Tintina Gold Project

YMIP # 12-044
Grassroots Module

Grassroots Prospecting

and Geochemical Survey

of the

Best RGS Gold silt sites unclaimed within 12km north of the south-eastern portion of the Tintina Trench

105 A/11, 105 A/13, 105 B/16, 105 G/01

July 5 - July 22, 2012

by Van Krichbaum

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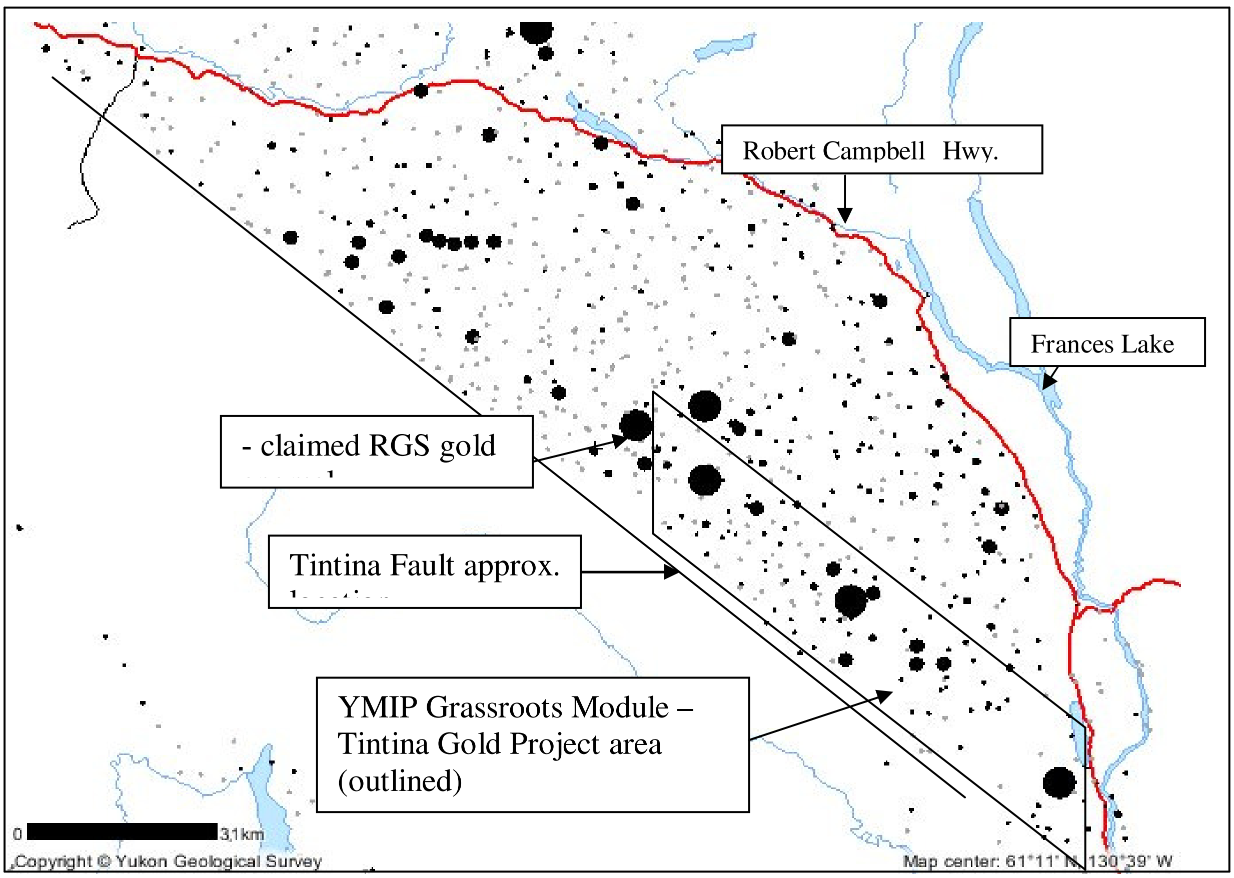
1. INTRODUCTION

RATIONALE FOR THE PROJECT

A previously successful technique using the Yukon Government MapMaker Online website RGS silt sediment geochem data to identify anomalous locations was used along with a systematic approach to identify the highest gold or other precious / base metal RGS silt sediment geochem sites in the Pelly Mountain south and west of the Campbell Highway (southwest of Frances Lake). After examining the RGS data it became apparent that almost all of the best gold RGS anomalies (99th percentile) were not claimed (and not within Interim Protected First Nations Lands) and were found to be within 12km of the north side of the south-eastern section of the Tintina Trench. This became the area of interest with gold as the primary commodity for this project. The Yukon-Tanana RGS Silt Sample Percentile Thresholds table used is in the Appendix.

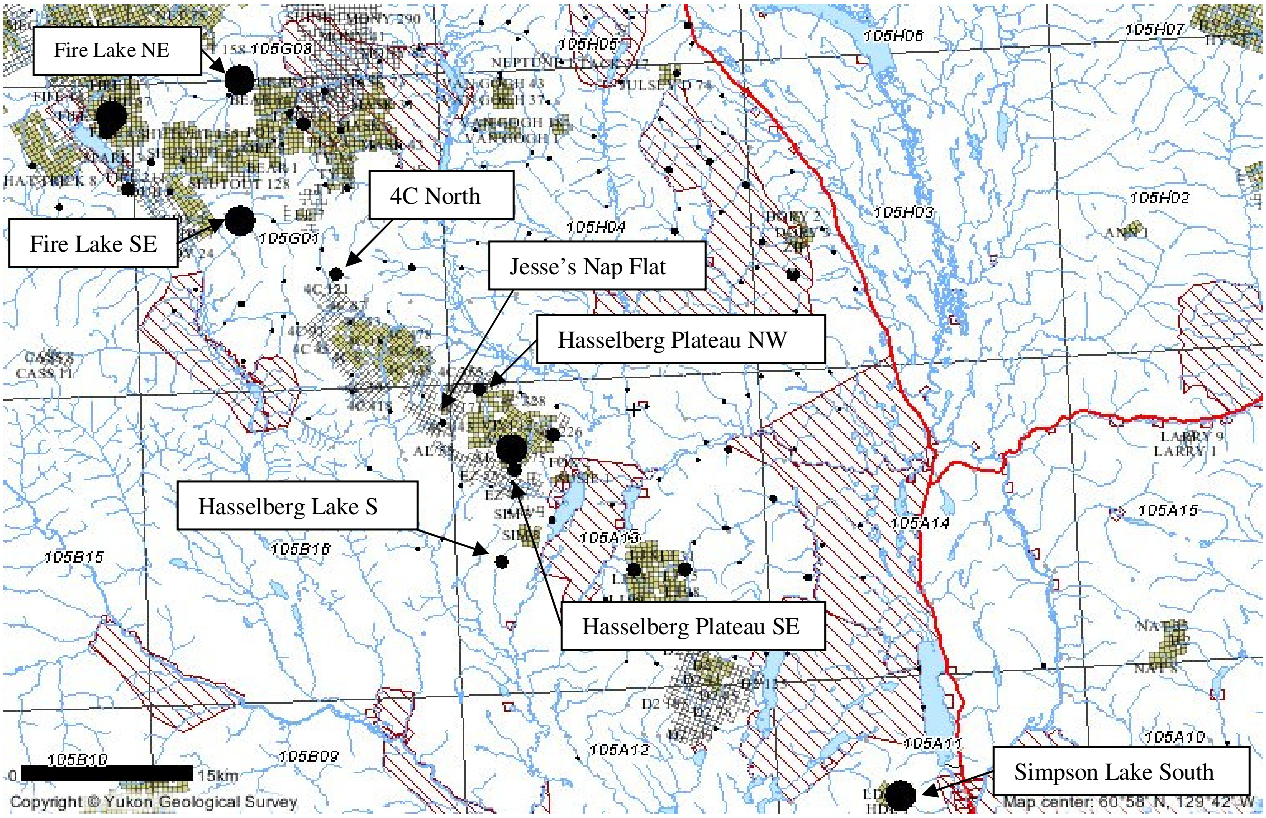
LOCATION OF THE PROJECT

Please refer to the Tintina Gold Project area map below for the 99th percentile RGS Au silt sediment sample sites.



Map 1. Overview Location Map – showing gold only RGS results. *Large black circles are 99th percentile RGS gold silt sediment rankings for Yukon-Tanana in this part of southeast Yukon, next smaller are 95th percentile. Note their proximity and alignment to the Tintina Trench.*

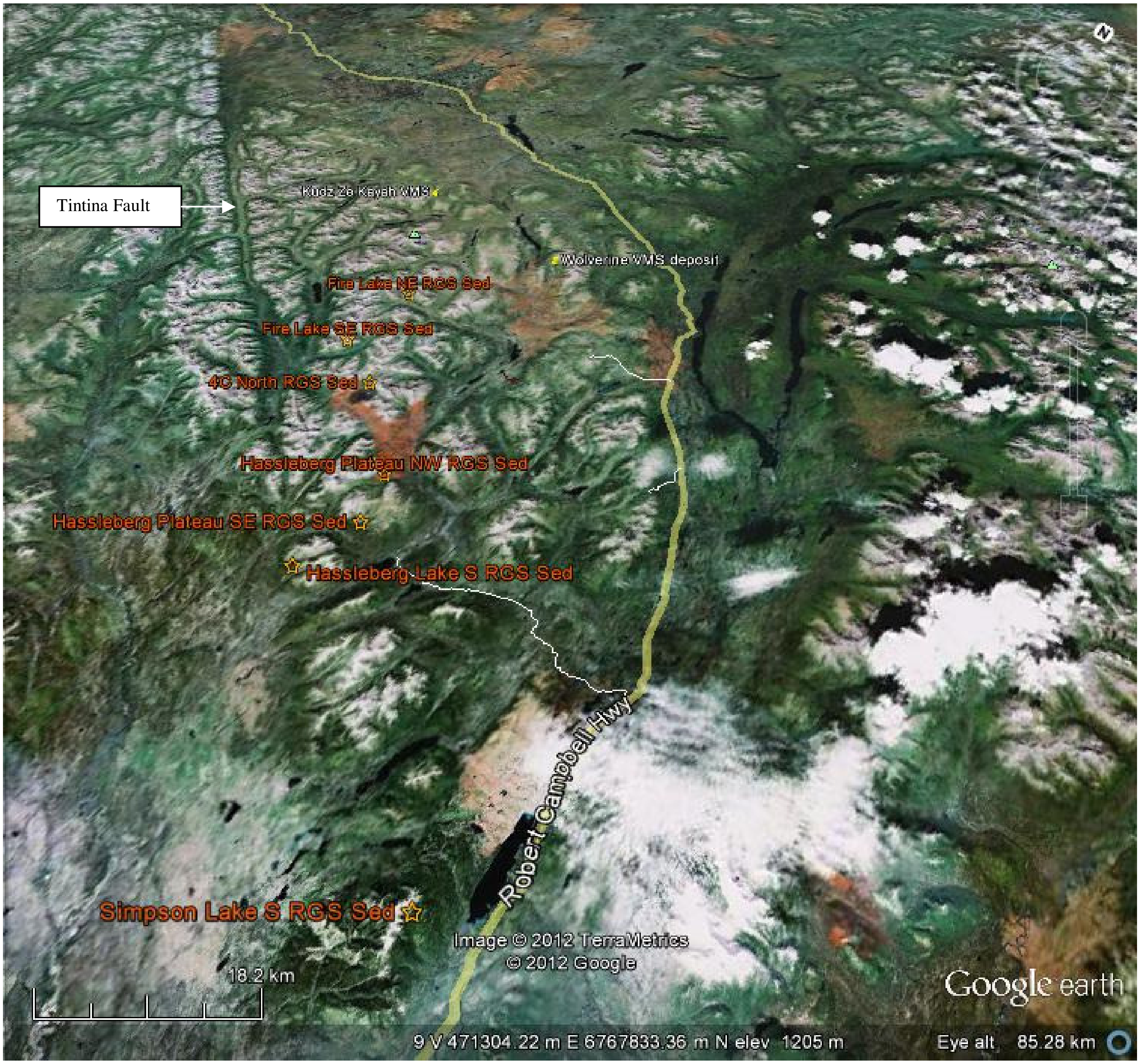
Please refer to the Tintina Gold Project area map below for the site names used for sites visited for this YMIP Grassroots Module.



Map 2. Target Site Names for the Tintina Gold Project. *All Grassroots Module targets are unclaimed. Active quartz claims are shown in brown, Interim Protected First Nations Lands are shown with red diagonal lines and large black circles are 99th percentile RGS gold silt sample rankings for Yukon-Tanana, next smaller are 95th percentile. All YMIP target sites are 99th or 95th percentile RGS gold silt sample rankings for Yukon-Tanana, except Jesse's Nap Flat (see comment at top of next page).*

'Fire Lake NE' represented only a tentative target in the initial application because of the extensive extra logistics required for additional supplies and effort required for hiking out - unless additional helicopter time could be aquired using a YMIP inspection visit or gatis helicopter time from Northern Tiger Exploration. Neither helicopter usage panned out, so the Fire Lake NE target site was not visited. 'Hasselberg Lake S' in the initial application also was not visited for safety and logistics reasons, and notification and approval was acquired from YMIP (Derek Torgerson) for this. According to the local user of the cabin at the north end of Hasselberg Lake, a grizzly bear that was previously particularily aggressive to humans and human equipment lived at the south end of Hasselberg Lake, and he advised us not to go there, plus he refused to let us use his boat that we needed (due to extensive flooding at the south end of Hasselberg Lake caused by beavers) because of the likelihood of damage to his boat caused by the grizzly bear.

Partly to make up for the target site lost, and due to a 1 day wait for a helicopter flight, 'Jesse's Nap Flat' was added to cover a gossanous area where I previously had taken just 1 soil sample, but it had returned an assay of approximately .5 g/mt Au.



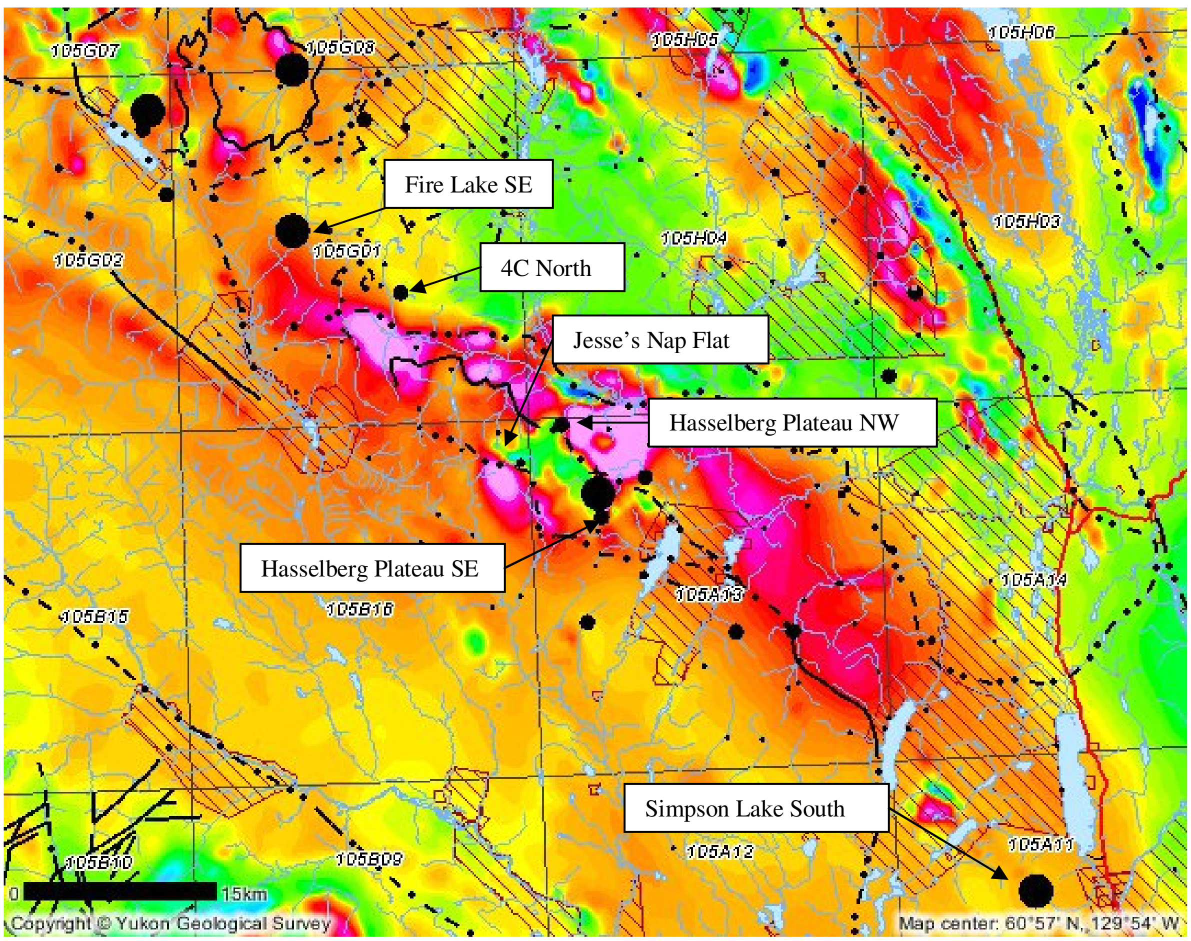
Map 3. Tintina Gold Project Targets. *The RGS Sed sites (gold stars) are the final selections from a systematic approach using exploration of the Yukon RGS database to produce a prioritized list of the most highly anomalous gold targets in the area that are not on Interim Protected First Nations Lands or otherwise claimed. Their relationship to the Tintina Trench is readily apparent from this Google Earth view looking northwest. White lines are gazetted roads or trails to the west of the Robert Campbell Highway.*

2. GEOLOGY

REGIONAL GEOLOGY

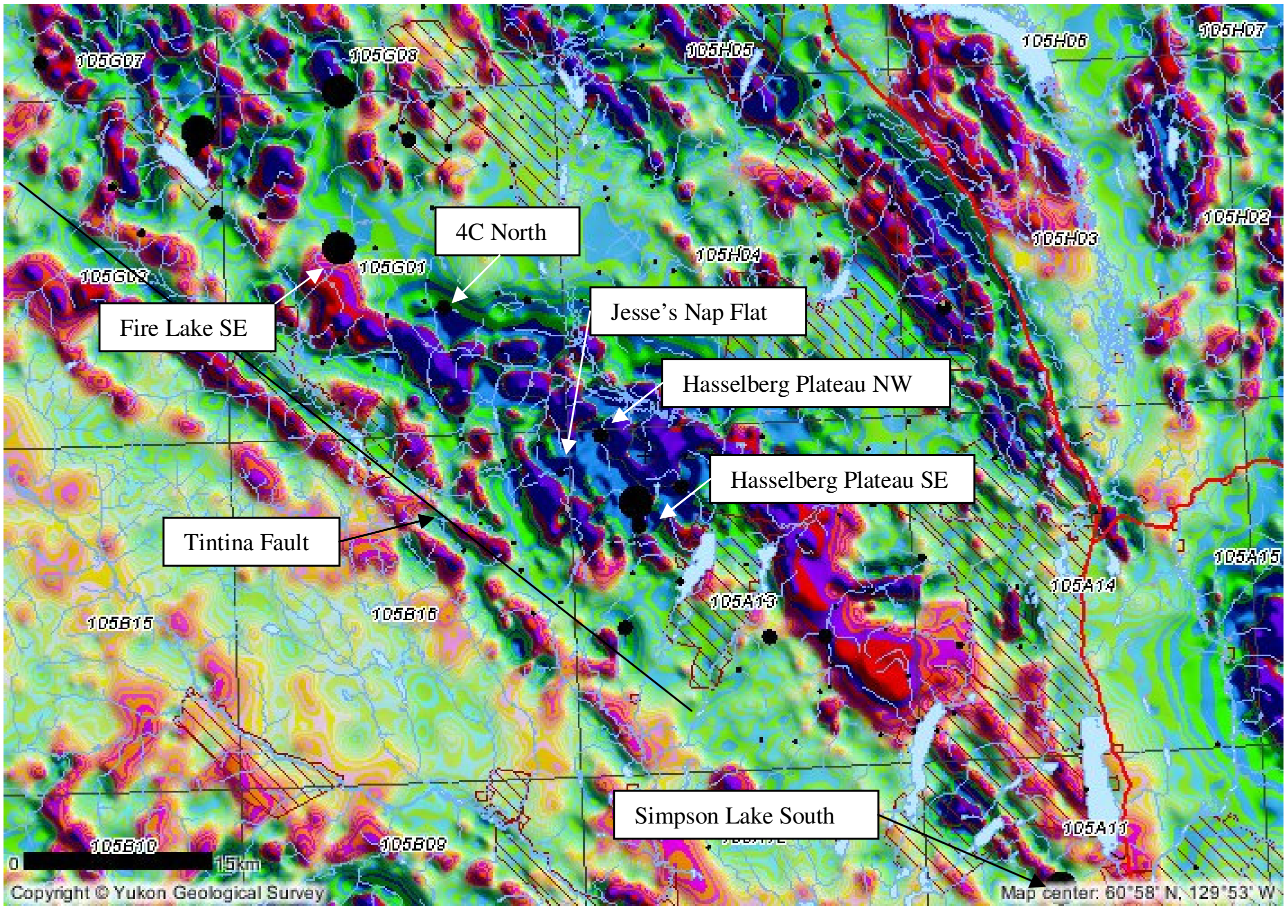
As many of the intrusion-related gold deposits in the Dawson Range Gold Belt were formed before the Tintina Fault displaced the Finlayson Lake region, it seems reasonable to expect that the Gold Belt should continue into this area, and which the. RGS Au data seems to suggest. Also, pathfinder elements for VMS deposits (Cu, Zn, Pb, Ag, +/- Co, As and Sb) show a good correlation with the target sites chosen for this project, thus giving a good secondary target for this gold focused project.

The presence of many VMS sites in the Findlayson District further north is well known, and the Fire Lake Cu-Co Besshi-type VMS deposit with gold credits is nearby and within the same distance from the Tintina Fault as the sites selected for this project. The mafic rocks that host the Fire Lake Kona deposit are elevated in Cr and Ni, as are the Hasselberg Plateau SE and NW sites for this project. Both the Fire Lake and Hasselberg Plateau sites have high magnetic signatures which show on the Total Field Aeromag Map below.



Map 4. Total Field Aeromag Map. *Large black circles are 99th percentile RGS gold silt sediment rankings for Yukon-Tanana, next smaller are 95th percentile. Black (dashed) lines are major faults. (From Yukon MapMaker Online web site).*

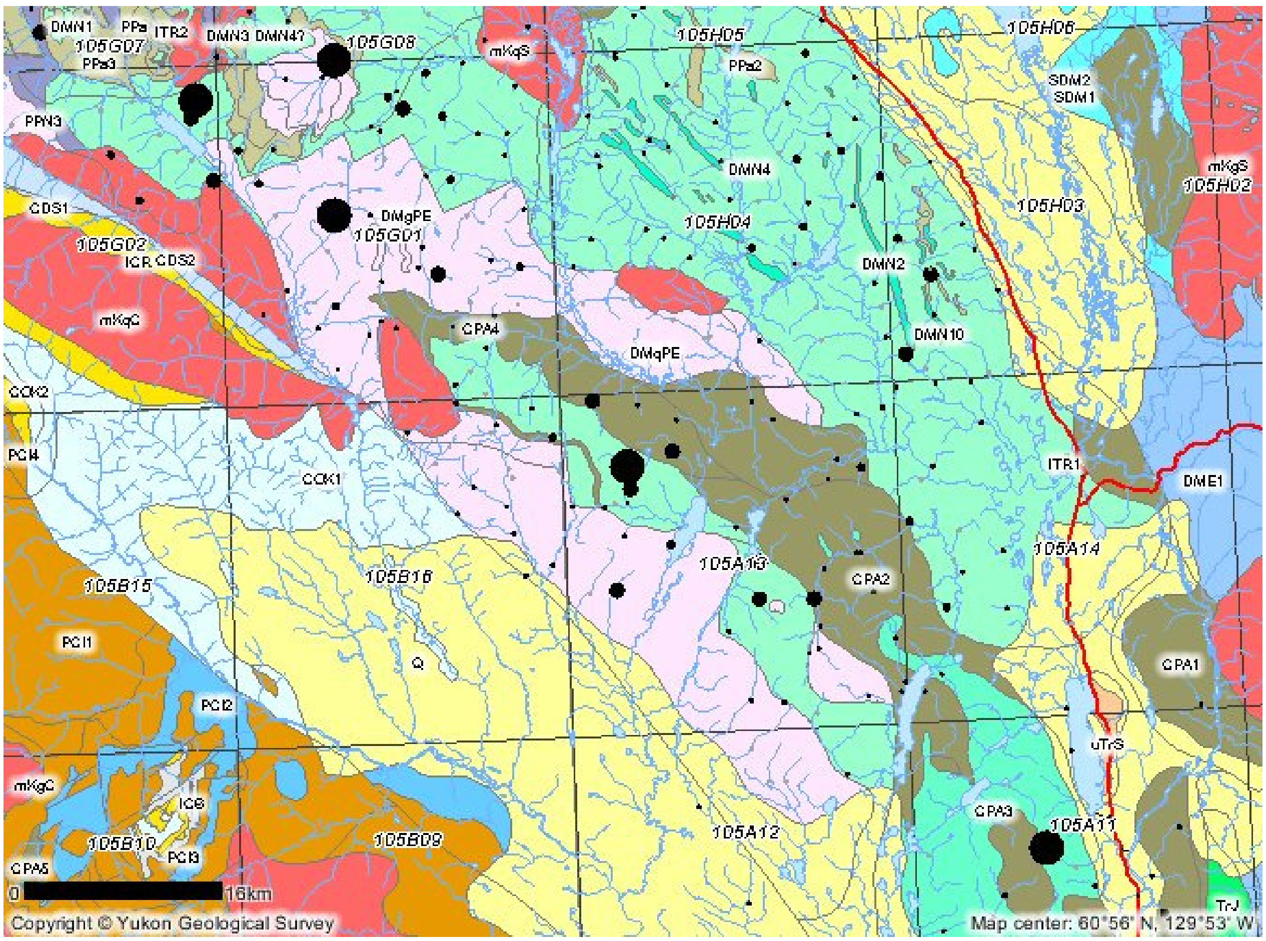
The “First Derivative Aeromag Map of the Tintina Gold Project area” is shown below. All of the sites selected for the Tintina Gold Project are on the borders of aeromag highs or lows, possibly indicating fault or contact boundaries which are geological features favorable for gold deposits.



Map 5. First Derivative Aeromag Map of the Tintina Gold Project area. *Large black circles are 99th percentile RGS gold silt sediment rankings for Yukon-Tanana, next smaller are 95th percentile. Also shown is the approximate location of the Tintina Fault. (From Yukon MapMaker Online web site).*

The section along the Tintina Fault where this project is centered is underexplored, having received little attention lately as the VMS staking from the Wolverine discovery has passed, and its primary focus was further north in the Wolverine Lake area. The focus is possibly set to shift as Wolverine Minerals Corp has announced positive results from a recently completed exploration and drilling program last summer (2012). The GSC paper Volcanic-hosted Massive Sulphides of the Findlayson Lake District [FLD], Yukon notes that “The relatively nascent level of exploration in the FLD suggests that prospecting, coupled with traditionally successful exploration methods, such as surficial geochemistry......(is) likely to result in new discoveries in the coming years.”

Intrusive activity is well known to concentrate gold and other metals and mobilize them with hot fluids. The metamorphic Yukon-Tanana faulting created pathways for the fluids resulting in intrusion related, epithermal and orogenic gold vein deposits. The same processes can remobiize VMS deposits as well. As an example, the foliated rock sequences in the Coffee Gold Project are butted against Middle to Late Cretaceous equigranular granite to the south along a west-northwest trending contact. Also, the Fire Lake Kona VMS deposit occurs at the transition from mafic volcanic rocks to overlying turbiditic sedimentary rocks. The abundance of intrusives in the project area, both mafic and felsic, increases the deposit potential of the Tintina Gold Project area for gold and VMS deposits. The felsic intrusives (coloured red, light pink) and mafic intrusives (coloured brown) can be seen on the geology map below.



Map 6. Geological Map. *Large black circles are 99th percentile RGS gold silt sediment rankings for Yukon-Tanana, next smaller are 95th percentile. (From Yukon MapMaker Online web site).*

The RGS highly anomalous Au sites for this project are located in relatively small basins of 2-3 km and represent more easily sampled discrete targets, increasing the chance of finding the source of the highly anomalous RGS gold using a smaller sampling program. Please refer to the individual site maps and Google Earth images later in the report.

3. WORK PROGRAM

ACCESS

Each of the 6 sites for this project were visited for varying amounts of time as the geology and sampling program required. A log of work activity is described under Table 1 below and the daily diary of notes taken is submitted in the Appendix. Maps showing the traverses made are given for each site visited. Basic access to each site is given in the table below.

The 6 sites visited for this module are presented in the table below in chronologic order with the basic means of access for each site.

Site Visited	Travel Method
Simpson Lake South	Canoe across Simpson Lake, walk in/out
Hasselberg Plateau SE	Argo in/out
Jesse's Nap Flat	Argo, walk in/out
Fire Lake SE	Helicopter in, walk out (incl. 4C North below)
4C North	Walk out
Hasselberg Plateau NW	Argo, walk in/out (on return trip)

Table 1. Basic Site Access. *The 6 sites visited for this module are presented in chronologic order.*

More details for accessing the 6 sites and the basic work program are given below. All sites mentioned, trails, camps, traverses and claims staked are shown on the various maps that follow for each of the 6 sites visited and sampled.

- "Simpson Lake South" was accessed from the Campbell Highway by canoeing across Simpson Lake, hiking 6 km to a saddle below the mountain ridge, establishing camp, hiking up and 'ridge and spur' soil sampling the 3 mountain ridges and 1 lower ridge (one each day), returning back to the Campbell Highway by the reverse route. This took 6 days July 5-10, 2012.
- The last 5 sites were accessed by driving 18 km using a gazetted 'gravel road' starting at Km 108 on the Campbell Highway, then using an Argo 8-wheel Industrial Model ATV along a very swampy 'cat trail' 20 km to the cabin at the north end of Hasselberg Lake. This took 1 day July 12, 2012.
- From the cabin, the "Hasselberg Plateau SE" site was accessed by Argo using a pre-existing 'cat trail' to the west of Hasselberg Lake, endidg at a creek canyon. Prospecting and rock sample collecting was done on foot in the creek canyon. The return by Argo by reverse route involved taking silt samples at every creek or water flow. This was a 1 day prospect. We returned to the cabin by nightfall, July 13, 2012.
- (The last 4 sites were done in one continuous 9 day trip). From the cabin area, the Argo ATV used a pre-existing 'bush trail' up onto the large plateau northwest of Hasselberg Lake, locally known as the Hasselberg Plateau, then west across Hasselberg Plateau. A drill camp for Wolverine Minerals Corp was encountered and

visited. Arrangements were made to utilize a helicopter that was servicing the camp in 2 days. We continued by Argo to the end of the Argo 'trail' where "Crystal Valley" camp was established. This Argo trip took 1 day July 14, 2012.

- "Jesse's Nap Flat" was reached the next day by hiking 2 km north of "Crystal Valley" camp to a gossanous shoulder on the north side of "Pyramid Mountain" (local) where rock and soil sampling was done. The gossanous quartz-rich area looked so promising that 3 claims were staked, the most southerly claim also covering a high quality vesuvianite float and in-situ occurrence. We hiked back to the camp by nightfall. This took 1 day July 15, 2012.

- Access to "Fire Lake SE" 30 km northwest of "Crystal Valley" camp was done by helicopter the next day. We landed on the Fire Lake SE basin's northern ridge, hikeing down it doing 'ridge and spur' soil sampling to the valley floor stream where camp was established. On day 2, early in the morning the southern ridge of the basin was explored, doing 'ridge and spur' soil sampling, then hiking down to the valley floor and collecting rock and silt sediment samples on the way back to camp. In the afternoon rock and silt sediment sampling was done in the upper part of this basin along with staking 6 claims. Staking was done because Fire Lake SE was the most anomalous Au RGS site visited and the smallest basin. It was felt that this would capture the source of this very high gold anomaly. Two days were spent at this site, July 16-17, 2012.

-"4C North" (4CN) was reached by hiking from Fire Lake SE. Rock was collected along the way from the base of a very large gossan, essentially the entire southern face of a small mountain. We have named this site "Gossan Mountain". Camp was established at 4CN. This took 1 day July 18, 2012.

-The "4CN" south ridge and the south facing slope of the northern basin was 'ridge and spur' soil sampled the next day, followed by silt sediment sampling the next day to the upper end of this larger basin. 1 ½ days were spent at this site. Next up was a very long hike and by then we were fully loaded with rock, soil and silt samples, so we hiked ½ day - part way to "Crystal Valley" camp to a lake in Porcupine Creek and made camp at "Small Fish Lake". Total : 2 days, July19-20, 2012.

- From "Small Fish Lake" camp, the return to "Crystal Valley" camp was done by hiking. Rock was collected along the way at a strong gossan at the head of `Crystal Valley. One more day was spent on this hike July 21, 2012.

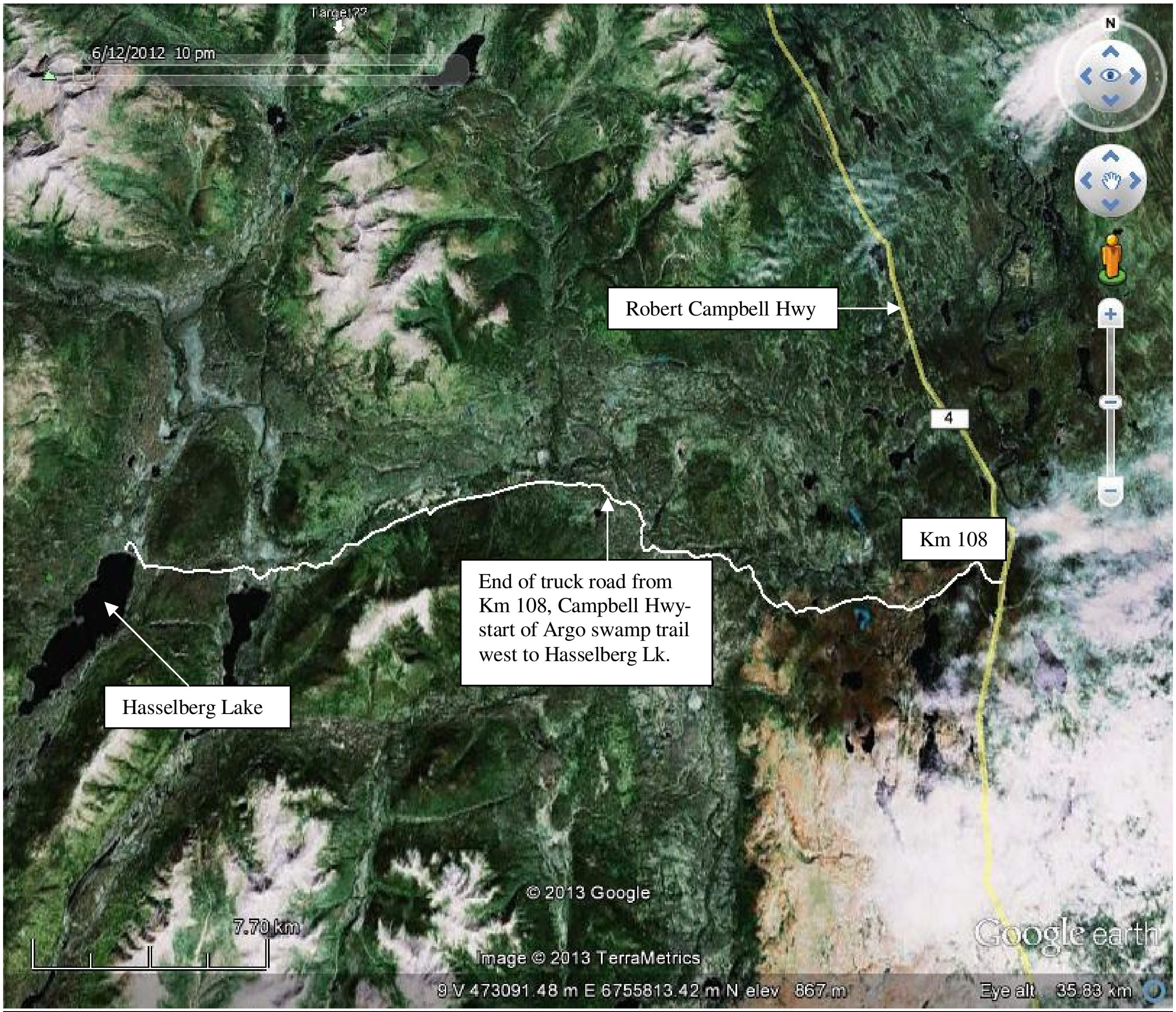
- From "Crystal Valley" camp, the "Hasselberg Plateau NW" site was visited by a short Argo cross-country drive in the creek valley. Thick underbrush and steep terrain hindered the Argo ATV portion of this trip, limiting it to 500 m, but the plan was supposed to be to Argo another 1.5 km. Even hiking through the thick brush was very difficult and slow going. Because the rocks in the creek were entirely unvarying serpentinized ultramafic rocks, and it because it was very slow going, and in order to get to Hasselberg Lake cabin by nightfall, the silt sampling that was planned for this site was abbreviated. We continued by Argo by reverse route across Hasselberg Plateau to the Hasselberg Lake cabin by nightfall. This took 1 day July 22, 2012.

- Return to the Campbell Highway from the Hasselberg cabin was by ‘reverse order’, using the Argo along the very swampy ‘cat trail’ 20 km to the start of the gazetted ‘gravel road’, then driving 18 km to Km 108 on the Campbell Highway. This took 1 day July 23, 2012.

The 2 main routes for target site access are shown on the maps on the next 4 pages. Traverse maps appear in the ‘TRAVERSES AND RESULTS FOR SILT, SOIL AND ROCK - BY SITE’ section starting on page 17.

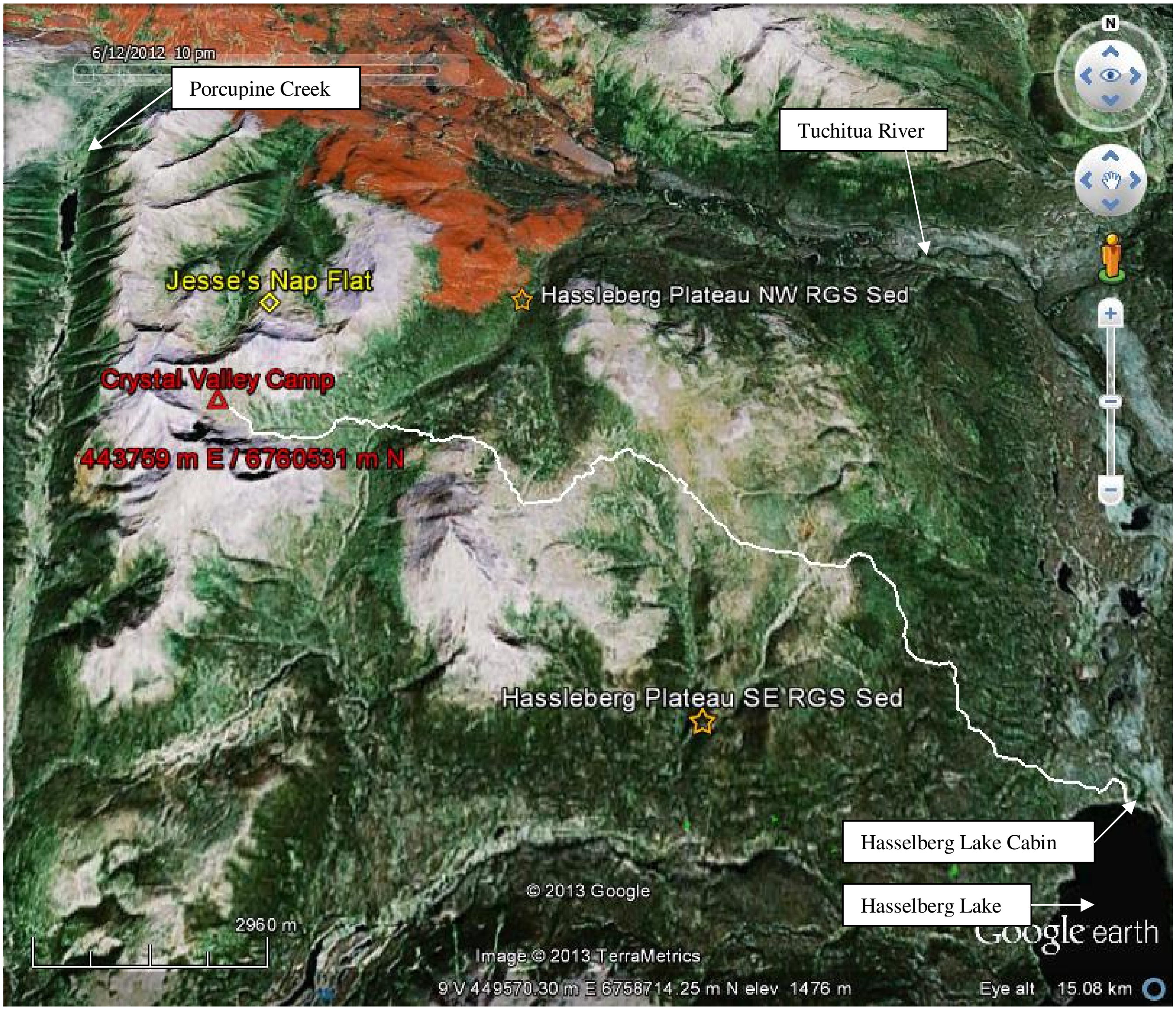
Map 7. Access Route to “Simpson Lake South” Camp. *There was both a hiking and a canoeing portion for this access. This avoided the swampy area south of Simpson Lake. Return was by reverse route. View looking North.*

Please refer to the map below for the truck and Argo access route to Hasselberg Lake cabin.



