

APPENDIX 7H

GEOLOGICAL SURVEY OF CANADA

Banks Island samples - LA-ICPMS rare earth element (REE) chemistry (ppm); VESUVIANITE

Sample #	Mount	EPMA #	ODM ID	EPMA ID	Grain Size	Ca	Ti_m47	Ti_m49	Ni	Sr	Y	Zr	Nb	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf
Ves15SUV001row8grain1 - 1	Mount 2	185	vesuvianite	garnet	0.25-0.5	534000	3600	3950	6.66	0.265	21.14	285	11.82	0.008	6.3	47.6	10.58	60.8	10.84	2.89	5.96	0.869	4.84	0.862	2.42	0.349	2.52	0.439	7.79
Ves15SUV001row8grain3 - 1	Mount 2	187	vesuvianite	vesuvianite	0.25-0.5	591000	9690	10660	0.96	204.8	20.21	334.8	35.1	0.034	40.8	85.7	9.87	38.6	7.19	1.147	5.48	0.761	4.38	0.833	2.17	0.32	1.88	0.278	9.37
Ves15SUV001row8grain4 - 1	Mount 2	188	vesuvianite	garnet	0.25-0.5	497000	4100	4470	2.02	0.149	27.5	47.8	11.01	0.146	1.428	9.78	2.197	15.79	6.84	4.8	7.44	1.016	5.78	0.998	2.512	0.311	1.74	0.257	1.255
Ves15SUV001row8grain5 - 1	Mount 2	189	vesuvianite	garnet	0.25-0.5	534000	4380	4720	1.43	0.189	26.87	137.7	232.4	0.029	6.26	57.1	13.18	74.2	14.28	4.72	7.69	0.935	5.04	0.954	2.64	0.376	2.4	0.363	3.59
Ves15SUV001row8grain6 - 1	Mount 2	190	vesuvianite	garnet	0.25-0.5	527000	1657	1780	17.69	0.671	44.4	3.94	32.9	0.073	19.53	37.3	2.69	10.52	3.06	1.516	3.96	0.788	6.23	1.492	5.06	0.836	5.48	0.704	0.101
Ves15SUV002row8grain8 - 1	Mount 2	191	vesuvianite	garnet	0.5-1.0	529000	17100	18350	1.3	0.626	23.9	190.4	7.71	0.193	5.33	40.2	8.24	47.4	15.29	3.54	14.21	1.526	6.7	0.853	1.72	0.173	1.12	0.159	4.18
Ves15SUV002row8grain9 - 1	Mount 2	192	vesuvianite	garnet	0.5-1.0	551000	28900	30200	3.41	0.684	27.7	232.1	83.1	0.075	10.15	82.5	15.65	69	8.98	2.66	6.51	0.956	5.73	1.086	2.87	0.389	2.57	0.368	8.35
Ves15SUV002row8grain10 - 1	Mount 2	193	vesuvianite	garnet	0.5-1.0	522000	14140	15080	0.78	0.18	60.6	202	163.6	0.077	11.41	71.9	14.72	90.3	27.4	8.99	21.3	2.83	15.4	2.68	6.51	0.805	4.43	0.544	5.48
Ves15SUV003row9grain1 - 1	Mount 2	196	vesuvianite	garnet	0.25-0.5	535000	3103	3320	1.28	0.199	37.9	71.3	36.1	0.146	9.16	78.3	17.69	97.1	19.76	5.34	11.97	1.451	8.05	1.434	3.87	0.517	3.3	0.449	1.84
Ves15SUV003row9grain2 - 1	Mount 2	198	vesuvianite	garnet	0.25-0.5	524000	2181	2276	9.17	0.391	21.22	1.386	10.98	0.106	4.92	26.56	4.48	21.04	4.74	1.664	4.65	0.693	4.38	0.84	2.35	0.309	1.84	0.222	0.0041
Ves15SUV003row9grain3 - 1	Mount 2	199	vesuvianite	garnet	0.25-0.5	548000	15470	16420	11.92	0.282	32.63	128.2	7.02	-0.001	2.27	15.39	3.08	17.28	4.58	2.366	5.32	0.919	6.22	1.297	3.75	0.503	3.27	0.432	4.75
