

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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## 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 volcanoclastics 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<sup>th</sup> %tile), As (98<sup>th</sup> %tile), Sb (98<sup>th</sup> %tile), Ag (80<sup>th</sup> %tile), and Ba (80<sup>th</sup> %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, 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	115113
Smoko 39-40	YD12680- YD12681	2015/12/10	Gordon G Richards	100.00	115113

### **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 volcanoclastics of the Upper Triassic Semenov 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 volcanoclastics 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 Semenov volcanics were all fine-grained and chloritic. Beds of aphanitic, very siliceous rhyolite chert were observed along the ridge northeast of camp within chloritic volcanoclastics. 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



**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

**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
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
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	Mo	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

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 volcanoclastics 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
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#### 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	<u>1601.21</u>
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<b>TOTAL</b>	<b>\$17,613.32</b>
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### **STATEMENT OF QUALIFICATIONS.**

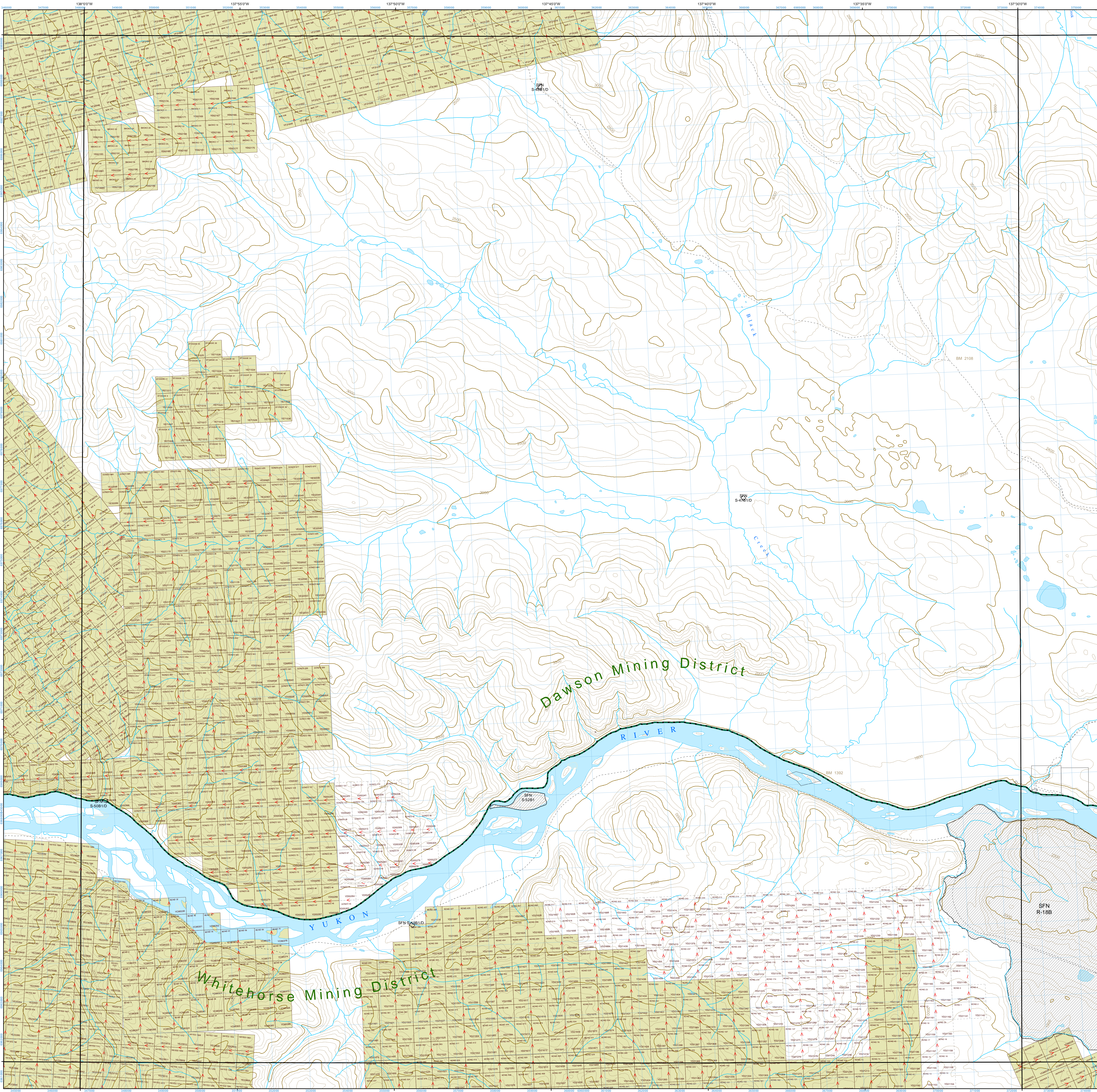
I, Gordon G Richards, with business address at 6410 Holly Park Drive, B.C., V4K 4W6, do hereby certify that:

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.