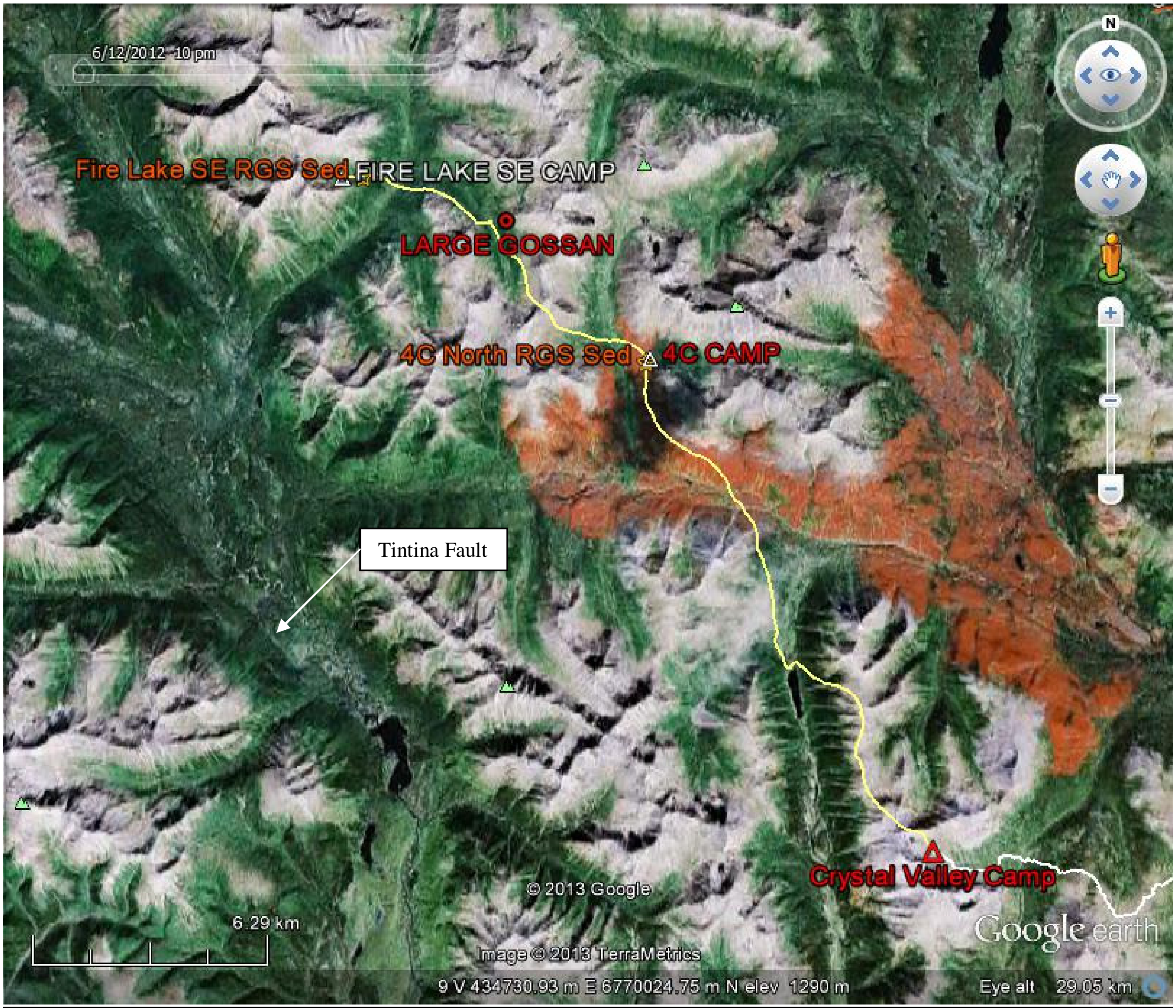
Map 8. Truck and Argo Access Route to Hasselberg Lake cabin. *Return was by reverse route. The swamp trail is sometimes not passable for quad ATV's, and better suited for Argo ATV access. View looking North.*

Please refer to the map below for the Argo access route from Hasselberg Lake cabin to "Crystal Valley" camp.



Map 9. Argo Access Route to "Crystal Valley" Camp. *A helicopter flight was taken from "Crystal Valley" camp to 'Fire Lake SE' basin approximately 30 km further northwest. From there we hiked to the '4C North' site, then hiked back to "Crystal Valley" camp. Argo return to Hasselberg cabin was by reverse route.View looking North.*

Please refer to the map below for the hiking route from ‘Fire Lake SE’ to “Crystal Valley” camp.



Map 10. Hiking Route from ‘Fire Lake SE’ site. *After a helicopter flight from “Crystal Valley” camp to the ‘Fire Lake SE’ site we hiked to the ‘4C North’ site, then hiked back to “Crystal Valley” camp. View looking North.*

NUMBERS OF SAMPLES

The primary methods of geochemical survey for this project were soil and silt sediment sampling, augmented by rock sampling. Where warranted, rocks were collected that were mineralized or with other interesting qualities. ‘Ridge-and-spur’ soil sampling was done primarily on the ridges, upslope and upstream of the highly anomalous Au RGS sample locations. This should have eliminated some of the potential sampling problems associated with glacial till and downslope gravitational dispersion of minerals and readily soluble elements. Silt sediment samples were taken upstream of and at smaller side steams to augment the RGS silt sample site.

The sites chosen for this project could easily have resulted in far more samples than the YMIP budget would cover. Packing that number of samples ‘on foot’ would also have been too arduous to say the least, so the number of samples were regulated primarily by the size and quality of the target sites. The number of samples taken and the number sent for assay are given in the tables below. There were 16 soil samples taken innadvertantly on the HDL claims at Simpson Lake South, so they were not assayed along with 57 rocks to fit the budget and focus for this module.

Table 2. Tintina Gold Project : # of Samples **Taken**

Area	Rocks	Soils	Silts
Simpson Lake S	23	83	2
Hasselburg Plateau SE	6	0	6
Jesse’s Nap Flat	32	11	0
Fire Lake SE	20	26	9
4C North	5	19	7
Hasselburg Plateau NE	0	0	3
	86	139	27

Table 3. Tintina Gold Project : # of Samples **Assayed**

Area	Rocks	Soils	Silts
Simpson Lake S	7	67	2
Hasselburg Plateau SE	6	0	6
Jesse’s Nap Flat	8	11	0
Fire Lake SE	6	26	9
4C North	2	19	7
Hasselburg Plateau NE	0	0	3
	29	123	27

SAMPLING METHODS

Soil was sampled from the B horizon approximately 12 inches deep below the surface (or slightly shallower if too much rock/bedrock was encountered) using stainless steel hand scoop/trowels. Soil samples were placed directly into 5 X 10 cm kraft paper soil sample bags that were immediately marked by pen with the GPS location waypoint # (location), sampler's initials and any unusual soil conditions, such as unusual soil color, if taken from a gossan, etc. Larger stones or other debris were hand removed prior to bagging. Soils were collected along ridges or other highpoints approximately 100 m apart using the 'ridge and spur' sampling technique. The soil samples' UTM location coordinates are given in a table in the Appendix. The soil samples were air dried in camp shortly after collection to help prevent mold, etc. To further insure against mold, etc., the soil samples were further air dried at low heat using a wood stove shortly after returning to 'base camp' at Km 108 on the Campbell Highway.

Stream silt sediments were taken from the active portion of the streambed where silt was encountered, in slower water flows, stream edges, pools, etc. Silt samples were placed directly into 5 X 10 cm kraft paper soil sample bags that were immediately marked by pen with the GPS location waypoint # (location), sampler's initials and any unusual stream conditions, such as unusual water or silt color, etc. The silt samples' UTM location coordinates are given in a table in the Appendix. Small roots, stones or other debris were hand removed and excess water was drained off prior to bagging. The silt samples were air dried in camp shortly after collection to help prevent mold, etc. To further insure against mold, etc., the silt samples were further air dried at low heat using a wood stove shortly after returning to 'base camp' at Km 108 on the Campbell Highway.

Rock samples were grab samples in almost all cases. After breaking them with a standard Estwing rock hammer, selected rocks were brushed off, marked with an indelible pen by GPS waypoint # (location) and placed into plastic sample bags marked by site location. Later at home, each one was photographed with the GPS # showing. The assayed rock samples' descriptions and UTM location coordinates are given in tables in the Appendix.

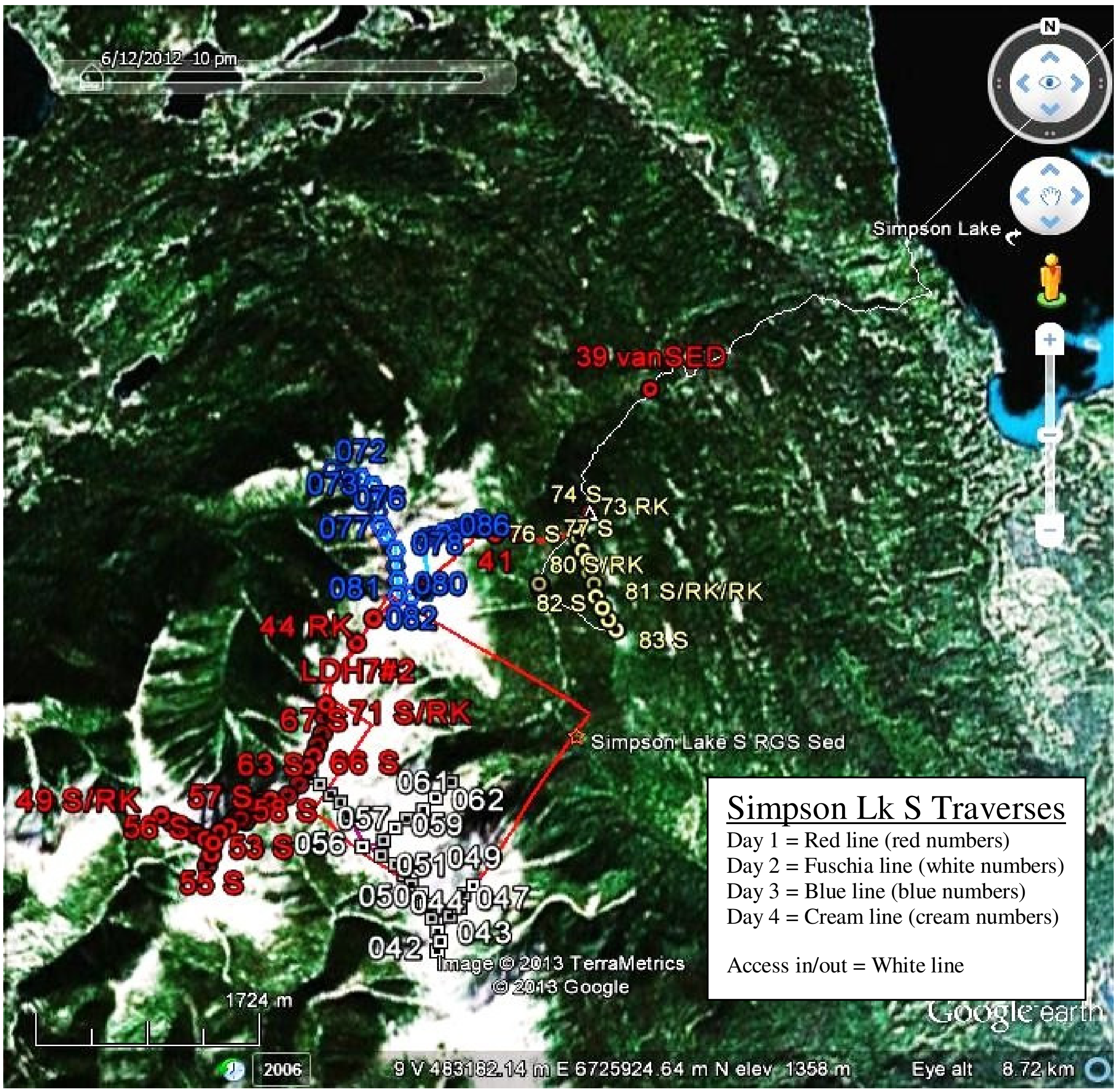
SAMPLE PREPARATION & ANALYTICAL PROCEDURES

Samples were sent for assay to Acme Analytical Lab in Vancouver, B.C. Soil samples were assayed for 36 elements by the ICP-MS method 'Group 1DX2', except when the sample size provided insufficient pulp (>15g), then the 'Group 1DX1' method was used on a 0.5g pulp sample. The larger split size was selected for more representative Au analysis. Sample splits were leached in hot (95°C) Aqua Regia. Refractory and graphitic samples possibly limited Au solubility. Sample analysis quality control was done by Acme Analytical Labs inserting blanks and running duplicates. Quality control results are presented in the Appendix with the Acme assay certificates.

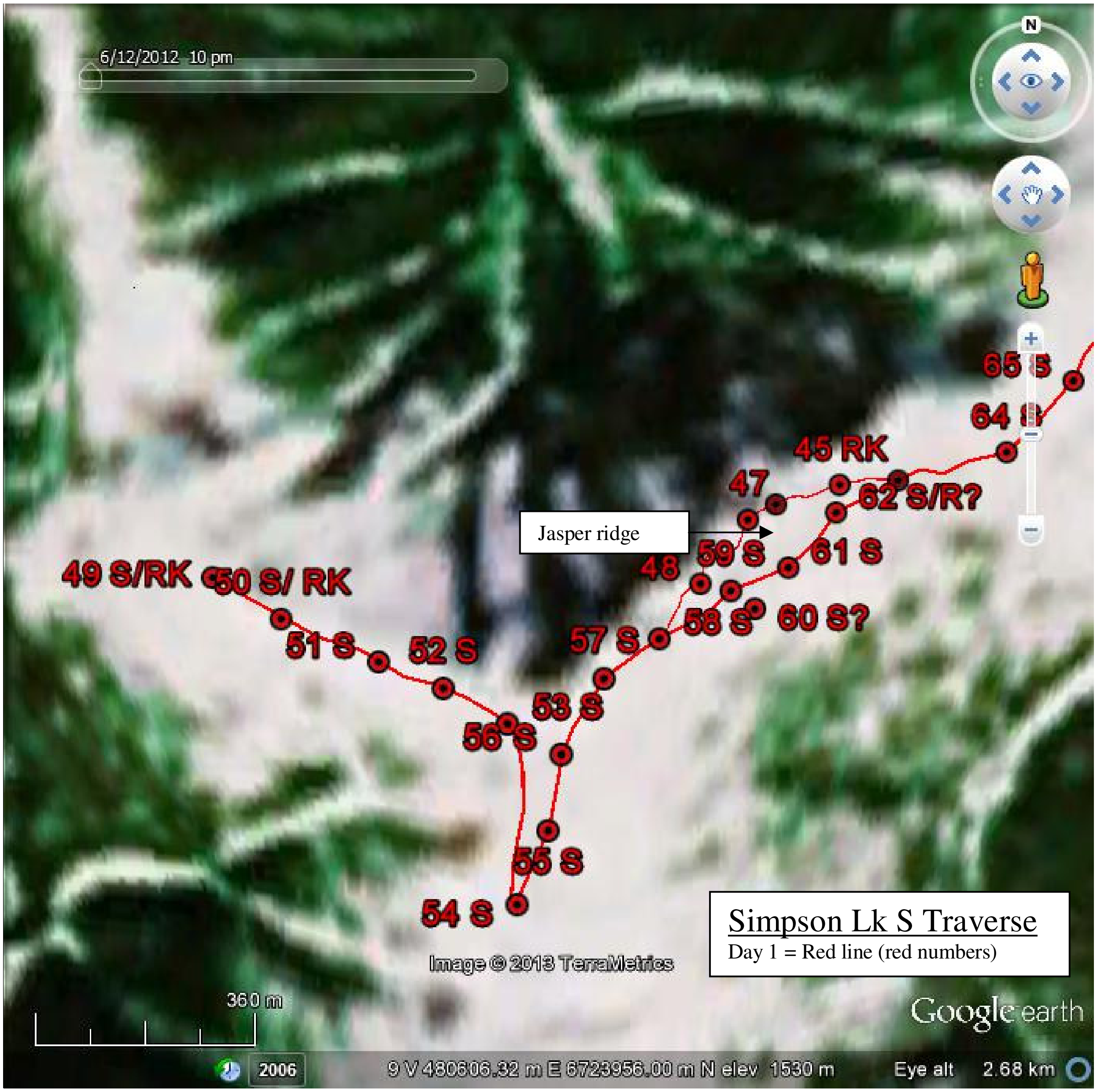
3. TRAVERSES AND RESULTS FOR SILT, SOIL AND ROCK - BY SITE

‘SIMPSON LAKE SOUTH’ TRAVERSES

From “Simpson Lake Camp” 4 traverses were done. Because this is primarily a ‘ridge and spur’ `soil sampling gold project, maps for traverse results highlight the Au assay results, with notes on other anomalous soil element assay results, silt sample results, rock types and other observations such as gossans, etc. Because of the large sample area (with 4 traverses covering a lot of distance most days for ‘ridge and spur’ soil sampling) there will be 3 different traverse maps for the ‘Simpson Lake South’ site plus an overview map below.



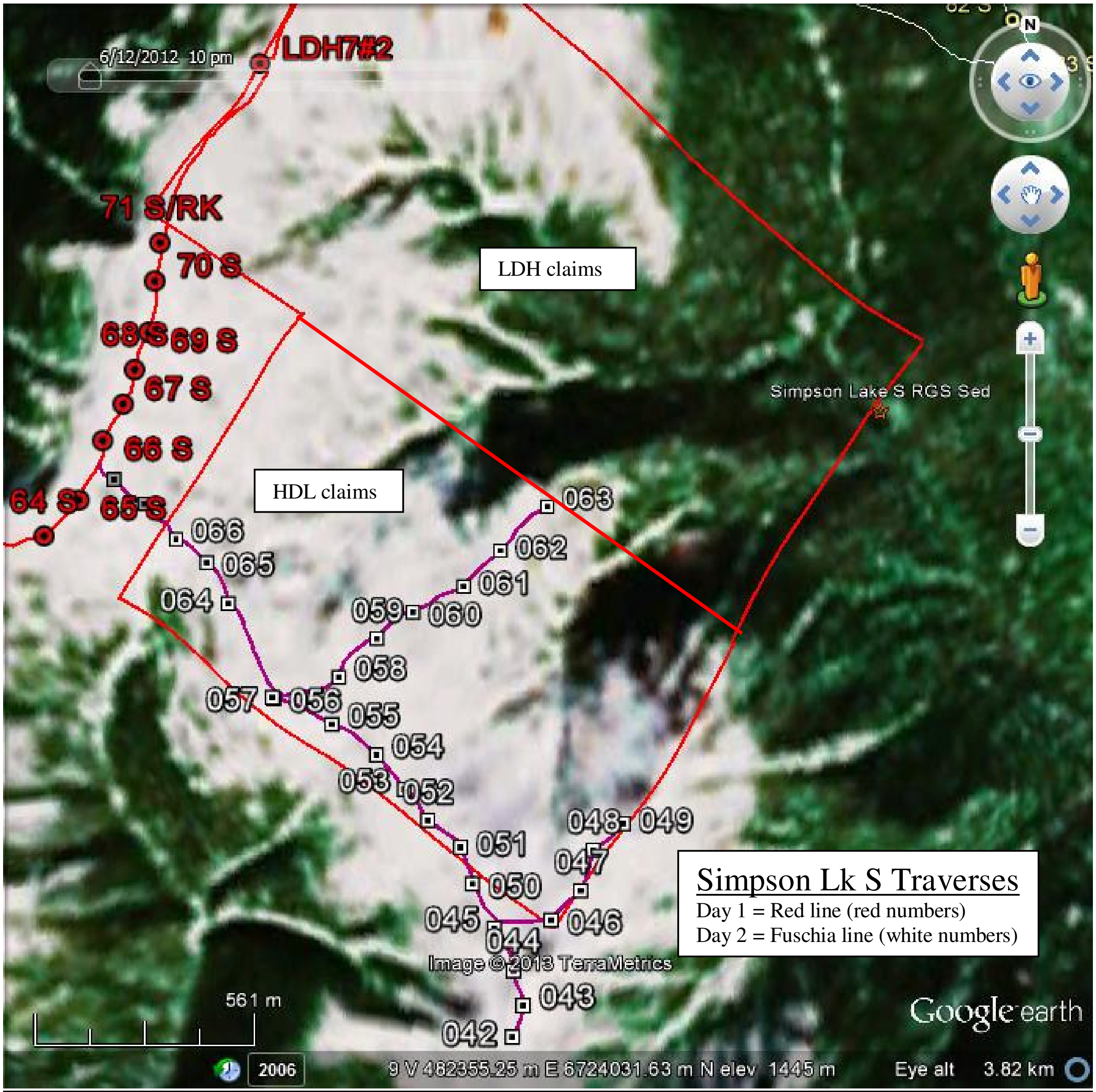
Map 11. ‘Simpson Lake South’ Traverses Overview. *The 4 main traverses are color coded by day. Enlargements will be presented separately on 3 separate maps for details. Silt sample ‘39 vanSED (assay # SLS12-SED-39) had no significant anomalous results. Straight red lines outline the LDH and the HDL claims.*



Map 12. 'Simpson Lake South' Traverse and Sample Sites. *Shows <u>most</u> of Day 1 (coloured-coded red) sample sites, the rest of Day 1 traverses and sample sites appear on the next 2 maps. "S" means soil sample location, and "RK" means rock sample location. The waypoint site numbers above are the #'s used for the assays and the red line is the traverse taken. View looking North.*

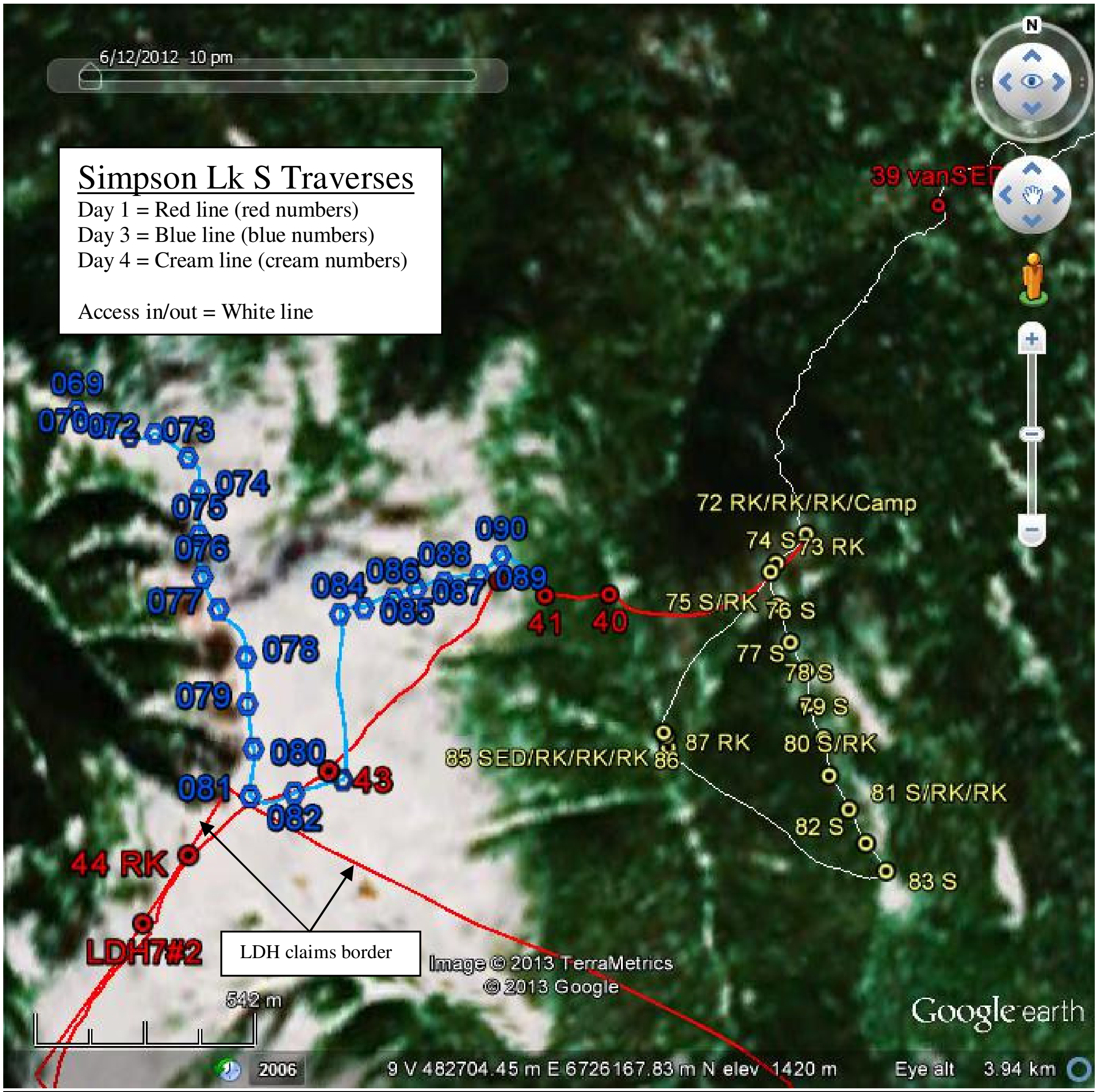
The <u>soil</u> samples' UTM UTM location coordinates are given in a table in the Appendix along with the assay results in the soil assay certificate. The <u>rock</u> samples' UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate.

The waypoint GPS numbers are sequential, but from 2 different GPS's. Therefore traverse routes do have overlapping waypoint #'s in some instances (next 2 maps).



Map 13. 'Simpson Lake South' Traverses and Sample Sites. *Shows Day 2 sample sites (coloured-coded white) as well as more of Day 1 sites (coloured-coded red). "S" means soil sample location, and "RK" means rock sample location. The waypoint site numbers above are the #'s used for the assays and the fuchia coloured line is the traverse taken for Day 2. LDH 7#2 is the claim post #2 location for the LDH 7 (and 8) claim. View looking North.*

The soil samples' UTM UTM location coordinates are given in a table in the Appendix along with the assay results in the soil assay certificate. The rock samples' UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate.

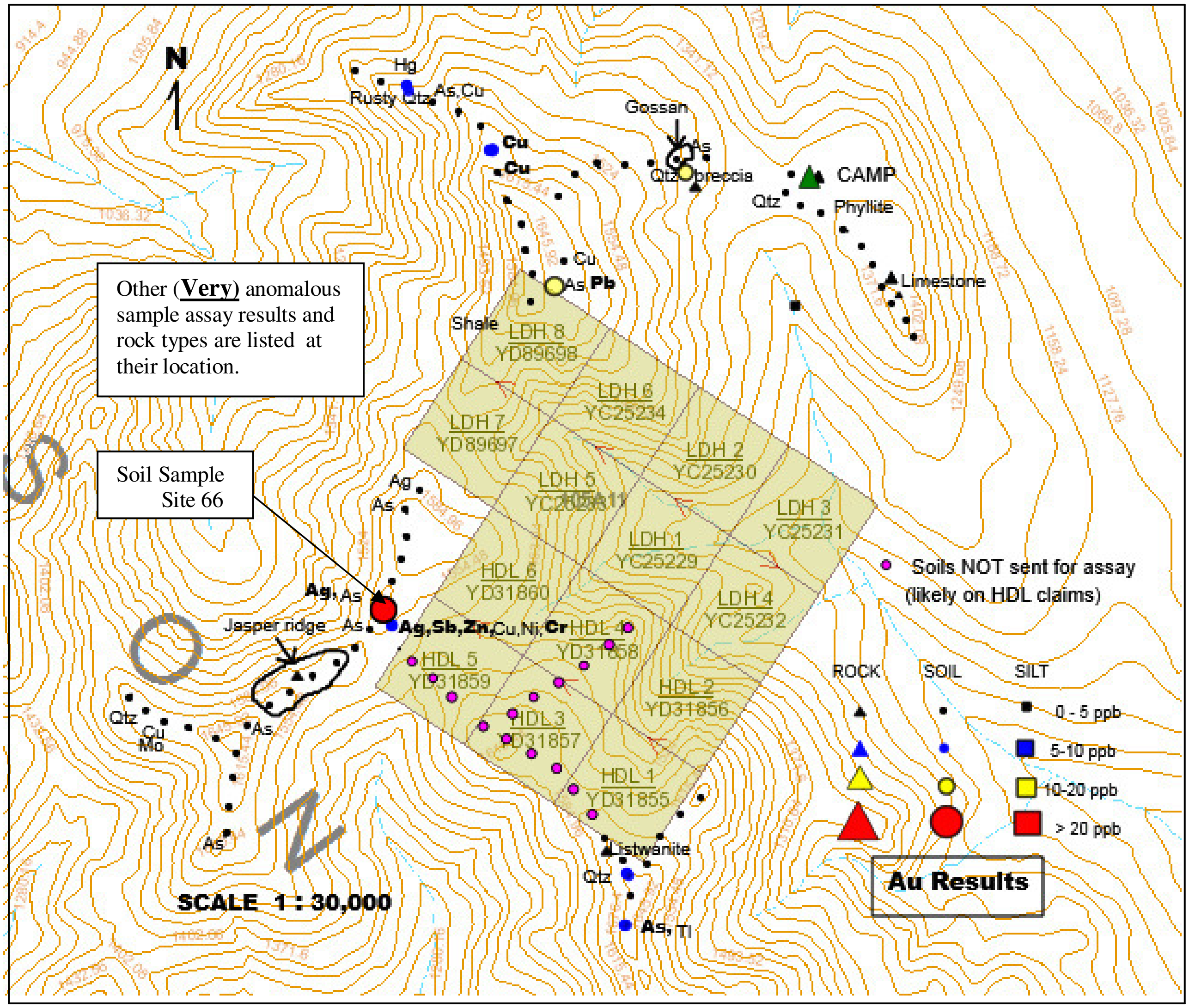


Map 14. 'Simpson Lake South' Traverses and Sample Sites. *Shows primarily the Days 3 & 4 sample sites (coloured-coded blue and cream respectively) as well as more of Day 1 sites (coloured-coded red). "S" means soil sample location, and "RK" means rock sample location. The waypoint site numbers above are the #'s used for the assays. LDH 7#2 is the claim post #2 location for the LDH 7 (and 8) claim. View looking North.*

The soil samples' UTM UTM location coordinates are given in a table in the Appendix along with the assay results in the soil assay certificate. The rock samples' UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate.

‘SIMPSON LAKE SOUTH’ **Au** [and other] RESULTS and DISCUSSION

The map below shows all ‘Simpson Lake South’ soil sample sites Au assay results - and other significant assay results - as well as rock types, gossans, etc.



Map 15. ‘Simpson Lake South’ Sample and Traverse Results. *All Au results plus other additional significant assay results for 1 silt, 54 soil and 7 rocks. Basic rock sample types and gossans are also mapped. The waypoint site numbers for the points above are on Maps 12 - 14 and are the #’s used for the assays. The 105 A/11 claims mapping shows the LDH and HDL claim locations.*

The soil and silt samples’ UTM location coordinates are given in a table in the Appendix along with the assay results in the assay certificates. The rock samples’ UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate. Refer to Maps 12-14 for site GPS waypoint #’s that correspond to the # in the assay certificates for the actual assay data results.

Note : the waypoint GPS numbers are sequential, but from 2 different GPS's. Therefore different traverse routes do have overlapping waypoint #'s in some instances. This was 'solved' by giving the sample #'s under 100 for the Garmin Etrex Venture GPS samples the prefix # "0". So, a real example, sample waypoint # 68 from the Garmin GPS 62st was numbered '68' and the Garmin Etrex Venture GPS sample was labeled '068'. These are reported in the assay certificates this way, plus the site prefix abbreviation. Overlapping waypoint #'s at the same target site only occured for the 'Simpson Lake South' location.

'Ridge and spur' soil sampling was able to detect several anomalous Au locations, although the tenor was not particularily strong. In addition, most of the anomalous Au locations were also anomalous for As as well. At least one location (sites 66-67 & 068) is interesting enough to warrant follow-up, and a few others should be further checked if one were to revisit this 'Simpson Lake South site again.

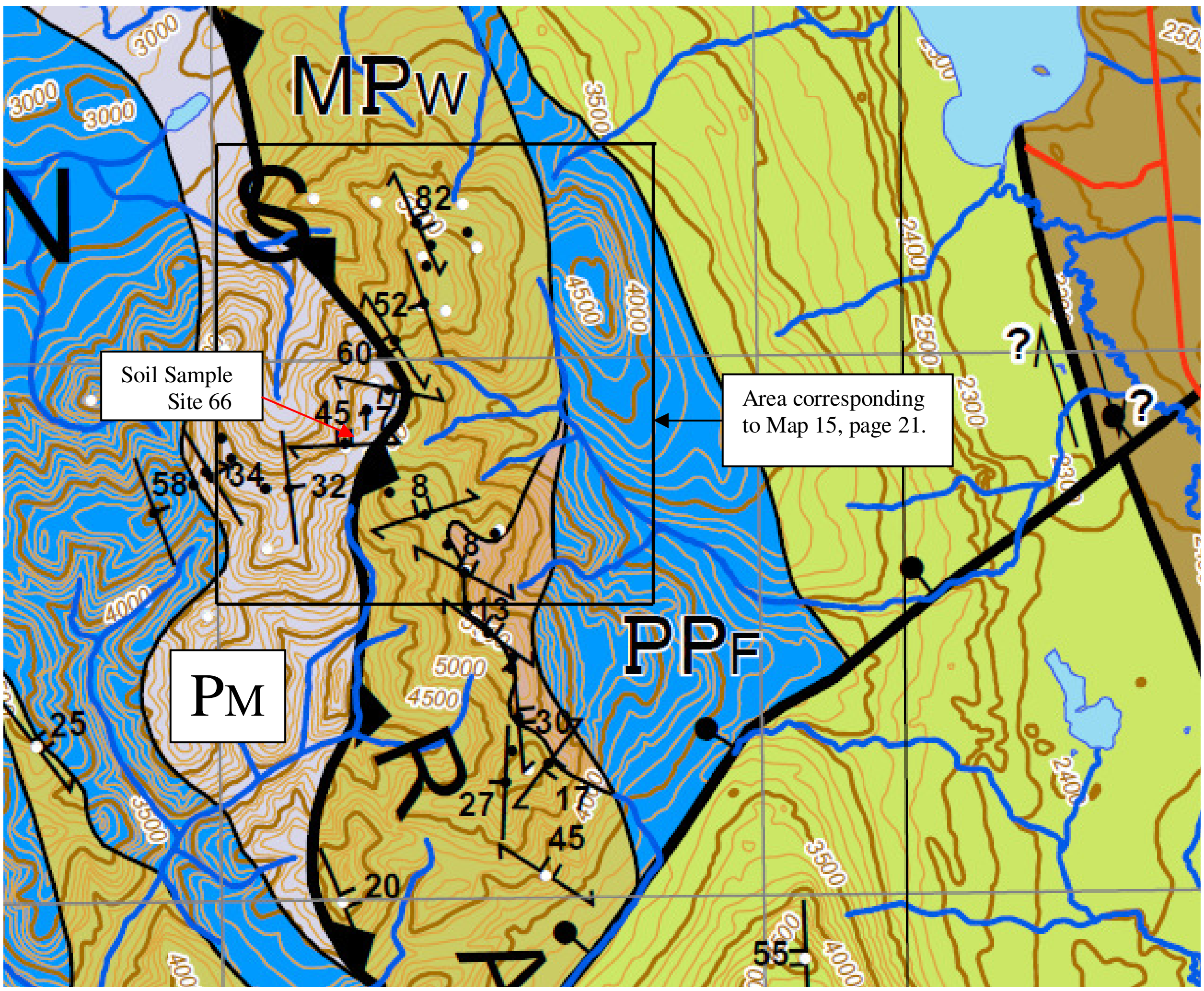
The area just northeast of the jasper ridge is the most promising. Site 66 (colour-coded red on Map 13) has the highest Au soil assay for all of the 'Simpson Lake South' sites (47.4 ppb for soil sample SLS12-S-66) - along with anomalous As and Ag. In addition, the closest proximity (90 m) soil sample site assay (SLS12-S-068) was also somewhat anomalous for Au and As. It is notable that site 068 (colour-coded white on Map 13) was anomalous for several elements, more than any other site. It is particularily enriched in Zn (highest of all 'Simpson Lake South' sites), Ag, Cr and Sb, and also anomalous for Cu and Ni, and contains some As. Also supporting the Au potential for this area is the other close site 65 (colour-coded red on Map 13) which is very anomalous for As. Structurally, this area is just above and north of a depression or "pass" running SE/NW perpendicular to the ridge and which looks like a fault. This location is only 100m from a regional scale thrust fault which could have provided the pathway for fluids to migrate to this site. Please refer to the geology map on page 23. The presence of a very large jasper body on the other side of the 'fault' structure is interesting, although it was apparently not mineralized. Please refer to rock assay SLS12-RK-46 for the jasper rock outcrop results.

The northwestern end of the 'Simpson Lake South' 'ridge and spur' soil sample project also had interesting results in 2 areas. The northern most soil sampling yielded anomalous Au, As, Hg and Cu assays (sites 071-072) and the ridge just to the south was very anomalous for Cu and somewhat anomalous for Au, As, Co and Mn (sites 075-076). The 4 soil sample 300 m portion of the ridge from sites 072 - 075 was anomalous for As.

The other interesting area to the north for the YMIP target 'Simpsom Lake South' was a very rusty gossan with grey quartz (site 089) and white quartz/mafic/serpentine breccia (site 090). While the assay for the rock at site 089 was not significantly mineralized, the soil assay (SLS12-S-089) did 'kick' for Au, As and Hg, as well as some Mn and Bi.

The silt sample at site 85 (assay SLS12-SED-85) lacked notable results, with all results at the 90th percentile or less when compared to the Yukon-Tanana RGS Silt Sample Percentile Thresholds Table (in the Appendix). The 99th % Au RGS site was over 1200 m downstream, so further downstream sampling is needed.

The geology map for the 'Simpson Lake South' target area is below. Soil sample 66 was the best Au - multi element anomaly for the 'Simpson Lake South' target. It occurs very close to a regional thrust fault which could have provided the pathway for fluids to migrate to this site. It also occurs in rocks labelled **PM**, identified as carbonaceous phyllite. This overlies **PPF**, a limestone unit. The carbonaceous phyllite can form a barrier to fluid migration except where the ground has been structurally prepared (faulted). As mentioned on the previous page, "Structurally, this area is just above and north of a depression or "pass" running SE/NW perpendicular to the ridge and which looks like a fault". The geology map shows a foliation at this location, sort of confirming field observations. Essentially, this very anomalous multi-element area is near an intersection of a thrust fault, depression and a jasper body.