Ves15SUV003row9grain4 - 1	Mount 2	200	vesuvianite	garnet	0.25-0.5	512000	2020	2130	1.22	0.166	447	0.542	15.08	0.039	1.812	12.87	3.29	29.4	24.5	6.31	52.1	10.51	75.3	15.2	40.8	5.08	27.3	2.88	0.0062
Ves15SUV003row9grain5 - 1	Mount 2	201	vesuvianite	garnet	0.25-0.5	532000	5780	6100	0.62	0.587	52.3	143.5	86.2	-0.009	7.08	57.1	11.85	64.6	14.49	2.78	11.01	1.569	9.39	1.83	5.28	0.83	5.63	0.786	2.66
Ves15SUV005row9grain6 - 1	Mount 2	202	vesuvianite	garnet	0.25-0.5	513000	4290	4510	-0.1	0.436	40.3	168.8	4.03	0.01	2.62	28.1	6.94	38.9	9.34	2.06	7.99	1.184	7.62	1.458	4.35	0.655	4.26	0.616	4.39
Ves15SUV010row9grain7 - 1	Mount 2	203	vesuvianite	garnet	0.5-1.0	549000	1981	2101	1.88	0.191	4.13	27.5	5.43	0.082	1.037	7.28	1.625	7.69	1.28	0.606	0.871	0.123	0.82	0.148	0.402	0.0571	0.39	0.06	0.869
Ves15SUV010row9grain8 - 1	Mount 2	204	vesuvianite	garnet	0.5-1.0	551000	4730	4950	17	2.02	13	11.1	0.961	3.9	3.8	17	2.65	12.07	2.48	1.35	2.79	0.419	2.67	0.463	1.18	0.149	0.99	0.111	0.185
Ves15SUV010row9grain9 - 1	Mount 2	206	vesuvianite	garnet	0.5-1.0	523000	2710	2834	0.15	2.6	37.5	123.8	7.35	0.143	10	48.5	10.45	53	9.95	1.84	7.16	1.063	6.83	1.408	4.22	0.618	4.03	0.548	3.6
Ves15SUV010row9grain10 - 1	Mount 2	207	vesuvianite	garnet	0.5-1.0	537000	5800	6100	15.78	0.901	20.13	7.16	105	0.03	4.06	27.11	5.61	32.7	7.62	3.52	6.52	0.789	4.09	0.701	1.624	0.209	1.21	0.164	0.082
Ves15SUV010row9grain11 - 1	Mount 2	208	vesuvianite	garnet	0.5-1.0	524000	16580	17380	21.93	0.84	90.3	27.46	43.1	0.9	4.69	27.79	4.9	23.31	4.64	2.7	6.22	1.298	12.04	3.08	11.13	1.864	13.44	1.997	0.27
Ves15SUV010row9grain12 - 1	Mount 2	209	vesuvianite	garnet	0.25-0.5	525000	801	828	0.45	0.507	26.99	1.106	15.66	0.079	3.21	21.61	4.85	34.6	9.6	3.09	5.63	0.757	4.5	0.872	2.51	0.369	2.57	0.389	0.017
Ves15SUV010row9grain13 - 1	Mount 2	210	vesuvianite	andradite	0.25-0.5	589000	370	361	0.36	0.207	24.6	57.7	0.806	0.045	6.6	54	8.05	24.62	2.69	1.291	2.82	0.485	3.62	0.779	2.61	0.46	3.72	0.663	1.55
Ves15SUV014row9grain14 - 1	Mount 2	211	vesuvianite	garnet	0.25-0.5	468000	3620	3800	1.13	0.276	18.53	52.6	7.35	-0.014	4.55	38.2	7.04	27.42	3.78	1.274	3.27	0.519	3.61	0.717	1.98	0.3	1.81	0.264	1.112
Ves15SUV015row10grain1 - 1	Mount 2	212	vesuvianite	vesuvianite	0.25-0.5	571000	5080	5290	0.71	329	1.92	544	41.5	0.66	1.85	6.5	0.88	3.24	0.369	0.071	0.164	0.0311	0.236	0.033	0.175	0.0375	0.254	0.0458	2.31
