10	<2
STD DS11 Expected		0.11	0.75	0.11	100	172
STD OREAS262 Expected		0.14	0.86	0.13		
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	3
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	<2
BLK	Blank	<0.02	<0.02	<0.02	<10	3
BLK	Blank	<0.02	<0.02	<0.02	<10	<2



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Client:

Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Submitted By: Jessey Rice
Receiving Lab: Canada-Vancouver
Received: September 06, 2022
Analysis Start: September 09, 2022
Report Date: September 22, 2022
Page: 1 of 5

CERTIFICATE OF ANALYSIS

VAN22002722.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number 3000732409
Number of Samples: 114

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
NO PREP	114	Sorting, labeling and boxing samples received as pulps			VAN
AQ250_EXT_REE	114	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

IMM-PLP Return immediately after analysis

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Geological Survey of Canada
Room 659 - 601 Booth St.
Ottawa Ontario K1A 0E8
Canada

CC: Shauna Madore
Wendy Spirito


Martin Wong
Data Validation Specialist

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: September 22, 2022

Page: 2 of 5

Part: 1 of 4

CERTIFICATE OF ANALYSIS

VAN22002722.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922126	Sediment Pulp	5.74	107.17	2.89	138.1	285	117.3	67.5	266	2.35	35.2	1.5	0.9	0.4	13.2	0.71	0.69	<0.02	35	0.91	0.104
013K922127	Sediment Pulp	1.56	57.51	2.35	80.5	105	63.5	5.9	83	0.54	9.2	1.9	0.8	0.3	16.1	0.42	0.44	<0.02	18	0.69	0.050
013K922128	Sediment Pulp	1.56	57.46	2.42	85.7	125	61.7	6.8	107	0.54	9.3	1.7	0.7	0.4	15.9	0.42	0.43	<0.02	18	0.66	0.056
013K922129	Sediment Pulp	3.42	106.95	4.77	101.2	350	99.6	8.0	157	0.98	13.6	5.0	1.2	0.3	21.9	0.76	0.42	<0.02	28	1.29	0.100
013K922130	Sediment Pulp	1.01	34.01	5.42	94.8	145	24.1	8.0	152	1.10	1.1	1.5	<0.2	0.2	16.3	0.64	0.21	<0.02	28	0.75	0.095
013K922131	Sediment Pulp	3.24	99.61	5.85	170.9	853	25.0	16.6	734	6.93	3.3	2.2	<0.2	1.8	21.2	1.38	0.11	0.03	51	0.82	0.290
013K922132	Sediment Pulp	1.53	60.04	5.31	124.0	471	31.2	22.0	531	4.88	2.7	2.7	0.7	1.1	19.2	0.64	0.10	0.03	50	0.64	0.214
013K922133	Sediment Pulp	0.85	16.03	1.74	34.1	96	6.1	1.8	30	0.40	0.2	1.3	<0.2	0.5	12.0	0.31	0.05	<0.02	8	0.32	0.018
013K922134	Sediment Pulp	0.79	15.89	8.17	62.5	86	7.0	2.0	24	0.32	<0.1	1.3	<0.2	0.4	12.0	0.50	0.04	<0.02	7	0.33	0.016
013K922135	Sediment Pulp	5.22	65.41	4.02	110.9	380	14.7	8.3	343	0.91	2.0	13.2	<0.2	0.3	20.1	0.77	0.26	<0.02	20	0.77	0.096
013K922136	Sediment Pulp	1.33	60.59	8.69	170.9	542	24.0	15.1	221	1.64	1.6	0.7	<0.2	0.3	36.2	0.97	0.33	<0.02	25	1.31	0.146
013K922137	Sediment Pulp	12.59	125.33	55.28	233.1	574	24.4	19.0	1091	3.46	18.1	13.7	<0.2	1.3	21.8	1.79	0.13	<0.02	39	0.91	0.177
013K922138	Sediment Pulp	2.48	12.51	2.44	64.1	71	11.2	2.1	35	0.24	<0.1	4.0	<0.2	0.1	22.3	0.35	0.04	<0.02	8	0.55	0.031
013K922139	Sediment Pulp	2.23	47.51	5.25	86.1	71	119.6	13.9	257	2.10	5.7	2.7	<0.2	2.8	31.6	0.27	0.28	0.03	47	0.78	0.075
013K922140	Sediment Pulp	23.12	21.61	2.11	68.7	160	32.0	5.5	42	0.45	1.2	4.7	<0.2	0.2	19.0	0.36	0.05	<0.02	16	0.66	0.047
013K922141	Sediment Pulp	9.45	63.07	6.32	128.4	293	36.0	23.7	1441	3.72	27.4	3.2	1.1	2.3	23.6	0.56	0.12	0.04	51	0.73	0.160
013K922142	Sediment Pulp	57.39	59.79	4.71	176.1	438	86.9	25.7	1449	5.73	34.9	6.9	2.3	0.6	19.6	0.85	0.16	0.07	47	0.81	0.187
013K922143	Sediment Pulp	6.80	87.43	3.58	140.9	358	18.7	11.9	311	1.76	6.7	1.7	1.5	0.2	22.7	0.77	0.10	0.04	35	1.21	0.161
013K922144	Sediment Pulp	5.09	122.20	3.44	149.9	357	21.2	12.7	380	1.69	5.0	2.1	2.2	0.4	26.6	0.85	0.09	0.04	37	1.22	0.218
013K922145	Sediment Pulp	14.99	133.11	3.59	196.0	595	19.9	21.5	654	2.82	24.3	4.7	3.1	0.6	27.3	1.34	0.53	0.04	40	1.81	0.220
013K922146	Sediment Pulp	9.39	60.97	5.89	130.8	274	34.8	23.2	1431	3.70	27.4	3.0	1.5	1.8	24.7	0.51	0.09	0.06	48	0.73	0.150
013K922147	Sediment Pulp	9.40	56.23	3.69	101.3	303	13.2	14.8	537	3.17	1.3	2.5	1.2	0.7	14.8	0.58	0.03	0.03	29	0.56	0.191
013K922148	Sediment Pulp	6.32	119.91	5.08	128.4	266	27.0	21.3	970	4.05	48.9	4.5	1.5	2.1	24.6	0.54	0.37	0.06	45	0.70	0.217
013K922149	Sediment Pulp	0.88	32.10	23.05	134.1	2683	46.3	28.8	1282	3.19	25.6	3.4	3.1	6.6	26.2	0.49	0.50	2.72	50	0.64	0.090
013K922150	Sediment Pulp	1.92	94.51	4.08	125.0	320	18.8	21.2	425	2.37	3.3	0.9	1.5	0.2	21.8	0.59	0.07	0.04	30	1.42	0.145
013K922151	Sediment Pulp	3.24	22.26	3.16	56.3	123	9.2	2.4	91	0.64	0.3	9.7	0.3	<0.1	21.8	0.32	0.04	0.03	19	0.72	0.075
013K922152	Sediment Pulp	8.00	45.56	2.10	59.9	108	21.4	5.1	57	1.09	1.5	2.6	<0.2	0.2	25.5	0.27	0.05	<0.02	20	0.90	0.069
013K922153	Sediment Pulp	74.35	132.97	5.81	148.1	871	24.5	38.7	1018	5.65	7.4	12.9	3.4	0.7	32.4	0.84	0.11	0.07	48	1.69	0.276
013K922154	Sediment Pulp	15.18	92.98	3.56	128.2	306	59.5	9.3	295	2.92	7.4	9.3	2.4	0.8	30.9	0.67	0.11	0.06	42	0.83	0.310
013K922155	Sediment Pulp	1.75	30.61	2.32	52.3	79	16.3	2.8	27	0.34	1.2	1.4	0.6	0.4	17.2	0.30	0.10	<0.02	10	0.47	0.023



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Project: None Given
Report Date: September 22, 2022

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CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs
				ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02
013K922126	Sediment Pulp			22.1	67.3	0.13	45.9	0.016	<20	1.99	0.023	0.01	0.2	2.6	0.09	0.66	210	4.7	<0.02	1.7	0.17
013K922127	Sediment Pulp			15.9	49.0	0.23	48.1	0.020	<20	1.12	0.038	0.03	<0.1	2.0	0.06	0.25	122	1.9	<0.02	1.5	0.37
013K922128	Sediment Pulp			16.0	50.2	0.22	51.3	0.019	<20	1.08	0.032	0.03	0.1	2.1	0.07	0.24	159	2.0	<0.02	1.6	0.36
013K922129	Sediment Pulp			36.6	77.2	0.25	76.8	0.016	<20	1.62	0.018	0.02	0.1	2.2	0.09	0.31	328	4.3	<0.02	2.0	0.34
013K922130	Sediment Pulp			32.9	30.9	0.26	38.1	0.027	<20	1.81	0.018	0.04	<0.1	2.0	0.09	0.34	132	2.4	<0.02	3.1	0.75
013K922131	Sediment Pulp			68.8	43.1	0.19	85.1	0.034	<20	4.07	0.014	0.04	0.2	6.7	0.17	0.30	378	4.4	<0.02	3.5	0.43
013K922132	Sediment Pulp			31.6	47.1	0.47	74.8	0.047	<20	2.70	0.030	0.07	0.1	4.9	0.11	0.19	280	2.6	0.02	4.1	0.74
013K922133	Sediment Pulp			113.0	10.0	0.10	66.4	0.015	<20	0.50	0.017	0.02	<0.1	4.0	0.04	0.45	199	2.1	<0.02	1.0	0.23
013K922134	Sediment Pulp			79.6	9.5	0.09	62.3	0.013	<20	0.56	0.016	0.02	<0.1	3.4	0.04	0.39	164	1.7	<0.02	1.1	0.28
013K922135	Sediment Pulp			36.9	21.7	0.08	62.2	0.011	<20	1.85	0.011	0.01	<0.1	1.5	0.10	0.45	226	4.2	0.03	1.6	0.26
013K922136	Sediment Pulp			22.2	27.1	0.10	62.8	0.022	<20	2.13	0.012	0.02	<0.1	2.8	0.08	0.51	305	3.0	<0.02	2.4	0.47
013K922137	Sediment Pulp			60.2	26.9	0.15	110.6	0.031	<20	3.17	0.017	0.02	<0.1	3.5	0.17	0.26	417	5.4	<0.02	3.6	0.38
013K922138	Sediment Pulp			12.8	6.6	0.05	58.7	0.012	<20	0.60	0.012	0.01	<0.1	0.8	0.03	0.35	133	1.2	<0.02	1.0	0.22
013K922139	Sediment Pulp			28.4	48.2	0.76	106.9	0.106	<20	1.67	0.099	0.13	0.3	4.7	0.14	0.21	90	0.8	<0.02	4.6	0.76
013K922140	Sediment Pulp			15.8	14.1	0.07	31.3	0.013	<20	0.91	0.012	0.01	0.2	1.1	0.05	0.58	147	1.5	<0.02	1.3	0.17
013K922141	Sediment Pulp			30.7	36.3	0.68	137.0	0.080	<20	2.49	0.065	0.14	0.3	4.9	0.13	0.15	202	2.6	0.03	5.4	1.15
013K922142	Sediment Pulp			30.4	43.4	0.18	107.7	0.028	<20	2.83	0.020	0.03	1.3	2.9	0.15	0.31	265	4.1	<0.02	3.2	0.33
013K922143	Sediment Pulp			28.8	25.9	0.14	81.2	0.027	<20	2.63	0.014	0.03	<0.1	2.4	0.08	0.39	225	3.8	<0.02	2.8	0.46
013K922144	Sediment Pulp			36.4	28.3	0.20	93.2	0.034	<20	2.53	0.023	0.05	<0.1	3.1	0.14	0.35	253	3.4	<0.02	2.8	0.44
013K922145	Sediment Pulp			44.8	39.7	0.13	91.0	0.025	<20	3.10	0.017	0.02	0.4	3.7	0.21	0.35	273	4.5	<0.02	2.6	0.31
013K922146	Sediment Pulp			29.2	38.2	0.69	124.3	0.081	<20	2.45	0.065	0.16	0.2	5.1	0.12	0.14	182	2.4	<0.02	5.2	1.06
013K922147	Sediment Pulp			43.4	21.7	0.10	39.0	0.027	<20	2.70	0.013	0.02	0.1	2.5	0.10	0.19	258	2.3	<0.02	2.2	0.24
013K922148	Sediment Pulp			46.4	35.2	0.38	73.2	0.062	<20	2.76	0.052	0.10	0.2	4.2	0.14	0.16	235	2.4	<0.02	4.0	0.55
013K922149	Sediment Pulp			39.2	51.0	0.83	151.3	0.104	<20	1.71	0.032	0.28	0.2	6.0	0.29	0.16	254	0.9	0.04	5.8	1.38
013K922150	Sediment Pulp			22.5	28.4	0.12	59.7	0.033	<20	2.87	0.011	0.02	0.2	1.8	0.07	0.38	257	3.2	<0.02	4.5	0.26
013K922151	Sediment Pulp			20.2	13.0	0.06	64.1	0.030	<20	1.69	0.008	0.01	<0.1	1.0	0.03	0.25	197	1.5	<0.02	4.3	0.18
013K922152	Sediment Pulp			24.3	17.0	0.10	50.0	0.023	<20	1.95	0.013	0.02	0.3	1.5	<0.02	0.40	232	2.1	<0.02	2.3	0.25
013K922153	Sediment Pulp			35.8	38.4	0.12	135.9	0.035	<20	3.53	0.014	0.02	1.3	3.8	0.11	0.32	357	5.5	0.03	4.2	0.26
013K922154	Sediment Pulp			57.2	44.9	0.28	73.9	0.035	<20	2.89	0.028	0.06	0.6	3.5	0.15	0.24	228	2.7	<0.02	2.5	0.41
013K922155	Sediment Pulp			21.5	13.5	0.07	52.7	0.014	<20	0.52	0.010	0.01	<0.1	2.3	0.04	0.58	185	1.2	<0.02	0.9	0.21



