MINERAL EXPLORATION REPORT

On the

TITAN PROPERTY

## BC Geological Survey

 Assessment Report 30365aAtlin Mining Division, North-western B.C.
Map sheet 104M049

Latitude $59^{\circ} 28^{\prime} 12$ " N, Longitude $134^{\circ} 18^{\prime} 42^{\prime \prime}$ W

## Volume I - Report

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## Summary

The Titan Property is in the Coast Mountains on the southwest side of Taku Arm, on Tagish Lake, 40 km west southwest of Atlin, BC. The property consists of 30 contiguous claims and 4914 Ha within mapsheet 104M049.

The Atlin mining district, in which the project lies, has seen exploration and mining work since the start of the $20^{\text {th }}$ century and includes past producing mines such as the Engineer and Ben-My-Chree. There are many historic poly-metallic showings located on the Titan property, including the Rupert, White Moose, Silver King and Buchans as well as more recent showings such as the Titan. Historic work on the Titan property includes an extensive soil sampling program in the proximity and to the north of the Silver King and Rupert-L showings, prospecting and mapping over the property area and a small IP survey and coincident minor drill program at the Titan showing.

Exploration work on the Titan property completed in 2007 included a 132 line-km airborne geophysical survey for both aeromagnetics and radiometrics and a two week soil sampling program that expanded the historic soil grid. Geophysical interpretation identified six locations of interests on the Titan property, based on both radiometric and aeromagnetic data collected by the airborne geophysical survey. The one region of interest in the south end of the property is interesting as there is a direct correlation between aeromagnetic derived intersecting magnetic lineaments and strong radiometric anomalies high in Uranium/Thorium, Uranium/Potassium and Thorium/Potassium ratios. The five regions of interest in the northern end of the property are less distinct and only one has a correlation between magnetic lineaments and radiometric anomalies. The rest of the locations are based on radiometric anomalies alone. The soil sample grid that was completed by Placer Dome in 1989 and digitized by Bootleg Exploration, along with the infill and expansion of such grid during the 2007 Exploration program, located many multi-element anomalies. There is a strong signature of $\mathrm{Au}, \mathrm{Ag}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{Cu}$ and As found in the proximity of the Rupert/ Silver King and Rupert-L showings. This anomalous area encompasses a maximum area of 1.4 km long and 750 m wide. In addition to this zone, there are further zones anomalous in $\mathrm{Cu}, \mathrm{Pb}$ and Ag at the edge of the soil grid and open to the southeast, southwest and northeast. Furthermore, there is an anomalous trend of $\mathrm{Au}, \mathrm{Pb}, \mathrm{Ag}$, and Cu values extending 300 m to the north of the Buchans Showing.

Exploration work on the Titan property in 2008 included a 195 line-km airborne geophysical survey which included both magnetic and radiometric analysis and a 46 man-day field program of prospecting/mapping and collection of 27 rock samples, 53 stream-silt samples and 301 soil samples.

The 2008 traverses verified that mineralization at the Titan-Moly showing appears to be constrained to within 325 meters either side of the granite/gneiss contact. There are two structures that appear to have the most influence on mineralization. The first is a pronounced fracture set $(120 / 58)$ host to some of the mineralization oriented subparallel to the main granite/gneiss contact. The second structure is oriented almost perpendicular to the first at (220/65) and parallel to the cliff face that exposes the main showing. A new quartz vein discovery, 6 km north of the Titan-Mo showing on the same cross-structure (208/70), returned 62000 ppb Au. A similar Cu-rich quartz vein on (220/64) was also discovered 1 km SE of the main showing.
Mapping, rock, soil and silt sampling at several of the Rupert Showings and integration with the latest 2007-2008 airborne geophysics has demonstrated a probable structural control on the mineralization there. The analysis suggests a strong association of mineral occurrences with NNW-trending magnetic lineations that clearly transect granodiorite/gneiss contacts at multiple locations. Soil geochemical anomalies along these lineation and lineation/contact intersections clearly require follow-up as do extensions of the lineations beyond the current detailed soil and mapping grids.