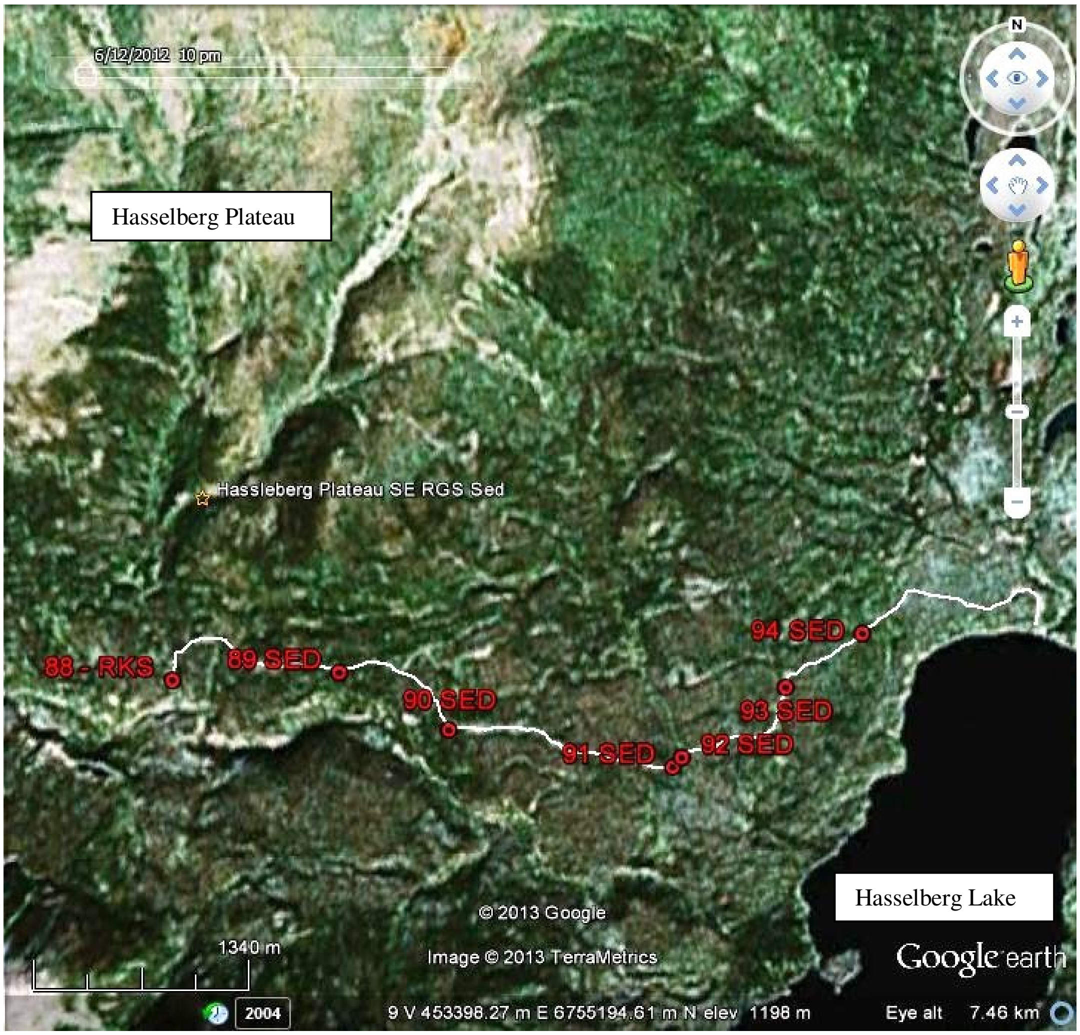


Map 16. Portion of Geology Map 105 A (105 A/11). *This shows the 'Simpson Lake S' target area and the soil sampling area outlined in black. Note the presence of a large regional thrust fault which could have provided the pathway for fluids to migrate to Site 66. Also, see the comment at the top of this page for more detail.*

‘HASSELBERG PLATEAU SE’ (Southeast) TRAVERSE

The ‘Hasselberg Plateau SE’ traverses were done using an Argo ATV along a cat trail that ended at a major creek flowing south from the Hasselberg Plateau. The creek at this spot (site 88) was at the bottom end of a canyon. It was believed we were further northeast on the EZ claims and that this site was claimed, so no silt sediment sample was taken. However, we were at a different location and this site was not claimed, so it would have been ‘smart’ to take a silt sample anyway. Rocks in the streambed were mineralized and several samples were taken and assayed.

The Google Earth map below shows the location of the traverse and sample sites.



Map 17. ‘Hasselberg Plateau SE’ Traverse. *“SED” means silt sample location, and “RK” means rock sample location. The waypoint site numbers above are the #’s used for the assays and the white line is the traverse taken. View looking North.*

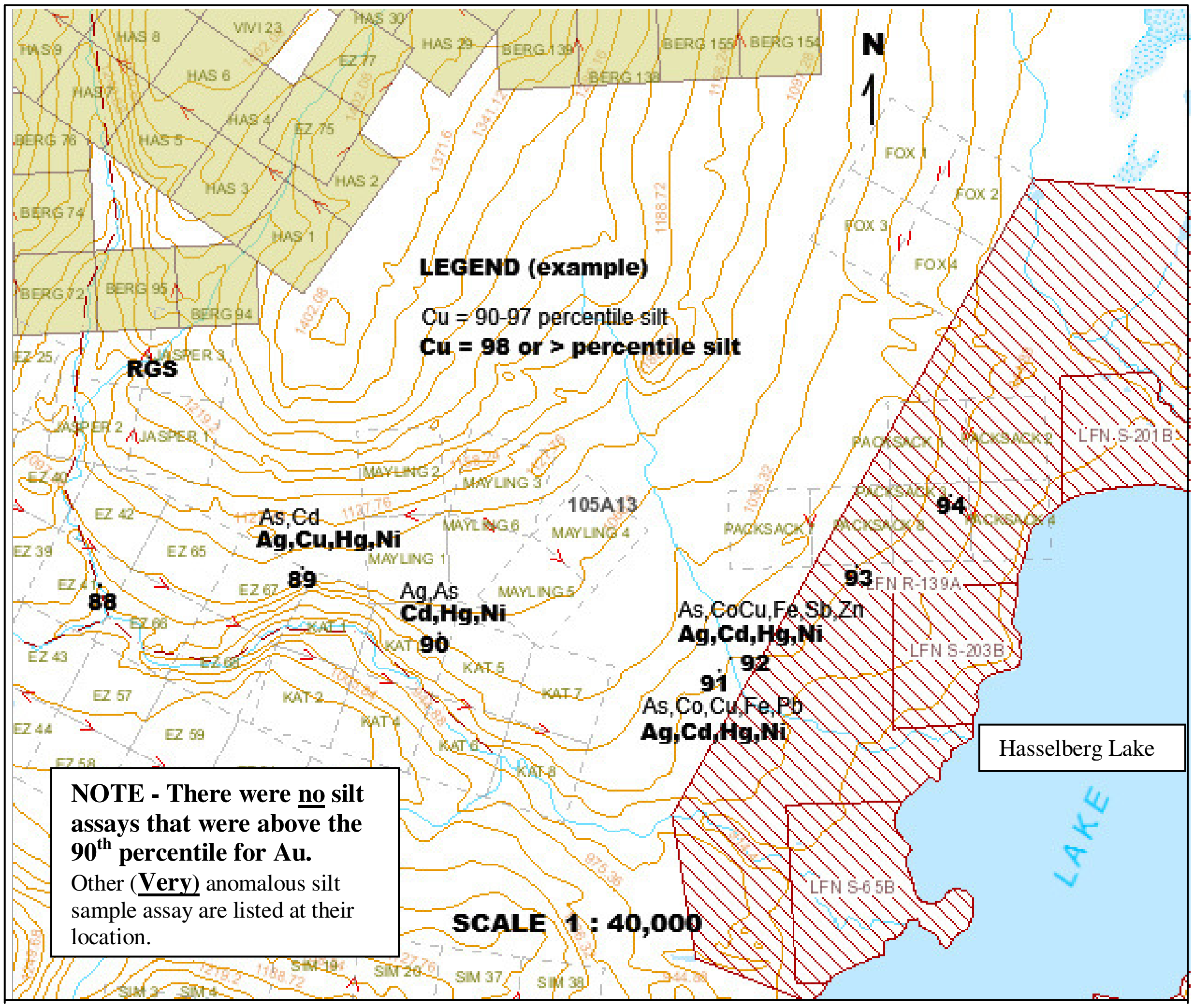
Silt sediment samples were taken at every flowing waterway on the return trip to the cabin at Hasselberg Lake. A total of 6 silt samples were taken from sites 89 - 94. The last 2 waterways going east (sites 93 and 94) were nothing more than boggy flows, and it proved impossible to get enough of the silt fraction for an assay (0.5 g).

No (‘ridge and spur’) soil samples were collected as this was a valley floor cat road.

The ‘Hasselberg Plateau SE’ <u>silt</u> samples’ UTM location coordinates are given in a table in the Appendix in addition to the assay results in the silt assay certificate. The <u>rock</u> samples’ UTM location coordinate is also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate.

<u>‘HASSELBERG PLATEAU SE’ **Au** [and other] RESULTS and DISCUSSION</u>

A map showing ‘Hasselberg Plateau SE’ silt sample sites assay results appears below. There were <u>no</u> silt assays that were anomalous (above the 90^{th} %tile) for Au.



Map 18. ‘Hasselberg Plateau SE’ Traverse Results. *Significant assay results for 4 silt samples are indicated. The last 2 waterways going east (sites* ***93*** *and 94) were boggy flows and there wasn’t enough of the silt fraction for an assay (0.5 g). The above element anomalies are relative to the other areas’ silt sample assays.*

The results for silt samples at sites 89 - 92 are summarized in the table below. Assay results (HPSE12-SED-89 through HPSE12-SED-92) were compared to the Yukon-Tanana RGS Silt Sample Percentile Thresholds table to generate the percentiles for the silt samples taken for this Tintina Gold Project.

Silt Site	Ag	As	Au	Cd	Co	Cu	Fe	Hg	Mn	Ni	Pb	Sb	Zn
Hasselberg Plateau SE **RGS**		99+	95	90	99	90	95			99			
89	99+	95		90		98		99++		99+			
90	95	90		99				99+		99			
91	99+	95		98	90	90	90	99++		99	90		
92	99	95		99	95	95	90	99+		99		90	95

Table 4. 'Hasselberg Plateau SE' Assay Results Percentile Summary Table. *The addition of a "+" represents 'very anomalous', a "++" represents 'very highly anomalous'. The percentiles for the silt sample assay results for this Tintina Gold Project were generated from the percentile thresholds in the Yukon-Tanana RGS Silt Sample Percentile Thresholds table which can be found in the Appendix.*

Some useful associations can be found in the 'Hasselberg Plateau SE' silt sample table above. The 'Hasselberg Plateau SE' silt sample area is anomalous or better for Ag, As, Cd, Hg and Ni in all 4 silt samples. Cu was anomalous or better in 3 of the 4 samples. The deposit model suggested by this association is Ni-Cu-(Co). This is supported by the geological mapping of a serpentinized mafic/ultramafic unit upslope and for the Hasselberg Plateau. The cat trail used by the Argo ATV was for hauling out Nephrite Jade found at site 90 and in the creek at site 88. Additionally, pathfinder elements for VMS deposits (Cu, Zn, Pb, Ag, +/- Co, As and Sb) show some correlation with the silt sample results.

A very extensive talc field on the Hasselberg Plateau that was the focus of drilling this summer by Wolverine Minerals on Hasselberg Plateau for listwanite fault-associated gold points to extensive hydrothermal alteration upstream of site 88. This is probably the source of the very highly anomalous Hg that is widespread downslope in all 4 silt samples. Hg is highly soluble and can travel far afield of its source.

Silt sampling was very close together for sites 91 and 92 and the assay results are very similar. This helps verify the integrity of the silt sampling procedures used for this project. The additional anomalous presence of Zn and Sb could possibly indicate a geological change in the area upslope. See the recommendation on page 27 of this report.

It is too bad that the last 2 waterways going east (sites 93 and 94) were nothing more than boggy swampy flows, and there wasn't enough of the silt fraction for an assay (0.5 g). It would have been interesting to see if the Zn and Sb would have continued to be anomalously present further east. A recommendation for better silt sampling might be to wash the muck sample through a screen to collect a larger silt fraction, or alternatively, taking a larger 'silt' (muck) sample than normal in the hope that enough silt would be present for an assay (0.5 g).

A rock descriptions table and the rock assay certificate are given in the Appendix along with a table giving the site UTM location coordinates. Six rock samples sent for assay from site 88 are in the rock assay certificate as sample #'s HPSE12-RK-88A through HPSE12-RK-88F. The rock assay 'results' are summarized below.

Site 88 Summary Table 'Hasselberg Plateau SE' Rock Sample Results			
Assay sample #	Anomalous	Very anomalous	Very highly anomalous
HPSE12-RK-88A	Ag,As,Zn	Au,Tl,Cu,V	Hg,Sb
HPSE12-RK-88B	Cu,Cr,Hg	Au,As	Ag,Sb
HPSE12-RK-88C	Ag,Cu,Cr,Hg,Zn,Se	As,Tl	Sb
HPSE12-RK-88D	Co,Fe	Ni,Mn	Cr
HPSE12-RK-88E	Fe	Ag,As,Sb,Hg,Co,Mo,Bi,Se	Au
HPSE12-RK-88F	Cu,Cr,Hg	Fe,Mn,V	Ni,Cr

Table 5. Site 88 Rock Assay Results Summary Table. *"Anomalous", "very anomalous" and "very highly anomalous" are subjective and based on comparative rock assay results for all 29 rock samples for the Tintina Gold Project. Even though the above are somewhat relative to the other rock sample assays, some useful associations can still be deducted.*

Site 88 is 3 km downstream of one of the highest Au RGS samples in the whole region (>99th percentile). A smaller feeder stream 1 km upstream northeast of site 88 also is very anomalous for gold (95th percentile). The rocks in the streambed are visibly mineralized with pyrite, smithsonite, very fine grained grey metallics and a small amount of (possibly copper mineralization?) green/blue minerals. Most of the visibly mineralized rocks are quartz and quartz breccia, siltstone, or mafic rocks with green mineralization (mariposite?). Most of the rocks collected were rusty weathering and heavy. Rocks assayed were of 3 main types, siltstone (88A and 88C), quartz and quartz breccia (88B and 88E), and mafic/ultramafic (88D and 88F).

The site 88 location is at the bottom end of a narrow 'canyon' which has steep walls of layered metasedimentary fine grained shale and siltstone type rocks, some of which are weakly mineralized with smithsonite and pyrite. There is a good correlation with pathfinder elements for VMS deposits (Cu, Zn, Pb, Ag, +/- Co, As and Sb) with the siltstone samples (88A and 88C). 88A is anomalous for As,Tl - and exceptionally anomalous for Hg and Sb, leaving open the possibility for epithermal sediment hosted replacement gold deposits where the pyritic ores display an association with As, Hg and Sb - or - carbonate-base metal gold low sulphidation epithermal deposits in which quartz-sulphide fluids that cooled at high level epithermal settings may exhibit anomalous As, Hg and Sb (Corbett, 2002). Further prospecting of this meta-sedimentary fine grained rock package in and above the canyon walls upstream is warranted for VMS and pyritic ores.

Upslope on the Hasselberg Plateau a very large talc field with very anomalous Au in soils was the subject of drilling in 2012, but the drill results were disappointing. What it does suggest is the presence of a large hydrothermal/epithermal system. The 88B and 88E rocks and the silt samples 89-92 taken just to the east all point to possible epithermal activity under the Hasselberg Plateau.

The quartz (88B) and quartz-breccia (88E) show more affinity for hydrothermal mineralization, and are a good match for the epithermal Au-Ag-Cu: high sulphidation model of Panteleyev (1996) in which the deposits form veins and massive sulphide replacement pods and lenses, stockworks and breccias where pyrite and quartz predominate. The geochemical signature (where Au, Cu, As dominate with minor Ag, Zn, Pb, Sb, Mo, Bi, Sn, Te, W, B and Hg) is a pretty good match for the 2 rocks assayed, especially the quartz-breccia which fits this model very well except for Cu. These 2 rock samples have the highest Au values of any rocks assayed for the entire Tintina Gold Project, although one has to be careful drawing too many conclusions from assaying only 2 samples of this quartz/quartz-breccia rock type.

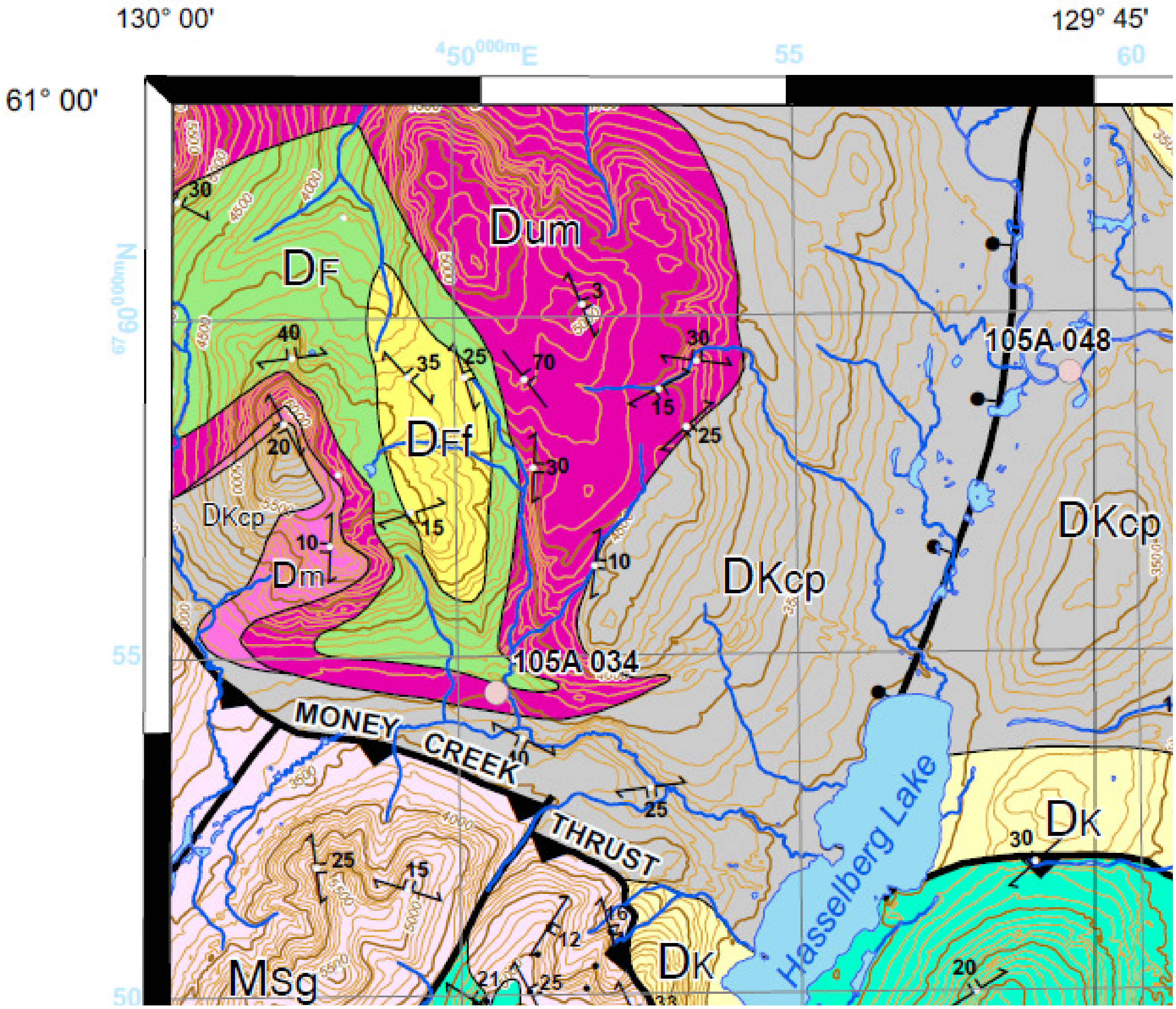
A further sampling / assaying of this quartz/quartz-breccia rock type is recommnded for follow-up upstream of site 88. Also recommended is follow-up streambed prospecting of the largest stream to the east, site 92, that also had the most anomalous silt samples (site 092) for the Au-Ag-Cu-(As-Hg-Sb) epithermal Au-Ag-Cu: high sulphidation model.

The abundant visibly mineralized quartz, quartz breccia (and mafic rocks discussed below) collected for assay from the streambed at site 88 had no apparent local source, leading to the assumption that they are from an upstream source. Prospecting upstream for the mineralized quartz and quartz breccia is warranted. The closest claim boundary is 1.3 km north, upstream of site 88. It is possible that the sources of the mineralized quartz and quartz breccia are within that section of the stream or the northeast sidestream (95^{th} %tile Au RGS). The steep walls of the canyon/stream bank make prospecting easier as bedrock is readily visible - but not necessarily readily accessible.

The 2 mafic/ultramafic rocks assayed (88D and 88F) showed an entirely different geochemical signature - as would be expected. They are consistent with a Ni-Cr-Co or Ni-Cr-Cu deposit type which is a common deposit type in ultramafic rock packages. Further prospecting for this deposit type is also warranted economically due to the promising higher grades of the assays. The nature of the large ultramafic body that makes up the entire Hasselberg Plateau is said to be a layered intrusion (Liverton, 2012). Therefore, there is a real possibility for this Ni-Cr-Co deposit type to occur - along with possibly PGM's. Assessment work filed on the Vivi claims on the Hasselberg Plateau had significant PGM's in soil assays - enough to recommend follow-up for exploration for this precious metal PGM group.

For the reason above, future silt sampling for streams draining the Hasselberg Plateau should include assays for PGM's. This includes future recommended silt sampling upstream of site 88 and at the site 92 stream.

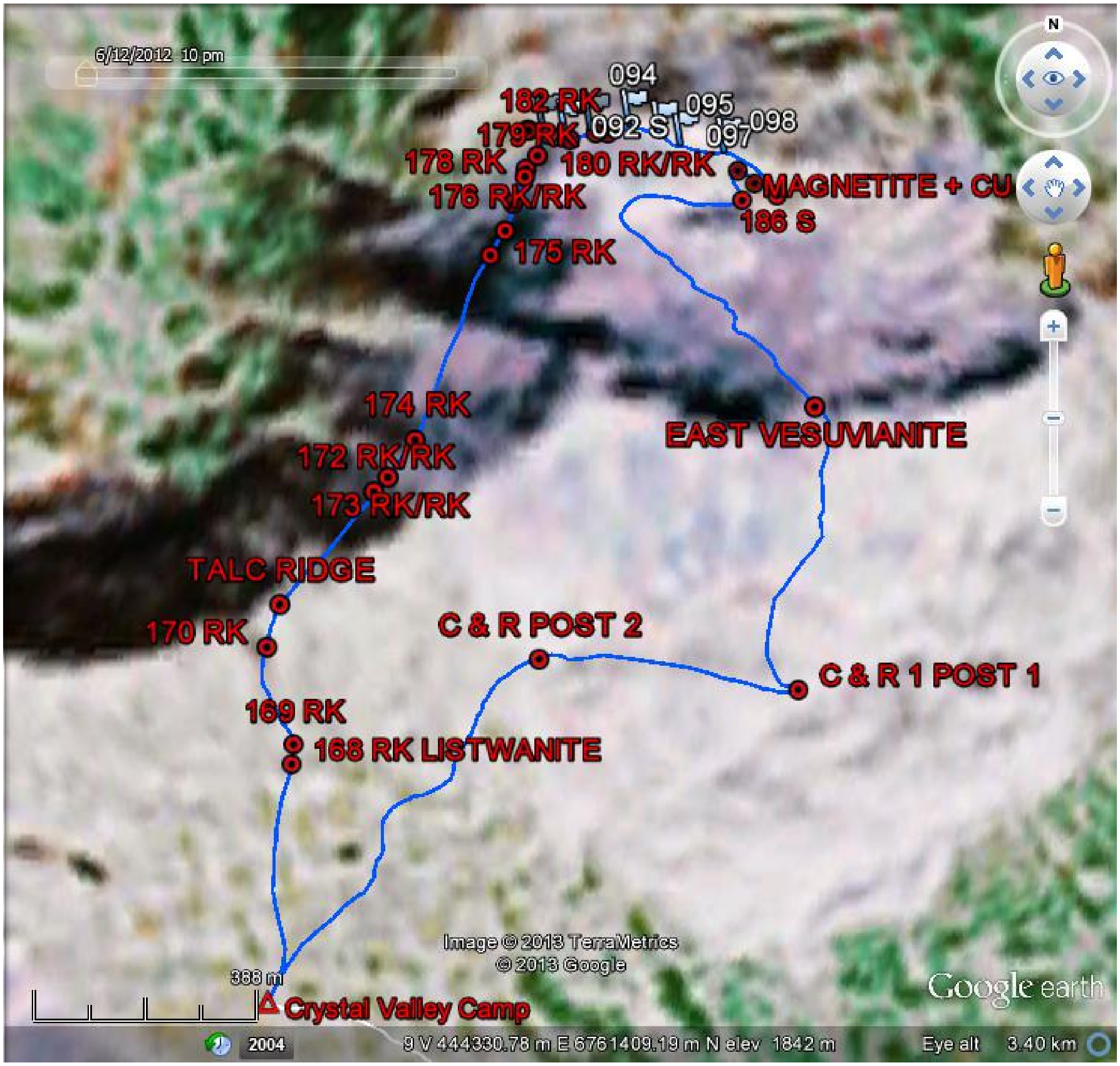
A reference to the geology map below by Mortensen and Murphy (2005) shows the northwest corner of 105 A, which is 105 A/13. The minfile occurrence “circle dot” at 105 A 034 marks the site 88 location. The canyon occurs in rocks identified as **DF,** and are likely layered carbonaceous metamorphosed siltstone. Much of the rock in the upstream center of the basin is ultramafic and the focus of the 2012 drilling by Wolverine Minerals. **DFf** is described as “felsic metavolcanic rock.... locally rusty and pyritic”. Perhaps the pyritic quartz and quartz breccia at site 88 originated in this rock package and was carried southward by stream or glacial action (or both) to site 88.



Map 19. Northwest Corner of Geology Map 105 A (105 A/13). *The minfile occurence “circle dot” at 105 A 034 approximately marks the site 88 rock sample location.*

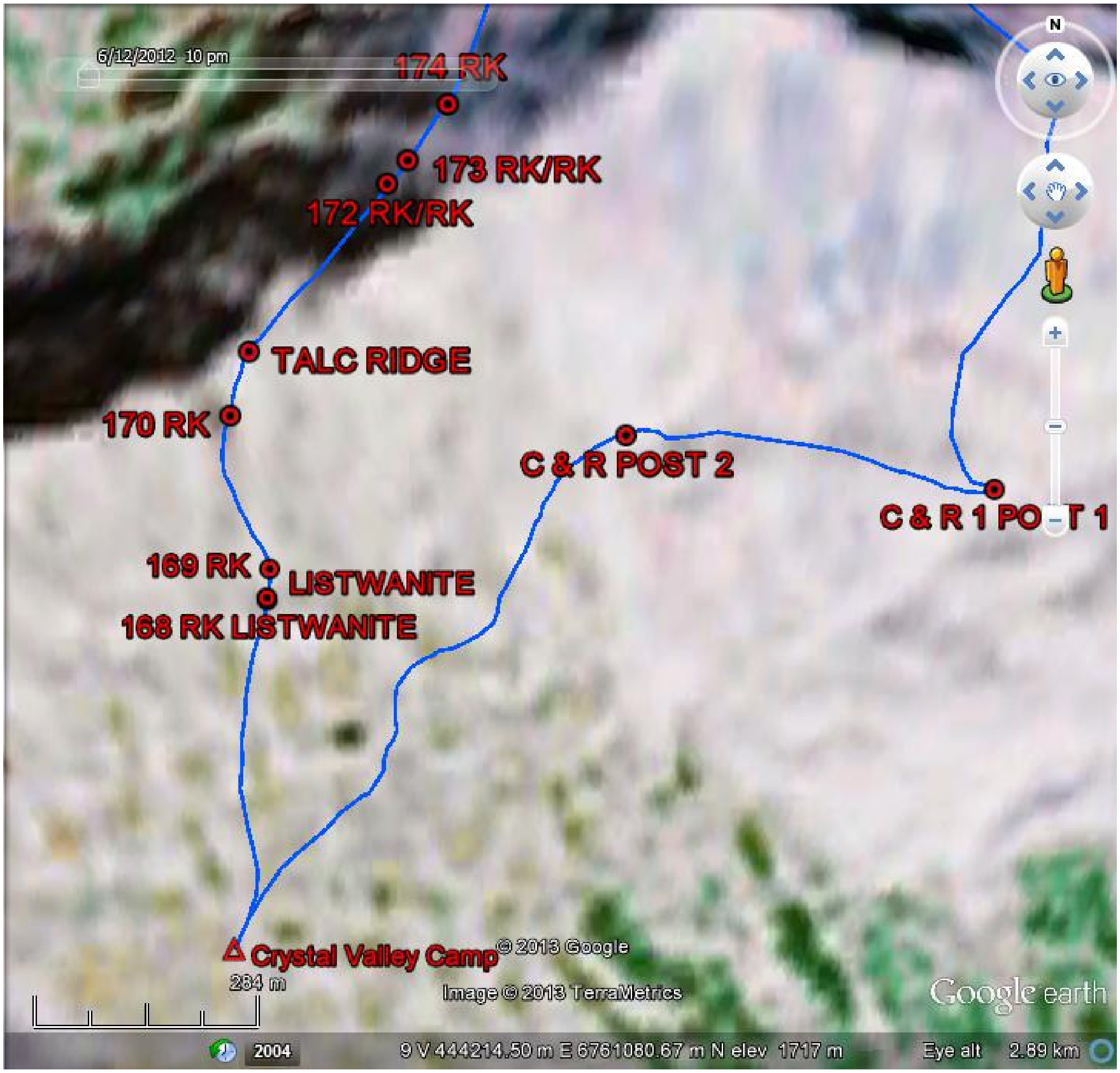
'JESSE'S NAP FLAT' TRAVERSE

The 1 day traverse to this alternate site - not in the origonal application - yielded the best Au soil assay of the entire project. The traverse overview is shown below.



Map 20. 'Jesse's Nap Flat' Traverse Overview. *Enlargements will be presented separately on 2 separate maps for details. The red waypoints and the red notes were from one GPS unit and the white ones were from another GPS unit, hence the waypoint number sequence is different. View looking North.*

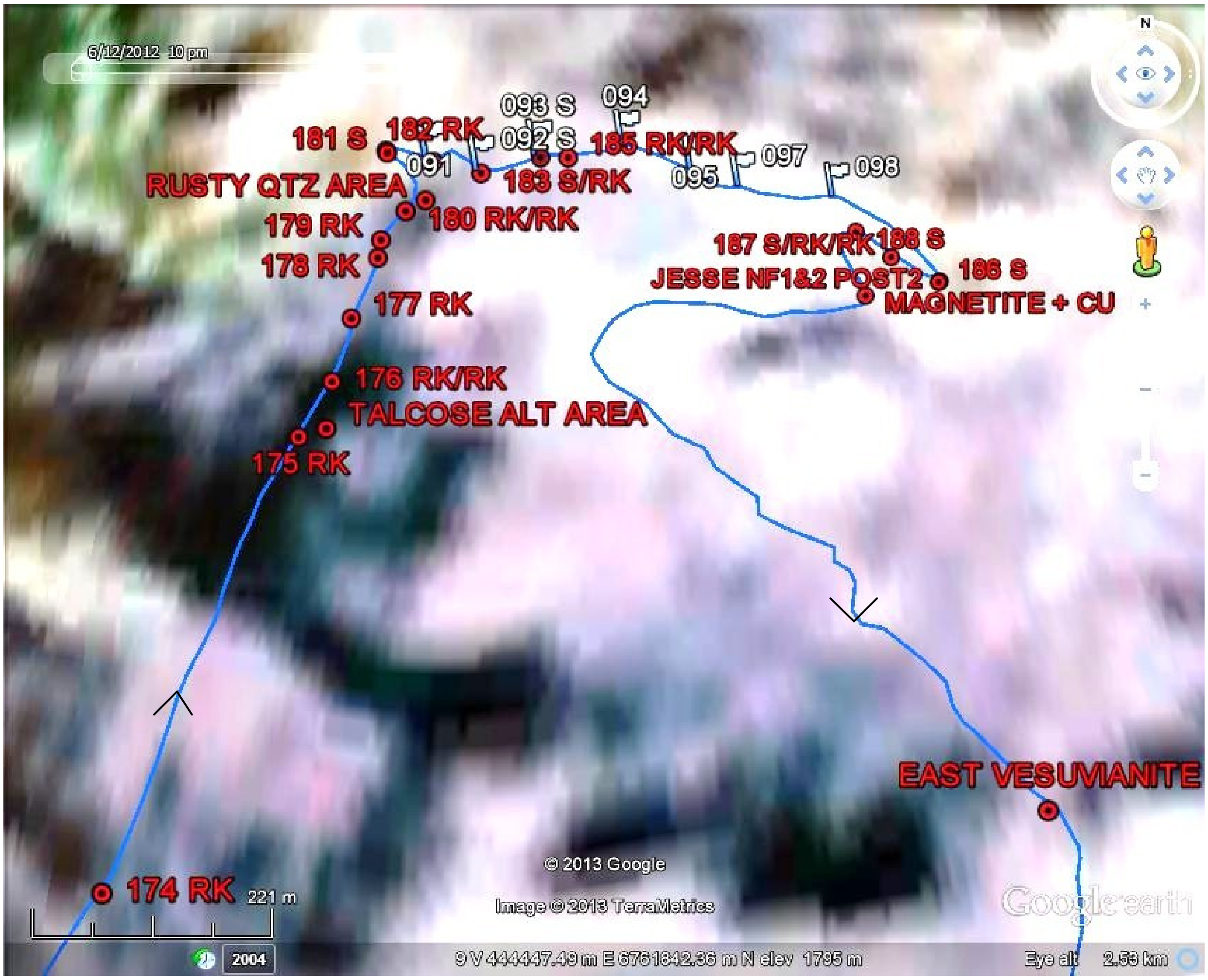
Although the traverse was only 1 day, it is necessary to include 2 detailed maps to show all of the sample sites so all the labels are easily readable. The <u>southern part</u> of the 'Jesse's Nap Flat' traverse is shown below. The <u>northern part</u> of the 'Jesse's Nap Flat' traverse is shown on the next page.



Map 21. 'Jesse's Nap Flat' Detailed Traverse - <u>southern portion</u> (basically just the traverse route going to 'Jesse's Nap Flat' and back to camp). *"RK" means rock sample location. The mountain at top of the map is locally known as "Pyramid Mtn." The C & R claim was staked during this traverse. View looking North.*

The <u>soil</u> samples' UTM location coordinates are given in a table in the Appendix along with the assay results in the soil assay certificate. The <u>rock</u> samples' UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate. Also refer to Map 22.

The more detailed map for the <u>northern</u> part of the 'Jesse's Nap Flat' traverse is shown below. The map showing the southern portion of the 'Jesse's Nap Flat' traverse is on the previous page.

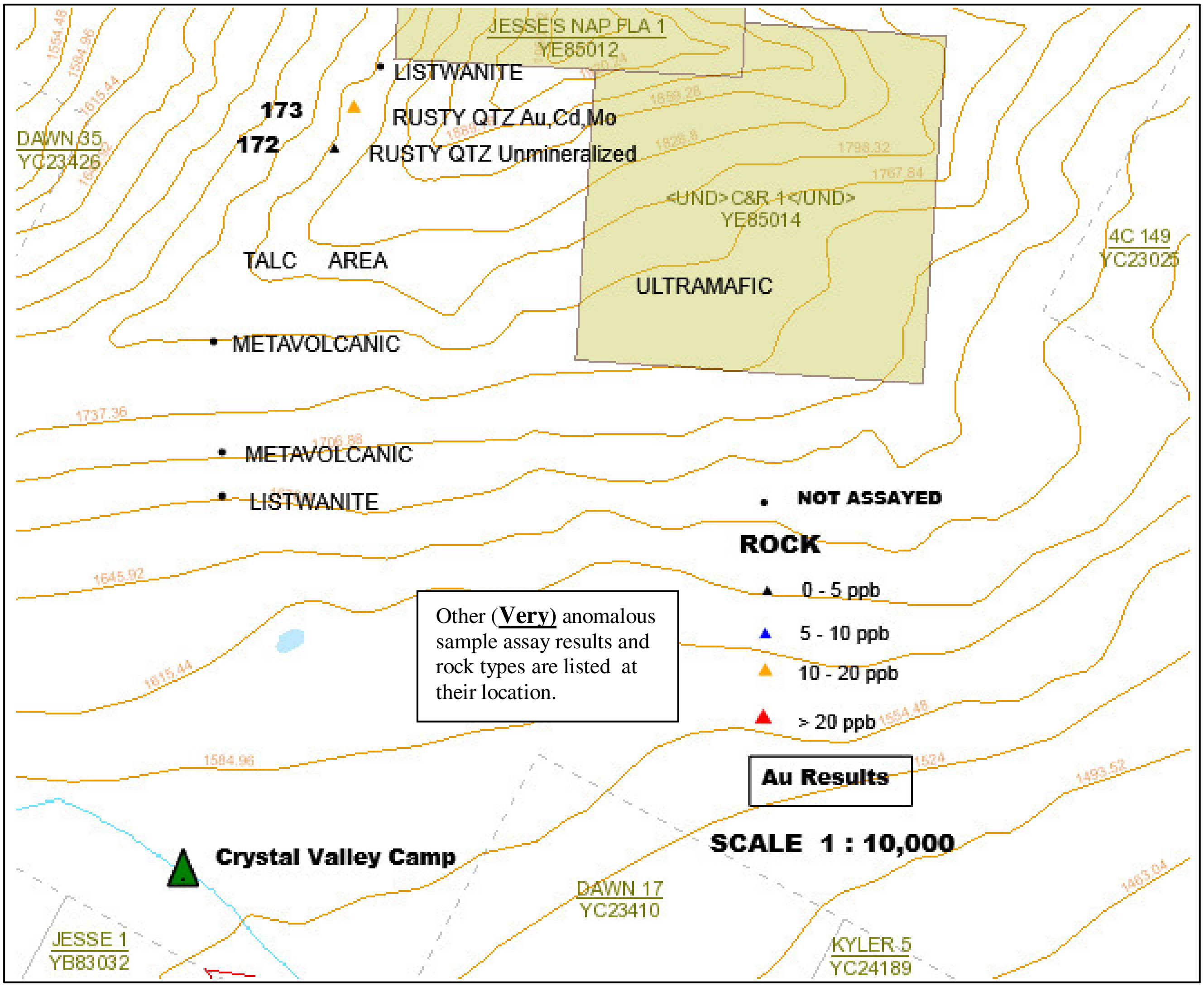


Map 22. 'Jesse's Nap Flat' Detailed Traverse - <u>northern portion</u>. "S" means soil sample location and *"RK" means rock sample location. The red waypoints and the red notes were from one GPS unit and the white ones were from another GPS unit, hence the waypoint number sequence is different. There is no [white] '096' soil sample site. The JESSE'S NAP FLAT 1 and JESSE'S NAP FLAT 2 claim was staked during this portion of the traverse to cover the rusty quartz area and the orange gossanous area from 091 - 098. View looking North.*

The <u>soil</u> samples' UTM location coordinates are given in a table in the Appendix along with the assay results in the soil assay certificate. The <u>rock</u> samples' UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate. Refer to Map 23 and Map 24 for site GPS waypoint #'s that correspond to the # in the assay certificates for the actual assay data results.