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Project: None Given
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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922126	Sediment Pulp	0.46	0.8	0.1	<0.05	0.8	13.28	32.8	<0.02	5	0.2	0.9	5.54	21.79	3.76	0.73	3.34	0.42	2.59	0.49	1.34
013K922127	Sediment Pulp	0.41	2.2	0.1	<0.05	0.5	10.39	19.6	<0.02	4	0.1	3.2	4.06	17.12	2.81	0.58	2.69	0.33	1.71	0.38	0.99
013K922128	Sediment Pulp	0.42	2.1	0.1	<0.05	0.6	9.96	20.5	<0.02	3	0.1	3.1	4.35	16.86	3.08	0.57	2.31	0.32	1.92	0.34	0.94
013K922129	Sediment Pulp	0.54	1.4	0.1	<0.05	0.6	20.30	29.4	<0.02	5	0.4	3.4	8.99	33.72	5.67	1.15	4.75	0.61	3.40	0.64	1.98
013K922130	Sediment Pulp	0.94	3.8	0.2	<0.05	1.2	18.01	53.2	<0.02	3	1.1	6.4	8.67	34.39	5.59	1.18	5.18	0.66	3.89	0.63	1.90
013K922131	Sediment Pulp	1.30	3.0	0.2	<0.05	2.2	41.33	101.8	0.04	3	1.1	3.9	17.35	64.51	11.13	2.33	9.62	1.33	8.04	1.41	4.23
013K922132	Sediment Pulp	0.98	4.7	0.3	<0.05	1.1	20.75	62.2	0.03	1	0.8	9.9	8.37	32.32	5.83	1.29	5.11	0.74	4.05	0.78	2.19
013K922133	Sediment Pulp	0.19	1.3	<0.1	<0.05	0.5	49.85	11.2	<0.02	1	0.2	2.0	24.93	101.57	15.45	2.64	12.17	1.43	7.84	1.49	3.81
013K922134	Sediment Pulp	0.16	1.4	<0.1	<0.05	0.3	41.77	12.2	<0.02	1	0.2	1.9	19.56	81.01	12.61	2.11	11.04	1.19	6.74	1.18	3.44
013K922135	Sediment Pulp	0.42	1.2	<0.1	<0.05	0.3	17.23	34.4	<0.02	3	0.3	1.7	8.71	34.25	4.82	1.05	3.74	0.53	3.24	0.54	1.70
013K922136	Sediment Pulp	0.72	1.6	0.2	<0.05	0.6	15.32	37.2	<0.02	<1	0.3	3.9	5.79	23.59	4.21	0.90	3.79	0.47	3.06	0.59	1.49
013K922137	Sediment Pulp	0.93	2.1	0.2	<0.05	1.0	22.86	78.4	<0.02	13	0.7	4.4	14.44	53.84	8.54	1.57	6.48	0.82	4.76	0.81	2.35
013K922138	Sediment Pulp	0.32	1.0	0.1	<0.05	0.4	5.52	22.1	<0.02	<1	0.1	1.1	3.47	13.91	2.31	0.50	1.86	0.21	1.27	0.22	0.62
013K922139	Sediment Pulp	1.74	8.1	0.4	<0.05	4.0	17.82	56.8	<0.02	2	0.4	11.3	7.80	29.72	5.47	0.89	4.45	0.55	3.43	0.65	1.88
013K922140	Sediment Pulp	0.41	0.8	<0.1	<0.05	0.5	9.32	29.2	<0.02	4	0.1	1.4	4.29	17.00	3.02	0.57	2.52	0.29	2.07	0.34	0.95
013K922141	Sediment Pulp	1.04	9.5	0.5	<0.05	2.0	18.72	56.1	0.02	2	0.9	14.0	8.39	31.68	6.01	1.09	4.92	0.67	3.50	0.66	1.99
013K922142	Sediment Pulp	0.69	2.2	0.2	<0.05	0.9	19.20	55.9	0.02	3	0.6	3.1	7.70	30.07	5.26	1.05	4.51	0.59	3.42	0.63	1.72
013K922143	Sediment Pulp	1.02	2.6	0.2	<0.05	0.9	21.57	45.6	0.02	7	0.7	3.5	7.43	29.40	5.37	1.07	4.72	0.62	3.67	0.69	1.91
013K922144	Sediment Pulp	1.29	3.4	0.2	<0.05	1.2	27.58	56.3	<0.02	6	0.7	4.3	9.33	36.77	6.69	1.26	5.80	0.77	4.61	0.87	2.42
013K922145	Sediment Pulp	0.96	1.4	0.2	<0.05	1.3	29.90	62.5	0.02	6	0.7	2.4	10.92	43.04	7.62	1.51	6.67	0.87	5.02	0.94	2.56
013K922146	Sediment Pulp	0.99	10.1	0.4	<0.05	2.0	18.89	51.8	0.03	4	0.7	12.2	7.41	29.02	5.21	0.95	4.45	0.59	3.41	0.63	1.71
013K922147	Sediment Pulp	0.93	1.7	0.2	<0.05	0.9	27.09	93.5	<0.02	2	1.4	2.6	10.80	41.30	7.45	1.20	6.20	0.85	5.04	0.91	2.45
013K922148	Sediment Pulp	1.47	7.0	0.4	<0.05	1.5	28.56	99.1	0.03	1	1.0	7.6	11.36	43.21	7.58	1.16	6.28	0.86	5.05	0.94	2.65
013K922149	Sediment Pulp	1.99	25.0	1.3	<0.05	6.5	18.79	73.3	0.05	1	0.7	20.4	9.39	35.47	6.13	0.91	4.61	0.58	3.34	0.62	1.75
013K922150	Sediment Pulp	1.19	1.3	0.2	<0.05	0.8	12.75	46.9	0.03	2	0.5	2.2	5.54	21.55	3.88	0.75	3.23	0.42	2.48	0.45	1.22
013K922151	Sediment Pulp	1.21	1.0	0.2	<0.05	0.9	10.93	40.8	<0.02	<1	0.6	1.5	4.82	18.76	3.43	0.60	2.88	0.39	2.30	0.40	1.04
013K922152	Sediment Pulp	0.89	1.1	0.1	<0.05	1.0	14.08	44.0	<0.02	4	0.6	1.9	6.21	24.69	4.41	0.76	3.67	0.48	2.77	0.50	1.31
013K922153	Sediment Pulp	1.01	1.5	0.2	<0.05	1.2	24.26	56.8	0.03	13	0.8	2.4	8.96	34.69	6.22	1.30	5.43	0.73	4.24	0.78	2.13
013K922154	Sediment Pulp	1.12	3.9	0.2	<0.05	1.1	39.75	112.6	0.02	3	0.9	5.8	14.74	57.57	10.34	1.80	8.87	1.17	6.84	1.27	3.51
013K922155	Sediment Pulp	0.29	1.1	0.1	<0.05	0.9	12.51	21.6	<0.02	1	0.2	1.5	5.11	20.87	3.50	0.69	3.01	0.35	2.06	0.39	1.06



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Client: Geological Survey of Canada

Room 659 - 601 Booth St.

Ottawa Ontario K1A 0E8 Canada

Project: None Given

Report Date: September 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22002722.1

		Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250
			Tm	Yb	Lu	Pd	Pt
			ppm	ppm	ppm	ppb	ppb
			0.02	0.02	0.02	10	2
013K922126	Sediment Pulp	0.18	1.21	0.14	<10	3	
013K922127	Sediment Pulp	0.13	0.86	0.11	<10	<2	
013K922128	Sediment Pulp	0.13	0.82	0.10	<10	<2	
013K922129	Sediment Pulp	0.25	1.50	0.23	<10	<2	
013K922130	Sediment Pulp	0.26	1.60	0.20	<10	<2	
013K922131	Sediment Pulp	0.53	3.34	0.42	<10	<2	
013K922132	Sediment Pulp	0.26	1.69	0.19	<10	2	
013K922133	Sediment Pulp	0.50	2.95	0.39	<10	<2	
013K922134	Sediment Pulp	0.41	2.66	0.35	<10	<2	
013K922135	Sediment Pulp	0.22	1.32	0.19	<10	2	
013K922136	Sediment Pulp	0.17	1.32	0.17	<10	<2	
013K922137	Sediment Pulp	0.29	1.93	0.26	<10	<2	
013K922138	Sediment Pulp	0.07	0.45	0.05	<10	<2	
013K922139	Sediment Pulp	0.24	1.59	0.23	<10	<2	
013K922140	Sediment Pulp	0.10	0.77	0.09	<10	<2	
013K922141	Sediment Pulp	0.23	1.55	0.22	<10	<2	
013K922142	Sediment Pulp	0.23	1.42	0.20	<10	<2	
013K922143	Sediment Pulp	0.25	1.58	0.23	<10	<2	
013K922144	Sediment Pulp	0.32	2.03	0.30	<10	<2	
013K922145	Sediment Pulp	0.33	2.07	0.30	<10	<2	
013K922146	Sediment Pulp	0.22	1.40	0.19	<10	<2	
013K922147	Sediment Pulp	0.31	1.90	0.24	<10	<2	
013K922148	Sediment Pulp	0.35	2.20	0.30	<10	<2	
013K922149	Sediment Pulp	0.24	1.53	0.22	<10	<2	
013K922150	Sediment Pulp	0.16	0.99	0.14	<10	<2	
013K922151	Sediment Pulp	0.13	0.75	0.09	<10	<2	
013K922152	Sediment Pulp	0.16	0.99	0.13	<10	<2	
013K922153	Sediment Pulp	0.27	1.67	0.23	<10	<2	
013K922154	Sediment Pulp	0.46	2.95	0.42	<10	<2	
013K922155	Sediment Pulp	0.13	0.79	0.12	<10	<2	



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Project: None Given
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CERTIFICATE OF ANALYSIS