The results from the 2007-2008 exploration programs support the potential for the Titan property to host significant gold, silver, copper and molybdenum mineralization. This report includes recommendations for future work on the project, including: an 800 m drill program to test the Titan-Moly 120/58 and 220/65 structural features; further exploration around the soil geochemical anomalies, in close proximity to the Silver King and Rupert-L showings, with particular emphasis on the granodiorite contact and intersecting NNW and East trending structures. The White Moose Showings (A-F) near lake level requires careful assessment of available literature, followed by detailed ground assessment and airborne geophysics groundtruthing. Age dating of the Rupert/Buchans/White Moose mineralization would assist in unravelling the source of mineralization, and limit exploration vectors.

Total expenditures on the Titan property from the 2007-2008 exploration program were $\$ 198716.08$.

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## Introduction

## Location, Access, Infrastructure and Physiography

The Titan Property is in the Coast Mountains on the southwest side of Taku Arm, on Tagish Lake, 40 km west southwest of Atlin, BC at $59^{\circ} 27^{\prime} \mathrm{N}$ Latitude, $134^{\circ} 23^{\prime} \mathrm{W}$ Longitude (Figure 1). The Titan claims are located on White Moose Mountain and are situated above tree line in an area of a recently retreated glacier. Elevations range from 1200 m to 1862 m A.S.L. At lower elevations balsam and lodge pole pine dominated with willow and alder occurring in drainages and avalanche chutes. The alpine areas have scrub balsam, heather and alpine flora. Outcrop exposure is fair, except where glacial till and debris cover occurs in the alpine valley.

For the 2007 and 2008 work programs, the crew mobilized to the property by helicopter from Atlin. The White Pass Railroad, with direct access to the port of Skagway, is located approximately 60 kilometres northwest of the property.

The area is affected by weather from the coast and receives abundant rain and snow. Snow generally begins accumulating in the alpine areas in mid September and begins receding in late April to early May. The snow is generally melted back sufficiently by mid to late May to allow for fieldwork at lower elevations.

The land in which the mineral claims are situated is Crown Land and falls under the jurisdiction of the Government of British Columbia. Surface rights would have to be obtained from the government if the property were to go into development. The Titan claims are located within traditional lands of the Taku River and Tagish Tlingit First Nations.

Power is not available in the immediate project area. The nearest source of power is in Atlin, where dieselelectric motors generate electrical power. Any mine development would have to supply its own power system or negotiate with the British Columbia Government to have power supplied to a mine complex. Water resources are abundant in the project area in flowing steams and numerous large lakes.

The nearest major city centre is Whitehorse, 210 km by road north of Atlin. Whitehorse is a supply centre for this northern region and has an ample labour force. Due to historic mining activity in the area, an experienced work force, including mining personnel are available in Atlin and in the Yukon.

The author did not see any topographic or physiographic impediments for a potential mine, mill, heap leach or waste disposal sites. Suitable lands occur throughout the project area that should allow development of such facilities. However, there are areas of steep terrain in which such facilities could not be located. Environmental concerns and land claims issues with local First Nations are issues that the project operators will have to address from time-to-time as the project advances.

## Tenure

The property consists of 30 contiguous claims on TRIM claim map 104M049 (Figure 2). Claim data is as follows:
Table 1: Mineral Tenure