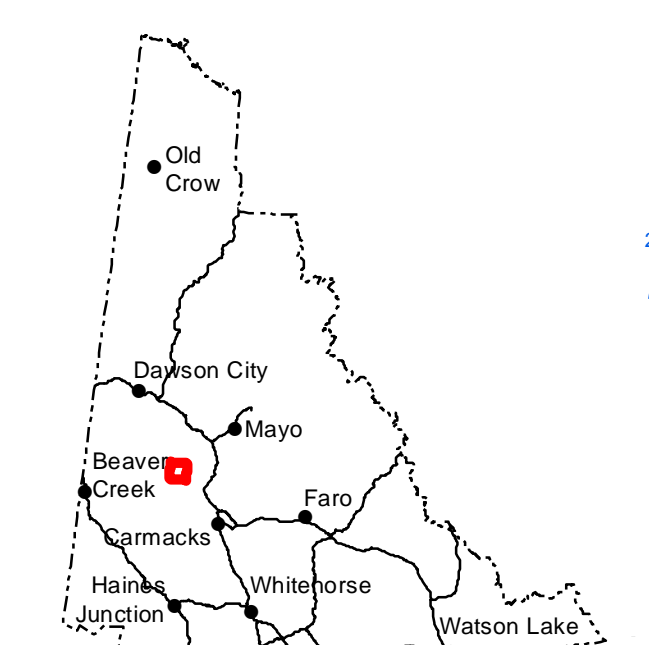


- Mining**
- Placer mineral claims
    - Unserved baselines
    - Surveyed
  - Quartz mineral claims
    - Location line direction
    - Active
    - Expired
    - Surveyed
  - Coal Tenure
    - Exploration licence
    - Mining lease
    - Expired

- Administrative boundaries**
- Municipal
  - Community
  - Mining district
- Parks and protected areas**
- Not withdrawn from staking mineral claims
  - Withdrawn from staking mineral claims
- First Nation unsettled lands**
- Unsurveyed
  - Interim protected
  - Withdrawn from staking mineral claims
- First Nation settlement lands**
- Unsurveyed
  - A
  - B
  - FS
- First Nation settlement lands**
- Surveyed
  - A
  - B
  - FS

- Land Tenure**
- Land applications**
- Active
  - Denied
- Land dispositions**
- Agreement for sale
  - Easement
  - Land use application
  - Lease
  - Notations
  - Reservation
  - Others
- Agricultural Land**
- Applications
  - Dispositions
- Legal survey**
- Easements
  - Land parcels

- Base map features**
- Mapsheet index**
- 10K mineral index
  - Basemap index
- Topographic**
- Contour line intervals 100 feet
  - Contour line intervals 500 feet
- Hydrographic**
- Watercourses
  - Sand and dry river bed
  - Waterbody
- Transportation routes**
- Highway
  - Main
  - Secondary
  - Trail
  - Cut line
  - Water
  - Railway
  - Ferry route



# 115113

## MINING CLAIMS

Approximate Mean Occupation Date: 23 Jul 2012  
 District: Dawson, Whitehorse  
 Date: 23 Jul 2012  
 Coordinate System: NAD 1983 UTM Zone 8N  
 Projection: Transverse Mercator  
 Datum: North American 1983  
 Reference Scale: 1:30,000

115001	115004	115003
115J16	115113	115114
115J09	115112	115111

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**Whitehorse District Office:**  
 Box 102 - 35th Main Street  
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**Mayo District Office:**  
 Box 10 Mayo, YT Y0B 1M0  
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 email: mayo.mining@gov.yk.ca

**Other Contact:**

**Yukon Energy, Mines and Resources Library**  
 P.O. Box 2703, Whitehorse, Yukon Y1A 2C6  
 Ph: (867) 667-3211 Fax: (867) 667-5388  
 email: emr.library@gov.yk.ca

**Yukon Geological Survey**  
 Box 2703, Whitehorse, YT Y1A 2C6  
 Phone: (867) 667-5200 Fax: (867) 667-5150  
 email: geosurvey@gov.yk.ca

**Sources:**

**NRCan NTDB**  
 Natural Resources Canada, National Topographic Data Base, file 11513, Software edition, Ottawa: Natural Resources Canada, Geomatics Canada, 2006.

**Natural Resources Canada, Level, Quebec, National Topographic Database, 1:50,000, map code 115113, version 3.10, Ottawa: Natural Resources Canada, Geomatics Canada, 1995.**

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**National Road Network**  
 Geospatial Product Specifications: National Road Network of Canada, Level 1 (Edition 1.0, January 2003)

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**Land Information**  
 Energy, Mines and Resources Lands Branch  
 Box 2703, Whitehorse, Yukon Y1A 2C6  
 Ph: (867) 667-6212 / 1-800-661-0408 ext. 5215  
 Fax: (867) 667-3214  
 email: land-information@gov.yk.ca

