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

Submitted By: Alexandre Zagorevski
Receiving Lab: Canada-Vancouver
Received: February 25, 2013
Report Date: March 11, 2013
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN13000593.1

CLIENT JOB INFORMATION

Project: Stikinia
Shipment ID: NRCan-07M052451W/001
P.O. Number: 3000481315
Number of Samples: 10

SAMPLE DISPOSAL

RTRN-PLP Return
RTRN-RJT Return

Acme 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 - Invoice Receipt
615 Booth St.,
Mailbox SS0-1-A 1st Floor
Ottawa ON K1A 0E9
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	10	Crush, split and pulverize 250 g rock to 200 mesh			VAN
XWSH	10	Extra Wash with Glass between each sample			VAN
4AB1	10	Whole Rock Analysis Majors and Trace Elements	0.2	Completed	VAN

ADDITIONAL COMMENTS



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. Acme 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.

CERTIFICATE OF ANALYSIS

VAN13000593.1

Method	WGHT	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B											
Analyte	Wgt	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	
Unit	kg	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	
ZE10-281	Rock	0.35	49.50	18.08	9.50	3.62	6.92	4.36	2.18	0.95	0.24	0.15	<0.002	<20	26	3.9	99.44	2376	2	23.8	1.5
ZE10-282	Rock	0.50	57.20	17.54	5.96	2.60	5.81	3.61	2.44	0.52	0.23	0.12	0.002	<20	13	3.4	99.49	2877	2	13.5	3.9
ZE10-299	Rock	0.22	53.88	17.82	8.02	3.87	7.25	2.96	2.57	1.00	0.35	0.11	0.006	25	20	1.8	99.64	1326	1	21.8	0.6
ZE10-300	Rock	0.26	32.90	10.91	4.43	1.55	24.84	3.56	1.08	0.74	0.33	0.18	0.004	22	12	19.3	99.78	471	1	17.8	0.6
ZE10-308	Rock	0.31	52.18	18.18	8.07	5.53	4.27	4.54	1.57	0.86	0.29	0.13	0.009	<20	16	3.9	99.56	1516	1	19.1	0.3
ZE10-338	Rock	0.34	43.67	16.48	10.90	3.41	11.15	3.41	1.29	1.18	0.23	0.17	0.006	36	31	7.9	99.76	462	<1	27.7	1.6
ZE10-340	Rock	0.58	52.33	16.35	6.77	1.63	6.76	7.56	0.96	0.76	0.28	0.08	0.003	<20	11	6.4	99.83	313	1	15.3	0.3
ZE10-341	Rock	0.29	54.43	16.75	9.55	3.41	7.52	3.15	0.74	0.82	0.21	0.14	0.003	<20	23	3.1	99.79	372	2	20.3	0.8
ZE10-480	Rock	0.52	52.61	12.44	5.11	4.01	9.98	3.98	1.07	0.60	0.17	0.13	0.079	142	12	9.6	99.76	476	<1	18.2	1.5
MMI10-17-3	Rock	0.57	64.29	16.55	3.43	1.62	2.17	5.59	2.94	0.37	0.15	0.06	0.003	<20	5	2.5	99.69	1362	<1	9.0	1.6