| Tenure Number | Tenure Name | Expiry date | Size (hectares) |
| :---: | :---: | :---: | :---: |
| 404287 | TITAN 1 | 15/11/2011 | 13 |
| 404288 | TITAN 2 | 15/11/2011 | 13 |
| 404289 | TITAN 3 | 15/11/2011 | 25 |
| 404290 | TITAN 4 | 15/11/2011 | 25 |
| 404860 | TITAN 5 | 15/11/2011 | 25 |
| 404861 | TITAN 6 | 15/11/2011 | 250 |
| 404862 | TITAN 7 | 15/11/2011 | 250 |
| 408642 | TITAN 8 | 15/11/2011 | 500 |
| 408643 | TITAN 9 | 15/11/2011 | 299 |
| 408644 | TITAN 10 | 15/11/2011 | 500 |
| 408645 | TITAN 11 | 15/11/2011 | 450 |
| 504073 | TITAN | 15/11/2011 | 411 |
| 504077 | TITAN A | 15/11/2011 | 49 |
| 504079 | TITAN B | 15/11/2011 | 16 |
| 504082 | TITAN C | 15/11/2011 | 16 |
| 564095 | TITAN 1 | 15/11/2011 | 66 |
| 564097 | TITAN 3 | 15/11/2011 | 33 |
| 564098 | TITAN 4 | 15/11/2011 | 33 |
| 564114 | TITAN | 15/11/2011 | 247 |
| 564115 | TITAN | 15/11/2011 | 82 |
| 564116 | TITAN 5 | 15/11/2011 | 16 |
| 564117 | TITAN 2 | 15/11/2011 | 197 |
| 564225 | TITAN | 15/11/2011 | 99 |
| 564237 | TITAN 6 | 15/11/2011 | 33 |
| 564238 | TITAN 7 | 15/11/2011 | 16 |
| 564239 | TITAN 8 | 15/11/2011 | 33 |
| 564294 | TITAN | 15/11/2011 | 329 |
| 589599 | TITAN NW | 06/08/2009 | 411 |
| 589600 | TITAN NE | 06/08/2009 | 378 |
| 589601 | TITAN NNE | 06/08/2009 | 99 |



## History and Previous Work

The mineral exploration history of the area dates back to 1890's, when prospectors traveling over the Chilkoot trail and across Bennett Lake to the Klondike goldfields first started exploring the area. The first recorded production in the area came from the Engineer Gold Mine at Taku Arm on Tagish Lake. A small amount of production also came from the Ben-My-Chree gold mine.

The early prospectors discovered a number of precious and base metal bearing veins on the north and east slope of White Moose Mountain known as the Rupert showings. In 1979, United Keno Hill Mines Ltd (UKHM) staked the Fee claims to cover the Rupert showings. UKHM carried out extensive geological and geochemical surveys in the showing area.

In 1986, UKHM optioned the property to Rise Resources. Rise confirmed the soil geochemical anomalies but performed no further work.

In 1989, the property was optioned to Placer Dome. Placer conducted mapping, geochemical sampling, geophysical surveys and trenching on the showings. Their program had limited success and the property was later allowed to lapse.

During the period of this exploration activity, however, field crews noted that the ongoing retreat of glacial ice at the headwaters of Buchan Creek had begun to expose porphyry copper - molybdenum mineralization.

In August 2002, Dennis Ouellette staked the TITAN claim and conducted a one-day field program confirming the high-grade nature of the molybdenum occurrences. Rock samples collected from a glacially derived boulder field returned values up to 0.8 \% Mo. Later that year the property was acquired by Eagle Plains Resources Ltd.

2003 fieldwork by Eagle Plains included prospecting, rock and soil sampling, an Induced Polarization (IP) ground geophysical survey contracted to Aurora Geosciences Ltd., and staking of additional claims to cover prospective stratigraphy. Prospecting in the area exposed by retreating glacial ice located massive to disseminated molybdenite in Cretaceous granodiorite boulders and in quartz veins within the granodiorite. By tracing the mineralized boulders upslope, molybdenum mineralization was located in place near the contact between metasediments and Cretaceous granodiorite. This was the first known in situ molybdenum occurrence discovered on the property. Eight of the ten rock samples collected returned greater than $0.1 \%$ molybdenum. Some samples are also associated with elevated copper (up to 2873 ppm ), tungsten (up to 93.1 ppm ), and bismuth (up to 60.7 ppm ) values.