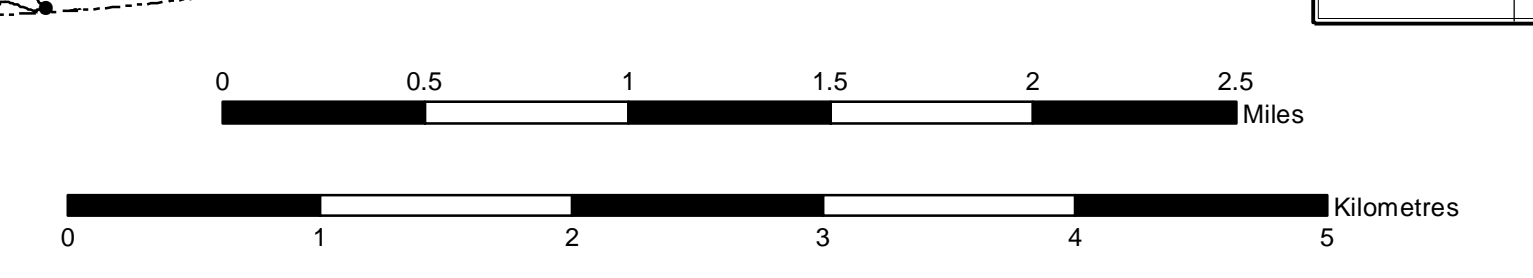
**Agriculture Information**  
 Energy, Mines and Resources Agriculture Branch  
 Box 2703, Whitehorse, Yukon Y1A 2C6  
 Ph: (867) 667-5838 / 1-800-661-0408 ext. 5838  
 Fax: (867) 353-6222  
 email: agriculture@gov.yk.ca

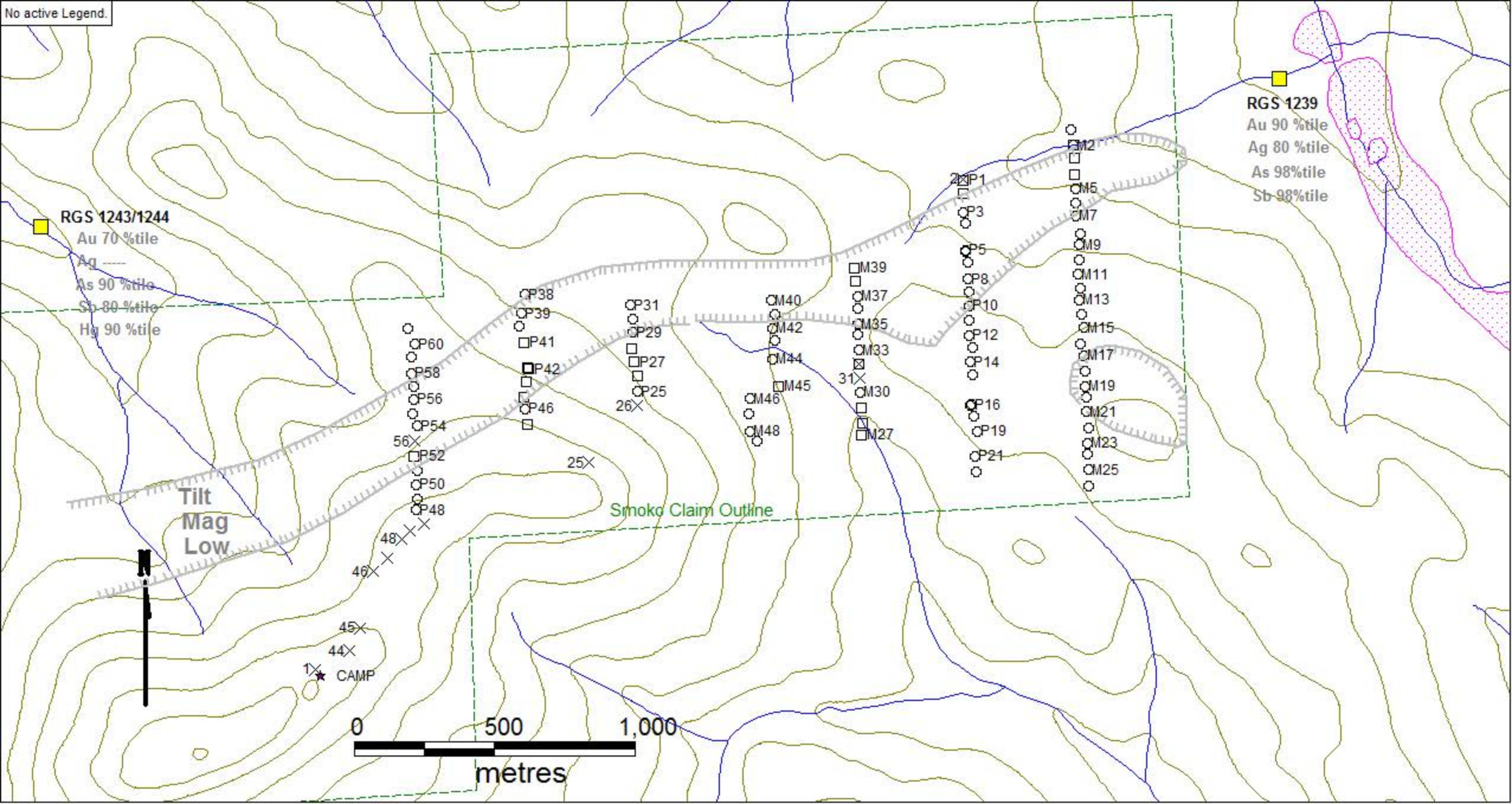
**Parks and Protected Areas**  
 Yukon Department of Environment  
 Box 2703 Whitehorse, YT Y1A 2B5  
 Ph: (867) 667-6222 / 1-800-661-0408 ext. 5652  
 Fax: (867) 393-6213  
 email: environment.yukon@gov.yk.ca