‘JESSE’S NAP FLAT’ TRAVERSE **Au** [and other] RESULTS and DISCUSSION

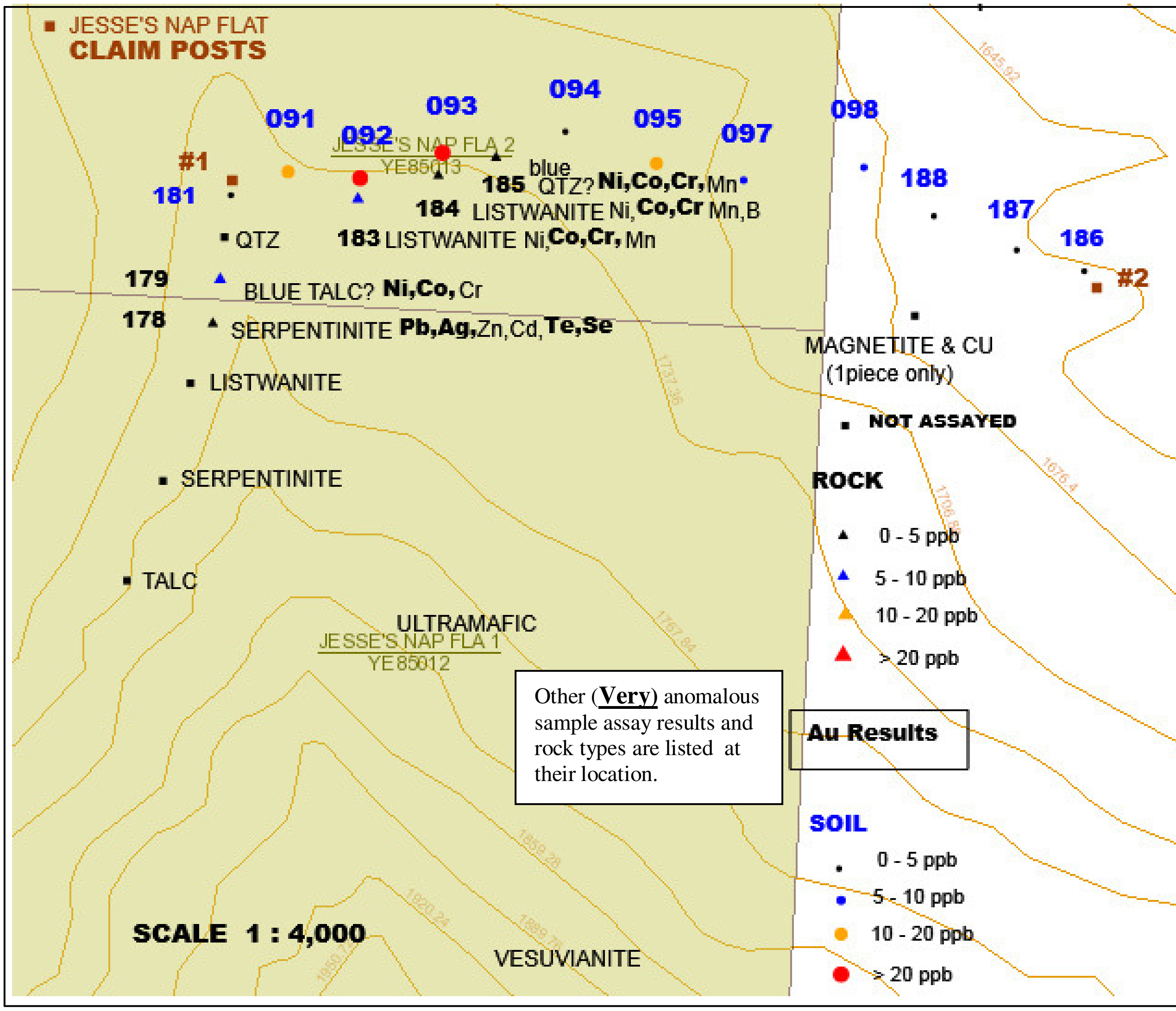
A map showing the southern portion of the ‘Jesse’s Nap Flat’ rock sample sites Au assay results - and other significant assay results - as well as rock types appears below.



Map 23. ‘Jesse’s Nap Flat’ Sample and Traverse Results - southern portion (basically just the traverse route to ‘Jesse’s Nap Flat’). *Au results plus other additional significant assay results for 2 rocks. Basic rock sample types are also mapped. The waypoint site numbers for the points above are the #’s used for the assays. The 105 B/16 claims mapping shows the JESSE’S NAP FLAT #1 and C & R claim locations. Even though the above element anomalies are somewhat relative to the other sample assays, some useful associations can be deducted.*

The rock samples’ UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate. The site GPS waypoint #’s correspond to the # in the assay certificates for the actual assay data results.

A map showing the northern portion of the 'Jesse's Nap Flat' soil and rock sample sites Au assay results - and other significant assay results - as well as rock types appears below.



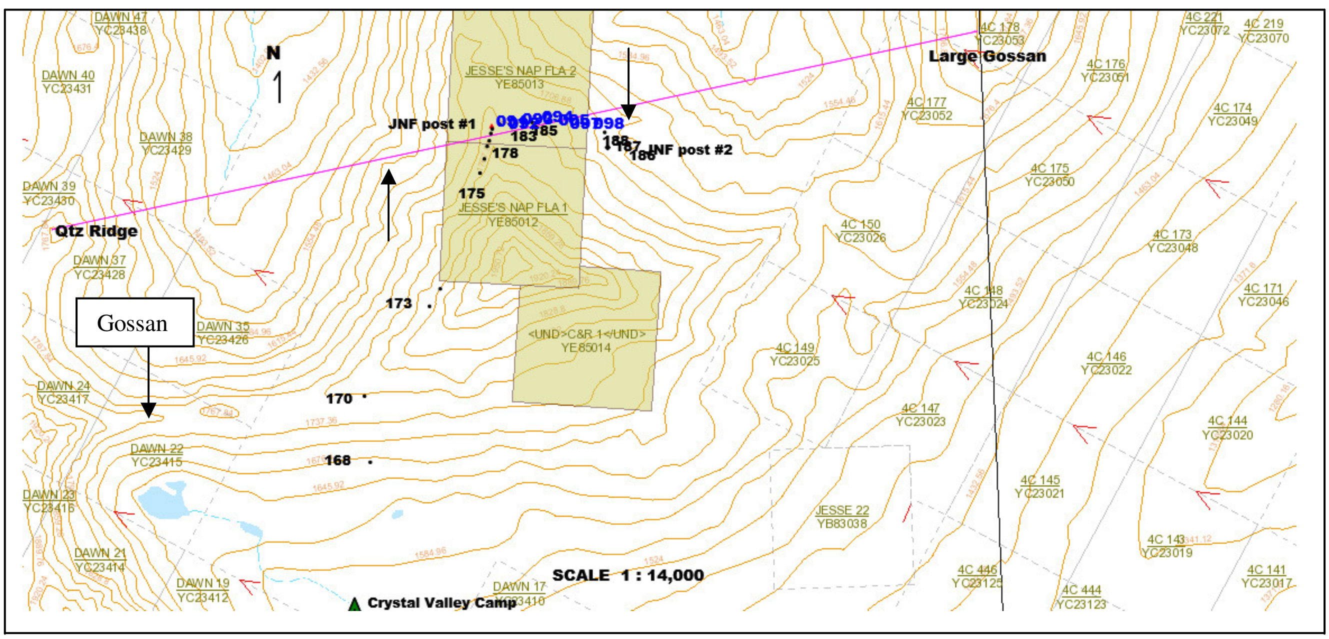
Map 24. 'Jesse's Nap Flat' Sample and Traverse Results - northern portion. *All Au results plus other additional significant assay results for 11 soil samples and 5 rocks. Even though the above are somewhat relative to the other rock sample assays, some useful associations can be deducted. Basic rock sample types are also mapped. The waypoint site numbers for the points above are the #'s used for the assays. The 105 B/16 claims mapping shows the JESSE'S NAP FLAT #1 & #2 claim locations.*

The soil samples' UTM location coordinates are given in a table in the Appendix along with the assay results in the assay certificates. The rock samples' UTM location coordinates are also given in a table in the Appendix along with a table of rock descriptions and the rock assay results certificate. The site GPS waypoint #'s correspond to the # in the assay certificates for the actual assay data results.

As it turned out, 'Jesse's Nap Flat' - not a site in the original YMIP application, but a substituted target site for this project - turned out to have the highest Au soil assay, the highest % of anomalous Au soil assays and the second longest sequence of anomalous Au soil sample sites in a row of any site in the Tintina Gold Project.

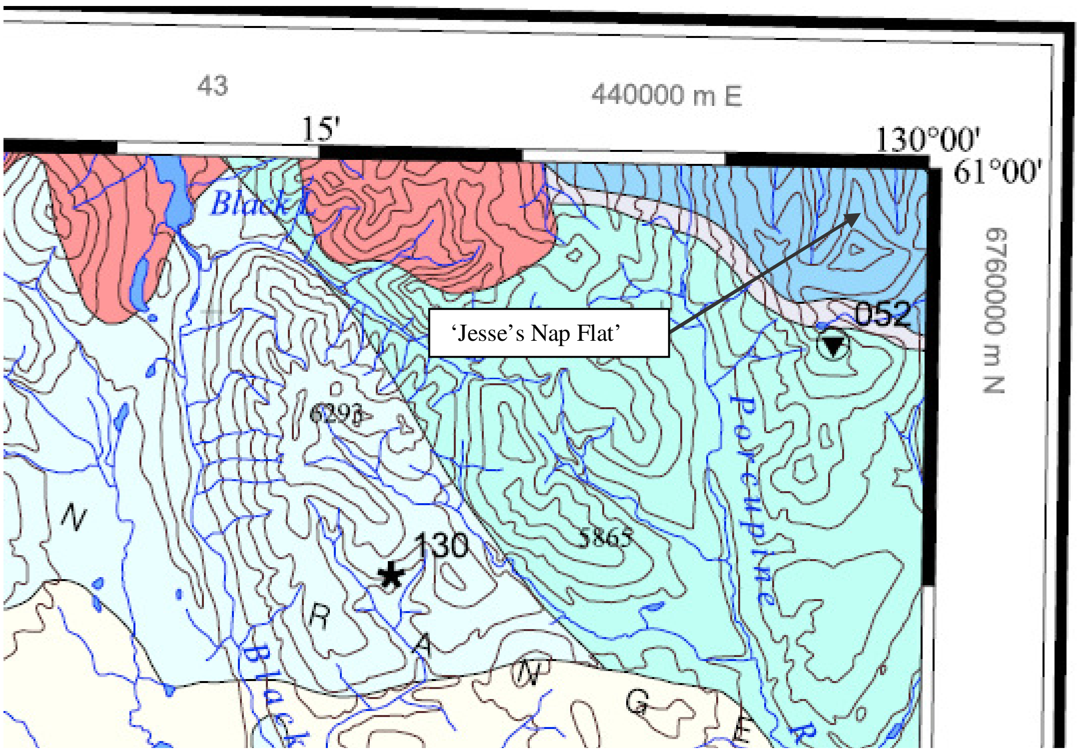
In addition, soil sample site 092, which has the highest Au soil assay (102.6 ppb) for the entire project (121 soil samples assayed), also had the highest As, Sb, Tl, Ni, Co, Cr, Mn and Fe for the entire project. It truly stands out as the prime candidate for follow-up. Close by soil samples(sites 091 - 098), while not as anomalous for Au and the other elements mentioned, were still highly anomalous to anomalous for these.

The presence of several clay rich rusty gossans followed an east-west depression feature. The staking line for the Jesse's Nap Flat #1 and #2 claims followed that feature, as did the soil sampling. A prominant quartz ridge 1.5 km to the west and a very large gossan on a ridge 1.5 km to the east are in basic alignment with the east-west depression in the Jesse's Nap Flat #1 and #2 claims. This clearly shows on the overview map below with the pink line passing clearly through the 'Jesse's Nap Flat' Au anomaly. Further, topo mapping also gives evidence for a structural feature (fault?) at a deeper level, as the 2 topo lines with the black arrows are aligned and at nearly the same elevation level and follow the larger scale alignment (pink line). One last interesting notation, if extended, the pink line aligns directly with the Hasselberg Plateau RGS 95th percentile Au sample site.



Map 25. 'Jesse's Nap Flat' Structural Alignment. *The 105 B/16 claims mapping shows the JESSE'S NAP FLAT #1 & #2 claims and the soil sampling (blue) that follows a depressional feature that roughly parallels the larger alignment of the prominant quartz ridge and the large gossan on either side (pink line).*

Several interesting aspects support an epithermal system or a high heat source "below" the 'Jesse's Nap Flat' Au occurance. There is abundant listwanite that tests positive for carbonate and is known to often accompany gold in ultramafic environments with epithermal systems. There is abundant talc that can also form from hydrothermal alteration of serpentine in the ultramafic rock package. There is abundant skarn vesuvianite and some andalucite, massive magnetite, fuchsite and mariposite - all of which are skarn minerals. To the northeast of the‘Jesse’s Nap Flat’ Au occurance is abundant chloritic schist. The gossans at the ‘Jesse’s Nap Flat’ Au occurance are clay rich, often an alteration product of hydrothermal systems, especially for serpentine. Finally, a small granitic intrusion occurs 3 km to the northwest of the ‘Jesse’s Nap Flat’ Au occurrence (on the ridge east of Porcupine Creek), and a very large Early Cretaceous 2-mica granite intrusion occurs 8 km west. In all likelihood, this is the source of the fluids involved in the skarn alteration and the hydrothermal system that seems apparent at ‘Jesse’s Nap Flat’. The granite intrusion shows pink. MINFILE 052 is named PORCUPINE, and notes “asbestos - ultramafic”.

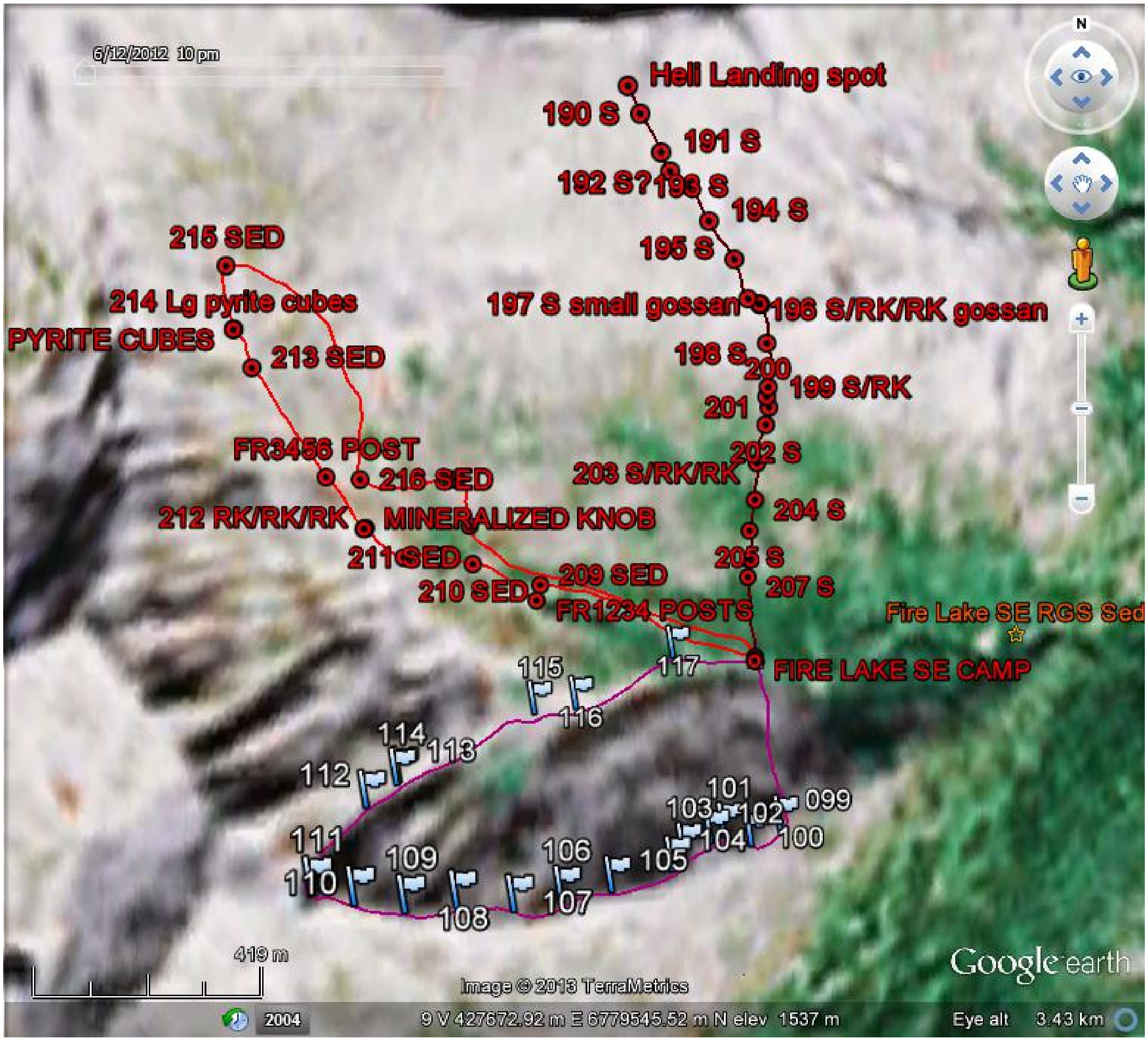


Map 26. ‘Jesse’s Nap Flat’ Area Geology Map. *‘Jesse’s Nap Flat’ is in the extreme upper right corner of map 105 B/16. Image taken from Yukon MINFILE - Mineral Occurrence Map: 105 B - Wolf Lake, Version 2004-1.*

A follow-up gridded soil sampling program is warranted for the ‘Jesse’s Nap Flat’ Au anomaly. The program should also soil sample further east following the staking line depressional feature. The gossan on the ridge 1.5 km to the east should also be prospected and sampled. As well, the chlorite rich area to the northeast should receive widely spaced soil sampling, or at the least, careful prospecting. Soil sampling and prospecting activity should also be keeping an eye out for NI-Co-Cr mineralization in the immediate area, as these were very highly anomalous - again, many times higher than any of the other assays for the Tintina Gold Project.

‘FIRE LAKE SE’ (SOUTHEAST) TRAVERSES

The ‘Fire Lake SE’ target site for this project was accessed by a short helicopter flight from the “Crystal Valley” camp. The ‘heli’ landing site is shown below. This was helpful in doing the ‘ridge and spur’ traverse for the north wall of the basin, saving the long climb up and saving some time. Because this was the best Au RGS anomaly in the region, 6 claims were staked while doing the silt sediment sampling traverse.

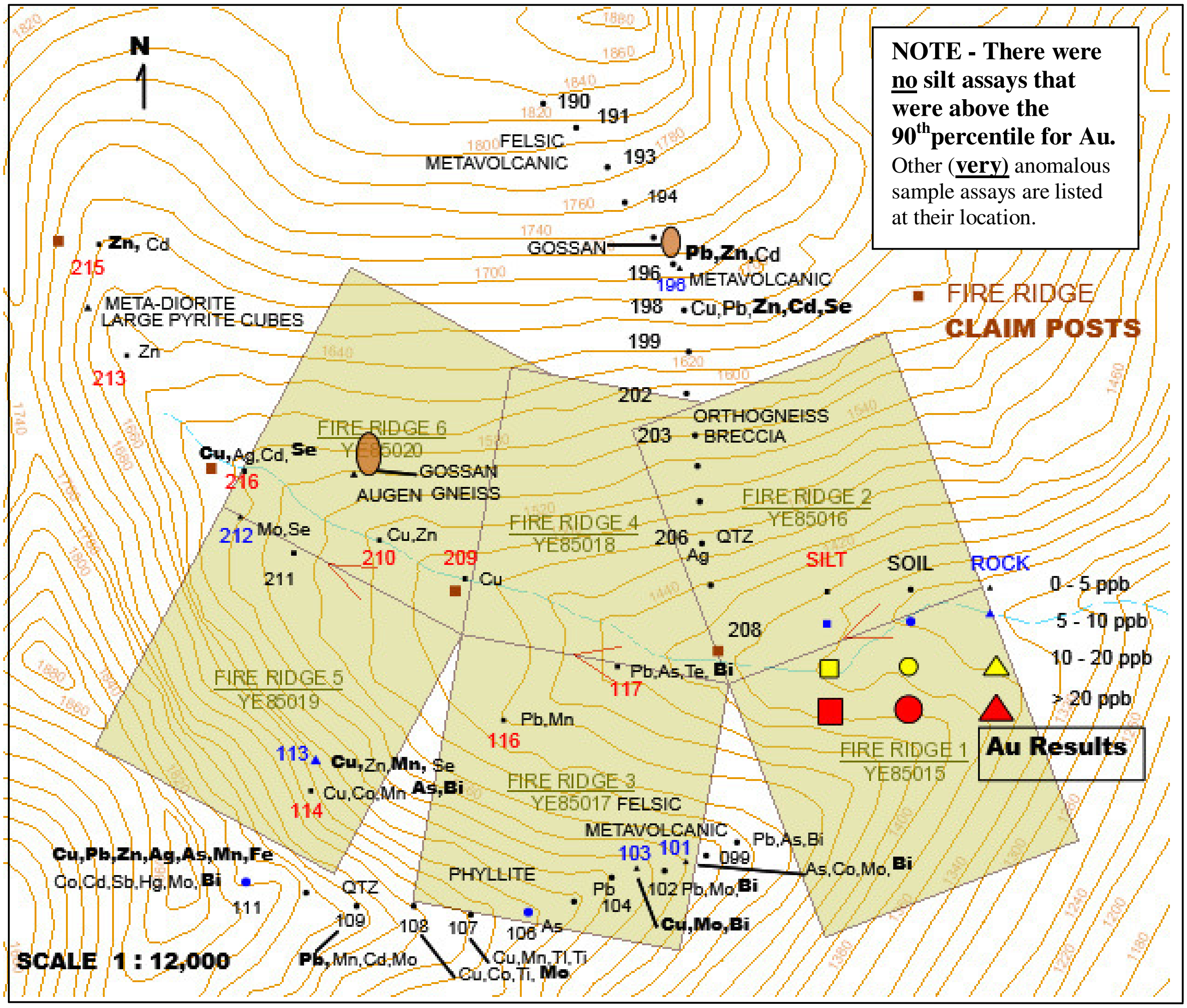


Map 27. ‘Fire Lake SE’ Traverses. “S” means soil sample location and *“RK” means rock sample location. The red waypoints and the red notes were from one GPS unit and the white ones were from another GPS unit, hence the waypoint number sequence is different. View looking North.*

The GPS site samples’ UTM location coordinates are given in a table in the Appendix The site GPS waypoint #’s correspond to the # in the assay certificates for the actual assay data results. Assays and a table of rock descriptions are also in the Appendix.

‘FIRE LAKE SE’ (SOUTHEAST) **Au** [and other] RESULTS and DISCUSSION

Please refer to the results for ‘Fire Lake SE’ silt, soil and rock samples map below.



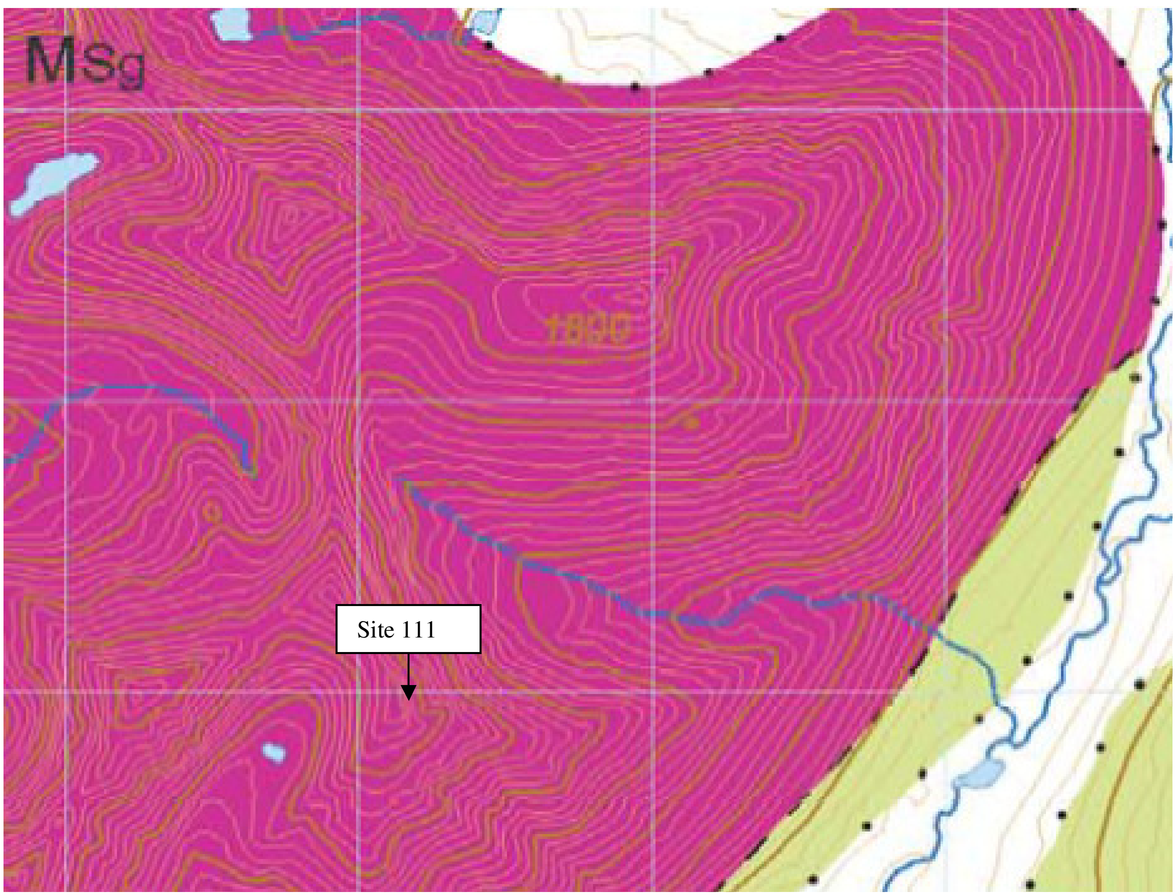
Map 28. ‘Fire Lake SE’ Results. *Sample locations are colour (and shape) coded using the site GPS waypoint numbers - red is a silt sample, black is a soil sample, blue is a rock sample. Even though the above element anomalies are somewhat relative to the other sample assays, some useful associations can be deducted. There is no site # 197 for soils, the next soil sample taken downslope was site 198.*

There were no silt assays that were above the 90th percentile for Au. The northern wall of the eastward flowing stream basin was not particularly mineralized except for the small gossanous area marked on the map above at site 195-196. Only soil site 196 sampled the gossan and some downslope dispersion was sampled at site 198. If this is leakage from a VMS deposit it appears to be precious metal poor, and isn’t a strong candidate for follow-up. The augen gneiss, orthogneiss and the metavolcanic rocks do not conform to the geology map for this part of the north wall of the basin. The geology map for the ‘Fire Lake SE’ basin is on page 39.

The stream silt sediment assays certainly did not indicate an upstream source for the extremely high Au anomaly in the RGS sample further downstream. The camp was 500-600 m upstream of the RGS high Au anomaly sample site, so it appears we silt sampled too far upstream. If there is a return trip to this basin, several stream silt samples should be taken in the stretch 500-600 m downstream of the camp location. That portion of the stream is steeper and forested, and will be more difficult to silt sample.

The southern ridge of the eastward flowing stream basin was more mineralized. There were a few weak indications of Au, and certainly did not indicate a source for the high Au anomaly in the RGS sample further downstream. The ridge was composed of layered pyritic muscovite quartz-rich micaceous phyllite? in the vicinity of sites 99-106, becoming more mafic and gneissic going to site 111 which had by far the best mineralized site for the 'Fire Lake SE' target basin.

The layered phyllite and gneissic rocks for this part of the south wall of the basin also do not conform to the geology map. The same was true for the north wall traverse. The geology map for the 'Fire Lake SE' basin is shown below. Murphy et al. (2004) mapped the basin as **MSg** consisting of weakly foliated to unfoliated biotite-hornblende granite to granodiorite.



Map 29. 'Fire Lake SE' Geology Map. *The highly anomalous 'site 111' location is indicated for reference.*

Site 111 has the strongest VMS soil assay indications of any site for the entire Tintina Gold Project. It also had a weak Au assay. Compared to all of the other sites for the entire project, it was comparatively very highly anomalous for the elements for VMS deposits, Cu-Pb-Zn-Ag. Additionally, the VMS pathfinder elements Co, As and Sb are anomalous. Downslope the rock on the valley floor at site 113 was Cu mineralized with visible bornite. It consisted of a quartz vein in a more mafic layered phyllite.

Structurally, there was a notch and bluff above on the ridge at soil sample site 111 That site looks like it is a normal fault that strikes NE downslope and follows a prominant depression/gully. That depression was followed downslope to sites 113-114 which also have Cu anomalous rock and soil samples. A probable explanation for the anomaly is leakage of fluids, possibly from a VMS occurrence, flowing upward and along the fault structure.

A prospecting follow-up and additional soil sampling is warranted both up ridge and downslope both north and south of the East-West ridge. Also recommended is an additional silt sampling program downstream of the camp location to try to find an indication of the source for the 99^{th} percentile Au RGS anomaly.

“Gossan Mountain” Traverse, Results and Discussion

An additional ‘footnote’ is added here for a very large gossan seen and sampled at the base as we passed by. Two rock samples were taken and both submitted as one sample, assay # FLSE12-RK-220AB. It was slightly anomalous for Au (5.1 ppb) and not much else, but we barely sampled the gossan. The photo showing the sample location is below. View is looking northeast. Colour is somewhat emphasized.

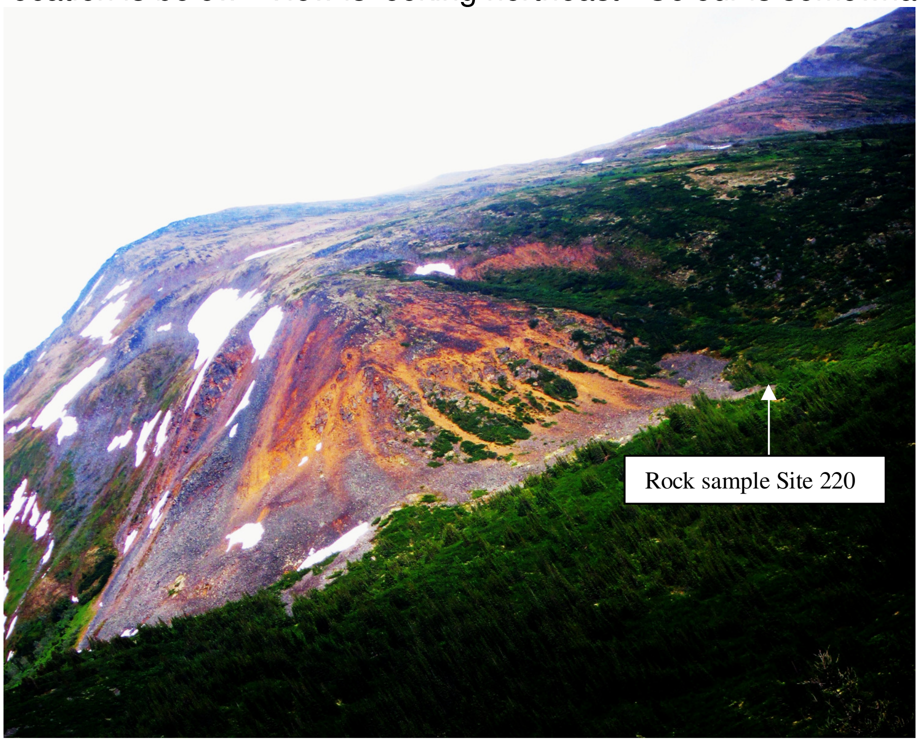


Photo 1. “Gossan Mountain”. *Just to the north are the ‘EL 1-8’ claims of Teck Mining.*

The large gossan represented a target that was too big to sample in the very short time we had available, basically none, as we needed to get to the next camp at ‘4CN’ by that night to stay on schedule and on budget. This site also was not in the approved YMIP application.

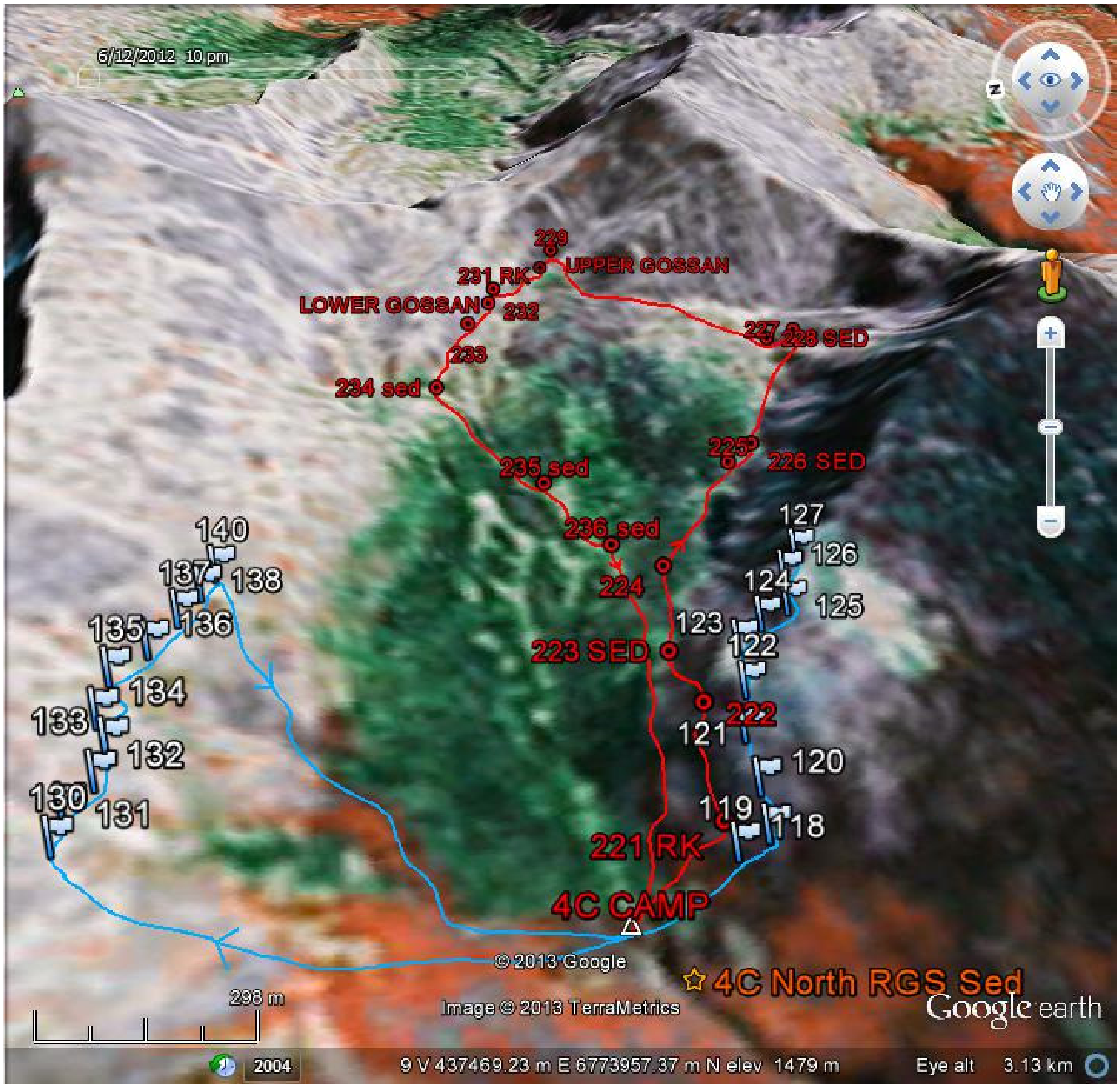
A prospecting and ‘ridge and spur’ soil sampling program is warranted for this “Gossan Mountain” site in the future because of it’s very large size and because there are 8 claims less than 1 km north that have been held by Teck Mining Worldwide Holdings Ltd. since 1994. They are ‘up for renewal’ in April, 2013. They were staked during the VMS staking rush in this area in 1994, so they probably are a VMS target.

The traverse from the ‘Fire Lake SE’ target to the ‘4CN’ target - and the ‘large gossan’ (Gossan Mountain) site - is shown below.

Map 30. ‘LARGE GOSSAN’ Site Location. *This was a diversion/addition to the basic traverse planned from the ‘Fire Lake SE’ target to the ‘4CN’ target. Other gossans were encountered along the way but they appeared uninteresting, being small and only weakly limonitic. They were not sampled. The location is noted as ‘LOTS of GOSSANS’. View looking northeast.*

<u>‘4CN (NORTH)’ TRAVERSES</u>

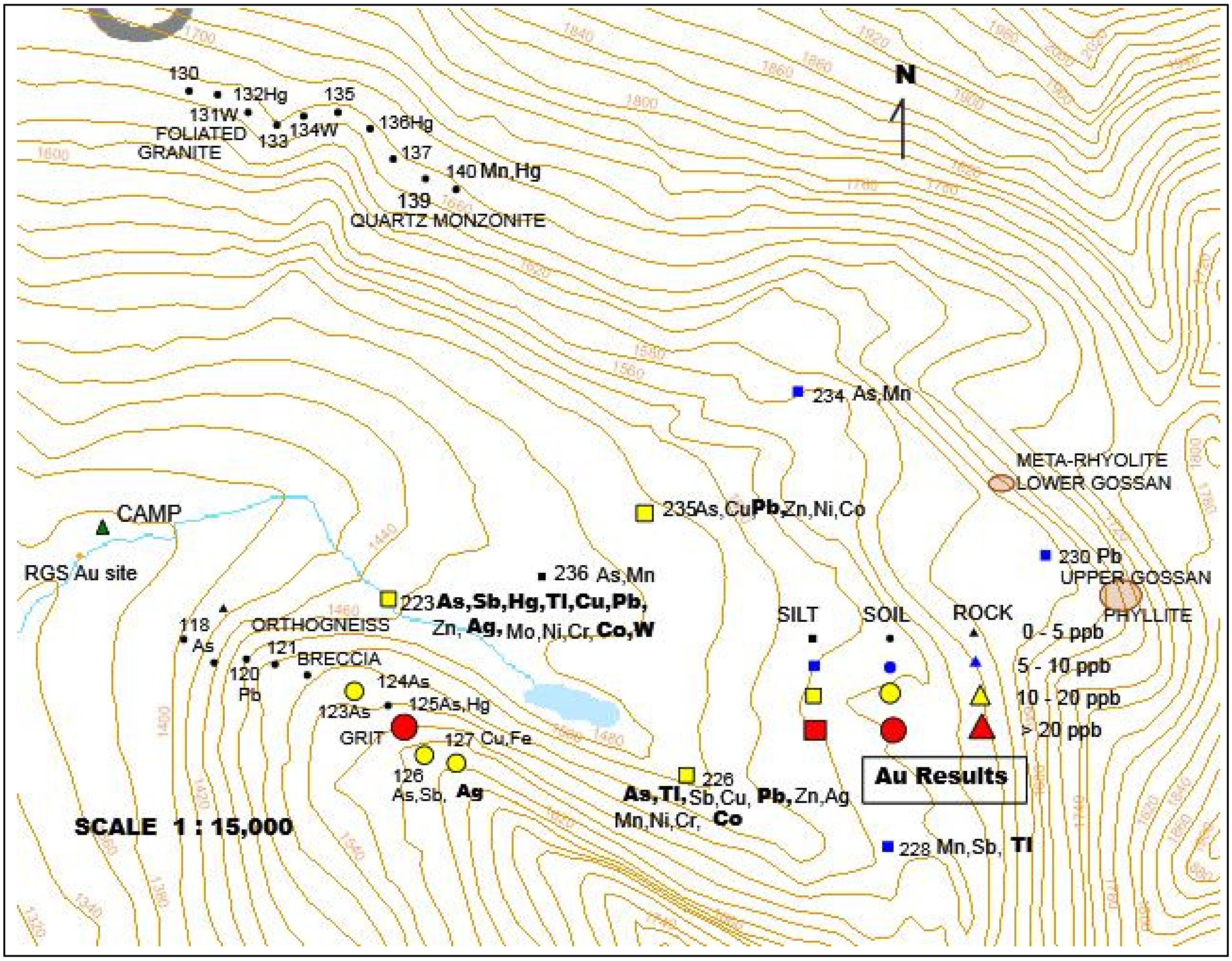
Camp for ‘4CN” was near the 95th percentile Au RGS site. Three traverses were made from camp, and are shown on the Google Earth map below. The 2 ‘ridge and spur’ soil sample traverses are coloured blue and the silt sampling traverse is red.



Map 31. ‘4CN’ Traverses. *Three traverses were made. The 2 ‘ridge and spur’ soil sample traverses are coloured blue and the silt sampling traverse is red. View looking east.*

‘4CN’ (NORTH) TRAVERSE **Au** [and other] RESULTS and DISCUSSION

A map showing the ‘4CN’ silt, soil and rock sample sites Au assay results - and other significant assay results - as well as basic rock types and gossan occurrances appear below.



Map 32. ‘4CN’ Traverse Results. *Sample locations are shape coded - ‘square’ is a silt sample, ‘circle’ is a soil sample, ‘triangle’ is a rock sample. Even though the above element anomalies are somewhat relative to the other sample assays, some useful associations can still be deducted.*

The silt, soil and rock samples’ UTM location coordinates are given in a table in the Appendix along with the assay results in the assay certificates. A table of assayed rock descriptions is also in the Appendix. The site GPS waypoint #’s correspond to the # in the assay certificates for the actual assay data results.

The rock on the sampled area on the north slope (near top of above map) of the west flowing stream basin appeared unmineralized, and soil samples proved relatively unmineralized also. Rocks from the southern ridge (left bottom of map) also looked unmineralized and a decision was made to only send one for assay. It also was poorly mineralized except for Zn, which was the 2nd highest of all rock assays.

