YMIP Grant **12-016**

A Summary Technical Report on the **Stoggie Project** as part of the Smoko Project A Focussed Regional Module, Hard Rock Type

A Geochemical/Geological Report

Claims staked under this grant:
Stoggie 3-40; Grant Numbers YE71503-YE71540
Total 38 Quartz Claims in the Dawson Mining District
Owner: Gordon Richards

Location
NTS Map Sheet 115P06,
Camp at 351,100E, 6.979,350N, Elev 1080 m
UTM NAD 83, Zone 8

Grant awarded to Gordon Richards
Work performed by Gordon Richards & Jeff Mieras
Report written by Gordon Richards

January 15, 2013

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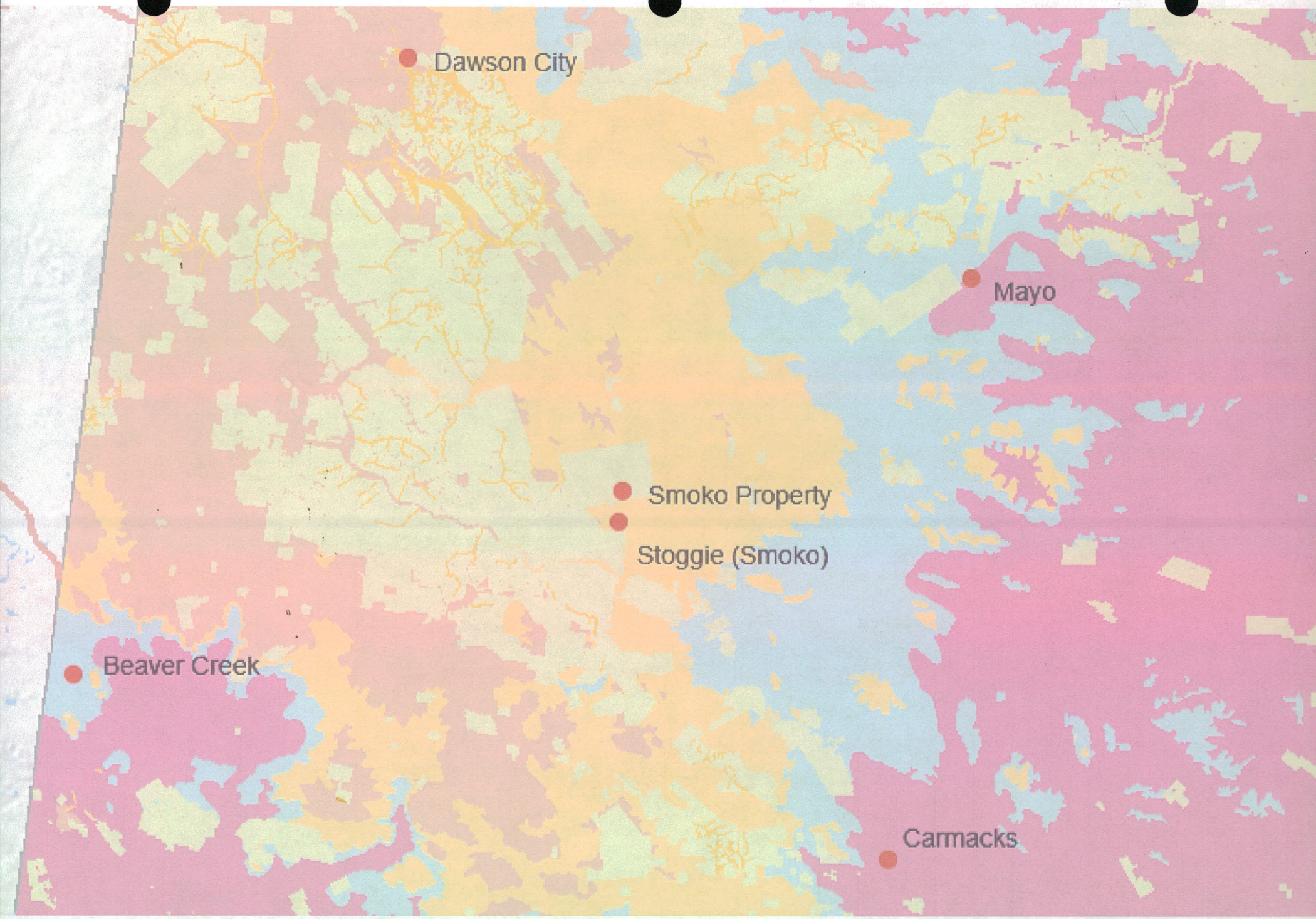
Dawson City
Mayo
Smoko Property
Stoggie (Smoko)
Beaver Creek
Carmacks

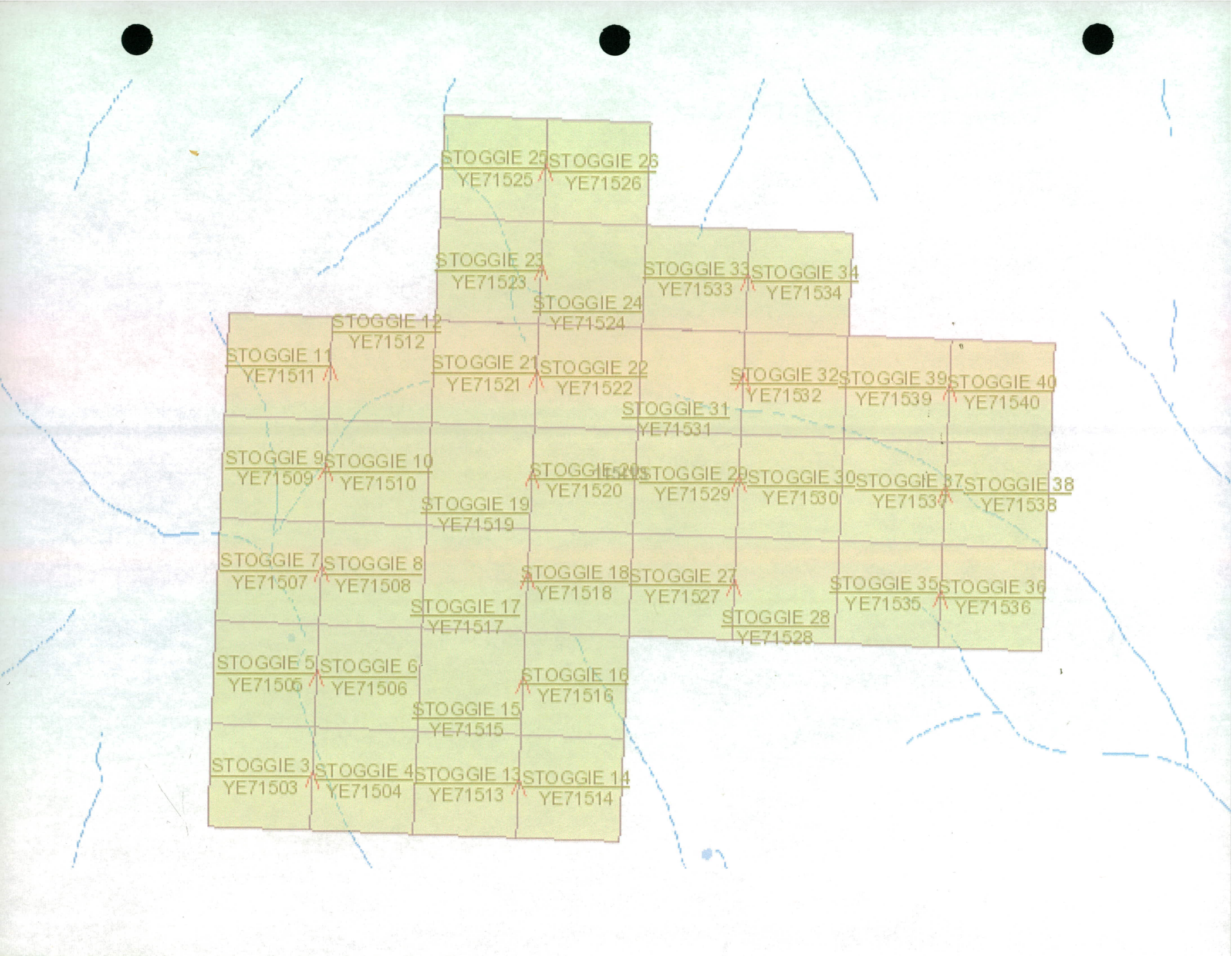
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Table 1. STOGGIE MMI Response Ratios 2012																												
		gold pathfinders								porphyry			alteration					mafic				rare earth elements					
ID	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Y
P66	5	4	2	2	1	4	2	214	469	6	16	1	10	29	1	2	21	1	16	7	26	10	8	8	18	9	16
P67	10	1	3	1	1	5	1	56	423	2	4	1	3	13	2	2	23	2	5	6	5	15	9	8	11	8	10
P68	5	2	2	2	1	5	1	122	214	3	13	1	4	22	2	2	23	2	5	5	26	17	16	13	17	12	15
P69	6	1	3	1	1	3	1	97	45	2	5	1	2	6	4	2	15	2	2	3	3	9	9	7	4	7	6
P70	34	1	4	1	1	1	2	385	104	4	4	1	2	17	5	2	8	2	5	7	2	6	9	7	3	7	8
P71	35	1	5	1	1	1	2	116	31	4	4	3	1	15	6	1	4	2	4	4	2	4	6	5	2	6	6
P72	19	1	2	1	1	1	1	541	87	3	1	1	3	2	5	2	7	4	5	4	2	13	12	9	4	9	12
P73	7	1	2	2	1	3	2	693	35	4	5	1	6	4	2	2	19	3	4	6	8	18	18	12	12	11	13
P74	8	1	3	4	1	1	1	6	11	3	0	5	1	1	5	5	7	4	4	2	0	2	2	2	1	3	3
P75	2	1	2	5	2	1	1	2	3	2	1	2	1	2	5	3	4	6	4	2	0	5	5	7	1	7	5
P76	4	1	3	4	1	1	1	14	4	4	21	1	2	46	4	3	9	3	8	3	3	13	19	13	7	10	7
P77	3	1	3	3	1	1	2	45	34	5	8	1	5	14	3	1	5	3	15	6	6	15	13	12	12	11	12
P78	2	4	2	1	1	2	4	94	54	4	5	1	14	3	2	1	16	3	6	6	48	23	19	16	10	14	13
P79	2	1	2	5	1	1	2	31	19	8	15	1	6	14	3	2	8	3	9	#	12	28	26	20	18	18	17
P81	4	1	3	2	1	1	2	8	14	4	1	4	2	2	4	4	3	4	4	3	4	14	7	6	2	6	4
P83	0	6	1	1	1	1	4	2	1	5	3	1	36	1	1	6	6	1	3	1	124	2	2	1	2	1	1
P84	2	2	1	1	1	6	2	2	4	8	3	1	29	0	1	3	21	1	5	2	67	2	2	1	4	1	1
P86	17	10	3	1	1	4	2	541	22	2	2	1	6	1	0	1	17	0	1	4	200	14	11	12	10	10	11
P87	1	4	2	4	1	10	1	10	47	2	14	2	9	101	1	4	39	1	3	2	123	16	18	9	6	8	8
P88	1	1	0	1	1	16	1	87	4	0	3	1	2	6	1	2	40	1	1	1	92	50	45	23	4	14	9
P89	1	1	3	2	1	3	1	32	3	2	5	1	4	5	2	2	14	1	1	7	30	10	13	10	12	9	11
P90	1	4	2	4	1	7	1	18	3	2	2	1	7	2	1	1	17	1	1	4	118	24	31	29	11	27	28
P91	1	4	0	2	1	8	1	48	4	0	12	1	8	19	1	3	45	1	1	1	233	4	4	2	2	2	2
P94	3	1	9	2	1	1	1	3	7	9	1	1	3	3	5	3	1	6	13	2	2	7	5	6	3	6	5
P95	2	1	3	2	1	1	2	5	5	10	5	1	5	6	5	1	2	3	20	4	3	9	7	6	3	6	5
P97	2	1	2	2	1	1	4	3	1	8	13	2	15	31	4	1	1	3	7	3	13	6	5	4	5	3	3
P98	3	1	5	3	1	1	4	3	2	11	12	1	5	21	6	1	1	6	11	9	3	6	7	6	2	5	4
P99	2	1	4	4	1	1	1	2	4	3	10	1	1	22	5	2	3	6	7	2	2	10	11	9	3	8	8
P100	2	1	2	3	1	1	1	6	3	2	16	1	7	23	2	1	8	3	3	2	20	27	27	20	15	15	12
P101	1	1	4	7	1	1	1	5	3	1	6	1	2	13	7	1	1	10	12	2	1	53	68	70	27	74	47
P102	4	1	18	1	6	1	1	1	1	4	3	1	1	6	5	2	1	3	3	0	1	0	0	0	2	0	1
P103	1	1	7	2	1	1	1	3	3	2	6	1	2	4	4	2	4	3	3	1	3	5	4	5	4	5	4
P104	1	8	2	1	1	1	2	8	4	1	12	2	20	10	0	5	34	1	2	1	1088	3	3	2	9	2	2
P105	3	1	4	2	1	2	1	1	2	4	6	1	1	6	4	6	6	5	5	1	3	2	2	3	4	4	4
P106	1	4	2	2	1	1	4	1	1	11	9	1	13	41	4	2	1	2	3	6	16	6	6	5	7	4	3
P107	4	1	1	2	1	2	1	28	1	3	1	1	2	1	1	13	47	1	0	1	50	3	3	3	4	3	3
P108	4	2	2	2	1	3	1	15	4	2	3	1	6	2	2	6	29	1	2	1	128	11	11	6	7	5	3
P109	1	4	1	1	1	4	1	37	5	1	2	1	5	6	0	6	35	0	0	1	236	6	6	5	5	5	5
P110	6	2	2	2	1	3	1	46	2	4	1	1	3	1	1	2	22	1	1	5	142	31	26	22	20	19	12
P111	1	4	1	3	1	4	1	66	4	2	2	1	3	1	1	2	18	1	0	2	260	50	59	30	20	22	15
P120	4	8	7	1	1	8	6	36	7	13	13	2	25	2	1	2	29	1	7	5	211	3	2	2	10	2	3
P122	4	6	6	3	1	9	4	118	27	6	15	1	6	6	2	1	25	1	6	5	136	15	13	12	16	12	14
P123	3	2	2	2	1	3	1	94	9	2	48	1	5	22	2	2	18	2	3	2	76	16	17	9	10	7	6
P127	7	1	3	3	1	1	2	21	19	4	0	1	3	1	5	1	5	5	5	4	2	7	7	7	3	7	7

ID	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Y
P128	2	1	3	3	1	1	1	77	4	1	4	1	2	7	4	3	5	6	3	3	2	22	11	7	7	5	4
P129	37	1	2	2	1	3	1	293	12	1	5	1	1	1	2	8	18	2	1	1	11	1	1	1	2	1	2
P130	3	1	5	1	1	6	12	13	5	1	9	1	3	1	2	2	18	2	2	1	77	11	11	8	6	6	4
P131	5	1	8	1	1	4	4	49	3	1	4	2	3	0	1	1	19	2	1	2	112	11	12	7	8	5	4
P132	12	2	13	1	1	7	4	30	3	8	5	12	5	0	2	2	18	2	1	5	176	25	22	20	18	16	12
P133	5	4	3	1	1	9	6	58	4	3	5	4	5	1	1	1	25	1	1	5	211	22	21	15	7	12	7
M55	0	4	0	2	1	1	4	1	3	3	19	16	18	68	3	5	2	3	2	5	46	2	2	2	3	1	1
M56	2	1	2	3	1	1	1	2	3	3	5	1	2	13	5	1	1	6	5	9	2	7	7	6	1	5	4
M57	3	1	1	2	1	1	1	1	4	2	16	10	4	34	4	12	1	5	2	3	5	2	2	1	1	1	0
M58	2	1	2	3	1	1	2	3	4	3	10	4	1	21	5	3	1	6	6	6	4	4	3	3	1	2	2
M59	4	1	3	3	1	1	2	2	3	4	1	1	2	2	5	1	1	6	12	#	3	3	6	6	1	6	5
M60	3	1	1	3	4	4	1	3	4	2	16	11	1	54	4	6	9	5	7	2	5	0	0	0	1	0	0
M61	3	1	3	2	1	1	1	1	1	2	2	3	1	8	5	4	8	5	4	4	2	1	1	2	1	3	3
M62	3	1	0	1	4	2	1	10	5	1	2	3	1	6	4	7	10	4	1	0	94	1	0	0	1	1	1
M63	3	1	1	3	1	1	1	3	8	4	7	3	5	20	4	2	1	5	10	7	5	10	9	7	2	5	3
M64	9	1	1	3	4	1	1	2	7	3	1	8	1	5	6	6	7	5	5	2	5	1	1	1	1	2	3
M66	3	1	1	2	1	1	1	1	3	3	1	4	1	4	5	3	2	4	5	5	1	2	2	3	1	3	2
M67	2	1	2	4	1	1	1	5	4	1	1	1	1	4	5	6	1	6	3	3	0	4	4	3	1	2	2
M68	4	2	4	1	1	6	1	113	10	1	1	1	3	1	2	1	13	2	2	4	41	29	27	34	8	29	26
M69	1	1	1	1	1	12	1	20	12	0	7	1	4	71	2	4	46	1	1	1	50	5	6	4	2	3	3
M70	1	1	1	1	1	5	1	51	5	0	8	1	5	37	2	15	21	1	1	3	115	10	10	6	4	5	4
M71	1	1	2	2	1	6	1	15	12	0	6	1	8	47	2	5	15	2	1	4	10	10	13	8	4	6	7
M74	2	1	3	3	1	1	1	1	1	4	1	1	1	2	8	1	1	5	1	4	0	1	1	2	2	2	3
M75	1	1	4	2	1	1	1	1	1	4	5	1	1	14	5	1	1	2	2	2	3	2	2	3	2	3	3
M76	4	1	6	2	2	1	1	1	1	5	1	1	1	1	6	3	1	2	1	0	0	0	0	0	1	0	1
M77	3	1	3	2	1	1	1	1	1	3	3	2	1	5	6	1	2	3	1	4	0	0	0	0	1	1	1
M78	1	1	3	2	1	1	1	1	1	2	2	1	1	4	7	3	1	3	1	1	0	0	0	0	1	0	1
M79	4	1	5	2	1	1	1	1	1	6	2	1	1	2	9	3	1	3	6	1	0	0	0	0	1	1	1
M80	6	1	2	3	1	1	1	1	1	4	0	3	1	1	7	4	2	5	2	2	1	0	0	0	1	0	1
M81	2	1	1	2	1	1	4	2	1	6	5	3	3	17	5	1	2	4	13	6	0	2	2	2	1	2	1
M82	0	1	0	1	1	1	1	3	1	0	1	1	2	2	4	1	1	3	4	1	0	0	0	0	0	0	1
M84	2	1	2	2	1	1	4	3	2	7	8	1	8	17	5	1	3	4	12	4	4	6	7	5	4	4	3
M85	3	1	4	3	2	1	1	2	4	4	2	1	1	7	6	1	3	6	9	2	8	3	4	5	1	5	4
M86	3	1	3	1	1	1	1	1	1	4	4	1	2	7	5	0	3	3	5	2	3	2	3	3	1	3	2
M87	3	1	4	3	1	1	1	5	2	6	10	1	2	12	4	2	3	3	6	4	2	15	17	15	6	15	14
M88	2	1	2	3	1	1	1	2	2	3	13	1	1	20	5	1	1	7	6	3	6	3	3	2	2	2	2
M89	3	1	3	9	1	1	1	1	3	4	6	1	2	6	5	1	2	3	3	3	0	1	2	2	2	2	2
M90	10	1	3	5	1	1	1	5	1	4	3	1	2	3	5	2	3	6	3	2	2	6	8	8	3	8	10
M91	1	2	1	3	1	2	1	36	5	1	6	1	4	1	1	2	15	1	2	1	229	7	7	4	4	3	2
M92	4	1	1	1	1	1	1	1	1	5	10	2	7	39	3	2	1	4	8	5	9	3	3	3	4	2	1
M94	4	1	2	1	1	6	1	48	4	1	5	1	1	8	4	3	21	3	3	3	3	46	19	13	11	11	10
M95	2	1	2	1	1	3	1	1	1	5	5	1	25	0	1	1	20	1	7	2	48	1	1	1	6	1	1
M96	14	2	5	2	1	4	1	31	4	3	2	1	2	1	1	1	17	1	0	4	180	26	27	19	14	15	10
M97	5	1	4	2	1	1	1	1	1	5	4	3	1	16	5	1	2	3	5	1	3	1	0	1	1	1	1
M98	10	1	2	1	1	1	1	5	3	3	1	1	2	2	5	2	1	2	8	2	1	1	4	5	3	6	5
M99	2	1	1	1	1	1	1	3	2	2	15	1	1	9	4	2	5	4		2	3	2	2	2	2	2	2

Table 2. Ah Response Ratios. Stoggie 2012

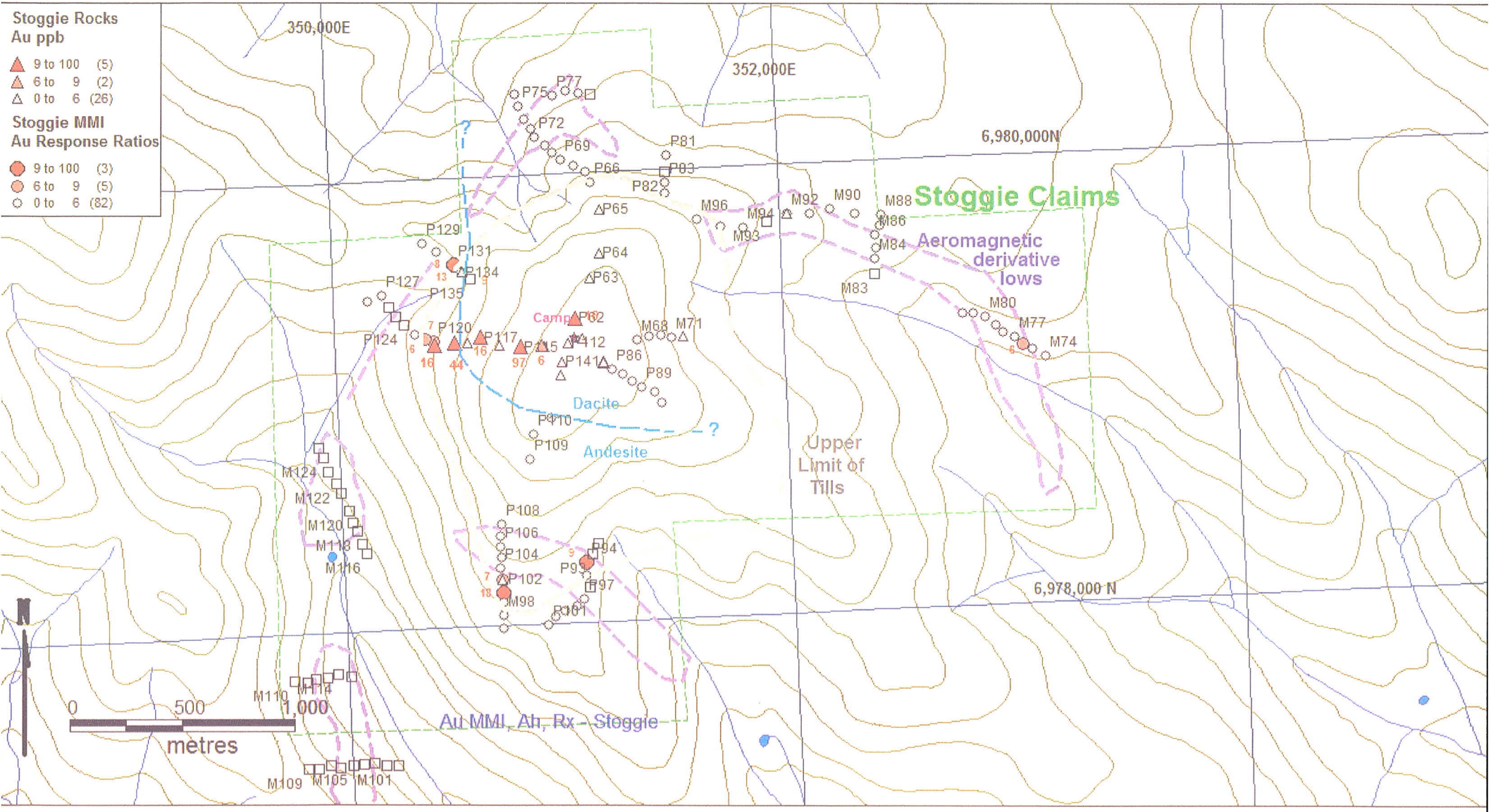
	gold pathfinders												porphyry				alteration						mafic					REE			
ID	Ag	As	Au	Ba	Hg	Sb	Bi	Te	Se	B	Pb	Zn	Cu	Co	Mo	Sn	Fe	Mn	S	Ca	Sr	K	Mg	Ni	Cr	U	Ti	Ce	La	Sc	Y
P80	7	4	3	2	2	2	3	3	1	2	7	2	2	4	2	4	3	4	1	1	1	3	1	3	2	2	1	5	3	1	1
P82	2	5	2	1	1	1	4	3	1	1	4	2	1	2	2	4	3	1	1	1	1	1	2	2	4	1	4	4	2	4	2
P92	0	1	2	1	1	1	1	2	1	4	1	0	1	1	2	1	1	1	3	4	3	1	2	1	1	0	2	1	0	1	2
P93	1	2	4	1	1	2	2	5	2	3	3	1	1	3	1	29	2	5	2	4	2	1	2	2	4	2	3	2	1	5	2
P96	3	2	2	1	1	1	2	3	1	2	2	3	2	4	1	4	3	6	1	1	1	4	2	2	4	1	6	3	2	5	2
P124	7	7	4	1	0	2	14	3	2	1	15	4	4	5	2	11	4	2	0	0	1	3	2	4	4	3	3	4	3	2	2
P125	7	4	2	2	1	1	9	4	1	1	10	5	3	7	2	3	3	10	0	1	1	2	2	4	3	2	4	6	4	3	2
P126	1	4	1	0	2	1	3	2	1	2	5	1	1	1	2	42	2	0	2	1	1	2	1	1	1	1	1	2	1	1	1
P135	19	12	9	1	1	3	14	3	4	1	8	2	8	1	10	2	3	0	2	1	1	2	1	1	2	5	1	8	6	1	1
M65	1	2	1	1	2	1	2	1	1	2	8	2	1	2	2	121	2	4	1	1	1	3	2	1	2	1	3	4	2	3	2
M83	1	2	2	1	2	4	2	1	2	3	1	1	1	1	1	7	1	3	2	3	3	2	2	1	2	1	2	2	1	2	2
M93	1	0	1	1	1	1	1	1	12	3	3	0	1	1	2	48	1	3	3	5	3	1	2	1	1	4	1	1	0	1	2
M101	1	2	1	1	2	1	1	1	1	1	1	1	2	2	3	4	2	3	1	2	1	3	2	1	2	1	4	2	1	2	2
M102	1	1	1	1	2	2	1	1	1	2	4	1	1	1	2	58	1	1	2	3	1	4	1	1	1	1	2	1	1	2	1
M103	1	2	1	1	3	2	1	1	1	2	1	1	1	1	2	8	1	0	2	2	1	3	1	1	1	1	2	2	2	3	1
M104	1	1	1	1	2	1	1	1	1	1	3	1	1	1	2	34	2	0	2	1	1	3	1	1	1	1	2	3	2	3	1
M105	3	2	2	2	2	2	1	1	1	1	2	1	1	2	2	2	2	1	2	1	1	3	1	1	1	2	1	3	2	2	1
M106	3	2	1	1	2	1	1	2	1	2	3	1	1	1	1	36	1	0	1	1	1	3	1	1	2	1	3	2	1	2	1
M107	3	1	1	1	1	1	2	1	1	1	3	1	3	1	2	1	2	1	1	1	1	2	1	2	2	1	3	3	2	2	1
M108	5	1	1	1	3	1	1	1	1	3	3	1	1	1	4	43	1	1	2	1	1	2	1	1	1	1	2	1	1	2	1
M109	1	3	2	1	2	2	2	1	4	2	1	2	1	2	3	2	2	2	2	2	1	3	2	2	3	1	4	3	2	4	2
M110	1	0	1	1	2	1	0	1	1	3	1	0	2	1	3	1	1	3	3	3	2	4	1	1	1	1	1	1	1	1	1
M111	1	1	1	1	2	1	1	1	1	2	1	1	1	2	2	4	2	2	2	2	1	3	2	1	2	1	4	2	2	3	2
M112	1	1	1	2	2	2	0	1	1	3	1	1	1	1	2	13	1	3	2	3	2	3	1	1	1	0	1	2	2	1	1
M113	2	1	1	2	3	2	1	2	1	2	1	1	1	2	2	6	1	4	2	3	2	3	2	1	2	1	3	3	2	3	2
M114	1	1	1	1	2	2	0	1	1	3	1	1	2	1	1	3	1	2	2	3	2	3	1	1	1	0	1	2	1	1	1
M115	1	2	1	1	2	2	1	1	1	2	1	2	1	2	1	2	1	5	2	2	1	2	2	1	2	1	2	2	1	2	2
M116	1	1	2	2	1	1	1	1	2	3	1	1	2	1	1	2	1	1	2	5	2	1	2	2	2	1	2	2	1	1	2
M117	1	1	1	1	2	1	0	1	1	3	1	1	2	1	1	4	1	2	2	3	2	4	2	2	2	0	2	2	2	2	2
M118	1	1	1	1	2	1	0	1	1	6	1	2	2	2	1	3	1	3	3	3	2	3	3	2	3	1	3	3	2	2	3
M119	1	2	0	1	2	1	5	1	1	14	3	4	1	2	1	6	1	4	3	4	2	3	2	2	2	1	2	1	1	1	2
M120	19	3	1	1	2	2	4	3	1	9	9	10	2	3	2	1	2	1	2	2	1	4	2	3	3	4	5	1	1	3	2
M121	5	6	3	1	1	2	3	1	3	30	9	5	3	3	2	4	2	4	3	4	2	2	3	3	4	2	4	2	1	3	3
M122	6	3	2	0	2	4	2	4	2	11	4	4	2	2	1	4	1	3	3	3	2	3	2	2	2	2	2	2	1	2	2
M123	3	1	2	0	1	3	2	1	2	22	2	1	2	1	1	6	1	3	5	4	2	1	2	2	1	1	1	2	2	1	2
M124	2	1	2	0	2	2	1	1	2	17	2	3	2	2	1	5	1	13	5	4	2	1	2	2	1	4	1	2	1	2	2
M125	1	2	4	0	2	2	10	4	2	19	1	6	3	1	1	9	1	2	2	5	2	2	2	2	1	1	2	1	1	4	2

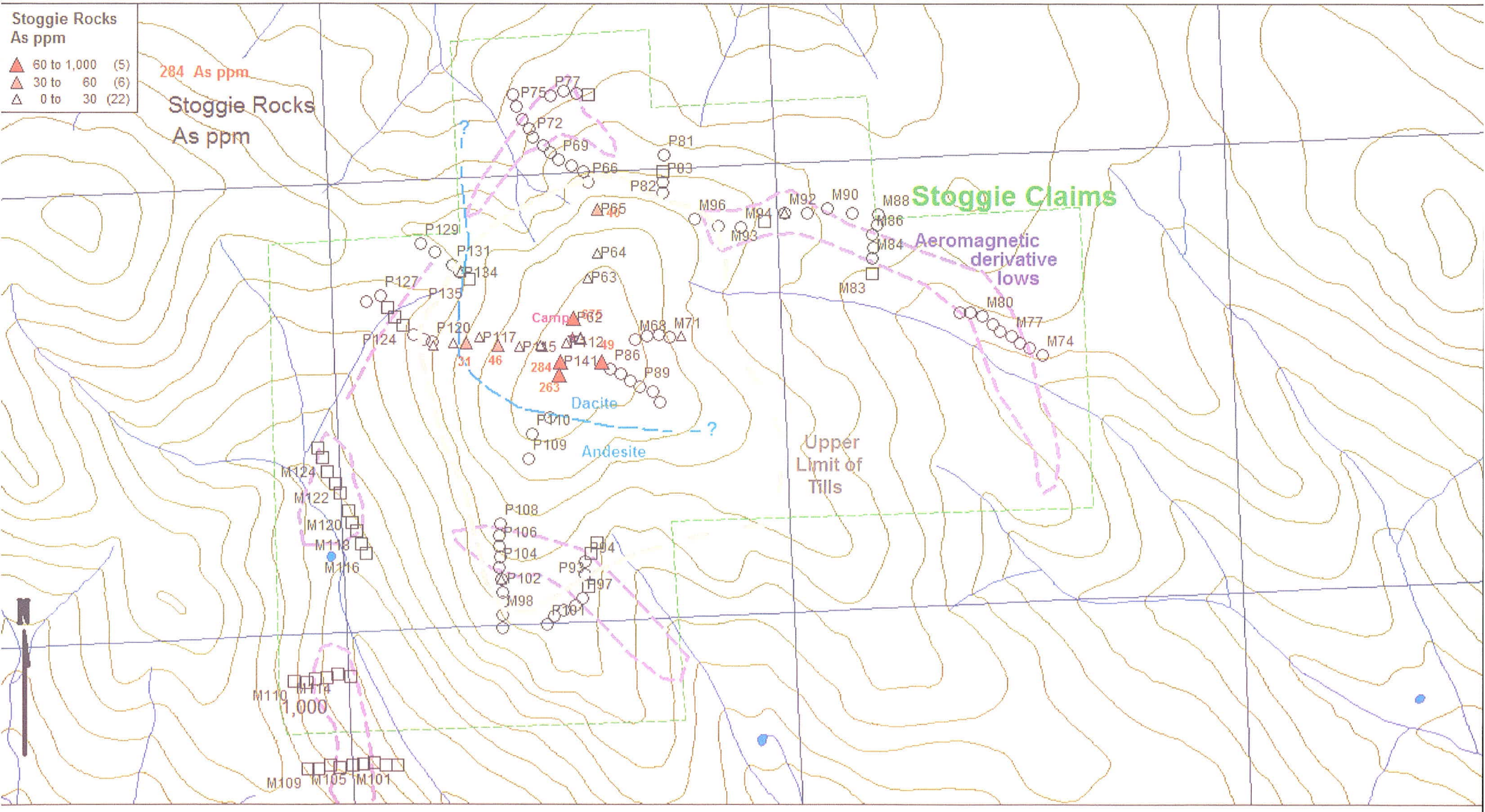
Table 3. Rock sample descriptions.	
ID	**Description**
P62	float dacite with fracture silica and limonite.
P63	float dacite with very fine grained pyrite blebs
P64	small pieces limonitic dacite, one piece with silica
P65	float dacite lapilli tuff with 3% pyrite. Much limonite. Some silica
P67	angular rubble lapilli tuff most with 3% limonite-pyrite.
P68	subangular lapilli tuff with low limonite.
P70	angular unaltered dacite with fracture limonite
P71	angular unaltered dacite with some limonite
P72	limonite chips in soil. Angular unaltered dacite on top of soil
P76	till with some dacite fragments
P78	glacial sediment with rusty dacite chips
P82	till and residual soil with many limonitic chips
P83	till with few rusty dacite chips
P85	float white bleached dacite with low frac limonite
P86	float dacite some very altered limonitic
P87	small rocks some with high limonite and Mn staining
P88	small rocks dacite with limonite
P90	loess with dacite chips
P91	very rocky, dacite , less limonitic
P93	many rock chips dacite, many are limonitic
P94	loess with dacite chips
P95	loess with dacite chips
P102	float thin banded andesite, Seminoff(?)
P103	many chips Seminoff with limonite
P105	much angular float porphyritic augite andes with few lim fracs
P106	unaltered Seminoff float
P107	unaltered Seminoff float
P108	base of augite porphyritic andesite outcrop. Unaltered. Wkly sheared
P112	float chalky dacite with frac & diss limonite
P113	much rubble dacite with peculiar mafic clots.
P114	dacite rubble
P115	angular float dacite moderate frac limonite
P116	much leached dacite float with frac lim & black clots & bxia texture
P117	dacite with variable limonite
P118	dacite with breccia and limonite
P119	some dacite with frac lim, mostly fine-grained greenstone (Seminoff)
P121	bleached Seminoff with frac limonite float
P122	angular float Seminoff
P123	till with angular Seminoff
P133	till. One 15 cm rusty dacite. Many rusty chips.
P134	rusty slab dacite
P136	float dacite with good limonite minor fracs and py boxwwork

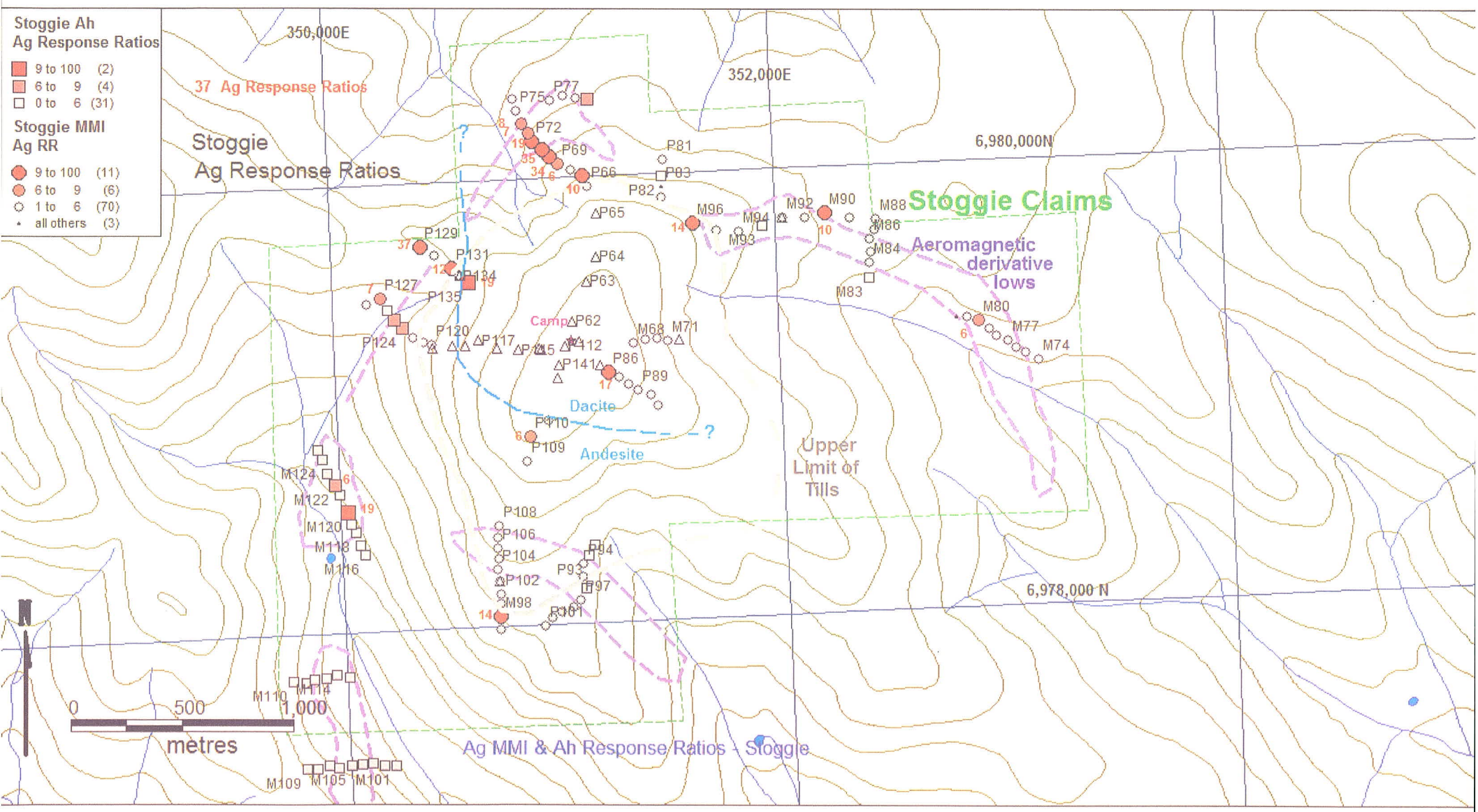
ID	Description
P137	chalky dacite w boxwork and few hairline silica vnlts
P138	dacite breccia w Fe boxwork. Lower limonite staining.
P139	dacite float with micrl fractures &moderate limonite
P140	dacite w micro fractures, calcite, boxwork and limonite
P141	calcite(?) laced or bxia matrix dacite. All leached minor limonite fracs
P142	numerous late calcite micro fracs and minor lim in vugs and fracs
P143	late calcite(?) and high limonite
P144	microveined leached dacite
P145A	fine fractured and diss limonite in felsic Seminoff or dacite
P146	Seminoff schist with high leached sulphide
P147	at M51. felsite with goetite fractures and intense lim envelopes
P148	at M52. rhyo w lched blades fspar alted to clay goetite frac w 1cm lim envlp
P149	at M53. as for P148
M54	flaot rhyolite altered to chalk no limonite
P150	at M50. rhyolite with goetite fracs with limonite envelop.very intense.
P151	at M72. float intensely leached and Fe stained dacite witn Mn staining
	bold numbers indicate samples with assays