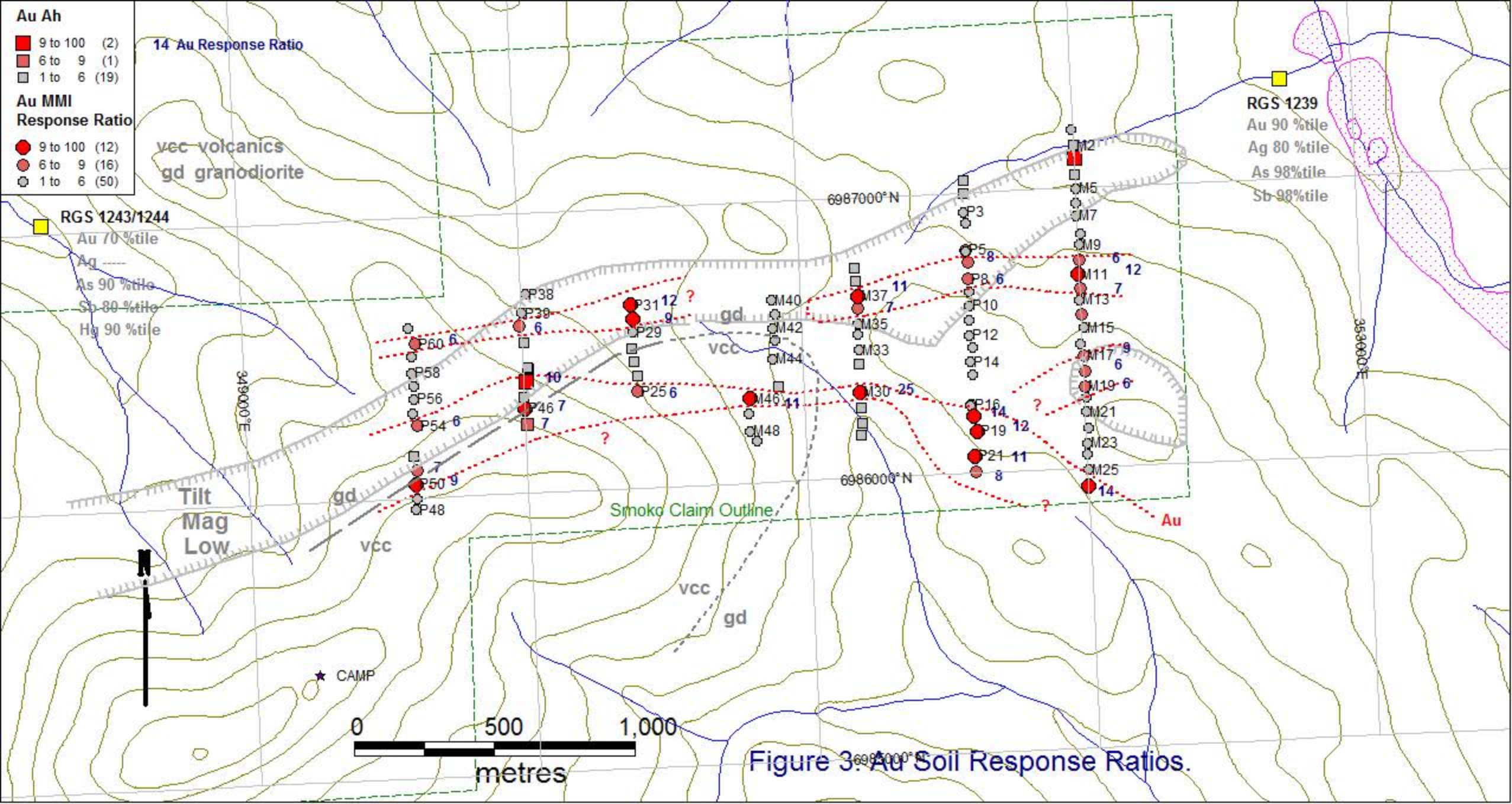
**Unsurveyed or Interim Protected Land Claims**  
 Indian and Northern Affairs Canada  
 Room 416C - 35th Main Street  
 Whitehorse, YT Y1A 2B5  
 Ph: (867) 667-3888 / 1-800-661-0451  
 Fax: (867) 667-3801