CERTIFICATE OF ANALYSIS

VAN13000593.1

Method	Analyte	4A-4B																			
		Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd
Unit		ppm																			
MDL		0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1	0.02	0.3	0.05	0.02	
ZE10-281	Rock	19.8	2.7	5.3	53.0	1	1308	0.3	4.8	2.5	266	1.2	89.5	21.4	20.0	40.1	4.72	21.3	4.26	1.42	4.37
ZE10-282	Rock	19.6	3.3	6.0	52.3	<1	821.8	0.3	5.5	3.2	108	0.9	113.1	14.9	21.6	38.3	4.28	17.4	3.27	1.04	3.00
ZE10-299	Rock	17.3	3.7	11.8	42.3	1	612.4	0.7	4.1	2.0	210	<0.5	166.7	24.3	27.1	53.0	6.01	23.4	4.74	1.47	4.94
ZE10-300	Rock	8.6	2.6	8.2	16.8	<1	693.5	0.5	4.6	2.6	129	<0.5	98.3	21.5	27.4	47.3	5.81	24.5	4.77	1.27	4.44
ZE10-308	Rock	16.5	5.8	12.1	19.6	2	801.6	0.8	8.2	3.8	155	<0.5	252.1	27.5	31.6	62.6	6.94	28.3	5.34	1.61	5.33
ZE10-338	Rock	16.2	1.1	1.9	19.7	<1	490.1	0.1	0.4	0.3	394	<0.5	36.8	17.9	5.5	12.9	1.91	8.5	2.93	0.99	3.48
ZE10-340	Rock	11.9	1.6	7.6	15.7	<1	628.1	0.4	2.0	1.3	225	0.6	60.6	11.6	11.6	20.9	2.30	10.4	2.28	0.73	2.30
ZE10-341	Rock	16.6	1.4	2.0	15.2	<1	484.8	0.1	0.3	0.2	267	<0.5	39.4	16.1	6.5	14.1	1.91	9.5	2.70	0.90	2.96
ZE10-480	Rock	11.9	1.9	3.5	24.9	<1	600.8	0.2	1.2	1.1	115	1.7	73.6	14.2	11.8	23.5	3.01	12.3	2.59	0.83	2.65
MMI10-17-3	Rock	19.7	2.8	4.0	45.2	<1	928.1	0.3	2.9	1.6	57	0.5	85.3	9.4	14.9	29.2	3.41	12.9	2.72	0.79	2.25

CERTIFICATE OF ANALYSIS

VAN13000593.1

Method	Analyte	4A-4B Tb	4A-4B Dy	4A-4B Ho	4A-4B Er	4A-4B Tm	4A-4B Yb	4A-4B 2A Lu	Leco 2A TOT/C	Leco TOT/S	1DX Mo	1DX Cu	1DX Pb	1DX Zn	1DX Ni	1DX As	1DX Cd	1DX Sb	1DX Bi	1DX Ag	1DX Au
Unit	MDL	ppm	%	%	ppm	ppb															
ZE10-281	Rock	0.68	3.79	0.85	2.29	0.36	1.97	0.35	0.37	0.07	2.3	84.5	10.9	89	8.4	3.0	<0.1	0.3	<0.1	<0.1	3.3
ZE10-282	Rock	0.48	2.60	0.59	1.68	0.24	1.76	0.27	0.27	0.03	0.6	61.0	7.4	108	7.5	1.2	<0.1	0.3	<0.1	0.1	36.5
ZE10-299	Rock	0.81	4.20	0.90	2.78	0.42	2.58	0.43	0.03	<0.02	0.5	35.0	1.3	81	13.5	<0.5	<0.1	<0.1	<0.1	<0.1	5.3
ZE10-300	Rock	0.74	4.14	0.84	2.44	0.35	2.11	0.37	5.47	0.09	1.0	12.5	5.0	51	15.9	14.1	0.1	<0.1	<0.1	<0.1	1.9
ZE10-308	Rock	0.87	4.83	1.03	3.36	0.50	3.09	0.51	0.23	<0.02	0.1	6.6	2.8	84	17.7	<0.5	<0.1	<0.1	<0.1	<0.1	1.8
ZE10-338	Rock	0.60	3.51	0.76	2.11	0.34	1.77	0.27	1.49	<0.02	<0.1	63.4	1.1	29	23.2	1.9	0.1	<0.1	<0.1	<0.1	<0.5
ZE10-340	Rock	0.40	2.09	0.48	1.23	0.18	1.14	0.18	1.20	<0.02	0.5	43.1	5.0	31	9.1	3.7	<0.1	0.4	<0.1	<0.1	0.9
ZE10-341	Rock	0.49	3.08	0.65	1.79	0.27	1.69	0.25	0.37	0.26	0.1	92.0	2.6	41	8.8	1.0	<0.1	<0.1	<0.1	<0.1	1.3
ZE10-480	Rock	0.43	2.32	0.49	1.27	0.20	1.23	0.20	2.22	0.55	2.1	69.1	22.7	58	137.9	27.0	0.2	1.4	0.1	0.3	0.7
MMI10-17-3	Rock	0.33	1.70	0.34	0.99	0.13	0.92	0.13	0.25	<0.02	0.2	5.5	9.6	64	9.6	3.2	<0.1	0.3	<0.1	<0.1	0.9