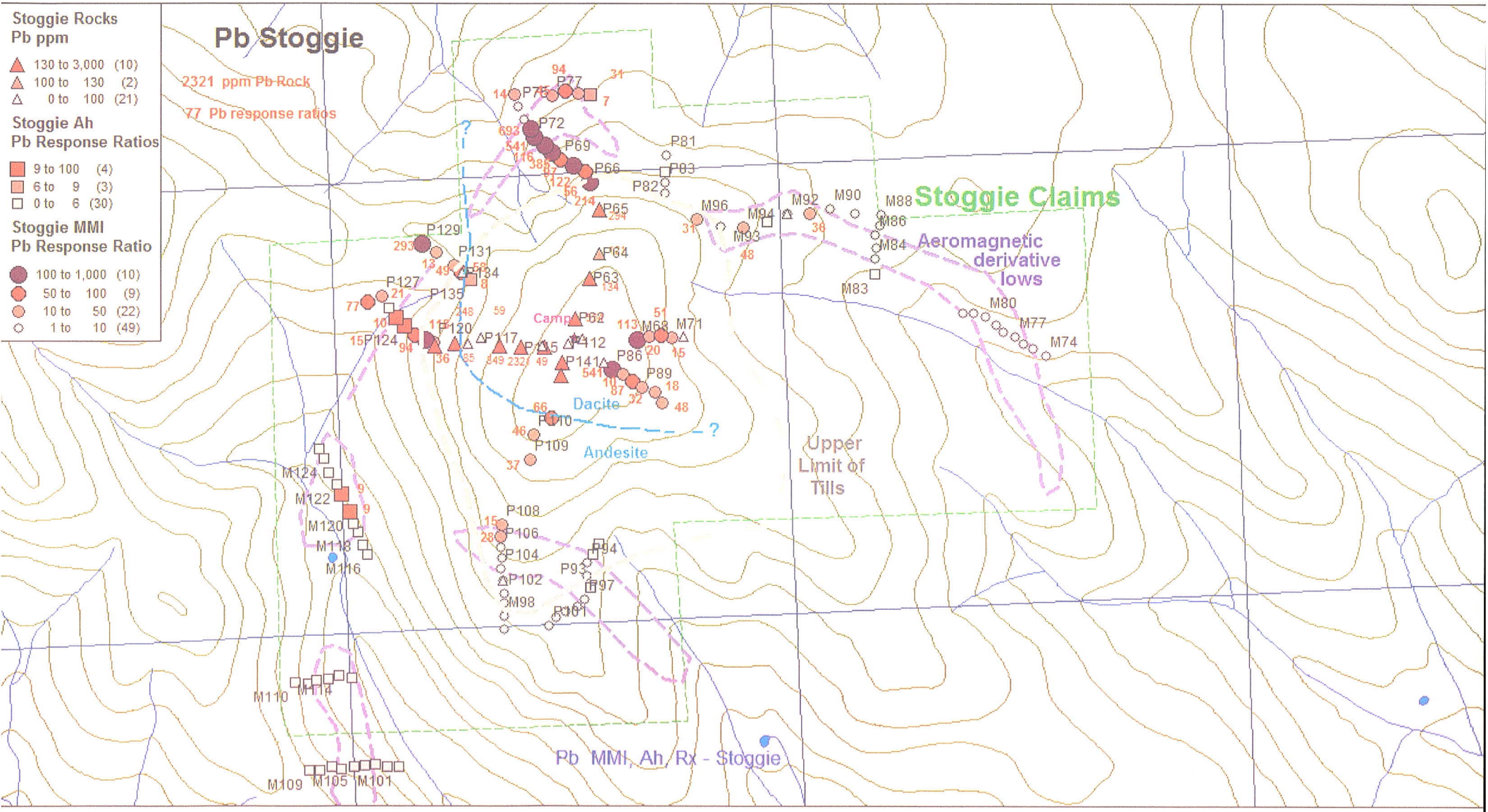
Table 4. Rock Sample Geochemical Results. Stoggie 2012															
ID	83_E	83_N	Mo	Cu	Pb	Zn	Ag	Ni	Mn	Fe	As	Au	Sb	Bi	V
			PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPB	PPM	PPM	PPM
P62	351075	6979353	7.7	15.1	554.1	58	12.4	0.5	41	2.76	675.6	15.5	2.8	19.5	6
P63	351148	6979531	3.5	3.5	134.6	29	3.2	0.5	48	1.27	4.4	4.2	0.8	6.9	4
P64	351194	6979639	2.4	7.3	121	5	1.4	0.7	33	1.71	4.6	2.8	0.6	6.6	5
P65	351204	6979832	3.4	18.2	293.9	380	1.4	7.4	572	3.86	40.7	2.9	4.5	0.2	91
P85	351195	6979150	1.4	2.8	34.7	66	0.4	1.1	138	1.4	48.9	6.3	0.5	0.4	7
P112	351040	6979246	2.2	3.3	32.6	15	0.3	0.6	37	3	19.2	3.1	1.5	1.3	7
P113	350935	6979234	2.2	2.6	265	98	1.3	0.9	51	3.4	17.6	2.1	0.8	2.8	11
P114	350923	6979236	1.7	3.4	49.3	101	0.3	1	38	1.85	9.4	6.4	0.4	0.3	2
P115	350827	6979237	1.8	10.4	2321	122	1.7	2.2	97	2.24	24.2	97.4	3.2	5.2	16
P116	350732	6979247	1.7	6.5	349.3	33	0.8	1.1	64	1.69	46.5	1.8	1	2.3	6
P117	350653	6979286	7.7	2.6	59.1	30	0.3	1.4	52	2.01	6	16.4	1.2	3.2	6
P118	350589	6979262	3.3	6.6	85.8	60	1.1	2.1	158	1.89	31.5	3.8	1	6.1	8
P119	350536	6979268	22.2	32.2	248.3	56	0.9	10.8	243	2.74	4.2	44.6	1.1	35.3	378
P121	350446	6979261	8.2	33.4	147.4	44	0.6	9	185	2.59	4.3	16.5	0.8	4.2	80
P134	350578	6979579	4.4	104.5	21.6	32	0.2	5.7	114	1.34	1.9	0.25	1.7	0.7	8
P136	351105	6979260	2.8	4.3	35.5	49	0.3	0.8	66	3.82	36.1	1.8	0.4	2.4	10
P137	351105	6979260	1.5	1.5	84.3	10	0.2	0.6	102	0.82	2	1.3	0.2	1.3	5
P138	351105	6979260	2.3	1.6	77.9	66	0.9	0.5	67	2.26	21.5	2.6	0.5	3.1	6
P139	351105	6979260	1.8	2.5	77.3	27	0.5	0.7	52	3.16	26.1	0.7	0.5	6	12
P140	351105	6979260	1.8	2	14	36	0.05	0.6	67	2.29	22.7	0.25	0.5	1.4	7
P141	351010	6979163	1.1	4.7	988.1	195	2.5	0.8	40	2.1	94.4	1.1	3.9	2.5	5
P142	350999	6979105	0.9	6.9	116.6	216	0.3	1.2	54	1.42	42.5	1.3	0.6	0.2	5
P143	350999	6979105	3.3	7.4	75.8	286	0.2	2.9	74	1.47	65.5	0.25	0.9	0.2	5
P144	350999	6979105	1.9	9.1	526.7	250	0.6	1.3	39	4.61	263.1	2.6	3.6	1.4	9
P145	351195	6979150	0.7	7.4	59.5	231	0.3	2.1	798	2.05	284.6	1.1	2	0.05	18
P146	350703	6978206	2.4	101.7	56.2	32	0.2	49.1	393	6.18	20.3	3.7	0.6	0.3	110
P147	352704	6982149	0.4	4.8	37.9	106	0.2	3.8	190	4.1	6.2	1.8	1.6	0.05	26
P148	352666	6982115	0.4	2.8	42.8	69	0.4	3.4	97	3.04	2.9	1.8	2.4	0.05	29
P149	352635	6982071	0.9	1.8	27.8	22	0.1	0.7	31	0.89	5.8	2	1.8	0.05	29
P150	352738	6982185	0.7	7.7	27.8	108	0.1	5.1	236	3.25	5.8	1.4	2.6	0.05	30
P151	351552	6979254	0.8	29.8	21	70	0.05	2.8	554	1.96	4.5	0.9	0.4	0.4	10
P152	352034	6979779	1.3	71.2	20	50	0.2	103.9	2244	5.7	11	2	0.8	0.1	50
P145A	350703	6978206	2.8	62.6	23.3	13	0.05	11.4	90	2.65	16.3	1.1	0.3	0.4	34

			Ta						
ID	83_E	83_N	Cr	Mg	Ti	B	S	Se	Te
			PPM	%	%	PPM	%	PPM	PPM
P62	351075	6979353	2	0.08	0.001	9	0.23	3.8	0.1
P63	351148	6979531	1	0.06	0.002	10	0.21	0.25	0.1
P64	351194	6979639	1	0.05	0.002	10	0.24	0.9	0.4
P65	351204	6979832	19	1.3	0.003	5	0.09	0.7	0.1
P85	351195	6979150	2	0.06	0.001	5	0.025	0.25	0.2
P112	351040	6979246	2	0.03	0.002	10	0.44	0.25	0.1
P113	350935	6979234	1	0.04	0.002	12	0.49	0.8	0.1
P114	350923	6979236	1	0.03	0.0005	11	0.07	0.25	0.1
P115	350827	6979237	3	0.07	0.003	25	0.09	0.25	0.1
P116	350732	6979247	3	0.06	0.003	24	0.15	0.25	0.1
P117	350653	6979286	2	0.04	0.002	9	0.49	2.8	0.1
P118	350589	6979262	4	0.03	0.004	18	0.22	1.5	0.1
P119	350536	6979268	63	0.54	0.245	5	0.11	6.8	0.1
P121	350446	6979261	42	0.33	0.133	5	0.16	6.3	0.1
P134	350578	6979579	11	0.05	0.004	9	0.025	0.25	0.1
P136	351105	6979260	2	0.04	0.002	11	0.27	1.5	0.1
P137	351105	6979260	2	0.05	0.001	12	0.13	0.25	0.1
P138	351105	6979260	1	0.05	0.0005	10	0.49	4.4	0.1
P139	351105	6979260	1	0.03	0.001	11	0.12	1.5	0.1
P140	351105	6979260	1	0.04	0.001	11	0.09	0.6	0.1
P141	351010	6979163	1	0.07	0.001	13	0.29	0.25	0.1
P142	350999	6979105	2	0.17	0.0005	11	0.025	0.25	0.1
P143	350999	6979105	2	0.13	0.0005	12	0.025	0.25	0.1
P144	350999	6979105	2	0.06	0.001	9	0.35	0.6	0.2
P145	351195	6979150	4	0.05	0.002	15	0.025	0.25	0.1
P146	350703	6978206	177	1.46	0.006	3	0.13	16.1	0.8
P147	352704	6982149	4	0.01	0.002	1	0.025	0.25	0.1
P148	352666	6982115	3	0.01	0.001	0.5	0.025	0.25	0.1
P149	352635	6982071	2	0.005	0.001	0.5	0.025	0.25	0.1
P150	352738	6982185	2	0.005	0.002	0.5	0.025	0.25	0.1
P151	351552	6979254	2	0.06	0.0005	14	0.025	0.25	0.1
P152	352034	6979779	92	0.96	0.003	23	0.025	0.25	0.1
P145A	350703	6978206	49	0.05	0.007	1	0.48	8.1	0.5


Stoggie Rocks
Au ppb
9 to 100 (5)
6 to 9 (2)
0 to 6 (26)
Stoggie MMI
Au Response Ratios
9 to 100 (3)
6 to 9 (5)
0 to 6 (82)
350,000E
352,000E
6,980,000N
6,978,000 N
Stoggie Claims
Aeromagnetic derivative lows
Upper Limit of Tills
Dacite
Andesite
Camp
0
500
1,000
metres
Au MMI, Ah, Rx - Stoggie


Stoggie Rocks
As ppm
60 to 1,000 (5)
30 to 60 (6)
0 to 30 (22)
284 As ppm
Stoggie Rocks
As ppm
Stoggie Claims
Aeromagnetic
derivative
lows
Upper
Limit of
Tills
Dacite
Andesite
Camp
1,000


Stoggie Ah
Ag Response Ratios
9 to 100 (2)
6 to 9 (4)
0 to 6 (31)
Stoggie MMI
Ag RR
9 to 100 (11)
6 to 9 (6)
1 to 6 (70)
all others (3)
350,000E
352,000E
6,980,000N
6,978,000 N
37 Ag Response Ratios
Stoggie
Ag Response Ratios
Stoggie Claims
Aeromagnetic
derivative
lows
Camp
Dacite
Andesite
Upper
Limit of
Tills
0
500
1,000
metres
Ag MMI & Ah Response Ratios - Stoggie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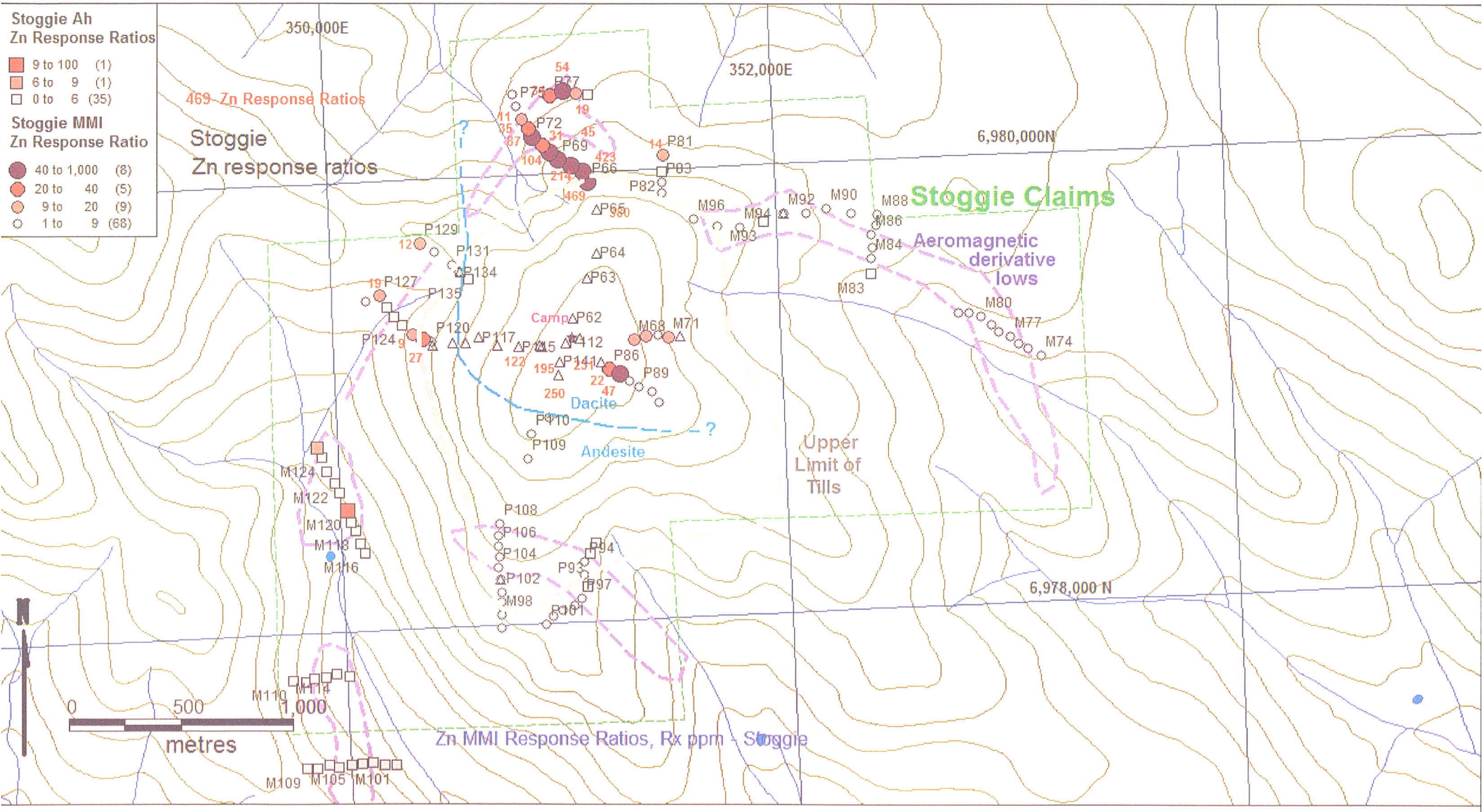
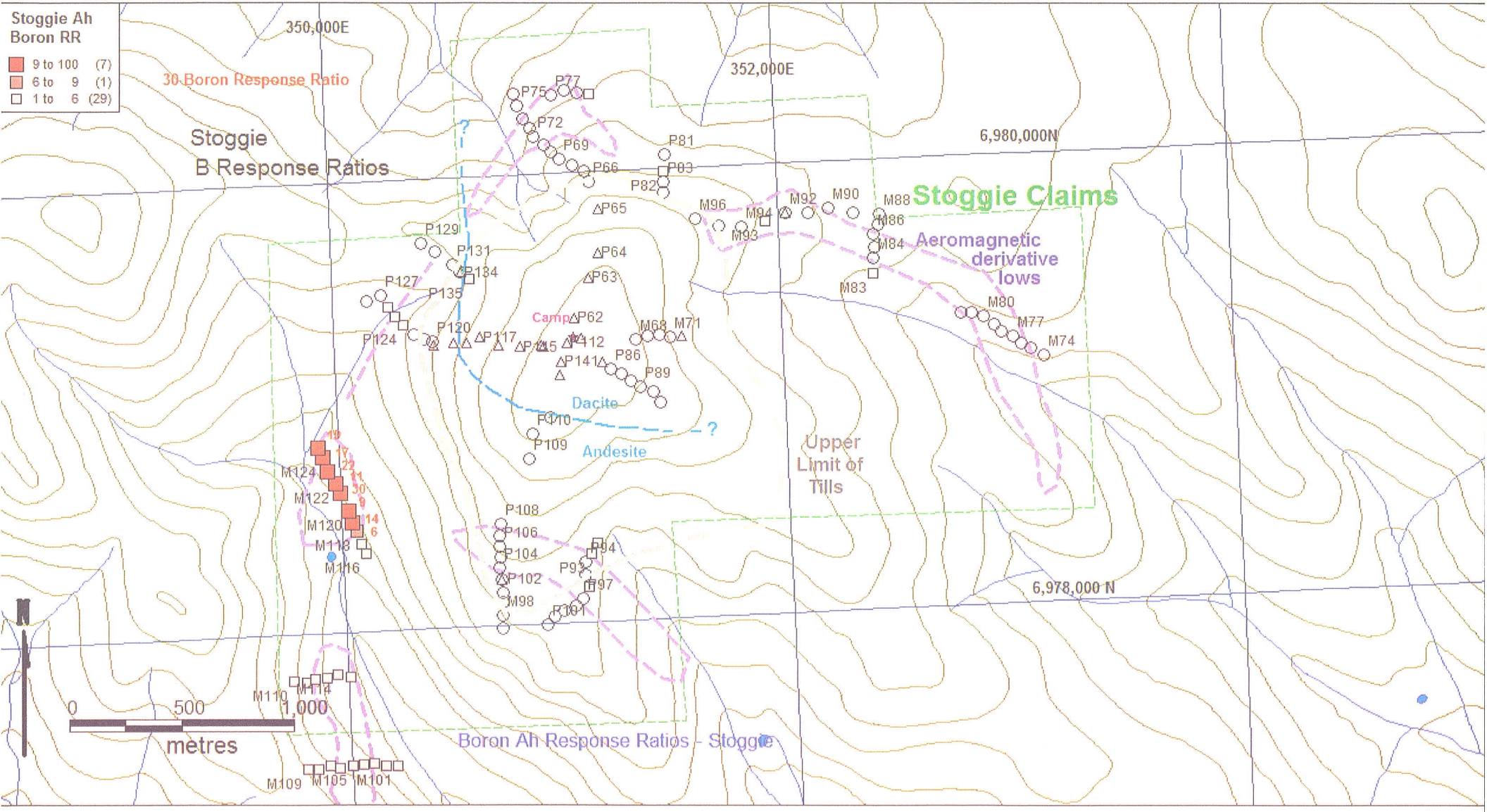
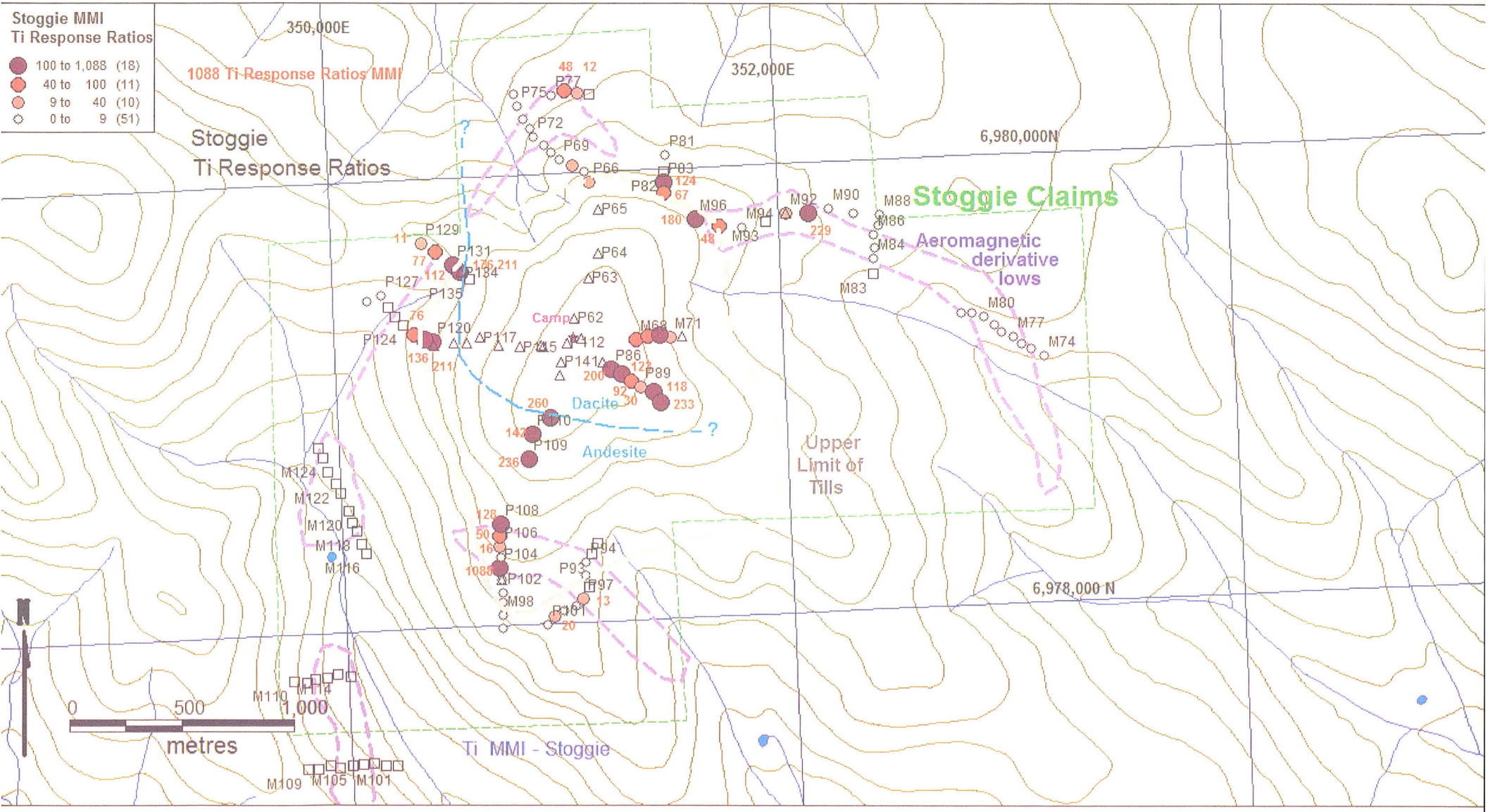
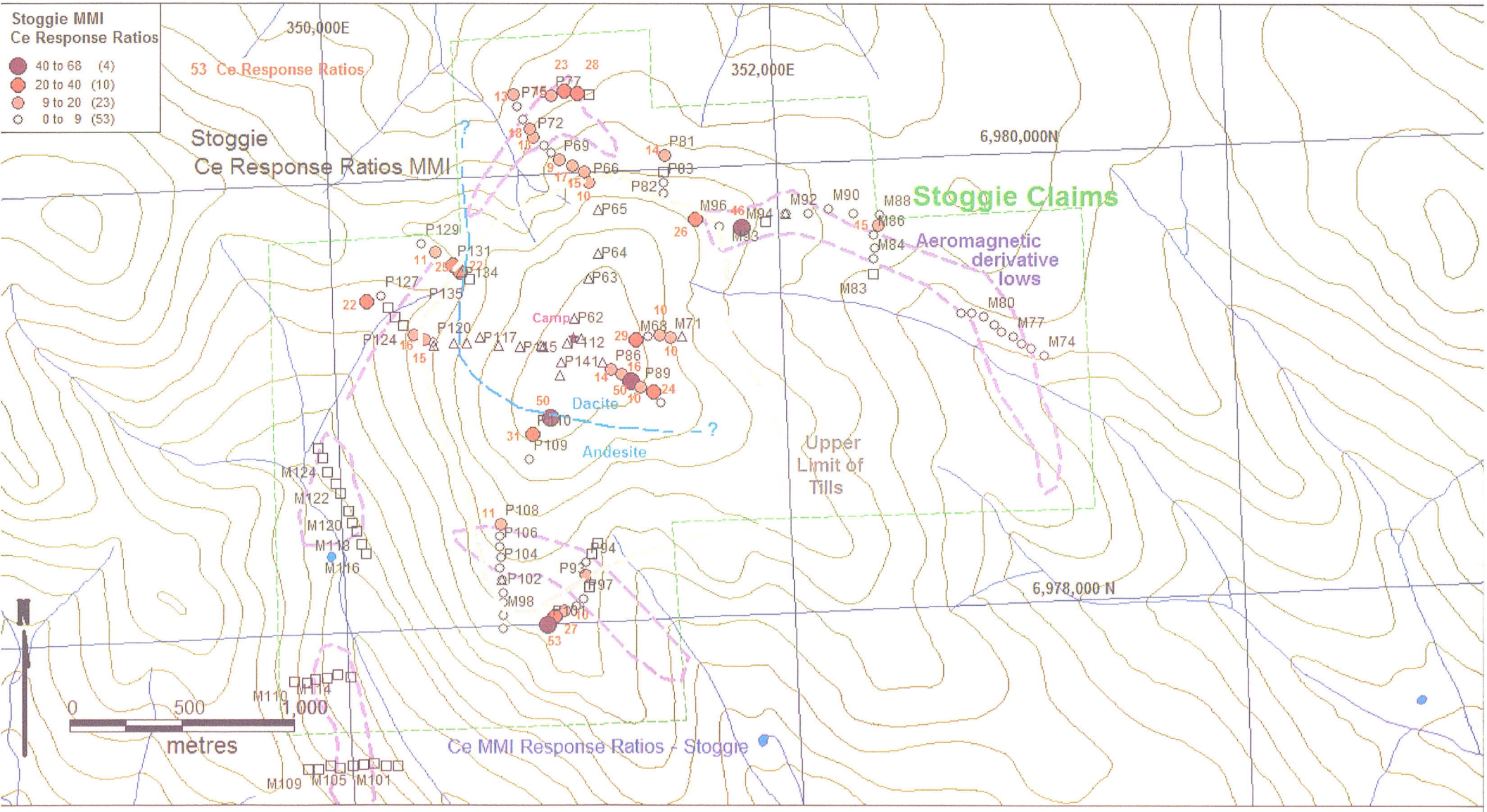
Pb ppm
130 to 3,000 (10)
100 to 130 (2)
0 to 100 (21)
Stoggie Ah
Pb Response Ratios
9 to 100 (4)
6 to 9 (3)
0 to 6 (30)
Stoggie MMI
Pb Response Ratio
100 to 1,000 (10)
50 to 100 (9)
10 to 50 (22)
1 to 10 (49)
Pb Stoggie
2321 ppm Pb Rock
77 Pb response ratios
Stoggie Claims
Aeromagnetic derivative lows
Dacite
Andesite
Upper Limit of Tills
Pb MMI, Ah, Rx - Stoggie


Stoggie Ah
Zn Response Ratios
9 to 100 (1)
6 to 9 (1)
0 to 6 (35)
Stoggie MMI
Zn Response Ratio
40 to 1,000 (8)
20 to 40 (5)
9 to 20 (9)
1 to 9 (68)
350,000E
352,000E
6,980,000N
6,978,000 N
469 Zn Response Ratios
Stoggie
Zn response ratios
Stoggie Claims
Aeromagnetic
derivative
lows
Camp
Dacite
Andesite
Upper
Limit of
Tills
0
500
1,000
metres
Zn MMI Response Ratios, Rx ppm - Stoggie


Stoggie Ah
Boron RR
9 to 100 (7)
6 to 9 (1)
1 to 6 (29)
30 Boron Response Ratio
Stoggie
B Response Ratios
350,000E
352,000E
6,980,000N
6,978,000 N
Stoggie Claims
Aeromagnetic
derivative
lows
Camp
Dacite
Andesite
Upper
Limit of
Tills
0
500
1,000
metres
Boron Ah Response Ratios - Stoggie


Stoggie MMI
Ti Response Ratios
100 to 1,088 (18)
40 to 100 (11)
9 to 40 (10)
0 to 9 (51)
350,000E
352,000E
6,980,000N
6,978,000 N
1088 Ti Response Ratios MMI
Stoggie
Ti Response Ratios
Stoggie Claims
Aeromagnetic
derivative
lows
Upper
Limit of
Tills
Dacite
Andesite
Camp
0
500
1,000
metres
Ti MMI - Stoggie


Stoggie MMI
Ce Response Ratios
40 to 68 (4)
20 to 40 (10)
9 to 20 (23)
0 to 9 (53)
350,000E
352,000E
6,980,000N
6,978,000 N
53 Ce Response Ratios
Stoggie
Ce Response Ratios MMI
Stoggie Claims
Aeromagnetic derivative lows
Upper Limit of Tills
Dacite
Andesite
Camp
0
500
1,000
metres
Ce MMI Response Ratios - Stoggie

SUMMARY

Work described in this report was conducted under a YMIP Focussed Regional Grant, Hardrock Type. YMIP No is 12-016 awarded to Gordon Richards. The Grant includes work on the Smoko Quartz Claims that is described in a report filed for Representation Work. This report describes only that work done on the Stoggie portion of that Grant.

The project is located in the headwaters of a tributary to Black Creek 130 km northwest of Carmacks on NTS Map Sheet 115I13.

Richards and Mieras flew by helicopter from a previous fly camp on the nearby Smoko Claims. A helipad was cut out on a ridge top for use on demob and as a camp from which prospecting traverses and staking was conducted. The following is an historical account of events on this (Stoggie) part of the Smoko project:

June 6. Mob Whs to Dawson. Bought supplies. Shared time with other projects.
June 10. Flew in afternoon from Smoko Property to Stoggie Project. Set up camp.
June 11-14. Prospected and sampled.
June 15-16. Staked and Sampled.
June 17. Flew to Lake Project.
July 5. Demob to Whitehorse. Sorted and shipped samples. Stored camp supplies and van. Shared this time with other projects.

The target area occurs in the underexplored pre-Reid glaciated terrain east of the White Gold District within volcanic flows and volcaniclastics of the Early Jurassic Seminof Formation and its co-eval Aishihik intrusive suite within Quesnellia/Stikinia Terrane overlain by volcaniclastics of the Upper Cretaceous Carmacks Group. This piece of Quesnellia/ Stikinia occurs at the northern tip of this terrane surrounded to the west, north and east by rocks of the Yukon Tanana Terrane.

Glaciation is described as pre-Reid in age. Reid glaciation began 200,000 years ago and ended about 50,000 years ago. The glaciation across the general area of the Stoggie Project is described as much older than Reid, possibly older than 500,000 years (Jeff Bond, personal communication, 2012). Jeffrey Bond and

Panya Lipovsky of the Yukon Geological Survey have recently provided a number of papers, maps and posters on the surficial geology of the pre-Reid glaciated area with descriptions related to exploration. In particular they noted that tills have largely been removed by weathering from hilltops and modest slopes leaving hillsides amenable to soil sampling with effectiveness believed to be similar to unglaciated terrain further west.

RGS samples variably anomalous for Au, As, Sb and Hg occur in three north flowing and three south flowing creeks off of the eat-west ridge the camp was on. Topography was hilly with modest slopes and a minimum of swampy ground.

Aeromagnetic tilt derivative lows that are known to associate with White Gold District structurally controlled gold prospects and deposits also exist within the target area and were used in large part to guide soil sampling for gold bearing structures.

Soil sampling traverses were carried out using selective leach techniques because the area was described as having been glaciated in pre-Reid times. Residual soils were believed to be absent. The primary sampling method was MMI soil sampling at 50 m intervals on lines crossing the magnetic tilt derivative lows and spaced so as to give widespread coverage of as much of the area as possible. Where frozen ground prohibited the collection of MMI samples, Ah (organic) soil samples were collected. Where bedrock and subcrop exposures of unmineralized intrusive rock were encountered no samples were collected. Refer to figures for coverage in relation to the magnetic lows and highs.

All garbage was removed from camp and taken to Dawson City for disposal.

SURVEY METHODS

General

Soil sampling used methods employing selective leach analyses because the area had been glaciated during one or more pre-Reid glacial periods and MMI soil sampling can "see through" deep overburden including glacial till. Ah sampling was only used as a backup where MMI soils could not be collected.

Nine man days were spent by Jeff Mieras and Gordon Richards collecting 90 MMI soil samples and 37 organic Ah soil samples. Lab results and spreadsheets

showing GPS location with the geochemical data are provided in Appendices. GPS coordinates were recorded using a UTM NAD83 Zone 8 Projection.

Sample details such as rock type and mineralization, soil colour, texture, depth, dampness and site slope were described in notes. Their locations were recorded in a Garmin GPSmap 60Cx. Some UTM co-ordinates were also recorded in notebooks as a backup in case of loss of the GPS unit or loss of data stored on the unit. No such loss occurred. Sampled material was placed into numbered bags as described below. Soils were collected at 50 m intervals on widely space lines designed to give broad coverage and cross the magnetic lows wherever possible.

Response ratios for 27 elements were calculated for all 90 MMI soil samples and are provided in Table 1. Response ratios (RR) for 31 elements were calculated for all 37 Ah soil samples and are provided in Table 2. Anomalous results greater than selected threshold values for Au (RR & Rx), As (Rx), Ag (RR), Pb (RR & Rx), Zn (RR & Rx), and B (RR), are shown graphically on the figures. It is important to distinguish response ratios for MMI and Ah soil samples. Data have not been leveled between these two methods due to the low number of Ah samples. MMI and Ah thresholds are different for all elements.

Geology

Gold mineralization related to the magnetic tilt derivative lows was the main target. This target is modeled after the White Gold District structurally controlled deposits with the realization that other gold bearing systems are certainly possible. Expected size of geochemically anomalous zones is up to three km long and 50 to 500 m or so wide. There are numerous examples from the White Gold District where a reconnaissance style soil line with a 100m spaced sample interval yielded only one anomalous sample that eventually led to the discovery of significant gold mineralization. Angular float was described wherever possible in an attempt to understand geology and alteration present on the property.

MMI Soil Samples.

MMI analysis uses a weak partial extraction to improve the conventional geochemical response over buried ore deposits. The process measures the mobile metal ions from mineralization, which have moved toward the surface and become loosely attached to the surfaces of soil particles. They concentrate within

the 10 to 25 cm soil depth which on the property is a mixture of loess and till. Its effectiveness has been documented in over 1000 case histories on six continents and includes numerous commercial successes. The anomalies are sharply bounded and in most cases directly overlie and define the extent of the surface projection of buried primary mineralized zones. The MMI process is a proprietary method developed by Wamtech of Australia. SGS Minerals Services in Toronto purchased all rights to the method and provides analyses in Canada.

Watch and ring were removed prior to sampling. Pits were dug by shovel to a depth of 30 cm in order to expose the soil profile for sampling. The profile was scraped clean with a plastic scoop to remove any metal effect from the shovel. A continuous strip of soil was collected by plastic scoop over the interval of 10 to 25 cm below the top of true soil, placed in a pre-numbered ziplock baggie and placed in an 11 inch by 20 inch 2 mil plastic bag. Loess was present at nearly all sample sites and was the sample medium for the bulk of all of the 90 MMI soils collected. Some samples were mixtures of loess and till. Samples were kept cool until they were shipped to SGS Minerals Services in Toronto for analyses.

In the SGS Lab, samples are not dried or prepared in any way. The MMI process includes analyses of an unscreened 50-g sample using multi-component extractants. Metal contents are determined for 53 elements by ICP-MS in the parts per billion range.

Response Ratios were calculated for 27 elements as shown on Table 1. The average value for results of the lower quartile was calculated for each element. One-half of detection limit was used for those samples with values reported as less than detection limit. Then each result was divided by the lower quartile average to obtain its response ratio. A response ratio of 10 or more is considered very significant for indicating underlying mineralization. Lesser values of 5 to 10 can also be important particularly where more than one element has such a value. Response ratios can best be thought of as a multiple of background in interpreting results.

Organic Ah Soil Samples.

Ah horizon organic soil samples were collected from the very base of the organic layer overlying loess and placed into gusseted kraft bags. The organic layer was from 1 to 5 cm thick. Considerable care and time was taken to collect

only completely decomposed organic soil. Samples were sent to Acme Labs in Vancouver, B.C., where samples were dried at 60 degrees C, 100 g sieved to -80 mesh, and a 15 g sample digested in 1:1:1 Aqua Regia and analyzed by Acme's Ultratrace ICP-MS analyses for 53 elements.

Response ratios were then calculated for 37 elements similar to those for the MMI soils. Refer to Table 2.

RESULTS

MMI and Ah response ratios for Au, Ag, Pb, Zn, and B and rock geochem values for Au, As, and Pb are shown graphically on the attached figures and for many more elements on Tables 1 and 2. The figures also show the aeromagnetic tilt derivative lows and highs, angular float sample locations and interpreted geological contacts. The following is used as a guide in interpretation of results.

Geology

The Carmacks Group volcanics was only seen as angular rubble and float of dacite across the height of land above the upper limits of till shown on the figures and below that elevation as angular float and chips within some of the tills. The dacite was most commonly a lapilli tuff with some fine-grained tuffs and was invariably limonitic. Limonite was both disseminated and fracture controlled. Pyrite was noted in a few samples as described on Table 3. Geochemical results are provided in Table 4 and shown graphically on the figures. Angular float of Seminof Formation fine-grained andesite was seen west and south of camp and provides the limits of the contact with overlying Carmacks Group dacite. Bleaching and fracture and disseminated limonite were noted in some of the float of Seminof andesites. This limonite was more intense and common in the float west of camp. Northeast of camp about two km the traverse with soil sample numbers M50 to M67 contained intensely altered rhyolite(?) or intensely bleached fine-grained sediment. Alteration is in the form of goetite covered fractures with one cm wide altered envelopes of limonite. These samples were not anomalous for any metals. Geology was only recorded along the P-series of samples where Richards traversed. However altered rocks collected by Mieras on his traverses were examined and sampled by Richards.

The property lies at the extreme western limit of the pre-Reid glaciated terrain with higher elevations shown to be unglaciated. Current work found unglaciated terrain at higher elevations as shown on the accompanying figures. At lower elevations tills were common in soil pits beneath an extensive loess blanket 20 to 50 cm thick. The loess deposit was not present on much of the gently sloped hilltop that the camp was on. Here angular rubble of Carmacks Group volcanics was present making collection of soils difficult or impossible. Presence of tills was confirmed in most soil pits below the limit of tills shown on the maps. A 5 to 20 cm thick post McConnell age loess deposit blankets most of the hillsides that along with till makes mapping of underlying geology and the observation of altered float difficult.

Au Response Ratios.

Two clusters of high Au response ratios (RR) in MMI soils and one cluster of anomalous Au in rocks occur on the property.

The first high Au MMI RR cluster is made of two soils that returned RRs of 7 and 6 from samples P122 and P123 about 800 m west of camp coupled with two soils that returned RRs of 8 and 13 from samples P131 and P132 about 500 m northeast of the first two samples. These samples are coincident with a very strong zone of anomalous Ag, Pb and Zn that mimics a northeast trending magnetic tilt derivative low. Two slightly elevated Au RRs of 4 and 5 occur one km northeast of the other samples at the north end of the anomalous geochemical/mag low trend in association with the strongest Ag, Pb, and Zn RRs. Additional soil samples and rock samples should be collected along this trend.

The second high Au MMI RR cluster is made of three soils collected about 1500 m south of camp near the upper limit of tills. Here RRs from MMI soils were 9, 18, and 7 from samples P94, P102 and P103 near a magnetic low but not exactly mimicking it. Lack of support from RRs of other metals makes this anomaly less significant than the others. Float near these samples were of Seminof andesites with low fracture limonite in some samples.

The cluster of anomalous Au in rocks occurs west of camp over a 700 m length. Rocks collected at a roughly 100 m interval leading west from camp yielded results of 6, 97, 16, 44, and 16 ppb Au and another sample just north of camp that yielded 15 ppb Au. Rocks were limonitic dacite lapilli tuffs of the

Carmacks Group. The two most westerly samples were of limonitic Seminof andesite. It was difficult to collect soils from the unglaciated upland surface so rocks were collected as an initial test to check for anomalous gold. The west end of this rock sample line is at the south end of the first cluster of MMI soils anomalous for gold described above. Additional rocks and soils and perhaps conventional soils should be collected across this upland surface.

As Rock Sample Geochemistry.

Some samples of dacite float that were limonitic returned anomalous arsenic values up to 675 ppm at P62 but only two MMI soil samples returned anomalous RRs of 10 and 8 from above the unglaciated terrain. One Ah soil sample returned an anomalous value again from the unglaciated terrain. Arsenic may not be responsive in MMI soils collected over tills. The high As values in the dacites substantiate the significance of the high Au in the same rocks. The writer has found that As is unresponsive in soils collected over tills on other properties where high As was obtained from adjacent angular float such as at the Paleo Property 20 km east of here.

Ag Response Ratios.

A pronounced linear pattern of anomalous Ag RRs from both MMI and Ah samples occurs on the west of the target area and forms the northeast trending zone mentioned above under 'Au Response Ratios'. Ah samples at the south end that are anomalous for Ag extend the length of the anomalous zone to two km with the zone open at both ends. Values range from 6 to 37 with many values (7) in excess of 10. These are highly anomalous and if coupled with less responsive Au in MMI soils from tills they would indicate a large system for additional work and discovery of significant gold mineralization.

Other high Ag RRs are scattered across the property and not of high priority for follow-up work at this time.

Pb Response Ratios and Rock Geochemistry.

Highly anomalous RRs for Pb, with a high of 693, occur over the same linear trend described for Ag above over the same two km length and open at both ends. Dacites sampled over the upland surface that were anomalous for Au and As as well as many more dacite samples were also highly anomalous for Pb with values up to 2321 ppm at P115. MMI soils east of camp for 500 m and south of

camp for one km were also highly anomalous for Pb. No pattern is obvious for the anomalous rocks and these last described anomalous MMI soils other than to say they occur over an area of 1800 m by 1100 m and open to the east. Gold bearing structures could be crossing this metal rich zone that could be found by detailed soil and rock sampling and a ground magnetometer/VLF-EM survey.

Zn Response Ratios.

Highly anomalous RRs for Zn, with a high of 469, occur over the same linear trend described for Pb and Zn above over the same two km length. The soils east of camp that were highly anomalous for Pb contain several highly anomalous RRs for Zn as well. Zn values for rocks are not plotted but an examination of Table 4 shows high rock chip samples from the dacites with a high of 380 ppm Zn.