The southern ridge of the west flowing stream basin at 4CN was anomalous for Au. It was also anomalous for the Au pathfinder minerals As, Sb and Hg when compared to all other soil sample assays for this Tintina Gold Project. This was unexpected based on the lack of visual mineralization in the rocks. While the sites were comparatively high in Au, the absolute assay values are still low, and only point out an anomalous area, not one with high Au values. Still, the nearly continuous (4 out of 5) string of anomalous Au soil sites (sites 123-127), ending in Au mineralization, indicates more soil sampling is warranted further along the ridge to the east of site 127. Site 126 was also noteably high in Ag.

In addition, the silt samples in the stream running along the base of the southern ridge (silt sites 223 & 226) are also anomalous for Au, as is silt site 235. All 3 are above the 90^{th} percentile for Au, and site 223 is slightly above the 95^{th} percentile for Au for all Yukon-Tanana RGS sample sites. By comparison, silt site 223 also is the most anomalous for the package of Au pathfinder minerals - As, Sb, Hg and Tl - of any site in the entire project. Other silt sample sites further up the basin are also somewhat anomalous for Au. This is a large area for a Au anomaly in silts. '4CN' has by far the most anomalous Au silt samples of any target for this project.

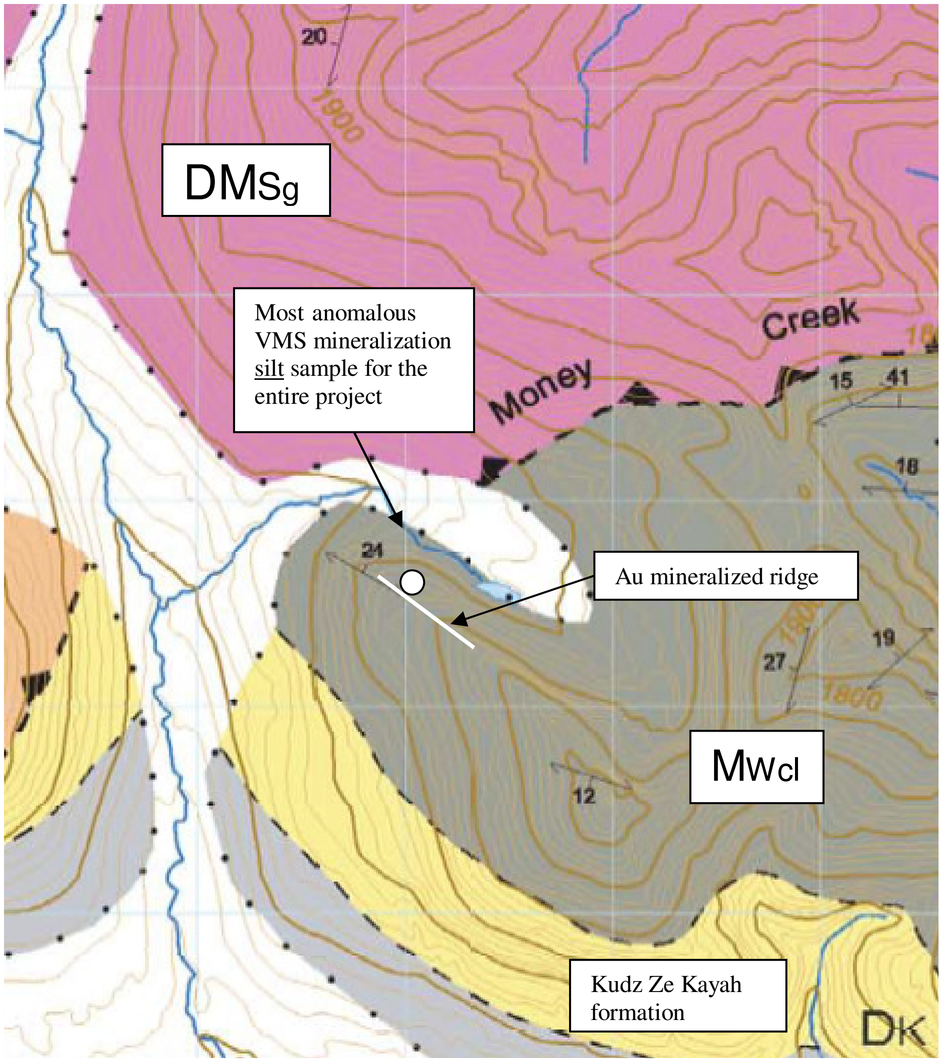
Silt sample sites 223 & 226 are also anomalous to very anomalous for VMS minerals - Cu, Pb, Zn and Ag - and also the VMS pathfinder elements - Co, As and Sb - are anomalous, plus even some Mo and W. The talus at the base of the south 'steep ridge wall/cliff' warrants further detailed prospecting for mineralized rock to explain the multi-element anomaly there.

The geology for the basin is found on Map 32 on the next page. It is from the mapping of Murphy et al. (2004) in Open File 2004-11. Most of the mineralization at '4CN' occurs in the rock unit **MWcl**. It is described by Murphy et al. (2004) as consisting of quartz-feldspathic grit, pebble meta-conglomerate, lesser phyllite and rare meta-rhyolite. The rock at the mineralized south ridge sample sites was quartz-feldspathic grit, and further east below the ridge was phyllite.

Rock unit **MWcl** is underlain by **DK**, the Kudz Ze Kayah formation. An interesting posssibility is that the ridge Au-Ag mineralization is more distal leakage, and the valley floor multi-element VMS anomaly is more proximal leakage from a VMS body in the Kudz Ze Kayah formation close to or under the west end of the south ridge. This trend of less VMS element mineralization is evident in the silt sample results going away (northeast) from silt site 223. Structurally, site 223 is the closest to the very nearby Money Creek Thrust fault, an important structure for ground preparation for fluid flow, as well as an avenue for fluid migration in its own right. Silt Site 236 is not anomalous, but it also lies in unconsolidated glacial deposits on the valley floor shown on the geology map on the next page.

Rock at the relatively unmineralized soil sample sites on the north slope was in rock unit **DMSg**, a foliated biotite-hornblende granite to quartz monzonite.

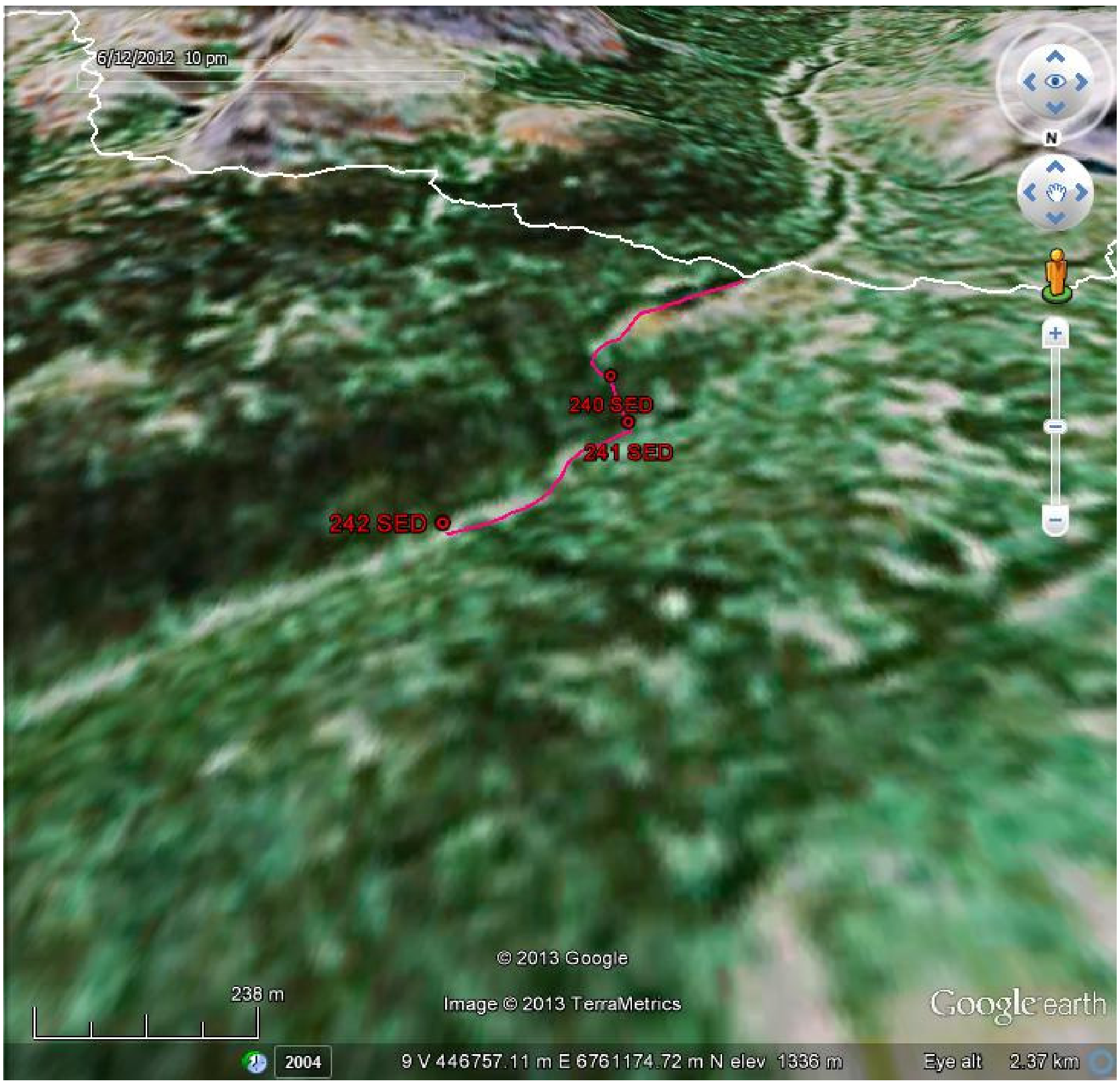
The geology for the basin is found on Map 32 below. It is from the mapping of Murphy et al. (2004) in Open File 2004-11. The Money Creek Thrust fault appears to be an important factor controlling the mineralization, along with the Kudz Ze Kayah formation underpinning the mineralized ridge and valley floor.



Map 33. '4CN' Geology Map. *Most of the mineralization at '4CN' occurs in the rock unit* ***MWcl.*** *It is described by Murphy et al. (2004) as consisting of quartz-feldspathic grit, pebble meta-conglomerate, lesser phyllite and rare meta-rhyolite. Rock unit* ***MWcl*** *is underlain by* ***DK****, the Kudz Ze Kayah formation. Notice the proximity and location of the mineralized ridge and very anomalous silt sample to the regional Money Creek Thrust fault.*

‘HASSELBERG PLATEAU NW’ (Northwest) TRAVERSE

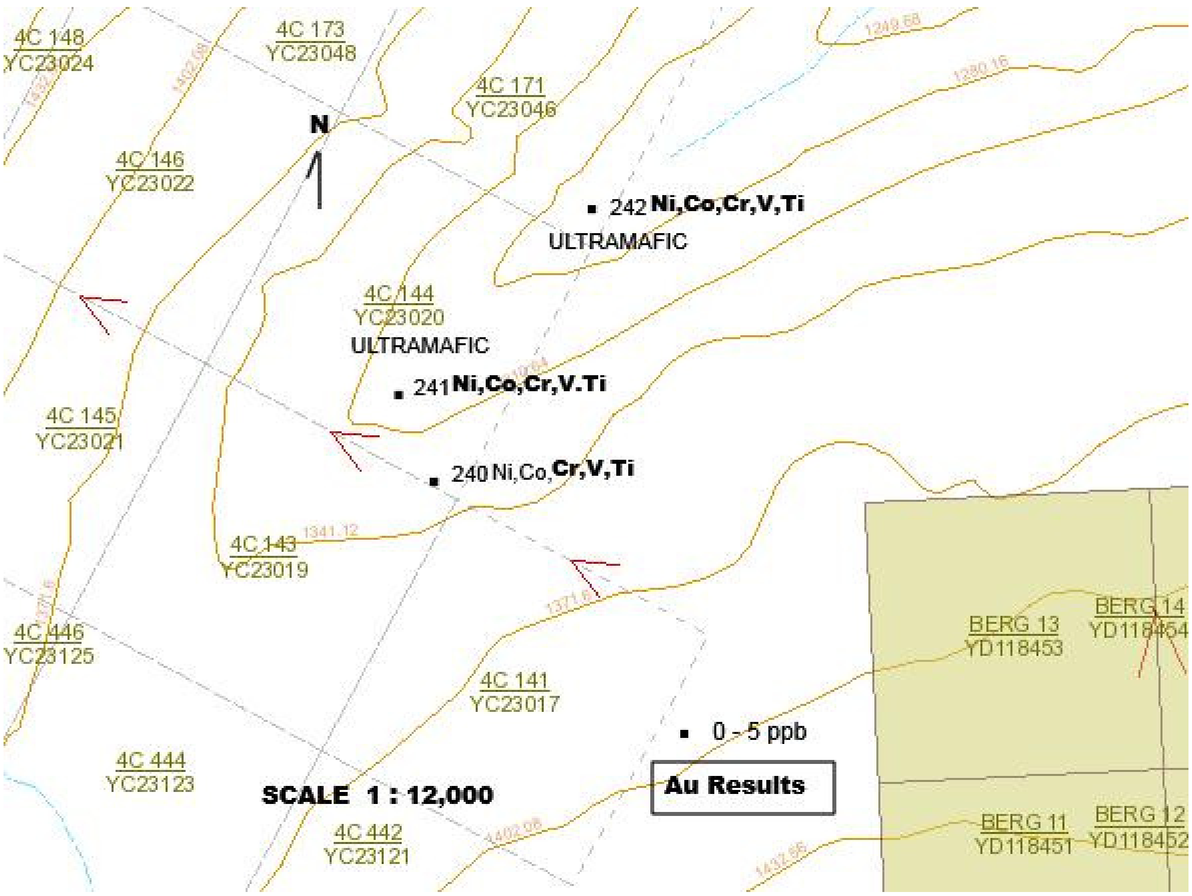
‘Hasselberg Plateau NW’ was the last target visited for the Tintina Gold Project. By this time we were very tired from the arduous hike from ‘Fire Lake SE’ back to “Crystal Valley” camp packing all the rock, soil and silt samples as well as camp. The plan presented in the YMIP application was to Argo down the valley to near the RGS 95th percentile Au sample site, hiking if needed to silt sample the stream (in the Google Earth map foreground below). As it were, the near flat part of the start of the Argo trip gave way to a steep section that prematurely stopped the use of the Argo. Hiking continued downslope and downstream, but the very thick shrub in the valley made hiking very difficult, tireing and slow. The rock appeared very uniform in the stream, so we decided to stop sampling - only 3 silt samples were taken (& no ‘ridge and spur’ soil samples).



Map 34. ‘Hasselberg Plateau NW’ Traverse. *Traverse in red, Argo trail from “Crystal Valley” camp to Hasselberg Lake cabin in white. View looking south.*

‘HASSELBERG PLATEAU NW’ TRAVERSE **Au** [and other] RESULTS, DISCUSSION

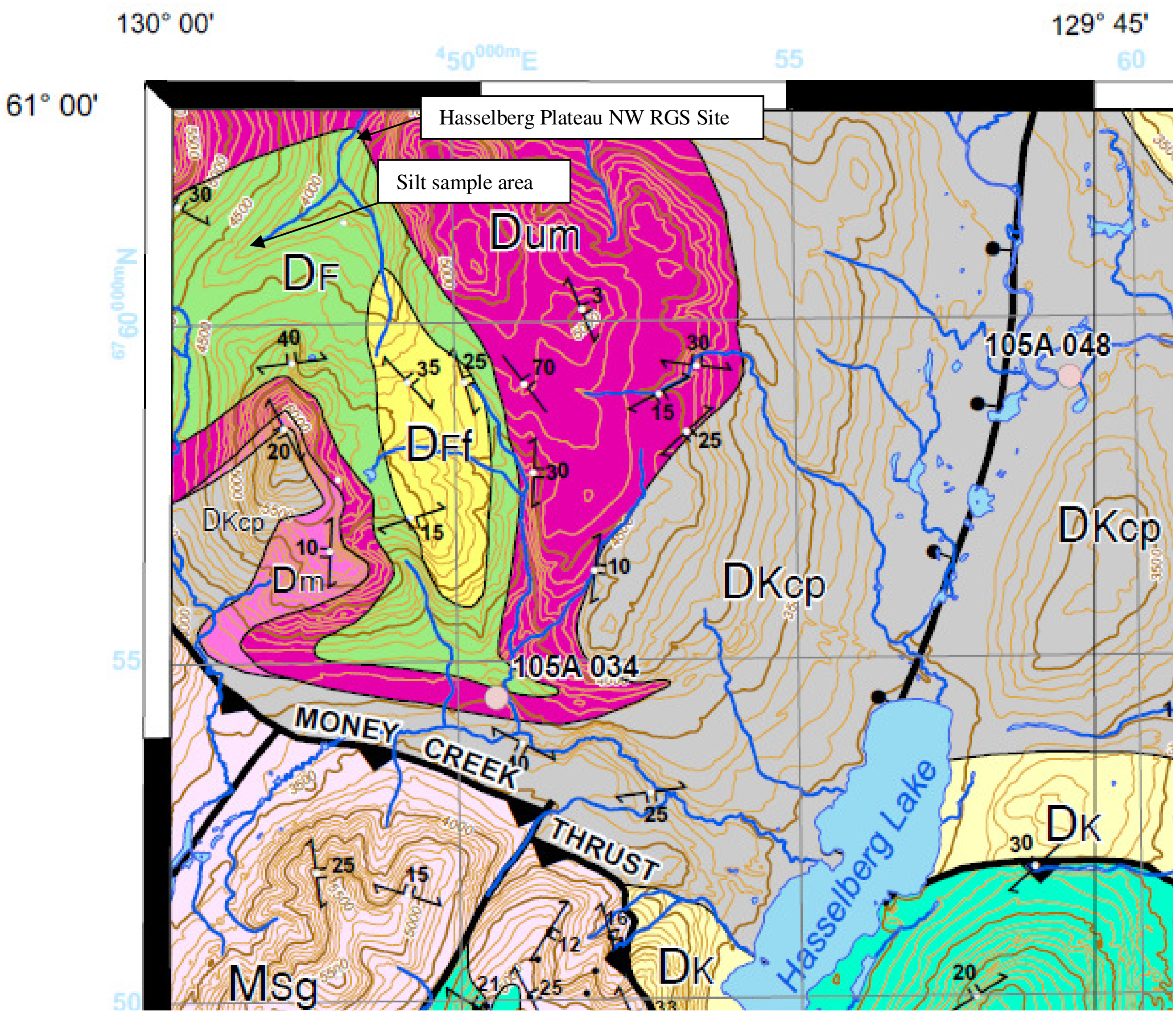
The assay results for the silt samples are indicative of the rocks found in the streambed - ultramafic rocks mostly composed of serpentinite, with some rocks high in olivine (possibly dunite?). The silt samples were very anomalous in Ni-Co-Cr, similar to those for the ‘Hasselberg Plateau SE’, but even higher for Co and Cr. They were the highest Co and Cr silt sample assays for all areas visited for this project, except for the equally high Co silt assays for silt sites 223, 226 and 228 at ‘4CN’. Interestingly, all 3 silt site were also very anomalous for V and Ti, noticeably higher than the other silt assays. Unfortunately, Au and Au pathfinders were not anomalous for the silt sites 240-242. Therefore they are not at the source for the RGS 95th percentile Au sample further downstream. More silt sampling downstream will be required to locate a source for the Au anomaly. Please see the results map below.



Map 35. ‘Hasselberg Plateau NW’ Traverse Results. *There were no anomalous Au silt samples for the 3 stream silt samples, but they were very anomalous for Ni,Co,Cu. Even though the above element anomalies are somewhat relative to the other silt sample assays, some useful associations can still be deducted.*

The silt, samples’ UTM location coordinates are given in a table in the Appendix along with the assay results in the assay certificates. The site GPS waypoint #’s correspond to the # in the assay certificates for the actual assay data results.

The very anomalous presence of the Ni-Co-Cr suite of minerals points to the need to further assay the silts for PGM's in the future. This is also advised because the large ultramafic body that makes up the majority of the Hasselberg Plateau is said to be a layered intrusion (Liverton, 2012), therefore more likely to have concentrated layered PGM's. The ultramafic rock package is coloured (fuchia) pink in the geology map below. The geology map below by Mortensen and Murphy (2005) shows the northwest corner of 105 A, which is 105 A/13. The rocks found in the stream for silt sample sites 240-242 were all but one entirely serpentinized ultramafics. These do not conform to the geology map below. The silt sample area is marked on the map and occur in a rock unit labelled **DF**. This rock unit is described as 'plagioclase-chlorite phyllite or schist'. None was found in the silt sample area, so either the area in underlain by ultramafic rock or they are there as a result of glacial action.



Map 36. Northwest Corner of Geology Map 105 A (105 A/13). *The silt sample location area is identified on the map. The geology map by Mortensen and Murphy (2005) shows the northwest corner of 105 A, which is 105 A/13.*

6. CONCLUSIONS & RECOMMENDATIONS

Mapping the highest Au RGS sites for Yukon-Tanana north of the Tintina Fault and south of the Robert Campbell Highway showed a distinct proximity to and alignment with this deep seated regional fault. The aim of the project was to 'ridge and spur' soil sample and silt sample all of the unclaimed highest Au RGS basins on the northern side of and within 12 km of the southeastern portion of the Tintina Fault. This Tintina Gold Project covers 6 target locations paralleling the Tintina Fault.

As the name of the project (Tintina Gold Project) implies, the primary focus was exploration for gold. A secondary focus for this project was VMS mineralization, followed by Ni-Cu-Co-Cr deposits. All 3 deposit types were encountered in the assay results. Overall, the results exceeded my expectations. Follow-up is warranted for most sites in my estimation. Each sites' findings and recommendations will be summarized in the order that they were explored.

- '**Simpson Lake South**' - 'ridge and spur' soil sampling resulted in a small but strong Au-Ag multi-element anomaly (Au-Ag plus Au pathfinders As and Sb, plus Zn-Cu-Ni-Cr) occurance in excess of 150 m in size. It is within 100m proximity to the regional scale Money Creek Thrust fault and a depressional feature/"pass" (smaller fault?) in the ridge. A large jasper body is located on the other side of this depression. Soil sample sites 66-67 & 068 warrant follow-up soil sampling. If one were to revisit 'Simpson Lake South', 2 other areas should receive more soil sampling.
    - The northern-most ridge sampled had a very strong Cu soil assay along with lesser Cu-Co and Au-As assays along a 400 m soil sample line (sites 072-076).
    - A prominant quartz / quartz-breccia gossan soil sample (below the gossan - site 089) was anomalous for Au-As.

- '**Hasselberg Plateau SE**' - A silt sampling program resulted in very anomalous Ni assays. Ni exceeded the 99th percentile for all samples as did Hg, and Ag exceeded the 99th percentile for 3 of 4 samples (the other one being 95th percentile). A Ni-Cu-(Co) deposit model is suggested. This is supported by the geological mapping of a large serpentinized ultramafic unit upslope and for the Hasselberg Plateau. Additionally, pathfinder elements for VMS deposits (Cu, Zn, Pb, Ag, +/- Co, As and Sb) show some correlation with the silt sample results. More silt sampling upstream for all 4 streams is warranted due to the high tenor of the assays. Assays should also include tests for PGM's (which was not done for this project) because the ultramafic body is reported to be a layered intrusion.
    - Six rocks were sent for assay from the streambed at site 88. Rocks assayed were of 3 main types, 'siltstone' (88A and 88C), quartz and quartz breccia (88B and 88E), and mafic/ultramafic (88D and 88F). All were all mineralized.
    - The siltstone samples (88A and 88C) showed a good correlation with VMS pathfinder elements (Cu, Zn, Pb, Ag, +/- Co, As and Sb). Rock sample 88A was very anomalous for Cu.

‘**Hasselberg Plateau SE**’ - cont.

- The quartz (88B) and quartz breccia (88E) have the highest Au values of any rocks assayed for the entire project. The geochemical signature for the epithermal Au-Ag-Cu: high sulphidation model of Panteleyev (1996) - (where Au, Cu, As dominate with minor Ag, Zn, Pb, Sb, Mo, Bi, Sn, Te, W, B and Hg) - matches pretty good for the 2 rocks assayed, especially the quartz breccia which fits this model very well except for Cu.
- The 2 mafic/ultramafic rocks assayed (88D and 88F) showed an entirely different geochemical signature - as would be expected. They are consistent with a Ni-Cr-Co deposit type which is a common deposit type in ultramafic rock which occurs upstream. Rock sample 88F was 0.2% Ni (>2200 ppb).

A silt sampling program for upstream of site 88 is warranted. Site 88 is 3 km downstream of one of the highest Au RGS samples in the whole region (>99th percentile). A smaller feeder stream 1 km upstream northeast of site 88 also is very anomalous for gold (95th percentile). Assays should include testing for PGM’s because the Hasselberg Plateau is said to be a layered intrusion (personal communication, Tim Liverton, PhD, 2012).
A rock sampling program for the streambed/canyon walls is also warranted. Site 88 is at the bottom end of a canyon with meta-sedimentary rock walls, the probable source of rocks 88A and 88C. There is no apparent on-site source for the quartz and quartz breccia (88B and 88E) and the mafic/ultramafic rocks (88D and 88F). The closest claim boundary is 1.3 km north, upstream of site 88. It is possible that the sources of the mineralized quartz and quartz breccia are within that section of the stream.

- ‘**Jesse’s Nap Flat**’ - Soil sample site 092 had the highest Au soil assay (102.6 ppb) for the entire project (121 soil samples assayed). This site also had the highest As, Sb, Tl, Ni, Co, Cr, Mn and Fe for the entire Tintina Gold Project! It truly stands out as the prime candidate for follow-up.
  - Close by soil samples (sites 091 - 098) were anomalous for Au and the other mentioned elements. Several gossans occur at this location, and the anomalous Au soil sample line occurs along an east-west depressional feature (fault?). There is abundant listwanite and skarn nearby and a large Early Cretaceous 2 mica granite 8 km away and 2 small granite bodies (roof pendants?) 3 km away. A follow-up gridded soil sampling program is warranted for the ‘Jesse’s Nap Flat’ Au anomaly and further east following the depressional feature.

  The large gossan on the next ridge 1.5 km east should be prospected and sampled. The chlorite rich phyllite area to the northeast should receive careful prospecting and perhaps widely spaced soil sampling,. Prospecting should also keep an eye out for Ni-Co-Cr mineralization in the immediate area, as these were very highly anomalous - higher than any of the other assays for the Tintina Gold Project.

- ‘**Fire Lake SE**’ - None of the silt samples taken were above the 90th percentile for Au, but this basin had the highest Au RGS sample of any basin (>99th percentile). The closest silt sample taken was 500-600 m upstream of the RGS Au anomaly sample site, so it appears we silt sampled too far upstream. If there is a return trip to this basin, several stream silt samples should be taken in the stretch 500-600 m downstream of the camp location to try to establish the Au source area.
  - There were very good indications for VMS mineralization in a small area. Soil site 111 has the strongest VMS indications of any site for the entire Tintina Gold Project, but a weak Au assay. It was the last sample taken along the ridge. Compared to all of the other sites for the entire project, it was very highly anomalous for the elements for VMS deposits, Cu-Pb-Zn-Ag. Additionally, the VMS pathfinder elements Co, As and Sb are anomalous. Structurally, there was a notch and bluff above on the ridge at soil sample site 111. That site looks like it is a normal fault that strikes NE downslope and follows a prominant depression/gully. That depression was followed downslope to site 114 which had a slightly VMS anomalous silt sample and to rock sample site 113 which was Cu mineralized with visible bornite. A probable explanation for the anomaly is leakage of fluids, possibly from a VMS occurrence, flowing along the depressional (fault?) structure. A prospecting follow-up and additional soil sampling is warranted both up ridge and downslope on both sides of this East-West ridge.

- **“Gossan Mountain”** - A very large gossan mountain and ridge was seen and sampled at the base as we passed by.
  - Two rock samples were taken and both submitted as one sample, assay # FLSE12-RK-220AB. This rocksample was slightly anomalous for Au (5.1 ppb) and not much else, but we barely (if at all) sampled the gossan. No soil samples were taken. The large gossan represented a target that was too big to sample in the very short time we had available, basically none, as we needed to get to the next camp at ‘4CN’ by that night to stay on schedule and on budget. This site also was not in the approved YMIP application.

A prospecting and ‘ridge and spur’ soil sampling program is probably warranted for this “Gossan Mountain” site because of it’s very large size and because there are 8 claims less than 1 km north that have been held by Teck Mining Worldwide Holdings Ltd. since 1994. They are ‘up for renewal’ in April, 2013. They were staked during the VMS staking rush in this area in 1994, so they probably are a VMS target.

- **'4CN' (north)** - The soil samples for the southern ridge of the west flowing stream basin at 4CN were anomalous for Au and the Au pathfinder minerals As, Sb and Hg. The nearly continuous (4 out of 5) string of anomalous Au soil sites (sites 123-127), ending in Au mineralization, indicates more soil sampling is warranted further along the ridge to the east of site 127. Also, Site 126 was also noticeably anomalous in Ag.
  - The silt samples in the stream running along the base of this Au anomalous ridge (silt sites 223 & 226) are also anomalous for Au, as is silt site 235. All 3 are above the 90th percentile for Au, and site 223 is slightly above the 95th percentile for Au compared to all Yukon-Tanana RGS silt sample sites. Silt site 223 also is the most anomalous for the package of Au pathfinder minerals - As, Sb, Hg and Tl - of any site in the entire Tintina Gold Project. Other silt sample sites further up the basin are also somewhat anomalous for Au. '4CN' has by far the most anomalous Au silt samples of any target for this project.
  - Silt sample sites 223 & 226 are also anomalous to very anomalous for VMS minerals - Cu, Pb, Zn and Ag - and also the VMS pathfinder elements - Co, As and Sb - are anomalous, plus even some Mo and W. The most anomalous mineralization is at or very near the Money Creek Thrust Fault. The ridge and basin rocks are underlain by the Kudz Ze Kayah formation. An interesting posssibility is that the ridge Au-Ag mineralization is more distal leakage, and the valley floor multi-element VMS anomaly is more proximal leakage from a VMS body in the Kudz Ze Kayah formation close to or under the west end of the south ridge. This trend of less VMS element mineralization is evident in the silt sample results going away (northeast) from silt site 223. Structurally, site 223 is the closest to the very nearby Money Creek Thrust fault, an important structure for ground preparation for fluid flow, as well as an avenue for fluid migration in its own right. The talus at the base of the south 'steep ridge wall/cliff' warrant further detailed prospecting for mineralized rock to explain the multi-element anomaly there.

- **'Hasselberg Plateau NW'** - The silt samples (sites 240-242) were very anomalous in Ni-Co-Cr, similar to those for the 'Hasselberg Plateau SE', but even higher for Co and Cr. They were the highest Co and Cr silt sample assays for all areas visited for this project, except for the equally high Co silt assays for silt sites 223, 226 and 228 at '4CN'.
  - Au and Au pathfinders were not anomalous for the silt sites 240-242. Therefore they are not at the source for the RGS 95th percentile Au sample further downstream. More silt sampling downstream will be required to locate a source for the Au anomaly. Assays should include testing for PGM's because the Hasselberg Plateau is said to be a layered intrusion (Liverton, 2012).

To make thing simpler, since there were so many discrete areas with anomalous results, a summary table is presented below of the main findings and recommendations. Even though the element anomalies may not be considered high in absolute terms, these anomalies are somewhat relative to the other sample assays, and some useful associations can still be deducted. Most sites had at least one area that was significantly anomalous enough to warrant follow-up recommendations in my opinion. Other areas less promising but still anomalous received a 'suggested' follow-up designation.

Summary for YMIP Grant # 12-044				
		Anomaly	Future type of work	Future type of work
Target Site Name	Sample Site #	Deposit - Type	Warranted	Suggested
		(Highlights)		
Simpson Lake South	Sites 65-66,068	**Au-Ag**	Soil sampling, prospecting	
	Sites 072-076	Cu-Au-(Co)		Soil sampling, prospecting
	Sites 080-090	Au		Soil sampling, prospecting
Hasselberg Plat. SE	Sites 88-92	Ni-Cu-(Co)	Silt sampling that includes PGM's, prospecting	
	Site 88	VMS	Silt sampling, prospecting	
	Site 88	**Au-Ag-Cu**	Silt sampling, prospecting	
Jesse's Nap Flat	Sites 089-098	**Au-Ag-Ni-Co-Cr**	Soil sampling that includes PGM's, prospecting	
	Sites 181-188	Ni-Co-Cr		Soil sampling, prospecting
Fire Lake SE	Site 111	**VMS**	Soil sampling, prospecting	
	Sites 113-114	Cu-Co	Soil sampling, prospecting	
		Au		Silt Sampling
"Gossan Mountain"		VMS?		Soil sampling, prospecting
4CN (North)	Sites 123-127	**Au-Ag**	Soil sampling, prospecting	
	Sites 223-226	**VMS**	Soil sampling, prospecting	
	Site 235	VMS		Soil sampling, prospecting
Hasselberg Plat. NW	Sites 241-242	Ni-Co-Cr		Soil sampling, prospecting
		Au		Silt Sampling

Table 6. Summary for YMIP Grant # 12-044.

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Yukon MINFILE - Mineral Occurance Map: 105 B - Wolf Lake (1:250,000 scale),Version 2004-1, Yukon Geological Survey, Energy ,Mines and Resources, Yukon Government, 2004.

6. STATEMENT OF QUALIFICATIONS

- 33 years experience doing geological prospecting in Yukon.
- Author of several Yukon YMIP reports on mineral property evaluations or grassroots prospecting programs, plus previous Yukon assessment reports.
- 13 years Geology teaching experience at first year University equivalent.
- Operator of one mine property in Yukon (for Nephrite Jade).
- Owner of 75 Yukon quartz claims.
- Many geological short courses including ones on diamonds, platinum, geophysics, glacial drift prospecting, VMS deposits, rare earth elements, MMI, exploration geochemistry, and several on gold exploration.
- Exploration manager and technical report writer for Crusader Gold in B.C. 2007-2012, including ARIS Reports 28546, 30293, and 31281.
- BSc degree in Biology, (including some university geology courses)

“Everett Van Krichbaum”, Jan 25, 2013

7. STATEMENT OF EXPENDITURES

Expenditures for YMIP Grant 12-044				
Exploration Work, other expenses	Comment	Units	(YMIP) Rate /Unit	Subtotal
Field Expenses				
Camp costs - 2 Persons	18 Days	36 Per.-Days	$100.00/Day/Person	$ 3,600.00
Personnel				
Labourer	18 Days		$275.00/Day	$ 4,950.00
Equipment (YMIP rental rates)				
Argo ATV		12 Days	$40.00/Day	$ 480.00
4 X 4 Truck		4 Days	$50.00/Day	$ 200.00
Argo transport trailer		2 Days	$16.00/Day	$ 32.00
Canoe		2 Days	$10.00/Day	$ 20.00
Transportation				
Return trips to Watson Lake -2	@225km	450 km	$0.61/km	$ 270.01
Helicopter - incl. fuel		.5 hr		$ 730.20
Assays, other tests				
Rock assays	per receipt	29 Rocks		$ 840.91
Silt assays	per receipt	27 Silts		$ 644.62
Soil assays	per receipt	121 Soils		$ 2,926.57
Report Preparation				
Report writing, copying, binding		58 Hrs	25/Hr.	$ 1,450.00
Printing costs, binders,postage	per receipts			$ 109.57
Other expenses				
Argo fuel	per receipt			$ 128.15
Freight for Samples	per receipt			$ 75.23
			Total	$ 16,457.26

Table 7. Statement of Expenditures for YMIP Grant 12-044

8. APPENDICES

Assayed Rock Sample Descriptions

YMIP 12-044 Description of Rocks Assayed

Rock Sample #	Description	Acid Test
SLS12-RK-045-50AB	Tan green listwanite, fine-grained, very rusty weathering, rusty vugs	+
SLS12-RK-089	Grey quartz-rusty material breccia, hematite and limonite	-
SLS12-RK-42	Laminated marble, dark fine-grained material at lamination boundaries	+
SLS12-RK-46	Red jasper, some thin grey and white quartz veins, relic bedding	-
SLS12-RK-72A	White quartz and red jasper, jasper with hematite weathering, heavy	-
SLS12-RK-80	Tan phyllite, with white and rusty calcite veins and patches	+
SLS12-RK-81	Grey limestone, laminated (debris flow?), decarbonatized?, light weight	+
HPSE12-RK-88A	Pale buff siltstone/meta-siltstone?, very fine-grained, rusty weathering, heavy, contains pyrite and lots of very fine-grained grey metallics	-
HPSE12-RK-88B	Grey quartz, very fine-grained, dull, with pyritic and dull greymetallics in cracks	-
HPSE12-RK-88C	Grey siltstone/meta-siltstone?, very fine-grained, rusty weathering at contact, crudely laminated with robin egg blue/whitish/grey layers layers	-
HPSE12-RK-88D	Brown & green mariposite?, very rusty weathering, some calcite	+
HPSE12-RK-88E	Grey quartz-breccia, lots of very fine-grained dull grey metallics and pyrite matrix,	-
HPSE12-RK-88F	Brown & green mariposite?, very rusty weathering, some calcite	+
JNF12-RK-172A	Limonitic quartz, vuggy contact with calcite bladed rosettes	+
JNF12-RK-173A	Rusty grey quartz, rusty vugs	-
JNF12-RK-178A	Grey quartz vein, mafic dark green contacts, rusty, vuggy, some calcite, heavy	+
JNF12-RK-179	Breccia?, matrix is light robin egg blue hard material in soft orange brown clots?	-
JNF12-RK-183	Limonite coated listwanite, quartz contact is darker rusty orange	+
JNF12-RK-184	Limonite to tan coated listwanite,very fine dark crystals throughout, heavy	+
JNF12-RK-185B	Brown, tan & green listwanite, fine-grained, heavy	+
JNF12-RK-189B	Not in my notes for some unknown reason	
FLSE12-RK-101B	White and grey silicious schist?, micaceous, pyritic, rusty weathering, heavy	-
FLSE12-RK-103	White and grey silicious schist?, micaceous, pyritic, very rusty weathering, heavy	-
FLSE12-RK-113	Chloritic schist, thick white quartz vein with rusty contact, visible bornite patch	-
FLSE12-RK-196A	Buff tan ash/tuff?, very fine-grained, rusty weathering, no visible pyrite, heavy?	-
FLSE12-RK-212AC	Buff white quartzite?, very fine-grained, finely laminated, pyritic, rusty weathering	-
FLSE12-RK-220AB	(Gossan Mtn.) Tan meta-volcanic, felsic, silicious, fine-grained crudely laminated, rusty pyrite and small black x'tals, rusty weathering, heavy	-
4CN12-RK-221B	Breccia composed of quartz vein with dark brown patches within fine-grained dark and light brown rusty weatheringmaterial, some calcite, heavy	+
4CN12-RK-231	Buff tan ash/tuff?, very fine-grained, rusty weathering, small brown x'tals, heavy	-

Table 8. YMIP 12-044 Description of Rocks Assayed

Rock Sample Assay Results Certificate

29 Rocks were selected for assay based on their mineralization and rock type. Each of the 6 target sites for this project are coded in the assay certificates by an abbreviation of the target site same, followed by a 12 for the year, followed by a sample type code and lastly by the GPS waypoint site #. There were 2 exceptions. The assay for “Gossan Mountain” was designated as a ‘Fire Lake SE’ rock for coding purposes, although it was from a gossan 5 km southeast, and is assay ‘FLSE12-RK-220AB’. The other exception is rock assay ‘JNF12-RK-189B’, which was from a gossan 1.5 km west of ‘Jesse’s Nap Flat’, and was designated as a ‘Jesse’s Nap Flat’ rock for coding purposes. No rocks were collected from ‘Hasselberg Plateau NW’.

The codes for the rock assay certificate are as follows;

SLS	=	Simpson Lake South
HPSE	=	Hasselberg Plateau SE
JNF	=	Jesse’s Nap Flat
FLSE	=	Fire Lake SE
4CN	=	4C North

RK	=	Rock

AcmeLabs™
A Bureau Veritas Group Company

Acme Analytical Laboratories (Vancouver) Ltd.