VAN22002722.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922156	Sediment Pulp	0.93	33.44	6.14	115.3	115	20.5	6.7	92	2.39	4.2	0.6	0.9	0.7	15.2	0.55	0.17	0.04	34	0.67	0.039
013K922157	Sediment Pulp	1.08	77.69	2.57	88.5	234	26.3	6.6	38	0.52	2.1	0.8	1.1	<0.1	13.9	0.59	0.22	<0.02	11	0.98	0.042
013K922158	Sediment Pulp	0.53	39.68	7.54	121.9	166	26.8	10.9	203	1.90	4.6	1.0	5.5	0.3	15.9	0.75	0.21	0.04	31	0.66	0.076
013K922159	Sediment Pulp	0.54	29.88	7.45	110.5	130	24.9	10.7	299	2.20	4.3	1.0	0.6	0.4	14.3	0.49	0.11	0.04	33	0.55	0.070
013K922160	Sediment Pulp	1.47	28.18	3.93	82.0	96	24.5	8.2	126	0.50	1.0	3.0	0.9	<0.1	76.7	0.36	0.18	0.02	10	0.96	0.056
013K922161	Sediment Pulp	1.63	38.17	4.11	103.3	68	20.3	11.0	360	2.05	2.2	2.0	1.1	0.5	30.7	0.32	0.65	0.04	29	0.78	0.064
013K922162	Sediment Pulp	2.81	63.86	5.29	194.3	246	36.4	14.0	401	1.86	1.6	4.9	0.6	0.3	36.1	0.74	0.14	0.04	22	1.23	0.131
013K922163	Sediment Pulp	3.21	66.35	5.38	175.7	248	36.0	14.6	377	1.82	1.7	5.5	1.7	0.2	35.3	0.76	0.15	0.04	21	1.25	0.120
013K922164	Sediment Pulp	1.60	37.70	4.06	102.9	66	20.2	11.0	351	2.01	2.3	2.0	0.9	0.5	30.0	0.33	0.65	0.04	29	0.78	0.063
013K922165	Sediment Pulp	3.07	49.54	4.62	104.1	290	26.9	8.8	310	1.83	3.3	6.0	1.1	0.3	84.3	0.50	0.54	0.05	31	1.27	0.128
013K922166	Sediment Pulp	7.52	45.35	7.40	128.4	611	16.2	22.2	1887	5.85	3.3	18.6	1.5	1.2	110.7	0.85	0.14	0.07	50	1.09	0.277
013K922167	Sediment Pulp	3.50	53.94	5.68	94.6	419	15.2	8.3	401	1.28	0.6	27.0	1.6	0.4	1241.1	0.73	0.11	0.04	34	1.94	0.155
013K922168	Sediment Pulp	9.27	41.55	78.96	307.5	641	12.5	7.8	466	1.89	34.9	8.1	2.8	1.2	64.1	1.21	0.55	0.98	22	6.36	0.066
013K922169	Sediment Pulp	14.26	21.58	15.85	96.1	123	17.4	12.4	662	1.52	1.7	34.4	0.5	0.5	61.5	0.64	0.12	0.07	25	0.76	0.074
013K922170	Sediment Pulp	1.96	66.76	6.73	144.1	152	17.7	7.9	252	0.90	1.4	22.2	0.5	0.5	27.1	0.71	0.09	0.04	31	0.86	0.057
013K922171	Sediment Pulp	15.29	73.84	6.78	177.5	844	32.8	15.8	569	3.42	1.0	19.7	1.0	1.0	23.6	1.32	0.13	0.05	40	0.70	0.111
013K922172	Sediment Pulp	4.93	99.76	9.83	220.0	468	27.3	11.0	516	1.34	1.2	140.6	1.7	0.8	58.0	3.61	0.13	0.04	56	1.48	0.091
013K922173	Sediment Pulp	3.68	66.04	2.75	97.9	164	16.1	3.9	82	0.38	0.3	66.7	0.6	0.3	25.0	0.57	0.11	0.02	18	0.79	0.039
013K922174	Sediment Pulp	4.95	85.95	5.98	218.8	580	22.1	7.8	1169	1.62	5.2	66.7	1.3	0.5	44.8	2.16	0.19	0.05	110	1.50	0.338
013K922175	Sediment Pulp	29.00	31.47	4.38	103.0	294	15.5	6.6	408	2.69	2.0	6.9	0.5	0.4	23.5	0.57	0.09	0.04	34	0.70	0.151
013K922176	Sediment Pulp	5.91	83.07	4.52	242.2	809	62.4	21.9	373	2.91	5.3	2.3	1.0	0.5	18.3	3.51	0.24	0.02	19	0.71	0.108
013K922177	Sediment Pulp	14.62	15.72	1.45	71.5	17	24.7	1.9	69	0.44	<0.1	2.1	0.4	0.5	125.1	0.83	0.13	<0.02	6	28.60	0.011
013K922178	Sediment Pulp	4.79	48.38	4.44	199.7	340	42.2	12.6	184	1.12	1.5	3.2	<0.2	1.1	29.7	2.27	0.12	0.10	13	0.80	0.046
013K922179	Sediment Pulp	5.50	110.39	7.08	506.6	1022	73.9	11.9	251	1.86	2.8	2.9	1.8	0.9	25.9	12.39	0.53	0.04	12	0.44	0.097
013K922180	Sediment Pulp	2.04	81.73	9.51	435.0	741	82.8	13.9	856	3.35	3.1	3.9	0.9	1.4	33.9	4.32	0.22	0.03	30	0.80	0.115
013K922181	Sediment Pulp	2.41	70.92	7.32	192.6	285	55.6	11.3	1164	2.47	8.8	4.3	0.6	1.7	26.7	1.43	0.19	0.04	33	0.47	0.127
013K922182	Sediment Pulp	1.46	38.82	2.27	169.5	203	28.5	4.5	86	0.59	0.7	1.2	<0.2	0.6	18.3	1.62	0.13	<0.02	8	0.60	0.034
013K922183	Sediment Pulp	1.36	38.46	2.27	155.9	203	28.2	4.8	84	0.53	0.4	1.2	<0.2	0.5	18.0	1.57	0.12	<0.02	8	0.60	0.035
013K922184	Sediment Pulp	3.00	83.98	7.28	371.3	1032	65.3	15.1	679	2.56	3.7	2.0	3.1	0.9	33.9	5.12	0.26	0.02	22	0.73	0.122
013K922185	Sediment Pulp	10.46	112.57	14.13	577.5	1398	116.4	43.0	2644	7.62	12.5	2.8	0.8	2.4	31.2	4.87	0.28	0.05	35	0.66	0.197



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K922156	Sediment Pulp	21.7	28.2	0.15	43.3	0.021	<20	1.32	0.016	0.03	<0.1	4.7	0.07	0.54	212	1.5	<0.02	1.5	0.40	<0.1	0.03
013K922157	Sediment Pulp	29.9	23.5	0.10	49.4	0.013	<20	1.31	0.007	0.02	<0.1	2.0	0.10	0.54	241	1.4	<0.02	1.1	0.39	<0.1	<0.02
013K922158	Sediment Pulp	25.4	32.6	0.29	46.8	0.033	<20	1.93	0.017	0.05	<0.1	3.3	0.10	0.26	207	1.9	<0.02	3.7	1.02	<0.1	0.03
013K922159	Sediment Pulp	24.1	30.5	0.34	47.5	0.038	<20	1.78	0.018	0.05	<0.1	3.3	0.10	0.18	166	1.5	<0.02	3.9	1.34	<0.1	0.02
013K922160	Sediment Pulp	10.5	14.5	0.11	78.1	0.013	<20	0.81	0.016	0.02	<0.1	1.0	0.05	0.59	110	1.3	<0.02	1.5	0.45	<0.1	<0.02
013K922161	Sediment Pulp	37.6	30.3	0.16	104.3	0.025	<20	2.11	0.010	0.03	<0.1	3.6	0.08	0.34	173	1.9	<0.02	1.7	0.57	<0.1	0.03
013K922162	Sediment Pulp	18.0	29.8	0.26	62.2	0.019	<20	1.89	0.022	0.05	<0.1	2.8	0.09	0.90	190	2.2	<0.02	2.2	0.60	<0.1	0.03
013K922163	Sediment Pulp	17.6	29.5	0.26	65.2	0.019	<20	1.95	0.023	0.06	<0.1	2.7	0.11	0.85	175	2.2	<0.02	2.4	0.61	<0.1	0.02
013K922164	Sediment Pulp	37.4	29.8	0.16	103.5	0.024	<20	2.10	0.011	0.03	<0.1	3.7	0.08	0.34	177	1.8	<0.02	1.7	0.57	<0.1	0.03
013K922165	Sediment Pulp	26.0	48.8	0.37	161.8	0.031	<20	2.50	0.018	0.07	0.1	2.5	0.07	0.32	240	3.7	<0.02	2.8	0.79	<0.1	0.03
013K922166	Sediment Pulp	40.1	37.2	0.17	492.7	0.038	<20	3.77	0.013	0.04	0.1	3.7	0.10	0.27	390	3.8	0.02	4.7	0.42	<0.1	0.06
013K922167	Sediment Pulp	53.2	37.6	0.19	582.3	0.032	<20	3.85	0.014	0.03	0.3	2.2	0.07	0.34	303	2.7	0.07	3.1	0.36	<0.1	0.04
013K922168	Sediment Pulp	9.9	13.0	0.62	84.7	0.043	<20	0.48	0.030	0.06	0.7	2.4	0.22	1.63	92	1.4	0.03	2.2	0.50	<0.1	0.04
013K922169	Sediment Pulp	32.9	29.4	0.26	154.5	0.037	<20	1.82	0.011	0.04	0.2	2.0	0.12	0.29	213	1.7	<0.02	3.3	0.70	<0.1	0.03
013K922170	Sediment Pulp	93.0	24.8	0.30	201.6	0.035	<20	1.56	0.025	0.05	<0.1	5.4	0.11	0.29	198	3.1	<0.02	2.2	0.56	<0.1	0.04
013K922171	Sediment Pulp	82.2	47.3	0.33	265.7	0.028	<20	2.30	0.018	0.10	<0.1	7.2	0.21	0.42	246	4.1	<0.02	2.8	0.61	<0.1	0.05
013K922172	Sediment Pulp	71.3	28.9	0.32	785.1	0.020	24	2.12	0.027	0.12	0.3	6.7	0.38	0.30	262	4.7	<0.02	2.6	0.78	<0.1	0.07
013K922173	Sediment Pulp	33.8	15.2	0.15	268.9	0.016	<20	0.80	0.015	0.04	<0.1	3.4	0.12	0.51	127	1.5	<0.02	1.1	0.50	<0.1	0.07
013K922174	Sediment Pulp	81.9	26.4	0.20	776.1	0.016	<20	2.18	0.024	0.06	1.0	4.7	0.18	0.41	277	6.5	0.03	2.6	0.51	<0.1	0.06
013K922175	Sediment Pulp	32.4	22.8	0.19	139.5	0.023	<20	2.15	0.022	0.05	0.1	2.7	0.08	0.36	159	2.6	<0.02	2.1	0.36	<0.1	0.02
013K922176	Sediment Pulp	128.4	21.3	0.12	69.3	0.014	<20	1.60	0.008	0.02	<0.1	5.2	0.21	2.27	371	4.5	<0.02	1.2	0.25	<0.1	0.03
013K922177	Sediment Pulp	5.1	7.4	0.19	93.7	0.017	<20	0.22	0.016	0.03	<0.1	0.7	0.08	0.42	93	5.8	<0.02	0.6	0.17	<0.1	0.05
013K922178	Sediment Pulp	31.5	16.8	0.10	135.4	0.014	<20	0.92	0.006	0.02	0.1	3.1	0.10	1.00	244	2.6	<0.02	1.0	0.31	<0.1	0.05
013K922179	Sediment Pulp	64.3	40.1	0.10	126.6	0.009	<20	1.03	0.008	0.02	0.2	3.5	0.13	1.28	651	7.1	<0.02	1.0	0.31	0.1	0.06
013K922180	Sediment Pulp	47.4	51.5	0.47	142.0	0.037	<20	2.30	0.028	0.06	<0.1	4.7	0.36	0.26	220	1.7	0.02	3.1	0.83	0.1	0.04
013K922181	Sediment Pulp	52.8	55.0	0.57	166.9	0.054	<20	1.49	0.035	0.11	0.1	4.4	0.15	0.21	248	2.1	0.03	3.4	0.96	<0.1	<0.02
013K922182	Sediment Pulp	65.1	11.4	0.05	116.3	0.009	<20	0.74	0.005	0.01	<0.1	3.6	0.09	0.94	226	1.6	<0.02	0.7	0.22	<0.1	<0.02
013K922183	Sediment Pulp	65.4	11.5	0.05	110.4	0.009	<20	0.78	0.005	0.01	<0.1	3.1	0.08	0.89	211	1.5	<0.02	0.7	0.21	<0.1	0.03
013K922184	Sediment Pulp	39.6	23.5	0.16	191.0	0.018	<20	1.80	0.012	0.03	0.3	3.7	0.27	1.08	753	3.5	<0.02	1.8	0.47	0.1	0.07
013K922185	Sediment Pulp	62.4	43.7	0.47	175.0	0.048	<20	2.86	0.027	0.10	<0.1	4.9	0.87	0.31	588	4.1	<0.02	3.7	0.84	<0.1	0.07