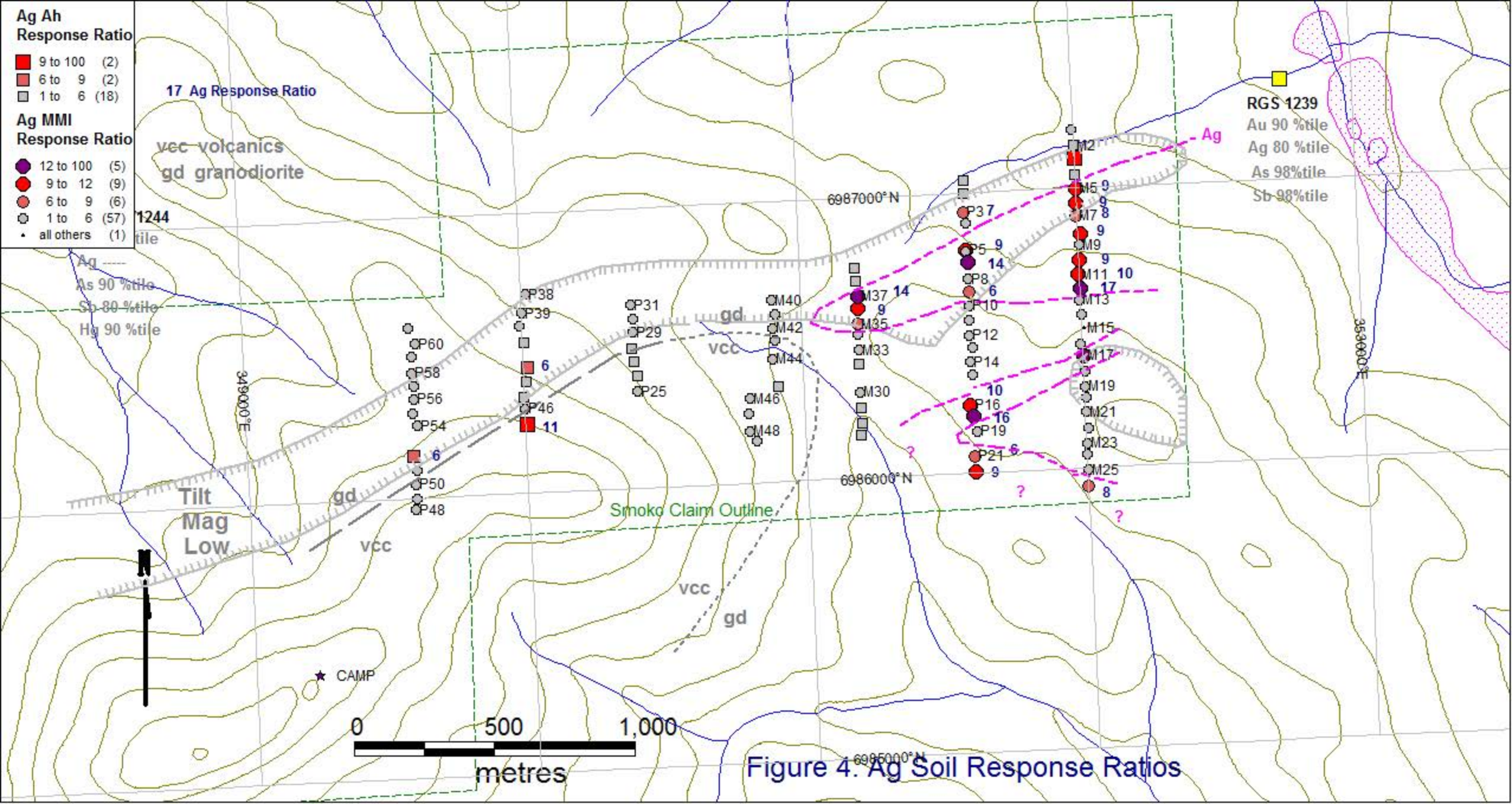
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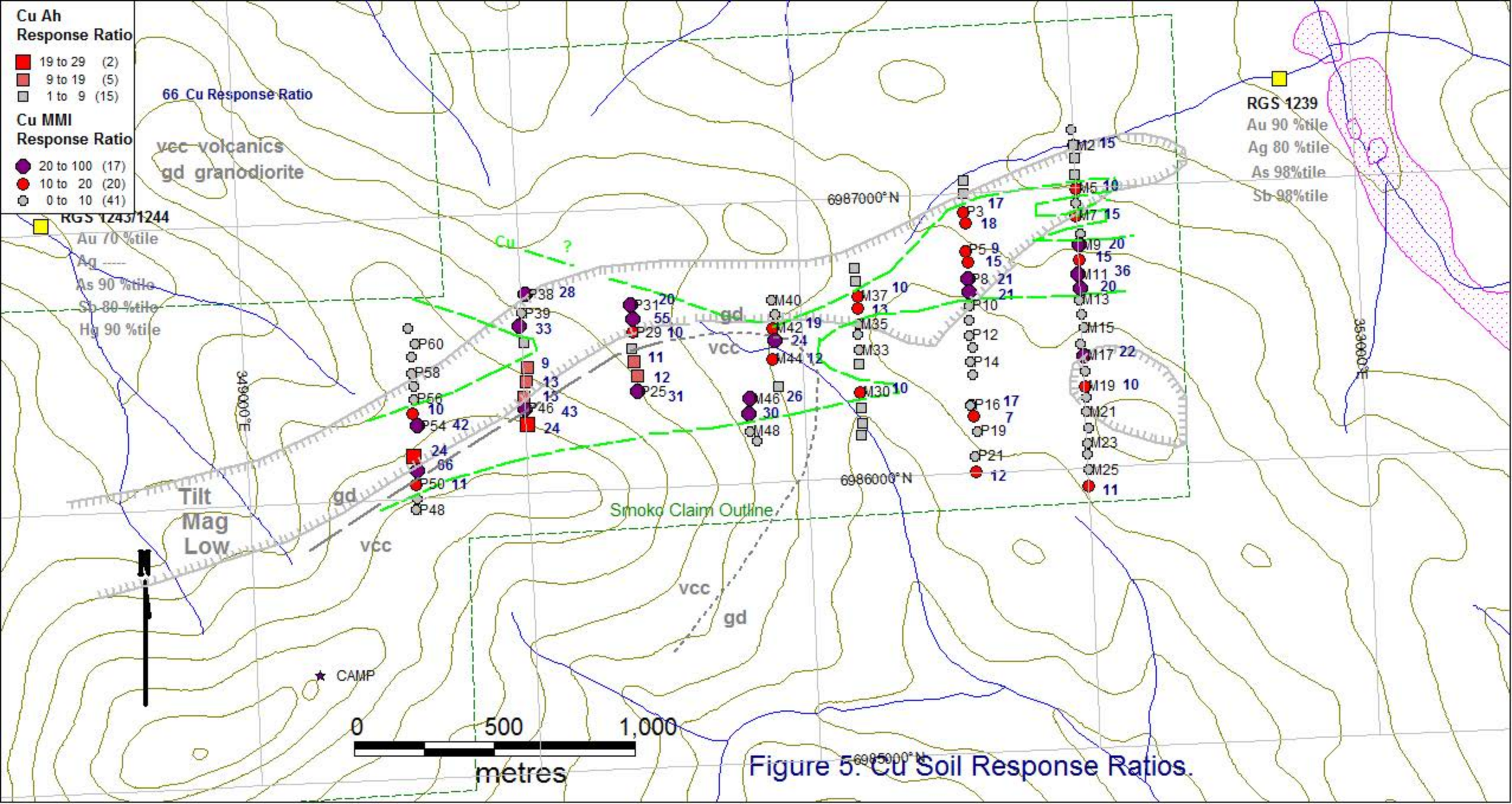