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Report Date: March 11, 2013

Page: 2 of 2

Part: 4 of 1

CERTIFICATE OF ANALYSIS

VAN13000593.1

	Method	1DX	1DX	1DX
	Analyte	Hg	Tl	Se
	Unit	ppm	ppm	ppm
	MDL	0.01	0.1	0.5
ZE10-281	Rock	0.03	<0.1	<0.5
ZE10-282	Rock	0.03	<0.1	<0.5
ZE10-299	Rock	<0.01	0.2	<0.5
ZE10-300	Rock	<0.01	<0.1	<0.5
ZE10-308	Rock	<0.01	<0.1	<0.5
ZE10-338	Rock	0.09	<0.1	<0.5
ZE10-340	Rock	<0.01	<0.1	<0.5
ZE10-341	Rock	<0.01	<0.1	<0.5
ZE10-480	Rock	<0.01	0.4	<0.5
MMI10-17-3	Rock	<0.01	<0.1	<0.5

QUALITY CONTROL REPORT

VAN13000593.1

Method	WGHT	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B										
Analyte	Wgt	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	
Unit	kg	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	
MDL	0.01	0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	1	0.2	
MMI10-17-3	Rock	0.57	64.29	16.55	3.43	1.62	2.17	5.59	2.94	0.37	0.15	0.06	0.003	<20	5	2.5	99.69	1362	<1	9.0	1.6
Reference Materials																					
STD DS9	Standard																				
STD GS311-1	Standard																				
STD GS910-4	Standard																				
STD OREAS45EA	Standard																				
STD SO-18	Standard	58.39	13.98	7.61	3.39	6.37	3.61	2.09	0.68	0.77	0.39	0.542	42	24	1.9	99.74	516	2	25.6	6.8	
STD SO-18	Standard	58.19	14.12	7.58	3.35	6.41	3.63	2.14	0.69	0.77	0.39	0.542	51	23	1.9	99.73	517	1	26.8	7.3	
STD GS311-1 Expected																					
STD GS910-4 Expected																					
STD DS9 Expected																					
STD OREAS45EA Expected																					
STD SO-18 Expected		58.47	14.23	7.67	3.35	6.42	3.71	2.17	0.69	0.83	0.39	0.55	44	25			514		26.2	7.1	
BLK	Blank																				
BLK	Blank																				
BLK	Blank	0.20	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<20	<1	0.0	0.20	<1	<1	<0.2	<0.1	
Prep Wash																					
G1	Prep Blank	67.28	15.98	3.39	1.19	3.53	3.59	3.70	0.40	0.17	0.10	0.003	<20	6	0.4	99.72	1113	1	4.2	4.2	
G1	Prep Blank	67.43	15.74	3.43	1.18	3.47	3.53	3.65	0.40	0.18	0.10	0.003	<20	6	0.6	99.72	1067	3	4.8	4.2	

QUALITY CONTROL REPORT

VAN13000593.1

Method	Analyte	4A-4B																			
Unit		Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd
MDL		ppm																			
MMI10-17-3	Rock	19.7	2.8	4.0	45.2	<1	928.1	0.3	2.9	1.6	57	0.5	85.3	9.4	14.9	29.2	3.41	12.9	2.72	0.79	2.25
Reference Materials																					
STD DS9	Standard																				
STD GS311-1	Standard																				
STD GS910-4	Standard																				
STD OREAS45EA	Standard																				
STD SO-18	Standard	17.0	9.1	19.0	27.3	14	433.3	6.8	10.4	18.3	207	13.9	287.2	30.8	13.6	29.0	3.31	13.7	3.02	0.86	3.07
STD SO-18	Standard	17.5	9.4	19.0	26.9	14	423.6	6.9	10.2	17.8	198	14.1	284.2	31.2	13.6	28.3	3.38	12.8	2.86	0.86	3.00
STD GS311-1 Expected																					
STD GS910-4 Expected																					
STD DS9 Expected																					
STD OREAS45EA Expected																					
STD SO-18 Expected		17.6	9.8	21.3	28.7	15	407.4	7.4	9.9	16.4	200	14.8	280	31	12.3	27.1	3.45	14	3	0.89	2.93
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.5	<0.1	0.2	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	0.2	<0.1	<0.1	<0.1	<0.02	<0.3	<0.05	<0.02	<0.05
Prep Wash																					
G1	Prep Blank	17.9	4.0	23.0	125.9	2	814.6	1.6	8.3	3.5	58	<0.5	133.6	17.4	30.2	60.8	6.51	24.5	4.08	1.10	3.51
G1	Prep Blank	18.0	3.4	24.4	124.8	2	794.7	1.6	9.0	3.8	57	<0.5	119.3	18.0	34.6	67.1	7.02	25.0	4.36	1.16	3.59