PHONE (604) 253-3158

www.acmelab.com

Client: **Krichbaum, Van**
Box 382
New Denver BC V0G 1S0 CANADA

Submitted By:	Van Krichbaum
Receiving Lab:	Canada-Vancouver
Received:	November 13, 2012
Report Date:	December 18, 2012
Page:	1 of 3

CERTIFICATE OF ANALYSIS VAN12005350.1

CLIENT JOB INFORMATION

Project:	Tintina Gold
Shipment ID:	
P.O. Number	
Number of Samples:	29

Rock Assays

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	29	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	29	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage

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: Krichbaum, Van
Box 382
New Denver BC V0G 1S0
CANADA

CC:

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.

Rock Sample Assay Results Certificate - cont.

CERTIFICATE OF ANALYSIS VAN12005350.1

	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
G1	Prep Blank	<0.01	<0.1	1.9	2.7	50	<0.1	3.6	4.5	629	1.93	<0.5	2.3	5.0	55	<0.1	<0.1	<0.1	33	0.42	0.084
G1	Prep Blank	<0.01	<0.1	3.0	2.8	51	<0.1	4.2	4.8	574	1.89	<0.5	0.6	5.0	52	<0.1	<0.1	<0.1	33	0.42	0.090
SLS12-RK-045-50AB	Rock	0.11	0.5	27.9	6.1	91	<0.1	17.3	7.3	1725	2.67	6.9	2.6	0.5	158	0.4	13.0	<0.1	9	7.53	0.062
SLS12-RK-089	Rock	0.04	0.3	3.9	6.0	25	<0.1	4.9	1.2	444	1.67	1.1	0.9	0.2	8	0.2	0.2	<0.1	3	0.24	0.003
SLS12-RK-42	Rock	0.08	0.4	2.5	5.1	27	<0.1	5.1	2.5	236	0.60	1.7	0.9	1.5	87	0.3	0.5	<0.1	22	6.50	0.022
SLS12-RK-46	Rock	0.10	0.8	21.7	1.7	30	<0.1	15.0	6.5	773	0.42	0.6	1.1	0.6	73	<0.1	0.3	<0.1	<2	0.09	0.013
SLS12-RK-72A	Rock	0.08	0.5	1.4	2.1	16	<0.1	1.9	0.8	131	1.42	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	0.03	0.013
SLS12-RK-80	Rock	0.07	0.8	20.2	22.8	27	<0.1	5.9	6.7	804	2.10	<0.5	0.6	2.0	50	<0.1	<0.1	0.3	3	1.79	0.026
SLS12-RK-81	Rock	0.08	0.4	13.9	6.3	43	<0.1	9.2	6.0	459	0.50	0.6	<0.5	1.0	5	0.4	<0.1	<0.1	5	0.37	0.029
HPSE12-RK-88A	Rock	0.26	0.5	175.7	1.5	15	0.5	7.9	3.7	7	1.23	16.0	2.5	<0.1	12	<0.1	42.8	<0.1	27	<0.01	0.004
HPSE12-RK-88B	Rock	0.07	0.5	64.7	1.8	7	2.8	1.6	0.4	20	1.19	27.0	72.7	<0.1	<1	<0.1	31.1	0.2	<2	<0.01	<0.001
HPSE12-RK-88C	Rock	0.19	0.7	47.3	1.5	17	1.1	7.5	4.9	15	0.82	38.2	68.5	<0.1	5	<0.1	42.7	0.2	13	0.01	0.002
HPSE12-RK-88D	Rock	0.12	0.2	4.2	2.0	5	<0.1	745.2	30.4	1121	3.17	8.6	<0.5	<0.1	280	0.3	0.3	<0.1	11	5.55	0.002
HPSE12-RK-88E	Rock	0.08	1.2	8.0	2.0	3	1.7	8.7	3.0	22	3.17	28.4	135.6	<0.1	<1	<0.1	21.9	0.6	8	0.03	<0.001
HPSE12-RK-88F	Rock	0.13	0.2	16.5	2.5	8	0.1	2202	69.9	1153	4.80	3.7	1.1	<0.1	47	0.2	3.0	<0.1	23	1.51	0.003
JNF12-RK-172A	Rock	0.21	<0.1	3.3	4.3	7	<0.1	3.9	1.3	107	0.75	<0.5	<0.5	1.1	46	<0.1	0.1	<0.1	3	1.60	0.019
JNF12-RK-173A	Rock	0.15	0.6	12.2	4.4	13	<0.1	7.2	1.4	708	1.64	0.6	11.6	0.4	42	0.5	0.1	0.2	34	3.65	0.015
JNF12-RK-178A	Rock	0.29	0.3	63.0	459.6	43	3.6	23.2	6.9	738	2.42	<0.5	2.3	2.5	122	1.7	<0.1	7.6	81	3.40	0.010
JNF12-RK-179	Rock	0.13	0.2	23.2	0.2	9	<0.1	1033	46.8	487	2.97	1.8	7.5	<0.1	6	<0.1	1.5	<0.1	8	0.28	<0.001
JNF12-RK-183	Rock	0.13	<0.1	8.3	0.8	8	<0.1	995.7	48.7	873	2.83	3.0	6.6	<0.1	64	<0.1	1.1	<0.1	7	3.51	0.002
JNF12-RK-184	Rock	0.23	<0.1	4.5	0.9	9	<0.1	856.5	52.3	906	3.71	1.4	4.8	<0.1	68	<0.1	0.5	<0.1	10	2.52	0.002
JNF12-RK-185B	Rock	0.23	<0.1	6.1	0.5	13	<0.1	1608	67.2	1333	4.58	4.2	2.0	<0.1	25	<0.1	3.6	<0.1	8	0.81	0.001
JNF12-RK-189B	Rock	0.19	<0.1	2.6	1.3	5	0.1	14.5	2.7	45	5.48	18.9	5.9	<0.1	6	<0.1	5.7	<0.1	21	0.03	0.016
FLSE12-RK-101B	Rock	0.10	2.3	62.9	24.8	6	0.5	5.8	24.1	38	1.78	30.1	4.4	19.1	17	<0.1	0.1	2.7	<2	0.14	0.016
FLSE12-RK-103	Rock	0.10	5.3	197.1	33.5	9	0.2	3.8	5.6	434	0.86	0.6	<0.5	19.9	42	0.2	0.1	6.6	<2	0.76	0.027
FLSE12-RK-113	Rock	0.14	0.7	323.1	3.3	46	0.2	4.4	8.4	1845	2.22	1.0	10.1	0.4	61	<0.1	<0.1	<0.1	21	3.16	0.012
FLSE12-RK-196A	Rock	0.09	0.3	9.0	10.6	29	<0.1	1.3	0.3	45	0.67	<0.5	2.0	5.2	3	0.1	<0.1	0.2	<2	0.01	0.005
FLSE12-RK-212AC	Rock	0.14	2.3	5.5	11.1	2	<0.1	3.3	3.3	23	1.19	<0.5	0.8	8.9	18	<0.1	<0.1	0.3	7	0.13	0.021
FLSE12-RK-220AB	Rock	0.16	0.3	13.9	7.5	6	0.1	0.9	1.5	59	1.95	<0.5	5.1	18.8	62	<0.1	<0.1	0.4	15	0.09	0.031
4CN12-RK-221B	Rock	0.15	0.5	21.2	10.7	84	<0.1	23.6	14.6	475	1.24	12.7	<0.5	6.8	43	0.3	0.4	0.2	10	1.10	0.056

CERTIFICATE OF ANALYSIS VAN12005350.1

	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
G1	Prep Blank	9	8	0.56	247	0.138	<1	1.09	0.138	0.58	<0.1	<0.01	2.5	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank	7	7	0.56	226	0.122	2	0.99	0.087	0.50	<0.1	<0.01	2.2	0.3	<0.05	5	<0.5	<0.2
SLS12-RK-045-50AB	Rock	1	15	2.52	161	0.001	2	0.12	0.004	0.03	<0.1	0.06	1.5	<0.1	<0.05	<1	<0.5	<0.2
SLS12-RK-089	Rock	1	5	0.08	36	<0.001	<1	0.03	0.003	0.01	<0.1	0.02	1.8	<0.1	<0.05	<1	<0.5	<0.2
SLS12-RK-42	Rock	3	30	0.25	35	0.059	3	0.46	0.032	0.16	0.2	<0.01	2.2	<0.1	<0.05	2	<0.5	<0.2
SLS12-RK-46	Rock	3	57	0.19	2591	0.002	<1	0.20	0.001	0.03	<0.1	0.04	0.4	<0.1	0.06	<1	<0.5	<0.2
SLS12-RK-72A	Rock	<1	37	<0.01	14	0.001	<1	0.01	0.002	<0.01	<0.1	<0.01	0.5	<0.1	<0.05	<1	<0.5	<0.2
SLS12-RK-80	Rock	2	66	0.12	42	<0.001	<1	0.14	0.022	0.09	<0.1	0.01	3.2	<0.1	<0.05	<1	<0.5	<0.2
SLS12-RK-81	Rock	6	31	0.19	26	0.001	1	0.36	0.005	<0.01	<0.1	0.01	0.7	<0.1	<0.05	<1	<0.5	<0.2
HPSE12-RK-88A	Rock	<1	29	<0.01	115	<0.001	<1	0.70	<0.001	0.03	<0.1	20.62	1.8	1.8	0.90	1	0.8	<0.2
HPSE12-RK-88B	Rock	<1	49	<0.01	9	<0.001	<1	0.02	<0.001	<0.01	<0.1	1.87	0.2	0.7	1.16	<1	<0.5	0.6
HPSE12-RK-88C	Rock	<1	57	0.02	54	<0.001	<1	0.28	<0.001	0.07	<0.1	1.33	0.7	1.2	0.70	1	1.9	<0.2
HPSE12-RK-88D	Rock	<1	214	9.88	59	<0.001	1	0.03	0.005	<0.01	<0.1	0.07	7.6	<0.1	<0.05	<1	<0.5	<0.2
HPSE12-RK-88E	Rock	<1	90	0.01	30	<0.001	<1	0.12	<0.001	0.06	<0.1	3.56	0.3	3.4	3.67	<1	3.1	<0.2
HPSE12-RK-88F	Rock	<1	344	8.68	123	<0.001	<1	0.06	0.002	0.01	0.1	0.35	7.1	0.1	<0.05	2	<0.5	<0.2
JNF12-RK-172A	Rock	2	4	0.78	17	<0.001	<1	0.09	0.004	0.04	<0.1	0.07	0.8	<0.1	<0.05	<1	<0.5	<0.2
JNF12-RK-173A	Rock	1	30	1.45	25	<0.001	<1	0.12	0.004	0.02	<0.1	0.05	3.7	<0.1	<0.05	<1	<0.5	<0.2
JNF12-RK-178A	Rock	8	12	0.96	40	0.003	<1	0.13	0.007	0.03	<0.1	0.05	11.2	<0.1	<0.05	<1	5.8	1.4
JNF12-RK-179	Rock	<1	277	9.04	39	<0.001	<1	0.05	0.004	0.03	<0.1	0.02	2.7	0.4	<0.05	<1	<0.5	<0.2
JNF12-RK-183	Rock	<1	246	10.08	36	0.001	<1	0.04	0.003	0.01	0.3	<0.01	5.4	0.2	0.10	<1	<0.5	<0.2
JNF12-RK-184	Rock	<1	457	12.59	25	0.001	4	0.08	0.002	<0.01	0.2	0.01	6.4	0.2	<0.05	<1	<0.5	<0.2
JNF12-RK-185B	Rock	<1	428	13.08	11	<0.001	2	0.07	0.002	<0.01	0.3	0.01	1.9	0.2	<0.05	<1	<0.5	<0.2
JNF12-RK-189B	Rock	<1	7	0.05	90	0.001	<1	0.10	0.002	0.04	<0.1	0.25	1.6	0.9	0.09	<1	1.0	<0.2
FLSE12-RK-101B	Rock	11	30	0.05	36	0.020	1	0.21	0.026	0.21	0.2	0.01	0.3	<0.1	1.80	<1	1.1	0.4
FLSE12-RK-103	Rock	24	4	0.05	71	0.035	<1	0.32	0.028	0.43	0.1	0.01	0.6	0.1	<0.05	<1	<0.5	0.2
FLSE12-RK-113	Rock	1	41	1.45	54	0.056	<1	1.37	0.003	0.30	<0.1	<0.01	1.5	<0.1	<0.05	3	<0.5	<0.2
FLSE12-RK-196A	Rock	19	3	0.01	16	<0.001	<1	0.22	0.041	0.22	<0.1	0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2
FLSE12-RK-212AC	Rock	2	34	0.06	51	0.092	1	0.24	0.049	0.18	0.2	0.01	1.3	<0.1	0.46	1	1.2	<0.2
FLSE12-RK-220AB	Rock	27	4	0.32	40	0.151	1	0.48	0.072	0.10	0.1	<0.01	2.9	<0.1	0.41	3	1.1	<0.2
4CN12-RK-221B	Rock	15	42	0.16	76	0.095	<1	0.49	0.055	0.18	0.2	<0.01	1.8	0.2	<0.05	2	<0.5	<0.2

<u>Rock Sample Assay Results Certificate</u> - cont.

CERTIFICATE OF ANALYSIS — VAN12005350.1

	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
4CN12-RK-231	Rock	0.12	0.4	3.2	2.5	3	<0.1	2.3	2.4	23	1.25	1.8	2.1	8.2	4	<0.1	<0.1	0.4	2	<0.01	0.011

CERTIFICATE OF ANALYSIS — VAN12005350.1

	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
4CN12-RK-231	Rock	2	6	<0.01	4	0.016	<1	0.15	0.165	0.01	<0.1	<0.01	0.5	<0.1	<0.05	<1	<0.5	<0.2

QUALITY CONTROL REPORT — VAN12005350.1

	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																					
REP G1	QC		<0.1	3.0	2.8	52	<0.1	4.3	4.8	583	1.86	<0.5	1.2	5.1	51	<0.1	<0.1	<0.1	32	0.45	0.090
JNF12-RK-185B	Rock	0.23	<0.1	6.1	0.5	13	<0.1	1608	67.2	1333	4.58	4.2	2.0	<0.1	25	<0.1	3.6	<0.1	8	0.81	0.001
REP JNF12-RK-185B	QC		<0.1	6.5	0.5	13	<0.1	1602	67.0	1334	4.55	3.9	0.8	<0.1	26	<0.1	3.7	<0.1	8	0.80	0.001
Core Reject Duplicates																					
FLSE12-RK-212AC	Rock	0.14	2.3	5.5	11.1	2	<0.1	3.3	3.3	23	1.19	<0.5	0.8	8.9	18	<0.1	<0.1	0.3	7	0.13	0.021
DUP FLSE12-RK-212AC	QC	<0.01	2.4	5.0	10.0	2	<0.1	3.6	3.1	23	1.20	0.6	<0.5	8.2	18	<0.1	<0.1	0.3	8	0.12	0.019
Reference Materials																					
STD DS9	Standard		14.0	119.3	123.6	307	1.8	41.6	8.5	585	2.37	25.3	112.4	6.9	69	2.4	6.0	7.1	39	0.74	0.077
STD DS9	Standard		13.2	113.2	132.6	322	1.8	40.6	8.1	599	2.44	25.5	121.8	7.1	64	2.2	5.6	6.6	38	0.69	0.080
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
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	3	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	0.04	<0.001
Prep Wash																					
G1	Prep Blank	<0.01	<0.1	1.9	2.7	50	<0.1	3.6	4.5	629	1.93	<0.5	2.3	5.0	55	<0.1	<0.1	<0.1	33	0.42	0.084
G1	Prep Blank	<0.01																			
G1	Prep Blank		<0.1	3.0	2.8	51	<0.1	4.2	4.8	574	1.89	<0.5	0.6	5.0	52	<0.1	<0.1	<0.1	33	0.42	0.090

QUALITY CONTROL REPORT — VAN12005350.1

	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																		
REP G1	QC	8	7	0.57	236	0.127	1	1.06	0.101	0.51	<0.1	<0.01	2.1	0.3	<0.05	5	<0.5	<0.2
JNF12-RK-185B	Rock	<1	428	13.08	11	<0.001	2	0.07	0.002	<0.01	0.3	0.01	1.9	0.2	<0.05	<1	<0.5	<0.2
REP JNF12-RK-185B	QC	<1	417	13.24	11	<0.001	2	0.07	0.002	<0.01	0.3	<0.01	2.0	0.2	<0.05	<1	<0.5	<0.2
Core Reject Duplicates																		
FLSE12-RK-212AC	Rock	2	34	0.06	51	0.092	1	0.24	0.049	0.18	0.2	0.01	1.3	<0.1	0.46	1	1.2	<0.2
DUP FLSE12-RK-212AC	QC	2	32	0.06	44	0.086	<1	0.21	0.047	0.18	0.1	<0.01	1.2	<0.1	0.46	<1	0.7	<0.2
Reference Materials																		
STD DS9	Standard	13	126	0.62	299	0.118	3	0.99	0.096	0.42	2.9	0.21	2.3	5.3	0.17	4	5.2	5.7
STD DS9	Standard	13	123	0.63	278	0.114	2	0.97	0.083	0.40	3.3	0.20	2.3	5.7	0.16	5	4.3	5.4
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
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	Prep Blank	9	8	0.56	247	0.138	<1	1.09	0.138	0.58	<0.1	<0.01	2.5	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank																	
G1	Prep Blank	7	7	0.56	226	0.122	2	0.99	0.087	0.50	<0.1	<0.01	2.2	0.3	<0.05	5	<0.5	<0.2

Table 9. Rock Sample Assay Results Certificate

Silt Sample Assay Results Certificate

27 Silt samples were collected and sent for assay. Each of the 6 target sites for this project are coded in the assay certificates by an abbreviation of the target site same, followed by a 12 for the year, followed by a sample type code and lastly by the GPS waypoint site #. No rocks were collected from 'Jesse's Nap Flat'.

The codes for the silt assay certificate are as follows;

SLS = Simpson Lake South
HPSE = Hasselberg Plateau SE
FLSE = Fire Lake SE
4CN = 4C North
HPSE = Hasselberg Plateau NW

SED = Silt

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Client: **Krichbaum, Van**
Box 382
New Denver BC V0G 1S0 CANADA

Project: Tintina Gold
Report Date: December 18, 2012

Page: 2 of 2 Part: 1 of 1

CERTIFICATE OF ANALYSIS VAN12005347.1

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
SLS12-SED-39	Silt	1.1	29.1	14.6	68	0.1	19.3	8.3	595	2.23	7.2	3.0	3.6	43	0.3	0.6	0.2	38	0.93	0.061	18
SLS12-SED-65	Silt	1.2	37.0	15.3	78	0.1	20.3	9.7	533	2.32	7.8	4.4	2.8	55	0.4	0.8	0.2	36	1.15	0.055	17
HPSE12-SED-89	Silt	3.7	74.9	6.9	54	1.4	266.6	12.1	253	1.93	26.7	5.5	0.9	73	1.9	0.7	0.2	53	2.00	0.133	14
HPSE12-SED-90	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-91	Silt	0.9	36.3	14.6	79	1.4	146.1	15.0	380	2.94	20.9	7.1	6.2	49	0.8	0.7	0.3	47	0.76	0.095	56
HPSE12-SED-92	Silt	5.4	61.0	14.3	181	1.1	197.5	18.6	654	3.32	29.8	7.7	3.5	51	4.9	1.1	0.3	75	0.97	0.075	51
HPSE12-SED-93	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
HPSE12-SED-94	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
FLSE12-SED-114	Silt	2.2	45.4	43.8	79	0.2	11.8	21.4	998	3.62	56.9	3.0	26.1	58	0.2	0.4	2.0	19	0.59	0.093	49
FLSE12-SED-116	Silt	2.1	31.7	46.4	90	0.2	9.6	18.3	1204	3.77	6.9	2.5	10.6	35	0.3	0.3	0.9	41	0.42	0.067	36
FLSE12-SED-117	Silt	4.5	29.7	61.1	77	0.1	7.9	7.9	634	2.72	21.7	2.4	4.5	30	0.2	0.3	2.0	28	0.25	0.050	40
FLSE12-SED-209	Silt	1.1	41.2	27.7	73	0.1	9.7	13.4	575	2.20	9.8	1.0	15.4	47	0.3	0.2	0.5	28	0.36	0.079	33
FLSE12-SED-210	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-211	Silt	2.2	28.8	32.5	66	0.1	7.4	11.0	716	2.41	5.3	1.2	4.7	20	<0.1	0.1	0.8	40	0.17	0.068	18
FLSE12-SED-213	Silt	2.4	38.8	24.1	137	0.2	9.2	12.3	503	2.42	8.5	2.0	4.3	55	0.1	0.1	0.5	32	0.50	0.072	30
FLSE12-SED-215	Silt	1.5	35.1	27.3	213	0.2	8.7	6.5	439	1.55	2.2	1.9	0.7	41	0.5	0.1	0.3	29	0.44	0.117	82
FLSE12-SED-216	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-223	Silt	1.7	52.6	89.6	117	0.6	46.6	29.8	538	4.29	80.1	19.9	11.2	50	0.2	0.6	0.3	31	0.79	0.079	126
4CN12-SED-226	Silt	0.6	40.7	75.9	120	0.3	40.8	29.3	993	3.90	43.2	13.0	15.2	34	<0.1	0.5	0.2	26	0.52	0.061	87
4CN12-SED-228	Silt	0.2	39.5	66.8	120	0.2	41.8	27.9	869	3.89	20.9	6.1	20.0	29	0.1	0.5	0.2	24	0.43	0.066	82
4CN12-SED-230	Silt	0.6	29.1	35.5	88	0.1	28.4	17.5	686	2.76	15.5	5.6	7.4	25	0.3	0.4	0.2	40	0.29	0.080	42
4CN12-SED-234	Silt	1.0	27.6	22.7	81	0.2	20.3	14.9	876	2.72	29.7	5.3	4.1	36	0.2	0.3	0.1	37	0.44	0.081	39
4CN12-SED-235	Silt	0.5	23.4	28.7	66	0.1	20.3	12.3	531	2.17	32.0	15.1	6.0	38	0.2	0.4	0.2	24	0.52	0.062	52
4CN12-SED-236	Silt	0.9	17.9	22.8	75	0.2	19.6	15.9	1210	2.67	37.5	3.3	4.2	37	0.2	0.3	0.1	19	0.57	0.075	49
HPNW12-SED-240	Silt	0.4	35.6	5.2	72	0.2	133.3	19.7	430	3.10	12.8	3.4	2.2	19	0.1	0.2	<0.1	71	0.48	0.070	11
HPNW12-SED-241	Silt	0.3	50.1	3.7	57	<0.1	192.0	29.0	525	3.18	5.9	1.3	2.0	17	0.1	0.1	<0.1	78	0.51	0.069	9
HPNW12-SED-242	Silt	0.3	56.1	4.1	64	<0.1	183.4	25.0	367	2.79	5.5	1.8	1.9	16	0.2	<0.1	<0.1	78	0.51	0.066	8

Silt Sample Assay Results Certificate - cont.

CERTIFICATE OF ANALYSIS VAN12005347.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
SLS12-SED-39	Silt	12	0.47	157	0.020	3	0.91	0.010	0.07	<0.1	0.14	2.4	<0.1	<0.05	2	1.1	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-SED-85	Silt	18	0.53	148	0.019	2	0.95	0.008	0.08	<0.1	0.09	2.6	<0.1	<0.05	3	1.0	<0.2	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-89	Silt	99	0.82	185	0.023	5	1.46	0.019	0.12	0.2	0.13	3.9	0.2	0.14	3	18.0	<0.2	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-90	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.1	21.1	4.9	28
HPSE12-SED-91	Silt	104	0.96	406	0.023	1	1.91	0.018	0.12	0.4	0.14	5.3	0.2	<0.05	4	5.2	<0.2	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-92	Silt	111	1.08	256	0.031	3	1.73	0.024	0.10	0.4	0.09	4.6	0.5	<0.05	5	5.4	<0.2	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-93	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-94	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-114	Silt	21	1.06	67	0.047	<1	1.34	0.004	0.32	0.1	0.02	6.9	0.4	<0.05	5	1.0	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-116	Silt	14	1.32	121	0.081	<1	1.75	0.007	0.43	<0.1	0.01	5.1	0.5	<0.05	5	<0.5	0.3	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-117	Silt	19	0.53	144	0.021	<1	1.50	0.005	0.20	0.1	<0.01	2.4	0.3	<0.05	5	0.8	0.5	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-209	Silt	13	0.77	86	0.080	<1	1.03	0.006	0.38	0.1	<0.01	2.5	0.4	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-210	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2.0	54.8	35.8	119
FLSE12-SED-211	Silt	18	0.85	82	0.056	<1	1.53	0.016	0.17	0.1	<0.01	2.8	0.3	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-213	Silt	18	0.79	140	0.065	2	1.49	0.015	0.26	0.1	<0.01	1.8	0.4	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-215	Silt	24	0.49	173	0.015	<1	1.52	0.025	0.17	<0.1	0.02	1.0	0.2	<0.05	4	1.6	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-216	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.8	71.8	6.2	46
4CN12-SED-223	Silt	41	0.75	104	0.019	2	2.27	0.016	0.35	0.3	0.14	4.9	0.6	<0.05	7	1.8	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-SED-226	Silt	41	0.86	83	0.053	<1	1.89	0.010	0.43	0.2	0.04	4.6	0.7	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-SED-228	Silt	34	0.88	66	0.100	<1	1.70	0.008	0.59	0.2	0.02	4.1	0.8	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-SED-230	Silt	30	0.56	153	0.062	<1	1.70	0.013	0.27	0.1	0.04	4.0	0.4	<0.05	5	1.0	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-SED-234	Silt	21	0.71	146	0.031	1	1.52	0.014	0.26	0.1	0.04	3.3	0.3	<0.05	4	0.9	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-SED-235	Silt	17	0.46	128	0.036	<1	1.10	0.009	0.30	0.2	0.04	3.0	0.3	<0.05	4	0.7	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-SED-236	Silt	18	0.41	154	0.025	1	1.16	0.015	0.29	0.2	0.05	2.4	0.3	<0.05	3	1.5	<0.2	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-240	Silt	138	1.10	215	0.136	<1	1.83	0.032	0.20	<0.1	0.03	6.0	0.2	<0.05	6	0.8	<0.2	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-241	Silt	203	1.20	172	0.130	2	1.52	0.047	0.22	<0.1	0.02	6.4	0.1	<0.05	4	0.6	<0.2	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-242	Silt	189	1.35	190	0.139	<1	1.60	0.042	0.21	<0.1	0.02	6.7	0.2	<0.05	5	0.8	<0.2	N.A.	N.A.	N.A.	N.A.

CERTIFICATE OF ANALYSIS VAN12005347.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti
	Unit	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%
	MDL	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	1	0.01	1	0.001
SLS12-SED-39	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-SED-85	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-89	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-90	Silt	0.4	150.2	7.8	264	1.67	13.3	5.9	0.6	113	0.6	0.5	0.2	22	1.96	0.086	7	79	0.70	210	0.013
HPSE12-SED-91	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-92	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-93	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-94	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-114	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-116	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-117	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-209	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-210	Silt	0.3	8.6	10.8	547	2.01	4.7	2.0	2.7	92	0.7	0.2	0.5	19	0.89	0.064	92	14	0.65	92	0.024
FLSE12-SED-211	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-213	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-215	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-216	Silt	0.4	4.8	3.0	236	0.42	3.8	2.4	0.5	97	1.2	0.4	0.1	17	1.60	0.172	186	19	0.16	91	0.005
4CN12-SED-223	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-226	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-228	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-230	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-234	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-235	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-236	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-240	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-241	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-242	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Silt Sample Assay Results Certificate - cont.

CERTIFICATE OF ANALYSIS VAN12005347.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
SLS12-SED-39	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-SED-85	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-89	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-90	Silt	<20	0.67	0.016	0.04	<0.1	0.09	1.2	0.2	0.43	2	12.7	<0.2
HPSE12-SED-91	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-92	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-93	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPSE12-SED-94	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-114	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-116	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-117	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-209	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-210	Silt	<20	0.98	0.012	0.18	<0.1	0.03	1.5	0.3	0.07	3	1.6	<0.2
FLSE12-SED-211	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-213	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-215	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FLSE12-SED-216	Silt	<20	0.55	0.039	0.26	<0.1	0.03	2.1	<0.1	0.34	2	12.8	<0.2
4CN12-SED-223	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-226	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-228	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-230	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-234	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-235	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4CN12-SED-236	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-240	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-241	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
HPNW12-SED-242	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

QUALITY CONTROL REPORT VAN12005347.1

	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
Pulp Duplicates																					
FLSE12-SED-114	Silt	2.2	45.4	43.8	79	0.2	11.8	21.4	998	3.62	56.9	3.0	26.1	58	0.2	0.4	2.0	19	0.59	0.093	49
REP FLSE12-SED-114	QC	2.1	44.2	39.7	79	0.2	11.8	21.8	1012	3.53	57.7	4.4	24.9	58	0.2	0.5	1.9	35	0.59	0.088	47
FLSE12-SED-216	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP FLSE12-SED-216	QC																				
4CN12-SED-228	Silt	0.2	39.5	66.8	120	0.2	41.8	27.9	869	3.89	20.9	6.1	20.0	29	0.1	0.5	0.2	24	0.43	0.066	82
REP 4CN12-SED-228	QC	0.2	40.2	65.4	122	0.2	42.1	27.1	871	3.98	21.4	4.4	19.7	30	0.1	0.5	0.2	30	0.42	0.060	84
Reference Materials																					
STD DS9	Standard	13.2	113.7	137.3	322	1.9	42.9	8.2	612	2.48	27.1	133.8	7.1	82	2.3	6.0	7.0	48	0.77	0.085	15
STD DS9	Standard																				
STD OREAS45EA	Standard																				
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
STD OREAS45EA Expected																					
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
BLK	Blank																				

<u>Silt Sample Assay Results Certificate</u> - cont.

QUALITY CONTROL REPORT VAN12005347.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
Pulp Duplicates																					
FLSE12-SED-114	Silt	21	1.06	67	0.047	<1	1.34	0.004	0.32	0.1	0.02	6.9	0.4	<0.05	5	1.0	<0.2	N.A.	N.A.	N.A.	N.A.
REP FLSE12-SED-114	QC	23	1.06	64	0.046	<1	1.22	0.004	0.33	0.1	<0.01	7.1	0.5	<0.05	5	0.8	<0.2				
FLSE12-SED-216	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.8	71.8	6.2	46
REP FLSE12-SED-216	QC																	1.9	74.3	6.6	47
4CN12-SED-228	Silt	34	0.88	66	0.100	<1	1.70	0.008	0.59	0.2	0.02	4.1	0.8	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP 4CN12-SED-228	QC	35	0.89	64	0.100	<1	1.78	0.008	0.57	0.2	0.02	3.9	0.8	<0.05	6	1.0	<0.2				
Reference Materials																					
STD DS9	Standard	123	0.65	313	0.127	3	1.03	0.109	0.44	3.1	0.20	3.2	5.9	<0.05	5	6.3	5.5				
STD DS9	Standard																	12.6	100.9	131.8	312
STD OREAS45EA	Standard																	1.4	583.7	11.4	24
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	12.84	108	126	317
STD OREAS45EA Expected																		1.78	709	14.3	30.6
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	0.02	<0.1	<0.1	<0.05	<1	<0.5	<0.2				
BLK	Blank																	<0.1	<0.1	<0.1	<1

QUALITY CONTROL REPORT VAN12005347.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti
	Unit	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%
	MDL	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	1	0.01	1	0.001
Pulp Duplicates																					
FLSE12-SED-114	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP FLSE12-SED-114	QC																				
FLSE12-SED-216	Silt	0.4	4.8	3.0	236	0.42	3.8	2.4	0.5	97	1.2	0.4	0.1	17	1.60	0.172	186	19	0.16	91	0.005
REP FLSE12-SED-216	QC	0.4	4.7	2.9	226	0.41	3.5	2.1	0.7	98	1.1	0.4	0.1	18	1.62	0.175	185	19	0.16	91	0.006
4CN12-SED-228	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-SED-228	QC																				
Reference Materials																					
STD DS9	Standard																				
STD DS9	Standard	1.9	41.8	7.7	570	2.33	21.6	125.7	5.5	58	2.1	5.1	5.3	45	0.66	0.073	10	121	0.62	285	0.091
STD OREAS45EA	Standard	0.3	300.7	44.2	333	20.69	7.6	50.8	8.0	2	<0.1	0.2	0.3	281	0.03	0.021	5	823	0.07	118	0.067
STD DS9 Expected		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	121	0.6165	330	0.1108
STD OREAS45EA Expected		0.311	357	52	400	22.65	11.4	53	10.7	4.05	0.03	0.64	0.26	295	0.032	0.029	8.19	849	0.095	148	0.106
BLK	Blank																				
BLK	Blank	<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	<1	<0.01	<1	<0.001

QUALITY CONTROL REPORT VAN12005347.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates													
FLSE12-SED-114	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP FLSE12-SED-114	QC												
FLSE12-SED-216	Silt	<20	0.55	0.039	0.26	<0.1	0.03	2.1	<0.1	0.34	2	12.8	<0.2
REP FLSE12-SED-216	QC	<20	0.54	0.042	0.26	<0.1	0.04	1.6	<0.1	0.29	2	12.8	<0.2
4CN12-SED-228	Silt	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-SED-228	QC												
Reference Materials													
STD DS9	Standard												
STD DS9	Standard	<20	0.84	0.085	0.38	2.9	0.21	2.1	5.5	0.12	4	5.6	5.2
STD OREAS45EA	Standard	<20	2.40	0.017	0.04	<0.1	<0.01	62.0	<0.1	<0.05	10	0.5	<0.2
STD DS9 Expected			0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
STD OREAS45EA Expected			3.32	0.027	0.053		0.34	78	0.072	0.044	11.7	2.09	0.11
BLK	Blank												
BLK	Blank	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

Table 10. Silt Sample Assay Results Certificate

<u>Soil Sample Assay Results Certificate</u>

121 Soil samples were collected and sent for assay. Each of the 6 target sites for this project are coded in the assay certificates by an abbreviation of the target site same, followed by a 12 for the year, followed by a sample type code and lastly by the GPS waypoint site #. No ('ridge and spur') soil samples were collected from 'Hasselberg Plateau SE' or 'Hasselberg Plateau NE' because these were low elevation target sites and received a silt sampling program instead.

The codes for the soil assay certificate are as follows;

SLS	=	Simpson Lake South
JNF	=	Jesse's Nap Flat
FLSE	=	Fire Lake SE
4CN	=	4C North

S = Soil

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Acme Analytical Laboratories (Vancouver) Ltd.

PHONE (604) 253-3158

Client:	**Krichbaum, Van** Box 382 New Denver BC V0G 1S0 CANADA
Submitted By:	Van Krichbaum
Receiving Lab:	Canada-Vancouver
Received:	November 13, 2012
Report Date:	December 18, 2012
Page:	1 of 6

CERTIFICATE OF ANALYSIS VAN12005348.1

CLIENT JOB INFORMATION

Project:	Tintina Gold
Shipment ID:	
P.O. Number	
Number of Samples:	121

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
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	121	Dry at 60C			VAN
SS80	121	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	116	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
1DX1	5	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

ADDITIONAL COMMENTS

Invoice To:	Krichbaum, Van Box 382 New Denver BC V0G 1S0 CANADA
CC:	

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.

<u>Soil Sample Assay Results Certificate</u> - cont.

CERTIFICATE OF ANALYSIS VAN12005348.1

	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
SLS12-S-042	Soil	2.5	34.7	21.1	85	0.2	32.7	13.9	631	3.63	28.0	8.2	0.6	13	0.2	2.1	0.3	34	0.09	0.063	15
SLS12-S-043	Soil	0.9	20.7	9.5	61	<0.1	23.8	7.8	323	2.12	6.5	4.2	4.9	19	0.3	0.6	0.2	34	0.23	0.085	17
SLS12-S-044	Soil	0.6	19.0	9.4	64	<0.1	18.3	7.5	350	2.25	5.2	5.2	2.6	14	0.2	0.4	0.1	32	0.23	0.052	13
SLS12-S-045	Soil	1.2	16.2	15.1	73	<0.1	21.3	7.9	506	3.26	11.7	3.4	2.7	12	0.2	0.7	0.2	37	0.17	0.063	14
SLS12-S-046	Soil	0.9	31.5	12.0	76	0.2	22.1	9.0	533	2.89	7.3	3.5	1.7	17	0.2	0.5	0.2	40	0.22	0.124	17
SLS12-S-047	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-048	Soil	1.5	13.1	12.3	59	<0.1	15.7	4.3	206	2.77	12.3	2.0	2.6	5	0.1	0.8	0.2	44	0.04	0.039	15
SLS12-S-049	Soil	1.1	12.6	12.4	39	<0.1	12.3	4.1	190	2.50	11.1	1.7	2.2	6	0.1	0.6	0.3	54	0.07	0.040	16
SLS12-S-050	Soil	0.9	14.0	11.9	63	0.1	12.3	12.1	1097	3.59	8.7	1.6	0.5	12	<0.1	0.4	0.2	67	0.12	0.077	10
SLS12-S-067	Soil	2.1	23.7	11.9	83	0.4	22.7	7.1	335	2.94	10.3	2.2	0.4	9	0.6	1.1	0.2	50	0.06	0.119	17
SLS12-S-068	Soil	4.5	65.0	13.9	151	0.6	46.9	10.8	291	3.74	13.9	7.3	1.4	24	0.3	2.8	0.2	76	0.12	0.091	22
SLS12-S-069	Soil	1.0	28.7	13.2	64	0.1	14.0	7.8	312	3.29	11.4	2.6	1.0	15	0.2	0.6	0.2	56	0.25	0.049	11
SLS12-S-070	Soil	0.7	23.7	16.9	87	<0.1	13.6	10.9	709	3.85	9.8	2.4	2.4	18	0.3	0.7	0.2	56	0.33	0.057	10
SLS12-S-071	Soil	0.6	42.8	6.0	42	<0.1	14.1	7.8	426	1.91	3.7	6.3	4.9	13	0.1	0.5	0.1	34	0.20	0.062	19
SLS12-S-072	Soil	0.6	64.0	14.4	88	<0.1	20.0	16.0	738	3.28	20.4	1.3	1.0	12	0.2	0.6	0.2	58	0.26	0.074	12
SLS12-S-073	Soil	0.9	36.0	19.2	77	<0.1	14.3	12.8	1154	3.42	14.5	2.8	0.7	10	0.2	0.5	0.3	68	0.12	0.098	12
SLS12-S-074	Soil	0.7	68.1	19.4	72	0.1	19.8	13.3	751	3.61	11.2	2.1	1.0	12	0.2	0.5	0.3	64	0.16	0.101	15
SLS12-S-075	Soil	0.5	125.6	13.6	78	0.1	18.5	17.6	1009	4.42	20.0	5.8	2.4	17	0.4	0.7	0.2	95	0.48	0.068	19
SLS12-S-076	Soil	0.9	115.4	13.8	75	0.2	18.4	19.9	1284	3.53	7.7	4.1	0.4	14	0.2	0.6	0.2	75	0.21	0.095	10
SLS12-S-077	Soil	1.0	21.6	12.0	53	<0.1	17.7	8.3	290	3.09	12.0	1.6	0.6	9	0.1	0.6	0.2	48	0.11	0.073	12
SLS12-S-078	Soil	0.5	36.6	6.8	50	<0.1	16.3	9.9	563	2.40	5.3	1.6	3.0	15	0.1	0.4	0.1	46	0.18	0.060	15
SLS12-S-079	Soil	0.6	43.3	6.8	43	<0.1	13.3	7.7	489	1.98	4.4	4.4	6.8	14	0.1	0.4	0.1	37	0.22	0.074	24
SLS12-S-080	Soil	0.8	47.4	9.3	48	<0.1	16.6	8.7	362	2.69	7.8	2.3	3.0	13	0.1	0.5	0.2	48	0.15	0.057	17
SLS12-S-081	Soil	0.8	46.3	9.3	58	<0.1	19.8	10.0	541	2.70	7.1	3.2	4.5	17	0.1	0.5	0.2	48	0.21	0.053	18
SLS12-S-082	Soil	1.0	24.3	73.1	55	<0.1	21.8	9.0	436	3.01	18.6	14.2	1.5	10	0.2	0.6	0.5	39	0.15	0.052	15
SLS12-S-083A	Soil	0.8	65.8	12.5	79	0.1	25.6	12.1	649	3.24	9.5	3.7	4.3	15	0.2	0.6	0.2	51	0.22	0.067	20
SLS12-S-083B	Soil	0.9	42.6	7.4	64	<0.1	16.3	10.5	577	3.10	6.5	1.4	1.2	12	0.1	0.5	0.2	54	0.13	0.061	14
SLS12-S-085	Soil	0.9	38.3	6.4	54	0.1	13.8	7.7	412	3.29	7.3	2.7	1.3	10	0.4	0.5	0.2	63	0.11	0.066	11
SLS12-S-086	Soil	0.9	72.1	10.9	83	0.3	33.8	17.2	1670	3.45	9.7	4.7	0.7	15	0.5	0.6	0.3	57	0.30	0.095	14
SLS12-S-087	Soil	1.0	11.0	11.6	37	<0.1	10.8	3.6	175	2.17	10.2	4.0	1.9	5	0.1	0.6	0.3	47	0.06	0.041	14

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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
SLS12-S-042	Soil	20	0.40	200	0.006	1	1.45	0.004	0.07	0.2	0.08	1.2	0.4	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-043	Soil	20	0.61	780	0.062	1	1.28	0.007	0.05	0.4	0.08	2.4	<0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-044	Soil	17	0.81	280	0.127	<1	1.37	0.005	0.04	0.3	0.08	3.2	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-045	Soil	23	0.68	162	0.075	2	1.40	0.005	0.06	0.3	0.06	2.3	<0.1	<0.05	4	0.6	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-046	Soil	23	0.72	521	0.063	2	1.76	0.007	0.07	0.2	0.06	3.2	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-047	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.7	19.9	10.7	62
SLS12-S-048	Soil	20	0.38	86	0.047	<1	1.35	0.003	0.05	0.4	0.02	1.9	<0.1	<0.05	5	0.6	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-049	Soil	20	0.27	73	0.031	<1	1.16	0.004	0.04	0.3	0.01	1.7	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-050	Soil	19	0.95	175	0.110	1	1.98	0.006	0.07	0.1	0.04	4.3	<0.1	0.07	7	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-067	Soil	31	0.43	330	0.007	<1	1.73	0.006	0.08	0.1	0.05	0.9	0.2	0.07	5	0.7	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-068	Soil	49	0.66	499	0.007	2	1.58	0.011	0.11	0.1	0.08	1.7	0.2	0.08	6	2.2	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-069	Soil	18	0.68	322	0.080	<1	2.10	0.007	0.06	0.2	0.05	3.2	0.1	<0.05	7	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-070	Soil	19	1.19	168	0.179	2	2.15	0.006	0.11	0.2	0.05	5.9	<0.1	<0.05	7	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-071	Soil	15	0.50	409	0.033	<1	0.94	0.006	0.04	0.2	0.32	2.8	<0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-072	Soil	20	0.70	344	0.062	<1	1.76	0.006	0.09	0.2	0.06	3.5	<0.1	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-073	Soil	18	0.55	183	0.044	1	1.58	0.005	0.13	0.2	0.06	2.4	<0.1	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-074	Soil	20	0.73	205	0.029	1	1.88	0.007	0.08	0.3	0.07	2.6	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-075	Soil	17	1.37	1134	0.011	1	2.30	0.008	0.12	0.1	0.31	7.7	<0.1	<0.05	7	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-076	Soil	19	0.67	160	0.037	2	1.89	0.007	0.06	0.1	0.09	2.7	<0.1	0.07	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-077	Soil	21	0.46	115	0.023	<1	1.40	0.005	0.06	0.3	0.07	1.5	<0.1	<0.05	4	0.7	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-078	Soil	20	0.52	109	0.061	<1	1.19	0.006	0.05	0.2	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-079	Soil	18	0.47	147	0.040	<1	0.94	0.008	0.04	0.2	0.02	2.7	<0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-080	Soil	19	0.48	134	0.056	<1	1.25	0.006	0.05	0.3	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-081	Soil	21	0.60	477	0.055	<1	1.55	0.009	0.05	0.2	0.03	3.1	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-082	Soil	21	0.55	215	0.023	<1	1.38	0.005	0.08	0.3	0.05	1.7	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-083A	Soil	25	0.77	391	0.055	1	1.83	0.008	0.11	0.2	0.07	4.5	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-083B	Soil	18	0.62	180	0.053	1	1.46	0.006	0.07	0.2	0.06	2.3	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-085	Soil	18	0.53	92	0.095	2	1.49	0.005	0.06	0.2	0.06	2.2	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-086	Soil	31	0.78	594	0.042	2	2.24	0.006	0.10	0.2	0.11	3.4	0.1	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-087	Soil	18	0.26	67	0.032	<1	1.09	0.003	0.03	0.3	0.02	1.6	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.