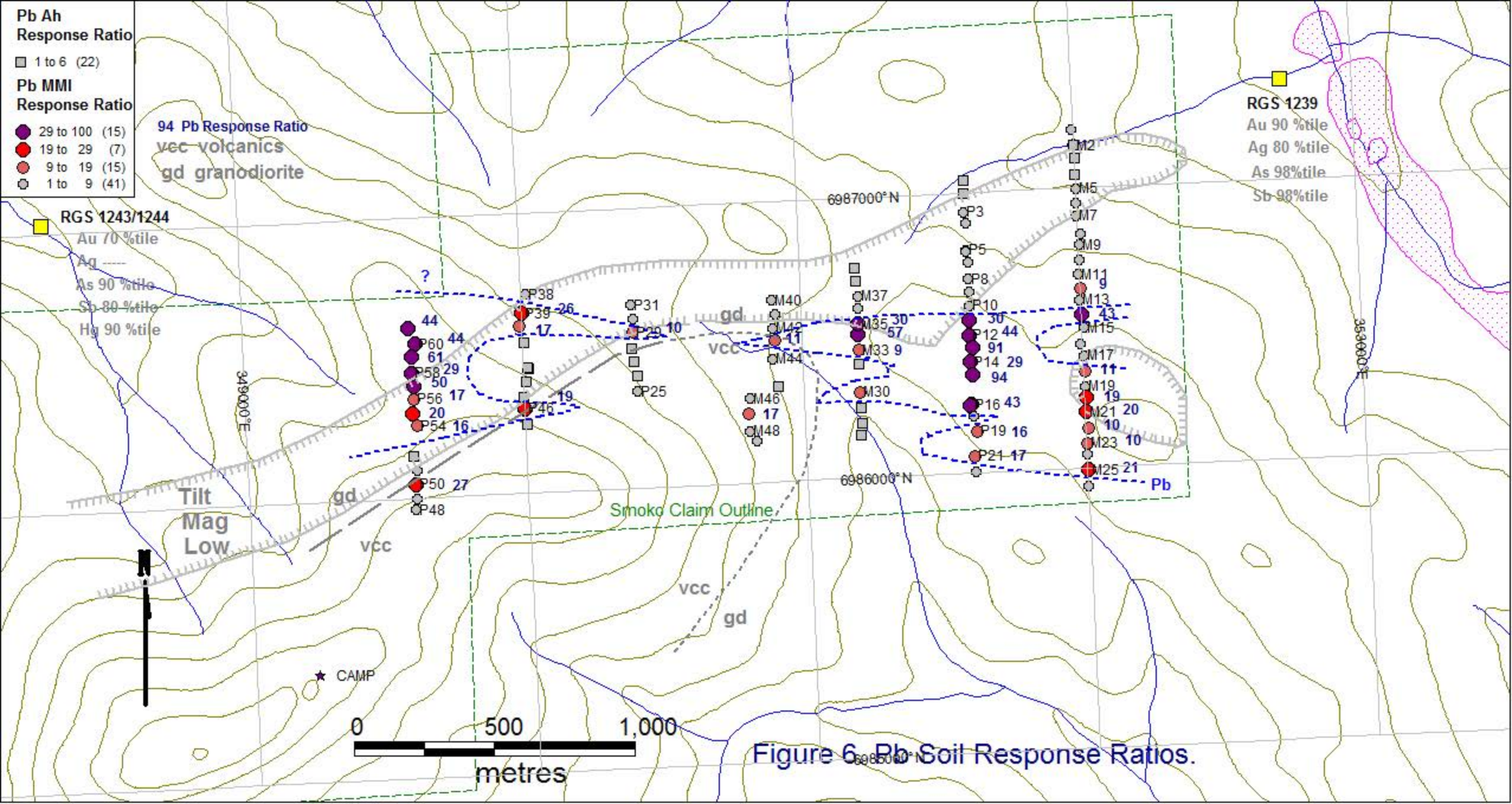


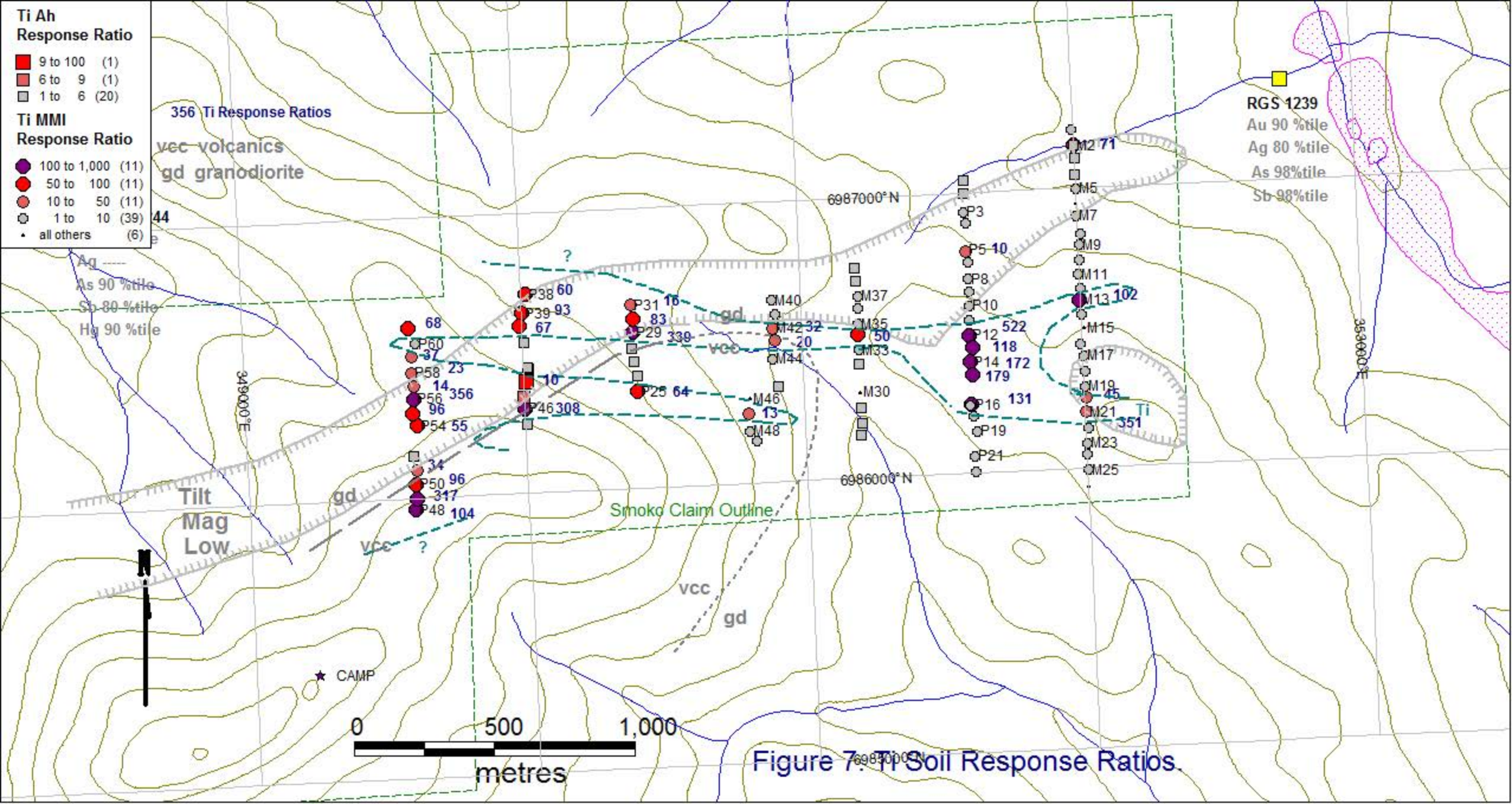


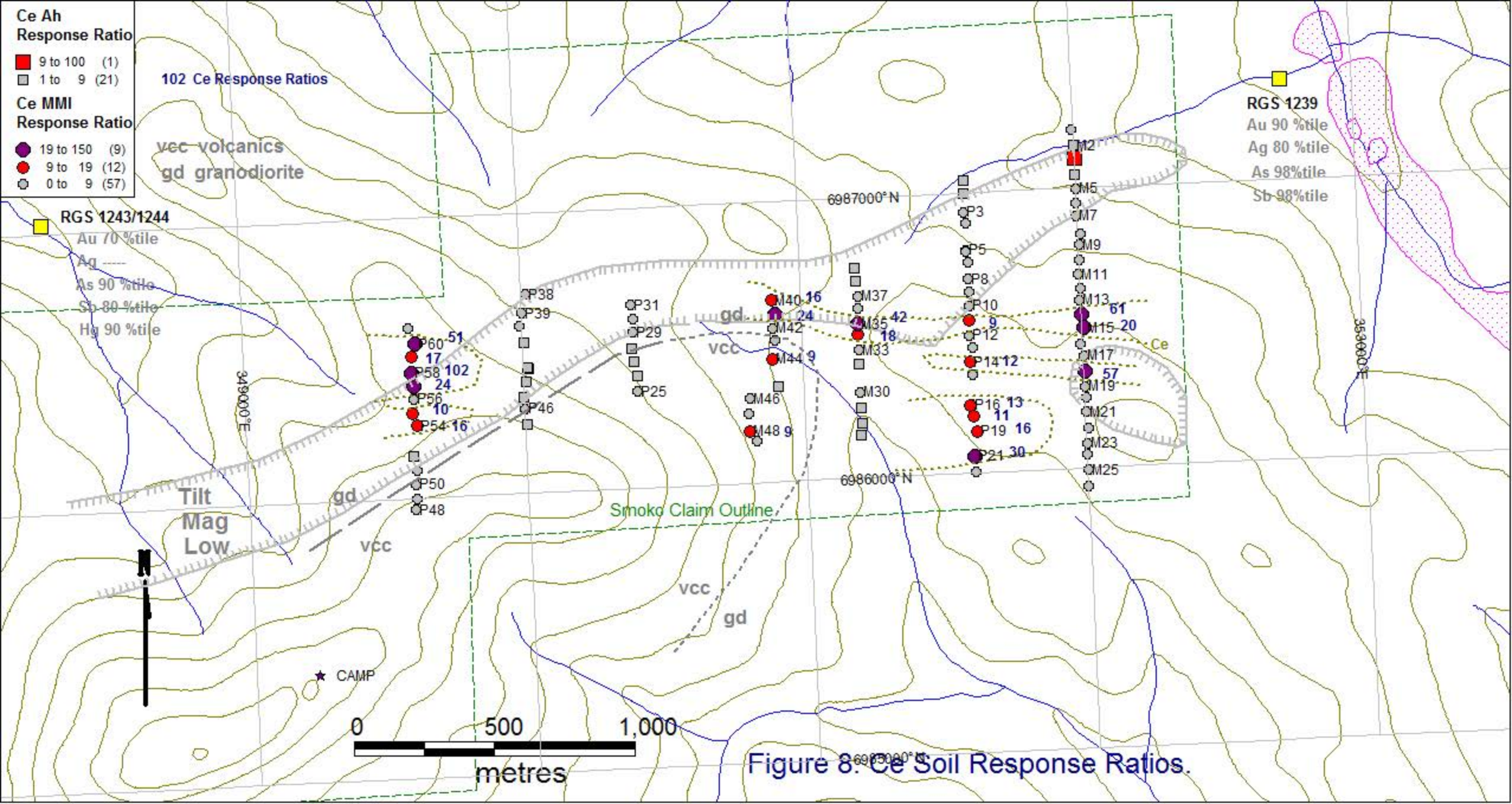














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Client: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6 Canada

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.

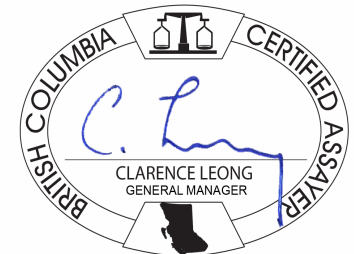
Invoice To: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Table with 6 columns: Method Code, Number of Samples, Code Description, Test Wgt (g), Report Status, Lab. Rows include methods like Dry at 60C, SS80, and 1F05.

ADDITIONAL COMMENTS



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



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 6410 Holly Park Drive  
 Delta BC V4K 4W6 Canada

Project: SMOKO  
 Report Date: August 11, 2012

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Part: 1 of 3

CERTIFICATE OF ANALYSIS

DAW12000056.1

Method	Analyte	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	
		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	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.1	0.2	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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CERTIFICATE OF ANALYSIS