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 Report Date: March 11, 2013

Page: 1 of 1

Part: 3 of 1

QUALITY CONTROL REPORT

VAN13000593.1

Method	Analyte	Unit	MDL	4A-4B	2A Leco	2A Leco	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX								
				Tb	Dy	Ho	Er	Tm	Yb	Lu	TOT/C	TOT/S		Mo	Cu	Pb	Zn	Ni	As	Cd	Sb	Bi	Ag	Au
				ppm	%	%		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb						
MMI10-17-3	Rock			0.33	1.70	0.34	0.99	0.13	0.92	0.13	0.25	<0.02		0.2	5.5	9.6	64	9.6	3.2	<0.1	0.3	<0.1	<0.1	0.9
Reference Materials																								
STD DS9	Standard													13.0	116.0	137.9	320	42.2	24.5	2.4	3.9	5.6	2.0	101.0
STD GS311-1	Standard										0.99	2.31												
STD GS910-4	Standard										2.71	8.31												
STD OREAS45EA	Standard													1.4	701.9	18.3	27	381.6	7.6	<0.1	0.1	0.3	0.3	58.2
STD SO-18	Standard			0.50	2.84	0.64	1.89	0.28	1.88	0.26														
STD SO-18	Standard			0.50	2.97	0.65	1.84	0.27	1.75	0.27														
STD GS311-1 Expected											1.02	2.35												
STD GS910-4 Expected											2.65	8.27												
STD DS9 Expected														12.84	108	126	317	40.3	25.5	2.4	4.94	6.32	1.83	118
STD OREAS45EA Expected														1.78	709	14.3	30.6	357	11.4	0.03	0.64	0.26	0.311	53
STD SO-18 Expected				0.53	3	0.62	1.84	0.27	1.79	0.27														
BLK	Blank										<0.02	<0.02												
BLK	Blank													<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.5
BLK	Blank			<0.01	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01														
Prep Wash																								
G1	Prep Blank			0.54	2.66	0.61	1.95	0.29	2.10	0.37	<0.02	<0.02	<0.1	4.3	3.4	52	3.7	0.6	<0.1	0.2	<0.1	<0.1	<0.1	4.8
G1	Prep Blank			0.56	3.20	0.64	1.88	0.29	2.12	0.35	<0.02	<0.02	0.1	3.4	4.5	50	3.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5

QUALITY CONTROL REPORT

VAN13000593.1

Method	1DX	1DX	1DX	
Analyte	Hg	Tl	Se	
Unit	ppm	ppm	ppm	
MDL	0.01	0.1	0.5	
MMI10-17-3	Rock	<0.01	<0.1	<0.5
Reference Materials				
STD DS9	Standard	0.21	5.4	5.6
STD GS311-1	Standard			
STD GS910-4	Standard			
STD OREAS45EA	Standard	<0.01	<0.1	<0.5
STD SO-18	Standard			
STD SO-18	Standard			
STD GS311-1 Expected				
STD GS910-4 Expected				
STD DS9 Expected		0.2	5.3	5.2
STD OREAS45EA Expected		0.34	0.072	2.09
STD SO-18 Expected				
BLK	Blank			
BLK	Blank	<0.01	<0.1	<0.5
BLK	Blank			
Prep Wash				
G1	Prep Blank	<0.01	0.3	<0.5
G1	Prep Blank	<0.01	0.3	<0.5