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		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922156	Sediment Pulp	0.55	2.1	0.2	<0.05	1.4	15.58	29.5	<0.02	<1	0.4	3.3	5.34	21.30	3.84	0.85	3.45	0.45	2.62	0.51	1.43
013K922157	Sediment Pulp	0.53	2.1	<0.1	<0.05	0.8	20.05	40.4	<0.02	4	0.3	3.2	7.65	30.58	5.57	1.24	5.00	0.64	3.70	0.68	1.83
013K922158	Sediment Pulp	1.01	4.6	0.3	<0.05	1.5	15.54	38.5	<0.02	<1	0.5	8.1	6.42	25.29	4.51	0.96	3.79	0.49	2.84	0.52	1.44
013K922159	Sediment Pulp	0.92	4.8	0.3	<0.05	1.2	14.67	35.6	<0.02	<1	0.5	9.7	6.14	24.42	4.33	0.90	3.64	0.46	2.70	0.49	1.34
013K922160	Sediment Pulp	0.44	1.8	<0.1	<0.05	0.7	7.29	21.4	<0.02	1	0.2	2.3	2.64	10.67	2.00	0.51	1.76	0.23	1.38	0.25	0.69
013K922161	Sediment Pulp	1.31	2.6	0.2	<0.05	1.7	34.52	61.6	<0.02	<1	0.9	3.0	9.71	38.91	7.61	1.56	7.24	0.99	5.93	1.12	3.15
013K922162	Sediment Pulp	0.67	3.8	0.2	<0.05	1.3	12.20	28.3	<0.02	2	0.4	4.4	4.08	15.62	2.81	0.66	2.47	0.33	2.04	0.39	1.10
013K922163	Sediment Pulp	0.68	4.1	0.2	<0.05	1.2	12.21	28.0	<0.02	2	0.4	4.6	4.04	15.55	2.76	0.66	2.49	0.33	2.06	0.39	1.11
013K922164	Sediment Pulp	1.29	2.5	0.2	<0.05	1.8	34.25	60.6	<0.02	<1	0.9	3.0	9.53	38.48	7.52	1.55	7.11	0.98	5.83	1.10	3.08
013K922165	Sediment Pulp	1.15	4.5	0.2	<0.05	1.6	18.59	47.3	0.02	4	0.7	5.4	6.54	25.55	4.80	0.99	4.26	0.57	3.42	0.62	1.71
013K922166	Sediment Pulp	1.22	2.7	0.2	<0.05	2.3	25.96	82.2	0.04	1	1.2	3.1	9.50	35.98	6.49	1.38	5.65	0.80	4.86	0.87	2.34
013K922167	Sediment Pulp	1.69	2.1	0.2	<0.05	2.4	30.41	89.4	0.03	2	1.2	3.0	12.58	47.46	8.17	1.66	6.93	0.95	5.62	1.02	2.80
013K922168	Sediment Pulp	0.74	3.6	3.0	<0.05	1.5	10.62	17.0	0.46	18	0.1	4.2	2.64	11.19	2.33	0.44	2.02	0.27	1.68	0.32	0.93
013K922169	Sediment Pulp	1.27	3.9	0.5	<0.05	1.8	20.23	68.4	<0.02	2	0.7	6.1	8.09	31.16	5.44	0.94	4.54	0.60	3.54	0.64	1.82
013K922170	Sediment Pulp	1.11	4.4	0.2	<0.05	2.8	56.52	73.6	<0.02	2	0.8	6.9	21.51	82.42	14.00	2.69	11.89	1.48	8.50	1.60	4.52
013K922171	Sediment Pulp	1.07	7.6	0.3	<0.05	2.5	54.79	61.7	<0.02	5	1.0	8.5	20.07	76.63	13.15	2.70	11.28	1.44	8.37	1.61	4.62
013K922172	Sediment Pulp	0.95	8.2	0.2	<0.05	3.7	61.08	55.0	<0.02	20	1.0	6.6	16.17	63.40	11.50	2.21	10.71	1.45	8.81	1.72	4.94
013K922173	Sediment Pulp	0.87	3.5	0.1	<0.05	4.5	38.15	31.1	<0.02	4	0.4	3.0	8.68	36.14	7.25	1.40	7.01	0.95	5.90	1.14	3.18
013K922174	Sediment Pulp	0.75	4.1	0.2	<0.05	3.4	61.22	70.3	0.02	6	1.2	4.2	18.86	73.35	12.85	2.50	11.29	1.49	8.88	1.72	4.88
013K922175	Sediment Pulp	0.82	3.6	0.2	<0.05	1.0	26.05	46.8	<0.02	4	0.7	3.8	8.32	32.74	6.09	1.19	5.36	0.71	4.30	0.81	2.28
013K922176	Sediment Pulp	0.45	1.7	<0.1	<0.05	1.4	41.27	32.1	<0.02	7	0.5	2.9	25.24	91.26	13.28	2.78	10.45	1.18	6.34	1.13	3.08
013K922177	Sediment Pulp	0.38	1.8	0.1	<0.05	2.3	3.31	7.4	<0.02	25	<0.1	2.0	1.14	4.55	0.78	0.13	0.66	0.07	0.50	0.09	0.27
013K922178	Sediment Pulp	0.53	1.6	0.6	<0.05	1.7	20.14	30.3	<0.02	5	0.3	2.6	7.21	28.50	4.77	1.02	4.62	0.58	3.00	0.68	1.76
013K922179	Sediment Pulp	0.30	1.8	0.3	<0.05	2.2	32.88	24.2	<0.02	9	0.7	2.2	15.11	56.40	8.92	1.97	7.88	0.91	5.30	0.95	2.52
013K922180	Sediment Pulp	0.79	4.8	0.3	<0.05	2.0	24.86	60.4	0.02	2	1.0	9.4	11.22	44.87	7.76	1.69	6.53	0.86	5.09	0.92	2.55
013K922181	Sediment Pulp	0.81	8.8	0.4	<0.05	1.2	31.81	63.3	<0.02	1	0.8	9.5	12.78	48.79	8.21	1.46	6.62	0.92	5.69	1.01	2.74
013K922182	Sediment Pulp	0.32	1.2	0.3	<0.05	1.5	39.38	47.8	<0.02	3	0.3	1.0	16.48	62.66	10.88	2.18	9.38	1.18	7.05	1.21	3.39
013K922183	Sediment Pulp	0.35	1.1	0.2	<0.05	1.5	39.61	50.2	<0.02	3	0.4	0.9	16.92	65.13	11.49	2.44	9.88	1.22	7.05	1.28	3.35
013K922184	Sediment Pulp	0.56	2.8	0.2	<0.05	1.9	26.00	45.0	<0.02	3	0.8	4.4	10.35	38.28	6.84	1.67	5.95	0.84	4.54	0.78	2.47
013K922185	Sediment Pulp	1.17	8.0	0.3	<0.05	2.6	30.74	83.0	<0.02	9	1.3	10.5	14.50	55.81	9.30	1.88	8.56	1.04	5.51	1.09	2.98



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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250
		Tm	Yb	Lu	Pd	Pt
		ppm	ppm	ppm	ppb	ppb
		0.02	0.02	0.02	10	2
013K922156	Sediment Pulp	0.19	1.17	0.17	<10	<2
013K922157	Sediment Pulp	0.23	1.43	0.20	<10	<2
013K922158	Sediment Pulp	0.18	1.14	0.16	<10	<2
013K922159	Sediment Pulp	0.17	1.09	0.15	<10	<2
013K922160	Sediment Pulp	0.09	0.54	0.08	<10	<2
013K922161	Sediment Pulp	0.41	2.62	0.37	<10	2
013K922162	Sediment Pulp	0.14	0.94	0.13	<10	2
013K922163	Sediment Pulp	0.15	0.92	0.13	<10	2
013K922164	Sediment Pulp	0.41	2.56	0.37	<10	2
013K922165	Sediment Pulp	0.22	1.37	0.18	<10	3
013K922166	Sediment Pulp	0.31	1.83	0.24	<10	<2
013K922167	Sediment Pulp	0.37	2.24	0.31	<10	<2
013K922168	Sediment Pulp	0.12	0.81	0.12	<10	<2
013K922169	Sediment Pulp	0.24	1.50	0.21	<10	<2
013K922170	Sediment Pulp	0.60	3.78	0.56	<10	<2
013K922171	Sediment Pulp	0.61	3.83	0.56	<10	<2
013K922172	Sediment Pulp	0.65	4.13	0.60	11	<2
013K922173	Sediment Pulp	0.41	2.57	0.37	<10	<2
013K922174	Sediment Pulp	0.64	4.08	0.60	<10	<2
013K922175	Sediment Pulp	0.30	1.87	0.25	<10	<2
013K922176	Sediment Pulp	0.39	2.46	0.36	<10	<2
013K922177	Sediment Pulp	0.03	0.22	0.03	<10	<2
013K922178	Sediment Pulp	0.24	1.68	0.21	<10	2
013K922179	Sediment Pulp	0.35	2.26	0.38	<10	5
013K922180	Sediment Pulp	0.33	1.91	0.28	<10	3
013K922181	Sediment Pulp	0.41	2.58	0.35	<10	5
013K922182	Sediment Pulp	0.44	2.81	0.38	<10	<2
013K922183	Sediment Pulp	0.49	2.72	0.38	<10	3
013K922184	Sediment Pulp	0.30	1.95	0.25	<10	2
013K922185	Sediment Pulp	0.36	2.32	0.29	<10	2



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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922186	Sediment Pulp	2.40	70.99	7.34	192.3	290	55.6	11.3	1163	2.47	8.5	4.1	0.5	2.2	26.3	1.37	0.17	0.03	34	0.48	0.127
013K922187	Sediment Pulp	4.67	91.42	13.89	144.0	310	54.4	19.6	1581	3.70	6.7	4.6	<0.2	6.4	42.2	1.27	0.18	0.09	48	0.74	0.105
013K922188	Sediment Pulp	2.73	84.78	5.09	501.0	607	68.5	18.1	241	4.34	0.9	1.8	0.6	1.0	29.9	5.06	0.35	<0.02	18	0.83	0.101
013K922189	Sediment Pulp	4.76	154.34	6.37	1262.6	879	401.8	27.3	662	6.42	14.4	4.1	2.4	1.8	55.5	12.65	0.90	0.03	29	1.26	0.069
013K922190	Sediment Pulp	1.46	48.37	3.61	261.7	289	66.6	6.7	70	2.02	0.8	2.2	<0.2	1.2	26.0	4.34	0.19	0.04	15	0.58	0.031
013K922191	Sediment Pulp	1.59	83.44	9.50	173.9	207	71.8	13.9	877	2.86	9.5	4.2	0.6	4.1	32.2	1.46	0.14	0.06	41	0.57	0.122
013K922192	Sediment Pulp	15.04	61.42	7.39	121.2	407	68.5	15.7	1523	2.85	10.7	6.4	<0.2	1.1	109.0	0.76	0.14	<0.02	39	0.86	0.153
013K922193	Sediment Pulp	3.38	65.88	3.74	187.1	313	61.3	5.9	159	0.51	1.9	4.7	0.4	0.7	31.8	2.55	0.19	<0.02	9	0.74	0.045
013K922194	Sediment Pulp	3.13	62.47	15.68	136.5	234	58.2	17.1	254	2.12	3.3	2.8	1.4	3.3	19.9	1.16	0.17	0.07	38	0.61	0.073
013K922195	Sediment Pulp	24.79	68.86	11.15	220.4	919	29.7	9.3	744	2.12	2.6	25.9	0.5	0.9	33.8	2.42	0.21	0.04	27	0.84	0.122
013K922196	Sediment Pulp	12.45	141.18	6.06	285.8	1358	137.1	26.1	>10000	6.78	16.9	8.4	2.0	2.1	31.5	4.87	0.32	0.02	16	1.13	0.111
013K922197	Sediment Pulp	5.44	113.77	16.17	240.9	536	117.2	25.8	1407	3.74	6.5	2.5	1.2	1.7	29.5	2.27	0.13	0.03	56	0.83	0.221
013K922198	Sediment Pulp	3.51	53.98	5.86	119.1	271	50.4	13.4	1207	3.02	5.6	3.8	<0.2	0.8	35.0	0.46	0.10	<0.02	45	0.46	0.190
013K922199	Sediment Pulp	0.98	34.65	24.83	143.4	2805	50.1	31.0	1296	3.27	25.7	3.7	1.6	8.8	27.4	0.52	0.58	3.27	52	0.64	0.098
013K922200	Sediment Pulp	3.87	37.10	6.97	126.1	371	34.3	7.7	563	2.45	40.3	4.2	<0.2	1.1	56.5	0.64	0.20	0.05	31	0.55	0.149
013K922201	Sediment Pulp	7.72	126.67	5.57	113.8	300	51.1	6.1	74	0.47	3.7	37.9	0.4	0.5	13.9	1.20	0.42	<0.02	10	0.68	0.033
013K922202	Sediment Pulp	42.01	310.31	42.43	477.3	1918	400.9	153.0	9130	8.40	117.9	91.5	3.8	3.0	40.4	6.33	0.46	0.03	62	1.31	0.326
013K922203	Sediment Pulp	8.08	126.27	5.78	110.7	318	51.9	6.4	77	0.46	4.2	38.0	0.8	0.4	14.2	1.19	0.43	<0.02	10	0.68	0.036
013K922204	Sediment Pulp	9.56	41.31	79.79	310.6	681	13.0	7.8	435	1.82	34.6	8.5	2.1	1.5	62.8	1.40	0.56	0.90	21	6.30	0.064
013K922205	Sediment Pulp	8.92	130.99	5.51	107.1	285	50.7	5.6	38	0.41	3.2	41.1	0.8	0.4	13.9	1.16	0.47	<0.02	9	0.67	0.032
013K922206	Sediment Pulp	13.06	115.51	8.24	255.8	828	95.1	31.3	1517	5.10	15.3	41.5	1.4	0.9	22.7	3.33	0.30	0.03	39	1.09	0.173
013K922207	Sediment Pulp	2.35	113.88	5.29	163.1	837	22.3	14.2	614	2.65	1.7	5.4	1.2	1.1	25.3	0.72	0.06	<0.02	58	0.51	0.386
013K922208	Sediment Pulp	1.77	103.40	2.80	177.7	355	25.5	7.4	206	0.50	2.7	3.3	<0.2	0.4	24.7	0.45	0.08	<0.02	15	0.88	0.077
013K922209	Sediment Pulp	3.79	79.52	2.08	94.0	145	51.5	7.9	56	0.23	0.5	4.1	<0.2	0.5	69.8	0.38	0.08	<0.02	10	0.91	0.039
013K922210	Sediment Pulp	2.99	86.54	3.43	136.6	262	44.5	10.3	226	0.97	0.2	21.8	0.8	0.5	53.8	0.52	0.11	<0.02	59	0.94	0.072
013K922211	Sediment Pulp	3.43	87.21	4.96	116.9	381	41.3	11.5	412	1.64	0.2	7.6	0.3	0.8	45.3	0.68	0.13	<0.02	42	0.75	0.193
013K922212	Sediment Pulp	3.96	74.62	5.85	108.3	534	25.2	26.6	616	2.92	1.0	4.7	<0.2	0.9	32.3	0.74	0.04	<0.02	46	0.91	0.254
013K922213	Sediment Pulp	3.79	47.18	3.28	98.8	513	16.4	8.6	550	2.27	3.1	9.2	<0.2	0.7	33.0	0.55	0.07	<0.02	41	0.72	0.188
013K922214	Sediment Pulp	10.33	48.43	2.22	76.0	156	19.6	8.7	89	0.47	2.1	6.2	0.8	0.3	31.5	0.45	0.10	<0.02	18	0.61	0.039
013K922215	Sediment Pulp	2.59	37.85	2.60	72.3	307	11.6	5.6	228	1.79	2.4	3.6	0.3	0.2	17.1	0.42	0.08	0.02	28	0.53	0.111