Field observations indicate that higher grade molybdenum mineralization appears to occur along the intrusive metasedimentary contact zone, with associated chalcopyrite, malachite and a broad zone of disseminated pyrite. Argillic, sericite and abundant epidote alteration were noted up to 1 kilometer from the contact zone. The presence of high grade molybdenum mineralization within the limited outcrop exposure combined with an abundance of locally derived high grade float boulders indicate the potential for a large mineralized system.

Results from the IP geophysical survey indicated the presence of a large, high-intensity chargeability anomaly in the vicinity of high-grade mineralization discovered in outcrop during the initial program. Resistivity imaging showed a 25 to 75 meter wide area of lower resistivity suggesting incipient fracturing that may have provided a conduit for mineralizing fluids. The resistivity also clearly showed the contact between the intrusive and metasedimentary rocks, consistent with field observations by Eagle Plains' geologists. Chargeability imaging indicated the presence of chargeable bodies on both survey lines, consistent with the observed contact between sedimentary and intrusive rocks.

A 2004 report, authored by Scott Casselman, P.Geo, recommended further geophysical surveying, mapping, sampling and diamond drilling to delineate the extent of the molybdenum mineralization and test the Titan Showing. A short diamond drill program was carried out under an option agreement with Kobex Resources Ltd.
with targets selected based on the Casselman report. However, the collection of the geophysical survey data referred to in the Casselman report was constrained in part by poor electrode contacts, particularly in the areas of high grade boulders. Consequently, the geophysical targets tested by drilling in 2004 were located peripheral to the best observed mineralization. It is believed that the chargeability anomalies tested in T04001 and T04002 are likely related to disseminated pyrite. The resistivity feature tested by T04003 is likely the contact between the mafic gneiss and the underlying granite. The low grade molybdenum mineralization that was intersected in the drilling does not appear to be the same as that seen at the Titan showing and in the high grade boulder field.

In 2006, a limited program was completed to take reference points on the ground so that the 1989 soil geochemical grid by Placer Dome could be accurately digitized. Many of the historic showings were also visited and assessed, including the Buchans Creek and White Moose showings.

## Geological Setting

## Regional Geology

The regional geological setting of the project area (Figure 3) is taken from Mihalynuk (1999). The project area occurs at the contact between the Coast Intrusive Belt and the western margin of the Intermontane Belt. The Coast Intrusive Belt is comprised of predominantly Late Cretaceous and Tertiary magmatic rocks, while the Intermontane Belt in this area is comprised of Devonian to Triassic Boundary Ranges Metamorphic Suite, Late Proterozoic orthogneiss (Wann River Gneiss) and meta-sediments (Florence Range Metamorphic Suite). These rocks are intruded by the Early Jurassic Aishihik Plutonic Suite.

The Coast Intrusive Belt rocks in the Taku Arm area are part of the Sloko Plutonic Suite. They are typically comprised of granodiorite, tonalite or granite composition. At White Moose Mountain, the pluton is dominated by non-foliated granite to granodiorite. It is pink to grey, medium to coarse grained, contains $40-50 \%$ perthitic and zoned K-feldspar, $40 \%$ interstitial quartz, $10-15 \%$ plagioclase, and $2-5 \%$ euhedral biotite booklets. K-feldspar locally forms scattered ( $1-5 \%$ ) megacrysts up to 5 centimetres.

The Aishihik Plutonic Suite is a suite of foliated, hornblende-biotite granodiorite to diorite bodies. They are white to grey on weathered or fresh surfaces; fine to medium-grained and always contain hornblende. At the southern end of Taku Arm, they form resistant, steeply jointed exposures.