B Response Ratios.

Ah samples collected one km southwest of camp along the base of slope east of a southerly flowing creek were highly anomalous for boron, with a high of 30, over a 400 m length. This anomalous boron zone occurs at the southwest end of the main northeast trending geochemically anomalous zones described above for Au, Ag, Pb, and Zn.

Other response ratios.

A cursory examination of Table 1 for anomalous response ratios for other elements finds interesting clusters of highs for Tl, a common pathfinder for gold, Rb, a possible indicator of alteration, Ti, Ce, and other rare earth elements. The Tl is associated with the main linear Au zone a km west of camp and with the soils immediately east of camp. Both these areas are in unglaciated terrain.

CONCLUSIONS AND RECOMMENDATIONS.

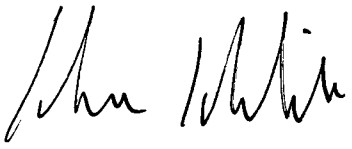
- Angular float and chips in soil define the limits of limonitic dacite of the Upper Cretaceous Carmacks Group in contact with underlying fine-grained andesites of the Lower Jurassic Seminof Formation. The contact of the Seminof Formation with Aishihik suite granodiorite was not located although it is mapped by Ryan and Colpron as lying along the western limit of the survey area. The ridgetop at camp is unglaciated with the contact of tills fairly well defined from the traverses made.

- Soils on hillsides are till with a covering of 20 to 50 cm thick loess that in places is partially admixed into the upper part of the till. The upper limit of tills occurs at about 950 m elevation with residual soils and angular rubble occurring above. The flat upland surface contains large areas of dacite rubble with no or thin loess cover as at camp.
- The dacite that occurs as rubble on the upland surface and as chips in many soil pits is limonitic with occasional siliceous fractures and lenses. Pyrite forms up to 3% in the few dacites where it is present. Some of the Seminof andesites are bleached with varying limonite content.
- As and Au were anomalous in rocks but not in MMI or Ah soil samples with rare exceptions. These elements may not be responsive in tills. Ag and Pb were responsive in MMI and Ah soils. Zn was responsive in MMI but not in Ah soils. However strong consistent multi-element patterns have developed that could be indicative of gold bearing structures. They are discussed below. It is uncertain if gold pathfinder elements such as As, Sb, Te, Ba and Hg were active enough to form anomalous values or if they are absent in bedrock and thus not available to produce anomalies. Standard soil samples may or may not work in this environment. If they do they would certainly yield anomalies transported some distance by pre-Reid glaciers. Above the limits of till, standard soils might be a good method of sampling because of the very rocky nature of the soil which makes collection of MMI samples almost impossible to collect.
- Selective leaches of soils using MMI and Ah analyses provided strong multi-element anomalous patterns for Pb, Ag, Zn and Au over a two km linear pattern trending northeast on the west of the survey area coincident with a pronounced linear magnetic tilt derivative low. As, Au and Tl associated with these patterns of anomalous RRs were anomalous only in samples collected above the upper limit of tills. Based on this relationship it is believed that these elements are not responsive to MMI soil sampling over tills and that patterns for anomalous Pb, Ag, and Zn should be used as a guide to gold-bearing mineralization on the property. Detailed soil sampling is recommended over the full two km length of this anomaly and further to

the northeast to find the limit of the anomaly. Altered and limonitic float should be sampled as part of this survey.

- A strong pattern of anomalous Pb in rocks, MMI and Ah response ratios occurs over a zone measuring 1800 m by 1100 m with no discernible pattern. Anomalous Zn, and lesser Au, As, and Ag occur in rocks and soils within this Pb zone. More detailed soil and rock chip sampling is recommended to define the extent of this anomaly and try and locate gold bearing zones within it.
- A VLF-EM survey is recommended to search for sulphide bearing structures that could be gold bearing. This survey should cover the large Pb anomaly and the two km long northeast trending Pb-Ag-Zn-Au anomaly. It is further recommended that this geophysical survey be conducted prior to soil and rock sampling in order to provide targets for more detailed soil and rock sampling.

Respectfully submitted,



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Submitted By: Gordon Richards
Receiving Lab: Canada-Whitehorse
Received: June 29, 2012
Report Date: July 26, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS WHI12000199.1

CLIENT JOB INFORMATION

Project: STOGGIE
Shipment ID:
P.O. Number
Number of Samples: 33

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	33	Crush, split and pulverize 250 g rock to 200 mesh			WHI
1DX2	33	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

ADDITIONAL COMMENTS

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: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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.

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Project: STOGGIE
Report Date: July 26, 2012

CERTIFICATE OF ANALYSIS WHI12000199.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
P62	Rock	0.12	7.7	15.1	554.1	58	12.4	0.5	0.5	41	2.76	675.6	15.5	11.7	66	0.3	2.8	19.5	6	0.05	0.081
P63	Rock	0.17	3.5	3.5	134.6	29	3.2	0.5	0.4	48	1.27	4.4	4.2	13.7	19	0.2	0.8	6.9	4	0.05	0.043
P64	Rock	0.18	2.4	7.3	121.0	5	1.4	0.7	0.5	33	1.71	4.6	2.8	10.4	60	<0.1	0.6	6.6	5	0.04	0.046
P65	Rock	0.14	3.4	18.2	293.9	380	1.4	7.4	10.9	572	3.86	40.7	2.9	7.6	14	0.4	4.5	0.2	91	0.24	0.135
P85	Rock	0.18	1.4	2.8	34.7	66	0.4	1.1	4.5	138	1.40	48.9	6.3	11.8	9	<0.1	0.5	0.4	7	0.03	0.033
P112	Rock	0.16	2.2	3.3	32.6	15	0.3	0.6	0.7	37	3.00	19.2	3.1	12.0	45	<0.1	1.5	1.3	7	0.02	0.060
P113	Rock	0.27	2.2	2.6	265.0	98	1.3	0.9	1.1	51	3.40	17.6	2.1	14.0	40	<0.1	0.8	2.8	11	0.04	0.084
P114	Rock	0.33	1.7	3.4	49.3	101	0.3	1.0	1.3	38	1.85	9.4	6.4	10.3	10	<0.1	0.4	0.3	2	0.03	0.051
P115	Rock	0.14	1.8	10.4	2321	122	1.7	2.2	2.7	97	2.24	24.2	97.4	13.7	23	0.2	3.2	5.2	16	0.10	0.085
P116	Rock	0.24	1.7	6.5	349.3	33	0.8	1.1	0.9	64	1.69	46.5	1.8	5.6	20	<0.1	1.0	2.3	6	0.03	0.030
P117	Rock	0.20	7.7	2.6	59.1	30	0.3	1.4	0.9	52	2.01	6.0	16.4	11.6	50	0.2	1.2	3.2	6	0.05	0.045
P118	Rock	0.17	3.3	6.6	85.8	60	1.1	2.1	2.6	158	1.89	31.5	3.8	7.0	22	0.1	1.0	6.1	8	0.03	0.030
P119	Rock	0.10	22.2	32.2	248.3	56	0.9	10.8	5.6	243	2.74	4.2	44.6	1.9	61	0.2	1.1	35.3	378	0.33	0.069
P121	Rock	0.08	8.2	33.4	147.4	44	0.6	9.0	3.4	185	2.59	4.3	16.5	2.2	138	0.2	0.8	4.2	80	0.21	0.049
P134	Rock	0.15	4.4	104.5	21.6	32	0.2	5.7	11.6	114	1.34	1.9	<0.5	25.2	7	0.3	1.7	0.7	8	0.03	0.031
P136	Rock	0.31	2.8	4.3	35.5	49	0.3	0.8	1.0	66	3.82	36.1	1.8	13.0	47	<0.1	0.4	2.4	10	0.05	0.110
P137	Rock	0.14	1.5	1.5	84.3	10	0.2	0.6	1.0	102	0.82	2.0	1.3	6.1	16	<0.1	0.2	1.3	5	0.04	0.019
P138	Rock	0.28	2.3	1.6	77.9	66	0.9	0.5	0.9	67	2.26	21.5	2.6	12.8	84	<0.1	0.5	3.1	6	0.05	0.073
P139	Rock	0.16	1.8	2.5	77.3	27	0.5	0.7	0.4	52	3.16	26.1	0.7	14.0	33	<0.1	0.5	6.0	12	0.03	0.127
P140	Rock	0.26	1.8	2.0	14.0	36	<0.1	0.6	0.9	67	2.29	22.7	<0.5	12.3	12	<0.1	0.5	1.4	7	0.04	0.079
P141	Rock	0.22	1.1	4.7	988.1	195	2.5	0.8	0.8	40	2.10	94.4	1.1	14.8	30	0.2	3.9	2.5	5	0.03	0.060
P142	Rock	0.12	0.9	6.9	116.6	216	0.3	1.2	0.8	54	1.42	42.5	1.3	10.6	19	<0.1	0.6	0.2	5	0.09	0.046
P143	Rock	0.20	3.3	7.4	75.8	286	0.2	2.9	1.7	74	1.47	65.5	<0.5	11.0	9	<0.1	0.9	0.2	5	0.08	0.040
P144	Rock	0.09	1.9	9.1	526.7	250	0.6	1.3	1.1	39	4.61	263.1	2.6	11.0	17	0.2	3.6	1.4	9	0.02	0.116
P145	Rock	0.15	0.7	7.4	59.5	231	0.3	2.1	15.5	798	2.05	284.6	1.1	13.9	11	0.3	2.0	<0.1	18	0.07	0.052
P146	Rock	0.10	2.4	101.7	56.2	32	0.2	49.1	32.2	393	6.18	20.3	3.7	0.7	22	<0.1	0.6	0.3	110	0.07	0.056
P147	Rock	0.07	0.4	4.8	37.9	106	0.2	3.8	2.6	190	4.10	6.2	1.8	1.5	36	<0.1	1.6	<0.1	26	0.01	0.013
P148	Rock	0.11	0.4	2.8	42.8	69	0.4	3.4	1.5	97	3.04	2.9	1.8	1.2	27	<0.1	2.4	<0.1	29	0.01	0.007
P149	Rock	0.14	0.9	1.8	27.8	22	0.1	0.7	0.5	31	0.89	5.8	2.0	2.2	29	<0.1	1.8	<0.1	29	<0.01	0.008
P150	Rock	0.20	0.7	7.7	27.8	108	0.1	5.1	4.5	236	3.25	5.8	1.4	1.7	22	0.2	2.6	<0.1	30	0.02	0.047

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.

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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
P62	Rock	31	2	0.08	183	0.001	9	0.41	0.040	0.18	<0.1	<0.01	1.9	0.2	0.23	<1	3.8	<0.2
P63	Rock	27	1	0.06	201	0.002	10	0.40	0.033	0.23	<0.1	<0.01	0.6	0.3	0.21	1	<0.5	<0.2
P64	Rock	24	1	0.05	241	0.002	10	0.41	0.045	0.26	<0.1	<0.01	0.6	0.3	0.24	1	0.9	0.4
P65	Rock	15	19	1.30	115	0.003	5	1.55	0.020	0.09	<0.1	<0.01	6.8	<0.1	0.09	8	0.7	<0.2
P85	Rock	26	2	0.06	48	0.001	5	0.40	0.025	0.11	<0.1	<0.01	0.9	0.1	<0.05	1	<0.5	0.2
P112	Rock	29	2	0.03	352	0.002	10	0.42	0.080	0.28	<0.1	<0.01	0.9	0.3	0.44	1	<0.5	<0.2
P113	Rock	19	1	0.04	254	0.002	12	0.34	0.068	0.33	<0.1	<0.01	1.8	0.2	0.49	1	0.8	<0.2
P114	Rock	33	1	0.03	55	<0.001	11	0.26	0.022	0.17	0.1	<0.01	0.9	0.3	0.07	<1	<0.5	<0.2
P115	Rock	23	3	0.07	88	0.003	25	0.59	0.036	0.15	<0.1	<0.01	2.3	0.2	0.09	2	<0.5	<0.2
P116	Rock	6	3	0.06	154	0.003	24	0.45	0.013	0.32	<0.1	<0.01	0.7	0.6	0.15	1	<0.5	<0.2
P117	Rock	14	2	0.04	289	0.002	9	0.31	0.037	0.37	<0.1	<0.01	0.8	0.6	0.49	<1	2.8	<0.2
P118	Rock	13	4	0.03	187	0.004	18	0.32	0.010	0.25	<0.1	<0.01	0.6	0.4	0.22	<1	1.5	<0.2
P119	Rock	8	63	0.54	133	0.245	5	1.32	0.074	0.10	0.4	<0.01	6.0	0.3	0.11	5	6.8	<0.2
P121	Rock	6	42	0.33	194	0.133	5	0.91	0.057	0.08	0.2	<0.01	3.0	0.4	0.16	4	6.3	<0.2
P134	Rock	7	11	0.05	52	0.004	9	0.44	0.031	0.16	<0.1	<0.01	1.9	0.3	<0.05	1	<0.5	<0.2
P136	Rock	28	2	0.04	178	0.002	11	0.36	0.051	0.24	<0.1	<0.01	1.8	0.2	0.27	1	1.5	<0.2
P137	Rock	31	2	0.05	156	0.001	12	0.40	0.053	0.24	<0.1	<0.01	0.6	0.2	0.13	1	<0.5	<0.2
P138	Rock	27	1	0.05	247	<0.001	10	0.36	0.072	0.30	<0.1	<0.01	1.6	0.2	0.49	<1	4.4	<0.2
P139	Rock	28	1	0.03	117	0.001	11	0.38	0.037	0.18	<0.1	<0.01	2.0	0.2	0.12	1	1.5	<0.2
P140	Rock	28	1	0.04	103	0.001	11	0.30	0.044	0.17	0.1	<0.01	1.6	0.1	0.09	1	0.6	<0.2
P141	Rock	38	1	0.07	156	0.001	13	0.46	0.056	0.27	0.1	<0.01	1.4	0.3	0.29	1	<0.5	<0.2
P142	Rock	26	2	0.17	73	<0.001	11	0.62	0.026	0.20	<0.1	<0.01	1.3	0.2	<0.05	<1	<0.5	<0.2
P143	Rock	28	2	0.13	67	<0.001	12	0.74	0.024	0.20	<0.1	<0.01	1.5	0.2	<0.05	1	<0.5	<0.2
P144	Rock	23	2	0.06	265	0.001	9	0.54	0.037	0.27	<0.1	<0.01	1.1	0.3	0.35	1	0.6	0.2
P145	Rock	30	4	0.05	83	0.002	15	0.65	0.042	0.18	<0.1	<0.01	1.8	0.3	<0.05	2	<0.5	<0.2
P146	Rock	5	177	1.46	95	0.006	3	1.64	0.073	0.18	<0.1	0.05	13.3	0.1	0.13	7	16.1	0.8
P147	Rock	3	4	0.01	125	0.002	1	0.59	0.002	<0.01	0.3	0.02	3.7	<0.1	<0.05	2	<0.5	<0.2
P148	Rock	2	3	0.01	115	0.001	<1	0.39	0.001	<0.01	0.4	0.04	4.2	<0.1	<0.05	1	<0.5	<0.2
P149	Rock	2	2	<0.01	195	0.001	<1	0.52	<0.001	<0.01	0.2	0.02	1.7	<0.1	<0.05	1	<0.5	<0.2
P150	Rock	2	2	<0.01	130	0.002	<1	0.49	<0.001	<0.01	0.4	<0.01	3.9	<0.1	<0.05	1	<0.5	<0.2

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

CERTIFICATE OF ANALYSIS WHI12000199.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
P151	Rock	0.32	0.8	29.8	21.0	70	<0.1	2.8	7.5	554	1.96	4.5	0.9	9.8	9	<0.1	0.4	0.4	10	0.12	0.082
P152	Rock	0.21	1.3	71.2	20.0	50	0.2	103.9	20.5	2244	5.70	11.0	2.0	2.7	197	0.2	0.8	0.1	50	2.71	0.242
P145A	Rock	0.64	2.8	62.6	23.3	13	<0.1	11.4	6.4	90	2.65	16.3	1.1	0.7	38	<0.1	0.3	0.4	34	0.03	0.035

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Project: STOGGIE
Report Date: July 26, 2012

CERTIFICATE OF ANALYSIS WHI12000199.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
P151	Rock	10	2	0.06	134	<0.001	14	0.60	0.026	0.17	<0.1	<0.01	2.2	0.3	<0.05	1	<0.5	<0.2
P152	Rock	15	92	0.96	215	0.003	23	0.73	0.026	0.20	<0.1	0.01	16.1	0.5	<0.05	2	<0.5	<0.2
P145A	Rock	5	49	0.05	79	0.007	1	0.25	0.178	0.11	<0.1	0.02	4.1	0.2	0.48	2	8.1	0.5

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

QUALITY CONTROL REPORT WHI12000199.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
P117	Rock	0.20	7.7	2.6	59.1	30	0.3	1.4	0.9	52	2.01	6.0	16.4	11.6	50	0.2	1.2	3.2	6	0.05	0.045
REP P117	QC		7.6	2.5	58.3	29	0.4	1.5	0.8	54	2.02	6.1	22.5	11.6	50	0.2	1.1	3.2	6	0.05	0.046
P139	Rock	0.16	1.8	2.5	77.3	27	0.5	0.7	0.4	52	3.16	26.1	0.7	14.0	33	<0.1	0.5	6.0	12	0.03	0.127
REP P139	QC		1.6	2.6	80.4	27	0.4	0.5	0.5	54	3.13	26.8	1.1	13.7	32	<0.1	0.5	6.0	12	0.04	0.130
Core Reject Duplicates																					
P142	Rock	0.12	0.9	6.9	116.6	216	0.3	1.2	0.8	54	1.42	42.5	1.3	10.6	19	<0.1	0.6	0.2	5	0.09	0.046
DUP P142	QC		1.1	7.2	123.4	218	0.3	1.2	0.8	55	1.42	44.2	0.8	10.8	19	<0.1	0.7	0.2	5	0.09	0.049
Reference Materials																					
STD DS9	Standard		12.3	107.3	129.2	299	1.8	40.2	7.3	570	2.26	26.1	118.6	6.6	75	2.3	6.3	7.1	37	0.70	0.077
STD DS9 Expected			12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1-WHI	Prep Blank		0.1	3.1	441.9	44	4.4	2.3	3.3	485	1.69	3.7	3.5	4.8	58	<0.1	2.3	<0.1	29	0.42	0.066
G1-WHI	Prep Blank		<0.1	2.4	86.1	40	0.9	2.0	3.5	487	1.67	0.6	1.6	4.7	53	<0.1	0.4	<0.1	31	0.42	0.068

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

QUALITY CONTROL REPORT WHI12000199.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
P117	Rock	14	2	0.04	289	0.002	9	0.31	0.037	0.37	<0.1	<0.01	0.8	0.6	0.49	<1	2.8	<0.2
REP P117	QC	14	2	0.04	292	0.002	10	0.31	0.037	0.37	<0.1	<0.01	0.9	0.6	0.49	1	3.7	<0.2
P139	Rock	28	1	0.03	117	0.001	11	0.38	0.037	0.18	<0.1	<0.01	2.0	0.2	0.12	1	1.5	<0.2
REP P139	QC	28	2	0.03	116	0.002	11	0.39	0.036	0.17	<0.1	<0.01	2.0	0.2	0.12	1	2.5	<0.2
Core Reject Duplicates																		
P142	Rock	26	2	0.17	73	<0.001	11	0.62	0.026	0.20	<0.1	<0.01	1.3	0.2	<0.05	<1	<0.5	<0.2
DUP P142	QC	28	2	0.18	77	<0.001	12	0.63	0.026	0.20	<0.1	<0.01	1.4	0.2	<0.05	1	<0.5	<0.2
Reference Materials																		
STD DS9	Standard	12	116	0.59	300	0.111	3	0.93	0.083	0.39	3.1	0.22	2.4	5.7	0.15	5	5.7	5.1
STD DS9 Expected		13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1-WHI	Prep Blank	10	7	0.43	146	0.091	<1	0.78	0.091	0.45	<0.1	<0.01	2.1	0.3	<0.05	4	<0.5	<0.2
G1-WHI	Prep Blank	9	6	0.43	128	0.087	<1	0.77	0.077	0.43	<0.1	<0.01	1.8	0.3	<0.05	4	<0.5	<0.2

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Certificate of Analysis

Work Order: TO122408

To: **Gordon Richards**
Gordon Richards
6410 Holly Park Drive
DELTA
BC V4K 4W6

Date: Aug 10, 2012

P.O. No.	:	Project:STOGGIE
Project No.	:	-
No. Of Samples	:	40
Date Submitted	:	Jul 26, 2012
Report Comprises	:	Pages 1 to 13 (Inclusive of Cover Sheet)

Distribution of unused material:
Discard samples:

Certified By : Bruce Robertson
Operations Manager

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Report Footer:

L.N.R. = Listed not received
n.a. = Not applicable
I.S. = Insufficient Sample
-- = No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Final : TO122408 Order: Project:STOGGIE

Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd	Ce	Co
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
M55	3	35	20	0.1	5960	<1	470	4	77	525
M56	18	27	<10	0.5	11000	<1	750	6	214	135
M57	25	30	<10	0.3	7610	<1	620	12	64	435
M58	22	27	<10	0.5	12400	<1	730	7	118	257
M59	37	10	<10	0.6	12000	<1	810	7	88	21
M60	27	5	<10	0.3	9850	<1	650	20	11	434
M61	29	7	<10	0.6	7900	<1	720	7	35	60
M62	25	12	<10	<0.1	5270	<1	640	13	17	47
M63	25	42	<10	0.2	10700	<1	620	21	310	177
M64	80	5	<10	0.2	12700	<1	860	37	20	33
M66	28	20	<10	0.3	8960	<1	830	9	77	34
M67	16	30	<10	0.4	14300	<1	730	6	126	38
M68	39	207	10	0.8	2180	<1	240	9	903	31
M69	7	171	<10	0.2	3930	<1	230	13	150	189
M70	8	159	<10	0.3	2980	<1	230	4	311	222
M71	10	169	<10	0.5	7940	<1	370	16	305	171
M74	15	10	<10	0.6	9500	<1	1210	<1	25	14
M75	12	20	<10	0.8	5780	<1	760	<1	70	123
M76	35	4	<10	1.3	6900	<1	880	1	<5	20
M77	28	8	<10	0.6	7080	<1	870	<1	10	94
M78	12	9	<10	0.6	7150	<1	1110	<1	<5	61
M79	40	9	<10	1.0	7160	<1	1350	2	<5	46
M80	51	9	<10	0.5	10800	<1	1030	4	<5	7
M81	18	32	<10	0.2	6120	<1	770	10	78	140
M82	3	32	<10	<0.1	2910	<1	620	7	13	18
M84	19	53	<10	0.4	6780	<1	730	2	200	223
M85	24	18	<10	0.8	10000	<1	890	4	107	66
M86	28	24	<10	0.7	5240	<1	790	2	78	115
M87	25	38	<10	0.9	11000	<1	640	2	461	274
M88	22	16	<10	0.4	10700	<1	760	2	92	352
M89	29	13	<10	0.6	34700	<1	780	2	46	168
M90	94	35	<10	0.6	17400	<1	770	2	201	70
M91	10	178	10	0.2	9660	<1	200	2	215	154
M92	33	41	<10	0.2	3320	<1	510	3	108	266
M94	40	104	<10	0.4	5320	<1	550	16	1440	131
M95	16	122	<10	0.5	3580	<1	110	<1	42	144
M96	127	96	10	1.1	7500	<1	210	4	801	52
M97	43	12	<10	0.8	6660	<1	780	5	20	104
M98	90	44	<10	0.5	3550	<1	820	49	26	17
M99	21	29	<10	0.3	4410	<1	580	6	73	402
*Rep M64	82	5	<10	0.2	12700	<1	870	46	24	41
*Rep M79	41	10	<10	1.3	7570	<1	1410	2	8	84
*Rep M92	18	27	<10	0.4	4440	<1	620	3	142	330

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Final : TO122408 Order: Project:STOGGIE

Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd	Ce	Co
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
*Rep M99	16	36	<10	0.3	5230	<1	600	9	108	434
*Std MMISRM16	22	49	20	28.3	70	<1	250	5	16	64
*Std AMIS0169	9	62	10	0.4	860	<1	40	2	815	112
*Blk BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5
*Blk BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5

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Element	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Hg
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
M55	<100	<0.5	1550	10	6.1	2.9	185	1	11	<1
M56	<100	<0.5	1450	53	27.4	13.0	18	2	65	<1
M57	<100	<0.5	790	6	3.5	2.2	36	<1	8	<1
M58	100	<0.5	1330	27	15.9	6.2	15	1	29	<1
M59	<100	<0.5	2030	61	32.0	15.5	19	1	79	<1
M60	<100	1.1	900	6	4.9	1.4	7	<1	5	2
M61	<100	0.8	710	38	21.9	7.5	10	<1	42	<1
M62	<100	2.4	360	11	7.5	1.9	14	3	10	2
M63	<100	<0.5	1640	48	25.1	13.7	46	2	59	<1
M64	<100	<0.5	1150	39	25.8	6.8	7	<1	37	2
M66	<100	<0.5	1440	30	14.9	7.6	14	<1	36	<1
M67	100	<0.5	550	29	14.6	6.9	11	<1	32	<1
M68	<100	6.2	410	326	173	88.2	28	12	359	<1
M69	<100	74.2	90	39	24.2	9.0	40	3	39	<1
M70	<100	62.6	150	60	30.6	12.9	52	4	57	<1
M71	<100	7.6	160	82	44.5	20.1	86	3	79	<1
M74	<100	<0.5	1710	37	18.7	8.9	10	<1	43	<1
M75	<100	<0.5	1850	36	18.1	9.6	10	<1	46	<1
M76	<100	<0.5	2410	6	3.7	1.9	10	<1	7	1
M77	<100	<0.5	1200	10	5.3	2.2	7	<1	12	<1
M78	<100	<0.5	740	13	6.8	2.3	7	<1	13	<1
M79	<100	<0.5	2800	12	7.3	3.0	10	<1	13	<1
M80	<100	<0.5	2000	7	4.4	2.2	10	<1	8	<1
M81	<100	<0.5	2680	17	8.8	5.2	28	<1	20	<1
M82	<100	<0.5	200	6	4.1	1.5	25	<1	7	<1
M84	100	1.3	3080	43	24.4	10.7	80	2	47	<1
M85	<100	3.6	1870	54	26.5	14.2	12	<1	68	1
M86	<100	4.1	1720	25	12.6	8.2	17	1	35	<1
M87	<100	17.6	2610	165	92.3	45.2	23	4	203	<1
M88	<100	<0.5	1250	25	14.0	7.0	14	<1	30	<1
M89	<100	1.3	1700	22	10.9	8.1	17	<1	27	<1
M90	<100	2.0	1860	105	61.9	29.3	20	2	128	<1
M91	<100	6.5	560	35	17.2	8.5	40	5	34	<1
M92	<100	2.8	2230	15	8.4	5.3	68	1	20	<1
M94	<100	31.4	590	129	72.2	32.7	15	6	144	<1
M95	<100	18.2	2460	13	9.7	2.2	250	2	9	<1
M96	<100	18.6	1270	148	70.4	42.3	24	7	174	<1
M97	<100	<0.5	2270	10	5.2	2.9	10	<1	12	<1
M98	<100	<0.5	1490	59	28.5	21.5	17	1	95	<1
M99	<100	<0.5	1030	28	15.8	6.5	14	<1	31	<1
*Rep M64	<100	<0.5	1160	41	27.1	7.2	7	<1	39	2
*Rep M79	<100	<0.5	3040	14	8.4	3.5	12	<1	14	1
*Rep M92	<100	2.3	3460	21	11.0	7.6	78	1	29	<1

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Element	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Hg
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
*Rep M99	<100	<0.5	1060	32	17.7	7.7	15	1	36	<1
*Std MMISRM16	<100	12.0	580	3	1.0	1.1	2	<1	4	21
*Std AMIS0169	<100	7.8	3940	30	12.9	11.6	43	11	46	<1
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1

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Element	In	K	La	Li	Mg	Mn	Mo	Nb	Nd	Ni
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
M55	<0.5	15.1	32	<5	91	41800	41	2.4	48	303
M56	<0.5	2.3	105	<5	166	7960	<5	<0.5	184	725
M57	<0.5	34.2	24	<5	141	21100	24	1.0	35	233
M58	<0.5	7.7	47	5	155	12700	11	0.5	84	760
M59	<0.5	3.4	85	10	171	1370	<5	<0.5	189	1560
M60	<0.5	17.1	2	<5	141	33500	27	<0.5	7	937
M61	<0.5	12.2	22	26	126	4990	8	0.7	72	523
M62	<0.5	20.4	3	11	109	3720	8	1.6	9	191
M63	<0.5	4.5	131	<5	121	12200	7	0.7	212	1310
M64	<0.5	16.3	14	13	138	3170	20	<0.5	45	642
M66	<0.5	8.2	34	<5	109	2270	10	<0.5	85	627
M67	<0.5	16.6	53	<5	162	2410	<5	<0.5	83	444
M68	<0.5	2.1	399	<5	43	510	<5	<0.5	1050	247
M69	<0.5	13.1	86	<5	35	43700	<5	<0.5	115	122
M70	<0.5	44.8	151	<5	36	22500	<5	1.0	180	106
M71	<0.5	14.7	194	<5	46	28900	<5	<0.5	241	168
M74	<0.5	2.5	18	<5	140	1160	<5	<0.5	57	183
M75	<0.5	2.4	34	<5	56	8430	<5	<0.5	90	211
M76	<0.5	9.8	<1	<5	42	870	<5	<0.5	5	156
M77	<0.5	3.9	<1	<5	80	2910	5	<0.5	7	175
M78	<0.5	9.2	<1	<5	77	2470	<5	<0.5	4	172
M79	<0.5	9.5	2	<5	67	1310	<5	<0.5	12	767
M80	<0.5	11.0	1	<5	127	770	8	<0.5	8	288
M81	<0.5	3.4	30	<5	103	10600	7	0.6	62	1710
M82	<0.5	3.1	5	<5	75	1170	<5	<0.5	13	581
M84	<0.5	2.8	100	<5	101	10700	<5	0.8	151	1640
M85	<0.5	3.5	62	7	160	4260	<5	<0.5	142	1250
M86	<0.5	1.4	39	<5	73	4530	<5	<0.5	79	723
M87	<0.5	4.7	257	<5	91	7470	<5	<0.5	478	794
M88	<0.5	3.5	39	<5	181	12300	<5	<0.5	77	834
M89	<0.5	2.8	27	<5	84	3910	<5	<0.5	59	406
M90	<0.5	4.7	125	<5	148	1770	<5	<0.5	254	368
M91	<0.5	7.2	108	<5	37	340	<5	1.9	121	209
M92	<0.5	5.2	48	<5	103	23900	6	0.6	84	1090
M94	<0.5	7.3	286	<5	72	4730	<5	<0.5	397	411
M95	<0.5	3.3	17	<5	24	160	<5	0.9	27	981
M96	<0.5	3.5	398	<5	37	430	<5	1.3	596	67
M97	<0.5	3.1	7	<5	72	9750	8	<0.5	20	654
M98	<0.5	6.4	57	<5	51	1340	<5	<0.5	149	1100
M99	<0.5	7.0	33	<5	98	5580	<5	<0.5	64	490
*Rep M64	<0.5	16.9	15	10	139	4020	20	<0.5	46	765
*Rep M79	<0.5	9.2	5	<5	67	1950	<5	<0.5	19	1020
*Rep M92	<0.5	4.9	70	<5	131	21700	5	0.7	116	991

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Element	In	K	La	Li	Mg	Mn	Mo	Nb	Nd	Ni
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
*Rep M99	<0.5	7.5	47	<5	103	6780	<5	<0.5	82	527
*Std MMISRM16	<0.5	41.8	3	<5	35	120	58	<0.5	13	265
*Std AMIS0169	<0.5	43.6	446	<5	32	4250	<5	3.2	396	466
*Blk BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	<5
*Blk BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	<5

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Element	P	Pb	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
M55	0.5	<10	<1	11	<1	8	2	49	10	<1
M56	<0.1	20	<1	38	<1	7	<1	17	48	<1
M57	0.3	10	<1	8	<1	<5	<1	12	8	<1
M58	0.2	30	<1	17	<1	<5	1	17	22	<1
M59	<0.1	20	<1	35	<1	7	1	18	56	<1
M60	<0.1	30	<1	1	<1	41	<1	9	3	<1
M61	0.1	<10	<1	12	<1	36	<1	18	26	<1
M62	<0.1	90	<1	1	<1	49	<1	23	5	<1
M63	0.2	30	<1	46	<1	6	<1	27	51	<1
M64	<0.1	20	<1	7	<1	32	<1	13	18	<1
M66	0.5	10	<1	16	<1	9	<1	19	27	<1
M67	0.3	40	<1	17	<1	<5	<1	20	22	<1
M68	0.2	980	<1	204	<1	63	<1	130	278	<1
M69	0.7	170	<1	25	<1	218	<1	38	28	<1
M70	0.7	440	<1	41	<1	101	<1	63	44	<1
M71	1.0	130	<1	53	<1	70	<1	60	62	<1
M74	<0.1	<10	<1	9	<1	<5	<1	31	22	<1
M75	<0.1	<10	<1	15	<1	5	<1	25	31	<1
M76	0.1	<10	<1	<1	<1	<5	<1	12	3	<1
M77	<0.1	<10	<1	<1	<1	8	<1	11	5	<1
M78	<0.1	<10	<1	<1	<1	<5	<1	13	4	<1
M79	0.2	<10	2	2	<1	<5	<1	21	6	<1
M80	0.1	<10	<1	1	<1	9	<1	9	4	<1
M81	0.1	20	<1	13	<1	8	2	9	16	<1
M82	0.1	30	<1	2	<1	<5	<1	5	4	<1
M84	0.2	30	<1	34	<1	12	2	57	38	<1
M85	<0.1	20	<1	25	<1	13	<1	18	44	<1
M86	<0.1	10	<1	15	<1	12	<1	17	25	<1
M87	0.1	40	<1	95	<1	16	<1	93	142	<1
M88	<0.1	20	<1	15	<1	6	<1	24	21	<1
M89	<0.1	10	<1	10	<1	8	<1	31	18	<1
M90	<0.1	40	<1	45	<1	16	<1	43	82	<1
M91	0.8	310	<1	27	<1	72	<1	59	29	<1
M92	0.3	<10	<1	18	<1	6	<1	63	19	<1
M94	0.1	420	<1	81	<1	98	<1	166	103	<1
M95	0.5	10	<1	6	<1	97	<1	99	7	<1
M96	0.2	270	<1	130	<1	81	<1	218	145	<1
M97	<0.1	<10	<1	3	<1	8	<1	23	7	<1
M98	0.3	40	<1	26	<1	7	<1	40	55	<1
M99	<0.1	30	<1	12	<1	25	<1	30	20	<1
*Rep M64	<0.1	20	<1	7	<1	33	<1	11	19	<1
*Rep M79	0.2	<10	2	3	<1	<5	<1	23	8	<1
*Rep M92	0.3	<10	<1	26	<1	7	<1	75	27	<1

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Element	P	Pb	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
*Rep M99	<0.1	40	<1	16	<1	23	<1	34	25	<1
*Std MMISRM16	0.2	130	29	2	<1	291	<1	11	4	<1
*Std AMIS0169	2.4	130	<1	107	<1	261	<1	59	63	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1

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Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U	W	Y
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
M55	2650	<1	2	<10	26.4	145	<0.5	81	<1	64
M56	4150	<1	9	<10	33.9	7	<0.5	153	<1	289
M57	3380	<1	1	<10	25.9	17	<0.5	44	<1	34
M58	3820	<1	5	<10	38.8	12	<0.5	91	<1	132
M59	4100	<1	11	<10	31.3	11	<0.5	155	<1	371
M60	3070	<1	<1	<10	5.5	16	1.1	38	2	37
M61	2870	<1	7	<10	18.5	5	<0.5	58	<1	224
M62	2300	<1	2	<10	3.4	295	0.6	5	<1	69
M63	3050	<1	9	<10	23.4	15	<0.5	107	<1	262
M64	2900	<1	6	<10	7.4	15	<0.5	32	<1	237
M66	2860	<1	5	<10	45.6	3	<0.5	76	<1	140
M67	3460	<1	5	<10	54.7	<3	<0.5	46	<1	122
M68	1590	<1	56	<10	50.2	130	1.4	58	<1	2050
M69	1400	<1	6	<10	39.9	159	2.9	22	<1	264
M70	1200	<1	10	<10	60.8	363	1.2	44	<1	353
M71	1730	<1	13	<10	49.2	31	1.6	59	<1	522
M74	3530	<1	6	<10	8.6	<3	<0.5	65	<1	222
M75	1920	<1	7	<10	21.5	8	<0.5	40	<1	229
M76	1770	<1	1	<10	1.1	<3	<0.5	5	<1	48
M77	2640	<1	2	<10	1.6	<3	<0.5	65	<1	59
M78	2510	<1	2	<10	1.3	<3	<0.5	23	<1	76
M79	2590	<1	2	<10	1.9	<3	<0.5	17	<1	78
M80	3340	<1	1	<10	2.1	3	<0.5	37	<1	47
M81	3380	<1	3	<10	8.0	<3	<0.5	92	<1	103
M82	2810	<1	1	<10	1.6	<3	<0.5	23	<1	48
M84	3080	<1	7	<10	26.2	13	<0.5	66	<1	261
M85	4200	<1	10	<10	18.4	25	<0.5	27	<1	291
M86	3210	<1	5	<10	11.9	10	<0.5	29	<1	166
M87	2940	<1	29	<10	35.7	5	<0.5	59	<1	1090
M88	4020	<1	4	<10	23.5	18	<0.5	52	<1	133
M89	2450	<1	4	<10	11.7	<3	<0.5	44	<1	123
M90	2620	<1	18	<10	15.4	6	<0.5	37	<1	773
M91	1040	<1	3	<10	39.3	723	0.6	14	<1	186
M92	3320	<1	3	<10	10.6	28	<0.5	89	<1	97
M94	2400	<1	22	<10	27.3	8	1.6	45	<1	831
M95	890	<1	2	<10	33.7	151	0.8	38	<1	72
M96	1260	<1	27	<10	47.3	566	1.0	60	<1	796
M97	2450	<1	2	<10	5.8	9	<0.5	9	<1	63
M98	2380	<1	13	<10	5.8	4	<0.5	31	<1	400
M99	2200	<1	5	<10	10.1	10	<0.5	27	<1	157
*Rep M64	2970	<1	6	<10	6.4	14	<0.5	30	<1	245
*Rep M79	2700	<1	2	<10	2.7	<3	<0.5	21	<1	88
*Rep M92	4020	<1	4	<10	14.4	18	<0.5	79	<1	127

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Final : TO122408 Order: Project:STOGGIE

Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U	W	Y
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
*Rep M99	2350	<1	6	<10	14.7	<3	<0.5	32	<1	168
*Std MMISRM16	520	<1	<1	<10	23.2	4	<0.5	46	<1	10
*Std AMIS0169	90	<1	6	<10	77.2	402	1.3	26	2	127
*Blk BLANK	<10	<1	<1	<10	<0.5	<3	<0.5	<1	<1	<5
*Blk BLANK	<10	<1	<1	<10	<0.5	<3	<0.5	<1	<1	<5

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Final : TO122408 Order: Project:STOGGIE

Element	Yb	Zn	Zr
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
M55	6	30	53
M56	19	30	47
M57	3	40	36
M58	13	40	67
M59	24	30	56
M60	5	40	14
M61	19	<20	52
M62	7	60	48
M63	19	90	60
M64	21	80	29
M66	12	30	102
M67	10	40	61
M68	113	110	55
M69	17	140	114
M70	19	60	124
M71	30	130	98
M74	13	<20	12
M75	13	<20	27
M76	4	<20	<5
M77	4	<20	8
M78	5	<20	7
M79	6	<20	9
M80	4	<20	5
M81	7	<20	16
M82	3	<20	<5
M84	20	20	82
M85	18	40	43
M86	9	<20	17
M87	68	20	43
M88	10	20	22
M89	7	30	14
M90	42	<20	17
M91	7	60	64
M92	7	<20	18
M94	51	50	35
M95	7	<20	57
M96	49	40	73
M97	4	<20	12
M98	20	30	15
M99	12	20	16
*Rep M64	22	70	27
*Rep M79	6	<20	11
*Rep M92	9	<20	23

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Final : TO122408 Order: Project:STOGGIE

Element	Yb	Zn	Zr
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
*Rep M99	13	30	20
*Std MMISRM16	<1	240	16
*Std AMIS0169	10	270	51
*Blk BLANK	<1	<20	<5
*Blk BLANK	<1	<20	<5

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Certificate of Analysis

Work Order: TO122407

To: **Gordon Richards**
Gordon Richards
6410 Holly Park Drive
DELTA
BC V4K 4W6

Date: Aug 10, 2012

P.O. No.	:	Project:STOGGIE
Project No.	:	-
No. Of Samples	:	50
Date Submitted	:	Jul 26, 2012
Report Comprises	:	Pages 1 to 13 (Inclusive of Cover Sheet)

Distribution of unused material:
Discard samples:

Certified By : Bruce Robertson
Bruce Robertson
Operations Manager

SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at http://www.scc.ca/en/programs/lab/mineral.shtml

Report Footer:

L.N.R. = Listed not received
n.a. = Not applicable
I.S. = Insufficient Sample
-- = No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Final : TO122407 Order: Project:STOGGIE

Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd	Ce	Co
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
P66	49	134	20	0.5	5760	<1	220	59	306	443
P67	92	107	<10	0.7	3700	<1	360	91	469	98
P68	47	103	10	0.5	6660	<1	300	60	523	353
P69	54	57	<10	0.6	3980	<1	570	13	292	144
P70	311	37	<10	0.8	3810	<1	750	187	189	119
P71	318	17	<10	1.0	4940	<1	920	64	120	107
P72	173	75	<10	0.4	5540	<1	700	32	415	20
P73	61	122	<10	0.4	8450	<1	380	6	569	135
P74	72	11	<10	0.6	14300	<1	780	41	60	9
P75	14	20	<10	0.4	18000	<1	740	3	158	17
P76	35	69	<10	0.7	14100	<1	620	11	413	574
P77	32	90	<10	0.6	10600	<1	440	13	459	205
P78	16	118	20	0.4	4430	<1	280	40	719	133
P79	19	91	<10	0.5	17200	<1	390	20	886	392
P81	38	29	<10	0.7	6130	<1	570	41	449	16
P83	4	87	30	0.2	2280	<1	90	2	57	68
P84	17	137	10	0.2	2920	<1	80	3	71	94
P86	152	166	50	0.7	2430	<1	50	18	441	46
P87	11	132	20	0.5	15800	<1	190	74	488	376
P88	6	283	<10	<0.1	4300	<1	140	8	1570	81
P89	12	98	<10	0.7	8700	<1	290	2	328	129
P90	12	172	20	0.4	14300	<1	190	1	760	53
P91	11	215	20	0.1	8690	<1	110	2	112	315
P94	29	35	<10	1.9	6240	<1	840	13	209	22
P95	17	24	<10	0.6	8220	<1	750	22	272	141
P97	14	42	<10	0.5	7940	<1	570	5	180	352
P98	27	14	<10	1.0	10600	<1	870	10	176	333
P99	14	52	<10	0.9	15300	<1	820	3	318	257
P100	17	82	<10	0.4	11200	<1	380	2	847	431
P101	10	95	<10	0.8	24800	<1	1140	3	1650	160
P102	40	7	<10	3.7	5390	<1	790	3	<5	87
P103	13	39	<10	1.4	9130	<1	580	5	147	160
P104	6	211	40	0.5	2440	<1	60	6	108	328
P105	31	27	<10	0.9	8220	<1	590	2	73	156
P106	5	30	20	0.5	5760	<1	600	4	200	231
P107	38	86	<10	0.2	6070	<1	150	2	84	27
P108	40	115	10	0.4	6170	<1	300	9	338	93
P109	13	142	20	0.2	4470	<1	50	2	199	48
P110	59	118	10	0.4	7650	<1	110	1	958	37
P111	6	161	20	0.2	10600	<1	110	1	1550	42
P120	37	144	40	1.4	5440	3	90	18	86	363
P122	36	141	30	1.3	9850	3	270	26	476	410
P123	25	139	10	0.5	8990	<1	290	21	512	1300

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Final : TO122407 Order: Project:STOGGIE

Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd	Ce	Co
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
P127	66	44	<10	0.7	10600	<1	820	12	216	10
P128	20	97	<10	0.6	11600	<1	650	16	684	97
P129	337	69	<10	0.4	6260	<1	260	10	46	126
P130	27	187	<10	1.0	4370	<1	270	6	358	238
P131	43	172	<10	1.7	4750	<1	200	<1	329	97
P132	107	136	10	2.7	5400	<1	250	2	794	124
P133	42	139	20	0.6	4390	1	210	5	701	137
*Rep P77	35	92	<10	0.5	11500	<1	470	18	439	147
*Rep P95	13	24	<10	0.4	6090	<1	700	20	202	234
*Rep P102	42	6	<10	3.2	5120	<1	770	2	<5	56
*Rep P130	26	176	<10	1.0	3840	<1	250	7	267	235
*Std MMISRM16	18	50	20	23.4	80	<1	230	5	23	64
*Std MMISRM18	26	26	10	8.8	140	<1	190	95	22	75
*Blk BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5
*Blk BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5

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Element	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Hg
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
P66	<100	6.1	2580	195	125	32.7	101	4	144	<1
P67	<100	17.9	920	130	72.7	28.4	28	3	114	<1
P68	<100	7.7	1470	191	109	42.6	43	5	175	<1
P69	<100	5.5	920	88	41.7	24.0	21	3	96	<1
P70	<100	3.4	1830	103	58.3	27.0	25	2	106	<1
P71	<100	2.1	1920	76	37.4	23.5	15	1	87	<1
P72	<100	2.3	1260	148	79.0	35.8	28	3	140	<1
P73	<100	2.0	1660	165	85.4	34.3	57	5	152	<1
P74	<100	<0.5	1530	36	18.9	9.9	9	<1	44	<1
P75	<100	0.8	850	81	40.8	21.4	7	1	106	1
P76	100	<0.5	1610	99	55.9	25.9	20	4	116	<1
P77	<100	<0.5	2150	154	89.5	32.4	55	4	152	<1
P78	100	2.0	1690	168	84.2	38.8	142	6	176	<1
P79	100	<0.5	3510	214	125	48.9	56	7	228	<1
P81	<100	0.9	1940	54	25.6	17.6	22	3	71	<1
P83	<100	0.6	2330	9	6.4	2.0	366	2	7	<1
P84	<100	6.1	3570	12	8.2	2.5	291	2	8	<1
P86	<100	8.5	1050	149	76.3	29.5	61	10	131	<1
P87	<100	12.3	770	102	56.4	24.4	93	7	96	<1
P88	<100	7.2	120	114	57.0	35.2	18	10	136	<1
P89	<100	2.9	1030	143	74.2	29.7	39	4	133	<1
P90	<100	8.9	740	345	170	86.2	67	12	358	<1
P91	<100	59.1	170	24	12.2	6.4	81	5	23	<1
P94	<100	0.7	3940	72	38.2	19.7	35	2	82	<1
P95	<100	<0.5	4480	60	33.7	16.6	47	2	73	<1
P97	<100	<0.5	3720	32	18.9	8.5	147	2	36	<1
P98	<100	<0.5	4880	45	23.6	14.6	54	2	62	<1
P99	<100	<0.5	1320	97	57.0	23.4	11	3	112	<1
P100	<100	<0.5	1100	140	74.4	40.7	66	6	182	<1
P101	<100	<0.5	450	603	290	226	18	15	912	<1
P102	<100	<0.5	1870	10	5.8	2.4	9	<1	10	3
P103	<100	2.5	1110	55	29.5	16.2	25	2	66	<1
P104	200	12.7	410	30	18.3	6.5	199	9	26	<1
P105	<100	12.6	1870	52	26.6	14.2	10	1	61	<1
P106	<100	1.7	5130	33	20.3	9.7	130	3	39	<1
P107	<100	26.2	1400	41	23.5	9.5	18	3	43	<1
P108	<100	9.0	1070	61	29.1	15.6	59	5	64	<1
P109	<100	31.2	560	61	35.1	15.3	53	6	65	<1
P110	<100	7.9	1810	197	94.6	49.8	26	11	213	<1
P111	<100	10.3	890	221	104	55.3	29	14	238	<1
P120	<100	14.0	5720	35	31.0	5.2	253	3	21	<1
P122	<100	11.5	2960	168	102	36.3	63	6	158	<1
P123	<100	2.0	960	85	44.8	20.0	47	5	84	<1

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Element	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Hg
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
P127	<100	1.5	1710	87	49.7	22.8	31	2	96	<1
P128	<100	<0.5	480	61	31.2	15.9	16	4	67	<1
P129	<100	11.2	500	20	11.9	4.6	10	1	21	<1
P130	<100	10.5	330	59	28.9	15.1	33	5	65	<1
P131	<100	10.9	660	57	28.9	13.7	34	5	55	<1
P132	<100	9.9	3810	168	82.8	42.8	52	9	185	<1
P133	<100	14.6	1540	107	52.9	28.8	47	9	125	<1
*Rep P77	<100	<0.5	2150	141	81.4	29.9	56	4	143	<1
*Rep P95	<100	<0.5	4730	47	27.2	12.2	47	2	53	<1
*Rep P102	<100	<0.5	1560	7	4.2	1.9	8	<1	7	3
*Rep P130	<100	12.7	320	48	23.5	11.5	36	5	51	<1
*Std MMISRM16	<100	11.9	720	3	1.4	1.4	3	<1	6	25
*Std MMISRM18	<100	6.3	830	3	1.3	1.1	3	<1	5	6
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1

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Element	In	K	La	Li	Mg	Mn	Mo	Nb	Nd	Ni
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
P66	<0.5	6.6	122	<5	39	17700	<5	0.6	262	2200
P67	<0.5	7.1	127	<5	66	7990	<5	<0.5	240	687
P68	<0.5	5.4	230	<5	51	13600	<5	<0.5	401	715
P69	<0.5	6.2	129	<5	52	3620	<5	<0.5	219	205
P70	<0.5	6.3	133	<5	50	10600	<5	<0.5	220	670
P71	<0.5	4.3	83	<5	49	9110	7	<0.5	165	563
P72	<0.5	6.7	171	<5	96	1120	<5	<0.5	280	640
P73	<0.5	4.8	261	<5	72	2590	<5	<0.5	377	523
P74	<0.5	14.3	25	14	113	800	13	<0.5	71	483
P75	<0.5	9.6	73	<5	148	1330	6	<0.5	202	545
P76	<0.5	8.8	276	<5	78	28600	<5	<0.5	396	1100
P77	<0.5	4.1	187	<5	82	8630	<5	<0.5	359	2080
P78	<0.5	3.2	285	<5	71	1620	<5	1.5	485	830
P79	<0.5	6.0	378	<5	74	8460	<5	<0.5	622	1170
P81	<0.5	11.3	101	<5	118	1230	10	0.5	196	527
P83	<0.5	17.6	26	<5	31	700	<5	3.6	28	383
P84	<0.5	9.3	34	<5	29	200	<5	2.6	32	631
P86	<0.5	3.8	156	<5	11	590	<5	2.1	373	112
P87	<0.5	12.4	266	<5	36	62200	5	1.5	285	432
P88	<0.5	5.0	669	<5	25	3690	<5	0.6	705	80
P89	<0.5	5.2	187	<5	35	3210	<5	<0.5	297	168
P90	<0.5	4.0	463	<5	26	1400	<5	1.4	910	184
P91	<0.5	9.4	54	<5	19	11500	<5	1.8	71	114
P94	<0.5	7.3	77	6	154	1830	<5	<0.5	175	1770
P95	<0.5	3.0	107	10	84	3390	<5	<0.5	194	2740
P97	<0.5	3.3	80	<5	92	19000	5	1.1	122	903
P98	<0.5	2.2	105	7	150	12700	<5	<0.5	190	1530
P99	<0.5	5.1	167	<5	154	13500	<5	<0.5	283	910
P100	<0.5	3.6	406	<5	89	14200	<5	<0.5	621	430
P101	<0.5	3.9	1010	12	255	8120	<5	<0.5	2150	1590
P102	<0.5	4.4	1	<5	73	3500	<5	<0.5	6	430
P103	<0.5	5.2	65	5	93	2380	<5	<0.5	146	427
P104	<0.5	14.8	45	<5	21	6330	5	3.0	69	283
P105	<0.5	16.6	30	<5	121	3890	<5	<0.5	90	669
P106	<0.5	4.8	90	<5	62	25200	<5	1.2	142	399
P107	<0.5	39.1	38	<5	23	490	<5	<0.5	81	48
P108	<0.5	17.2	164	<5	20	1470	<5	1.5	187	203
P109	<0.5	17.1	83	<5	10	3950	<5	1.9	170	58
P110	<0.5	6.4	390	<5	19	400	<5	1.2	669	68
P111	<0.5	6.4	874	<5	27	890	<5	2.0	938	60
P120	<0.5	5.5	32	<5	14	1280	5	1.9	55	880
P122	<0.5	1.9	190	<5	34	3640	<5	1.2	380	768
P123	<0.5	6.2	246	<5	43	13800	<5	0.7	273	391

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Final : TO122407 Order: Project:STOGGIE

Element	In	K	La	Li	Mg	Mn	Mo	Nb	Nd	Ni
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
P127	<0.5	3.5	101	<5	136	540	<5	<0.5	210	736
P128	<0.5	7.4	166	<5	158	4180	<5	<0.5	208	407
P129	<0.5	21.9	21	<5	57	480	<5	<0.5	39	202
P130	<0.5	6.6	164	<5	49	640	<5	0.9	236	203
P131	<0.5	3.2	179	<5	62	70	6	1.0	202	153
P132	<0.5	5.2	329	<5	52	270	30	1.9	604	174
P133	<0.5	4.1	304	<5	25	340	10	2.2	475	138
*Rep P77	<0.5	4.5	193	<5	90	7890	<5	<0.5	336	2190
*Rep P95	<0.5	3.1	89	9	77	1510	<5	<0.5	152	2580
*Rep P102	<0.5	4.2	<1	<5	64	1960	<5	<0.5	3	293
*Rep P130	<0.5	7.4	122	<5	43	420	<5	1.2	175	182
*Std MMISRM16	<0.5	36.7	5	<5	31	120	50	<0.5	19	247
*Std MMISRM18	<0.5	28.8	6	<5	90	630	29	<0.5	18	500
*Blk BLANK	<0.5	0.1	<1	<5	<1	<10	<5	<0.5	<1	<5
*Blk BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	<5

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Element	P	Pb	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
P66	0.6	1860	<1	52	<1	101	1	280	90	<1
P67	0.2	490	<1	47	<1	111	<1	174	74	<1
P68	0.2	1060	<1	82	<1	111	<1	274	118	<1
P69	<0.1	840	<1	45	<1	72	<1	59	66	<1
P70	0.3	3350	<1	46	<1	39	1	42	66	<1
P71	0.1	1010	<1	31	<1	21	1	35	54	<1
P72	0.1	4700	<1	57	<1	34	<1	68	88	<1
P73	0.2	6030	<1	80	<1	91	1	193	103	<1
P74	<0.1	50	<1	11	<1	33	<1	11	26	<1
P75	<0.1	20	<1	34	<1	20	<1	23	68	<1
P76	0.1	120	<1	85	<1	45	<1	110	95	<1
P77	0.3	390	<1	72	<1	24	1	183	108	<1
P78	1.1	820	<1	105	<1	75	2	165	134	<1
P79	0.2	270	<1	131	<1	36	1	286	173	<1
P81	0.3	70	<1	38	<1	15	1	37	57	<1
P83	3.8	20	<1	7	<1	27	2	31	7	<1
P84	2.0	20	<1	8	<1	102	1	56	7	<1
P86	1.4	4700	<1	74	<1	79	1	156	101	<1
P87	1.4	90	<1	68	<1	188	<1	100	73	<1
P88	0.2	760	<1	181	<1	191	<1	65	134	<1
P89	0.1	280	<1	61	<1	69	<1	182	91	<1
P90	0.3	160	<1	181	<1	83	<1	176	263	<1
P91	1.5	420	<1	16	<1	213	<1	37	18	<1
P94	0.1	30	<1	33	<1	5	<1	55	58	<1
P95	0.1	40	<1	39	<1	9	1	48	56	<1
P97	0.3	30	<1	28	<1	5	2	71	30	<1
P98	0.1	30	<1	39	<1	6	2	29	50	<1
P99	<0.1	20	<1	56	<1	13	<1	48	78	<1
P100	0.2	50	<1	133	<1	36	<1	230	147	<1
P101	<0.1	40	<1	415	<1	5	<1	431	719	<1
P102	0.1	<10	1	<1	<1	<5	<1	29	4	<1
P103	0.2	30	<1	27	<1	20	<1	67	47	<1
P104	5.6	70	<1	15	<1	160	1	135	20	2
P105	0.3	<10	<1	14	<1	30	<1	67	35	<1
P106	0.5	<10	<1	32	<1	6	2	113	34	<1
P107	0.2	240	<1	15	<1	226	<1	65	28	<1
P108	0.6	130	<1	41	<1	137	<1	104	51	<1
P109	0.7	320	<1	33	<1	165	<1	86	51	<1
P110	0.3	400	<1	148	<1	105	<1	322	182	<1
P111	0.5	570	<1	223	<1	88	<1	314	208	<1
P120	1.2	310	<1	12	<1	137	3	156	16	<1
P122	0.4	1030	<1	76	<1	119	2	245	115	<1
P123	0.2	820	<1	63	<1	87	<1	157	69	<1

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Element	P	Pb	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
P127	<0.1	180	<1	40	<1	22	1	40	65	<1
P128	<0.1	670	<1	45	<1	26	<1	116	52	<1
P129	0.1	2550	<1	7	<1	87	<1	33	13	<1
P130	0.4	110	<1	50	<1	84	6	87	55	<1
P131	0.2	430	<1	44	<1	89	2	125	46	<1
P132	0.4	260	<1	123	<1	84	2	278	157	<1
P133	0.8	500	<1	104	<1	121	3	117	115	<1
*Rep P77	0.2	350	<1	69	<1	30	1	187	101	<1
*Rep P95	0.2	30	<1	32	<1	7	2	73	41	<1
*Rep P102	0.1	<10	1	<1	<1	<5	<1	27	3	<1
*Rep P130	0.5	90	<1	38	<1	82	6	74	44	<1
*Std MMISRM16	0.3	120	25	3	<1	307	<1	14	6	<1
*Std MMISRM18	0.6	270	15	3	7	165	<1	<5	5	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1

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Final : TO122407 Order: Project:STOGGIE

Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U	W	Y
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
P66	1300	<1	28	<10	59.2	81	1.0	121	<1	1290
P67	1860	<1	20	<10	61.2	15	1.2	97	<1	765
P68	1620	<1	29	<10	67.9	83	1.3	87	<1	1170
P69	1880	<1	15	<10	29.9	11	0.8	52	<1	476
P70	2130	<1	16	<10	26.9	7	<0.5	107	<1	676
P71	2180	<1	13	<10	34.7	6	<0.5	57	<1	458
P72	2270	<1	23	<10	30.5	7	<0.5	66	<1	942
P73	1570	<1	26	<10	97.2	26	0.8	95	<1	1020
P74	2650	<1	6	<10	10.2	<3	<0.5	31	<1	235
P75	3780	<1	15	<10	25.6	<3	<0.5	34	<1	404
P76	2520	<1	17	<10	52.7	9	<0.5	48	<1	565
P77	2340	<1	24	<10	31.3	18	<0.5	100	<1	997
P78	1280	<1	28	<10	53.7	151	0.6	93	<1	1000
P79	2290	<1	36	<10	84.5	37	<0.5	158	<1	1380
P81	2240	<1	10	<10	45.4	14	<0.5	41	<1	284
P83	680	<1	1	<10	15.8	390	<0.5	17	<1	43
P84	680	<1	2	<10	20.4	210	1.5	32	<1	57
P86	320	<1	23	<10	31.3	629	1.1	59	<1	891
P87	1030	<1	16	<10	37.6	389	2.6	37	<1	615
P88	1100	<1	20	<10	44.5	289	4.0	10	<1	754
P89	1080	<1	23	<10	42.5	94	0.7	108	<1	905
P90	990	<1	58	<10	69.0	373	1.7	72	1	2220
P91	620	<1	4	<10	38.0	736	2.1	11	<1	143
P94	2990	<1	12	<10	14.7	6	<0.5	30	<1	427
P95	2520	<1	11	<10	17.7	10	<0.5	68	<1	397
P97	2340	<1	5	<10	14.9	42	<0.5	44	<1	204
P98	3980	<1	8	<10	20.8	9	<0.5	142	<1	288
P99	4070	<1	16	<10	16.0	5	<0.5	32	<1	626
P100	2250	<1	25	<10	24.6	64	<0.5	28	<1	959
P101	5720	<1	112	<10	14.9	4	<0.5	25	1	3750
P102	2470	<1	2	<10	0.7	4	<0.5	6	<1	60
P103	2120	<1	10	<10	16.2	10	<0.5	14	<1	322
P104	280	<1	4	<10	29.6	3430	<0.5	16	<1	166
P105	2280	<1	9	<10	10.6	10	0.6	17	<1	307
P106	1990	<1	6	<10	21.6	51	<0.5	93	<1	220
P107	420	<1	7	<10	14.4	159	0.5	12	<1	243
P108	960	<1	10	<10	38.7	403	0.7	24	<1	262
P109	190	<1	10	<10	44.8	744	1.1	19	<1	364
P110	510	<1	34	<10	53.3	448	0.8	86	<1	968
P111	610	<1	38	<10	59.8	818	0.9	38	<1	1230
P120	1050	<1	4	<10	37.1	664	2.1	73	<1	217
P122	2100	<1	26	<10	67.8	429	2.2	82	<1	1140
P123	2020	<1	14	<10	60.1	240	0.8	36	<1	495

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Element	Sr	Ta	Tb	Te	Th	Ti	Tl	U	W	Y
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
P127	4080	<1	14	<10	26.1	5	<0.5	65	<1	582
P128	3660	<1	10	<10	28.5	6	<0.5	45	<1	344
P129	1270	<1	3	<10	4.4	34	0.7	9	<1	134
P130	2630	<1	10	<10	35.7	244	1.4	21	<1	345
P131	2090	<1	9	<10	56.3	352	1.1	28	<1	332
P132	2420	<1	28	<10	75.6	555	1.7	75	<1	954
P133	1370	<1	19	<10	107	666	2.2	73	1	583
*Rep P77	2550	<1	22	<10	31.5	17	<0.5	109	<1	960
*Rep P95	2250	<1	8	<10	14.1	19	<0.5	83	<1	321
*Rep P102	2330	<1	1	<10	<0.5	<3	<0.5	6	<1	47
*Rep P130	2320	<1	8	<10	34.7	318	1.3	19	<1	273
*Std MMISRM16	450	<1	<1	<10	24.1	15	<0.5	52	<1	9
*Std MMISRM18	1120	<1	<1	<10	19.1	5	<0.5	27	<1	19
*Blk BLANK	<10	<1	<1	<10	<0.5	<3	<0.5	<1	<1	<5
*Blk BLANK	<10	<1	<1	<10	<0.5	<3	<0.5	<1	<1	<5

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was (were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativity of the goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted. The findings report on the samples provided by the client and are not intended for commercial or contractual settlement purposes. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS

Final : TO122407 Order: Project:STOGGIE

Element	Yb	Zn	Zr
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
P66	87	5300	165
P67	46	4780	114
P68	73	2420	123
P69	24	510	51
P70	40	1170	55
P71	24	350	74
P72	51	980	116
P73	53	390	223
P74	14	120	27
P75	25	30	63
P76	41	50	115
P77	71	380	144
P78	57	610	215
P79	93	220	243
P81	18	160	85
P83	6	<20	75
P84	7	40	61
P86	50	250	96
P87	37	530	103
P88	40	40	49
P89	49	30	69
P90	110	30	121
P91	9	50	119
P94	28	80	36
P95	26	60	53
P97	16	<20	57
P98	19	20	48
P99	42	40	44
P100	45	30	60
P101	180	30	37
P102	4	<20	<5
P103	20	30	25
P104	14	50	99
P105	18	20	14
P106	17	<20	69
P107	17	<20	30
P108	21	40	74
P109	26	60	86
P110	65	20	86
P111	67	40	109
P120	25	80	136
P122	77	310	165
P123	31	100	132

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SGS

Final : TO122407 Order: Project:STOGGIE

Element	Yb	Zn	Zr
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
P127	37	220	61
P128	22	50	94
P129	9	130	12
P130	18	60	94
P131	19	30	89
P132	56	30	97
P133	38	50	92
*Rep P77	64	420	156
*Rep P95	23	40	54
*Rep P102	3	<20	<5
*Rep P130	15	60	100
*Std MMISRM16	1	310	20
*Std MMISRM18	<1	710	26
*Blk BLANK	<1	<20	<5
*Blk BLANK	<1	<20	<5

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Submitted By: Gordon Richards
Receiving Lab: Canada-Whitehorse
Received: June 29, 2012
Report Date: July 26, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS WHI12000199.1

CLIENT JOB INFORMATION

Project: STOGGIE
Shipment ID:
P.O. Number
Number of Samples: 33

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	33	Crush, split and pulverize 250 g rock to 200 mesh			WHI
1DX2	33	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

Invoice To: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

CERTIFICATE OF ANALYSIS WHI12000199.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
P62	Rock	0.12	7.7	15.1	554.1	58	12.4	0.5	0.5	41	2.76	675.6	15.5	11.7	66	0.3	2.8	19.5	6	0.05	0.081
P63	Rock	0.17	3.5	3.5	134.6	29	3.2	0.5	0.4	48	1.27	4.4	4.2	13.7	19	0.2	0.8	6.9	4	0.05	0.043
P64	Rock	0.18	2.4	7.3	121.0	5	1.4	0.7	0.5	33	1.71	4.6	2.8	10.4	60	<0.1	0.6	6.6	5	0.04	0.046
P65	Rock	0.14	3.4	18.2	293.9	380	1.4	7.4	10.9	572	3.86	40.7	2.9	7.6	14	0.4	4.5	0.2	91	0.24	0.135
P85	Rock	0.18	1.4	2.8	34.7	66	0.4	1.1	4.5	138	1.40	48.9	6.3	11.8	9	<0.1	0.5	0.4	7	0.03	0.033
P112	Rock	0.16	2.2	3.3	32.6	15	0.3	0.6	0.7	37	3.00	19.2	3.1	12.0	45	<0.1	1.5	1.3	7	0.02	0.060
P113	Rock	0.27	2.2	2.6	265.0	98	1.3	0.9	1.1	51	3.40	17.6	2.1	14.0	40	<0.1	0.8	2.8	11	0.04	0.084
P114	Rock	0.33	1.7	3.4	49.3	101	0.3	1.0	1.3	38	1.85	9.4	6.4	10.3	10	<0.1	0.4	0.3	2	0.03	0.051
P115	Rock	0.14	1.8	10.4	2321	122	1.7	2.2	2.7	97	2.24	24.2	97.4	13.7	23	0.2	3.2	5.2	16	0.10	0.085
P116	Rock	0.24	1.7	6.5	349.3	33	0.8	1.1	0.9	64	1.69	46.5	1.8	5.6	20	<0.1	1.0	2.3	6	0.03	0.030
P117	Rock	0.20	7.7	2.6	59.1	30	0.3	1.4	0.9	52	2.01	6.0	16.4	11.6	50	0.2	1.2	3.2	6	0.05	0.045
P118	Rock	0.17	3.3	6.6	85.8	60	1.1	2.1	2.6	158	1.89	31.5	3.8	7.0	22	0.1	1.0	6.1	8	0.03	0.030
P119	Rock	0.10	22.2	32.2	248.3	56	0.9	10.8	5.6	243	2.74	4.2	44.6	1.9	61	0.2	1.1	35.3	378	0.33	0.069
P121	Rock	0.08	8.2	33.4	147.4	44	0.6	9.0	3.4	185	2.59	4.3	16.5	2.2	138	0.2	0.8	4.2	80	0.21	0.049
P134	Rock	0.15	4.4	104.5	21.6	32	0.2	5.7	11.6	114	1.34	1.9	<0.5	25.2	7	0.3	1.7	0.7	8	0.03	0.031
P136	Rock	0.31	2.8	4.3	35.5	49	0.3	0.8	1.0	66	3.82	36.1	1.8	13.0	47	<0.1	0.4	2.4	10	0.05	0.110
P137	Rock	0.14	1.5	1.5	84.3	10	0.2	0.6	1.0	102	0.82	2.0	1.3	6.1	16	<0.1	0.2	1.3	5	0.04	0.019
P138	Rock	0.28	2.3	1.6	77.9	66	0.9	0.5	0.9	67	2.26	21.5	2.6	12.8	84	<0.1	0.5	3.1	6	0.05	0.073
P139	Rock	0.16	1.8	2.5	77.3	27	0.5	0.7	0.4	52	3.16	26.1	0.7	14.0	33	<0.1	0.5	6.0	12	0.03	0.127
P140	Rock	0.26	1.8	2.0	14.0	36	<0.1	0.6	0.9	67	2.29	22.7	<0.5	12.3	12	<0.1	0.5	1.4	7	0.04	0.079
P141	Rock	0.22	1.1	4.7	988.1	195	2.5	0.8	0.8	40	2.10	94.4	1.1	14.8	30	0.2	3.9	2.5	5	0.03	0.060
P142	Rock	0.12	0.9	6.9	116.6	216	0.3	1.2	0.8	54	1.42	42.5	1.3	10.6	19	<0.1	0.6	0.2	5	0.09	0.046
P143	Rock	0.20	3.3	7.4	75.8	286	0.2	2.9	1.7	74	1.47	65.5	<0.5	11.0	9	<0.1	0.9	0.2	5	0.08	0.040
P144	Rock	0.09	1.9	9.1	526.7	250	0.6	1.3	1.1	39	4.61	263.1	2.6	11.0	17	0.2	3.6	1.4	9	0.02	0.116
P145	Rock	0.15	0.7	7.4	59.5	231	0.3	2.1	15.5	798	2.05	284.6	1.1	13.9	11	0.3	2.0	<0.1	18	0.07	0.052
P146	Rock	0.10	2.4	101.7	56.2	32	0.2	49.1	32.2	393	6.18	20.3	3.7	0.7	22	<0.1	0.6	0.3	110	0.07	0.056
P147	Rock	0.07	0.4	4.8	37.9	106	0.2	3.8	2.6	190	4.10	6.2	1.8	1.5	36	<0.1	1.6	<0.1	26	0.01	0.013
P148	Rock	0.11	0.4	2.8	42.8	69	0.4	3.4	1.5	97	3.04	2.9	1.8	1.2	27	<0.1	2.4	<0.1	29	0.01	0.007
P149	Rock	0.14	0.9	1.8	27.8	22	0.1	0.7	0.5	31	0.89	5.8	2.0	2.2	29	<0.1	1.8	<0.1	29	<0.01	0.008
P150	Rock	0.20	0.7	7.7	27.8	108	0.1	5.1	4.5	236	3.25	5.8	1.4	1.7	22	0.2	2.6	<0.1	30	0.02	0.047

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

CERTIFICATE OF ANALYSIS WHI12000199.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
P62	Rock	31	2	0.08	183	0.001	9	0.41	0.040	0.18	<0.1	<0.01	1.9	0.2	0.23	<1	3.8	<0.2
P63	Rock	27	1	0.06	201	0.002	10	0.40	0.033	0.23	<0.1	<0.01	0.6	0.3	0.21	1	<0.5	<0.2
P64	Rock	24	1	0.05	241	0.002	10	0.41	0.045	0.26	<0.1	<0.01	0.6	0.3	0.24	1	0.9	0.4
P65	Rock	15	19	1.30	115	0.003	5	1.55	0.020	0.09	<0.1	<0.01	6.8	<0.1	0.09	8	0.7	<0.2
P85	Rock	26	2	0.06	48	0.001	5	0.40	0.025	0.11	<0.1	<0.01	0.9	0.1	<0.05	1	<0.5	0.2
P112	Rock	29	2	0.03	352	0.002	10	0.42	0.080	0.28	<0.1	<0.01	0.9	0.3	0.44	1	<0.5	<0.2
P113	Rock	19	1	0.04	254	0.002	12	0.34	0.068	0.33	<0.1	<0.01	1.8	0.2	0.49	1	0.8	<0.2
P114	Rock	33	1	0.03	55	<0.001	11	0.26	0.022	0.17	0.1	<0.01	0.9	0.3	0.07	<1	<0.5	<0.2
P115	Rock	23	3	0.07	88	0.003	25	0.59	0.036	0.15	<0.1	<0.01	2.3	0.2	0.09	2	<0.5	<0.2
P116	Rock	6	3	0.06	154	0.003	24	0.45	0.013	0.32	<0.1	<0.01	0.7	0.6	0.15	1	<0.5	<0.2
P117	Rock	14	2	0.04	289	0.002	9	0.31	0.037	0.37	<0.1	<0.01	0.8	0.6	0.49	<1	2.8	<0.2
P118	Rock	13	4	0.03	187	0.004	18	0.32	0.010	0.25	<0.1	<0.01	0.6	0.4	0.22	<1	1.5	<0.2
P119	Rock	8	63	0.54	133	0.245	5	1.32	0.074	0.10	0.4	<0.01	6.0	0.3	0.11	5	6.8	<0.2
P121	Rock	6	42	0.33	194	0.133	5	0.91	0.057	0.08	0.2	<0.01	3.0	0.4	0.16	4	6.3	<0.2
P134	Rock	7	11	0.05	52	0.004	9	0.44	0.031	0.16	<0.1	<0.01	1.9	0.3	<0.05	1	<0.5	<0.2
P136	Rock	28	2	0.04	178	0.002	11	0.36	0.051	0.24	<0.1	<0.01	1.8	0.2	0.27	1	1.5	<0.2
P137	Rock	31	2	0.05	156	0.001	12	0.40	0.053	0.24	<0.1	<0.01	0.6	0.2	0.13	1	<0.5	<0.2
P138	Rock	27	1	0.05	247	<0.001	10	0.36	0.072	0.30	<0.1	<0.01	1.6	0.2	0.49	<1	4.4	<0.2
P139	Rock	28	1	0.03	117	0.001	11	0.38	0.037	0.18	<0.1	<0.01	2.0	0.2	0.12	1	1.5	<0.2
P140	Rock	28	1	0.04	103	0.001	11	0.30	0.044	0.17	0.1	<0.01	1.6	0.1	0.09	1	0.6	<0.2
P141	Rock	38	1	0.07	156	0.001	13	0.46	0.056	0.27	0.1	<0.01	1.4	0.3	0.29	1	<0.5	<0.2
P142	Rock	26	2	0.17	73	<0.001	11	0.62	0.026	0.20	<0.1	<0.01	1.3	0.2	<0.05	<1	<0.5	<0.2
P143	Rock	28	2	0.13	67	<0.001	12	0.74	0.024	0.20	<0.1	<0.01	1.5	0.2	<0.05	1	<0.5	<0.2
P144	Rock	23	2	0.06	265	0.001	9	0.54	0.037	0.27	<0.1	<0.01	1.1	0.3	0.35	1	0.6	0.2
P145	Rock	30	4	0.05	83	0.002	15	0.65	0.042	0.18	<0.1	<0.01	1.8	0.3	<0.05	2	<0.5	<0.2
P146	Rock	5	177	1.46	95	0.006	3	1.64	0.073	0.18	<0.1	0.05	13.3	0.1	0.13	7	16.1	0.8
P147	Rock	3	4	0.01	125	0.002	1	0.59	0.002	<0.01	0.3	0.02	3.7	<0.1	<0.05	2	<0.5	<0.2
P148	Rock	2	3	0.01	115	0.001	<1	0.39	0.001	<0.01	0.4	0.04	4.2	<0.1	<0.05	1	<0.5	<0.2
P149	Rock	2	2	<0.01	195	0.001	<1	0.52	<0.001	<0.01	0.2	0.02	1.7	<0.1	<0.05	1	<0.5	<0.2
P150	Rock	2	2	<0.01	130	0.002	<1	0.49	<0.001	<0.01	0.4	<0.01	3.9	<0.1	<0.05	1	<0.5	<0.2

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

CERTIFICATE OF ANALYSIS WHI12000199.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
P151	Rock	0.32	0.8	29.8	21.0	70	<0.1	2.8	7.5	554	1.96	4.5	0.9	9.8	9	<0.1	0.4	0.4	10	0.12	0.082
P152	Rock	0.21	1.3	71.2	20.0	50	0.2	103.9	20.5	2244	5.70	11.0	2.0	2.7	197	0.2	0.8	0.1	50	2.71	0.242
P145A	Rock	0.64	2.8	62.6	23.3	13	<0.1	11.4	6.4	90	2.65	16.3	1.1	0.7	38	<0.1	0.3	0.4	34	0.03	0.035

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CERTIFICATE OF ANALYSIS WHI12000199.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
P151	Rock	10	2	0.06	134	<0.001	14	0.60	0.026	0.17	<0.1	<0.01	2.2	0.3	<0.05	1	<0.5	<0.2
P152	Rock	15	92	0.96	215	0.003	23	0.73	0.026	0.20	<0.1	0.01	16.1	0.5	<0.05	2	<0.5	<0.2
P145A	Rock	5	49	0.05	79	0.007	1	0.25	0.178	0.11	<0.1	0.02	4.1	0.2	0.48	2	8.1	0.5

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Acme Analytical Laboratories (Vancouver) Ltd.
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www.acmelab.com

Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

QUALITY CONTROL REPORT WHI12000199.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
P117	Rock	0.20	7.7	2.6	59.1	30	0.3	1.4	0.9	52	2.01	6.0	16.4	11.6	50	0.2	1.2	3.2	6	0.05	0.045
REP P117	QC		7.6	2.5	58.3	29	0.4	1.5	0.8	54	2.02	6.1	22.5	11.6	50	0.2	1.1	3.2	6	0.05	0.046
P139	Rock	0.16	1.8	2.5	77.3	27	0.5	0.7	0.4	52	3.16	26.1	0.7	14.0	33	<0.1	0.5	6.0	12	0.03	0.127
REP P139	QC		1.6	2.6	80.4	27	0.4	0.5	0.5	54	3.13	26.8	1.1	13.7	32	<0.1	0.5	6.0	12	0.04	0.130
Core Reject Duplicates																					
P142	Rock	0.12	0.9	6.9	116.6	216	0.3	1.2	0.8	54	1.42	42.5	1.3	10.6	19	<0.1	0.6	0.2	5	0.09	0.046
DUP P142	QC		1.1	7.2	123.4	218	0.3	1.2	0.8	55	1.42	44.2	0.8	10.8	19	<0.1	0.7	0.2	5	0.09	0.049
Reference Materials																					
STD DS9	Standard		12.3	107.3	129.2	299	1.8	40.2	7.3	570	2.26	26.1	118.6	6.6	75	2.3	6.3	7.1	37	0.70	0.077
STD DS9 Expected			12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1-WHI	Prep Blank		0.1	3.1	441.9	44	4.4	2.3	3.3	485	1.69	3.7	3.5	4.8	58	<0.1	2.3	<0.1	29	0.42	0.066
G1-WHI	Prep Blank		<0.1	2.4	86.1	40	0.9	2.0	3.5	487	1.67	0.6	1.6	4.7	53	<0.1	0.4	<0.1	31	0.42	0.068

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: July 26, 2012

QUALITY CONTROL REPORT WHI12000199.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
P117	Rock	14	2	0.04	289	0.002	9	0.31	0.037	0.37	<0.1	<0.01	0.8	0.6	0.49	<1	2.8	<0.2
REP P117	QC	14	2	0.04	292	0.002	10	0.31	0.037	0.37	<0.1	<0.01	0.9	0.6	0.49	1	3.7	<0.2
P139	Rock	28	1	0.03	117	0.001	11	0.38	0.037	0.18	<0.1	<0.01	2.0	0.2	0.12	1	1.5	<0.2
REP P139	QC	28	2	0.03	116	0.002	11	0.39	0.036	0.17	<0.1	<0.01	2.0	0.2	0.12	1	2.5	<0.2
Core Reject Duplicates																		
P142	Rock	26	2	0.17	73	<0.001	11	0.62	0.026	0.20	<0.1	<0.01	1.3	0.2	<0.05	<1	<0.5	<0.2
DUP P142	QC	28	2	0.18	77	<0.001	12	0.63	0.026	0.20	<0.1	<0.01	1.4	0.2	<0.05	1	<0.5	<0.2
Reference Materials																		
STD DS9	Standard	12	116	0.59	300	0.111	3	0.93	0.083	0.39	3.1	0.22	2.4	5.7	0.15	5	5.7	5.1
STD DS9 Expected		13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1-WHI	Prep Blank	10	7	0.43	146	0.091	<1	0.78	0.091	0.45	<0.1	<0.01	2.1	0.3	<0.05	4	<0.5	<0.2
G1-WHI	Prep Blank	9	6	0.43	128	0.087	<1	0.77	0.077	0.43	<0.1	<0.01	1.8	0.3	<0.05	4	<0.5	<0.2

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Client: **Richards, Gordon**
6410 Holly Park Drive
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Submitted By: Gordon Richards
Receiving Lab: Canada-Dawson City
Received: June 27, 2012
Report Date: August 04, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS DAW12000057.1

CLIENT JOB INFORMATION

Project: STOGGIE
Shipment ID:
P.O. Number
Number of Samples: 37

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	37	Dry at 60C			DAW
SS80	37	Dry at 60C sieve 100g to -80 mesh			DAW
1F05	37	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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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.