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		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
013K922186	Sediment Pulp	50.5	53.5	0.57	165.6	0.054	<20	1.50	0.036	0.11	0.1	4.7	0.16	0.21	236	1.9	<0.02	3.3	0.94	0.1	0.06
013K922187	Sediment Pulp	41.7	56.4	0.98	648.9	0.116	<20	2.24	0.051	0.25	0.1	6.7	0.19	0.25	198	2.1	<0.02	6.3	1.52	<0.1	0.15
013K922188	Sediment Pulp	27.8	20.4	0.12	41.7	0.019	<20	1.84	0.008	0.02	<0.1	3.1	0.50	2.90	527	4.5	<0.02	1.3	0.33	0.1	0.07
013K922189	Sediment Pulp	47.2	40.2	0.23	50.4	0.014	<20	2.02	0.008	0.04	<0.1	7.1	0.72	5.53	621	5.5	0.04	1.6	0.64	<0.1	0.08
013K922190	Sediment Pulp	25.2	28.9	0.16	61.9	0.011	<20	0.74	0.007	0.02	<0.1	2.9	0.12	2.10	261	2.2	<0.02	1.1	0.39	<0.1	0.04
013K922191	Sediment Pulp	55.7	60.2	0.84	206.2	0.090	<20	1.67	0.045	0.16	0.1	6.1	0.23	0.11	160	1.6	<0.02	4.5	1.34	<0.1	0.05
013K922192	Sediment Pulp	54.9	149.8	0.55	310.9	0.026	<20	2.30	0.011	0.05	0.4	4.4	0.19	0.30	347	3.4	<0.02	2.6	1.25	<0.1	0.04
013K922193	Sediment Pulp	40.2	33.0	0.12	150.8	0.010	<20	0.53	0.012	0.03	0.1	2.8	0.11	0.79	197	2.2	<0.02	0.8	0.50	<0.1	0.06
013K922194	Sediment Pulp	38.6	53.4	0.76	238.0	0.080	<20	1.51	0.021	0.11	<0.1	5.1	0.15	0.26	181	1.1	<0.02	4.3	1.25	<0.1	0.11
013K922195	Sediment Pulp	58.4	42.3	0.19	419.5	0.020	<20	1.80	0.015	0.05	0.3	3.9	0.17	0.33	297	4.9	<0.02	2.2	0.55	<0.1	0.05
013K922196	Sediment Pulp	33.3	34.0	0.16	31.4	0.014	<20	1.72	0.010	0.03	0.2	7.3	0.32	3.39	868	6.1	0.02	1.6	0.53	0.1	0.17
013K922197	Sediment Pulp	45.3	114.4	0.44	167.6	0.048	<20	3.55	0.011	0.05	0.1	5.3	0.41	0.18	384	2.4	<0.02	3.7	0.85	0.1	0.06
013K922198	Sediment Pulp	40.0	111.9	0.52	147.9	0.031	<20	2.63	0.013	0.05	0.3	3.5	0.15	0.25	246	2.2	<0.02	3.0	0.84	<0.1	<0.02
013K922199	Sediment Pulp	42.4	54.6	0.85	164.9	0.111	<20	1.76	0.033	0.28	0.2	6.2	0.28	0.16	282	1.0	0.06	6.3	1.46	<0.1	0.13
013K922200	Sediment Pulp	41.4	79.3	0.42	335.9	0.024	<20	2.50	0.015	0.05	0.2	3.9	0.06	0.31	202	2.7	<0.02	2.6	0.73	<0.1	0.06
013K922201	Sediment Pulp	25.1	64.5	0.15	63.8	0.014	<20	0.76	0.008	0.02	<0.1	3.3	0.11	0.78	247	9.0	<0.02	0.8	0.44	<0.1	0.05
013K922202	Sediment Pulp	85.5	206.7	0.45	336.2	0.047	<20	4.86	0.008	0.05	0.4	9.1	1.33	0.35	658	10.1	0.03	3.8	1.05	0.2	0.14
013K922203	Sediment Pulp	25.4	64.8	0.15	65.2	0.015	<20	0.74	0.007	0.02	<0.1	3.6	0.11	0.77	313	9.3	<0.02	1.0	0.44	<0.1	0.04
013K922204	Sediment Pulp	10.6	12.3	0.59	90.9	0.041	<20	0.45	0.027	0.05	0.5	2.6	0.21	1.56	96	1.5	0.03	2.0	0.50	<0.1	<0.02
013K922205	Sediment Pulp	25.1	61.6	0.15	61.1	0.014	<20	0.73	0.008	0.02	0.1	3.5	0.11	0.75	283	10.3	<0.02	0.8	0.45	<0.1	0.03
013K922206	Sediment Pulp	39.6	96.1	0.44	241.9	0.027	<20	2.52	0.009	0.04	0.2	5.2	0.43	0.27	408	4.8	<0.02	2.9	1.04	0.1	0.02
013K922207	Sediment Pulp	74.2	59.3	0.09	74.3	0.046	<20	5.11	0.006	0.03	0.3	3.6	0.16	0.36	318	4.8	<0.02	4.8	0.48	<0.1	0.05
013K922208	Sediment Pulp	60.2	33.2	0.06	61.0	0.016	<20	1.40	0.013	0.02	0.1	2.2	0.10	0.51	156	2.9	<0.02	1.1	0.26	<0.1	0.04
013K922209	Sediment Pulp	44.2	59.7	0.11	100.2	0.019	<20	0.68	0.009	0.02	<0.1	2.4	0.09	0.48	279	2.0	0.03	0.9	0.31	<0.1	0.07
013K922210	Sediment Pulp	45.5	54.2	0.16	118.6	0.016	<20	1.33	0.014	0.04	0.3	2.4	0.10	0.62	133	6.9	<0.02	1.5	0.39	<0.1	0.04
013K922211	Sediment Pulp	48.5	72.1	0.29	161.1	0.023	<20	2.40	0.011	0.06	0.2	3.1	0.15	0.49	229	5.0	<0.02	2.2	0.53	0.1	0.04
013K922212	Sediment Pulp	48.6	60.5	0.12	179.2	0.030	<20	3.25	0.008	0.03	0.3	3.4	0.20	0.22	287	2.1	0.02	2.7	0.52	0.1	0.03
013K922213	Sediment Pulp	48.8	36.4	0.16	136.9	0.026	<20	2.65	0.012	0.04	0.2	2.8	0.09	0.29	232	2.8	<0.02	2.3	0.63	<0.1	0.03
013K922214	Sediment Pulp	18.8	19.6	0.07	87.0	0.010	<20	0.51	0.012	0.03	0.2	1.9	0.06	0.81	145	3.3	<0.02	0.6	0.28	<0.1	0.03
013K922215	Sediment Pulp	34.4	20.4	0.11	133.8	0.018	<20	1.93	0.010	0.04	<0.1	2.0	0.03	0.22	224	1.8	<0.02	1.4	0.51	<0.1	0.02