Soil Sample Assay Results Certificate - cont.

CERTIFICATE OF ANALYSIS VAN12005348.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti
	Unit	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%
	MDL	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	1	0.01	1	0.001
SLS12-S-042	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-043	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-044	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-045	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-046	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-047	Soil	<0.1	15.7	7.5	550	2.66	4.8	1.1	0.6	7	0.2	0.3	0.1	42	0.12	0.062	10	17	0.94	500	0.101
SLS12-S-048	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-049	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-050	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-067	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-068	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-069	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-070	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-071	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-072	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-073	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-074	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-075	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-076	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-077	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-078	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-079	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-080	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-081	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-082	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-083A	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-083B	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-085	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-086	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-087	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

CERTIFICATE OF ANALYSIS VAN12005348.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
SLS12-S-042	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-043	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-044	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-045	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-046	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-047	Soil	<20	1.53	0.013	0.05	0.1	0.05	2.1	<0.1	0.06	5	<0.5	<0.2
SLS12-S-048	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-049	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-050	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-067	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-068	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-069	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-070	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-071	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-072	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-073	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-074	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-075	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-076	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-077	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-078	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-079	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-080	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-081	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-082	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-083A	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-083B	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-085	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-086	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-087	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Soil Sample Assay Results Certificate - cont.

CERTIFICATE OF ANALYSIS VAN12005348.1

	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
SLS12-S-088	Soil	0.6	46.3	9.6	64	<0.1	25.8	10.5	532	2.47	6.8	1.7	5.3	13	0.3	0.5	0.2	40	0.22	0.075	18
SLS12-S-089	Soil	0.9	27.6	19.9	78	0.2	29.2	11.0	925	2.64	18.8	10.7	4.8	21	1.0	0.8	0.4	23	0.98	0.099	29
SLS12-S-090	Soil	0.6	32.0	7.2	74	<0.1	16.7	9.6	441	4.42	6.2	4.5	3.1	20	0.3	0.5	0.1	99	0.19	0.061	11
SLS12-S-49	Soil	1.1	15.3	15.4	58	0.3	19.5	5.8	279	3.03	7.4	0.9	0.4	7	0.4	0.5	0.2	30	0.09	0.081	10
SLS12-S-50	Soil	1.3	20.1	15.9	63	<0.1	20.4	7.8	357	3.18	11.4	2.8	1.2	8	0.3	0.7	0.2	44	0.08	0.061	17
SLS12-S-51	Soil	6.0	72.0	13.8	64	<0.1	26.8	14.0	1023	2.68	10.7	3.7	0.8	8	0.1	1.9	0.2	29	0.06	0.048	15
SLS12-S-52	Soil	1.6	24.8	14.8	62	0.2	20.1	6.9	252	2.77	16.1	1.7	0.8	9	0.4	1.1	0.2	34	0.08	0.080	19
SLS12-S-53	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-54	Soil	3.2	33.7	11.3	53	0.2	21.6	8.5	652	2.53	28.9	3.0	0.4	8	0.1	1.5	0.3	31	0.07	0.086	14
SLS12-S-55	Soil	1.1	11.9	15.7	58	0.2	10.4	14.6	2343	1.80	4.7	1.6	0.3	18	0.2	0.4	0.3	38	0.17	0.098	17
SLS12-S-56	Soil	1.2	18.3	23.3	85	<0.1	19.3	12.8	1548	2.95	9.6	1.2	0.9	17	0.3	0.8	0.3	32	0.19	0.138	24
SLS12-S-57	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-58	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-59	Soil	0.8	16.4	5.9	17	<0.1	4.2	1.6	58	0.90	5.1	1.0	0.2	5	0.1	0.3	0.2	24	0.04	0.100	10
SLS12-S-61	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-62	Soil	1.3	14.6	9.9	35	<0.1	12.5	3.6	130	1.53	10.6	1.3	0.5	7	0.1	0.6	0.3	32	0.07	0.056	15
SLS12-S-63	Soil	1.0	8.0	10.1	30	<0.1	7.4	2.4	150	1.73	7.2	1.5	0.5	4	0.3	0.4	0.3	38	0.03	0.042	18
SLS12-S-64	Soil	1.4	17.6	16.3	56	<0.1	17.1	5.2	187	3.27	16.8	1.8	2.6	5	0.3	0.9	0.3	36	0.03	0.045	19
SLS12-S-65	Soil	1.1	31.2	22.5	89	0.1	32.7	10.2	332	2.79	44.3	1.6	3.9	8	0.1	1.5	0.2	26	0.09	0.062	30
SLS12-S-66	Soil	0.9	19.2	20.4	71	0.5	30.0	13.7	451	3.00	22.1	47.4	2.2	11	0.2	0.7	0.3	30	0.13	0.053	18
SLS12-S-67	Soil	0.8	16.5	12.8	37	0.2	9.6	3.5	170	1.51	3.5	0.6	0.7	6	0.2	0.5	0.2	23	0.04	0.119	14
SLS12-S-68	Soil	1.7	16.9	17.0	62	0.3	21.6	6.5	305	3.11	10.8	2.8	1.5	9	0.2	0.8	0.3	38	0.07	0.049	13
SLS12-S-69	Soil	1.2	8.5	10.6	37	0.1	10.4	3.7	160	1.73	8.7	0.9	1.3	5	0.2	0.5	0.3	30	0.04	0.041	15
SLS12-S-70	Soil	2.2	40.4	25.1	67	0.1	17.8	12.9	1033	2.90	23.3	1.0	1.5	9	0.2	1.6	0.5	39	0.04	0.076	24
SLS12-S-71	Soil	1.7	26.9	13.4	95	0.5	34.5	18.8	576	3.52	11.2	0.6	0.6	12	0.8	0.6	0.2	40	0.18	0.116	12
SLS12-S-74	Soil	1.3	15.8	17.0	61	<0.1	15.6	6.4	235	3.24	8.3	1.0	4.4	11	<0.1	0.5	0.2	42	0.07	0.029	17
SLS12-S-75	Soil	1.7	10.6	12.0	34	0.1	6.7	2.9	169	1.82	4.9	0.9	6.4	6	<0.1	0.3	0.3	31	0.04	0.023	23
SLS12-S-76	Soil	0.6	5.3	7.6	15	<0.1	2.3	0.7	34	0.59	1.1	0.9	0.3	5	<0.1	<0.1	0.2	20	0.03	0.034	14
SLS12-S-77	Soil	1.4	16.0	11.8	58	<0.1	13.2	5.6	297	2.59	7.6	1.9	3.5	9	<0.1	0.5	0.3	33	0.06	0.027	24
SLS12-S-78	Soil	1.1	8.3	8.1	26	<0.1	5.3	2.3	94	1.29	4.3	0.8	3.0	7	<0.1	0.3	0.2	28	0.04	0.029	25

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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
SLS12-S-088	Soil	19	0.65	175	0.053	<1	1.40	0.006	0.07	0.3	0.02	2.9	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-089	Soil	16	0.52	129	0.020	3	1.24	0.010	0.13	0.2	0.17	4.8	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-090	Soil	33	0.82	87	0.156	2	1.77	0.005	0.06	0.2	0.03	3.5	<0.1	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-49	Soil	16	0.33	143	0.035	1	1.48	0.008	0.06	0.3	0.12	1.6	<0.1	0.09	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-50	Soil	25	0.42	1092	0.031	1	1.48	0.007	0.05	0.4	0.08	1.8	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-51	Soil	21	0.40	161	0.007	<1	1.21	0.003	0.05	0.1	0.05	1.2	<0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-52	Soil	23	0.39	149	0.007	2	1.22	0.006	0.07	0.2	0.10	0.8	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-53	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.0	26.9	16.9	48
SLS12-S-54	Soil	21	0.29	158	0.008	2	1.00	0.005	0.06	0.2	0.09	0.7	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-55	Soil	16	0.12	360	0.011	2	0.75	0.005	0.08	0.1	0.04	0.5	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-56	Soil	25	0.38	253	0.008	3	1.32	0.005	0.14	0.1	0.06	0.9	0.1	0.07	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-57	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.9	23.9	4.4	18
SLS12-S-58	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.8	43.1	15.5	58
SLS12-S-59	Soil	10	0.06	92	0.004	2	0.62	0.009	0.03	<0.1	0.04	0.2	<0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-61	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.0	16.9	7.2	27
SLS12-S-62	Soil	19	0.26	272	0.008	1	1.01	0.003	0.05	0.2	0.05	0.8	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-63	Soil	14	0.11	100	0.013	<1	0.71	0.004	0.05	0.2	0.04	0.6	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-64	Soil	23	0.34	95	0.012	2	1.27	0.003	0.07	0.3	0.06	1.5	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-65	Soil	28	0.54	131	0.007	2	1.73	0.004	0.09	<0.1	0.04	1.3	0.2	<0.05	5	0.7	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-66	Soil	23	0.78	262	0.011	2	1.82	0.011	0.08	0.2	0.06	1.6	0.1	0.07	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-67	Soil	16	0.17	168	0.005	1	1.22	0.010	0.06	0.1	0.05	0.6	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-68	Soil	25	0.48	103	0.019	2	1.18	0.006	0.07	0.3	0.09	1.3	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-69	Soil	15	0.21	59	0.014	1	0.92	0.003	0.05	0.3	0.04	0.9	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-70	Soil	23	0.36	108	0.023	2	1.21	0.006	0.17	0.2	0.06	1.7	0.1	0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-71	Soil	28	0.83	94	0.017	2	2.07	0.020	0.05	0.2	0.11	1.1	0.1	<0.05	7	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-74	Soil	16	0.42	51	0.051	1	1.33	0.006	0.04	0.2	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-75	Soil	10	0.13	49	0.010	<1	1.08	0.003	0.04	0.1	0.01	1.4	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-76	Soil	7	0.06	47	0.006	<1	0.65	0.005	0.02	0.1	0.02	0.2	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-77	Soil	13	0.30	89	0.017	1	1.18	0.004	0.05	0.1	<0.01	1.6	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-78	Soil	7	0.08	50	0.014	<1	0.81	0.005	0.03	<0.1	<0.01	1.1	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.

Soil Sample Assay Results Certificate - cont.

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	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti
	Unit	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%
	MDL	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	1	0.01	1	0.001
SLS12-S-088	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-089	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-090	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-49	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-50	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-51	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-52	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-53	Soil	0.3	15.1	7.1	840	2.30	15.7	1.4	0.4	8	0.2	0.9	0.2	26	0.10	0.129	17	19	0.20	210	0.005
SLS12-S-54	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-55	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-56	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-57	Soil	0.4	4.2	1.4	48	0.69	1.6	1.3	0.1	10	0.4	0.4	0.2	16	0.08	0.122	7	9	0.03	207	0.002
SLS12-S-58	Soil	0.2	22.8	10.2	713	2.53	34.8	1.4	1.1	12	0.2	1.5	0.3	34	0.10	0.099	24	29	0.32	255	0.005
SLS12-S-59	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-61	Soil	0.1	7.4	1.8	115	0.80	3.2	1.3	0.1	6	0.3	0.4	0.2	20	0.06	0.078	12	11	0.05	305	0.005
SLS12-S-62	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-63	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-64	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-65	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-66	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-67	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-68	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-69	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-70	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-71	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-74	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-75	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-76	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-77	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-78	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

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	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
SLS12-S-088	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-089	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-090	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-49	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-50	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-51	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-52	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-53	Soil	<20	0.97	0.012	0.09	<0.1	0.12	0.4	<0.1	0.09	4	<0.5	<0.2
SLS12-S-54	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-55	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-56	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-57	Soil	<20	0.50	0.018	0.04	<0.1	0.06	0.2	<0.1	0.06	2	<0.5	<0.2
SLS12-S-58	Soil	<20	1.08	0.012	0.10	<0.1	0.06	1.0	0.1	<0.05	5	<0.5	<0.2
SLS12-S-59	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-61	Soil	<20	0.49	0.013	0.04	<0.1	0.08	0.1	<0.1	<0.05	4	<0.5	<0.2
SLS12-S-62	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-63	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-64	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-65	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-66	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-67	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-68	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-69	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-70	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-71	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-74	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-75	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-76	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-77	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SLS12-S-78	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

<u>Soil Sample Assay Results Certificate</u> - cont.

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	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
SLS12-S-79	Soil	1.3	5.6	11.5	37	<0.1	7.5	2.9	144	1.61	4.7	0.6	4.1	8	<0.1	0.2	0.2	29	0.07	0.018	20
SLS12-S-80	Soil	1.3	20.7	14.4	57	<0.1	18.1	6.9	247	2.75	8.8	<0.5	2.0	7	<0.1	0.4	0.3	24	0.07	0.029	22
SLS12-S-81	Soil	1.1	9.7	8.9	39	<0.1	8.1	3.1	143	1.52	3.7	1.3	0.6	9	0.1	0.2	0.2	23	0.15	0.026	18
SLS12-S-82	Soil	1.2	12.6	10.7	54	<0.1	16.7	6.0	297	2.39	5.1	0.8	5.8	8	0.2	0.3	0.2	23	0.10	0.020	25
SLS12-S-83	Soil	1.4	7.4	8.8	43	<0.1	12.4	4.3	181	2.03	4.5	0.8	4.9	5	0.1	0.3	0.2	23	0.05	0.016	22
JNF12-S-091	Soil	2.0	52.5	19.8	87	0.2	297.5	27.1	633	5.97	232.4	12.1	0.6	20	<0.1	5.5	0.3	83	0.07	0.092	10
JNF12-S-092	Soil	2.2	22.0	3.3	40	0.4	3532	148.9	3422	9.86	833.4	102.6	0.6	76	0.2	14.5	<0.1	34	3.26	0.027	2
JNF12-S-093	Soil	0.7	19.5	4.4	40	0.2	1663	81.9	1232	6.03	141.7	19.8	0.6	21	0.1	3.2	0.1	27	0.76	0.035	3
JNF12-S-094	Soil	0.7	23.6	8.6	80	0.1	329.0	50.0	1468	4.23	15.3	2.7	0.2	12	0.2	0.6	0.1	55	0.12	0.126	6
JNF12-S-095	Soil	4.5	28.0	15.5	67	0.5	656.4	38.7	554	4.27	43.3	14.9	1.9	18	0.1	2.6	0.2	44	0.09	0.069	10
JNF12-S-097	Soil	0.3	15.9	2.9	51	<0.1	1362	85.6	890	4.74	9.3	7.9	0.5	8	<0.1	0.2	<0.1	35	0.11	0.059	3
JNF12-S-098	Soil	0.9	16.7	2.6	154	0.3	843.7	64.0	1252	6.58	43.7	9.5	6.2	33	0.1	5.6	<0.1	91	0.66	0.078	23
JNF12-S-181	Soil	0.8	25.9	1.1	38	<0.1	58.7	17.4	296	2.47	2.1	0.6	2.7	14	<0.1	<0.1	<0.1	113	0.63	0.169	19
JNF12-S-186	Soil	0.5	30.0	6.6	58	<0.1	608.2	43.0	669	4.29	3.9	2.1	2.5	7	<0.1	0.3	0.1	73	0.14	0.054	8
JNF12-S-187	Soil	0.1	6.3	2.6	17	<0.1	154.0	4.9	62	0.94	4.1	1.6	0.3	8	<0.1	0.3	<0.1	16	0.08	0.045	3
JNF12-S-188	Soil	0.3	27.4	16.2	81	<0.1	480.6	23.0	408	4.98	6.3	5.3	2.9	5	<0.1	0.5	0.2	72	0.13	0.057	9
FLSE12-S-099	Soil	1.5	21.1	28.6	49	<0.1	6.4	5.7	321	1.80	14.7	1.9	4.0	22	0.2	0.1	1.3	22	0.11	0.039	13
FLSE12-S-100	Soil	1.7	12.9	16.1	42	<0.1	8.2	5.7	227	1.76	4.3	2.0	2.2	17	<0.1	0.3	0.4	30	0.11	0.030	12
FLSE12-S-102	Soil	2.6	41.5	42.6	33	0.2	2.5	4.0	138	0.95	10.5	1.6	5.4	8	0.1	0.2	3.3	9	0.06	0.040	29
FLSE12-S-104	Soil	2.0	17.0	26.9	38	<0.1	5.0	3.8	176	1.92	4.2	<0.5	1.2	8	0.1	0.3	0.8	34	0.04	0.034	12
FLSE12-S-105	Soil	1.2	20.7	22.4	31	<0.1	4.7	4.3	246	1.39	3.4	<0.5	2.8	7	<0.1	0.2	0.5	18	0.05	0.034	12
FLSE12-S-106	Soil	1.3	21.6	25.0	49	0.2	14.5	10.8	410	2.32	22.0	5.4	4.7	16	<0.1	0.3	0.9	32	0.17	0.056	23
FLSE12-S-107	Soil	0.8	35.2	15.3	52	<0.1	24.1	19.5	874	3.76	5.0	4.4	7.6	30	<0.1	0.2	0.3	41	0.29	0.069	27
FLSE12-S-108	Soil	5.0	43.9	21.4	45	0.1	9.1	31.7	496	3.56	7.9	4.0	9.3	51	0.2	0.6	0.2	28	0.17	0.092	31
FLSE12-S-109	Soil	3.4	16.4	89.6	43	0.1	3.4	8.7	777	1.70	4.0	0.6	17.4	11	0.4	0.5	0.5	10	0.08	0.061	79
FLSE12-S-110	Soil	1.5	26.9	28.3	48	0.1	9.1	11.5	398	2.50	5.6	<0.5	6.7	34	0.1	0.2	1.0	32	0.18	0.058	14
FLSE12-S-111	Soil	3.2	176.0	141.0	139	1.7	22.5	38.5	1938	6.00	57.7	7.1	29.8	35	0.4	0.8	7.1	54	0.46	0.100	73
FLSE12-S-190	Soil	0.6	9.1	14.0	44	<0.1	8.8	4.7	267	1.99	3.3	1.3	0.5	12	0.1	0.3	0.2	31	0.09	0.059	12
FLSE12-S-191	Soil	0.5	8.8	16.8	46	<0.1	8.7	4.7	245	1.96	2.8	2.3	0.9	10	0.2	0.3	0.2	28	0.09	0.050	15
FLSE12-S-193	Soil	0.4	5.2	10.8	20	0.1	2.3	1.8	150	0.76	0.6	0.9	0.4	6	0.1	0.1	0.1	16	0.04	0.070	9

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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
SLS12-S-79	Soil	11	0.21	60	0.021	<1	0.98	0.004	0.05	0.1	<0.01	1.2	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-80	Soil	13	0.41	65	0.013	1	1.20	0.004	0.06	<0.1	0.02	1.3	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-81	Soil	8	0.18	93	0.014	<1	0.73	0.006	0.06	<0.1	0.02	0.7	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-82	Soil	12	0.35	81	0.009	<1	1.19	0.003	0.06	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
SLS12-S-83	Soil	11	0.29	49	0.014	<1	0.97	0.003	0.05	<0.1	0.02	1.1	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-091	Soil	275	0.39	109	0.010	1	0.73	0.007	0.07	0.2	0.06	3.5	0.4	0.06	4	0.9	0.3	N.A.	N.A.	N.A.	N.A.
JNF12-S-092	Soil	899	4.36	91	0.004	2	0.56	0.007	0.03	0.3	0.12	15.1	1.3	<0.05	3	1.1	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-093	Soil	794	4.12	83	0.008	4	0.53	0.007	0.04	0.2	0.02	10.6	0.6	<0.05	2	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-094	Soil	369	0.95	191	0.017	3	0.77	0.010	0.10	0.4	0.03	1.7	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-095	Soil	428	3.84	127	0.018	5	0.78	0.011	0.09	0.6	0.04	4.9	0.3	<0.05	3	<0.5	0.3	N.A.	N.A.	N.A.	N.A.
JNF12-S-097	Soil	826	10.73	56	0.013	11	0.47	0.009	0.04	0.6	0.01	5.7	<0.1	<0.05	1	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-098	Soil	71	0.50	101	0.001	1	0.71	0.004	0.11	<0.1	0.08	16.8	1.2	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-181	Soil	85	1.19	253	0.178	1	1.37	0.034	0.38	<0.1	0.02	4.6	0.1	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-186	Soil	358	5.33	92	0.080	3	1.52	0.012	0.11	0.2	<0.01	7.8	0.2	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-187	Soil	78	0.55	48	0.020	2	0.69	0.037	0.03	<0.1	<0.01	1.3	<0.1	<0.05	2	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
JNF12-S-188	Soil	357	2.23	108	0.127	3	1.74	0.008	0.26	0.2	<0.01	6.8	0.5	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-099	Soil	10	0.33	50	0.041	<1	1.03	0.005	0.14	0.2	0.01	1.0	0.2	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-100	Soil	11	0.37	32	0.067	<1	0.99	0.005	0.14	0.1	0.02	1.0	0.3	0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-102	Soil	4	0.07	43	0.004	<1	0.71	0.005	0.13	0.1	0.02	0.7	0.2	<0.05	2	<0.5	0.4	N.A.	N.A.	N.A.	N.A.
FLSE12-S-104	Soil	9	0.14	44	0.036	<1	0.94	0.004	0.11	0.2	0.02	0.6	0.1	<0.05	5	<0.5	0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-105	Soil	7	0.16	42	0.012	<1	0.81	0.004	0.14	0.2	0.02	0.9	0.2	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-106	Soil	18	0.56	77	0.043	<1	1.27	0.008	0.14	0.2	0.02	2.1	0.2	<0.05	4	<0.5	0.4	N.A.	N.A.	N.A.	N.A.
FLSE12-S-107	Soil	27	1.36	75	0.095	<1	1.75	0.005	0.57	<0.1	0.03	6.3	0.7	<0.05	5	<0.5	0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-108	Soil	7	0.48	80	0.105	<1	0.90	0.012	0.17	<0.1	0.01	4.4	0.2	0.11	3	<0.5	0.3	N.A.	N.A.	N.A.	N.A.
FLSE12-S-109	Soil	3	0.08	73	0.004	<1	0.51	0.003	0.16	0.1	0.03	1.9	0.2	<0.05	2	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-110	Soil	24	0.65	38	0.137	<1	1.12	0.005	0.52	0.2	0.04	1.2	0.7	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-111	Soil	25	0.53	84	0.003	<1	1.13	0.002	0.18	0.2	0.08	12.0	0.3	<0.05	5	<0.5	0.5	N.A.	N.A.	N.A.	N.A.
FLSE12-S-190	Soil	17	0.29	67	0.016	<1	0.90	0.005	0.14	0.1	0.02	0.2	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-191	Soil	15	0.28	68	0.014	<1	1.00	0.004	0.11	<0.1	0.02	0.6	0.2	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-193	Soil	5	0.06	51	0.007	<1	0.81	0.010	0.13	<0.1	0.03	0.2	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.

Soil Sample Assay Results Certificate - cont.

CERTIFICATE OF ANALYSIS VAN12005348.1

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
FLSE12-S-194	Soil	0.6	8.4	26.9	35	<0.1	3.0	2.2	242	1.24	0.8	2.6	1.0	9	<0.1	0.1	0.7	15	0.03	0.055	25
FLSE12-S-195	Soil	0.7	8.8	14.2	39	0.1	6.5	4.2	525	1.46	1.6	1.9	0.5	15	0.3	0.2	0.2	24	0.12	0.071	21
FLSE12-S-196	Soil	1.1	16.8	89.1	118	0.2	10.0	6.0	714	1.72	2.8	<0.5	8.0	15	0.6	0.2	0.5	17	0.08	0.045	30
FLSE12-S-198	Soil	1.0	37.1	56.7	111	0.3	3.7	2.0	717	0.94	0.5	<0.5	3.5	12	1.2	<0.1	0.5	10	0.11	0.106	80
FLSE12-S-199	Soil	0.8	11.4	16.3	34	0.1	4.0	3.3	284	1.03	1.5	<0.5	0.5	8	0.2	0.2	0.3	21	0.03	0.049	11
FLSE12-S-202	Soil	0.6	16.4	27.1	44	0.1	8.1	5.5	254	1.68	2.5	0.9	1.7	10	0.1	0.2	0.3	22	0.06	0.041	18
FLSE12-S-203	Soil	0.5	14.8	14.8	37	<0.1	8.2	10.1	650	1.55	1.7	<0.5	1.4	14	<0.1	0.1	0.2	29	0.10	0.029	7
FLSE12-S-204	Soil	1.2	13.4	10.6	24	<0.1	4.1	5.1	95	0.94	1.9	<0.5	0.5	9	<0.1	0.2	0.4	24	0.05	0.045	11
FLSE12-S-205	Soil	1.4	11.4	11.5	27	0.1	4.6	4.4	114	1.15	2.8	0.7	0.3	15	0.1	0.2	0.3	24	0.11	0.034	8
FLSE12-S-206	Soil	1.2	19.7	28.6	51	0.3	6.9	11.0	338	2.80	9.2	<0.5	3.8	17	0.2	0.2	0.4	27	0.12	0.043	12
FLSE12-S-207	Soil	1.5	16.6	20.6	35	0.2	6.7	7.4	231	2.29	6.3	1.4	2.5	12	0.2	0.2	0.5	32	0.07	0.030	15
FLSE12-S-208	Soil	1.3	12.7	22.8	38	0.1	4.9	6.0	237	2.42	5.4	<0.5	8.1	14	0.1	0.2	0.3	26	0.06	0.039	10
4CN12-S-118	Soil	0.4	10.7	19.5	37	<0.1	12.5	6.2	169	2.29	120.6	<0.5	6.6	14	<0.1	0.2	0.1	19	0.11	0.022	17
4CN12-S-119	Soil	0.4	15.0	25.5	35	<0.1	12.0	4.5	170	1.53	17.5	1.0	1.4	9	<0.1	0.3	0.2	18	0.03	0.046	12
4CN12-S-120	Soil	0.6	22.7	46.0	89	0.1	35.4	17.3	704	2.48	14.1	3.5	10.3	17	0.1	0.4	0.4	24	0.20	0.049	25
4CN12-S-121	Soil	0.8	12.2	15.2	29	<0.1	6.9	3.6	292	2.15	7.3	<0.5	6.6	8	<0.1	0.4	0.2	30	0.03	0.033	17
4CN12-S-122	Soil	0.3	10.7	13.8	23	<0.1	6.6	3.8	216	1.38	12.1	<0.5	1.5	9	<0.1	0.3	0.1	17	0.02	0.032	22
4CN12-S-123	Soil	0.5	12.4	17.7	25	<0.1	6.3	3.1	106	1.24	15.4	5.7	2.2	9	<0.1	0.5	0.2	25	0.02	0.030	22
4CN12-S-124	Soil	0.4	11.5	17.9	27	<0.1	6.7	3.2	184	1.38	17.9	2.2	0.5	5	<0.1	0.4	0.2	18	0.02	0.049	25
4CN12-S-125	Soil	0.5	11.6	17.0	34	<0.1	9.6	4.0	218	2.26	19.2	11.7	3.5	7	<0.1	0.4	0.2	24	0.03	0.040	25
4CN12-S-126	Soil	0.3	17.5	28.0	36	0.4	10.1	7.7	423	1.97	28.3	7.0	12.4	5	<0.1	2.5	<0.1	6	0.03	0.035	33
4CN12-S-127	Soil	0.8	34.4	17.6	68	<0.1	31.6	16.5	406	3.37	11.1	6.7	5.4	13	<0.1	0.4	0.2	31	0.15	0.055	19
4CN12-S-130	Soil	0.6	9.1	7.2	21	<0.1	5.4	4.2	158	1.25	4.5	2.5	0.6	9	<0.1	0.4	0.2	39	0.06	0.035	12
4CN12-S-131	Soil	0.8	18.5	11.4	56	0.1	12.9	8.6	510	2.62	7.1	1.7	0.8	9	0.2	0.5	0.3	42	0.08	0.065	19
4CN12-S-132	Soil	0.7	15.3	8.5	38	0.1	8.4	5.2	275	1.98	3.5	2.8	0.5	9	0.2	0.3	0.3	37	0.08	0.064	10
4CN12-S-134	Soil	0.7	13.3	6.9	38	<0.1	7.5	4.4	253	1.74	2.8	2.4	0.4	9	0.1	0.3	0.2	35	0.09	0.060	13
4CN12-S-135	Soil	0.7	15.6	13.5	54	0.1	10.4	7.4	586	2.37	3.9	4.7	0.3	10	0.3	0.4	0.2	38	0.08	0.073	17
4CN12-S-136	Soil	0.8	13.4	15.8	50	<0.1	13.4	7.4	395	2.23	5.0	3.0	1.5	10	<0.1	0.3	0.1	32	0.10	0.067	17
4CN12-S-137	Soil	0.7	17.6	11.9	55	<0.1	17.3	9.2	375	2.17	5.2	4.7	5.7	15	0.2	0.4	0.1	30	0.22	0.074	19
4CN12-S-139	Soil	0.5	20.7	12.9	70	<0.1	14.6	9.2	550	2.92	7.9	2.8	3.2	16	0.2	0.3	0.1	38	0.22	0.067	22

CERTIFICATE OF ANALYSIS VAN12005348.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
Analyte		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
FLSE12-S-194	Soil	6	0.10	47	0.005	<1	1.02	0.011	0.12	0.1	0.02	0.5	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-195	Soil	11	0.18	71	0.010	<1	0.68	0.005	0.15	<0.1	0.03	0.3	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-196	Soil	13	0.23	66	0.013	<1	0.91	0.004	0.12	0.2	0.03	1.1	0.1	<0.05	2	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-198	Soil	7	0.10	102	0.003	<1	1.15	0.018	0.11	0.1	0.05	0.5	0.1	<0.05	3	0.8	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-199	Soil	6	0.08	57	0.010	<1	0.53	0.005	0.15	<0.1	0.03	0.2	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-202	Soil	15	0.29	44	0.017	<1	0.87	0.004	0.10	0.2	0.02	0.6	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-203	Soil	22	0.50	42	0.051	<1	0.79	0.003	0.10	<0.1	0.03	1.0	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-204	Soil	10	0.08	48	0.007	<1	0.63	0.003	0.08	<0.1	<0.01	0.2	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-205	Soil	9	0.19	56	0.016	<1	0.80	0.006	0.10	<0.1	0.02	0.4	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-206	Soil	12	0.48	40	0.073	<1	1.07	0.003	0.20	0.1	0.03	1.2	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-207	Soil	11	0.30	64	0.061	<1	0.95	0.004	0.12	0.2	0.03	1.4	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
FLSE12-S-208	Soil	10	0.30	52	0.063	<1	1.26	0.004	0.16	0.2	0.02	1.6	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-118	Soil	16	0.30	71	0.060	<1	1.06	0.014	0.17	0.2	<0.01	2.0	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-119	Soil	11	0.14	46	0.030	<1	0.87	0.004	0.14	<0.1	0.02	0.8	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-120	Soil	26	0.45	59	0.049	<1	1.26	0.004	0.11	0.3	0.03	3.6	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-121	Soil	13	0.12	45	0.062	<1	0.86	0.004	0.09	0.2	0.02	1.4	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-122	Soil	10	0.17	50	0.012	<1	0.89	0.005	0.11	<0.1	<0.01	1.0	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-123	Soil	9	0.08	38	0.029	<1	0.61	0.004	0.10	<0.1	0.02	0.9	0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-124	Soil	10	0.14	70	0.007	<1	0.98	0.003	0.11	<0.1	<0.01	0.4	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-125	Soil	12	0.20	48	0.037	<1	0.92	0.004	0.17	<0.1	0.04	1.4	0.2	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-126	Soil	5	0.20	74	0.002	<1	1.10	0.002	0.20	<0.1	0.03	1.9	0.1	<0.05	2	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-127	Soil	26	0.71	66	0.043	<1	1.59	0.005	0.09	0.2	0.03	2.1	<0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-130	Soil	12	0.10	54	0.048	<1	0.80	0.005	0.06	0.2	0.01	1.0	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-131	Soil	22	0.45	131	0.023	<1	1.82	0.008	0.09	0.4	0.02	1.9	0.2	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-132	Soil	15	0.24	82	0.043	1	1.00	0.007	0.07	0.3	0.04	0.7	0.1	0.16	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-134	Soil	15	0.28	104	0.032	1	1.04	0.008	0.07	0.4	0.02	0.9	0.1	0.08	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-135	Soil	18	0.34	134	0.020	<1	1.38	0.006	0.08	0.3	0.03	0.6	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-136	Soil	21	0.40	55	0.031	1	1.37	0.005	0.11	0.2	0.04	1.2	0.2	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-137	Soil	19	0.52	70	0.050	1	1.06	0.006	0.12	0.2	0.02	2.2	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
4CN12-S-139	Soil	22	0.80	132	0.026	<1	1.60	0.005	0.18	0.2	0.02	2.7	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.

<u>Soil Sample Assay Results Certificate</u> - cont.

CERTIFICATE OF ANALYSIS VAN12005348.1

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
4CN12-S-140	Soil	0.8	15.1	22.7	44	0.1	9.1	8.3	1178	2.49	6.4	3.5	0.4	15	0.1	0.3	0.2	44	0.16	0.150	27

CERTIFICATE OF ANALYSIS VAN12005348.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
Analyte		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
4CN12-S-140	Soil	18	0.24	160	0.010	1	1.18	0.006	0.11	0.2	0.04	0.7	0.2	0.13	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.

QUALITY CONTROL REPORT VAN12005348.1

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
Pulp Duplicates																					
SLS12-S-072	Soil	0.6	64.0	14.4	88	<0.1	20.0	16.0	738	3.28	20.4	1.3	1.0	12	0.2	0.6	0.2	58	0.26	0.074	12
REP SLS12-S-072	QC	0.7	65.7	14.4	89	<0.1	20.4	16.2	760	3.31	21.1	3.0	1.0	11	0.2	0.6	0.2	55	0.27	0.073	13
SLS12-S-088	Soil	0.6	46.3	9.6	64	<0.1	25.8	10.5	532	2.47	6.8	1.7	5.3	13	0.3	0.5	0.2	40	0.22	0.075	18
REP SLS12-S-088	QC	0.6	47.2	9.9	64	<0.1	25.2	10.8	532	2.52	6.6	4.9	5.5	13	0.2	0.5	0.2	40	0.21	0.076	18
SLS12-S-53	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-53	QC																				
SLS12-S-71	Soil	1.7	26.9	13.4	95	0.5	34.5	18.8	576	3.52	11.2	0.6	0.6	12	0.8	0.6	0.2	40	0.18	0.116	12
REP SLS12-S-71	QC	1.8	29.0	13.9	102	0.6	35.6	19.4	617	3.69	11.3	3.2	0.6	13	0.7	0.7	0.2	42	0.18	0.129	14
JNF12-S-095	Soil	4.5	28.0	15.5	67	0.5	656.4	38.7	554	4.27	43.3	14.9	1.9	18	0.1	2.6	0.2	44	0.09	0.069	10
REP JNF12-S-095	QC	5.0	29.5	15.6	68	0.5	664.8	38.9	535	4.30	44.0	18.0	2.2	18	0.2	3.1	0.2	46	0.09	0.068	10
FLSE12-S-194	Soil	0.6	8.4	26.9	35	<0.1	3.0	2.2	242	1.24	0.8	2.6	1.0	9	<0.1	0.1	0.7	15	0.03	0.055	25
REP FLSE12-S-194	QC	0.6	8.5	28.0	36	0.1	3.3	2.3	263	1.31	1.4	<0.5	1.2	9	<0.1	0.1	0.7	18	0.03	0.063	26
4CN12-S-121	Soil	0.8	12.2	15.2	29	<0.1	6.9	3.6	292	2.15	7.3	<0.5	6.6	8	<0.1	0.4	0.2	30	0.03	0.033	17
REP 4CN12-S-121	QC	0.8	13.6	15.3	31	<0.1	7.1	4.1	308	2.14	8.0	3.1	6.5	10	<0.1	0.5	0.2	35	0.04	0.034	20
4CN12-S-135	Soil	0.7	15.6	13.5	54	0.1	10.4	7.4	586	2.37	3.9	4.7	0.3	10	0.3	0.4	0.2	38	0.08	0.073	17
REP 4CN12-S-135	QC	0.8	16.3	14.1	54	0.1	9.6	7.5	592	2.47	3.8	<0.5	0.4	10	0.5	0.3	0.3	39	0.09	0.074	18
4CN12-S-137	Soil	0.7	17.6	11.9	55	<0.1	17.3	9.2	375	2.17	5.2	4.7	5.7	15	0.2	0.4	0.1	30	0.22	0.074	19
REP 4CN12-S-137	QC	0.5	17.5	12.5	56	<0.1	17.4	8.7	365	2.10	5.0	3.7	5.8	15	0.2	0.4	0.1	31	0.20	0.074	19
Reference Materials																					
STD DS9	Standard	14.8	113.3	134.8	322	2.0	42.5	7.8	616	2.56	25.3	117.3	6.9	73	2.6	5.9	6.0	44	0.74	0.084	14
STD DS9	Standard	13.1	108.1	127.5	309	1.9	39.9	7.3	576	2.28	24.9	114.6	6.2	70	2.3	5.7	6.0	40	0.71	0.082	13
STD DS9	Standard	13.9	109.6	130.3	313	1.9	40.4	7.4	601	2.55	27.1	122.3	6.9	67	2.4	5.7	5.9	43	0.72	0.087	13
STD DS9	Standard																				
STD DS9	Standard	13.4	112.4	135.0	314	1.9	41.3	7.7	586	2.37	26.1	117.2	6.6	72	2.4	5.8	6.3	42	0.72	0.084	14
STD DS9	Standard	12.4	103.6	120.8	303	2.0	39.0	7.3	575	2.26	24.4	123.7	6.0	70	2.2	5.3	6.0	38	0.65	0.080	13
STD OREAS45EA	Standard																				
STD OREAS45EA Expected																					
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

Soil Sample Assay Results Certificate - cont.