Ves15SUV021row10grain2 - 1	Mount 2	213	vesuvianite	andradite	0.25-0.5	514000	12980	13430	3.94	0.333	27.1	321	3.53	0.25	0.64	3.07	0.799	7.64	3.11	1.47	3.58	0.666	4.72	1	3.11	0.469	2.58	0.459	9.7
Ves15SUV024row10grain3 - 1	Mount 2	215	vesuvianite	garnet	0.25-0.5	513000	4970	5170	55.9	0.291	132.5	457	79.4	0.053	13.39	67.3	12.39	73.8	23.9	4.47	24.35	3.9	25.55	5.2	14.84	2.221	15.52	2.388	10.34
Ves15SUV024row10grain4 - 1	Mount 2	216	vesuvianite	andradite	0.25-0.5	553000	485	497	1.89	0.451	9.53	0.506	0.7	0.033	0.296	3.05	1.076	10.39	4.31	1.62	3.47	0.403	2.29	0.369	0.907	0.126	0.671	0.085	-0.0003
Ves15SUV024row10grain5 - 1	Mount 2	218	vesuvianite	garnet	0.25-0.5	518000	7630	7930	2.48	1.91	89	216.4	25.57	0.273	16.09	76.9	14.35	76.4	19.37	5.25	17.22	2.597	16.63	3.18	8.91	1.286	8.06	1.092	7.53
Ves15SUV024row10grain6 - 1	Mount 2	219	vesuvianite	talcc?	0.25-0.5	588000	1084	1118	2.77	217	2.9	10.84	1.251	0.56	271	387	27	53.6	3.27	0.904	1.3	0.138	0.754	0.121	0.306	0.0348	0.146	0.0178	0.248
Ves15SUV026row10grain7 - 1	Mount 2	221	vesuvianite	garnet	0.5-1.0	561000	2710	2800	17.13	0.747	18.85	3.51	9.82	-0.051	11.63	51.4	6.63	26.3	4.56	1.9	3.66	0.529	3.4	0.731	2.14	0.378	2.91	0.488	0.036
Ves15SUV027row10grain8 - 1	Mount 2	222	vesuvianite	garnet	0.5-1.0	538000	15780	16170	0.4	1.59	52.3	90.1	12.19	1.9	4.45	25.1	5.05	29.6	9.58	3.29	9.88	1.576	10.27	2	5.51	0.777	5.05	0.642	1.03
Ves15SUV050row10grain9 - 1	Mount 2	223	vesuvianite	garnet	0.25-0.5	522000	5420	5590	2.75	35.7	41.6	56.8	23.4	19.9	2.83	12	3.23	22.5	7.63	1.475	7.87	1.207	7.88	1.552	4.43	0.647	4.08	0.565	1.043
Ves15SUV050row10grain10 - 1	Mount 2	224	vesuvianite	vesuvianite	0.25-0.5	517000	2004	2074	5.31	8.74	12.28	52.5	2.97	4.32	12.95	26.14	3.26	13.69	2.94	0.786	2.26	0.368	2.37	0.477	1.35	0.198	1.38	0.183	1.149
Ves15SUV050row10grain11 - 1	Mount 2	226	vesuvianite	garnet	0.25-0.5	414000	8930	9200	4.58	3.04	58.1	151.3	28.7	3.55	3.79	18.33	4.15	26.2	7.81	2.56	7.72	1.376	10.05	2.02	5.93	0.865	4.9	0.586	3.19
Ves15SUV050row10grain12 - 1	Mount 2	229	vesuvianite	garnet	0.25-0.5	539000	5970	6170	3.7	2.5	29.4	72.8	19.6	4.1	14.04	67.7	10.09	42.6	9	3.02	7.23	0.999	6.21	1.147	3.18	0.483	2.88	0.384	1.89
Ves16SUV013row10grain13 - 1	Mount 2	230	vesuvianite	garnet	0.25-0.5	469000	3850	3950	6.5	7.6	66.7	218.8	113.3	2.08	6.62	39.2	7.43	41	10.41	3.45	9.18	1.521	10.12	2.26	7.33	1.179	8.37	1.225	5.7