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Project: None Given

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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922186	Sediment Pulp	0.77	8.7	0.3	<0.05	2.3	31.81	62.5	<0.02	4	1.0	9.5	12.72	48.58	8.37	1.65	7.03	0.93	5.14	1.01	2.98
013K922187	Sediment Pulp	2.08	19.0	0.6	<0.05	7.1	23.93	73.9	0.03	5	1.3	18.1	10.99	39.64	6.59	1.13	5.54	0.79	4.59	0.79	2.30
013K922188	Sediment Pulp	0.58	1.7	0.1	<0.05	2.2	14.48	33.4	<0.02	6	0.6	2.7	6.37	23.97	4.02	0.89	3.64	0.47	2.63	0.47	1.30
013K922189	Sediment Pulp	0.70	3.6	0.1	<0.05	3.2	30.77	54.6	<0.02	15	1.0	6.9	10.76	42.07	7.88	1.83	7.08	0.96	5.26	0.96	2.85
013K922190	Sediment Pulp	0.39	1.4	<0.1	<0.05	2.0	14.62	27.3	<0.02	5	0.2	2.7	6.06	23.31	3.82	1.06	3.56	0.49	2.82	0.51	1.33
013K922191	Sediment Pulp	1.29	12.6	0.5	<0.05	3.1	35.25	77.4	0.02	<1	0.8	12.9	13.78	52.93	9.05	1.58	7.70	1.04	5.99	1.11	3.28
013K922192	Sediment Pulp	0.79	4.4	0.2	<0.05	2.0	30.05	70.2	0.03	17	1.0	6.2	13.83	54.00	9.65	1.66	7.56	1.04	5.75	1.04	3.05
013K922193	Sediment Pulp	0.37	2.6	0.2	<0.05	2.4	21.96	24.3	<0.02	4	0.6	3.0	8.77	33.51	5.67	1.19	4.82	0.62	3.78	0.61	1.90
013K922194	Sediment Pulp	1.64	10.1	0.3	<0.05	5.3	21.15	57.0	<0.02	2	0.7	14.7	9.54	36.60	5.78	1.24	5.04	0.68	3.75	0.67	1.96
013K922195	Sediment Pulp	0.68	3.9	0.2	<0.05	1.7	36.32	51.2	<0.02	10	0.8	4.9	13.78	49.84	8.16	1.90	7.45	0.98	5.77	1.05	3.23
013K922196	Sediment Pulp	0.34	3.3	<0.1	<0.05	4.9	31.12	25.4	0.02	14	0.5	7.5	8.35	32.15	6.45	1.84	6.70	0.96	5.19	0.99	2.73
013K922197	Sediment Pulp	1.43	4.4	0.2	<0.05	2.4	28.48	88.0	0.04	1	1.3	6.3	12.28	45.46	8.21	1.62	7.57	0.98	5.45	0.99	2.77
013K922198	Sediment Pulp	0.71	4.2	0.3	<0.05	1.4	23.19	70.8	<0.02	<1	1.7	5.8	10.38	40.92	6.58	1.18	4.88	0.75	4.26	0.75	2.22
013K922199	Sediment Pulp	2.03	25.8	1.2	<0.05	5.8	19.05	77.7	0.04	<1	0.8	22.7	10.62	38.48	6.54	0.97	4.95	0.67	3.62	0.66	1.91
013K922200	Sediment Pulp	0.80	4.1	0.2	<0.05	2.2	32.93	59.5	<0.02	<1	1.1	5.3	10.76	43.88	8.65	1.57	7.86	1.03	5.84	1.11	3.24
013K922201	Sediment Pulp	0.40	1.5	0.1	<0.05	2.0	18.01	29.2	<0.02	13	0.3	2.4	6.42	27.41	4.80	1.05	4.59	0.56	3.32	0.60	1.77
013K922202	Sediment Pulp	1.13	4.3	0.2	<0.05	4.4	47.17	122.3	0.04	22	1.3	5.5	21.10	78.19	13.45	2.79	11.38	1.60	9.06	1.62	4.84
013K922203	Sediment Pulp	0.41	1.5	<0.1	<0.05	2.0	19.03	30.0	<0.02	11	0.2	2.1	6.58	27.03	5.22	1.13	4.31	0.58	3.48	0.62	1.74
013K922204	Sediment Pulp	0.63	3.3	3.4	<0.05	1.2	9.95	17.6	0.51	19	0.4	4.2	2.81	11.93	2.75	0.45	2.19	0.32	1.65	0.34	1.11
013K922205	Sediment Pulp	0.37	1.5	0.1	<0.05	1.7	18.33	29.1	<0.02	12	0.3	2.1	6.58	27.61	5.00	1.10	4.78	0.59	3.30	0.63	1.93
013K922206	Sediment Pulp	0.75	4.0	0.1	<0.05	1.2	28.11	65.3	0.02	7	0.5	4.7	9.71	37.02	7.43	1.44	6.15	0.92	5.41	0.98	2.97
013K922207	Sediment Pulp	2.10	1.9	0.2	<0.05	2.6	36.69	149.3	0.04	<1	2.1	2.2	20.23	75.44	13.13	2.03	10.15	1.36	7.49	1.33	3.47
013K922208	Sediment Pulp	0.71	1.0	0.2	<0.05	1.7	38.87	63.0	<0.02	3	1.1	1.0	16.56	63.86	10.24	1.69	9.07	1.10	6.59	1.26	3.72
013K922209	Sediment Pulp	0.77	1.2	0.1	<0.05	4.2	24.51	55.9	<0.02	2	0.6	1.2	11.68	46.59	7.73	1.51	6.28	0.87	4.97	0.90	2.35
013K922210	Sediment Pulp	0.92	2.2	0.2	<0.05	3.2	33.24	61.9	<0.02	<1	0.5	1.9	12.13	46.50	8.13	1.34	7.23	0.99	6.23	1.18	3.20
013K922211	Sediment Pulp	1.12	4.2	0.2	<0.05	2.2	37.20	67.4	<0.02	<1	0.9	4.2	12.73	49.05	8.96	1.45	8.03	1.13	6.73	1.25	3.76
013K922212	Sediment Pulp	1.23	2.3	0.1	<0.05	1.5	28.93	91.9	<0.02	2	1.1	2.5	12.94	50.42	8.69	1.73	8.11	1.03	6.04	1.07	3.13
013K922213	Sediment Pulp	0.96	2.9	0.1	<0.05	1.5	26.49	72.9	<0.02	<1	1.1	3.4	12.26	48.94	8.18	1.34	6.28	0.87	4.88	0.93	2.63
013K922214	Sediment Pulp	0.43	1.3	<0.1	<0.05	1.7	18.73	28.2	<0.02	8	0.3	1.3	4.87	19.71	3.70	0.67	3.46	0.47	2.91	0.58	1.70
013K922215	Sediment Pulp	0.68	2.4	0.2	<0.05	0.9	30.07	48.6	<0.02	<1	0.9	2.8	9.59	39.21	7.26	1.37	6.43	0.85	5.05	0.97	2.66



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Project: None Given

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CERTIFICATE OF ANALYSIS

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		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K922186	Sediment Pulp		0.39	2.58	0.38	<10	<2
013K922187	Sediment Pulp		0.32	2.02	0.27	<10	2
013K922188	Sediment Pulp		0.17	0.98	0.16	<10	<2
013K922189	Sediment Pulp		0.36	2.36	0.36	<10	<2
013K922190	Sediment Pulp		0.16	1.10	0.15	<10	<2
013K922191	Sediment Pulp		0.41	2.75	0.41	<10	4
013K922192	Sediment Pulp		0.35	2.30	0.40	<10	6
013K922193	Sediment Pulp		0.28	1.56	0.19	<10	3
013K922194	Sediment Pulp		0.27	1.67	0.23	<10	<2
013K922195	Sediment Pulp		0.40	2.68	0.39	<10	<2
013K922196	Sediment Pulp		0.36	2.24	0.28	<10	4
013K922197	Sediment Pulp		0.35	2.09	0.29	<10	3
013K922198	Sediment Pulp		0.33	1.91	0.28	<10	3
013K922199	Sediment Pulp		0.27	1.80	0.25	<10	<2
013K922200	Sediment Pulp		0.41	2.62	0.39	<10	<2
013K922201	Sediment Pulp		0.24	1.46	0.17	<10	4
013K922202	Sediment Pulp		0.59	3.92	0.53	<10	7
013K922203	Sediment Pulp		0.22	1.42	0.21	<10	2
013K922204	Sediment Pulp		0.14	0.94	0.13	<10	<2
013K922205	Sediment Pulp		0.24	1.36	0.21	<10	3
013K922206	Sediment Pulp		0.35	2.23	0.31	<10	7
013K922207	Sediment Pulp		0.45	2.85	0.38	<10	2
013K922208	Sediment Pulp		0.46	3.13	0.46	<10	<2
013K922209	Sediment Pulp		0.32	1.92	0.25	<10	<2
013K922210	Sediment Pulp		0.39	2.67	0.34	<10	4
013K922211	Sediment Pulp		0.48	3.01	0.44	<10	2
013K922212	Sediment Pulp		0.37	2.40	0.35	<10	5
013K922213	Sediment Pulp		0.36	2.20	0.30	<10	<2
013K922214	Sediment Pulp		0.22	1.42	0.20	<10	<2
013K922215	Sediment Pulp		0.35	2.15	0.29	<10	<2



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CERTIFICATE OF ANALYSIS

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
013K922216	Sediment Pulp	1.42	18.97	4.11	54.2	41	15.5	7.0	218	1.38	3.5	2.0	<0.2	1.9	26.4	0.25	0.06	0.03	35	0.62	0.061
013K922217	Sediment Pulp	1.76	35.39	2.08	92.5	195	13.3	7.7	222	0.95	2.5	2.5	0.2	<0.1	30.0	0.49	0.07	<0.02	71	0.73	0.097
013K922218	Sediment Pulp	25.83	75.12	3.78	160.3	150	20.7	2.4	41	0.39	2.0	1.7	0.2	0.4	14.9	3.10	0.24	<0.02	7	0.71	0.020
013K922219	Sediment Pulp	21.86	172.89	5.47	109.3	167	9.9	4.0	93	0.35	0.3	9.9	0.8	0.3	17.3	0.42	0.08	0.02	18	0.79	0.038
013K922220	Sediment Pulp	1.18	54.88	2.77	50.1	115	6.2	3.1	59	0.22	3.8	38.7	0.5	0.2	14.7	0.30	0.11	<0.02	26	0.59	0.035
013K922221	Sediment Pulp	3.78	65.45	2.57	73.4	135	10.0	5.2	121	0.55	8.8	4.8	0.4	0.9	50.4	0.36	0.08	<0.02	243	1.09	0.058
013K922222	Sediment Pulp	1.69	60.56	3.95	115.6	167	12.1	4.4	231	2.15	37.3	8.9	1.3	1.0	54.0	0.13	0.08	0.02	130	1.04	0.114
013K922223	Sediment Pulp	3.99	68.23	2.64	75.7	142	10.4	5.5	127	0.56	8.9	5.0	0.8	0.9	53.5	0.36	0.08	<0.02	255	1.15	0.059
013K922224	Sediment Pulp	0.48	36.36	3.62	63.2	429	15.0	1.8	36	0.17	0.2	0.3	<0.2	<0.1	9.5	0.55	0.04	0.04	14	0.17	0.087
013K922225	Sediment Pulp	0.85	49.40	4.53	38.8	186	7.5	3.4	71	0.41	0.1	0.8	<0.2	<0.1	19.8	0.33	0.03	<0.02	28	0.34	0.071
013K922226	Sediment Pulp	1.32	69.16	4.24	96.4	434	16.3	7.6	305	1.09	<0.1	0.9	0.2	0.1	44.3	0.45	0.04	0.03	40	0.80	0.169
013K922228	Sediment Pulp	1.85	44.29	5.72	99.3	500	16.7	12.1	483	3.31	0.4	0.9	0.3	0.5	30.9	0.60	0.05	0.04	50	0.67	0.215
013K922229	Sediment Pulp	7.52	62.62	3.45	63.3	80	16.3	6.0	75	0.85	0.6	1.3	0.2	<0.1	39.3	0.27	0.06	<0.02	24	0.57	0.055
013K922230	Sediment Pulp	2.60	136.68	5.25	154.0	389	20.6	20.6	727	10.12	1.9	1.2	0.2	0.8	26.9	0.85	0.04	0.05	74	0.55	0.333
013K922231	Sediment Pulp	1.90	60.37	4.43	111.2	176	17.0	31.4	1171	10.04	0.7	0.8	<0.2	0.9	18.7	0.62	0.04	0.04	55	0.38	0.215
013K922232	Sediment Pulp	5.20	97.73	2.69	84.7	158	9.8	12.2	230	3.12	0.3	0.8	<0.2	0.1	21.0	0.38	0.04	0.02	34	0.63	0.159
013K922233	Sediment Pulp	12.12	83.93	3.18	156.6	328	67.4	104.3	4548	7.80	1.2	1.0	0.3	1.3	40.9	0.71	0.04	0.02	50	0.52	0.211
013K922234	Sediment Pulp	2.32	127.92	6.76	110.7	306	19.8	12.2	512	1.46	0.7	2.2	0.8	1.0	32.6	0.61	0.07	0.04	37	0.70	0.178
013K922235	Sediment Pulp	4.38	87.30	2.84	89.8	162	10.9	4.5	299	0.44	4.9	7.2	1.0	0.4	112.0	0.36	0.07	<0.02	23	0.91	0.042
013K922236	Sediment Pulp	6.90	84.85	4.81	100.0	352	25.2	17.4	468	3.35	0.4	2.2	0.7	0.7	21.0	0.70	0.07	0.03	28	0.60	0.137
013K922237	Sediment Pulp	2.61	78.14	3.64	92.7	138	27.4	8.2	88	0.78	0.4	2.2	<0.2	<0.1	23.7	0.36	0.09	<0.02	23	0.64	0.063
013K922238	Sediment Pulp	19.42	90.53	8.12	180.1	710	29.7	39.1	1689	7.46	1.2	3.3	0.7	2.3	42.2	0.81	0.06	0.05	53	0.61	0.358
013K922239	Sediment Pulp	4.27	110.65	3.02	105.9	501	16.0	13.7	298	2.44	0.2	4.9	1.0	0.3	42.1	0.39	0.09	0.02	37	0.69	0.233
013K922240	Sediment Pulp	13.29	52.73	6.35	105.5	316	10.5	7.2	434	1.85	1.2	10.1	0.3	0.6	15.6	0.42	0.14	0.05	34	0.26	0.104