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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	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	0.1	0.1	0.1	1
Pulp Duplicates																					
SLS12-S-072	Soil	20	0.70	344	0.062	<1	1.76	0.006	0.09	0.2	0.06	3.5	<0.1	<0.05	6	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-072	QC	21	0.72	368	0.061	2	1.87	0.006	0.09	0.2	0.06	3.4	<0.1	<0.05	5	0.5	<0.2				
SLS12-S-088	Soil	19	0.65	175	0.053	<1	1.40	0.006	0.07	0.3	0.02	2.9	<0.1	<0.05	4	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-088	QC	18	0.64	181	0.053	1	1.44	0.005	0.06	0.3	0.03	3.0	<0.1	<0.05	4	<0.5	<0.2				
SLS12-S-53	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	1.0	26.9	16.9	48
REP SLS12-S-53	QC																	0.9	26.4	17.8	48
SLS12-S-71	Soil	28	0.83	94	0.017	2	2.07	0.020	0.05	0.2	0.11	1.1	0.1	<0.05	7	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-71	QC	28	0.87	101	0.024	2	2.23	0.021	0.06	0.2	0.11	1.1	0.1	<0.05	8	<0.5	<0.2				
JNF12-S-095	Soil	428	3.84	127	0.018	5	0.78	0.011	0.09	0.6	0.04	4.9	0.3	<0.05	3	<0.5	0.3	N.A.	N.A.	N.A.	N.A.
REP JNF12-S-095	QC	440	3.82	132	0.018	5	0.77	0.011	0.09	0.6	0.03	5.1	0.3	<0.05	3	<0.5	<0.2				
FLSE12-S-194	Soil	6	0.10	47	0.005	<1	1.02	0.011	0.12	0.1	0.02	0.5	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP FLSE12-S-194	QC	6	0.10	56	0.007	<1	1.07	0.012	0.15	0.2	0.02	0.6	0.2	<0.05	3	<0.5	0.2				
4CN12-S-121	Soil	13	0.12	45	0.062	<1	0.86	0.004	0.09	0.2	0.02	1.4	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-121	QC	14	0.12	53	0.077	1	0.94	0.005	0.10	0.2	0.02	1.4	0.2	<0.05	5	<0.5	<0.2				
4CN12-S-135	Soil	18	0.34	134	0.020	<1	1.38	0.006	0.08	0.3	0.03	0.6	0.1	<0.05	5	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-135	QC	18	0.36	138	0.022	<1	1.41	0.007	0.09	0.2	0.01	0.8	0.1	0.07	5	<0.5	<0.2				
4CN12-S-137	Soil	19	0.52	70	0.050	1	1.06	0.006	0.12	0.2	0.02	2.2	0.1	<0.05	3	<0.5	<0.2	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-137	QC	19	0.51	71	0.050	2	1.03	0.005	0.12	0.2	0.01	2.1	0.1	<0.05	3	<0.5	<0.2				
Reference Materials																					
STD DS9	Standard	130	0.69	323	0.119	3	0.96	0.092	0.41	3.3	0.18	2.7	5.9	0.07	5	4.6	5.8				
STD DS9	Standard	120	0.62	309	0.106	3	0.94	0.100	0.41	3.1	0.21	2.4	5.6	0.16	5	5.3	5.5				
STD DS9	Standard	124	0.68	299	0.117	2	0.95	0.091	0.41	3.0	0.21	2.7	5.3	0.18	5	5.5	5.4				
STD DS9	Standard																	13.1	106.5	126.3	289
STD DS9	Standard	126	0.64	307	0.124	2	0.94	0.073	0.39	3.1	0.21	2.5	5.4	0.08	4	4.6	4.5				
STD DS9	Standard	118	0.66	302	0.105	3	0.90	0.101	0.41	3.0	0.19	3.6	5.5	0.14	5	5.2	5.2				
STD OREAS45EA	Standard																	1.3	588.6	12.7	24
STD OREAS45EA Expected																		1.78	709	14.3	30.6
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	12.84	108	126	317

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	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti
	Unit	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%
	MDL	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	1	0.01	1	0.001
Pulp Duplicates																					
SLS12-S-072	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-072	QC																				
SLS12-S-088	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-088	QC																				
SLS12-S-53	Soil	0.3	15.1	7.1	840	2.30	15.7	1.4	0.4	8	0.2	0.9	0.2	26	0.10	0.129	17	19	0.20	210	0.005
REP SLS12-S-53	QC	0.3	14.4	7.2	844	2.31	16.2	1.5	0.4	8	0.2	0.8	0.2	26	0.09	0.135	17	19	0.20	215	0.006
SLS12-S-71	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-71	QC																				
JNF12-S-095	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP JNF12-S-095	QC																				
FLSE12-S-194	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP FLSE12-S-194	QC																				
4CN12-S-121	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-121	QC																				
4CN12-S-135	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-135	QC																				
4CN12-S-137	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-137	QC																				
Reference Materials																					
STD DS9	Standard																				
STD DS9	Standard																				
STD DS9	Standard																				
STD DS9	Standard	1.6	38.7	7.4	545	2.21	24.1	135.1	5.9	66	2.1	4.9	5.3	40	0.69	0.077	12	118	0.60	305	0.105
STD DS9	Standard																				
STD DS9	Standard																				
STD OREAS45EA	Standard	0.2	316.1	46.2	349	21.21	8.7	46.1	9.1	3	<0.1	0.2	0.2	250	0.03	0.023	5	777	0.09	127	0.073
STD OREAS45EA Expected		0.311	357	52	400	22.65	11.4	53	10.7	4.05	0.03	0.64	0.26	295	0.032	0.029	8.19	849	0.095	148	0.106
STD DS9 Expected		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	121	0.6165	330	0.1108

Soil Sample Assay Results Certificate - cont.

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	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates													
SLS12-S-072	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-072	QC												
SLS12-S-088	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-088	QC												
SLS12-S-53	Soil	<20	0.97	0.012	0.09	<0.1	0.12	0.4	<0.1	0.09	4	<0.5	<0.2
REP SLS12-S-53	QC	<20	0.99	0.014	0.08	0.1	0.12	0.4	<0.1	0.10	4	<0.5	<0.2
SLS12-S-71	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP SLS12-S-71	QC												
JNF12-S-095	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP JNF12-S-095	QC												
FLSE12-S-194	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP FLSE12-S-194	QC												
4CN12-S-121	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-121	QC												
4CN12-S-135	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-135	QC												
4CN12-S-137	Soil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
REP 4CN12-S-137	QC												
Reference Materials													
STD DS9	Standard												
STD DS9	Standard												
STD DS9	Standard												
STD DS9	Standard	<20	0.88	0.090	0.37	2.6	0.21	2.3	5.2	0.14	4	5.3	4.8
STD DS9	Standard												
STD DS9	Standard												
STD OREAS45EA	Standard	<20	2.47	0.025	0.05	<0.1	0.01	67.5	<0.1	<0.05	10	0.8	<0.2
STD OREAS45EA Expected			3.32	0.027	0.053		0.34	78	0.072	0.044	11.7	2.09	0.11
STD DS9 Expected			0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02

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		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		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
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
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
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
BLK	Blank																				
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
BLK	Blank	<0.1	0.2	<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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		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX	1DX	1DX	1DX
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		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	0.1	0.1	0.1	1
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				
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				
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				
BLK	Blank																	<0.1	0.3	<0.1	2
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				
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				

<u>Soil Sample Assay Results Certificate</u> - cont.

QUALITY CONTROL REPORT VAN12005348.1

		1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti
		ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%
		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	1	0.01	1	0.001
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	0.2	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1	<1	<0.01	<1	<0.001
BLK	Blank																				
BLK	Blank																				

QUALITY CONTROL REPORT VAN12005348.1

		1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
BLK	Blank												
BLK	Blank												
BLK	Blank												
BLK	Blank	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank												
BLK	Blank												

Table 11. Soil Sample Assay Results Certificate

<u>Yukon-Tanana RGS Silt Percentile Thresholds</u>

Yukon-Tanana Terrane												
SAMPLE	AG	AS	AS_INA	AU	AU_R	AU_INA	BA	BA_INA	BI	CD	CO	CO_INA
min	0.1	0.5	0.2	0.5	0.5	1	54	270	0.1	0.1	1	2.5
50th percentile	0.1	3.5	5.8	1	4	3	870	1100	0.1	0.1	8	13
90 th percentile	0.2	13.5	15.8	9	37	10	1247.9	1700	0.26	0.6	14	21
95th percentile	0.3	22	23.4	18	85	17	1493.35	1900	0.28	1.1	17	24
98th percentile	0.5	46.02	36	46.86	172	40.8	1900	2300	0.292	2.1	22	32
99th percentile	0.7	80	54.608	96.43	280	62	2222.9	2500	0.296	3.001	29	40
max	3.3	489	280	1680	1185	1050	11550	3600	0.3	46.8	180	160
n	8206	7200	1013	7158	801	1013	7472	1013	5	7900	8206	1013
	CU	FE	FE_INA	HG	MN	MO	NI	PB	SB	SB_INA	SN	
min	1	0.11	0.7	2.5	2.5	1	1	1	0.1	0.05	0.5	
50th percentile	18	1.95	3.76	30	330	1	18	7	0.3	0.6	1	
90 th percentile	37	2.97	5.6	84	780	2	41	16	0.9	1.6	4	
95th percentile	48	3.49	6.2	119	1479.5	3	58	23	1.4	2	5	
98th percentile	68	4.337	6.8	170.5	2900	5	96.9	36	2.42	2.876	7	
99th percentile	94	5.5195	7.788	245	4899.3	7	147	47	3.6	3.488	10	
max	4510	29.9	18	3349	40546	94	1000	694	170	9.1	138	
n	8206	8206	1013	8176	8206	8206	8206	8206	7191	1013	7876	
	TA_INA	U	U_INA	V	W	W_INA	ZN	PH	F_W	U_W		
min	0.25	0.2	0.8	2.5	1	0.5	2	4.1	10	0.02		
50th percentile	0.9	3.3	3.7	35	2	0.5	63	7.2	80	0.11		
90 th percentile	1.4	8.6	13	59	3	2	123	7.9	240	1.5		
95th percentile	1.5	13.1	19	68	5	3	165	8	350	2.746		
98th percentile	1.8	26.104	34.096	83	10	4	249.8	8.2	540	5.2		
99th percentile	2	40.104	60.291	92	16	7.88	350	8.3	720	8.272		
max	2.7	236	351	470	140	29	2510	8.6	3170	255		
n	1013	7499	722	7884	7475	1013	8206	8065	8066	8065		

Table 12. Yukon-Tanana RGS Silt Pecentile Thresholds

UTM Location Coordinates of Rock Samples Assayed

All samples are from UTM Zone 9V, NAD 83

Sample type	Project Site Name	Assay Sample #	Easting	Northing
Grab - Rock	Simpson Lake South	SLS12-RK-045-50AB	482237	6323137
Float - Rock	Simpson Lake South	SLS12-RK-089	482518	6726096
Float - Rock	Simpson Lake South	SLS12-RK-42	482568	6726083
Bedrock	Simpson Lake South	SLS12-RK-46	480872	6724006
Grab - Rock	Simpson Lake South	SLS12-RK-72A	483402	6726202
Grab - Rock	Simpson Lake South	SLS12-RK-80	483450	6725551
Grab - Rock	Simpson Lake South	SLS12-RK-81	483499	6725463
Grab - Rock	Hasselberg Plateau SE	HPSE12-RK-88A	450829	6754117
Grab - Rock	Hasselberg Plateau SE	HPSE12-RK-88B	450828	6754122
Grab - Rock	Hasselberg Plateau SE	HPSE12-RK-88C	450826	6754126
Grab - Rock	Hasselberg Plateau SE	HPSE12-RK-88D	450827	6754132
Grab - Rock	Hasselberg Plateau SE	HPSE12-RK-88E	450826	6754134
Grab - Rock	Hasselberg Plateau SE	HPSE12-RK-88F	450825	6754139
Float - Rock	Jesse's Nap Flat	JNF12-RK-172A	444022	6761486
Float - Rock	Jesse's Nap Flat	JNF12-RK-173A	444047	6761509
Float - Rock	Jesse's Nap Flat	JNF12-RK-178A	444280	6762021
Float - Rock	Jesse's Nap Flat	JNF12-RK-179	444282	6762035
Grab - Rock	Jesse's Nap Flat	JNF12-RK-183	444358	6762085
Grab - Rock	Jesse's Nap Flat	JNF12-RK-184	444403	6762098
Grab - Rock	Jesse's Nap Flat	JNF12-RK-185B	444424	6762098
Float - Rock	Jesse's Nap Flat	JNF12-RK-189B	443037	6761203
Float - Rock	Fire Lake SE	FLSE12-RK-101B	427943	6778949
Float - Rock	Fire Lake SE	FLSE12-RK-103	427865	6778919
Grab - Rock	Fire Lake SE	FLSE12-RK-113	427367	6779067
Grab - Rock	Fire Lake SE	FLSE12-RK-196A	428001	6779920
Bedrock	Fire Lake SE	FLSE12-RK-212AC	427276	6779531
Float - Rock	Fire Lake SE	FLSE12-RK-220AB	432618	6777965
Float - Rock	4C North	4CN12-RK-221B	436657	6773774
Float - Rock	4C North	4CN12-RK-231	438423	6773994

Table 13. UTM Location Coordinates of Rock Samples Assayed

UTM Location Coordinates of Silt Samples Assayed

All samples are from UTM Zone 9V, NAD 83

Sample type	Project Site Name	Assay Sample #	Easting	Northing
Silt Sediment	Simpson Lake South	SLS12-SED-39	483908	6727221
"	Simpson Lake South	SLS12-SED-85	483031	6725605
"	Hasselberg Plateau SE	HPSE12-SED-89	451998	6754166
"	Hasselberg Plateau SE	HPSE12-SED-90	452739	6753756
"	Hasselberg Plateau SE	HPSE12-SED-91	454287	6753463
"	Hasselberg Plateau SE	HPSE12-SED-92	454351	6753528
"	Hasselberg Plateau SE	HPSE12-SED-93	455080	6754006
"	Hasselberg Plateau SE	HPSE12-SED-94	455625	6754370
"	Fire Lake SE	FLSE12-SED-114	427363	6779063
"	Fire Lake SE	FLSE12-SED-116	427678	6779182
"	Fire Lake SE	FLSE12-SED-117	427874	6779278
"	Fire Lake SE	FLSE12-SED-209	427605	6779423
"	Fire Lake SE	FLSE12-SED-210	427475	6779464
"	Fire Lake SE	FLSE12-SED-211	427345	6779476
"	Fire Lake SE	FLSE12-SED-213	427072	6779830
"	Fire Lake SE	FLSE12-SED-215	427034	6780012
"	Fire Lake SE	FLSE12-SED-216	427284	6779662
"	4C North	4CN12-SED-223	437062	6773782
"	4C North	4CN12-SED-226	437715	6773378
"	4C North	4CN12-SED-228	438150	6773190
"	4C North	4CN12-SED-230	438542	6773828
"	4C North	4CN12-SED-234	438011	6774210
"	4C North	4CN12-SED-235	437648	6773967
"	4C North	4CN12-SED-236	437413	6773837
"	Hasselberg Plateau NE	HPNW12-SED-240	446687	6760681
"	Hasselberg Plateau NE	HPNW12-SED-241	446651	6760818
"	Hasselberg Plateau NE	HPNW12-SED-242	446717	6760887

Table 14. UTM Location Coordinates of Silt Samples Assayed

UTM Location Coordinates of Soil Samples Assayed

All samples are from UTM Zone 9V, NAD 83

Sample type	Project Site Name	Assay Sample #	Easting	Northing
Soil	Simpson Lake South	SLS12-S-042	482264	6722928
"	Simpson Lake South	SLS12-S-043	482290	6723000
"	Simpson Lake South	SLS12-S-044	482267	6723077
"	Simpson Lake South	SLS12-S-045	482223	6723166
"	Simpson Lake South	SLS12-S-046	482353	6723177
"	Simpson Lake South	SLS12-S-047	482422	6723236
"	Simpson Lake South	SLS12-S-048	482452	6723324
"	Simpson Lake South	SLS12-S-049	482522	6723387
"	Simpson Lake South	SLS12-S-050	482172	6723260
"	Simpson Lake South	SLS12-S-067	481378	6724142
"	Simpson Lake South	SLS12-S-068	481314	6724200
"	Simpson Lake South	SLS12-S-069	481450	6726535
"	Simpson Lake South	SLS12-S-070	481528	6726485
"	Simpson Lake South	SLS12-S-071	481607	6726459
"	Simpson Lake South	SLS12-S-072	481685	6726464
"	Simpson Lake South	SLS12-S-073	481783	6726398
"	Simpson Lake South	SLS12-S-074	481821	6726312
"	Simpson Lake South	SLS12-S-075	481825	6726200
"	Simpson Lake South	SLS12-S-076	481847	6726097
"	Simpson Lake South	SLS12-S-077	481896	6726020
"	Simpson Lake South	SLS12-S-078	481967	6725904
"	Simpson Lake South	SLS12-S-079	481967	6725791
"	Simpson Lake South	SLS12-S-080	481982	6725683
"	Simpson Lake South	SLS12-S-081	481974	6725569
"	Simpson Lake South	SLS12-S-082	482078	6725574
"	Simpson Lake South	SLS12-S-083A	482192	6725601
"	Simpson Lake South	SLS12-S-083B	482180	6726003
"	Simpson Lake South	SLS12-S-085	482236	6726017
"	Simpson Lake South	SLS12-S-086	482306	6726038
"	Simpson Lake South	SLS12-S-087	482360	6726062
"	Simpson Lake South	SLS12-S-088	482428	6726078
"	Simpson Lake South	SLS12-S-089	482518	6726096
"	Simpson Lake South	SLS12-S-090	482572	6726145
"	Simpson Lake South	SLS12-S-49	480215	6723924
"	Simpson Lake South	SLS12-S-50	480295	6723876
"	Simpson Lake South	SLS12-S-51	480409	6723827
"	Simpson Lake South	SLS12-S-52	480485	6723799
"	Simpson Lake South	SLS12-S-53	480558	6723763
"	Simpson Lake South	SLS12-S-54	480567	6723557
"	Simpson Lake South	SLS12-S-55	480602	6723642
"	Simpson Lake South	SLS12-S-56	480617	6723731
"	Simpson Lake South	SLS12-S-57	480665	6723811
"	Simpson Lake South	SLS12-S-58	480729	6723853

UTM Location Coordinates of Soil Samples Assayed - cont.

All samples are from UTM Zone 9V, NAD 83

Sample type	Project Site Name	Assay Sample #	Easting	Northing
Soil	Simpson Lake South	SLS12-S-59	480813	6723906
"	Simpson Lake South	SLS12-S-61	480882	6723932
"	Simpson Lake South	SLS12-S-62	480942	6723996
"	Simpson Lake South	SLS12-S-63	481019	6724034
"	Simpson Lake South	SLS12-S-64	481149	6724067
"	Simpson Lake South	SLS12-S-65	481231	6724152
"	Simpson Lake South	SLS12-S-66	481299	6724291
"	Simpson Lake South	SLS12-S-67	481351	6724376
"	Simpson Lake South	SLS12-S-68	481381	6724456
"	Simpson Lake South	SLS12-S-69	481417	6724542
"	Simpson Lake South	SLS12-S-70	481432	6724662
"	Simpson Lake South	SLS12-S-71	481439	6724756
"	Simpson Lake South	SLS12-S-74	483303	6726100
	Simpson Lake South	SLS12-S-75	483319	6726009
"	Simpson Lake South	SLS12-S-76	483351	6725909
"	Simpson Lake South	SLS12-S-77	483393	6725834
"	Simpson Lake South	SLS12-S-78	483397	6725742
"	Simpson Lake South	SLS12-S-79	483436	6725651
"	Simpson Lake South	SLS12-S-80	483450	6725551
"	Simpson Lake South	SLS12-S-81	483499	6725463
"	Simpson Lake South	SLS12-S-82	483544	6725372
"	Simpson Lake South	SLS12-S-83	483603	6725292
"	Jesse's Nap Flat	JNF12-S-091	443754	6762101
"	Jesse's Nap Flat	JNF12-S-092	444357	6762085
"	Jesse's Nap Flat	JNF12-S-093	444401	6762098
"	Jesse's Nap Flat	JNF12-S-094	444468	6762107
"	Jesse's Nap Flat	JNF12-S-095	444521	6762090
"	Jesse's Nap Flat	JNF12-S-097	444559	6762080
"	Jesse's Nap Flat	JNF12-S-098	444641	6762080
"	Jesse's Nap Flat	JNF12-S-181	444287	6762102
"	Jesse's Nap Flat	JNF12-S-186	444733	6762015
"	Jesse's Nap Flat	JNF12-S-187	444691	6762035
"	Jesse's Nap Flat	JNF12-S-188	444659	6762054
"	Fire Lake SE	FLSE12-S-099	428053	6778955
"	Fire Lake SE	FLSE12-S-100	427994	6778930
"	Fire Lake SE	FLSE12-S-102	427917	6778939
"	Fire Lake SE	FLSE12-S-104	427843	6778898
"	Fire Lake SE	FLSE12-S-105	427733	6778871
"	Fire Lake SE	FLSE12-S-106	427646	6778861
"	Fire Lake SE	FLSE12-S-107	427566	6778854
"	Fire Lake SE	FLSE12-S-108	427474	6778870
"	Fire Lake SE	FLSE12-S-109	427394	6778870

UTM Location Coordinates of Soil Samples Assayed - cont.

All samples are from UTM Zone 9V, NAD 83

Sample type	Project Site Name	Assay Sample #	Easting	Northing
Soil	Fire Lake SE	FLSE12-S-110	427318	6778890
"	Fire Lake SE	FLSE12-S-111	427255	6778910
"	Fire Lake SE	FLSE12-S-190	427804	6780214
"	Fire Lake SE	FLSE12-S-191	427841	6780155
"	Fire Lake SE	FLSE12-S-193	427892	6780101
"	Fire Lake SE	FLSE12-S-194	427927	6780045
"	Fire Lake SE	FLSE12-S-195	427974	6779984
"	Fire Lake SE	FLSE12-S-196	428001	6779920
"	Fire Lake SE	FLSE12-S-198	428039	6779848
"	Fire Lake SE	FLSE12-S-199	428045	6779774
"	Fire Lake SE	FLSE12-S-202	428044	6779711
"	Fire Lake SE	FLSE12-S-203	428030	6779644
"	Fire Lake SE	FLSE12-S-204	428029	6779578
"	Fire Lake SE	FLSE12-S-205	428020	6779521
"	Fire Lake SE	FLSE12-S-206	428022	6779467
"	Fire Lake SE	FLSE12-S-207	428020	6779434
"	Fire Lake SE	FLSE12-S-208	428036	6779277
"	4C North	4CN12-S-118	436596	6773752
"	4C North	4CN12-S-119	436616	6773684
"	4C North	4CN12-S-120	436698	6773680
"	4C North	4CN12-S-121	436798	6773684
"	4C North	4CN12-S-122	436892	6773655
"	4C North	4CN12-S-123	437000	6773637
"	4C North	4CN12-S-124	437044	6773573
"	4C North	4CN12-S-125	437074	6773499
"	4C North	4CN12-S-126	437141	6773491
"	4C North	4CN12-S-127	437188	6773450
"	4C North	4CN12-S-130	436674	6774944
"	4C North	4CN12-S-131	436756	6774928
"	4C North	4CN12-S-132	436800	6774907
"	4C North	4CN12-S-134	436915	6774903
"	4C North	4CN12-S-135	437017	6774899
"	4C North	4CN12-S-136	437080	6774837
"	4C North	4CN12-S-137	437141	6774767
"	4C North	4CN12-S-139	437217	6774740
"	4C North	4CN12-S-140	437263	6774720

Table 15. UTM Location Coordinates of Soil Samples Assayed

2012 Sim Lake 5.

90

5 JULY thursday 186-179

Truck Canoe

- Pack things in truck, canoe, life preservers, paddles,
- Drive to Reiner's - arrive 10:00 Unload truck, pack all gear + canoe to Reiner's house down trail, lock truck, stash keys
- Leave Reiner's by canoe for stream opposite - 11:00
- Arrive other side of lake 12:15
- Hike to camp - hot, hard, buggy, swampy. Take
→ [1 Silt sample]

No bedrock visible along whole route until ridge before camp. Bedrock
→ is laminated limestone, grey banded, not rusty, no obvious mineralization 483360/6726444.
- Set up camp in nice open spot - no bear sign, water is
- Cramped legs today, very sweaty need to drink more
→ Camp @ UTM 483402E/6726202N
- Rosh has blisters + bug bites reactions.

Sim Lake 5

90

friday 187-178 JULY 6

GPS 625t

Legs still sore from hike. Plan to do SE Ridge, get a routine for sampling and soil bag marking

- Decide to mark GPS waypoint # samplers name conditions on bag + do log notes at end of day to go faster. Decide to do SW Ridge instead

Soil Sample SW Ridge

Hike up in slow vertical, hot

- Rock is unmineralized, mostly uninteresting hike is good walking
→ [Gossan] at 481795/6725405 - small, not strongly limonitic Rock sample taken GPS #044
Strike 175° / Dip East 60°-70°
No sign of HD / or LDH claim posts
- Deep notch looks like fault intersecting ridge 481612/6725107
- Find 4 unmarked posts where HD #5/6 post ? should be - no others
- Large jasper body after dip / fault? Jasper is not apparently mineralized but has white small qtz veins
Rock samples taken at GPS 45/46
- Trace jasper body 45-48 GPS
No other interesting rock
→ See Jan 2 for site notes

Daily Field Journal - cont.

Sim Lakes

7 JULY — 90 — saturday 188-177

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

—°C

Venture GPS

8 Slow day - tired, late start, buggy
- Up same path as yesterday
9 - Look farther for / found HDH
#7/8 post #2 not as on
10 The mining recorder map but close
481656 / 6725213
11 - Big bowl on way to SE ridge
several old claim posts
12 - Go to far end to start is the
decision sample coming back
13 - Weather threatening to rain
Several humps on ridge
14 which are on HDL claims?
- Last hump is steep, decide
15 not to go up there - will
start here + go back
16 - Start w. Soil Sample 42
- We think spur is not claimed
17 do soil samples on ridge spur
Soil Samples 46-49
18 - Back to GPS #45, start ridge
line at 50, do next spur also
19 - Interesting rocks between
45-50 [illegible] looking
20 decide to take rock sample
045/050 ID *
Soil Sample to GPS #68
- Long hike back to camp

Sim Lakes

sunday 189-176 — 90 — JULY **8**

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Venture GPS

Getting more sleep, not so
tired. Nice "breakfast" eggs!
Decision is to go to far North
end today, not so far to walk
see new area.
- Hike up same way to ridge for
decision is we again go to far
north end, first sample coming
back. Ridge rock not apparently
mineralized
- Start soils at GPS # 069 pm
- Rusty Qtz @ 072 take sample
481685 / 6726464
- Ridge is a series of humps again
not easy on the legs - Lots
of BUGS - "skeeter ridge"
- Soils collected #69-81 on
ridge, decide to go to north
on way back to a gossan we
spotted on walk up to ridge
- Take soil samples 82, 83, weather
threatening to rain decide to
stop taking soils + go to north
gossan area. Start down at [illegible].
- Rusty gossan is bigger than others,
red rust / hematite some [illegible]
GPS #89 Soil/Rock 482518 / 672...
Last soil #90 Below gossan

Daily Field Journal - cont.

Sim Lakes

9 JULY 90 — monday 190-175

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

°C

GPS 62 ?

Thinking of going out, decide to do one more day. Could rain today. Even more buggy than before - not nice!

- Decide to do lower ridge going South from camp as it was proposed in grant application
- On way to get water bedrock was spotted so decide to start there. GPS #72 is camp rock hematite rusty qtz
- GPS 73 is trench - bedrock fault ? Strike 230° phyllite w qtz seams grey, non-min. Rock sample taken
- ridge is gentle slope, all rock is glacial ? -> all sorts mixed together. at top of crest is open area - could land a helicopter at this spot ?

-> 483582 / 6725435

Last thing needed is silt sample. LONG way down to creek. Silt sample #85 Interesting rock in creek min. qtz rusty, take samples also more rock samples [illegible]

Sim Lakes -> [illegible].

tuesday 191-174 — 90 — **JULY 10**

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Pack up camp, stash firewood + claimposts - didnt make any claims, no obvious good spots except rusty gossan at GPS 89.

- Much easier than going down
- Better trail is on north ridge of East Flowing creek
- Still major swamp at lower elevation - Same one as going up ? - need to avoid next time.
- Use GPS to find canoe spot was still a hard hike to here
- Canoe across Simpson Lk. tired, glad not much wind or waves
- Really tired, hard to carry canoe, gear + samples from Reiner's cabin to truck .5 km on his trail
- Back to Miners Junction main camp - beat, blistered, bug bit! Not as easy as I remembered - funny how memory is selective!

Daily Field Journal - cont.

Pack for rest of trip

11 JULY — 90 — wednesday 192-173

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

—°C

Assessment of Trip #1 Simpson Lk
- Took longer than planned -
  - Do more straight sampling, less looking around
- Need more moleskin for blisters
- Need to drink more water to reduce cramping + headaches
- Will need 2 bottles of stove fuel for the next trip

Plan for next trip = 12-14 days
- put heavy food in bucket for 2 days supply - to drop off 2 days into trip for return trip pick up.
- take liquid bug dope, less space, lighter

Pack for trip
- Moleskin, anti itch creme for bites, enough batteries for GPS units + walkie-talkies
- Map book, more soil bags

Service Argo, grease/oil check, fuel up.

BLUELINE

MJ → Hass Lk cabin Argo + Argo trailer 4x4

thursday 193-172 — 90 — **JULY 12**

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Load Argo onto trailer head out of M.J. at 10:45 AM
- Road to trappers cabin at landing is less rutted than some years, beaver dam at culvert is OK - small washout
- Head out on Argo at 1:15 for Hasselberg Lake cabin.
- Wow, the road is bad very wet!! Winch lots we are the first ones through this year.
- Arrive at cabin at Hasselberg Lake at 5:30 PM - trip took 4 hrs 15 mins. Have a flat tire to fix - the only one with a tube. Have to unbead the tire, very difficult
- Have trouble getting in to cabin (no key - not in old hiding place)
- Cabin has more mosquitos than outside, kill over 1000, still as many as before - AAGHH
- Will be hard to sleep tonight.

Daily Field Journal - cont.

Hass Plat. SE silts

13 JULY — friday 194-171 — 90 — Argo — GPS 625t

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Fix Argo tire by seating bead, adjust all tire pressures, unload back for samples room
- Argo to end of cat road about 1½ hours, to creek canyon
- Explore creek beds of large creek – lots of rock at base of canyon
- Collect lots of mineralized rock at GPS #88 site.
  - pyritic
  - grey fine grained
  - smithsonite? robin egg blue
  - listwanite / mariposite
- Collect silt seds at all water flows / creeks on cat road going back to cabin
- Lots of rain, pants wet cold
- Site # have hard time getting silt – all much under moss – small water flows
- Ditto site #
- Dry clothes at cabin by fire too many bugs – pitch tent in the cabin.

BLUELINE

Hasselberg cabin → CV Argo

saturday 195-170 — 90 — **JULY 14** — GPS 62st

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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22	23	24	25	26	27	28
29	30	31				

- Repack Argo, leave by 10:45am
- Argo to Hasselberg Plateau on previous made Argo trail
  - not much deadfall for the years since trail was last used.
- We know that there was drilling camp on Hass. Plateau from looking at map in Trans-North Helicopters office.
- Hear drilling on Plateau, Argo cross country to drill camp
- Stop in, have coffee + meet geologist from Archer Cathers
- make arrangements to use helicopter on July 16 for ½ hr. as he is servicing camp that day by using sat phone
- Argo to Crystal Valley Camp trail hard to find
- Arrive at camp at 7:30 set up / supper late. Long day, not as buggy as lower elevation.
- Lots of trail waypoints but no samples today

JNF Argo

15 JULY 90 sunday 196-169

GPS 625T ← Venture GPS

— Decide to go to Jesse's Nap Flat as we have 1 day wait for helicopter.
→ Take several rock samples on way to JNF
- Talc at top of ridge
- Listwanite part way up
- Qtz / phyllite / UM / sandstone on West facing side of Pyramid Mtn.
- Rusty Qtz 444317/6762063 Robin egg blue resistant weathering mineral/rock
- Lots of rusty orange UM clay rich spots & gossans

~ Stake Jesse's Nap Flat #1 + 2 by doing a soil survey through gossan field Venture GPS #091, 092, 093 also 098
~ Follow depression feature Soil sampling north side of E/W depression (fault?)
— Stake JNF posts #2 / 450m from post #1
~ lots of listwanite on north face of Pyramid Mtn + magnetite sample with copper min?
— Stake C+R1 claim on way home

C√ → Fire Lake SE Argo

monday 197-168 90 **JULY 16**

GPS 625T Argo

Pack up camp early - ready for helicopter by 9:00 AM
— Helicopter is late comes at 11:00 - rains during flight to Fire Lake SE.
— Can't land easily on South ridge decide to land on North ridge. Rains a bit, we got sampling tools, bags etc and soil sample North Ridge down to valley floor to make camp.
— Rock at top is qtz eye augen gneiss, unaltered & not mineralized / grey
→ Small gossan @ 428025/6799914, thin
→ Lots of qtz @ GPS #202
@ GPS 204 is Chloritic green granite?
Some soils more rusty but not much, some orthogneiss / breccia
@ GPS 206 - porphyry to white phenocrysts still some green granite and qtz eye augen gneiss
→ Soil very rusty @ GPS 208
— no good place to camp have to excavate camp / tent spot
— Cold night, make fire.

Fire Lake SE

17 JULY tuesday 198-167 — 90

GPS 62 st and Venture GPS

Arg

Up early, eat get early start
- decide to do South ridge first
to get in the sun
- South ridge across from camp
has light layers near horizontal. Rock is [illegible] schist
w/ pyrite throughout also
further up at GPS 101
- South ridge is steady hike up
rock is laminated, pyritic
metavolcanic? Changing
to more + more mafic phyllite
type rock near GPS 106
- Rock more rusty near 107/108
- at GPS 111 is a notch, rusty rock
go down snow chute, soil done
were 099-111 on Venture GPS.
→ - also 114 silt, 113 rock w/ Bornite
Eat lunch at camp. Decide to
stake valley to include South ridge
→ Silt sample up valley #209-210
- find very mineralized knob, #211,
212. Lots of pyrite, rusty metavolcanic?
- Not much else mineralized or rusty
except large pyrite cubes at 214
- mineralized pyritic gossan at
427438 / 6779623 Rock 217
- pre pack camp to leave Sample

Fire Lake SE → 4CN!

wednesday 199-166 — 90

Argo **JULY 18** GPS 62 St

Up early, leave early - long hike
today. Threatening weather.
- Hard to cross Waters Creek, have
to take off boots, pants - cold!
- Go up onto burn - hike along
base of ridge in burn. Lots
of gossanous rusty rock along
the way but no visible minerals
of interest. GPS one spot
- Hike along ridge till top [illegible]
go down but thick bush [illegible]
- Cross valley to base of large
#220 gossan mountain, but
have no time to explore -
take a few rock samples at base
- Hike up over pass, down to
another large creek, have to
again take off shoes, pants - Deep!
- Fall jumping in, bruise leg
- Hike through burn, very
long long hike - very tired
wet sore. Rosch's heel
blister is very bad, big + raw
(to the bone? - ugly wound)
- Make camp, dry clothes
- lots of bugs again - BAD!

Daily Field Journal - cont.

4CN

19 JULY — thursday — Argo

90

200-165

Venturing GPS

More sunny today, will be hot hiking. Decide to do South ridge first then north valley slope (not to ridge — too far from AK RGS sample site.

— Rock bluff at base of ridge
Strike 110° / Dip 44° N
laminated quartzite below [illegible]
above is rusty, some breccia-
qtz, heavy 436636/6773788

Soil sample up ridge [illegible]
GPS # 121 ~ 127. Rock [illegible]
real interesting, fine grained
black / white speckled [illegible]
— go to above small valley [illegible]
— Back to camp, dump off samples
set in sun to dry.
— Soil sampled north valley wall about ½ way up. Still a long way from the AK RGS creek
— mostly granitic rock, [illegible] granodiorite? becoming more feldspar less qtz to the north around GPS 137
— quartz? monzonite?
— no rock on this side of valley is that promising.

4CN → Sm. Fish Lake

friday — **JULY 20** — Argo

90

201-164

GPS 625t

Up early, want to silt sample large valley and break camp today if possible — very long and vertical hike to do to get to Crystal Valley camp.

— Silt sample starting at GPS 223 hike along creek at base of ridge to small lake, very shallow - No fish!
— Lots of talus most not interesting some rusty but no obvious mineralization — go quick to East end of valley, turn north, go to gossan at NE end of valley
Rusty rock is like in Fire Lake SE laminated felsic ash?
lots of pyrite 438632/6773777
→ another gossan, similar rock to 1st gossan 438423/6773994
— more rock samples
— Turn back, follow north part of upper basin, down another different creek, back to camp
— great bear country but no bears — good!
— leave, hike to Fish Lake

Daily Field Journal - cont.

Small Fish Lake → C.V

21 JULY saturday Argo 202-163

GPS 62 st

Break camp at Small Fish Lake, start up east ridge of Porcupine Creek — forgot bear spray at Shitter, back to camp.
— Very hot already, sweating and not really started yet.
— Ridge is very steep, lots of Balsam Fir brush, brutal hike, lots of stops. Hope I make it w/o dying!!
— Finally... up to the ridge.
— Long hike along ridge does not have much interesting rock. Too tired to check it out if there was some — need a rest, near collapse.
— Have to traverse very steep snow covered bowl very carefully to get to Crystal Valley. Slow going.
→ Nice gossan at notch (Fault?) take rock samples @ 189 443037 / 6761203 Very yellow
— Finally get to the camp — hardest hike of the trip. Exhausted!!!

CV → 4CN → Hass Lake cabin

sunday 203-162 GPS 62 st JULY **22**

Argo

So tired from hike we slept in, up at 10:00 AM. Slow going today, very sore.
— So glad to be at Argo, our feet are blistered sore.
— Break camp, leave at 12:00 for 4CN silt sampling.
— 4CN Argo access not as planned, too steep and thick bush, decide to walk. Almost impossible bush, very slow + hard hiking.
→ Silt sample side creek, follow it down to main creek. # 240
→ Take 2 more silts # 241/242
— rock is all (but one small white quartz) ultramafic serpentinite (and dunite?)
— So thick the bush to hike so uniform the U.M. rock, so tired and sore feet that we decide it is not worth it, go back to Argo.
— Argo across Hasselberg Plateau to Hass. Lake Cabin.

<u>Daily Field Journal</u> - cont.

23 JULY

90

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4X4 Argo
monday
204-161
Argo trailer

—°C

8 Clean up cabin, pack up
30 all samples left there from
9 Hasselberg Plateau SE
30 — Argo out through swamp
10 trail still pretty wet,
30 — Sils got stuck, had to
11 winch out.
30 — Lots of Porcupines around,
12 trees chewed.
30 — Argo to 4X4 truck, load
13 Argo on trailer drive to
30 Miners Junction on
14 Campbell Highway.
30 — Unpack — end of epic journey!
15 — Make fire at cabin, dry
30 samples of silt/soil
16 on low heat on wood
30 stove.
17
30
18
30
19
30
20
30