DAW12000056.1

Method	Analyte	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
		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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CERTIFICATE OF ANALYSIS

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	
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	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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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



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Project: SMOKO

Report Date: August 11, 2012

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Part: 3 of 3

## QUALITY CONTROL REPORT

DAW12000056.1

Method		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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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.

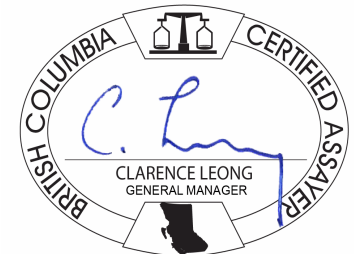
Invoice To: Richards, Gordon
6410 Holly Park Drive
Delta BC V4K 4W6
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Table with 6 columns: Method Code, Number of Samples, Code Description, Test Wgt (g), Report Status, Lab. Rows include Dry at 60C, SS80, and 1DX2.

ADDITIONAL COMMENTS



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



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Project: SMOKO  
 Report Date: July 06, 2012

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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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CERTIFICATE OF ANALYSIS

DAW12000059.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		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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Project: SMOKO  
 Report Date: July 06, 2012

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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	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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Project: SMOKO

Report Date: July 06, 2012

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Part: 2 of 2

## QUALITY CONTROL REPORT

DAW12000059.1

Method	1DX15	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