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Project: None Given

Report Date: September 22, 2022

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CERTIFICATE OF ANALYSIS

VAN22002722.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
013K922216	Sediment Pulp	28.7	22.2	0.28	119.0	0.061	<20	0.88	0.032	0.05	0.5	2.8	0.07	0.17	87	0.7	<0.02	2.6	0.86	<0.1
013K922217	Sediment Pulp	17.2	25.2	0.10	118.3	0.012	<20	1.45	0.013	0.03	0.2	0.8	0.07	0.31	164	2.3	<0.02	1.5	0.44	<0.1
013K922218	Sediment Pulp	8.3	15.1	0.10	62.2	0.014	<20	0.47	0.015	0.05	<0.1	1.7	0.41	0.82	172	5.2	<0.02	0.9	0.24	<0.1
013K922219	Sediment Pulp	12.6	21.1	0.14	73.8	0.018	<20	0.42	0.016	0.07	<0.1	1.5	0.05	0.80	65	1.9	<0.02	1.2	0.38	<0.1
013K922220	Sediment Pulp	44.4	18.9	0.07	120.1	0.008	<20	0.51	0.009	0.03	<0.1	2.3	0.03	0.39	151	2.4	<0.02	0.9	0.37	<0.1
013K922221	Sediment Pulp	39.3	31.8	0.16	330.3	0.017	<20	1.11	0.028	0.06	0.2	5.4	0.07	0.42	179	5.9	<0.02	1.5	0.32	<0.1
013K922222	Sediment Pulp	66.3	69.6	0.26	230.0	0.028	26	2.03	0.035	0.08	0.6	8.3	0.04	0.40	183	3.4	<0.02	2.9	0.47	<0.1
013K922223	Sediment Pulp	40.9	33.1	0.17	343.6	0.019	27	1.18	0.030	0.06	0.2	5.8	0.08	0.44	183	6.1	<0.02	1.7	0.35	<0.1
013K922224	Sediment Pulp	7.3	12.6	0.07	39.2	0.014	<20	1.02	0.009	0.03	<0.1	0.3	0.02	0.41	65	2.2	<0.02	2.7	0.56	<0.1
013K922225	Sediment Pulp	19.8	11.2	0.06	117.7	0.028	<20	1.86	0.007	0.02	<0.1	0.8	<0.02	0.19	206	1.0	<0.02	2.4	0.13	<0.1
013K922226	Sediment Pulp	37.1	24.4	0.15	164.3	0.035	<20	3.17	0.012	0.04	<0.1	1.9	0.06	0.41	285	2.2	<0.02	4.3	0.33	<0.1
013K922228	Sediment Pulp	36.1	24.1	0.19	125.7	0.045	<20	3.49	0.021	0.05	0.1	2.3	0.06	0.24	287	1.9	<0.02	4.5	0.38	<0.1
013K922229	Sediment Pulp	28.9	13.1	0.13	160.5	0.023	<20	1.40	0.018	0.05	<0.1	0.9	0.06	0.35	139	1.0	<0.02	1.6	0.26	<0.1
013K922230	Sediment Pulp	33.0	33.4	0.17	87.9	0.050	<20	4.01	0.016	0.07	0.1	3.6	0.12	0.23	242	3.4	<0.02	4.9	0.35	<0.1
013K922231	Sediment Pulp	24.2	27.6	0.20	148.4	0.052	<20	2.99	0.015	0.05	<0.1	3.7	0.10	0.19	178	2.0	<0.02	3.6	0.27	<0.1
013K922232	Sediment Pulp	13.5	14.5	0.09	124.7	0.022	<20	1.82	0.011	0.05	<0.1	1.3	0.04	0.15	192	1.3	0.03	2.3	0.18	<0.1
013K922233	Sediment Pulp	32.4	23.3	0.15	496.6	0.045	23	4.42	0.016	0.04	0.1	4.1	0.30	0.19	349	2.0	<0.02	4.1	0.26	<0.1
013K922234	Sediment Pulp	63.3	27.7	0.25	189.2	0.047	<20	2.68	0.020	0.09	0.1	3.7	0.12	0.25	390	1.7	<0.02	2.5	0.51	<0.1
013K922235	Sediment Pulp	16.5	19.1	0.20	278.8	0.019	<20	0.68	0.027	0.05	0.2	2.0	0.08	0.46	161	1.9	<0.02	1.2	0.47	<0.1
013K922236	Sediment Pulp	46.6	19.7	0.15	182.6	0.027	<20	2.59	0.012	0.04	0.1	3.1	0.18	0.25	268	1.9	<0.02	1.7	0.34	<0.1
013K922237	Sediment Pulp	36.7	17.6	0.11	85.3	0.020	<20	2.18	0.010	0.04	0.1	1.1	0.09	0.44	139	1.3	<0.02	1.6	0.24	<0.1
013K922238	Sediment Pulp	124.4	30.0	0.24	184.5	0.054	<20	3.79	0.018	0.10	0.2	4.7	0.45	0.19	376	3.6	<0.02	3.5	0.74	<0.1
013K922239	Sediment Pulp	46.6	27.1	0.12	638.5	0.036	<20	2.73	0.011	0.04	0.2	2.6	0.16	0.34	373	2.6	<0.02	1.7	0.56	<0.1
013K922240	Sediment Pulp	67.5	19.9	0.12	81.8	0.030	<20	1.84	0.012	0.06	0.5	2.2	0.17	0.18	208	1.8	<0.02	1.7	0.55	<0.1



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CERTIFICATE OF ANALYSIS

VAN22002722.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
013K922216	Sediment Pulp	1.62	3.6	0.4	<0.05	4.4	17.08	49.2	<0.02	<1	0.6	5.4	6.94	27.09	4.71	0.76	3.85	0.50	2.97	0.57
013K922217	Sediment Pulp	0.54	1.5	0.1	<0.05	0.4	16.94	26.1	<0.02	1	0.4	1.8	4.55	18.56	3.49	0.69	3.22	0.44	2.73	0.54
013K922218	Sediment Pulp	0.25	1.7	0.1	<0.05	1.0	7.48	12.2	<0.02	21	0.1	2.7	2.09	8.65	1.59	0.33	1.46	0.19	1.18	0.23
013K922219	Sediment Pulp	0.51	3.3	0.1	<0.05	2.1	12.27	12.5	<0.02	13	0.2	3.1	3.04	12.67	2.39	0.46	2.20	0.28	1.73	0.35
013K922220	Sediment Pulp	0.27	2.1	<0.1	<0.05	1.3	29.36	33.1	<0.02	<1	0.4	1.3	10.77	43.74	7.35	1.34	6.15	0.73	4.08	0.78
013K922221	Sediment Pulp	0.56	2.6	0.1	<0.05	2.8	38.55	31.1	<0.02	3	0.5	2.8	10.79	45.09	8.33	1.75	7.68	0.99	5.85	1.13
013K922222	Sediment Pulp	0.86	4.1	0.2	<0.05	3.3	70.74	49.3	<0.02	<1	0.8	6.7	18.59	78.39	14.61	3.09	13.66	1.78	10.55	2.07
013K922223	Sediment Pulp	0.61	2.8	0.1	<0.05	2.7	39.78	32.7	<0.02	3	0.5	2.9	11.20	46.57	8.71	1.82	8.01	1.03	6.06	1.17
013K922224	Sediment Pulp	0.81	3.2	0.3	<0.05	0.8	5.06	14.6	<0.02	<1	0.1	1.9	1.75	6.91	1.34	0.29	1.18	0.16	1.00	0.19
013K922225	Sediment Pulp	0.94	1.5	0.1	<0.05	1.0	13.05	50.5	<0.02	<1	0.7	1.2	5.43	21.98	4.22	0.76	3.59	0.49	2.86	0.51
013K922226	Sediment Pulp	1.64	2.6	0.2	<0.05	1.5	29.72	78.5	0.03	<1	1.3	3.2	10.12	40.60	7.61	1.43	6.78	0.96	5.70	1.07
013K922228	Sediment Pulp	2.06	3.6	0.3	<0.05	1.6	28.39	78.5	0.03	<1	1.3	3.9	9.88	39.39	7.36	1.33	6.41	0.92	5.54	1.00
013K922229	Sediment Pulp	0.93	2.6	0.2	<0.05	0.8	18.57	59.3	<0.02	39	0.7	3.0	7.65	30.21	5.41	0.96	4.46	0.58	3.41	0.63
013K922230	Sediment Pulp	1.89	3.1	0.3	<0.05	1.1	30.50	77.6	0.03	1	1.0	2.9	9.22	36.86	6.99	1.40	6.16	0.89	5.45	1.05
013K922231	Sediment Pulp	1.35	2.8	0.3	<0.05	1.1	21.91	66.2	0.03	<1	0.9	2.9	6.87	28.00	5.48	1.18	4.81	0.68	4.12	0.77
013K922232	Sediment Pulp	0.63	1.4	0.1	<0.05	0.3	12.02	28.3	<0.02	2	0.4	1.3	3.72	15.19	2.88	0.61	2.57	0.35	2.13	0.40
013K922233	Sediment Pulp	1.08	2.6	0.2	<0.05	2.2	28.34	77.9	0.03	2	1.1	2.9	8.87	35.44	6.75	1.45	5.99	0.85	5.11	0.95
013K922234	Sediment Pulp	2.78	6.4	0.3	<0.05	4.7	46.74	129.5	0.02	3	2.1	5.7	17.21	67.60	12.51	2.03	10.69	1.48	8.75	1.64
013K922235	Sediment Pulp	0.75	3.6	0.1	<0.05	3.1	17.07	27.8	<0.02	1	0.4	2.5	4.07	16.06	3.08	0.52	2.92	0.41	2.60	0.52
013K922236	Sediment Pulp	1.41	3.6	0.2	<0.05	1.6	34.04	82.2	<0.02	10	1.3	2.9	12.32	49.00	8.73	1.48	7.39	1.01	6.10	1.17
013K922237	Sediment Pulp	1.32	2.4	0.2	<0.05	1.5	26.04	75.7	<0.02	6	1.0	2.3	9.71	38.18	6.89	1.19	5.84	0.78	4.69	0.89
013K922238	Sediment Pulp	2.42	8.7	0.5	<0.05	3.8	93.56	239.1	0.03	7	4.1	6.9	30.38	115.54	21.07	2.98	18.23	2.68	16.63	3.16
013K922239	Sediment Pulp	1.44	2.0	0.2	<0.05	2.0	35.94	90.7	<0.02	2	1.4	1.9	12.70	50.12	8.92	1.63	7.65	1.03	6.23	1.20
013K922240	Sediment Pulp	1.07	4.8	0.3	<0.05	1.0	52.04	126.7	<0.02	1	3.7	2.7	19.63	80.77	14.44	1.96	11.93	1.50	8.67	1.71



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CERTIFICATE OF ANALYSIS

VAN22002722.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
013K922216	Sediment Pulp		0.21	1.32	0.18	<10	<2
013K922217	Sediment Pulp		0.20	1.25	0.18	<10	<2
013K922218	Sediment Pulp		0.08	0.49	0.07	<10	<2
013K922219	Sediment Pulp		0.13	0.87	0.13	<10	<2
013K922220	Sediment Pulp		0.27	1.71	0.25	<10	<2
013K922221	Sediment Pulp		0.40	2.52	0.38	<10	3
013K922222	Sediment Pulp		0.74	4.73	0.71	10	5
013K922223	Sediment Pulp		0.41	2.61	0.39	<10	3
013K922224	Sediment Pulp		0.07	0.45	0.06	<10	<2
013K922225	Sediment Pulp		0.17	0.94	0.12	<10	<2
013K922226	Sediment Pulp		0.37	2.14	0.27	<10	<2
013K922228	Sediment Pulp		0.35	2.04	0.25	<10	<2
013K922229	Sediment Pulp		0.23	1.34	0.18	<10	<2
013K922230	Sediment Pulp		0.41	2.50	0.34	<10	<2
013K922231	Sediment Pulp		0.28	1.73	0.22	<10	<2
013K922232	Sediment Pulp		0.15	0.91	0.12	<10	<2
013K922233	Sediment Pulp		0.35	2.12	0.28	<10	<2
013K922234	Sediment Pulp		0.62	3.74	0.51	<10	<2
013K922235	Sediment Pulp		0.20	1.31	0.19	<10	3
013K922236	Sediment Pulp		0.45	2.82	0.39	<10	<2
013K922237	Sediment Pulp		0.33	2.00	0.26	<10	<2
013K922238	Sediment Pulp		1.17	6.91	0.87	<10	<2
013K922239	Sediment Pulp		0.46	2.74	0.37	<10	<2
013K922240	Sediment Pulp		0.67	4.15	0.61	<10	<2