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: August 04, 2012

CERTIFICATE OF ANALYSIS DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	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	2	0.01	0.001
P80	Soil	1.52	33.81	19.43	42.9	696	38.7	17.4	903	1.96	6.6	1.6	3.4	0.2	53.2	2.03	0.53	0.14	23	0.67	0.203
P82	Soil	1.51	23.05	12.54	45.3	230	24.8	6.9	176	1.98	8.4	1.0	2.7	0.4	39.0	0.44	0.49	0.16	34	0.63	0.074
P92	Soil	1.55	17.52	1.74	8.9	43	12.1	2.8	277	0.44	1.6	0.2	2.1	0.2	137.4	0.13	0.24	0.05	9	3.84	0.080
P93	Soil	1.31	25.60	8.54	20.9	89	23.2	11.1	1194	1.50	3.8	1.5	4.8	0.4	107.9	0.19	0.54	0.08	32	3.20	0.090
P96	Soil	0.81	36.49	6.47	62.7	286	29.1	15.5	1416	1.77	3.7	0.5	2.2	0.7	48.6	1.61	0.48	0.09	33	1.24	0.109
P124	Soil	2.08	77.41	44.72	81.8	696	55.8	22.2	500	2.61	12.2	1.8	4.7	0.4	33.5	2.16	0.56	0.61	47	0.36	0.094
P125	Soil	1.63	53.71	30.07	108.3	644	57.2	29.6	2243	1.84	6.9	1.4	1.8	0.2	48.7	2.52	0.44	0.40	34	0.46	0.095
P126	Soil	1.56	22.69	13.45	21.1	95	10.4	4.5	48	1.32	6.0	0.5	1.3	<0.1	50.3	0.43	0.47	0.11	12	0.98	0.091
P135	Soil	8.63	148.5	23.50	42.6	1858	18.2	3.9	69	1.88	20.1	3.3	10.9	0.2	51.9	1.76	1.12	0.62	20	0.54	0.137
M65	Soil	1.74	13.88	24.50	50.2	88	16.6	9.1	814	1.09	2.8	1.0	1.6	0.3	73.4	1.15	0.49	0.08	24	1.28	0.080
M83	Soil	1.32	19.69	3.60	15.7	105	18.4	6.4	662	0.94	3.2	0.5	2.3	0.3	150.0	0.62	1.33	0.07	16	2.84	0.128
M93	Soil	1.39	15.61	9.38	5.7	91	16.1	3.4	757	0.37	<0.1	2.6	1.1	<0.1	152.9	0.12	0.33	0.04	7	4.47	0.081
M101	Soil	2.23	41.94	4.07	28.5	128	17.2	7.7	597	1.10	2.8	0.6	0.7	0.3	51.7	1.14	0.37	0.06	22	1.53	0.073
M102	Soil	2.09	19.77	11.59	13.6	93	7.2	3.8	201	0.63	1.8	0.6	1.4	0.3	75.0	0.58	0.59	0.04	10	2.69	0.103
M103	Soil	1.64	15.34	3.76	18.0	141	8.1	3.7	89	0.98	2.6	0.9	1.6	0.6	72.0	0.82	0.56	0.05	10	1.77	0.101
M104	Soil	1.78	18.95	8.19	17.5	109	10.7	5.3	83	1.05	1.8	0.8	1.4	0.4	58.0	0.92	0.44	0.05	8	1.23	0.095
M105	Soil	1.60	25.72	5.01	18.4	318	15.6	6.9	203	1.12	2.5	1.3	2.2	0.1	59.4	0.66	0.69	0.06	12	1.14	0.114
M106	Soil	1.25	15.35	9.04	23.7	331	11.0	3.9	74	0.99	3.2	0.5	1.3	0.2	32.2	0.64	0.24	0.05	22	0.51	0.089
M107	Soil	1.94	54.24	7.64	27.2	282	30.5	6.2	182	1.06	2.2	1.0	0.9	0.2	41.6	4.96	0.20	0.08	21	0.60	0.083
M108	Soil	3.23	17.08	9.94	27.3	443	11.1	3.4	171	0.55	1.3	0.4	1.2	0.2	43.7	1.62	0.28	0.03	7	0.83	0.131
M109	Soil	2.44	27.37	3.82	47.0	123	21.6	8.3	379	1.56	5.5	0.9	2.6	0.8	59.7	1.15	0.54	0.07	29	1.88	0.079
M110	Soil	2.26	29.24	1.79	9.4	78	14.1	4.7	556	0.34	0.8	0.5	1.2	0.2	86.2	2.06	0.42	<0.02	8	3.02	0.118
M111	Soil	1.46	25.96	3.18	22.6	83	18.9	7.2	429	1.02	1.9	0.5	1.2	0.4	69.3	1.01	0.34	0.05	19	2.06	0.088
M112	Soil	1.43	23.30	3.85	24.1	79	14.3	4.7	614	0.57	1.2	0.3	0.8	0.3	94.4	2.06	0.57	0.02	8	2.86	0.113
M113	Soil	1.64	25.62	3.60	20.2	219	16.5	8.3	800	0.99	1.7	0.5	1.6	0.6	99.0	0.64	0.64	0.04	15	2.67	0.079
M114	Soil	1.02	28.34	1.54	20.8	54	16.8	4.4	486	0.43	1.1	0.3	1.1	0.2	98.4	1.03	0.65	<0.02	7	2.82	0.125
M115	Soil	1.28	19.59	3.12	32.7	58	15.6	9.1	1112	0.91	2.6	0.4	1.0	0.1	71.4	0.76	0.61	0.04	17	1.82	0.101
M116	Soil	0.72	46.85	2.19	16.5	140	25.8	3.7	220	0.68	1.9	0.8	2.6	0.1	126.6	0.35	0.48	0.03	17	4.14	0.106
M117	Soil	1.24	33.94	2.79	15.4	113	20.5	4.8	349	0.65	1.3	0.3	1.5	0.2	94.4	1.59	0.45	<0.02	13	2.91	0.115
M118	Soil	0.75	33.47	2.95	34.7	104	25.0	8.1	709	0.93	2.0	0.6	1.5	0.2	97.0	0.69	0.39	0.02	18	3.10	0.115

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Project: STOGGIE
Report Date: August 04, 2012

CERTIFICATE OF ANALYSIS DAW12000057.1

Method		1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	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	1	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
P80	Soil	13.8	18.9	0.19	402.0	0.004	3	0.81	0.013	0.06	0.1	0.5	0.08	0.09	131	0.3	0.03	2.1	1.58	<0.1	<0.02
P82	Soil	10.6	35.8	0.37	212.2	0.027	2	1.09	0.011	0.03	0.1	2.3	0.12	0.08	83	0.5	0.03	3.7	1.56	<0.1	<0.02
P92	Soil	1.7	11.0	0.27	174.2	0.011	7	0.30	0.016	0.02	<0.1	0.7	0.04	0.23	76	0.3	0.02	0.8	0.68	<0.1	0.05
P93	Soil	4.8	35.7	0.41	339.8	0.016	6	0.82	0.016	0.02	0.1	2.9	0.08	0.20	72	0.7	0.05	2.4	1.56	<0.1	0.05
P96	Soil	7.9	31.4	0.41	291.3	0.036	3	0.93	0.014	0.08	0.1	3.4	0.05	0.08	80	0.3	0.03	3.1	1.07	<0.1	0.03
P124	Soil	11.6	36.4	0.38	270.4	0.019	1	1.36	0.010	0.06	<0.1	1.1	0.09	0.03	32	0.6	0.03	4.5	2.10	<0.1	0.03
P125	Soil	17.7	27.4	0.32	464.0	0.024	2	1.14	0.011	0.05	<0.1	1.8	0.08	0.03	38	0.3	0.04	3.4	1.68	<0.1	<0.02
P126	Soil	5.3	8.8	0.12	101.6	0.006	4	0.40	0.013	0.04	<0.1	0.5	0.05	0.13	118	0.3	0.02	0.9	0.90	<0.1	<0.02
P135	Soil	27.3	19.5	0.17	316.1	0.009	2	0.88	0.012	0.04	0.1	0.9	0.20	0.14	86	1.6	0.03	2.8	3.98	<0.1	<0.02
M65	Soil	9.1	20.2	0.36	298.8	0.022	4	0.71	0.027	0.07	0.2	1.6	0.07	0.09	104	0.3	<0.02	2.2	0.94	<0.1	0.03
M83	Soil	6.4	14.9	0.26	303.1	0.013	6	0.62	0.023	0.05	<0.1	1.1	0.05	0.18	102	0.7	<0.02	1.5	1.71	<0.1	0.07
M93	Soil	2.0	7.9	0.28	387.0	0.008	6	0.35	0.024	0.02	<0.1	0.5	0.08	0.28	42	4.5	<0.02	0.9	3.25	<0.1	0.04
M101	Soil	5.7	16.7	0.27	250.2	0.026	2	0.60	0.026	0.06	0.1	1.5	0.05	0.10	111	0.2	<0.02	1.7	0.57	<0.1	0.03
M102	Soil	4.3	7.5	0.23	237.5	0.010	4	0.31	0.026	0.08	0.1	1.0	0.03	0.20	144	0.5	<0.02	0.7	0.20	<0.1	0.04
M103	Soil	7.2	10.3	0.17	334.0	0.013	3	0.35	0.021	0.07	<0.1	1.9	0.03	0.17	171	0.5	<0.02	0.8	0.36	<0.1	0.04
M104	Soil	8.2	9.9	0.14	365.4	0.012	2	0.38	0.023	0.06	<0.1	1.8	0.03	0.18	153	0.5	<0.02	0.8	0.39	<0.1	0.04
M105	Soil	9.9	10.7	0.17	424.4	0.009	2	0.46	0.036	0.07	<0.1	1.2	0.04	0.14	153	0.4	<0.02	1.0	0.39	<0.1	<0.02
M106	Soil	5.8	14.2	0.17	215.2	0.017	3	0.50	0.020	0.06	0.1	1.1	0.05	0.10	106	0.4	0.02	1.8	1.11	<0.1	<0.02
M107	Soil	8.9	14.8	0.16	394.0	0.019	2	0.53	0.019	0.05	0.1	1.2	0.04	0.07	75	0.5	<0.02	1.9	0.67	<0.1	<0.02
M108	Soil	3.8	7.0	0.11	303.6	0.010	5	0.26	0.034	0.05	<0.1	1.2	0.03	0.16	167	0.3	<0.02	0.6	0.50	<0.1	<0.02
M109	Soil	7.8	24.7	0.41	262.3	0.027	3	0.93	0.019	0.06	0.1	2.8	0.09	0.14	101	1.6	<0.02	2.7	1.58	<0.1	0.07
M110	Soil	4.8	5.6	0.20	345.0	0.005	6	0.21	0.025	0.08	<0.1	0.7	0.02	0.23	147	0.3	<0.02	0.3	0.19	<0.1	0.04
M111	Soil	7.1	19.5	0.30	345.5	0.023	3	0.58	0.020	0.07	0.1	1.6	0.03	0.15	117	0.2	<0.02	1.4	0.97	<0.1	0.04
M112	Soil	6.8	6.7	0.23	432.8	0.007	6	0.36	0.029	0.07	<0.1	0.9	0.03	0.20	133	0.4	<0.02	0.4	0.26	<0.1	0.03
M113	Soil	7.6	13.7	0.31	411.8	0.019	3	0.50	0.025	0.06	0.2	1.6	0.04	0.16	173	0.4	0.02	1.1	0.40	<0.1	0.03
M114	Soil	5.4	7.0	0.23	338.8	0.007	5	0.32	0.025	0.06	<0.1	0.9	0.03	0.18	136	0.4	<0.02	0.5	0.40	<0.1	0.03
M115	Soil	5.0	17.3	0.31	266.6	0.015	4	0.53	0.024	0.05	0.1	1.0	0.05	0.14	150	0.4	<0.02	1.5	0.67	<0.1	0.02
M116	Soil	5.9	17.4	0.33	402.6	0.011	6	0.48	0.023	0.03	<0.1	0.9	0.07	0.19	92	0.6	<0.02	1.1	1.25	<0.1	0.06
M117	Soil	6.8	13.8	0.33	311.7	0.012	6	0.41	0.024	0.09	<0.1	1.2	0.05	0.20	153	0.2	<0.02	0.8	1.83	<0.1	0.03
M118	Soil	6.6	22.9	0.44	273.4	0.017	11	0.61	0.024	0.06	<0.1	1.2	0.07	0.22	100	0.3	<0.02	1.2	2.46	<0.1	0.03

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Project: STOGGIE
Report Date: August 04, 2012

CERTIFICATE OF ANALYSIS DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
P80	Soil	0.39	5.3	1.0	<0.05	0.6	9.70	28.7	0.04	<1	0.7	2.0	<10	<2
P82	Soil	1.05	5.9	1.0	<0.05	0.8	5.92	20.8	<0.02	2	0.4	6.2	<10	2
P92	Soil	0.25	1.2	0.4	<0.05	1.9	1.91	3.1	<0.02	3	<0.1	1.1	<10	<2
P93	Soil	0.64	2.1	8.2	<0.05	1.8	4.70	9.7	0.02	<1	0.1	4.9	<10	3
P96	Soil	0.90	11.7	1.1	<0.05	1.5	5.37	18.8	0.02	<1	0.4	3.2	<10	<2
P124	Soil	0.65	10.8	3.1	<0.05	1.2	7.08	24.3	0.04	<1	0.7	5.2	<10	<2
P125	Soil	0.67	18.6	0.7	<0.05	0.5	13.71	36.8	0.04	<1	0.7	4.5	<10	<2
P126	Soil	0.28	3.4	11.7	<0.05	0.3	5.56	11.3	<0.02	2	0.2	1.3	<10	<2
P135	Soil	0.87	6.9	0.6	<0.05	0.6	22.02	49.1	0.03	1	0.6	3.0	<10	<2
M65	Soil	0.80	14.4	33.8	<0.05	1.3	5.97	21.2	0.03	1	0.3	4.4	<10	<2
M83	Soil	0.55	3.0	1.9	<0.05	3.1	6.42	12.0	<0.02	<1	0.4	2.5	<10	<2
M93	Soil	0.29	1.2	13.5	<0.05	2.1	2.09	4.0	<0.02	4	0.3	0.7	<10	3
M101	Soil	0.59	6.8	1.0	<0.05	1.3	4.11	11.6	<0.02	<1	0.3	3.6	<10	<2
M102	Soil	0.24	2.1	16.3	<0.05	1.6	3.80	8.1	<0.02	3	<0.1	1.2	<10	2
M103	Soil	0.35	3.6	2.1	<0.05	2.6	5.50	14.0	<0.02	<1	0.1	1.4	<10	<2
M104	Soil	0.26	2.8	9.5	<0.05	2.0	6.28	16.5	<0.02	<1	0.2	1.1	<10	<2
M105	Soil	0.38	3.1	0.5	<0.05	0.6	7.96	20.0	<0.02	<1	0.4	1.7	<10	<2
M106	Soil	0.57	5.7	10.1	<0.05	0.4	3.41	11.3	0.02	<1	0.2	2.5	<10	<2
M107	Soil	0.51	4.6	0.3	<0.05	0.5	4.85	17.4	<0.02	<1	0.4	2.2	<10	<2
M108	Soil	0.16	2.7	12.1	<0.05	0.6	2.90	7.3	<0.02	<1	0.3	0.8	<10	<2
M109	Soil	0.89	6.7	0.6	<0.05	3.3	6.89	15.6	<0.02	3	0.3	6.9	<10	<2
M110	Soil	0.12	2.9	0.3	<0.05	1.8	5.76	8.2	<0.02	4	0.1	0.5	<10	<2
M111	Soil	0.48	7.8	1.2	<0.05	2.1	6.30	13.6	<0.02	2	0.2	2.8	<10	<2
M112	Soil	0.15	3.7	3.7	<0.05	1.7	7.85	13.3	<0.02	<1	0.3	0.7	<10	<2
M113	Soil	0.35	6.3	1.8	<0.05	2.1	7.13	14.8	<0.02	<1	0.2	1.9	<10	2
M114	Soil	0.14	3.7	0.7	<0.05	1.6	6.15	10.0	<0.02	4	0.3	0.8	<10	<2
M115	Soil	0.48	7.9	0.5	<0.05	0.8	4.28	11.1	<0.02	1	0.2	3.2	<10	<2
M116	Soil	0.39	2.6	0.6	<0.05	3.1	8.22	9.3	<0.02	2	0.3	2.0	<10	<2
M117	Soil	0.23	7.0	1.1	<0.05	1.5	7.55	10.1	<0.02	<1	0.2	1.4	<10	<2
M118	Soil	0.31	8.9	0.8	<0.05	1.2	6.86	14.8	<0.02	<1	0.3	2.8	<10	<2

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Project: STOGGIE
Report Date: August 04, 2012

CERTIFICATE OF ANALYSIS DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	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	2	0.01	0.001
M119	Soil	0.84	27.57	9.87	93.7	123	20.9	7.2	985	0.58	3.1	0.6	0.3	0.2	121.6	2.09	0.48	0.22	12	3.69	0.130
M120	Soil	1.47	40.79	25.99	213.9	1791	37.6	13.6	295	1.19	5.8	2.4	1.4	<0.1	75.7	13.14	0.59	0.16	30	1.97	0.082
M121	Soil	1.47	53.05	25.80	115.5	447	42.8	13.9	882	1.44	9.4	1.6	3.0	0.1	98.4	2.92	0.84	0.12	29	3.71	0.086
M122	Soil	1.22	38.65	11.36	74.9	547	25.2	6.5	610	0.70	5.0	1.1	2.8	0.2	91.0	4.15	1.27	0.08	11	2.78	0.130
M123	Soil	0.76	39.39	5.08	26.9	292	23.2	5.0	620	0.53	2.4	1.0	2.2	0.2	121.1	1.44	0.91	0.07	9	4.03	0.107
M124	Soil	0.99	32.17	5.76	59.0	187	23.8	8.2	2928	0.54	2.3	2.8	1.8	0.3	105.4	5.76	0.81	0.06	8	4.10	0.086
M125	Soil	0.70	46.94	4.17	133.3	100	24.1	4.2	538	0.42	2.5	1.0	5.0	0.4	129.7	2.53	0.68	0.45	8	4.11	0.110

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Project: STOGGIE
Report Date: August 04, 2012

CERTIFICATE OF ANALYSIS DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	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	1	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
M119	Soil	3.5	13.8	0.38	156.1	0.010	28	0.33	0.020	0.06	<0.1	0.7	<0.02	0.28	125	0.5	<0.02	0.8	1.81	<0.1	0.04
M120	Soil	4.2	28.9	0.40	196.7	0.030	17	0.65	0.024	0.08	0.1	1.9	0.11	0.14	127	0.4	0.03	2.3	6.14	<0.1	<0.02
M121	Soil	6.0	36.7	0.52	248.7	0.025	59	0.88	0.026	0.05	<0.1	1.8	0.16	0.28	62	1.1	<0.02	2.3	7.38	<0.1	<0.02
M122	Soil	5.7	18.7	0.35	106.9	0.010	22	0.48	0.032	0.06	<0.1	1.2	0.14	0.30	114	0.6	0.04	0.9	2.23	<0.1	0.03
M123	Soil	7.4	9.3	0.31	85.8	0.008	43	0.40	0.027	0.03	<0.1	0.7	0.07	0.46	95	0.7	<0.02	0.7	0.93	<0.1	0.05
M124	Soil	4.9	10.0	0.36	108.0	0.009	34	0.39	0.033	0.03	<0.1	1.0	0.08	0.46	109	0.6	<0.02	0.7	0.70	<0.1	0.04
M125	Soil	3.8	10.3	0.36	93.8	0.011	38	0.43	0.017	0.04	0.1	2.3	0.05	0.19	109	0.6	0.04	0.6	1.22	<0.1	0.09

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Project: STOGGIE
Report Date: August 04, 2012

CERTIFICATE OF ANALYSIS DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
M119	Soil	0.20	6.1	1.6	<0.05	1.5	3.29	6.6	<0.02	5	0.2	2.0	<10	<2
M120	Soil	0.52	9.8	0.3	<0.05	0.4	3.58	8.6	<0.02	4	0.1	3.6	26	<2
M121	Soil	0.48	6.9	1.0	<0.05	0.4	7.23	12.5	<0.02	4	0.4	7.1	<10	3
M122	Soil	0.22	4.8	1.1	<0.05	1.6	8.51	10.1	<0.02	4	0.3	1.9	19	<2
M123	Soil	0.24	2.7	1.8	<0.05	2.7	8.45	10.9	<0.02	7	0.4	1.1	<10	<2
M124	Soil	0.21	2.3	1.3	<0.05	2.4	6.31	9.6	<0.02	6	0.4	1.3	14	<2
M125	Soil	0.20	3.2	2.6	<0.05	4.2	5.75	5.7	<0.02	31	0.5	1.4	<10	<2

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Project: STOGGIE
Report Date: August 04, 2012

QUALITY CONTROL REPORT DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	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	2	0.01	0.001
Pulp Duplicates																					
P80	Soil	1.52	33.81	19.43	42.9	696	38.7	17.4	903	1.96	6.6	1.6	3.4	0.2	53.2	2.03	0.53	0.14	23	0.67	0.203
REP P80	QC	1.51	34.45	19.43	42.2	730	38.8	17.4	893	1.96	6.7	1.6	1.8	0.2	52.2	2.05	0.50	0.13	23	0.65	0.196
M120	Soil	1.47	40.79	25.99	213.9	1791	37.6	13.6	295	1.19	5.8	2.4	1.4	<0.1	75.7	13.14	0.59	0.16	30	1.97	0.082
REP M120	QC	1.47	38.65	26.10	208.2	1746	37.4	13.1	278	1.20	6.0	2.4	1.4	0.1	72.6	12.52	0.59	0.14	31	1.89	0.081
Reference Materials																					
STD DS9	Standard	12.99	109.7	127.2	317.3	1863	42.4	8.1	585	2.32	26.3	2.8	117.5	6.8	76.8	2.44	6.01	7.33	39	0.71	0.087
STD DS9	Standard	13.05	100.3	119.6	313.2	1994	39.1	7.3	557	2.18	25.7	2.5	127.2	5.5	63.1	2.20	5.40	5.99	37	0.67	0.078
STD DS9 Expected		12.84	108	126	317	1830	40.3	7.6	575	2.33	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank	<0.01	0.09	0.01	0.1	<2	<0.1	<0.1	2	<0.01	0.2	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	3	<0.1	<0.1	<1	<0.01	0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001

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QUALITY CONTROL REPORT DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	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	1	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																					
P80	Soil	13.8	18.9	0.19	402.0	0.004	3	0.81	0.013	0.06	0.1	0.5	0.08	0.09	131	0.3	0.03	2.1	1.58	<0.1	<0.02
REP P80	QC	13.6	19.4	0.19	398.5	0.004	3	0.81	0.013	0.06	<0.1	0.6	0.08	0.09	122	0.3	0.04	2.0	1.63	<0.1	<0.02
M120	Soil	4.2	28.9	0.40	196.7	0.030	17	0.65	0.024	0.08	0.1	1.9	0.11	0.14	127	0.4	0.03	2.3	6.14	<0.1	<0.02
REP M120	QC	4.0	29.3	0.40	194.1	0.030	16	0.65	0.024	0.08	0.1	1.7	0.10	0.14	124	0.3	0.04	2.4	6.24	<0.1	<0.02
Reference Materials																					
STD DS9	Standard	14.9	119.2	0.61	308.0	0.133	3	0.96	0.085	0.39	2.9	2.6	5.55	0.16	190	5.5	4.95	4.6	2.43	0.1	0.10
STD DS9	Standard	11.6	113.7	0.58	275.1	0.091	3	0.91	0.089	0.39	2.8	2.2	5.81	0.15	225	5.2	5.17	4.6	2.47	0.1	0.05
STD DS9 Expected		13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	2.5	5.3	0.1615	200	5.2	5.02	4.59	2.37	0.1	0.08
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<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	<1	<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

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.

Acme Analytical Laboratories (Vancouver) Ltd.
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Phone (604) 253-3158 Fax (604) 253-1716
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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: STOGGIE
Report Date: August 04, 2012

QUALITY CONTROL REPORT

DAW12000057.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
Pulp Duplicates														
P80	Soil	0.39	5.3	1.0	<0.05	0.6	9.70	28.7	0.04	<1	0.7	2.0	<10	<2
REP P80	QC	0.38	5.4	1.3	<0.05	0.5	9.57	28.6	<0.02	<1	0.6	2.1	<10	<2
M120	Soil	0.52	9.8	0.3	<0.05	0.4	3.58	8.6	<0.02	4	0.1	3.6	26	<2
REP M120	QC	0.51	9.6	0.5	<0.05	0.4	3.48	8.4	<0.02	2	0.1	3.5	29	<2
Reference Materials														
STD DS9	Standard	1.32	33.8	6.9	<0.05	2.2	6.12	26.8	2.37	58	5.5	26.2	119	356
STD DS9	Standard	1.76	34.2	5.8	<0.05	1.5	5.45	22.8	2.07	72	5.2	24.9	153	384
STD DS9 Expected		1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	61	5.4	25.2	120	350
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2

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.

Stoggie Camp (SNOKO Project)

Limonitic dacite lapilli tuff rubbly soil at camp.

A Geochemical Report on the SMOKO Property
submitted as Representation Work
on the following quartz claims

Claims:
SMOKO 1-40; Grant YE62163-YE62200
and YD12680-YD12681
Total 40 quartz claims in the Dawson Mining District
Owner: Gordon Richards

Location
NTS Map Sheet 115I13
Camp in southwest of claims at
UTM 349,200E, 6,985,400N, Elev 1033 m
UTM Zone 8, NAD 83

Field work performed by
Gordon Richards and Jeff Mieras
during the period June 6 to June 10, 2012

Report written by Gordon Richards
December 20, 2012

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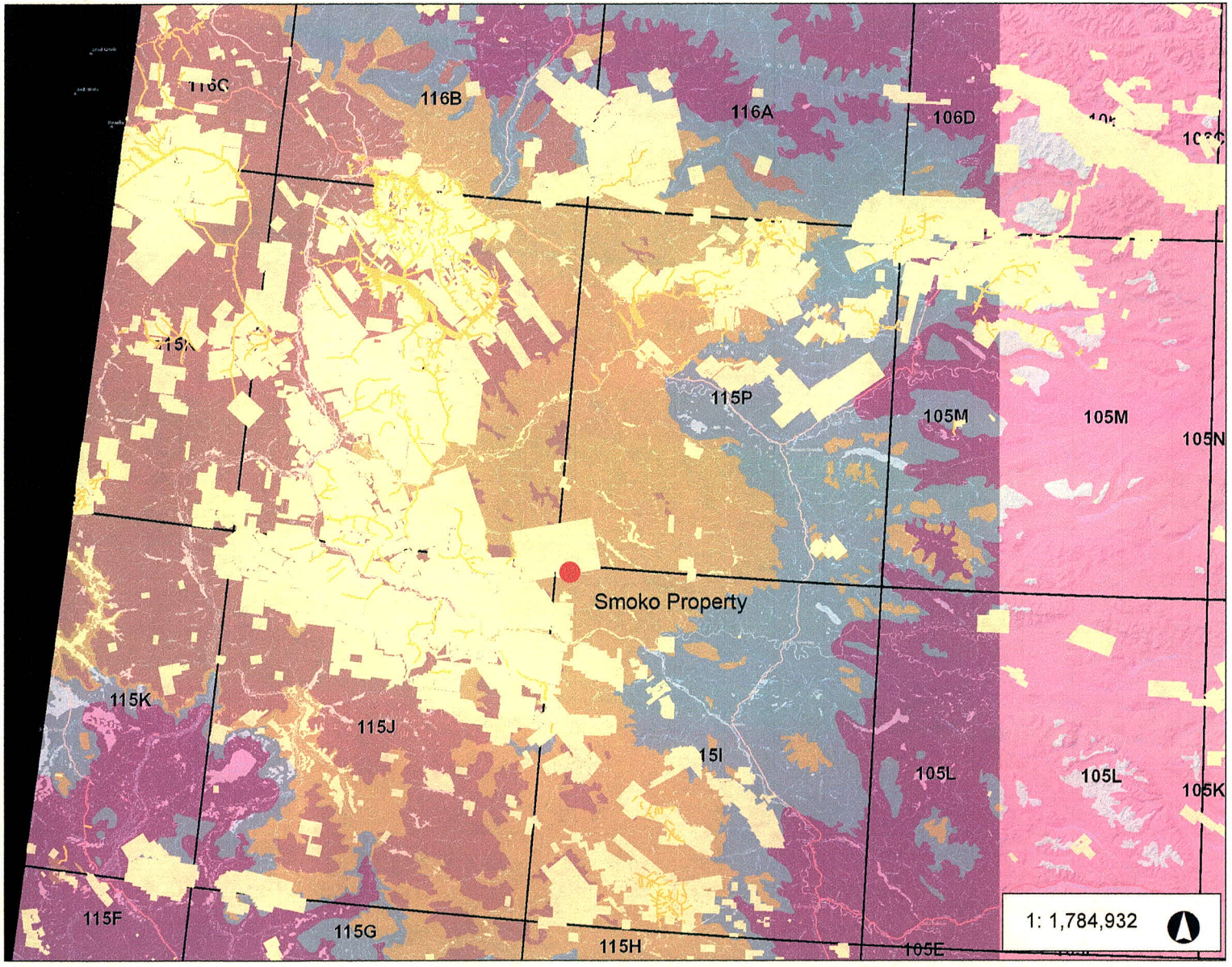
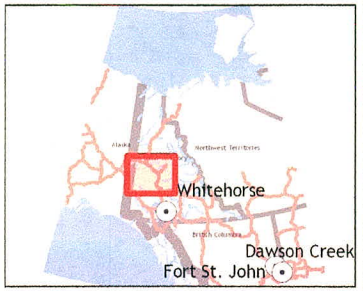
Figure 1. Location, Glacial Limits and Quartz Claims





Legend

- Placer Claims (1M)
- Quartz Claims (1M)
- 1:250,000 NTS Mapsheet Inde
- Glacial Limits (1M)
  - Cordilleran and montane glacial fea
  - Tutsieta Lake Phase Limit (ca. 13 k
  - Katherine Creek Phase Limit (ca. 2
  - All time Laurentide extent (ca. 30 k
  - Cordilleran and montane glacial fea
  - Cordilleran and montane glacial fea
  - Unglaciated area
- Ocean
- Shaded Relief 300m
  - High : 254
  - Low : 0

Notes

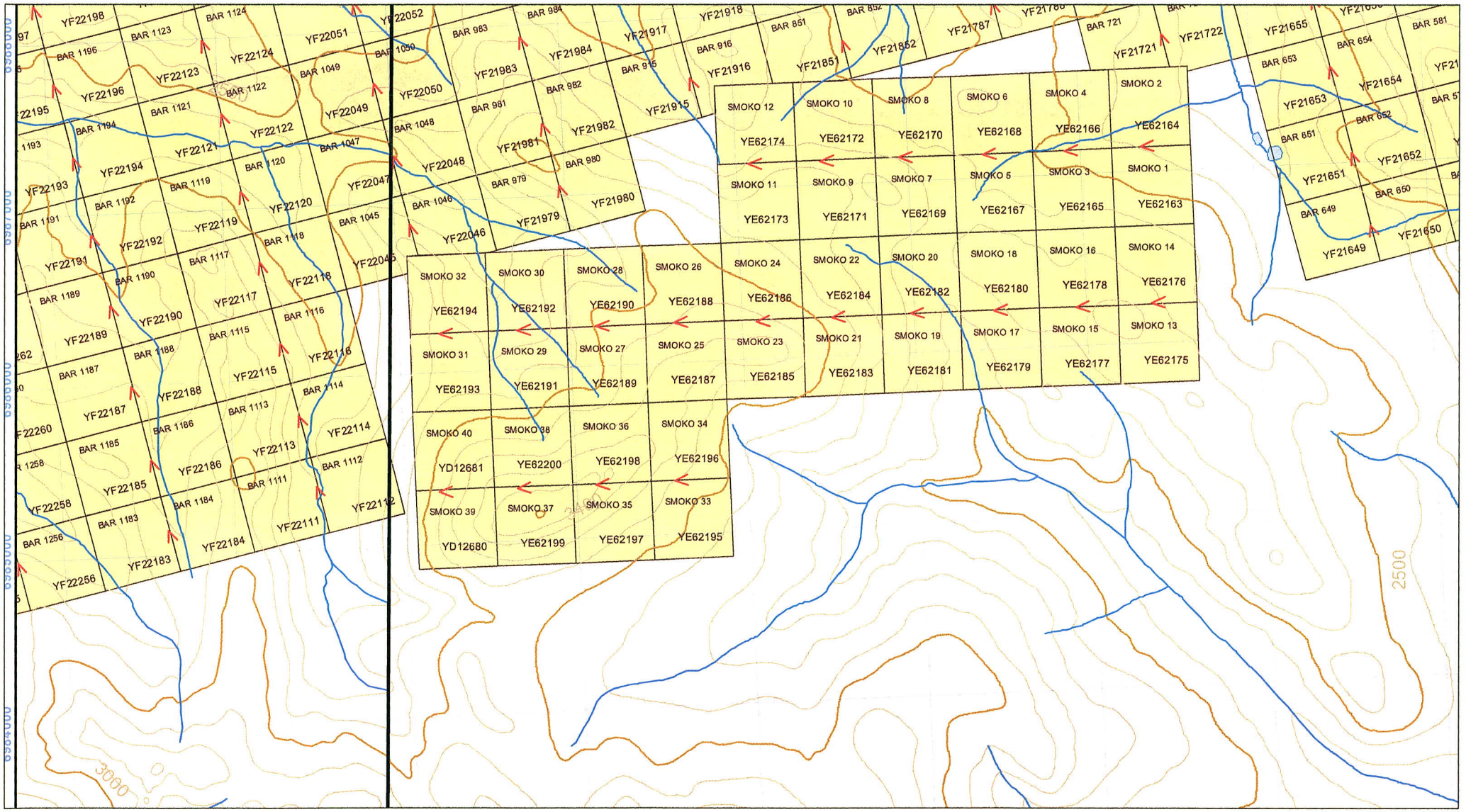
90.7 0 45.34 90.7 Kilometers

Yukon Albers

Produced from: Yukon Geological Survey MapMaker Online

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Date Printed: 19-Dec-2012


SMOKO 12
YE62174
SMOKO 10
YE62172
SMOKO 8
YE62170
SMOKO 6
YE62168
SMOKO 4
YE62166
SMOKO 2
YE62164
SMOKO 11
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SMOKO 37
YE62199
SMOKO 35
YE62197
SMOKO 33
YE62195
2500
3000

Table 2. MMI Response Ratios for 28 Elements. SMOKO																												
	gold pathfinders									porphyry			alteration					mafic				rare earth elements						
ID	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Tb	Y
P3	7	1	5	3	1	1	4	3	2	17	5	4	4	31	5	2	0	2	3	10	3	3	3	3	2	3	2	3
P4	5	1	5	2	1	1	1	6	4	18	7	1	5	59	4	4	4	4	3	6	3	4	3	4	3	3	3	3
P5	9	1	6	2	1	1	1	1	1	9	1	1	1	5	7	1	1	1	3	10	0	0	0	1	1	1	1	1
P6	3	2	4	2	1	1	6	4	2	15	7	4	12	79	4	2	0	2	6	5	10	5	5	4	3	3	3	3
P7	14	1	8	4	1	1	1	1	2	14	3	2	1	21	6	2	0	2	7	2	3	0	1	1	1	1	1	1
P8	3	1	6	2	1	1	6	1	1	21	9	3	8	97	6	1	0	1	11	12	4	7	6	6	2	6	4	4
P9	6	1	4	3	1	1	4	1	4	21	8	3	4	70	6	4	0	4	11	5	1	4	4	4	1	4	3	3
P10	2	1	2	1	1	1	1	1	4	3	6	1	2	41	6	4	4	4	3	5	2	8	9	9	4	9	7	7
P11	2	1	2	2	1	1	1	30	3	2	5	1	2	8	3	3	6	3	1	2	4	9	6	5	3	5	4	4
P12	1	4	1	1	1	1	1	44	4	2	3	1	7	3	0	4	22	4	1	1	522	3	3	2	3	2	2	1
P13	1	1	1	2	1	1	1	41	3	1	4	1	5	7	2	3	9	3	2	1	118	6	7	4	6	4	4	4
P14	1	2	1	4	1	2	1	29	1	1	4	1	2	5	2	1	28	1	0	1	172	12	14	5	4	3	3	2
P15	2	1	1	4	1	1	1	94	3	1	4	1	3	4	1	3	14	3	1	1	179	5	6	3	3	2	2	1
P16	2	1	1	2	1	1	1	43	4	1	2	1	3	6	1	4	20	4	1	0	131	1	1	1	2	1	1	1
P17	10	1	4	6	1	1	1	54	3	2	3	1	2	13	3	3	9	3	2	3	8	13	9	6	4	6	6	6
P18	16	1	14	7	1	1	1	7	5	17	1	1	2	5	6	5	2	5	15	22	1	11	8	11	5	13	13	13
P19	5	1	12	6	1	1	1	16	5	7	1	1	3	3	6	5	3	5	9	9	1	16	9	11	5	13	13	13
P21	6	1	11	4	1	1	1	17	1	3	6	1	1	3	6	1	2	1	7	10	3	30	30	34	7	41	39	44
P22	9	1	8	3	1	1	1	3	1	12	2	3	2	6	8	1	1	1	8	4	1	2	2	3	1	4	4	4
P25	4	1	6	1	1	1	1	1	3	31	6	1	31	0	0	3	19	3	7	2	64	1	1	1	4	1	1	1
P29	1	4	4	1	1	1	2	10	5	10	55	2	13	55	1	5	23	5	2	1	339	2	1	1	3	1	2	2
P30	2	4	9	4	1	1	6	6	3	55	29	4	30	49	1	3	13	3	8	8	83	3	2	3	12	3	4	5
P31	2	1	12	4	1	1	1	1	2	20	11	1	22	8	2	2	6	2	8	6	16	1	1	1	9	1	2	2
P38	2	4	5	1	1	2	2	1	1	28	5	1	31	0	0	1	15	1	6	5	60	1	1	1	5	1	1	1
P39	3	1	4	1	1	1	1	26	2	7	5	1	9	2	1	2	16	2	3	3	93	4	3	4	5	4	5	5
P40	3	2	6	3	1	1	1	17	4	33	8	1	22	4	1	4	9	4	8	7	67	5	4	4	10	4	6	7
P46	5	4	9	0	1	2	1	19	4	43	11	7	18	0	1	4	24	4	5	1	308	2	2	1	4	2	2	1
P48	1	1	2	1	1	4	1	3	1	3	6	1	7	1	2	1	23	1	3	2	104	2	2	1	2	1	1	1
P49	1	4	1	1	1	4	1	6	1	3	4	8	6	2	1	1	26	1	1	1	317	2	2	2	3	2	2	2
P50	5	1	9	1	1	24	1	27	1	11	5	4	10	0	1	1	61	1	3	2	96	1	1	2	4	4	3	3
P51	5	1	7	1	1	1	1	6	8	66	40	6	8	0	2	8	20	8	30	2	34	3	2	3	3	3	3	2
P54	3	1	6	1	1	1	1	16	20	42	5	3	9	1	2	20	17	20	27	5	55	16	17	15	10	14	14	14
P55	1	1	4	2	1	4	1	20	2	10	4	1	2	1	3	2	13	2	6	3	96	10	8	6	5	6	6	6
P56	1	4	2	1	1	1	1	17	3	3	2	1	8	0	1	3	11	3	1	1	356	4	4	3	3	3	3	2
P57	4	1	5	2	1	1	1	50	1	7	1	1	1	0	1	1	12	1	1	5	14	24	21	26	17	27	23	18
P58	1	1	2	2	1	1	1	29	1	1	2	1	1	0	2	1	9	1	1	4	23	102	130	84	27	65	50	47
P59	5	1	4	4	1	1	1	61	1	4	1	1	1	0	1	1	19	1	1	7	37	17	16	17	17	16	15	12
P60	1	1	6	5	1	1	1	44	1	2	2	1	1	0	3	1	4	1	1	6	2	51	63	40	12	31	28	28
P61	1	1	1	1	1	1	1	44	4	0	2	1	8	1	1	4	26	4	1	0	68	1	2	1	2	1	1	1
M2	1	6	4	1	1	1	12	9	4	15	12	8	24	9	3	4	1	4	5	6	71	3	3	3	4	3	2	2
M3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	4	1	1	1	3	2	1	1	1	1	1	1
M5	9	1	4	2	1	1	1	1	1	10	4	2	3	2	6	1	1	1	4	22	2	1	1	1	1	1	1	1
M6	9	1	4	1	1	1	1	1	1	6	1	3	1	0	5	1	1	1	3	11	0	0	0	0	0	0	0	0
M7	8	1	5	3	1	1	4	1	1	15	6	4	5	3	5	1	2	1	4	4	3	2	2	3	1	2	2	2
M8	9	1	5	2	1	1	1	1	1	8	2	3	2	2	5	1	2	1	3	14	2	1	1	1	1	1	1	1
M9	4	2	5	2	1	1	4	3	1	20	6	6	11	8	4	1	10	1	4	10	7	3	3	3	3	2	2	2
M10	9	1	6	3	1	1	1	1	1	15	7	1	3	5	5	1	0	1	5	20	2	1	2	2	1	2	2	2
M11	10	2	12	3	1	1	6	1	1	36	12	3	9	6	6	1	0	1	7	9	4	5	4	4	3	4	3	3
M12	17	1	7	5	4	1	1	9	5	20	7	5	1	3	6	5	3	5	14	9	1	3	2	3	2	5	7	7
M13	1	1	1	2	1	1	1	7	2	0	8	1	2	1	3	2	20	2	1	1	102	3	5	2	1	1	1	1
M14	3	1	8	4	1	1	1	43	1	2	6	1	1	0	3	1	8	1	2	6	6	61	93	28	12	19	15	13
M15	0	1	1	3	1	1	1	4	1	0	7	1	1	2	3	1	7	1	1	1	0	20	17	8	4	5	5	5

Table 2. MMI Response Ratios for 28 Elements. SMOKO																												
	gold pathfinders									porphyry			alteration					mafic				rare earth elements						
ID	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Tb	Y
M16	2	1	5	3	1	1	1	3	1	4	2	1	1	0	4	1	3	1	3	4	1	6	5	7	3	7	6	6
M17	20	1	8	5	2	1	1	3	3	22	7	3	1	3	8	3	2	3	8	1	1	0	0	1	1	1	1	1
M18	3	1	6	3	4	1	1	11	1	4	34	1	1	3	5	1	6	1	4	9	4	57	38	42	19	42	34	29
M19	3	1	6	3	1	1	1	1	1	10	19	1	2	5	5	1	2	1	3	4	2	8	8	9	4	8	5	5
M20	1	1	1	2	1	1	1	19	1	1	7	1	2	0	3	1	7	1	2	2	45	6	5	4	4	4	3	3
M21	1	1	1	2	1	1	1	20	1	1	3	1	2	0	3	1	7	1	1	1	35	2	3	2	3	1	1	1
M22	3	1	2	1	1	1	1	10	1	1	0	1	1	0	4	1	5	1	1	1	2	4	4	2	1	2	2	2
M23	2	1	1	1	1	1	1	10	1	0	3	1	1	0	4	1	6	1	1	1	3	3	3	1	2	1	1	1
M24	2	1	1	1	1	1	1	6	1	1	6	1	1	0	4	1	4	1	2	2	2	3	2	1	3	1	2	2
M25	2	1	2	3	1	1	1	21	1	1	6	1	1	0	2	1	6	1	1	2	8	2	2	1	2	1	1	1
M26	8	1	14	10	1	1	1	3	4	11	0	1	1	0	7	4	2	4	7	17	0	1	2	3	1	3	3	3
M30	5	1	25	3	1	1	1	9	5	10	0	1	1	0	6	5	1	5	9	12	0	6	5	8	2	10	11	10
M33	2	1	4	4	1	1	1	9	1	1	1	6	1	0	3	1	5	1	1	0	3	1	1	1	1	1	1	1
M34	2	1	2	7	1	1	1	57	1	2	4	1	2	0	1	1	7	1	2	5	50	18	21	13	16	12	12	11
M35	6	1	4	9	1	1	1	30	4	5	3	1	1	1	5	4	3	4	5	5	2	42	22	22	14	21	19	16
M36	9	1	7	4	1	1	1	1	2	13	5	1	2	1	6	2	2	2	8	3	1	2	2	3	2	3	3	3
M37	14	1	11	5	2	1	1	1	1	10	0	1	1	0	6	1	1	1	4	3	1	1	1	1	1	2	2	2
M40	1	1	5	3	1	1	1	4	1	4	2	1	1	0	6	1	3	1	7	6	4	16	8	12	3	17	19	17
M41	1	1	5	3	1	1	1	1	3	4	1	1	1	0	6	3	1	3	6	6	1	24	10	11	1	11	9	7
M42	2	2	4	2	1	1	2	3	5	19	7	2	33	0	2	5	8	5	8	5	32	1	1	1	6	2	2	2
M43	2	1	5	1	1	1	4	11	1	24	13	3	19	0	3	1	7	1	13	16	20	5	4	5	7	6	6	7
M44	3	1	4	1	1	1	1	6	5	12	1	2	8	0	4	5	5	5	8	13	7	9	7	7	4	7	5	5
M46	5	1	11	3	1	1	1	1	2	26	0	3	1	0	6	2	2	2	6	4	0	6	5	7	2	6	5	5
M47	4	1	4	2	1	1	1	17	3	30	5	3	12	0	3	3	9	3	37	11	13	7	6	7	7	8	7	9
M48	2	1	1	2	1	1	1	1	6	2	0	1	2	0	5	6	9	6	2	3	2	9	7	6	1	5	4	3
M49	1	1	1	1	1	1	1	3	4	1	3	1	1	0	3	4	15	4	1	1	4	1	2	1	2	1	1	1