The Boundary Ranges Metamorphic Suite is a belt of polydeformed rocks bounded on the east by the Llewellyn Fault and on the west by mainly intrusive rocks of the Coast Belt. The Boundary Ranges Metamorphic Suite is comprised of a wide range of protoliths from quartzose to pelitic or carbonaceous and calcareous sediments through volcanic tuffs or flows to small lenses to large bodies up to several kilometres across of gabbroic, dioritic, granodioritic and granitic intrusives and ultramafite.

The Wann River Gneiss is probably derived from mafic to intermediate strata and comagmatic intrusive rocks. It is consistently intensely foliated and does not contain any plagioclase porphyroblasts. However, it is commonly criss-crossed by plagioclase-rich pegmatites. The Wann River Gneiss is distinctive for its millimetre to decimetrescale compositional layering, which varies gradationally from hornblende diorite to gabbro; both display subordinate biotite and late epidote.

The Florence Range Metamorphic Suite consists of an upper amphibolite grade metapelite, with lesser, but conspicuous carbonate, amphibole gneiss and quartzite layers. The protolith for the sedimentary component is most likely clastic strata and carbonate deposited in a continental marginal setting while the protolith for the amphibole gneiss is basalt flows, tuffs, sills or dykes.

The major structural break in the area is the Llewellyn Fault, which trends roughly north south and runs through Taku Arm east of the property.


## Property Geology

Mihalynuk (1999) described the main units in the property area as follows:
ETgr: Sloko-Hyder Plutonic Suite: 53-56 Ma: Granite, biotite leucogranite, quartz monzonite, granodiorite, subvolcanic stocks, dikes and sills. Fresh, unfoliated to weakly foliated.

EJgd: Aishihik Plutonic suite: mid-crustal, foliated hornblende granodiorite to quartz diorite
PPMBa: Actinolite-chlorite schist and gneiss (metabasite), locally chlorite more abundant, lesser epidote.
PPMBb: Biotite-plagioclase-quartz schist (tuffaceous noncalcareous sediment?) and lesser biotite schist.
PPMF: Semipelite-quartzite interlayered with lesser amounts of biotite-hornblende amphibolite gneiss, fissile mica schist, black phyllite and clacsilicate; well foliated, locally pyritic.

PPMW: Wann River gneiss; hornblende-biotite-feldspar gneiss, Permian.
Limited mapping was done on the property in 2003 and 2004 and 2008. The latest mapping effort focused on updating the intrusive contacts of the Eocene Sloko-Hydor Plutonic suite (ETgr) - spatially associated with the Titan-Mo showing, and the Early Jurassic granodiorite of the Aishihik Plutonic Suite (EJgd) -- the contact area of which is spatially associated with $\mathrm{Pb}, \mathrm{Zn}, \mathrm{Ag}, \mathrm{Au}$ and, Cu mineralization of the various Rupert and Buchan showings (Figure 4,6). The 2008 mapping incorporates scanned and digitized linework from Maheux (1990), as well as airborne and radiometric survey results from the 2007 and 2008 surveys.

The Eocene Sloko-Hydor Plutonic suite (ETgr) rocks are pink to grey, and vary from medium to coarse grained and from equigranular to porphyritic granodiorite to granite. K-feldspar megacrysts are up to 5 cm in length. The intrusive rocks show a slight increase in quartz vein and fracture density towards the molybdenite showing. Approximately 0.5 km southwest of the Titan Showing the granitic rocks are stained with red iron oxide from water run off. However, there were very little sulphide minerals observed in the granite and the source of the iron is not known. Sloko-Hydor Plutonic suite (ETgr) rocks are well exposed on the west side of the property and on the steep south facing slopes. Outcrop exposure near the centre of the Titan-Moly showing area is poor where the glacier and glacial debris remain.

In contrast to the Eocene intrusive rocks, the Early Jurassic suite (EJgd), is typically a light to medium grey salt and pepper, equigranular to weakly porphyritic granodiorite. Various shades of green (epidote+-chlorite) alteration and Fe-staining are typically prevalent proximal to the known mineral showings.