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QUALITY CONTROL REPORT

VAN22002722.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
013K922133	Sediment Pulp	0.85	16.03	1.74	34.1	96	6.1	1.8	30	0.40	0.2	1.3	<0.2	0.5	12.0	0.31	0.05	<0.02	8	0.32	0.018
REP 013K922133	QC	0.84	15.63	1.70	32.1	100	6.1	1.9	30	0.42	<0.1	1.2	<0.2	0.5	11.8	0.28	0.05	<0.02	8	0.33	0.019
013K922169	Sediment Pulp	14.26	21.58	15.85	96.1	123	17.4	12.4	662	1.52	1.7	34.4	0.5	0.5	61.5	0.64	0.12	0.07	25	0.76	0.074
REP 013K922169	QC	15.37	23.02	16.82	100.6	123	18.5	13.2	716	1.62	1.8	36.2	0.4	0.5	65.8	0.68	0.13	0.08	27	0.82	0.078
013K922205	Sediment Pulp	8.92	130.99	5.51	107.1	285	50.7	5.6	38	0.41	3.2	41.1	0.8	0.4	13.9	1.16	0.47	<0.02	9	0.67	0.032
REP 013K922205	QC	8.91	131.74	5.45	111.3	280	52.3	5.7	38	0.42	3.3	40.6	0.4	0.3	13.6	1.10	0.47	<0.02	9	0.69	0.031
013K922234	Sediment Pulp	2.32	127.92	6.76	110.7	306	19.8	12.2	512	1.46	0.7	2.2	0.8	1.0	32.6	0.61	0.07	0.04	37	0.70	0.178
REP 013K922234	QC	2.25	125.83	6.56	108.6	302	19.4	12.0	501	1.44	0.7	2.2	0.9	0.9	31.8	0.59	0.07	0.04	36	0.69	0.174
Reference Materials																					
STD DS11	Standard	13.64	145.08	135.63	348.4	1707	77.1	13.6	1010	3.05	41.8	2.4	55.7	8.4	64.8	2.34	6.15	11.41	48	1.03	0.064
STD DS11	Standard	13.97	146.95	125.34	338.7	1581	77.4	13.3	1062	3.10	42.2	2.3	45.2	7.1	64.7	2.18	5.66	9.99	49	1.06	0.066
STD DS11	Standard	14.80	140.53	128.05	341.1	1863	78.3	13.7	1036	3.08	44.2	2.3	46.7	7.4	64.8	2.25	6.24	10.16	49	1.06	0.068
STD DS11	Standard	14.58	149.26	142.68	357.1	1700	81.8	13.8	1047	3.15	43.6	2.5	50.1	8.4	63.7	2.34	5.99	11.60	52	1.08	0.076
STD OREAS262	Standard	0.59	111.62	56.02	147.2	460	61.2	27.3	543	3.16	35.6	1.1	48.6	10.0	33.9	0.64	2.36	0.97	20	3.00	0.039
STD OREAS262	Standard	0.57	117.61	54.02	157.3	505	65.8	28.5	571	3.35	38.0	1.1	50.9	8.6	35.1	0.60	1.61	0.90	22	3.25	0.039
STD OREAS262	Standard	0.62	116.63	54.69	156.4	474	65.5	28.0	558	3.36	37.7	1.1	48.4	8.7	35.1	0.64	1.84	0.91	23	2.99	0.038
STD OREAS262	Standard	0.61	118.85	59.30	157.6	491	68.0	29.5	572	3.39	38.0	1.2	52.5	9.7	34.5	0.65	1.97	1.02	23	2.96	0.045
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	0.1	<0.1	<1	<0.01	0.3	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



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Project: None Given
Report Date: September 22, 2022

Bureau Veritas Commodities Canada Ltd.

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QUALITY CONTROL REPORT

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	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
013K922133	Sediment Pulp	113.0	10.0	0.10	66.4	0.015	<20	0.50	0.017	0.02	<0.1	4.0	0.04	0.45	199	2.1	<0.02	1.0	0.23	0.2	<0.02
REP 013K922133	QC	113.3	10.2	0.10	65.5	0.016	<20	0.51	0.018	0.02	<0.1	4.2	0.05	0.46	217	2.0	<0.02	1.1	0.24	0.1	<0.02
013K922169	Sediment Pulp	32.9	29.4	0.26	154.5	0.037	<20	1.82	0.011	0.04	0.2	2.0	0.12	0.29	213	1.7	<0.02	3.3	0.70	<0.1	0.03
REP 013K922169	QC	34.9	31.5	0.27	164.1	0.040	<20	1.95	0.012	0.04	0.2	2.2	0.13	0.32	222	1.9	<0.02	3.4	0.74	<0.1	0.04
013K922205	Sediment Pulp	25.1	61.6	0.15	61.1	0.014	<20	0.73	0.008	0.02	0.1	3.5	0.11	0.75	283	10.3	<0.02	0.8	0.45	<0.1	0.03
REP 013K922205	QC	24.2	61.4	0.15	61.1	0.014	<20	0.74	0.006	0.02	<0.1	3.5	0.12	0.76	305	10.7	<0.02	0.9	0.44	<0.1	0.03
013K922234	Sediment Pulp	63.3	27.7	0.25	189.2	0.047	<20	2.68	0.020	0.09	0.1	3.7	0.12	0.25	390	1.7	<0.02	2.5	0.51	<0.1	0.08
REP 013K922234	QC	60.8	27.0	0.25	184.7	0.047	<20	2.65	0.019	0.08	0.1	3.6	0.12	0.24	365	1.6	<0.02	2.5	0.51	<0.1	0.07
Reference Materials																					
STD DS11	Standard	17.5	58.5	0.85	413.4	0.093	<20	1.10	0.073	0.39	2.5	3.2	4.94	0.28	256	2.2	4.51	5.0	2.88	<0.1	0.06
STD DS11	Standard	16.5	57.2	0.85	378.8	0.089	<20	1.11	0.072	0.40	2.6	3.1	4.99	0.29	218	2.4	4.65	4.9	2.75	<0.1	0.07
STD DS11	Standard	17.4	58.8	0.84	346.6	0.092	<20	1.13	0.074	0.40	2.5	3.2	4.98	0.28	230	2.3	4.63	5.0	2.81	<0.1	0.07
STD DS11	Standard	18.0	61.4	0.87	423.2	0.097	<20	1.16	0.078	0.40	2.4	3.4	5.17	0.29	274	2.4	4.82	5.2	3.01	<0.1	0.06
STD OREAS262	Standard	14.3	40.9	1.16	245.3	0.003	<20	1.10	0.066	0.28	0.1	3.0	0.44	0.26	164	0.7	0.21	3.6	2.22	<0.1	0.15
STD OREAS262	Standard	15.1	44.7	1.23	243.0	0.003	<20	1.29	0.073	0.32	<0.1	3.2	0.49	0.28	158	0.7	0.22	4.1	2.31	<0.1	0.20
STD OREAS262	Standard	16.2	45.6	1.23	239.8	0.003	<20	1.34	0.073	0.33	<0.1	3.3	0.48	0.28	163	0.7	0.23	4.1	2.44	<0.1	0.23
STD OREAS262	Standard	15.0	45.4	1.26	246.1	0.003	<20	1.24	0.073	0.31	0.1	3.2	0.50	0.28	173	0.5	0.25	4.1	2.36	<0.1	0.17
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7	2.88	0.08	0.06
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9	2.8		0.17
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	7	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	0.1	<0.02	<0.02	6	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02



Bureau Veritas Commodities Canada Ltd.

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QUALITY CONTROL REPORT

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Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Pulp Duplicates																					
013K922133	Sediment Pulp	0.19	1.3	<0.1	<0.05	0.5	49.85	11.2	<0.02	1	0.2	2.0	24.93	101.57	15.45	2.64	12.17	1.43	7.84	1.49	3.81
REP 013K922133	QC	0.20	1.4	<0.1	<0.05	0.5	52.57	11.1	<0.02	2	0.2	2.0	25.22	101.60	15.07	2.44	12.58	1.39	7.54	1.41	3.87
013K922169	Sediment Pulp	1.27	3.9	0.5	<0.05	1.8	20.23	68.4	<0.02	2	0.7	6.1	8.09	31.16	5.44	0.94	4.54	0.60	3.54	0.64	1.82
REP 013K922169	QC	1.35	4.1	0.3	<0.05	1.9	21.46	72.9	<0.02	2	0.8	6.6	8.52	32.76	5.72	0.99	4.82	0.63	3.71	0.69	1.93
013K922205	Sediment Pulp	0.37	1.5	0.1	<0.05	1.7	18.33	29.1	<0.02	12	0.3	2.1	6.58	27.61	5.00	1.10	4.78	0.59	3.30	0.63	1.93
REP 013K922205	QC	0.38	1.5	<0.1	<0.05	1.9	18.68	28.9	<0.02	16	0.2	2.1	6.40	26.23	4.89	1.08	4.81	0.63	3.45	0.61	1.71
013K922234	Sediment Pulp	2.78	6.4	0.3	<0.05	4.7	46.74	129.5	0.02	3	2.1	5.7	17.21	67.60	12.51	2.03	10.69	1.48	8.75	1.64	4.59
REP 013K922234	QC	2.69	6.3	0.3	<0.05	4.5	45.61	126.0	0.02	2	2.0	5.6	16.84	65.55	12.19	1.98	10.37	1.44	8.54	1.60	4.45
Reference Materials																					
STD DS11	Standard	1.28	33.6	1.8	<0.05	2.2	7.33	35.2	0.23	46	0.6	23.3	3.76	14.55	2.66	0.46	2.24	0.28	1.44	0.25	0.73
STD DS11	Standard	1.21	33.0	1.6	<0.05	3.0	7.71	33.9	0.23	41	0.7	21.5	3.48	13.37	2.41	0.44	1.93	0.24	1.43	0.26	0.72
STD DS11	Standard	1.39	33.4	1.7	<0.05	2.7	7.94	34.9	0.23	44	0.7	22.2	3.65	13.97	2.52	0.47	2.03	0.25	1.48	0.27	0.76
STD DS11	Standard	1.34	33.6	1.8	<0.05	2.5	7.77	36.8	0.23	45	0.9	25.0	3.96	15.29	2.70	0.41	2.19	0.30	1.45	0.28	0.94
STD OREAS262	Standard	<0.02	16.7	0.5	<0.05	5.6	9.97	28.5	0.03	<1	0.8	18.4	3.45	13.30	2.89	0.61	2.85	0.37	2.14	0.37	1.10
STD OREAS262	Standard	<0.02	18.9	0.5	<0.05	8.7	10.90	31.0	0.03	<1	1.2	17.3	3.51	14.16	3.09	0.60	2.80	0.36	2.07	0.37	1.00
STD OREAS262	Standard	<0.02	19.7	0.5	<0.05	10.0	11.03	32.7	0.03	1	1.2	17.0	3.78	15.13	3.27	0.62	2.89	0.37	2.12	0.38	1.03
STD OREAS262	Standard	<0.02	17.7	0.6	<0.05	7.2	10.45	30.5	0.03	<1	0.8	17.7	3.63	14.24	3.28	0.63	3.04	0.39	2.25	0.38	1.10
STD DS11 Expected		1.2	33.6	1.8		2.4	7.82	37	0.24	50	0.67	23.3	4	14.9	2.68	0.54	2.22	0.29	1.57	0.29	0.81
STD OREAS262 Expected			18.6	0.5		7.7	11.2	32	0.033		1.14	17.8	4	15	3.3	0.72	2.93	0.43	2.29	0.41	1.07
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02



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Project: None Given

Report Date: September 22, 2022

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Part: 4 of 4

QUALITY CONTROL REPORT

VAN22002722.1

		Method	AQ250	AQ250	AQ250	AQ250	AQ250
		Analyte	Tm	Yb	Lu	Pd	Pt
		Unit	ppm	ppm	ppm	ppb	ppb
		MDL	0.02	0.02	0.02	10	2
Pulp Duplicates							
013K922133	Sediment Pulp	0.50	2.95	0.39	<10	<2	
REP 013K922133	QC	0.46	2.94	0.44	<10	<2	
013K922169	Sediment Pulp	0.24	1.50	0.21	<10	<2	
REP 013K922169	QC	0.25	1.59	0.22	<10	<2	
013K922205	Sediment Pulp	0.24	1.36	0.21	<10	3	
REP 013K922205	QC	0.20	1.31	0.18	<10	5	
013K922234	Sediment Pulp	0.62	3.74	0.51	<10	<2	
REP 013K922234	QC	0.60	3.65	0.49	<10	<2	
Reference Materials							
STD DS11	Standard	0.11	0.78	0.12	93	165	
STD DS11	Standard	0.10	0.65	0.09	96	161	
STD DS11	Standard	0.11	0.69	0.10	100	156	
STD DS11	Standard	0.11	0.72	0.10	81	177	
STD OREAS262	Standard	0.13	0.85	0.12	<10	3	
STD OREAS262	Standard	0.13	0.81	0.11	<10	<2	
STD OREAS262	Standard	0.13	0.83	0.12	<10	<2	
STD OREAS262	Standard	0.14	0.86	0.13	<10	3	
STD DS11 Expected		0.11	0.75	0.11	100	172	
STD OREAS262 Expected		0.14	0.86	0.13			
BLK	Blank	<0.02	<0.02	<0.02	<10	3	
BLK	Blank	<0.02	<0.02	<0.02	<10	<2	
BLK	Blank	<0.02	<0.02	<0.02	<10	<2	
BLK	Blank	<0.02	<0.02	<0.02	<10	3	