Table 3. Ah Response Ratios for 31 Elements. SMOKO																															
	gold pathfinders												porphyry					alteration						mafic					REE			
ID	Ag	As	Au	Ba	Hg	Sb	Bi	Te	Se	B	Pb	Zn	Cu	Co	Mc	Sn	Fe	Mn	S	Ca	Sr	K	Mg	Ni	Cr	U	Ti	Ce	La	Sc	Y
P1	1	4	4	1	1	2	4	3	1	1	2	2	1	2	1	3	2	3	1	1	1	2	2	1	2	1	2	3	2	2	2
P2	1	4	2	2	1	1	3	1	1	1	2	3	2	2	1	2	2	3	1	1	2	3	2	2	2	2	4	3	2	4	2
P26	4	3	5	1	1	1	3	3	1	1	2	2	12	3	3	3	4	1	0	0	0	3	2	3	4	2	5	3	2	4	2
P27	5	8	2	2	1	1	5	1	1	1	3	1	11	3	2	3	2	1	1	0	1	3	1	3	3	3	1	5	3	1	1
P28	5	5	2	2	2	1	3	3	1	1	2	1	6	1	1	3	2	0	1	0	1	2	1	2	2	2	1	4	2	1	1
P41	4	2	2	1	2	1	2	1	1	1	2	1	5	2	2	2	3	1	1	0	1	3	1	3	3	1	1	4	2	1	1
P42	5	2	2	2	2	1	2	3	1	1	2	1	7	3	2	1	3	0	1	0	1	3	1	5	4	2	3	4	2	2	1
P43	6	2	3	2	1	1	2	3	1	1	2	1	9	2	2	1	3	1	1	1	1	5	3	4	7	2	3	4	2	3	3
P44	4	2	10	1	2	1	1	2	2	1	1	1	13	2	1	1	3	0	1	0	1	15	5	7	19	3	10	4	3	7	5
P45	3	2	5	1	1	0	2	1	1	1	2	1	13	1	1	1	2	0	0	0	0	4	3	3	6	1	6	3	2	3	3
P47	11	2	7	1	2	0	2	1	2	1	1	1	24	3	4	2	2	0	1	0	1	6	2	3	3	1	4	2	1	3	2
P52	6	2	4	1	2	1	2	5	3	1	2	1	24	3	4	3	3	0	1	0	1	6	2	6	8	2	2	3	2	2	2
M1	11	2	10	10	2	1	4	23	3	1	4	1	3	2	2	3	3	2	1	2	3	3	1	3	3	3	2	12	9	9	1
M2	2	3	2	1	1	2	1	2	1	4	1	3	1	1	1	2	1	2	2	2	2	3	2	1	1	1	2	1	1	2	2
M4	1	2	1	1	1	1	2	2	2	1	1	1	1	1	1	1	2	0	1	2	2	1	1	1	1	1	2	2	1	2	1
M27	3	3	2	2	2	2	1	3	4	4	2	2	3	7	2	24	2	13	5	3	3	3	2	3	1	3	1	5	3	2	2
M28	3	2	1	1	2	1	1	1	1	2	2	2	1	4	2	5	2	9	3	2	1	2	2	1	2	1	2	2	1	2	2
M29	2	2	1	2	1	1	2	1	2	3	2	2	1	3	1	4	2	4	1	2	2	4	2	2	2	1	1	3	2	1	2
M32	2	3	3	3	2	2	2	12	2	2	2	1	2	2	2	1	2	9	2	2	2	3	2	2	2	2	2	4	3	3	2
M38	2	2	1	1	1	1	1	1	4	3	1	2	1	1	1	3	2	3	1	2	2	5	2	1	2	4	3	2	2	2	2
M39	2	2	2	2	1	2	2	1	2	2	2	3	1	3	2	3	2	16	1	2	2	2	2	2	2	2	5	3	2	4	2
M45	1	1	3	1	1	1	1	4	1	6	1	3	2	1	7	1	2	2	8	3	1	6	3	1	2	6	5	1	1	3	3

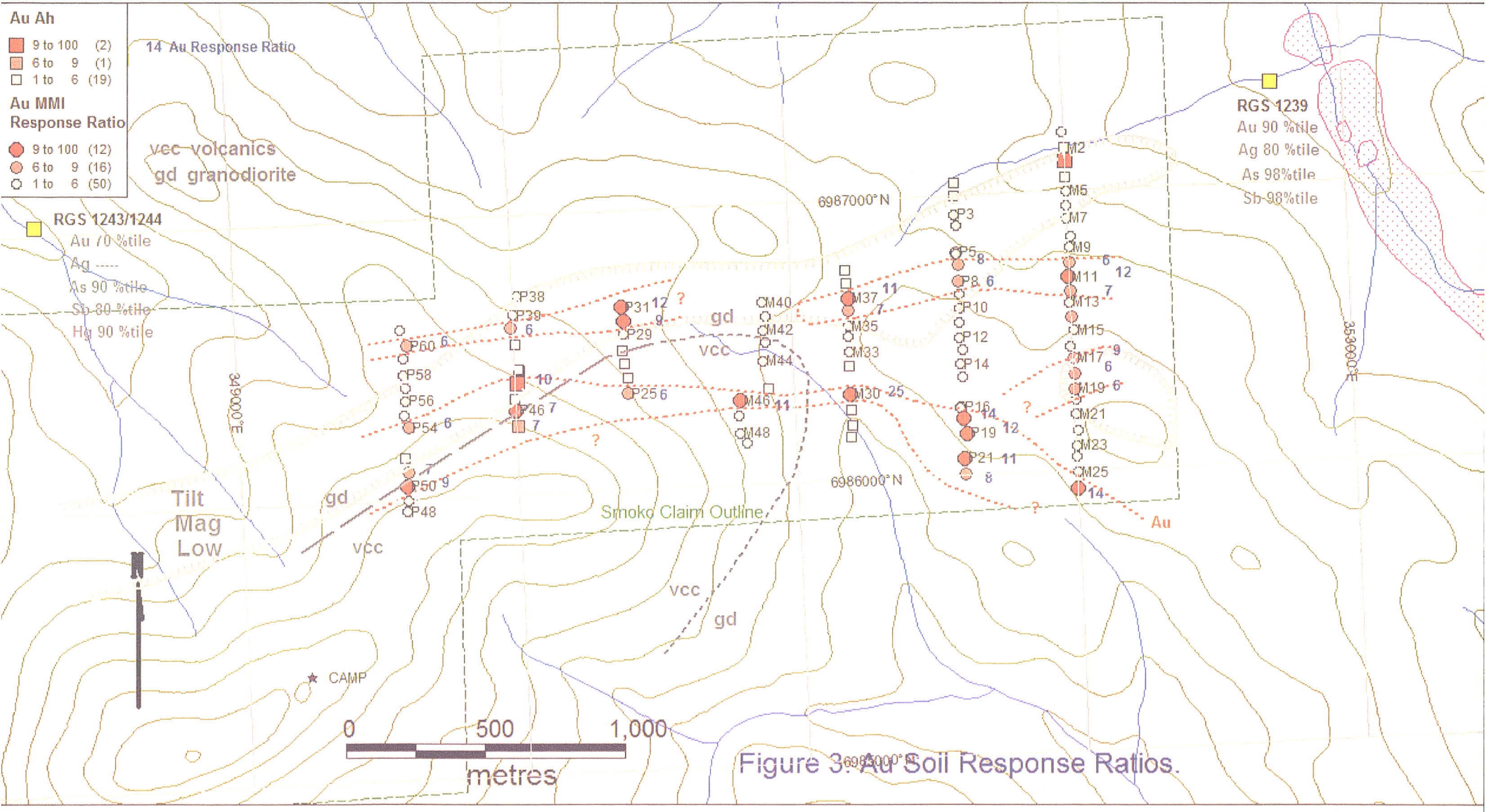


Figure 3: Au Soil Response Ratios.

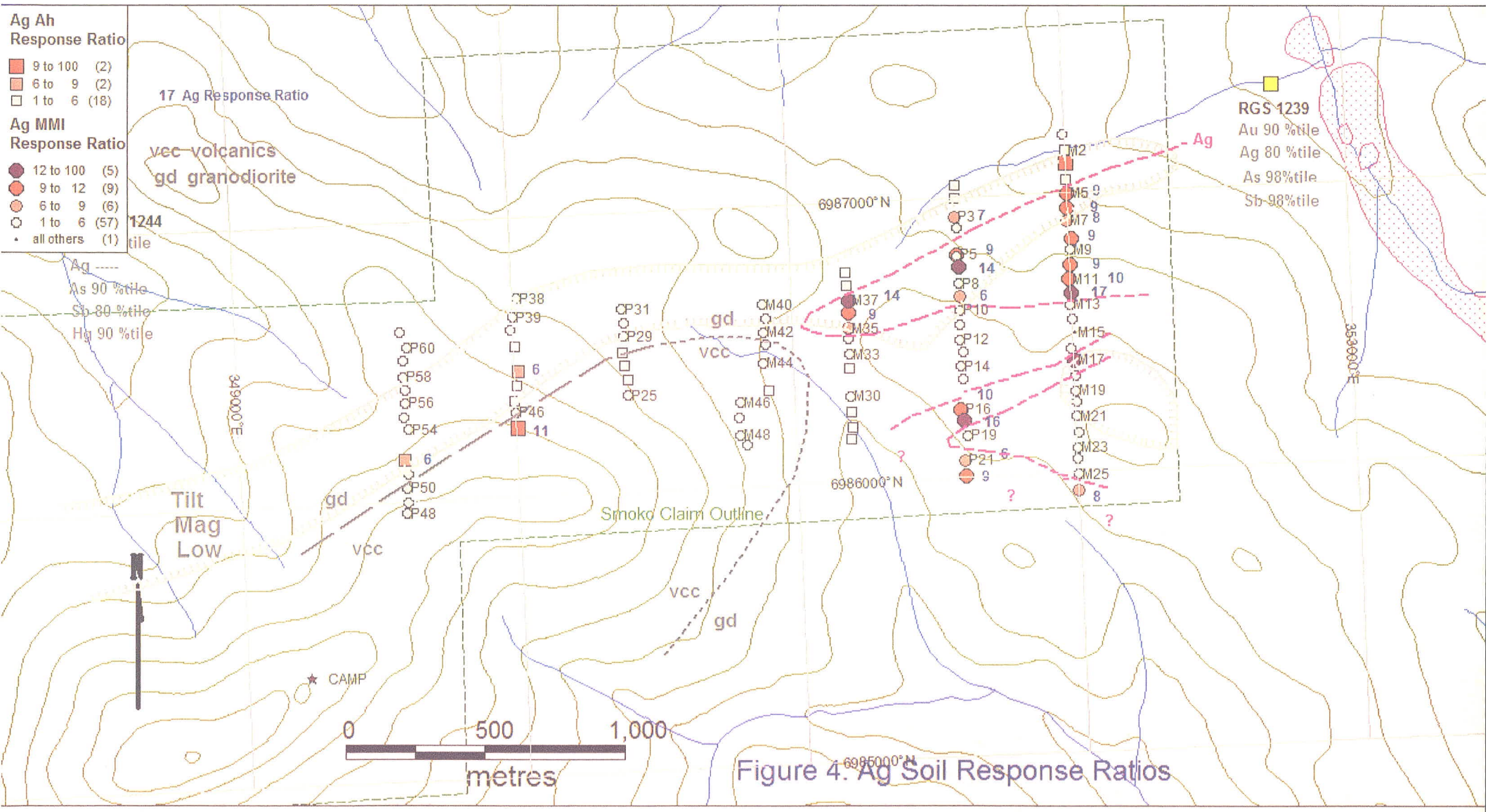


Figure 4. Ag Soil Response Ratios

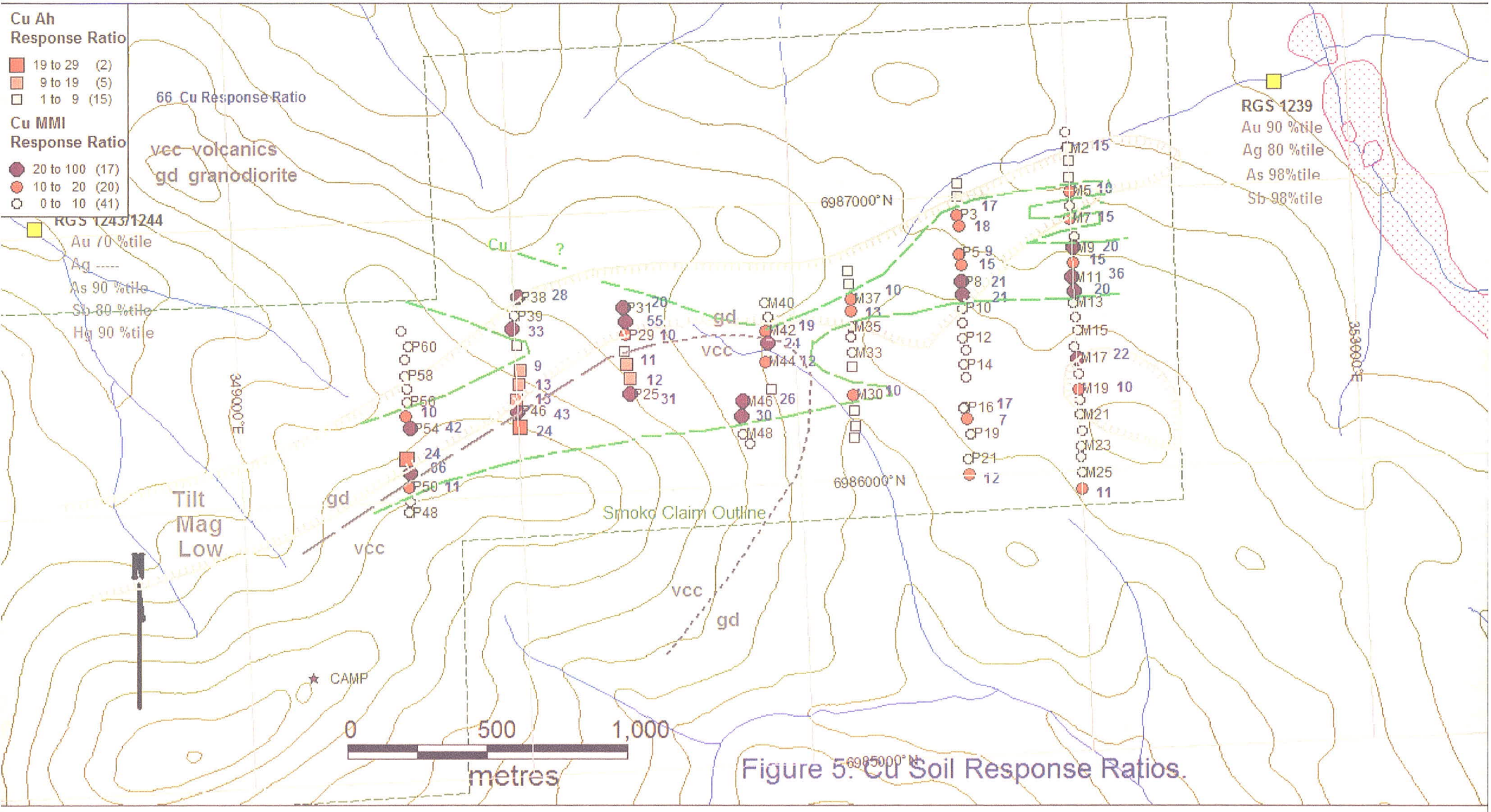


Figure 5. Cu Soil Response Ratios.

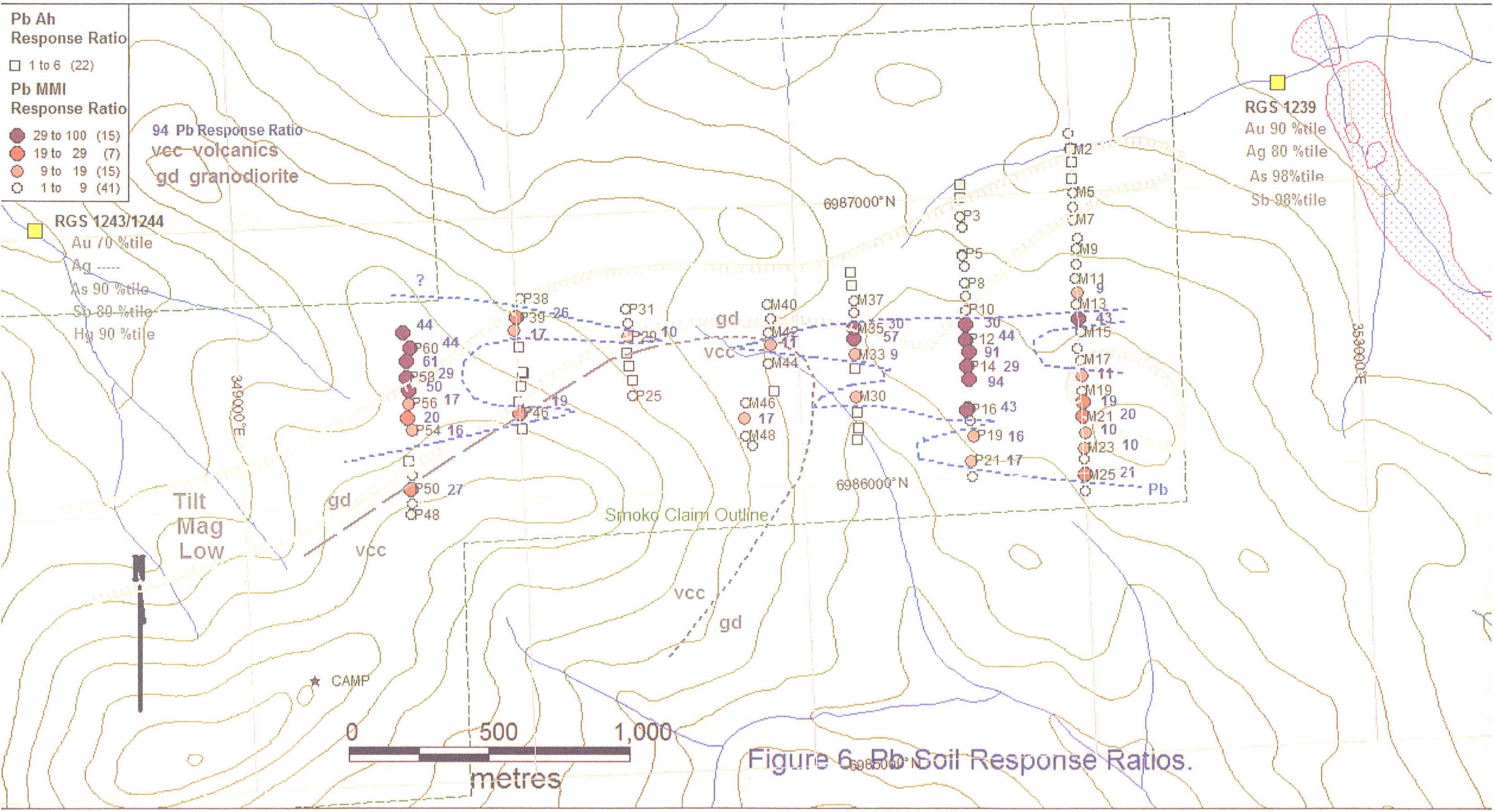


Figure 6. Pb Soil Response Ratios.

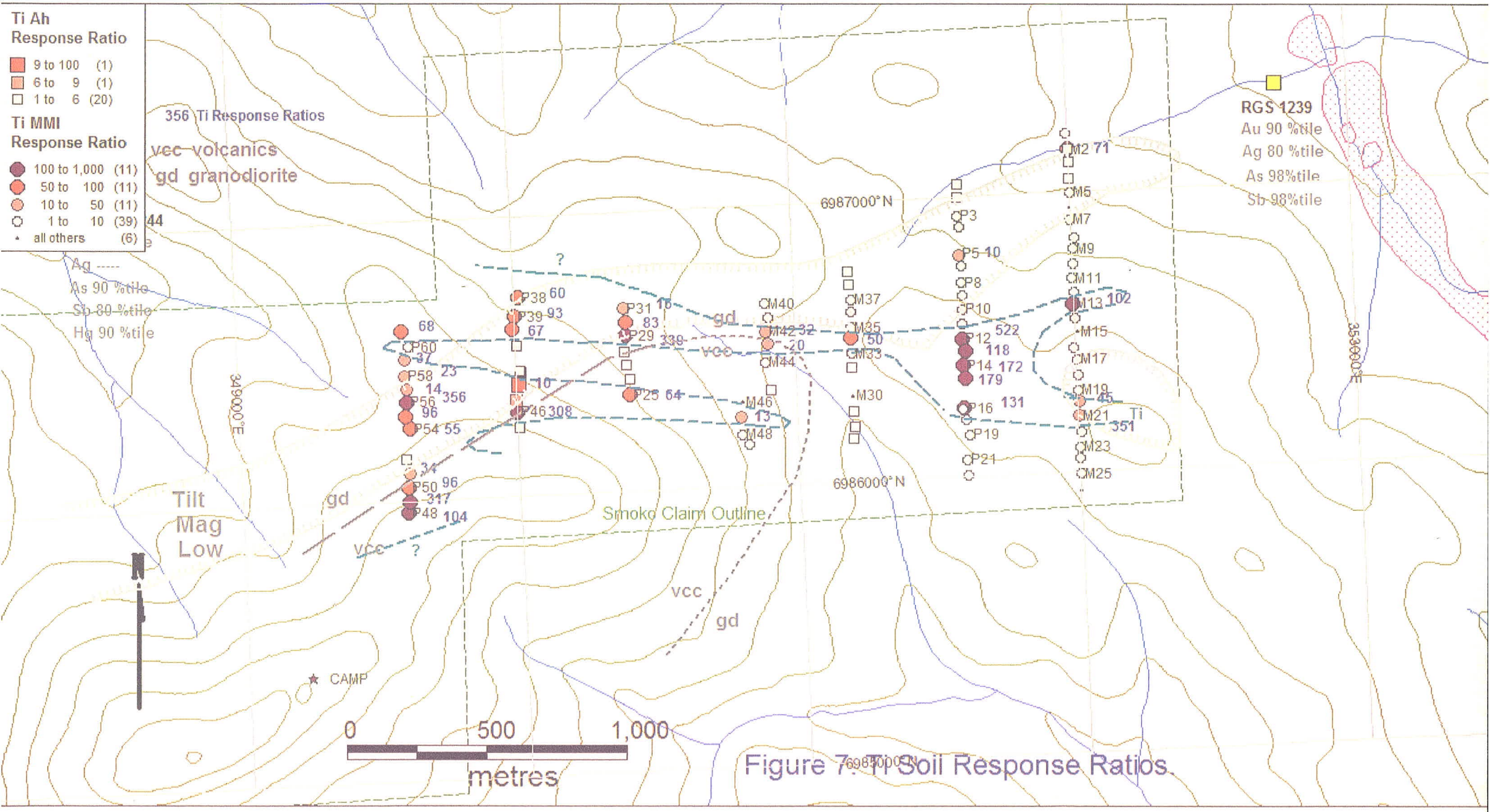


Figure 7: Ti Soil Response Ratios

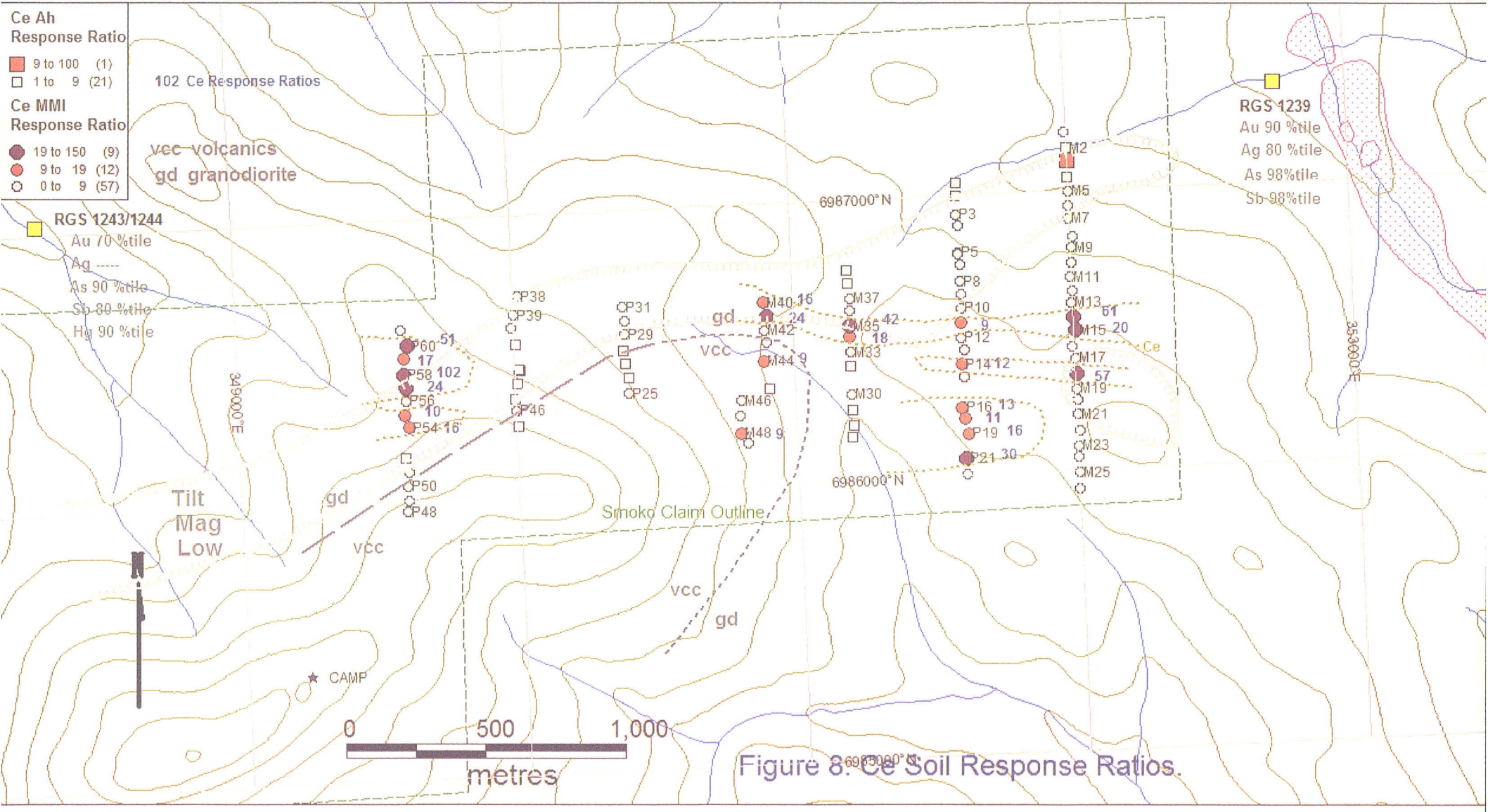


Figure 8. Ce Soil Response Ratios.

INTRODUCTION

In reaction to intensive staking throughout Yukon in 2010 and the following winter the writer staked an exploration target he had developed in the underexplored area east of the White Gold District in the area of pre-Reid glaciations. Staking was conducted with helicopter support out of the Pacific Ridge Exploration (PEX) camp on Scroggie Creek in May 2011. Claims were recorded June 10, 2011. The property is located 140 km from Dawson City, 130 km from Mayo, 130 km from Carmacks and 40 km from Scroggie Airstrip. It is located in the easternmost headwaters of Walhalla Creek and westernmost headwaters of a major east flowing tributary to Black Creek on NTS map sheet 115I13. Access is made by helicopter from any of the above towns. Refer to Figures 1 and 2.

The geology of the area has recently been described on *Canadian Geoscience Map 7 of Southwestern McQuesten and parts of northern Carmacks by Ryan, J.J., Colpron, M., and Hayward, N., 2010.* The property contains a roof pendant of Upper Triassic Seminof Formation dacite to andesite volcanic flows and volcaniclastics occurring within Early Jurassic Aishihik suite granodiorite. White Gold District gold occurrences had been described by many geologists familiar with the deposits as near vertical structural occurrences within all rock types so rock type was not considered as a preliminary screen for identifying targets.

Jeffrey Bond and Panya Lipovsky of the Yukon Geological Survey have recently provided a number of papers, maps and posters on the surficial geology of the pre-Reid glaciated area with descriptions related to exploration. In particular they noted that tills have largely been removed by weathering from hilltops and modest slopes leaving hillsides amenable to soil sampling with effectiveness believed to be similar to unglaciated terrain further west. The property lies at the extreme western limit of the pre-Reid glaciated terrain with higher elevations shown to be unglaciated. Current work found an extensive loess blanket 20 to 50 cm thick covering the hillsides. MMI samples were collected where possible and Ah (organic) samples were collected where MMI samples could not be collected due to frozen ground. MMI samples are collected across the interval of 10 to 25 cm below the top of soil so that in general loess was the

sample medium. Where loess was less than 25 cm thick the underlying material was a residual gritty soil with no rounded pebbles or any other evidence of previously existing till deposits.

The McQuesten Aeromagnetic Survey by Kiss, F., and Cryle, M., 2009 is available from Geoscience Data Repository through Natural Resources Canada. Pacific Ridge Exploration (PEX) provided the writer with horizontal and tilt derivative maps derived from the raw aeromagnetic data. These derivatives show structures where magnetite destructive alteration has occurred. Soil sampling was designed to test a prominent three km long by 150 m wide tilt derivative magnetic low anomaly.

Regional Geochemical Data (RGS) is readily available. It shows geochemical data for numerous elements of stream sediments throughout the area and for several creeks draining the claims. On the Smoko Claims the significant RGS values for sample number 1239 (Figures 3-8) are: Au (90^{th} %tile), As (98^{th} %tile), Sb (98^{th} %tile), Ag (80^{th} %tile), and Ba (80^{th} %tile). This stream flows eastward down the east end of hills underlain by the aeromag derivative low as shown. RGS sample number 1243/1244 is anomalous for Au, As, Sb, Hg, and Ag and drains part of the west end of the aeromag derivative low.

Very Few Minfile occurrences are known in the area. Minfile occurrence 115I 102 occurs on the claims and is described as anomalous Cu and Mo in rocks and soils explored by the Klotassin JV in 1975 for porphyry style mineralization.

The writer flew by helicopter to the property with Jeff Mieras on June 8, 2012 to collect soil and rock samples across the main magnetic derivative and randomly elsewhere on the property. This work was designed to evaluate the magnetic derivatives for precious metal mineralization by the collection of soil samples along lines across the magnetic anomaly. Work was completed on June 10, 2012.

Results were encouraging. Two patterns of strongly anomalous metal were found. One pattern included Au, Ag, Cu with some U, Ni, Co and Rb. The second pattern included Pb, Ti, and Ce along with La, Nd, Sc, Sm, Tb, and Y. Both occur over a two and one-half km east-west strike length and although the patterns are mostly mutually exclusive they occur close to each other and are somewhat parallel to and overlie the magnetic derivative lows. Both patterns are open to the

east and west. There is no outcrop or significant float over the anomalies. The anomalous patterns are believed to be caused by hydrothermal alteration because of their elongate shape, metal association and occurrence in part or completely within granodiorite.

Additional soil sampling is recommended to confirm the extent and continuity of the anomalies. Hand dug pits are also recommended to be dug as deep as possible in order to find, examine, and sample altered bedrock rubble.

CLAIMS.

The following is a list of all claims forming the property. The claims lie in the Dawson Mining District. The work was partially funded by a YMIP grant, #12-~~059~~,016 and was performed by and for the registered owner, Gordon G Richards. Claim expiry dates will be extended to Dec 10, 2015 by filing of the work described in this report as representation work. Refer to Figure 2.

Table 1. Claim Status

Claim Name	Grant No.	Expiry Date	Reg Owner	% Owned	NTS #s
Smoko 1-38	YE62163 – YE62200	2015/12/10	Gordon G Richards	100.00	115I13
Smoko 39-40	YD12680-YD12681	2015/12/10	Gordon G Richards	100.00	115I13

AEROMAGNETIC LOW.

Tilt and horizontal derivative lows derived from government aeromagnetic data are believed to define zones of magnetite destructive alteration that has been shown to be a good guide to gold bearing alteration systems within the White Gold District. An aeromagnetic tilt derivative low is shown on Figures 3 to 8 and was used as the main target for soil sampling. A horizontal derivative low is also present and forms a similar pattern as the tilt derivative low. The pattern shown on Figures 3 to 8 for the tilt derivative low is an approximation only as

limits of the low are somewhat diffuse and its location is not exact. Its axis is believed to be within 100 m of where shown.

RGS DATA.

Position and some results for two Regional Geochemical Survey silt samples are also provided on Figures 3 to 8. In general they are variably anomalous for Au, Ag, As, and Sb. They drain terrain underlain by the aeromagnetic tilt derivative low.

BEDROCK GEOLOGY.

Bedrock geology is best described on *Canadian Geoscience Map 7 of Southwestern McQuesten and Parts of Northern Carmacks by Ryan, J.J., Colpron, M., and Hayward, N., 2010.* The claims area is underlain by a roof pendant of dacitic to andesitic volcaniclastics of the Upper Triassic Semenof Formation lying within granodiorite of the Early Jurassic Aishihik Suite that together are part of the Stikinia/Quesnellia Terrane.

Float found on hillsides and in several soil pits were used to map the approximate contact between volcaniclastics and granodiorite as shown on Figures 3 to 8. As soils were collected across the 10 to 25 cm depth mainly in loess, only those soil pits that contained less than 25 cm loess provided rock chips for mapping underlying geology. No tills were observed so the rock chips are believed to represent underlying geology. Chips were mapped only in M-series samples.

Granodiorite chips were uniform medium-grained hornblende biotite bearing. Weak to moderate limonite staining was recognized in several pits as shown on the figures with the letters "lim". The Seminof volcanics were all fine-grained and chloritic. Beds of aphanitic, very siliceous rhyolite chert were observed along the ridge northeast of camp within chloritic volcaniclastics. Quartz vein float was found in a few pits as indicated on the figures with the letter "Q".

SURFICIAL GEOLOGY.

Soil sampling used methods employing selective leach analyses because the area was believed to have been glaciated during one or more pre-Reid glacial periods and MMI soil sampling can "see through" deep overburden including glacial till. Glaciation is described as pre-Reid in age. Reid glaciation began 200,000 years ago and ended about 50,000 years ago. The glaciation across the general area of the Smoko Property is described as much older than Reid, possibly older than 500,000 years (Jeff Bond, personal communication, 2012). However, no tills or rounded pebbles that might be indicative of previously partially eroded tills were observed in any of the soil pits. It is believed that the survey area of the property is largely unglaciated although lower elevations beyond the limits of the present survey could certainly have been glaciated. It is possible that the area has been glaciated with previously existing tills removed by erosion prior to deposition of loess in the late and post McConnell age glaciation. However much of the survey occurs over gentle terrain where remnants of till might be expected to remain.

A 20 to 50 cm thick post McConnell age loess deposit blankets most of the hillsides thereby making mapping of underlying geology including the occurrence of till and identification of altered float difficult. In future, soils collected by auger well below the loess horizon could prove as effective as it has been shown to be in recent years on numerous properties in unglaciated terrain further west within the White gold District.

GEOCHEMICAL SURVEYS.

SURVEY METHODS

Six man days were spent by Jeff Mieras and Gordon Richards collecting 81 MMI soil samples, 23 organic Ah soil samples, and 2 stream sediment samples. Lab results and spreadsheets showing GPS location with the geochemical data are also provided in Appendices. GPS coordinates were recorded using a UTM, Zone 8 Projection.

Sample details such as rock type and mineralization, soil colour, texture, depth, dampness and site slope were described in notes. Their locations were recorded in a Garmin GPSmap 60Cx. Some UTM co-ordinates were also recorded

in notebooks as a backup in case of loss of the GPS unit or loss of data stored on the unit. No such loss occurred. Sampled material was placed into numbered bags as described below. Soils were collected at 50 m intervals where possible on north-south lines spaced 400 m apart with few exceptions as noted.

A selective leach using MMI analyses was used in order to deal with the expected glacial tills and avoid possible deeper frozen ground. Where ground was too frozen to collect MMI soils, organic Ah soil samples were collected. No rock samples were collected although quartz float and limonitic rock chips were noted in a few soil pits as shown on Figures 3 to 8. Samples were sent to labs described below.

Response ratios for 28 elements were calculated for all MMI soil samples and are provided in Table 2. Response ratios for 31 elements were calculated for all Ah soil samples and are provided in Table 3. Anomalous results greater than selected threshold values for Au, Ag, Cu, Pb, Ti and Ce are shown graphically on Figure 3 to 8. It is important to distinguish response ratios for MMI and Ah soil samples. Data have not been leveled due to the low number of Ah samples. MMI and Ah thresholds are different for all elements.

MMI Soil Samples.

MMI analysis uses a weak partial extraction to improve the conventional geochemical response over buried ore deposits. The process measures the mobile metal ions from mineralization, which have moved toward the surface and become loosely attached to the surfaces of soil particles. They concentrate within the 10 to 25 cm soil depth which on the property is routinely a uniform loess blanket. Its effectiveness has been documented in over 1000 case histories on six continents and includes numerous commercial successes. The anomalies are sharply bounded and in most cases directly overlie and define the extent of the surface projection of buried primary mineralized zones. The MMI process is a proprietary method developed by Wamtech of Australia. SGS Minerals Services in Toronto purchased all rights to the method and provides analyses in Canada.

Watch and ring were removed prior to sampling. Pits were dug by shovel to a depth of 30 cm in order to expose the soil profile for sampling. The profile was scraped clean with a plastic scoop to remove any metal effect from the shovel. A continuous strip of soil was collected by plastic scoop over the interval of 10 to 25

cm below the top of true soil, placed in a pre-numbered ziplock baggie and placed in an 11 inch by 20 inch 2 mil plastic bag. Loess was present at nearly all sample sites and was the sample medium for the bulk of all of the 81 MMI soils collected. Samples were kept cool until they were shipped to SGS Minerals Services in Toronto for analyses.

In the SGS Lab, samples are not dried or prepared in any way. The MMI process includes analyses of an unscreened 50-g sample using multi-component extractants. Metal contents are determined for 53 elements by ICP-MS in the parts per billion range.

Response Ratios were calculated for 28 elements as shown on Table 2. The average value for results of the lower quartile was calculated for each element. One-half of detection limit was used for those samples with values reported as less than detection limit. Then each result was divided by the lower quartile average to obtain its response ratio. A response ratio of 10 or more is considered very significant for indicating underlying mineralization. Lesser values of 5 to 10 can also be important particularly where more than one element has such a value. Response ratios can best be thought of as a multiple of background in interpreting results.

Organic Ah Soil Samples.

Ah horizon organic soil samples were collected from the very base of the organic layer overlying loess and placed into gusseted kraft bags. The organic layer was unusually thick, varying from 1 to 5 cm thick probably because the hillsides have not suffered from recent forest fires, which destroys much of the Ah soil horizon, thus allowing a buildup of the organic layer since the last forest fire. Considerable care and time was taken to collect only completely decomposed organic soil. Samples were sent to Acme Labs where samples were dried at 60 degrees C, 100 g sieved to -80 mesh, and a 15 g sample digested in 1:1:1 Aqua Regia and analyzed by Acme's Ultratrace ICP-MS analyses for 53 elements.

Response ratios were then calculated for 31 elements with much overlap as was done for MMI soils. Refer to Table 3.

SURVEY RESULTS.

Au. Figure 3. Two linear anomalies defined by anomalous gold response ratios occur over and sub parallel with the magnetic tilt and horizontal derivative lows upstream from the two RGS samples anomalous for Au, Ag, As, and Sb.

The more northerly linear pattern is defined by eleven MMI samples that contain response ratios of 6 to 12 with support from anomalous Cu across the length of the Au anomaly, anomalous Ag in the eastern half of the anomaly, and little support from other Au pathfinder elements. The east and west ends of this anomalous pattern is open.

The southern linear Au pattern is stronger and defined by eleven MMI samples that contain response ratios of 6 to 25, 6 of which are in excess of 10, and 2 Ah samples. Some anomalous Cu and Ag support is provided but there is little support from other Au pathfinder elements. The west and southeast part of this anomaly is open.

The general lack of support from the other pathfinder elements could be real or be caused by a lack of response for these elements in the MMI and Ah selective leaches. This latter possibility is supported by the strong As and Sb response in the two RGS samples. The writer has seen a lack of As, and Sb response in Ah samples collected over an area of abundant boulders highly anomalous for Ag, As and Sb on the Paleo Property about 20 km east in a similar surficial geological setting. No MMI samples were collected in this area of the Paleo Property to make a comparison of that method.

Ag. Figure 4. Two patterns of anomalous response ratios for Ag from MMI samples occur in the eastern half of the soil grid upstream from an RGS sample that contains anomalous Ag, Au, As, and Sb. There is a strong correspondence of the anomalous Ag with the magnetic tilt and horizontal derivative lows.

The southern anomaly overlaps the southern gold anomaly described above and is defined by 6 samples with response ratios varying from 6 to 20. It is open to the east and south as is the gold pattern. There is minor anomalous Cu support and little other pathfinder support.

The northern anomaly is much bigger and forms a more contiguous pattern that remains open and widening to the east. It is defined by 13 anomalous

response ratio values varying from 6 to 17. There is good anomalous Au and Cu support but little other pathfinder support. See discussion under Au above.

Cu. Figure 5. A single strong pattern of highly anomalous Cu response ratios occurs over the magnetic tilt and horizontal derivative lows. It is defined by 33 MMI samples that vary from 10 to 66 and 8 Ah samples that vary from 9 to 24 and is open to the east and west. Good support from anomalous Au and Ag occurs as discussed above under Au and Ag. There is no appreciable anomalous Mo support but there is good correlation with anomalous Co , U, Ni and Rb and lesser Mn, and Fe apparent in MMI response ratios shown on Table 2. The high response ratio values certainly support the occurrence of Cu mineralization underlying the anomalous pattern. Au and Ag could be associated with such Cu mineralization.

Pb. Figure 6. A strong pattern of highly anomalous Pb response ratios occurs, somewhat interrupted in its central portion, over the magnetic tilt and horizontal derivative lows. It is defined by 32 MMI samples that have response ratios varying from 12 to 94 and is open to the east and west. No Ah soil samples are anomalous for Pb, which may be due to this selective leach being unresponsive for Pb. It is interesting to note that a high number of Ah samples were collected in the central portion of the survey where the anomalous Pb pattern appears interrupted. The interruption of the pattern may be caused more by the lack of MMI samples in this area than it is real. The Pb pattern does not correlate positively with any of Au, Ag, or Cu but does correlate well with Ti and somewhat with Ce. See below. The high response ratio values certainly support the occurrence of Pb mineralization underlying the anomalous pattern. Limonite was noted in chips from several soil pits within the anomalous Pb pattern.