The metamorphic rocks occur on the eastern and northern part of the property. Mihalynuk (1999) notes that the Wann River Gneiss (PPMW) is interleaved with the Florence Range Metamorphic Suite. The Wann River gneiss is well-layered hornblende gneiss of dioritic to gabbroic composition containing $20-40 \%$ hornblende with lesser biotite. This gneissic unit forms the contact with the Sloko-Hydor Plutonic suite in the area of the molybdenum mineralization.

Florence Range metamorphic lithologies (PPMF) are mainly metapelitic and semipelitic rocks with carbonate, amphibolite, quartzite and minor calc-silicate and graphite bearing semipelitic rocks. Metapelites occur in 0.1 to 30 m thick units, which may contain sillimanite and altered kyanite. Amphibolite is spatially associated with carbonate in 0.1 to 20 m thick layers.

## Deposit Types

The Tagish Lake area has the potential to host several deposits types, from bulk tonnage copper/gold/molybdenum porphyries with associated skarn deposits to high-grade gold veins to volcanogenic massive sulphide (VMS) deposits. The area around Taku Arm has had an extensive history of exploration for high-grade gold veins and has had some production form the Engineer Mine vein system on the east side of Taku Arm and from the Ben-My-Chree Mine on the South side of the Lake.

The Engineer Mine was discovered in 1899 and has operated on and off from then to 1987 (Minfile, 2003). Production values could not be located. Native gold mineral occurs in quartz veins up to 2 m wide in shale, siltstone and greywacke of the Lower Jurassic Laberge Group. Gold grades in the quartz vein material are quite variable and range from trace to 50 grams per tonne. The deposit is considered to be transitional between epithermal and mesothermal.

The Ben-My-Chree mine produced 93 grams of gold and 31,103 grams of silver from 7 tonnes of ore in 1911. The mineralization occurs in quartz and quartz-calcite veins in Cretaceous foliated diorites. The veins contain up to $4 \%$ chalcopyrite, galena and pyrite.

## Mineralization

There are many mineral occurrences on the Titan property. Previously, Eagle Plains focused their 2003 - 2004 exploration programs on the molybdenum-rich Titan showing at the toe of a glacier on the west side of White Moose Mountain. Additional claims were staked at that time to cover precious and base metal showings on the north and east flank of White Moose Mountain. These showings were identified while researching the BC Minfile occurrences in the area; verifying the location and the grades of these showings was the focus of the 2006 field work.

The Titan showing occurs along the contact between the Wann River Gneiss and the Eocene Sloko-Hydor Plutonic suite (ETgr). The mineralization consists of massive, semi massive and disseminated molybdenite with associated chalcopyrite and pyrrhotite. It occurs as disseminations in the granite; in quartz veins in granite and metasedimentary rocks; and along the granite / metasedimentary contact. The Titan showing, discovered in 2002, is a $1 \mathrm{~m} \times 2 \mathrm{~m}$ zone of $5 \%$ disseminated molybdenite with local high-grade zones of $20-30 \%$ molybdenite over $50 \times 50 \mathrm{~cm}$. The high-grade mineralization is associated with quartz flooding and vuggy quartz. Away from the high-grade core, coarse molybdenum disseminations decrease into low-grade molybdenite-chalcopyrite to barren pyrrhotite within about 1-1.5 meters.

Granodiorite boulders found down-slope from the Titan Showing show similar styles of mineralization. Field observations of the float boulders indicate that higher-grade molybdenite is found closer to the meta-sedimentintrusive contact, grading into lower grade chalcopyrite dominated porphyry style mineralization to the east.


Alteration includes argillic, sericitic and local strong epidotization, occurring up to 1 kilometre away from the contact zone. A well-developed pyrite halo is associated with parts of the metasedimentary contact. Copper skarn mineralization has also recently been noted 400 m SE of the main showing in the metasedimentary country rock.