Ti. Figure 7. A strong pattern of highly anomalous Ti response ratios occurs, somewhat interrupted in its central portion, over the magnetic tilt and horizontal derivative lows. It mimics the Pb pattern described above extremely well. It is defined by 31 MMI samples that vary from 13 to 522 with 19 samples over 50. The pattern is open to the east and west. Only one Ah sample was anomalous for Ti, which may be due to this selective leach being unresponsive for Ti. Like for Pb, a high number of Ah samples were collected in the central portion of the survey where the anomalous Ti pattern appears interrupted. The Ti pattern does not correlate positively with any of Au, Ag, or Cu but does correlate well with Pb and

somewhat with Ce. The high response ratio values certainly support the occurrence of Ti mineralization underlying the anomalous pattern.

Ce. Figure 8. Strongly anomalous values for Ce response ratios form patterns that mimic the patterns for Pb and Ti although not as consistent as the Pb and Ti patterns. The patterns are defined by 19 MMI samples varying from 9 to 102 with 8 samples greater than 20. Other rare earth elements correlate well with Ce and as can be seen on Table 2. The occurrence of anomalous Ce with anomalous Pb and Ti and the magnetic derivative lows possibly indicates a hydrothermal genesis for occurrence of these elements.

CONCLUSIONS

Magnetic derivative lows with two RGS samples collected from creeks draining the magnetic lows anomalous for Au, Ag, As and Sb proved useful for staking claims and positioning a soil grid for preliminary exploration of the claims. Magnetic derivative lows map areas of magnetite destruction believed caused by hydrothermal activity that could have associated mineralization.

Geology is as described on *Canadian Geoscience Map 7 of Southwestern McQuesten and parts of northern Carmacks by Ryan, J.J., Colpron, M., and Hayward, N., 2010* where a roof pendant of Upper Triassic Seminof Formation dacite to andesite volcanic flows and volcaniclastics occurs within Early Jurassic Aishihik suite granodiorite. Some soil pits contain rock fragments with limonite stains and some quartz fragments are found in some of these pits.

The property lies at the extreme western limit of pre-Reid glaciations with higher elevations described as unglaciated. The grid area is covered with a blanket of loess 20 to 50 cm deep. Some soil pits penetrated the loess blanket and found no traces of tills but gritty to rocky soil derived from local bedrock similar to soils found further west in unglaciated terrain.

Selective leach soil sampling using MMI and lesser Ah (organic) soil samples collected on a grid using seven north-south lines 400 m apart has produced patterns of moderate to highly anomalous elements. The sample medium for MMI samples was loess with a few samples containing up to 30% underlying rocky soil. No outcrop was found within any of the anomalous patterns. Anomalies are defined by response ratios, which are multiples of background. A response ratio

of 10 is highly anomalous and is considered a strong indication of underlying mineralization for that element.

Anomalous patterns for Au, Ag, and Cu appear to mimic each other and occur along an east-west two and one-half km strike length and over the magnetic derivative lows. The Cu and Au anomalies are open on both ends and the Ag anomaly is open on its east end. Au has a high response ratio of 25, Ag of 20 and Cu of 66. Pathfinder elements for As, Sb, Bi, Te, Ba and others were only sporadically anomalous. Absence of significant numbers of anomalous values for these elements may be real or they may not develop in the environment found on the property. The two RGS stream sediment samples draining the area of the grid are anomalous for As, Sb and Ba as well as Au and Ag. The RGS stream sediment samples collected from creeks draining the area of the grid are anomalous for As, Sb, and Ba as well as Au and Ag. Regardless, strong response ratios for Au, Ag, and Cu are indicative of mineralization lying beneath the anomalies and require further exploration. An examination of Table 2 shows very anomalous values of U, Co, Ni and Rb are also present for many of the anomalous Cu, Au and Ag samples. U potential of the property should be considered in future work on the property.
Anomalous patterns for Pb, Ti and Ce and other rare earth elements occur along an east-west two and one-half km strike length that crosses the Au-Ag-Cu anomalous patterns at an acute angle. The two sets of anomalous patterns are not spatially related. The response ratios are extremely high with a high values for Pb of 61, for Ti of 522, and for Ce of 102. An examination of Table 2 shows very anomalous values of La, Nd, Sc, Sm, Tb, and Y are also present for many of the anomalous Pb, Ti and Ce samples. Potential sources of the anomalies are unknown. On a worldwide basis titanium is known to associate with rare earth elements in some intrusive and metamorphic environments where they are sometimes recovered as placer concentrates. Most economic deposits of rare earth elements are associated with carbonatites. The low Ca and Mg values probably negate this possibility. The high associated Pb is suggestive of a hydrothermal environment. Pits dug to bedrock would help to understand the geologic environment and source of the Pb-Ti-Ce anomalies. The anomalous patterns are believed to be caused by hydrothermal alteration because of their

elongate shape, metal association and occurrence in part or completely within granodiorite.

The 400 m spaced grid lines need to be infilled in order to validate continuity of the anomalies. Soil pits also need to be dug to examine the causes of the mineralization. MMI anomalies develop directly above mineralization so pits dug into bedrock at anomalous soil pit locations can be expected to find the source of the anomaly.

RECOMMENDATIONS.

It is recommended that:

i) Additional north-south soil lines spaced 100m apart be completed with sample interval of 50 m. Additional north-south soil lines space 200 m apart should be completed to the east and west of the present lines. Four lines should be sampled to the east and four lines to the west.

ii) Augering of soil samples be considered if the sampling program is done late enough in the year to avoid frozen ground at the expected depths of sampling. This method is more direct in unglaciated terrain and would resolve whether or not other pathfinder elements such as As and Sb are present.

iii) Where these soil lines cross the projection of anomalous Au and Ag zones the sample interval should be reduced to 25 m.

iv) Pits be dug by hand as deep as possible in order to examine bedrock rubble and determine the cause of the anomalies. Samples should be collected from these pits for assay.

v) Further soil sample prospecting be conducted over the claims away from the magnetic derivative lows.

STATEMENT OF COSTS 2012

Smoko Property

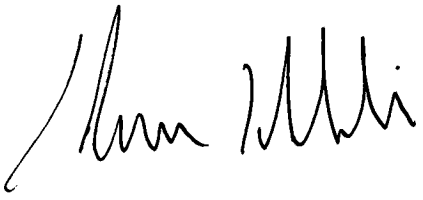
Trans North Helicopters:		
June 8. Mob from Dawson to Smoko Camp. #55601		$ 3160.00
June 10. Demob off property. #55209		2823.02
Truck: Wat Lake-Dawson-Wat Lake. ½ of 1982 km @ $0.61/km		604.51
Geochem:		
SGS - MMI soil sample assays. TO122410		2897.70
Acme - Ah soil assays. VANI139201		586.54
Acme - silt sample assays. VANI135840		40.34
Wages:		
Jeff Mieras June 7-10: 4 days @ $300/day		1200.00
Gord Richards June 7-10: 4 days @ $600/day		2400.00
Food and supplies: 8 man days @ $100/day		800.00
Report: 10% of above costs		1601.21
	TOTAL	**$17,613.32**

STATEMENT OF QUALIFICATIONS.

I, Gordon G Richards, with business address at 6410 Holly Park Drive, B.C., V4K 4W6, do hereby certify that:

1. I am a Professional Engineer, registered with number 11,411, with the Association of Professional Engineers and Geoscientists of British Columbia since 1978.
2. I hold a B.A.Sc. (1968) in Geology from The University of British Columbia, and an M.A.Sc. (1974) in Geology from The University of British Columbia.
3. I have been practicing my profession as a geologist for over 40 years and as a consulting geological engineer since 1985. I have work experience in western areas of the United States, Alaska, Canada, Mexico and Africa.
4. I have based this report my field work and supervision of field work by Jeff Mieras during the period of June 7 to 10, 2012 and on the results generated by that field work.
5. I have written this report based on results of the fieldwork described.

Respectfully submitted,



Gordon G Richards, P.Eng.

MMI Samples tied to Sample Number and UTM*83 Zone 8 Co-ordinates SMOKO 2012																															
ID	GPS	UTM_83_E	UTM_83_N	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Tb	Y
P3	5	351596	6986931	7	1	5	3	1	1	4	3	2	17	5	4	4	31	5	2	0	2	3	10	3	3	3	3	2	3	2	3
P4	6	351601	6986891	5	1	5	2	1	1	1	6	4	18	7	1	5	59	4	4	4	4	3	6	3	4	3	4	3	3	3	3
P5	7	351596	6986796	9	1	6	2	1	1	1	1	1	9	1	1	1	5	7	1	1	1	3	10	0	0	0	1	1	1	1	1
P6	8	351597	6986792	3	2	4	2	1	1	6	4	2	15	7	4	12	79	4	2	0	2	6	5	10	5	5	4	3	3	3	3
P7	9	351604	6986753	14	1	8	4	1	1	1	1	2	14	3	2	1	21	6	2	0	2	7	2	3	0	1	1	1	1	1	1
P8	10	351602	6986693	3	1	6	2	1	1	6	1	1	21	9	3	8	97	6	1	0	1	11	12	4	7	6	6	2	6	4	4
P9	11	351606	6986649	6	1	4	3	1	1	4	1	4	21	8	3	4	70	6	4	0	4	11	5	1	4	4	4	1	4	3	3
P10	12	351603	6986598	2	1	2	1	1	1	1	1	4	3	6	1	2	41	6	4	4	4	3	5	2	8	9	9	4	9	7	7
P11	13	351601	6986547	2	1	2	2	1	1	1	30	3	2	5	1	2	8	3	3	6	3	1	2	4	9	6	5	3	5	4	4
P12	14	351598	6986492	1	4	1	1	1	1	1	44	4	2	3	1	7	3	0	4	22	4	1	1	522	3	3	2	3	2	2	1
P13	15	351606	6986450	1	1	1	2	1	1	1	41	3	1	4	1	5	7	2	3	9	3	2	1	118	6	7	4	6	4	4	4
P14	16	351597	6986396	1	2	1	4	1	2	1	29	1	1	4	1	2	5	2	1	28	1	0	1	172	12	14	5	4	3	3	2
P15	17	351603	6986351	2	1	1	4	1	1	1	94	3	1	4	1	3	4	1	3	14	3	1	1	179	5	6	3	3	2	2	1
P16	18	351594	6986245	2	1	1	2	1	1	1	43	4	1	2	1	3	6	1	4	20	4	1	0	131	1	1	1	2	1	1	1
P17	19	351591	6986243	10	1	4	6	1	1	1	54	3	2	3	1	2	13	3	3	9	3	2	3	8	13	9	6	4	6	6	6
P18	20	351602	6986203	16	1	14	7	1	1	1	7	5	17	1	1	2	5	6	5	2	5	15	22	1	11	8	11	5	13	13	13
P19	21	351611	6986149	5	1	12	6	1	1	1	16	5	7	1	1	3	3	6	5	3	5	9	9	1	16	9	11	5	13	13	13
P21	23	351600	6986061	6	1	11	4	1	1	1	17	1	3	6	1	1	3	6	1	2	1	7	10	3	30	30	34	7	41	39	44
P22	24	351600	6986003	9	1	8	3	1	1	1	3	1	12	2	3	2	6	8	1	1	1	8	4	1	2	2	3	1	4	4	4
P25	27	350402	6986346	4	1	6	1	1	1	1	1	3	31	6	1	31	0	0	3	19	3	7	2	64	1	1	1	4	1	1	1
P29	31	350397	6986557	1	4	4	1	1	1	2	10	5	10	55	2	13	55	1	5	23	5	2	1	339	2	1	1	3	1	2	2
P30	32	350399	6986606	2	4	9	4	1	1	6	6	3	55	29	4	30	49	1	3	13	3	8	8	83	3	2	3	12	3	4	5
P31	33	350393	6986654	2	1	12	4	1	1	1	1	2	20	11	1	22	8	2	2	6	2	8	6	16	1	1	1	9	1	2	2
P38	34	350016	6986710	2	4	5	1	1	2	2	1	1	28	5	1	31	0	0	1	15	1	6	5	60	1	1	1	5	1	1	1
P39	35	350004	6986643	3	1	4	1	1	1	1	26	2	7	5	1	9	2	1	2	16	2	3	3	93	4	3	4	5	4	5	5
P40	36	349993	6986600	3	2	6	3	1	1	1	17	4	33	8	1	22	4	1	4	9	4	8	7	67	5	4	4	10	4	6	7
P46	42	350001	6986302	5	4	9	0	1	2	1	19	4	43	11	7	18	0	1	4	24	4	5	1	308	2	2	1	4	2	2	1
P48	51	349594	6985960	1	1	2	1	1	4	1	3	1	3	6	1	7	1	2	1	23	1	3	2	104	2	2	1	2	1	1	1
P49	52	349601	6986000	1	4	1	1	1	4	1	6	1	3	4	8	6	2	1	1	26	1	1	1	317	2	2	2	3	2	2	2
P50	53	349596	6986051	5	1	9	1	1	24	1	27	1	11	5	4	10	0	1	1	61	1	3	2	96	1	1	2	4	4	3	3
P51	54	349604	6986098	5	1	7	1	1	1	1	6	8	66	40	6	8	0	2	8	20	8	30	2	34	3	2	3	3	3	3	2
P54	57	349613	6986259	3	1	6	1	1	1	1	16	20	42	5	3	9	1	2	20	17	20	27	5	55	16	17	15	10	14	14	14

MMI Samples tied to Sample Number and UTM*83 Zone 8 Co-ordinates SMOKO 2012																															
ID	GPS	UTM_83_E	UTM_83_N	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Tb	Y
P55	58	349598	6986304	1	1	4	2	1	4	1	20	2	10	4	1	2	1	3	2	13	2	6	3	96	10	8	6	5	6	6	6
P56	59	349602	6986355	1	4	2	1	1	1	1	17	3	3	2	1	8	0	1	3	11	3	1	1	356	4	4	3	3	3	3	2
P57	60	349605	6986402	4	1	5	2	1	1	1	50	1	7	1	1	1	0	1	1	12	1	1	5	14	24	21	26	17	27	23	18
P58	61	349601	6986448	1	1	2	2	1	1	1	29	1	1	2	1	1	0	2	1	9	1	1	4	23	102	130	84	27	65	50	47
P59	62	349601	6986507	5	1	4	4	1	1	1	61	1	4	1	1	1	0	1	1	19	1	1	7	37	17	16	17	17	16	15	12
P60	63	349615	6986552	1	1	6	5	1	1	1	44	1	2	2	1	1	0	3	1	4	1	1	6	2	51	63	40	12	31	28	28
P61	64	349592	6986608	1	1	1	1	1	1	1	44	4	0	2	1	8	1	1	4	26	4	1	0	68	1	2	1	2	1	1	1
M2		351999	6987153	1	6	4	1	1	1	12	9	4	15	12	8	24	9	3	4	1	4	5	6	71	3	3	3	4	3	2	2
M3	3	351995	6987207	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	4	1	1	1	3	2	1	1	1	1	1	1
M5	5	352000	6986999	9	1	4	2	1	1	1	1	1	10	4	2	3	2	6	1	1	1	4	22	2	1	1	1	1	1	1	1
M6	6	351999	6986947	9	1	4	1	1	1	1	1	1	6	1	3	1	0	5	1	1	1	3	11	0	0	0	0	0	0	0	0
M7	7	351997	6986900	8	1	5	3	1	1	4	1	1	15	6	4	5	3	5	1	2	1	4	4	3	2	2	3	1	2	2	2
M8	8	352009	6986837	9	1	5	2	1	1	1	1	1	8	2	3	2	2	5	1	2	1	3	14	2	1	1	1	1	1	1	1
M9	9	352005	6986798	4	2	5	2	1	1	4	3	1	20	6	6	11	8	4	1	10	1	4	10	7	3	3	3	3	2	2	2
M10	10	352002	6986743	9	1	6	3	1	1	1	1	1	15	7	1	3	5	5	1	0	1	5	20	2	1	2	2	1	2	2	2
M11	11	351997	6986692	10	2	12	3	1	1	6	1	1	36	12	3	9	6	6	1	0	1	7	9	4	5	4	4	3	4	3	3
M12	12	352001	6986643	17	1	7	5	4	1	1	9	5	20	7	5	1	3	6	5	3	5	14	9	1	3	2	3	2	5	7	7
M13	13	351996	6986601	1	1	1	2	1	1	1	7	2	0	8	1	2	1	3	2	20	2	1	1	102	3	5	2	1	1	1	1
M14	14	352004	6986549	3	1	8	4	1	1	1	43	1	2	6	1	1	0	3	1	8	1	2	6	6	61	93	28	12	19	15	13
M15	15	352010	6986500	0	1	1	3	1	1	1	4	1	0	7	1	1	2	3	1	7	1	1	1	0	20	17	8	4	5	5	5
M16	16	351995	6986445	2	1	5	3	1	1	1	3	1	4	2	1	1	0	4	1	3	1	3	4	1	6	5	7	3	7	6	6
M17	17	352002	6986401	20	1	8	5	2	1	1	3	3	22	7	3	1	3	8	3	2	3	8	1	1	0	0	1	1	1	1	1
M18	18	352005	6986346	3	1	6	3	4	1	1	11	1	4	34	1	1	3	5	1	6	1	4	9	4	57	38	42	19	42	34	29
M19	19	352005	6986291	3	1	6	3	1	1	1	1	1	10	19	1	2	5	5	1	2	1	3	4	2	8	8	9	4	8	5	5
M20	20	352004	6986251	1	1	1	2	1	1	1	19	1	1	7	1	2	0	3	1	7	1	2	2	45	6	5	4	4	4	3	3
M21	21	352003	6986200	1	1	1	2	1	1	1	20	1	1	3	1	2	0	3	1	7	1	1	1	35	2	3	2	3	1	1	1
M22	22	352007	6986142	3	1	2	1	1	1	1	10	1	1	0	1	1	0	4	1	5	1	1	1	2	4	4	2	1	2	2	2
M23	23	352003	6986089	2	1	1	1	1	1	1	10	1	0	3	1	1	0	4	1	6	1	1	1	3	3	3	1	2	1	1	1
M24	24	352000	6986049	2	1	1	1	1	1	1	6	1	1	6	1	1	0	4	1	4	1	2	2	2	3	2	1	3	1	2	2
M25	25	352001	6985993	2	1	2	3	1	1	1	21	1	1	6	1	1	0	2	1	6	1	1	2	8	2	2	1	2	1	1	1
M26	26	351998	6985937	8	1	14	10	1	1	1	3	4	11	0	1	1	0	7	4	2	4	7	17	0	1	2	3	1	3	3	3
M30	30	351198	6986306	5	1	25	3	1	1	1	9	5	10	0	1	1	0	6	5	1	5	9	12	0	6	5	8	2	10	11	10

MMI Samples tied to Sample Number and UTM*83 Zone 8 Co-ordinates SMOKO 2012																															
ID	GPS	UTM_83_E	UTM_83_N	Ag	As	Au	Ba	Hg	Tl	Sb	Pb	Zn	Cu	Co	Mo	Fe	Mn	Ca	K	Rb	Mg	Ni	U	Ti	Ce	La	Nd	Sc	Sm	Tb	Y
M33	33	351203	6986456	2	1	4	4	1	1	1	9	1	1	1	6	1	0	3	1	5	1	1	0	3	1	1	1	1	1	1	1
M34	34	351198	6986514	2	1	2	7	1	1	1	57	1	2	4	1	2	0	1	1	7	1	2	5	50	18	21	13	16	12	12	11
M35	35	351202	6986549	6	1	4	9	1	1	1	30	4	5	3	1	1	1	5	4	3	4	5	5	2	42	22	22	14	21	19	16
M36	36	351202	6986604	9	1	7	4	1	1	1	1	2	13	5	1	2	1	6	2	2	2	8	3	1	2	2	3	2	3	3	3
M37	37	351205	6986649	14	1	11	5	2	1	1	1	1	10	0	1	1	0	6	1	1	1	4	3	1	1	1	1	1	2	2	2
M40	40	350898	6986649	1	1	5	3	1	1	1	4	1	4	2	1	1	0	6	1	3	1	7	6	4	16	8	12	3	17	19	17
M41	41	350906	6986597	1	1	5	3	1	1	1	1	3	4	1	1	1	0	6	3	1	3	6	6	1	24	10	11	1	11	9	7
M42	42	350897	6986549	2	2	4	2	1	1	2	3	5	19	7	2	33	0	2	5	8	5	8	5	32	1	1	1	6	2	2	2
M43	43	350902	6986507	2	1	5	1	1	1	4	11	1	24	13	3	19	0	3	1	7	1	13	16	20	5	4	5	7	6	6	7
M44	44	350893	6986439	3	1	4	1	1	1	1	6	5	12	1	2	8	0	4	5	5	5	8	13	7	9	7	7	4	7	5	5
M46	46	350803	6986301	5	1	11	3	1	1	1	1	2	26	0	3	1	0	6	2	2	2	6	4	0	6	5	7	2	6	5	5
M47	47	350796	6986246	4	1	4	2	1	1	1	17	3	30	5	3	12	0	3	3	9	3	37	11	13	7	6	7	7	8	7	9
M48	48	350801	6986186	2	1	1	2	1	1	1	1	6	2	0	1	2	0	5	6	9	6	2	3	2	9	7	6	1	5	4	3
M49	49	350822	6986148	1	1	1	1	1	1	1	3	4	1	3	1	1	0	3	4	15	4	1	1	4	1	2	1	2	1	1	1

Ah Samples tied to Sample number and UTM83 Zone 8 Co-ordinates SMOKO 2012																																			
ID	GP	UTM_83_E	UTM_83_N	ID	Ag	As	Au	Ba	Hg	Sb	Bi	Te	Se	B	Pb	Zn	Cu	Co	Mo	Sn	Fe	Mn	S	Ca	Sr	K	Mg	Ni	Cr	U	Ti	Ce	La	Sc	Y
P1	3	351600	6987046	P1	1	4	4	1	1	2	4	3	1	1	2	2	1	2	1	3	2	3	1	1	1	2	2	1	2	1	2	3	2	2	2
P2	4	351597	6986998	P2	1	4	2	2	1	1	3	1	1	1	2	3	2	2	1	2	2	3	1	1	2	3	2	2	2	2	4	3	2	4	2
P26	28	350405	6986401	P26	4	3	5	1	1	1	3	3	1	1	2	2	12	3	3	3	4	1	0	0	0	3	2	3	4	2	5	3	2	4	2
P27	29	350394	6986451	P27	5	8	2	2	1	1	5	1	1	1	3	1	11	3	2	3	2	1	1	0	1	3	1	3	3	3	1	5	3	1	1
P28	30	350391	6986501	P28	5	5	2	2	2	1	3	3	1	1	2	1	6	1	1	3	2	0	1	0	1	2	1	2	2	2	1	4	2	1	1
P41	37	350006	6986539	P41	4	2	2	1	2	1	2	1	1	1	2	1	5	2	2	2	3	1	1	0	1	3	1	3	3	1	1	4	2	1	1
P42	38	350017	6986444	P42	5	2	2	2	2	1	2	3	1	1	2	1	7	3	2	1	3	0	1	0	1	3	1	5	4	2	3	4	2	2	1
P43	39	350016	6986447	P43	6	2	3	2	1	1	2	3	1	1	2	1	9	2	2	1	3	1	1	1	1	5	3	4	7	2	3	4	2	3	3
P44	40	350009	6986399	P44	4	2	10	1	2	1	1	2	2	1	1	1	13	2	1	1	3	0	1	0	1	15	5	7	19	3	#	4	3	7	5
P45	41	349998	6986343	P45	3	2	5	1	1	0	2	1	1	1	2	1	13	1	1	1	2	0	0	0	0	4	3	3	6	1	6	3	2	3	3
P47	43	350004	6986246	P47	11	2	7	1	2	0	2	1	2	1	1	1	24	3	4	2	2	0	1	0	1	6	2	3	3	1	4	2	1	3	2
P52	55	349593	6986153	P52	6	2	4	1	2	1	2	5	3	1	2	1	24	3	4	3	3	0	1	0	1	6	2	6	8	2	2	3	2	2	2
M1	1	352000	6987109	M1	11	2	10	10	2	1	4	23	3	1	4	1	3	2	2	3	3	2	1	2	3	3	1	3	3	3	2	12	9	9	1
M2	2	351999	6987153	M2	2	3	2	1	1	2	1	2	1	4	1	3	1	1	1	2	1	2	2	2	2	3	2	1	1	1	2	1	1	2	2
M4	4	351999	6987048	M4	1	2	1	1	1	1	2	2	2	1	1	1	1	1	1	1	2	0	1	2	2	1	1	1	1	1	2	2	1	2	1
M27	27	351195	6986155	M27	3	3	2	2	2	2	1	3	4	4	2	2	3	7	2	24	2	13	5	3	3	3	2	3	1	3	1	5	3	2	2
M28	28	351201	6986197	M28	3	2	1	1	2	1	1	1	1	2	2	2	1	4	2	5	2	9	3	2	1	2	2	1	2	1	2	2	1	2	2
M29	29	351201	6986251	M29	2	2	1	2	1	1	2	1	2	3	2	2	1	3	1	4	2	4	1	2	2	4	2	2	2	1	1	3	2	1	2
M32		351200	6986408	M32	2	3	3	3	2	2	2	12	2	2	2	1	2	2	2	1	2	9	2	2	2	3	2	2	2	2	2	4	3	3	2
M38	38	351199	6986702	M38	2	2	1	1	1	1	1	1	4	3	1	2	1	1	1	3	2	3	1	2	2	5	2	1	2	4	3	2	2	2	2
M39	39	351198	6986751	M39	2	2	2	2	1	2	2	1	2	2	2	3	1	3	2	3	2	16	1	2	2	2	2	2	2	2	5	3	2	4	2
M45	45	350906	6986342	M45	1	1	3	1	1	1	1	4	1	6	1	3	2	1	7	1	2	2	8	3	1	6	3	1	2	6	5	1	1	3	3

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Submitted By: Gordon Richards
Receiving Lab: Canada-Dawson City
Received: June 27, 2012
Report Date: August 11, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS DAW12000056.1

CLIENT JOB INFORMATION

Project: SMOKO
Shipment ID:
P.O. Number
Number of Samples: 23

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	23	Dry at 60C			DAW
SS80	23	Dry at 60C sieve 100g to -80 mesh			DAW
1F05	23	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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.

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	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	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	2	0.01	0.001
P1	Soil	1.26	18.89	5.16	42.3	110	18.0	9.1	625	1.60	6.5	0.9	4.3	0.2	66.1	0.50	0.57	0.18	29	1.06	0.115
P2	Soil	0.94	30.58	5.47	55.9	128	27.1	8.5	648	1.66	6.2	1.4	2.8	0.5	78.3	1.45	0.49	0.15	28	1.21	0.088
P26	Soil	2.68	220.9	6.21	38.9	347	40.4	12.0	233	2.38	5.3	1.2	5.4	0.4	22.6	0.35	0.32	0.12	43	0.25	0.131
P27	Soil	1.77	209.0	8.31	31.8	459	40.5	12.0	151	1.61	13.3	1.7	1.9	<0.1	33.4	0.97	0.32	0.20	21	0.34	0.084
P28	Soil	1.21	112.0	7.13	24.7	431	25.3	6.3	106	1.25	8.4	1.3	2.3	<0.1	39.8	0.50	0.28	0.15	15	0.41	0.103
P41	Soil	1.41	84.45	5.93	28.7	429	44.0	9.7	262	1.74	3.8	1.0	2.0	<0.1	35.8	0.53	0.25	0.09	21	0.33	0.205
P42	Soil	1.81	131.6	6.63	29.5	462	59.3	10.9	92	2.23	4.0	1.2	2.4	0.1	34.0	0.59	0.24	0.09	20	0.31	0.277
P43	Soil	1.47	173.3	5.81	31.5	551	56.0	8.9	143	1.81	4.0	1.5	3.5	0.1	38.6	0.78	0.26	0.09	24	0.48	0.213
P44	Soil	0.86	244.8	3.53	22.6	373	96.0	9.6	102	2.02	2.6	2.1	11.5	0.7	27.6	0.08	0.18	0.06	27	0.36	0.107
P45	Soil	1.17	251.0	5.24	26.7	298	37.3	6.4	90	1.58	3.3	0.8	6.1	0.2	20.1	0.12	0.16	0.10	28	0.24	0.068
P47	Soil	3.57	446.7	3.28	14.8	1063	34.8	11.6	53	1.06	2.8	0.7	8.7	<0.1	44.4	0.37	0.16	0.07	14	0.38	0.080
P52	Soil	3.91	446.0	4.79	19.5	617	81.8	14.4	80	1.71	3.1	1.5	5.1	<0.1	30.5	0.17	0.20	0.08	19	0.30	0.105
P53	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
M1	Soil	1.93	58.51	10.86	31.1	1039	42.9	8.1	489	2.12	3.0	2.3	12.5	2.0	143.8	0.30	0.40	0.18	23	2.02	0.111
M2	Soil	1.23	22.57	2.11	53.6	177	14.1	4.9	491	0.66	4.7	0.4	2.0	0.2	96.4	0.67	0.55	0.04	7	2.22	0.114
M4	Soil	1.10	16.26	3.97	13.6	123	13.5	3.5	57	1.24	2.7	0.8	1.2	<0.1	122.4	0.22	0.33	0.07	11	1.68	0.085
M27	Soil	1.36	50.60	7.05	49.3	318	42.1	30.6	2826	1.69	4.2	1.7	2.6	<0.1	144.4	0.61	0.58	0.04	12	2.83	0.135
M28	Soil	1.55	25.05	4.47	42.0	270	18.9	16.5	1999	1.02	2.7	0.8	1.5	0.1	76.2	1.23	0.28	0.04	16	1.62	0.111
M29	Soil	1.04	27.42	4.53	40.9	148	22.4	11.4	846	1.20	3.1	0.8	1.2	<0.1	104.4	1.60	0.50	0.08	20	1.90	0.092
M32	Soil	1.37	37.51	4.97	30.8	192	30.7	10.3	2012	1.48	4.2	1.4	3.5	0.2	122.0	0.41	0.56	0.08	18	1.61	0.116
M38	Soil	0.98	21.77	4.34	51.8	162	18.7	5.4	659	1.04	3.4	2.7	1.7	0.1	117.4	1.97	0.44	0.06	19	1.95	0.108
M39	Soil	1.61	26.46	5.44	54.1	186	26.5	13.7	3538	1.66	3.9	1.1	2.8	0.4	104.0	1.14	0.55	0.09	27	1.97	0.115
M45	Soil	5.97	42.96	3.31	53.8	138	14.8	4.9	426	1.06	2.4	4.2	3.6	0.5	74.8	0.32	0.24	0.05	21	2.54	0.089

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Project: SMOKO
Report Date: August 11, 2012

CERTIFICATE OF ANALYSIS DAW12000056.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	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	1	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
P1	Soil	7.8	21.3	0.38	346.5	0.015	2	0.92	0.017	0.05	0.1	1.4	0.05	0.08	58	0.5	0.03	3.1	0.67	<0.1	<0.02
P2	Soil	10.3	21.1	0.38	425.1	0.027	2	0.98	0.016	0.07	0.3	2.6	0.05	0.05	37	0.5	<0.02	3.1	0.69	<0.1	0.03
P26	Soil	9.1	37.4	0.37	268.2	0.032	1	1.17	0.009	0.06	0.1	2.2	0.06	0.04	44	0.5	0.03	3.8	0.76	<0.1	0.02
P27	Soil	14.6	27.0	0.22	533.7	0.004	2	0.95	0.014	0.06	0.1	0.4	0.04	0.07	64	0.4	<0.02	2.8	1.01	<0.1	<0.02
P28	Soil	10.0	20.3	0.18	467.9	0.004	1	0.74	0.015	0.05	<0.1	0.5	0.05	0.07	123	0.4	0.03	3.0	0.60	<0.1	<0.02
P41	Soil	10.8	28.2	0.25	302.8	0.007	1	0.94	0.009	0.06	<0.1	0.6	0.05	0.07	116	0.5	<0.02	3.0	0.65	<0.1	<0.02
P42	Soil	10.8	38.2	0.21	449.7	0.017	2	0.99	0.013	0.07	<0.1	1.4	0.07	0.09	118	0.5	0.03	2.5	0.77	<0.1	<0.02
P43	Soil	10.9	60.9	0.46	431.9	0.021	2	1.05	0.011	0.11	0.1	1.7	0.11	0.08	95	0.5	0.03	2.8	0.83	<0.1	<0.02
P44	Soil	11.8	171.4	0.87	364.5	0.062	2	1.47	0.007	0.32	<0.1	4.4	0.19	0.07	143	0.7	0.02	3.3	1.47	<0.1	0.03
P45	Soil	8.7	54.2	0.43	213.1	0.037	1	1.09	0.007	0.08	<0.1	1.9	0.11	0.03	58	0.3	<0.02	4.0	0.80	<0.1	<0.02
P47	Soil	4.7	29.9	0.26	351.2	0.025	2	0.65	0.012	0.13	<0.1	1.8	0.07	0.08	114	0.7	<0.02	1.8	0.54	<0.1	<0.02
P52	Soil	8.2	67.8	0.41	390.2	0.015	1	0.98	0.011	0.13	<0.1	1.3	0.14	0.09	113	1.2	0.05	2.5	0.83	<0.1	<0.02
P53	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
M1	Soil	38.3	23.0	0.18	2610	0.013	2	1.51	0.017	0.07	<0.1	5.6	0.09	0.11	118	1.2	0.23	3.7	0.42	<0.1	0.09
M2	Soil	4.3	9.8	0.29	253.8	0.011	8	0.32	0.030	0.07	<0.1	1.0	0.03	0.15	84	0.5	0.02	0.8	0.37	<0.1	0.02
M4	Soil	5.7	11.7	0.19	387.2	0.012	2	0.53	0.017	0.03	<0.1	1.2	0.04	0.12	58	0.8	0.02	1.7	0.28	<0.1	<0.02
M27	Soil	11.9	11.8	0.32	471.1	0.007	8	0.51	0.033	0.07	<0.1	1.1	0.04	0.40	103	1.5	0.03	1.0	0.20	<0.1	<0.02
M28	Soil	6.1	13.7	0.34	182.3	0.015	4	0.46	0.024	0.05	0.1	1.3	0.04	0.23	135	0.4	<0.02	1.3	0.53	<0.1	<0.02
M29	Soil	7.6	13.5	0.30	439.2	0.007	5	0.61	0.024	0.08	0.1	0.6	0.04	0.09	80	0.9	<0.02	2.1	0.47	<0.1	<0.02
M32	Soil	12.4	17.1	0.30	676.6	0.015	3	0.71	0.021	0.06	<0.1	1.6	0.07	0.14	97	0.7	0.12	2.0	0.50	<0.1	<0.02
M38	Soil	7.2	13.8	0.34	365.9	0.016	5	0.57	0.030	0.10	0.1	1.2	0.04	0.10	60	1.4	<0.02	1.9	0.49	<0.1	<0.02
M39	Soil	8.8	16.3	0.36	459.8	0.032	3	0.92	0.022	0.04	0.2	2.6	0.06	0.08	53	0.6	<0.02	3.0	0.59	<0.1	0.03
M45	Soil	3.8	18.3	0.52	192.7	0.031	11	0.63	0.034	0.12	<0.1	1.8	0.05	0.68	74	0.5	0.04	1.9	0.49	<0.1	0.04

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Method		1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
Analyte		Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
MDL		0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
P1	Soil	0.62	7.5	0.8	<0.05	0.5	5.56	14.5	<0.02	1	0.3	5.5	<10	<2
P2	Soil	0.85	9.8	0.6	<0.05	0.9	7.73	19.5	<0.02	<1	0.4	5.4	10	<2
P26	Soil	0.97	8.4	0.8	<0.05	0.7	4.73	18.2	<0.02	2	0.3	4.4	<10	<2
P27	Soil	0.33	8.4	0.8	<0.05	0.2	8.78	31.0	<0.02	3	0.7	3.8	<10	<2
P28	Soil	0.40	4.6	0.9	<0.05	0.2	7.39	21.7	<0.02	2	0.5	2.5	<10	<2
P41	Soil	0.46	5.6	0.6	<0.05	0.1	6.30	20.8	<0.02	1	0.4	3.3	<10	<2
P42	Soil	0.60	7.9	0.4	<0.05	0.4	6.11	21.5	<0.02	1	0.4	1.8	<10	<2
P43	Soil	0.69	14.8	0.4	<0.05	0.3	6.18	21.7	<0.02	<1	0.3	3.7	<10	2
P44	Soil	0.95	17.8	0.3	<0.05	1.3	7.41	23.4	<0.02	1	0.3	5.8	16	4
P45	Soil	0.80	15.9	0.4	<0.05	0.4	3.64	16.4	<0.02	1	0.2	5.1	<10	2
P47	Soil	0.40	8.7	0.6	<0.05	0.5	3.87	8.9	<0.02	<1	0.2	1.6	<10	<2
P52	Soil	0.61	10.2	0.7	<0.05	0.3	6.23	16.1	<0.02	<1	0.3	2.5	18	5
P53	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
M1	Soil	0.69	5.1	0.7	<0.05	3.9	40.14	70.7	0.04	<1	1.1	4.7	<10	<2
M2	Soil	0.28	7.4	0.6	<0.05	1.0	5.41	6.9	<0.02	6	0.2	1.8	<10	<2
M4	Soil	0.53	2.1	0.4	<0.05	0.6	4.79	10.9	<0.02	1	0.3	1.7	<10	<2
M27	Soil	0.28	2.7	6.6	<0.05	0.1	13.78	27.5	0.03	45	0.4	2.1	<10	<2
M28	Soil	0.47	7.1	1.3	<0.05	0.6	5.55	12.6	<0.02	5	0.3	2.5	<10	<2
M29	Soil	0.49	8.3	1.1	<0.05	0.2	5.71	16.4	<0.02	<1	0.4	2.8	<10	<2
M32	Soil	0.56	11.0	0.4	<0.05	0.7	15.21	21.0	0.02	4	0.5	3.4	<10	<2
M38	Soil	0.56	10.0	0.7	<0.05	0.5	5.78	12.6	<0.02	1	0.3	2.5	11	<2
M39	Soil	0.67	4.5	0.7	<0.05	0.7	6.99	18.2	<0.02	7	0.4	4.0	<10	<2
M45	Soil	0.60	6.6	0.2	<0.05	1.7	3.03	7.3	<0.02	7	0.2	5.8	<10	2

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QUALITY CONTROL REPORT DAW12000056.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	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	2	0.01	0.001
Pulp Duplicates																					
P45	Soil	1.17	251.0	5.24	26.7	298	37.3	6.4	90	1.58	3.3	0.8	6.1	0.2	20.1	0.12	0.16	0.10	28	0.24	0.068
REP P45	QC	1.12	250.8	5.09	28.0	291	38.1	6.4	89	1.56	3.2	0.7	6.8	0.2	20.1	0.13	0.16	0.09	28	0.23	0.065
M39	Soil	1.61	26.46	5.44	54.1	186	26.5	13.7	3538	1.66	3.9	1.1	2.8	0.4	104.0	1.14	0.55	0.09	27	1.97	0.115
REP M39	QC	1.57	25.94	5.38	54.6	188	26.3	13.6	3504	1.66	3.8	1.1	1.6	0.4	104.5	1.22	0.58	0.08	27	1.98	0.110
Reference Materials																					
STD DS9	Standard	13.13	102.6	126.7	305.6	1857	41.1	7.3	603	2.28	23.8	2.4	120.5	5.9	73.5	2.20	5.37	6.06	35	0.72	0.082
STD DS9	Standard	13.42	109.3	132.6	312.5	1856	42.6	8.9	562	2.29	25.6	3.3	118.6	7.6	80.2	2.42	6.48	7.46	39	0.72	0.085
STD DS9 Expected		12.84	108	126	317	1830	40.3	7.6	575	2.33	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank	<0.01	0.07	<0.01	<0.1	4	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
BLK	Blank	<0.01	0.04	0.06	<0.1	8	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: SMOKO
Report Date: August 11, 2012

QUALITY CONTROL REPORT DAW12000056.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	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	1	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																					
P45	Soil	8.7	54.2	0.43	213.1	0.037	1	1.09	0.007	0.08	<0.1	1.9	0.11	0.03	58	0.3	<0.02	4.0	0.80	<0.1	<0.02
REP P45	QC	8.6	54.4	0.43	217.5	0.037	<1	1.10	0.007	0.08	<0.1	1.9	0.12	0.03	64	0.4	0.04	3.9	0.82	<0.1	<0.02
M39	Soil	8.8	16.3	0.36	459.8	0.032	3	0.92	0.022	0.04	0.2	2.6	0.06	0.08	53	0.6	<0.02	3.0	0.59	<0.1	0.03
REP M39	QC	8.4	16.4	0.35	427.2	0.032	3	0.91	0.022	0.04	0.2	2.6	0.06	0.08	45	0.5	0.03	3.0	0.56	<0.1	<0.02
Reference Materials																					
STD DS9	Standard	12.1	124.1	0.62	311.0	0.105	2	0.97	0.087	0.40	3.0	2.7	5.71	0.16	223	5.5	5.50	4.8	2.50	<0.1	0.09
STD DS9	Standard	15.3	116.6	0.62	317.1	0.119	2	0.99	0.086	0.40	3.0	2.5	5.50	0.17	198	5.6	5.36	4.6	2.43	0.1	0.09
STD DS9 Expected		13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	2.5	5.3	0.1615	200	5.2	5.02	4.59	2.37	0.1	0.08
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<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	<1	<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

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.