Mineralization and alteration on the Titan appears to be similar to that of the molybdenum showing located on the south-western end of Willison Bay. There, molybdenum mineralization is described as a Low F-type molybdenum porphyry system.

The other showings on the property occur in Florence Range meta-sediments and in Aishihik Suite granodiorite. The Buchan Creek Showing (Minfile \# 104M 035 - Rupert-G) was discovered in the early 1900s and consists of a 1.1 m wide quartz vein in hornblende gneiss. The vein consists of quartz with massive galena, chalcopyrite and minor malachite and azurite. Two chip samples across the 1.1 m vein in 1989 averaged $15.43 \mathrm{~g} / \mathrm{t}$ gold, 244.8 g/t silver, 9.85\% lead and 0.20\% copper. A grab sample taken during Eagle Plains Resources Ltd. 2004 recce program returned $>1.0 \% \mathrm{Cu},>100 \mathrm{~g} / \mathrm{T} \mathrm{Ag}$ and $21.8 \mathrm{~g} / \mathrm{T} \mathrm{Au}$. The strike and dip of the veins varies from 125/80 southwest to 160/80 east. (Figure 6)

The Rupert-North Showing (Minfile \# 104M 036 - Rupert-H) consists of quartz veins in a 0.5 m wide shear zone that is vuggy, rusty and malachite stained. A 0.5 metre chip sample across the shear zone by Placer Dome in 1990 returned $5.4 \mathrm{~g} / \mathrm{t}$ gold and $30 \mathrm{~g} / \mathrm{t}$ silver. A blast pit north of the shear exposed a weakly developed quartz stockwork with up to $2 \%$ pyrite in a rhyolite dyke.

The Silver King Showing (Minfile \# 104M 008 - Rupert-I) consists of narrow, discontinuous quartz veins in pelitic schists, gneisses and granodiorites. The veins are up to 1 m wide in shear zones and 3 m wide in granodiorite and often pinch out into barren shear zones; several are en echelon. The veins consist of massive white, locally vuggy quartz with massive to disseminated galena, pyrite, sphalerite and minor arsenopyrite and chalcopyrite. Sulphide content is variable, but generally less than 1\%. Intermediate to felsic dykes are spatially related to the
mineralized quartz veins. The veins strike from 020 to 166 degrees and dip 50 to 80 degrees west.
The Rupert-L Showing (Minfile \# 104M 073) consists of a shear-hosted quartz vein that is 20 to 50 cm wide and has been traced on surface fro 15 m . The quartz vein contains disseminated sulphides (pyrite, galena, pyrrhotite, chalcopyrite and sphalerite) in a gangue of limonitic quartz and minor carbonate. Assay results on vein material ranged up to $0.22 \mathrm{~g} / \mathrm{t}$ gold and $29 \mathrm{~g} / \mathrm{t}$ silver.

The Fee Glacier Showing (Minfile \# 104M 037 - Rupert-K) consists of quartz veins; quartz sweats and shear zones located on a nunatak in the Fee Glacier. The veins are up to 0.25 m wide and contain highly oxidized pyrite, pyrrhotite and minor chalcopyrite and galena. Assays of 3 grab samples collected by Placer Dome in 1990 returned an average of $6.86 \mathrm{~g} / \mathrm{t}$ silver and $0.02 \% \mathrm{Cu}$.

The White Moose Showings are located along the west shore of the Taku Arm and are described as epigenetic, hydrothermal, polymetallic veins within the Boundary Range Metamorphic Suite. The White Moose South (Minfile \# 104 M 010 ) vein is $1.8-3 \mathrm{~m}$ wide with disseminated galena and chalcopyrite. A small collapsed adit and dump occur at the showing location. Samples of vein material from the dump returned values of trace gold, $53.14 \mathrm{~g} / \mathrm{t}$ silver, $0.13 \%$ lead and 0.01\% copper (BCEMPR Assessment Report 8384).