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1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: SMOKO
Report Date: August 11, 2012

QUALITY CONTROL REPORT

DAW12000056.1

	Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
Pulp Duplicates														
P45	Soil	0.80	15.9	0.4	<0.05	0.4	3.64	16.4	<0.02	1	0.2	5.1	<10	2
REP P45	QC	0.78	16.2	0.4	<0.05	0.4	3.74	16.1	<0.02	<1	0.3	5.2	<10	<2
M39	Soil	0.67	4.5	0.7	<0.05	0.7	6.99	18.2	<0.02	7	0.4	4.0	<10	<2
REP M39	QC	0.63	4.8	0.6	<0.05	0.8	6.84	17.8	<0.02	4	0.4	3.9	<10	<2
Reference Materials														
STD DS9	Standard	1.49	33.0	5.9	<0.05	1.9	5.84	22.8	2.04	56	5.7	25.0	137	363
STD DS9	Standard	1.42	32.4	7.1	<0.05	2.1	6.54	28.8	2.49	59	6.1	22.9	113	341
STD DS9 Expected		1.33	33.8	6.4	0.004	2	5.97	25.4	2.2	61	5.4	25.2	120	350
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2

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Certificate of Analysis

Work Order: TO122410

To: **Gordon Richards**
Gordon Richards
6410 Holly Park Drive
DELTA
BC V4K 4W6

Date: Aug 29, 2012

P.O. No.	:	Project:SMOKO
Project No.	:	-
No. Of Samples	:	81
Date Submitted	:	Aug 04, 2012
Report Comprises	:	Pages 1 to 19 (Inclusive of Cover Sheet)

Distribution of unused material:
Discard samples:

Certified By : Bruce Robertson
Operations Manager

SGS Minerals Services (Toronto) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at http://www.scc.ca/en/programs/lab/mineral.shtml

Report Footer:

L.N.R. = Listed not received
n.a. = Not applicable
I.S. = Insufficient Sample
-- = No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Methods marked with the @ symbol (e.g. @AAS21E) denote accredited tests

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Final : TO122410 Order: Project:SMOKO

Element	Ag@	Al@	As@	Au@	Ba@	Bi@	Ca@	Cd@	Ce@	Co@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
P3	21	22	<10	0.4	9530	<1	540	6	159	144
P4	15	37	<10	0.4	8750	<1	470	3	192	189
P5	27	9	<10	0.5	8060	<1	770	2	16	33
P6	9	29	10	0.3	7630	<1	470	6	260	202
P7	43	12	<10	0.7	15000	<1	710	10	25	84
P8	9	33	<10	0.5	8630	<1	720	7	350	248
P9	17	18	<10	0.3	11800	<1	700	12	203	218
P10	5	46	<10	0.2	4990	<1	710	4	420	164
P11	5	90	<10	0.2	9280	<1	360	2	448	148
P12	2	222	20	<0.1	4730	<1	50	2	140	90
P13	4	170	<10	0.1	5830	<1	240	2	329	123
P14	3	124	10	<0.1	13300	<1	220	1	592	124
P15	5	180	<10	<0.1	13200	<1	150	2	267	118
P16	5	108	<10	<0.1	7720	<1	150	5	66	66
P17	29	113	<10	0.3	21100	<1	290	14	643	82
P18	49	45	<10	1.2	24400	<1	640	8	550	36
P19	15	62	<10	1.0	23000	<1	670	13	804	40
P21	17	69	<10	0.9	13800	<1	690	2	1510	186
P22	27	13	<10	0.7	12900	<1	850	5	109	67
P25	12	157	<10	0.5	5150	<1	50	1	66	161
P29	4	205	20	0.3	4040	<1	60	4	86	1590
P30	6	83	20	0.8	13500	<1	100	5	154	821
P31	6	119	<10	1.0	13600	<1	170	3	43	327
P38	6	109	20	0.4	5220	<1	40	<1	45	157
P39	9	167	<10	0.3	3140	<1	110	3	190	134
P40	8	121	10	0.5	9520	<1	120	3	260	224
P46	14	154	20	0.8	1730	<1	120	3	86	315
P48	4	226	<10	0.2	4500	<1	170	4	79	185
P49	4	194	20	0.1	3210	<1	120	1	106	106
P50	16	193	<10	0.8	2470	<1	80	3	60	131
P51	16	106	<10	0.6	3120	<1	270	5	152	1150
P54	10	133	<10	0.5	4600	<1	210	10	795	135
P55	4	135	<10	0.3	6700	<1	300	<1	515	113
P56	2	176	20	0.2	3350	<1	130	1	184	49
P57	12	84	<10	0.4	7890	<1	140	<1	1210	41
P58	3	199	<10	0.2	7180	<1	250	<1	5200	50
P59	16	95	<10	0.3	14000	<1	90	<1	851	33
P60	4	103	<10	0.5	17400	<1	370	1	2600	46
P61	2	282	<10	<0.1	2550	<1	80	1	62	54
M2	2	36	30	0.3	3650	<1	370	2	166	335
M3	2	28	<10	<0.1	5610	<1	490	<1	84	22
M5	27	9	<10	0.3	6340	<1	670	3	66	106
M6	28	5	<10	0.3	3500	<1	610	4	<5	16

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Final : TO122410 Order: Project:SMOKO

Element	Ag@	Al@	As@	Au@	Ba@	Bi@	Ca@	Cd@	Ce@	Co@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
M7	24	11	<10	0.4	10500	<1	580	3	122	170
M8	27	14	<10	0.4	8060	<1	620	8	40	61
M9	11	33	10	0.4	7580	<1	420	12	153	181
M10	26	16	<10	0.5	9420	<1	620	5	72	198
M11	31	11	10	1.0	10600	<1	640	6	233	334
M12	50	10	<10	0.6	18500	<1	680	6	129	188
M13	2	128	<10	<0.1	7340	<1	290	3	170	221
M14	8	87	<10	0.7	15100	<1	290	<1	3120	174
M15	<1	125	<10	<0.1	9480	<1	370	4	1020	188
M16	7	29	<10	0.4	10100	<1	490	2	311	54
M17	59	4	<10	0.7	18900	<1	930	35	19	213
M18	8	75	<10	0.5	11300	<1	530	2	2890	986
M19	8	24	<10	0.5	12400	<1	520	4	428	546
M20	4	124	<10	<0.1	7740	<1	290	<1	283	206
M21	4	114	<10	<0.1	6470	<1	350	<1	122	88
M22	8	53	<10	0.2	2510	<1	470	<1	204	14
M23	5	100	<10	<0.1	4340	<1	400	<1	137	73
M24	6	94	<10	<0.1	4770	<1	500	<1	160	164
M25	7	64	<10	0.2	9870	<1	250	1	97	163
M26	25	5	<10	1.2	35900	<1	760	4	60	13
M30	15	22	<10	2.1	12900	<1	720	2	314	10
M31	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.
M32	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.
M33	7	50	<10	0.3	15600	<1	350	<1	43	25
M34	7	146	<10	0.2	24400	<1	150	<1	897	118
M35	19	109	<10	0.3	33800	<1	560	12	2150	77
M36	28	19	<10	0.6	14600	<1	670	8	108	129
M37	41	8	<10	0.9	16900	<1	700	3	37	14
M40	3	45	<10	0.4	12000	<1	640	2	823	58
M41	4	25	<10	0.4	11500	<1	680	3	1240	15
M42	7	95	10	0.3	6840	<1	180	6	75	207
M43	6	73	<10	0.4	5480	<1	310	6	250	385
M44	10	54	<10	0.3	4260	<1	440	12	437	38
M45	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.
M46	14	15	<10	0.9	12100	<1	650	5	324	10
M47	11	102	<10	0.3	6970	<1	350	12	341	142
M48	7	49	<10	<0.1	6040	<1	530	9	471	14
M49	2	123	<10	<0.1	4390	<1	370	3	62	80
*Rep P14	3	116	10	<0.1	12000	<1	200	2	583	116
*Rep P22	30	13	<10	0.7	13600	<1	870	6	109	44
*Rep P55	5	149	<10	0.3	5360	<1	230	<1	498	138
*Rep M3	2	28	<10	0.3	5380	<1	470	<1	76	28
*Rep M31	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.

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Element	Ag@	Al@	As@	Au@	Ba@	Bi@	Ca@	Cd@	Ce@	Co@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	1	10	0.1	10	1	10	1	5	5
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
*Rep M37	41	7	<10	1.0	17100	<1	710	3	34	12
*Rep M47	8	95	<10	0.3	6790	<1	350	11	322	150
*Std MMISRM16	20	37	10	27.2	60	<1	230	4	15	58
*Std AMIS0169	8	56	10	0.4	760	<1	40	2	726	106
*Std MMISRM18	26	23	<10	9.0	150	<1	190	92	23	79
*Blk BLANK	<1	1	<10	<0.1	10	<1	<10	<1	<5	<5
*Blk BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5
*Blk BLANK	<1	<1	<10	<0.1	<10	<1	<10	<1	<5	<5

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Element	Cr@	Cs@	Cu@	Dy@	Er@	Eu@	Fe@	Ga@	Gd@	Hg@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
P3	<100	<0.5	2900	25	14.1	7.9	42	1	32	<1
P4	<100	<0.5	3140	32	18.9	8.9	57	2	39	<1
P5	<100	<0.5	1610	7	3.5	2.3	13	<1	10	<1
P6	<100	<0.5	2580	28	15.4	8.4	127	1	35	<1
P7	<100	<0.5	2470	12	6.2	3.9	12	<1	14	<1
P8	<100	<0.5	3590	46	26.1	13.4	81	2	56	<1
P9	<100	<0.5	3760	30	16.3	9.3	46	1	39	<1
P10	<100	<0.5	580	76	41.7	22.0	24	2	97	<1
P11	<100	<0.5	330	44	20.5	11.9	17	2	51	<1
P12	100	3.2	380	18	7.8	5.4	70	10	19	<1
P13	<100	0.5	210	41	20.2	10.6	55	4	43	<1
P14	<100	2.5	160	31	11.3	9.4	26	4	34	<1
P15	<100	<0.5	120	20	8.4	7.0	35	4	23	<1
P16	<100	0.7	150	9	4.4	3.0	33	3	10	<1
P17	<100	<0.5	290	68	37.0	18.1	26	2	75	<1
P18	<100	<0.5	3040	137	74.6	35.7	22	2	170	<1
P19	<100	<0.5	1220	148	80.6	40.3	27	2	171	<1
P21	<100	<0.5	510	446	275	114	13	6	539	<1
P22	<100	<0.5	2180	39	19.1	11.3	16	<1	52	<1
P25	<100	1.8	5440	14	9.6	2.7	321	1	10	<1
P29	<100	1.0	1770	21	12.8	3.6	135	7	15	<1
P30	<100	1.6	9630	51	34.8	10.6	320	2	41	<1
P31	<100	0.6	3570	23	23.3	3.8	235	<1	13	<1
P38	<100	2.2	4820	14	15.4	2.3	324	2	9	<1
P39	<100	1.9	1230	56	31.4	10.9	91	4	48	<1
P40	<100	1.3	5740	76	48.3	13.3	229	2	59	<1
P46	300	2.9	7490	18	9.9	4.2	184	7	18	<1
P48	100	9.2	480	13	6.0	3.1	72	3	13	<1
P49	<100	8.9	580	26	13.2	5.5	58	6	24	<1
P50	100	19.8	2010	32	13.4	11.7	110	4	52	<1
P51	100	1.5	11500	29	15.2	7.7	82	2	33	<1
P54	100	0.9	7270	161	94.1	37.3	91	5	165	<1
P55	<100	3.5	1710	69	39.5	16.4	17	2	70	<1
P56	100	2.6	440	30	16.3	8.0	83	9	32	<1
P57	<100	1.0	1190	249	118	67.5	8	6	295	<1
P58	<100	<0.5	200	547	265	151	12	17	632	<1
P59	<100	2.1	780	173	77.2	42.4	13	6	177	<1
P60	<100	<0.5	360	301	129	74.9	8	8	354	<1
P61	<100	1.1	60	13	6.7	3.6	80	6	12	<1
M2	<100	<0.5	2550	24	13.8	6.2	256	1	27	<1
M3	<100	<0.5	170	6	2.9	2.1	12	<1	8	<1
M5	<100	<0.5	1800	11	5.9	3.9	31	<1	16	<1
M6	<100	<0.5	1100	2	1.1	<0.5	7	<1	2	<1

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Element	Cr@	Cs@	Cu@	Dy@	Er@	Eu@	Fe@	Ga@	Gd@	Hg@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
M7	<100	<0.5	2620	18	9.0	6.0	48	<1	24	<1
M8	<100	<0.5	1420	10	5.1	3.6	22	<1	14	<1
M9	<100	<0.5	3580	18	10.4	5.4	117	1	21	<1
M10	<100	<0.5	2550	17	9.3	5.3	35	<1	22	<1
M11	<100	<0.5	6330	28	15.7	9.1	90	1	35	<1
M12	<100	<0.5	3560	81	47.8	14.7	10	<1	83	2
M13	<100	<0.5	80	9	4.6	3.3	20	3	12	<1
M14	<100	<0.5	430	163	71.5	44.6	11	7	201	<1
M15	<100	0.8	80	52	26.6	13.5	10	3	60	<1
M16	<100	<0.5	780	69	34.9	19.4	14	1	92	<1
M17	<100	<0.5	3830	14	7.5	3.9	7	<1	17	1
M18	<100	<0.5	770	362	181	99.6	11	8	470	2
M19	<100	<0.5	1700	54	25.6	18.5	22	2	80	<1
M20	<100	<0.5	160	38	18.5	9.5	23	2	40	<1
M21	<100	<0.5	150	15	7.6	4.4	23	2	16	<1
M22	<100	<0.5	240	19	7.2	5.0	12	1	23	<1
M23	<100	<0.5	60	11	5.5	2.7	14	1	12	<1
M24	<100	<0.5	170	20	10.8	4.0	11	1	19	<1
M25	<100	<0.5	200	11	5.2	3.5	15	<1	14	<1
M26	<100	<0.5	1910	33	16.6	12.4	10	<1	46	<1
M30	<100	<0.5	1680	116	59.5	31.7	12	1	140	<1
M31	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.
M32	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.
M33	<100	<0.5	200	9	4.2	3.5	10	<1	11	<1
M34	<100	<0.5	370	137	69.7	33.7	17	5	133	<1
M35	<100	<0.5	940	204	100.0	54.8	13	5	240	<1
M36	<100	<0.5	2280	29	15.1	9.3	26	<1	39	<1
M37	<100	<0.5	1810	19	8.8	5.9	9	<1	26	1
M40	<100	<0.5	710	222	132	50.1	12	3	244	<1
M41	<100	<0.5	690	86	42.8	28.0	15	3	122	<1
M42	<100	1.1	3360	32	23.1	5.0	345	<1	22	<1
M43	<100	<0.5	4220	70	40.9	14.6	203	2	72	<1
M44	<100	0.5	2020	58	30.3	15.8	87	2	71	<1
M45	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.
M46	<100	<0.5	4520	59	27.4	17.7	15	2	80	<1
M47	<100	<0.5	5280	90	52.8	19.9	124	2	95	<1
M48	<100	<0.5	330	37	18.1	13.5	21	2	50	<1
M49	<100	0.8	140	15	9.1	3.5	13	<1	14	<1
*Rep P14	<100	2.6	160	29	10.4	9.0	31	5	32	<1
*Rep P22	<100	<0.5	2110	44	22.0	12.8	13	<1	60	<1
*Rep P55	<100	3.4	2260	81	43.1	18.3	29	3	78	<1
*Rep M3	<100	<0.5	140	6	2.6	2.0	10	<1	8	<1
*Rep M31	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.

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Element	Cr@	Cs@	Cu@	Dy@	Er@	Eu@	Fe@	Ga@	Gd@	Hg@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	100	0.5	10	1	0.5	0.5	1	1	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
*Rep M37	<100	<0.5	1740	17	8.5	5.6	8	<1	24	1
*Rep M47	<100	<0.5	6750	84	49.3	19.0	139	2	90	<1
*Std MMISRM16	<100	11.0	820	2	0.8	0.8	3	<1	3	17
*Std AMIS0169	<100	7.8	3770	25	11.0	10.5	42	11	39	<1
*Std MMISRM18	<100	6.4	840	3	1.3	1.1	4	<1	5	9
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	1	<1	<1	<1
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1
*Blk BLANK	<100	<0.5	<10	<1	<0.5	<0.5	<1	<1	<1	<1

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Element	In@	K@	La@	Li@	Mg@	Mn@	Mo@	Nb@	Nd@	Ni@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
P3	<0.5	8.0	65	<5	94	9810	9	1.7	119	454
P4	<0.5	7.0	88	<5	82	6450	<5	0.9	135	359
P5	<0.5	2.5	10	<5	99	580	<5	0.6	23	448
P6	<0.5	5.4	117	<5	63	10300	9	1.6	153	746
P7	<0.5	5.0	13	<5	59	3430	6	<0.5	30	914
P8	<0.5	3.9	160	<5	89	19300	8	1.1	242	1490
P9	<0.5	4.4	91	8	86	13900	7	0.6	149	1480
P10	<0.5	4.5	235	8	111	11400	<5	<0.5	325	461
P11	<0.5	16.0	147	<5	65	2180	<5	<0.5	196	184
P12	<0.5	12.8	73	<5	16	960	<5	5.8	71	143
P13	<0.5	3.0	189	<5	58	2080	<5	1.5	168	261
P14	<0.5	15.4	354	<5	33	1640	<5	1.9	177	59
P15	<0.5	13.2	156	<5	32	1310	<5	2.0	102	130
P16	<0.5	21.6	28	<5	39	2480	<5	1.7	38	118
P17	<0.5	26.6	218	<5	59	5500	<5	<0.5	235	301
P18	<0.5	11.9	196	<5	99	2050	<5	<0.5	395	1980
P19	<0.5	20.9	235	<5	111	1250	<5	<0.5	430	1140
P21	<0.5	21.1	748	12	162	1500	<5	<0.5	1280	971
P22	<0.5	3.7	60	9	155	2660	7	<0.5	129	1070
P25	<0.5	12.2	30	<5	22	110	<5	1.8	38	898
P29	<0.5	15.6	37	<5	17	26800	6	3.6	45	279
P30	<0.5	16.6	59	<5	37	26700	9	1.9	108	1010
P31	<0.5	12.4	22	<5	59	4290	<5	0.7	36	1070
P38	<0.5	8.6	21	<5	12	280	<5	1.8	30	795
P39	<0.5	4.6	78	<5	26	1050	<5	1.3	132	361
P40	<0.5	8.6	89	<5	36	2540	<5	1.4	148	1100
P46	<0.5	15.3	38	<5	29	370	17	6.5	55	696
P48	<0.5	11.4	44	<5	41	490	<5	1.2	46	439
P49	<0.5	12.8	53	<5	29	1460	20	3.2	72	105
P50	<0.5	25.9	20	<5	16	160	10	1.7	85	352
P51	<0.5	42.8	54	<5	74	430	15	1.6	108	4070
P54	<0.5	21.9	422	<5	69	890	8	1.7	547	3680
P55	<0.5	4.5	190	<5	80	880	<5	<0.5	207	846
P56	<0.5	7.9	93	<5	24	460	<5	4.7	118	128
P57	<0.5	8.7	525	<5	31	330	<5	<0.5	989	84
P58	<0.5	5.2	3270	<5	59	570	<5	<0.5	3150	163
P59	<0.5	15.1	395	<5	14	200	<5	<0.5	622	68
P60	<0.5	4.7	1580	<5	79	200	<5	<0.5	1480	185
P61	<0.5	9.5	45	<5	24	1600	<5	1.5	55	90
M2	<0.5	9.1	67	<5	59	13400	20	3.7	105	640
M3	<0.5	10.8	29	<5	119	800	<5	<0.5	29	167
M5	<0.5	2.8	32	<5	118	2510	5	<0.5	56	513
M6	<0.5	5.0	<1	<5	140	470	8	<0.5	<1	360

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Element	In@	K@	La@	Li@	Mg@	Mn@	Mo@	Nb@	Nd@	Ni@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
M7	<0.5	4.2	59	<5	96	5400	9	0.9	100	521
M8	<0.5	3.1	21	<5	99	3970	7	<0.5	43	462
M9	<0.5	11.4	71	<5	62	17300	16	1.2	96	593
M10	<0.5	4.0	41	<5	134	10200	<5	<0.5	75	639
M11	<0.5	6.6	106	<5	110	14100	8	1.2	156	928
M12	<0.5	5.0	50	21	208	8280	13	<0.5	128	1820
M13	<0.5	9.0	128	<5	63	1460	<5	1.3	63	112
M14	<0.5	3.7	2350	<5	73	410	<5	<0.5	1030	209
M15	<0.5	3.1	420	<5	74	4240	<5	<0.5	300	145
M16	<0.5	4.0	116	<5	112	690	<5	<0.5	247	369
M17	<0.5	4.2	8	15	117	7120	7	<0.5	22	1010
M18	<0.5	3.6	953	<5	121	11200	<5	<0.5	1590	602
M19	<0.5	6.0	210	<5	157	19500	<5	<0.5	341	461
M20	<0.5	17.5	123	<5	70	2090	<5	0.6	138	288
M21	<0.5	31.8	68	<5	90	910	<5	0.5	59	181
M22	<0.5	17.1	103	<5	154	120	<5	<0.5	82	169
M23	<0.5	11.4	73	<5	123	1010	<5	<0.5	43	191
M24	<0.5	20.8	55	<5	176	2560	<5	<0.5	51	266
M25	<0.5	49.4	41	<5	76	1500	<5	<0.5	44	174
M26	<0.5	8.6	47	15	75	130	<5	<0.5	97	977
M30	<0.5	6.2	123	17	198	460	<5	<0.5	299	1140
M31	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.
M32	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.
M33	<0.5	33.5	20	<5	111	280	16	<0.5	32	194
M34	<0.5	19.7	521	<5	37	440	<5	0.6	469	284
M35	<0.5	10.5	560	<5	94	7530	<5	<0.5	818	720
M36	<0.5	4.0	57	<5	103	5570	<5	<0.5	116	1040
M37	<0.5	2.8	20	<5	97	290	<5	<0.5	48	471
M40	<0.5	6.5	197	7	153	2450	<5	<0.5	446	1000
M41	<0.5	10.2	254	10	166	1010	<5	<0.5	425	792
M42	<0.5	6.4	29	<5	57	1710	5	1.2	52	1080
M43	<0.5	3.5	96	<5	61	6750	8	1.1	195	1760
M44	<0.5	4.9	182	5	90	550	6	0.6	266	1050
M45	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.
M46	<0.5	7.2	126	<5	149	290	8	<0.5	248	866
M47	<0.5	18.3	143	<5	79	720	8	0.8	268	4960
M48	<0.5	11.8	188	10	103	1930	<5	<0.5	235	277
M49	<0.5	49.7	47	<5	102	400	<5	<0.5	43	83
*Rep P14	<0.5	15.1	354	<5	29	1780	<5	2.4	174	55
*Rep P22	<0.5	3.2	55	11	158	1950	6	<0.5	133	1060
*Rep P55	<0.5	4.8	212	<5	63	1060	<5	0.9	239	817
*Rep M3	<0.5	11.2	27	<5	115	1050	<5	<0.5	27	154
*Rep M31	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.

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Element	In@	K@	La@	Li@	Mg@	Mn@	Mo@	Nb@	Nd@	Ni@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.5	0.1	1	5	1	10	5	0.5	1	5
Units	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
*Rep M37	<0.5	2.8	18	<5	98	300	<5	<0.5	45	443
*Rep M47	<0.5	18.7	139	<5	79	1280	12	1.0	254	4580
*Std MMISRM16	<0.5	37.7	4	<5	35	100	48	<0.5	13	230
*Std AMIS0169	<0.5	42.9	409	<5	31	3730	<5	3.4	348	462
*Std MMISRM18	<0.5	26.4	7	<5	92	580	33	<0.5	17	544
*Blk BLANK	<0.5	<0.1	<1	<5	<1	10	<5	<0.5	<1	<5
*Blk BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	<5
*Blk BLANK	<0.5	<0.1	<1	<5	<1	<10	<5	<0.5	<1	6

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Element	P@	Pb@	Pd@	Pr@	Pt@	Rb@	Sb@	Sc@	Sm@	Sn@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
P3	0.2	20	<1	24	<1	<5	2	25	29	<1
P4	0.2	40	<1	29	<1	28	<1	49	33	<1
P5	0.1	<10	<1	4	<1	7	<1	9	7	<1
P6	0.3	30	<1	34	<1	<5	3	43	33	<1
P7	0.2	<10	<1	5	<1	<5	<1	12	10	<1
P8	0.2	10	<1	52	<1	<5	3	38	55	<1
P9	0.2	10	<1	31	<1	<5	2	19	36	<1
P10	0.1	10	<1	67	<1	27	<1	55	83	<1
P11	0.2	210	<1	44	<1	36	<1	53	44	<1
P12	2.3	310	<1	18	<1	145	<1	54	17	<1
P13	0.3	290	<1	39	<1	60	<1	93	36	<1
P14	0.5	200	<1	49	<1	184	<1	58	32	<1
P15	0.6	660	<1	26	<1	93	<1	40	22	<1
P16	0.7	300	<1	8	<1	131	<1	28	9	<1
P17	0.2	380	<1	51	<1	61	<1	56	59	<1
P18	0.1	50	<1	75	<1	11	<1	72	124	<1
P19	0.1	110	<1	80	<1	17	<1	78	128	<1
P21	0.1	120	<1	257	<1	11	<1	108	400	<1
P22	<0.1	20	<1	24	<1	5	<1	15	38	<1
P25	1.6	<10	<1	9	<1	120	<1	55	9	<1
P29	1.2	70	<1	10	<1	149	1	52	12	<1
P30	1.0	40	<1	22	<1	81	3	193	30	<1
P31	0.5	10	<1	8	<1	42	<1	145	11	<1
P38	1.0	<10	<1	7	<1	100	1	78	7	<1
P39	0.4	180	<1	26	<1	101	<1	71	35	<1
P40	0.4	120	<1	31	<1	58	<1	161	43	<1
P46	2.6	130	<1	12	<1	158	<1	57	15	<1
P48	1.4	20	<1	11	<1	149	<1	33	11	<1
P49	3.1	40	<1	15	<1	169	<1	53	20	<1
P50	1.8	190	<1	14	<1	392	<1	64	38	<1
P51	1.3	40	<1	23	<1	130	<1	51	28	<1
P54	1.4	110	<1	120	<1	109	<1	150	137	<1
P55	0.2	140	<1	47	<1	84	<1	75	58	<1
P56	1.6	120	<1	26	<1	71	<1	50	29	<1
P57	<0.1	350	<1	201	<1	77	<1	260	267	<1
P58	<0.1	200	<1	766	<1	57	<1	414	632	<1
P59	0.1	430	<1	132	<1	122	<1	272	160	<1
P60	<0.1	310	<1	357	<1	29	<1	184	298	<1
P61	2.1	310	<1	13	<1	168	<1	32	12	<1
M2	0.7	60	<1	23	<1	6	6	61	25	<1
M3	0.2	<10	<1	6	<1	28	<1	14	7	<1
M5	0.1	<10	<1	12	<1	7	<1	12	14	<1
M6	<0.1	<10	<1	<1	<1	6	<1	6	<1	<1

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Element	P@	Pb@	Pd@	Pr@	Pt@	Rb@	Sb@	Sc@	Sm@	Sn@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
M7	0.2	10	<1	21	<1	11	2	15	23	<1
M8	0.1	<10	<1	9	<1	15	<1	9	12	<1
M9	0.3	20	<1	22	<1	62	2	50	21	<1
M10	0.1	<10	<1	15	<1	<5	<1	22	19	<1
M11	0.2	10	<1	34	<1	<5	3	51	35	<1
M12	<0.1	60	<1	21	<1	20	<1	29	45	<1
M13	0.2	50	<1	16	<1	127	<1	21	11	<1
M14	<0.1	300	<1	286	<1	51	<1	182	186	<1
M15	0.1	30	<1	77	<1	43	<1	66	52	<1
M16	<0.1	20	<1	45	<1	18	<1	40	71	<1
M17	0.2	20	<1	4	<1	16	<1	8	9	<1
M18	<0.1	80	<1	336	<1	38	<1	290	412	<1
M19	<0.1	<10	<1	71	<1	11	<1	65	75	<1
M20	0.2	130	<1	31	<1	44	<1	66	35	<1
M21	0.3	140	<1	14	<1	43	<1	45	14	<1
M22	0.2	70	<1	19	<1	31	<1	16	17	<1
M23	0.2	70	<1	10	<1	36	<1	26	9	<1
M24	0.1	40	<1	12	<1	24	<1	51	13	<1
M25	0.3	150	<1	9	<1	42	<1	26	12	<1
M26	<0.1	20	<1	17	<1	13	<1	13	32	<1
M30	<0.1	60	<1	51	<1	9	<1	32	100	<1
M31	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.
M32	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.
M33	0.2	60	<1	6	<1	33	<1	9	8	<1
M34	<0.1	400	<1	108	<1	48	<1	245	115	<1
M35	0.1	210	<1	172	<1	17	<1	217	201	<1
M36	<0.1	10	<1	22	<1	12	<1	28	31	<1
M37	<0.1	<10	<1	8	<1	9	<1	20	17	<1
M40	0.1	30	<1	79	<1	20	<1	47	161	<1
M41	<0.1	10	<1	85	<1	8	<1	20	105	<1
M42	1.3	20	<1	11	<1	50	1	92	16	<1
M43	0.5	80	<1	39	<1	44	2	105	55	<1
M44	0.3	40	<1	58	<1	31	<1	62	64	<1
M45	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.
M46	<0.1	10	<1	46	<1	11	<1	24	61	<1
M47	0.4	120	<1	54	<1	58	<1	103	74	<1
M48	0.4	<10	<1	52	<1	61	<1	22	49	<1
M49	0.1	20	<1	9	<1	97	<1	26	11	<1
*Rep P14	0.6	190	<1	49	<1	174	<1	57	31	<1
*Rep P22	<0.1	20	<1	23	<1	7	<1	14	43	<1
*Rep P55	0.3	200	<1	54	<1	90	<1	95	64	<1
*Rep M3	0.2	<10	<1	6	<1	27	<1	12	6	<1
*Rep M31	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.

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Element	P@	Pb@	Pd@	Pr@	Pt@	Rb@	Sb@	Sc@	Sm@	Sn@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	0.1	10	1	1	1	5	1	5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
*Rep M37	<0.1	<10	<1	7	<1	8	<1	18	16	<1
*Rep M47	0.4	120	<1	52	<1	53	<1	98	73	<1
*Std MMISRM16	0.2	100	25	2	<1	315	<1	10	4	<1
*Std AMIS0169	2.5	100	<1	94	<1	244	<1	56	56	<1
*Std MMISRM18	0.6	250	15	3	8	155	<1	6	5	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1
*Blk BLANK	<0.1	<10	<1	<1	<1	<5	<1	<5	<1	<1

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Final : TO122410 Order: Project:SMOKO

Element	Sr@	Ta@	Tb@	Te@	Th@	Ti@	Tl@	U@	W@	Y@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
P3	2580	<1	4	<10	30.3	12	<0.5	97	<1	178
P4	2650	<1	5	<10	24.2	9	<0.5	63	<1	223
P5	4600	<1	1	<10	6.7	<3	<0.5	100	<1	43
P6	1730	<1	5	<10	33.6	37	<0.5	47	<1	185
P7	2090	<1	2	<10	10.3	11	<0.5	20	<1	79
P8	2790	<1	8	<10	31.5	14	<0.5	120	<1	311
P9	2660	<1	5	<10	30.5	5	<0.5	50	<1	201
P10	3160	<1	13	<10	48.6	6	<0.5	52	<1	480
P11	2190	<1	8	<10	26.2	15	<0.5	18	<1	264
P12	300	<1	3	<10	66.3	1880	<0.5	12	<1	84
P13	1550	<1	7	<10	30.4	425	<0.5	11	<1	272
P14	960	<1	6	<10	26.9	619	0.5	12	<1	161
P15	1060	<1	4	<10	39.0	645	<0.5	9	<1	99
P16	770	<1	1	<10	22.4	471	<0.5	5	<1	46
P17	1720	<1	11	<10	53.2	27	<0.5	26	<1	432
P18	3010	<1	24	<10	30.6	4	<0.5	229	<1	907
P19	2810	<1	24	<10	34.6	4	<0.5	94	<1	908
P21	3910	<1	74	<10	67.9	11	<0.5	100	<1	3060
P22	3420	<1	7	<10	26.7	4	<0.5	44	<1	243
P25	530	<1	2	<10	30.8	232	<0.5	25	<1	80
P29	430	<1	3	<10	36.1	1220	<0.5	15	<1	125
P30	890	<1	7	<10	39.1	297	<0.5	84	<1	348
P31	1340	<1	3	<10	37.8	57	<0.5	61	<1	140
P38	540	<1	2	<10	31.3	215	0.6	49	<1	87
P39	800	<1	9	<10	42.6	336	<0.5	26	<1	359
P40	1110	<1	11	<10	64.7	242	<0.5	73	<1	472
P46	520	<1	3	<10	42.7	1110	0.6	13	<1	100
P48	1060	<1	2	<10	19.5	376	1.1	16	<1	78
P49	500	<1	4	<10	46.5	1140	0.9	14	<1	140
P50	460	<1	6	<10	34.5	344	6.1	18	<1	216
P51	890	<1	5	<10	13.2	124	<0.5	19	<1	171
P54	930	<1	26	<10	39.2	198	<0.5	48	<1	1000
P55	1800	<1	11	<10	101	347	0.9	29	<1	438
P56	550	<1	5	<10	50.5	1280	<0.5	11	<1	173
P57	730	<1	43	<10	31.8	49	<0.5	56	<1	1220
P58	2270	<1	94	<10	47.7	84	<0.5	38	<1	3260
P59	390	<1	29	<10	48.8	133	<0.5	73	<1	809
P60	3010	<1	53	<10	32.9	6	<0.5	57	<1	1960
P61	620	<1	2	<10	25.3	244	<0.5	5	<1	71
M2	1760	<1	4	<10	28.3	254	<0.5	60	<1	151
M3	4100	<1	1	<10	26.3	12	<0.5	10	<1	36
M5	3600	<1	2	<10	12.8	6	<0.5	226	<1	76
M6	3190	<1	<1	<10	<0.5	<3	<0.5	111	<1	10

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Element	Sr@	Ta@	Tb@	Te@	Th@	Ti@	Tl@	U@	W@	Y@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
M7	2360	<1	3	<10	24.2	11	<0.5	36	<1	112
M8	3090	<1	2	<10	12.2	6	<0.5	142	<1	63
M9	2250	<1	3	<10	22.6	25	<0.5	101	<1	121
M10	4060	<1	3	<10	22.5	7	<0.5	200	<1	116
M11	3730	<1	5	<10	37.4	13	<0.5	91	<1	190
M12	5170	<1	13	<10	19.2	5	<0.5	91	<1	466
M13	2160	<1	2	<10	22.2	366	<0.5	6	<1	62
M14	2210	<1	29	<10	49.4	20	<0.5	60	<1	873
M15	3220	<1	9	<10	29.7	<3	<0.5	12	<1	379
M16	2700	<1	12	<10	32.0	3	<0.5	42	<1	402
M17	3290	<1	2	<10	1.7	3	<0.5	9	<1	97
M18	3370	<1	64	<10	40.5	16	<0.5	96	<1	2010
M19	3150	<1	10	<10	35.6	6	<0.5	44	<1	345
M20	2090	<1	6	<10	33.8	162	<0.5	17	<1	210
M21	2550	<1	2	<10	30.6	125	<0.5	11	<1	90
M22	4030	<1	3	<10	16.9	8	<0.5	13	<1	112
M23	2970	<1	2	<10	22.8	10	<0.5	6	<1	74
M24	3020	<1	3	<10	25.4	6	<0.5	21	<1	111
M25	1460	<1	2	<10	35.1	28	<0.5	17	<1	58
M26	3350	<1	6	<10	17.0	<3	<0.5	177	<1	241
M30	4360	<1	20	<10	31.4	<3	<0.5	123	<1	698
M31	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.
M32	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.
M33	2400	<1	1	<10	9.5	12	<0.5	5	<1	59
M34	1150	<1	22	<10	61.1	179	<0.5	53	<1	764
M35	3290	<1	35	<10	41.6	8	<0.5	55	<1	1100
M36	2500	<1	5	<10	23.4	5	<0.5	31	<1	186
M37	3120	<1	3	<10	13.1	3	<0.5	26	<1	119
M40	4650	<1	36	<10	49.1	13	<0.5	62	<1	1210
M41	4160	<1	16	<10	55.1	3	<0.5	57	<1	502
M42	1310	<1	4	<10	30.6	114	<0.5	49	<1	110
M43	2000	<1	11	<10	28.3	71	<0.5	161	<1	468
M44	2010	<1	10	<10	26.0	26	<0.5	129	<1	367
M45	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.
M46	3310	<1	10	<10	25.9	<3	<0.5	41	<1	320
M47	1230	<1	14	<10	32.0	47	<0.5	109	<1	631
M48	2260	<1	7	<10	59.2	6	<0.5	32	<1	210
M49	2150	<1	2	<10	38.6	15	<0.5	9	<1	95
*Rep P14	860	<1	5	<10	26.6	841	<0.5	11	<1	146
*Rep P22	3490	<1	8	<10	24.6	13	<0.5	45	<1	270
*Rep P55	1340	<1	13	<10	82.7	255	0.9	37	<1	478
*Rep M3	3880	<1	<1	<10	25.2	7	<0.5	8	<1	32
*Rep M31	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.

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Element	Sr@	Ta@	Tb@	Te@	Th@	Ti@	Tl@	U@	W@	Y@
Method	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	10	1	1	10	0.5	3	0.5	1	1	5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
*Rep M37	3210	<1	3	<10	11.1	6	<0.5	25	<1	112
*Rep M47	1250	<1	13	<10	30.2	55	<0.5	106	<1	589
*Std MMISRM16	510	<1	<1	<10	18.4	7	<0.5	45	<1	9
*Std AMIS0169	80	<1	5	<10	67.2	387	1.4	25	1	121
*Std MMISRM18	1080	<1	<1	<10	19.3	5	<0.5	26	<1	20
*Blk BLANK	<10	<1	<1	<10	0.5	<3	<0.5	<1	<1	<5
*Blk BLANK	<10	<1	<1	<10	<0.5	<3	<0.5	<1	<1	<5
*Blk BLANK	<10	<1	<1	<10	0.6	<3	<0.5	<1	<1	<5

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Final : TO122410 Order: Project:SMOKO

Element	Yb@	Zn@	Zr@
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
P3	12	20	38
P4	15	40	29
P5	3	<20	9
P6	14	20	64
P7	5	20	14
P8	24	<20	51
P9	14	40	41
P10	30	40	38
P11	13	30	25
P12	5	40	127
P13	13	30	48
P14	7	<20	36
P15	6	30	29
P16	3	40	22
P17	29	30	29
P18	53	50	25
P19	56	50	26
P21	214	<20	49
P22	14	<20	26
P25	8	30	86
P29	10	50	64
P30	30	30	93
P31	23	20	53
P38	14	<20	55
P39	22	20	60
P40	37	40	77
P46	8	40	109
P48	4	<20	39
P49	10	<20	75
P50	10	<20	66
P51	12	80	34
P54	74	200	67
P55	28	20	56
P56	13	30	69
P57	83	<20	29
P58	174	<20	30
P59	54	<20	45
P60	73	<20	24
P61	5	40	36
M2	12	40	77
M3	2	<20	16
M5	5	<20	15
M6	1	<20	<5

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was (were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativity of the goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted. The findings report on the samples provided by the client and are not intended for commercial or contractual settlement purposes. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Final : TO122410 Order: Project:SMOKO

Element	Yb@	Zn@	Zr@
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
M7	8	<20	37
M8	4	<20	19
M9	9	<20	44
M10	8	<20	23
M11	15	<20	52
M12	35	50	23
M13	3	20	33
M14	45	<20	34
M15	18	<20	18
M16	23	<20	26
M17	5	30	10
M18	117	<20	57
M19	16	<20	34
M20	13	<20	32
M21	5	<20	29
M22	4	<20	12
M23	3	<20	15
M24	7	<20	21
M25	4	<20	17
M26	13	40	19
M30	42	50	14
M31	L.N.R.	L.N.R.	L.N.R.
M32	L.N.R.	L.N.R.	L.N.R.
M33	3	<20	7
M34	50	<20	51
M35	63	40	66
M36	12	20	29
M37	6	<20	17
M40	108	<20	39
M41	28	30	33
M42	21	50	49
M43	32	<20	84
M44	23	50	54
M45	L.N.R.	L.N.R.	L.N.R.
M46	17	20	46
M47	45	30	60
M48	13	60	25
M49	7	40	23
*Rep P14	6	20	40
*Rep P22	15	20	26
*Rep P55	32	20	67
*Rep M3	2	<20	13
*Rep M31	L.N.R.	L.N.R.	L.N.R.

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Final : TO122410 Order: Project:SMOKO

Element	Yb@	Zn@	Zr@
Method	MMI-M5	MMI-M5	MMI-M5
Det.Lim.	1	20	5
Units	ppb	ppb	ppb
*Rep M37	6	<20	16
*Rep M47	41	30	61
*Std MMISRM16	<1	370	12
*Std AMIS0169	9	190	42
*Std MMISRM18	<1	700	26
*Blk BLANK	<1	<20	<5
*Blk BLANK	<1	<20	<5
*Blk BLANK	<1	<20	<5

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Submitted By: Gordon Richards
Receiving Lab: Canada-Dawson City
Received: June 27, 2012
Report Date: July 06, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS DAW12000059.1

CLIENT JOB INFORMATION

Project: SMOKO
Shipment ID:
P.O. Number
Number of Samples: 2

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	2	Dry at 60C			DAW
SS80	2	Dry at 60C sieve 100g to -80 mesh			DAW
1DX2	2	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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.

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: SMOKO
Report Date: July 06, 2012

CERTIFICATE OF ANALYSIS DAW12000059.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
M173	Silt	0.8	14.6	8.0	42	<0.1	18.5	8.5	381	3.60	13.3	3.3	2.5	42	0.1	0.4	<0.1	45	0.62	0.096	11
M100	Silt	0.6	24.1	5.7	48	<0.1	29.8	10.8	357	1.97	10.6	<0.5	2.1	35	0.1	0.4	<0.1	52	0.60	0.072	7

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AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: SMOKO
Report Date: July 06, 2012

CERTIFICATE OF ANALYSIS DAW12000059.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
M173	Silt	29	0.43	156	0.049	2	0.88	0.014	0.03	0.2	0.02	2.9	<0.1	<0.05	3	<0.5	<0.2
M100	Silt	49	0.63	118	0.074	1	0.89	0.013	0.05	0.1	0.02	2.9	<0.1	<0.05	3	<0.5	<0.2

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Client: **Richards, Gordon**
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

Project: SMOKO
Report Date: July 06, 2012

QUALITY CONTROL REPORT DAW12000059.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Reference Materials																					
STD DS9	Standard	13.5	107.7	122.8	304	1.9	39.7	7.5	576	2.29	24.3	118.9	6.4	65	2.3	5.4	6.0	41	0.71	0.081	13
STD DS9 Expected		12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819	13.3
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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QUALITY CONTROL REPORT DAW12000059.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																	
STD DS9	Standard	121	0.63	298	0.111	2	0.94	0.087	0.36	3.0	0.21	2.5	5.5	0.16	5	4.7	5.2
STD DS9 Expected		121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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