The White Moose B Showing (Minfile \# 104M 072) consists of a massive, vuggy, variably hematite stained quartz vein with galena and pyrite. Grab samples of vein material averaged trace gold, $71.6 \mathrm{~g} / \mathrm{t}$ silver, $1.34 \%$ lead and 0.01\% copper (BCEMPR Assessment Report 19827).

The White Moose-Shaft (C) Occurrence (Minfile \# 104M 012) consists of two shafts, located 35 m apart. A 40 cm wide quartz vein on the side of one of the shafts appears to follow a contact between rhyolite and schist. The quartz vein contains galena, pyrite, chalcopyrite and malachite. A 27 cm chip sample of vein material returned $2.06 \mathrm{~g} / \mathrm{t}$ gold, $27.43 \mathrm{~g} / \mathrm{t}$ silver, 2.45 \% lead and 0.01\% copper (BCEMPR Assessment Report 8384).

The White Moose North (A) Showing (Minfile \# 104M 009 ) consists of an adit driven on a $0.45-1.2 \mathrm{~m}$ width quartz vein containing chalcopyrite, bornite, galena, sphalerite and malachite. A 17 cm wide vein south of the adit returned values of trace gold, $0.34 \mathrm{~g} / \mathrm{t}$ silver, 0.13 \% lead 0.09 \% zinc and 0.09 \% copper (BCEMPR Assessment Report 8384).

## 2007 Exploration Program

The 2007 surface exploration program on the Titan property was carried out between September $22^{\text {nd }}$ and October $3^{\text {rd }}$, 2007. The crew of three was lodged in Atlin and travelled daily to the property via Discovery Helicopters using a Jet Ranger 206B aircraft. Unfortunately, due to the weather and snow cover, much of the property was inaccessable. Almost all of the ground work concentrated on completing and expanding the 1989 Placer Dome soil geochemistry grid, located on the plateau just south above the Buchans showing.

The 2007 airborne geophysical program consisted of a 132 Line km survey, including both magnetic and radiometric analysis. A detailed geophysical interpretation was completed on the results of this survey.

Overall project supervision was the responsibility of Aaron A. Higgs, Project Geologist. All work was carried out in accordance to Ministry of Environment, Ministry of Mines and WCB regulations. Analyses were performed by Eco-Tech Laboratories in Kamloops, BC.

## 2007 Exploration Program: Geochemical Results

## Titan soil grid

The 2007 exploration program consisted of two parts to the development of the Titan soil grid. Firstly, the geochemical and spatial data from a soil grid completed in 1989 by Placer Dome was acquired. This data was digitized into our database and cross checked for accuracy. Developing on this existing grid, the Bootleg Exploration crew took a total of 740 samples during the two week program between September $22^{\text {nd }}$ and October $3^{\text {rd }}, 2007$. Results are plotted in Figure 5.

## Geochemical Anomalies

## Au and Ag

The gold and silver anomalies are very coincident and so will be described together. Through geochemical analysis, using the existing dataset for the Titan project, it was determined that any soil sample between 68-120 ppb Au was anomalous and over 120 ppb Au deemed highly anomalous. On the side of Ag, any soil samples between 0.76-1.2 ppm Ag was anomalous and over 1.2 ppm Ag was deemed highly anomalous. With this in mind, the largest and most pronounced gold-silver anomalies are found in the southern quarter of the soil gird. The largest concentration is found just south of the Rupert-L showing and is consistent over a $400 \times 150 \mathrm{~m}$ area. Another zone $\sim 500 \mathrm{~m}$ to the south-east of the Rupert-L extends across 3 separate soil lines with a length of 250 m long and 50 m wide. Both of these anomalous zones are strongly truncated to the east at the creek found here or just up slope from it. There are also small anomalous clusters around the Rupert/Silver King showing as well as to the north and east of the showing. On line L5600N, from sample 5000W to 5175W, there is a significant anomaly that is however truncated by both soil lines to the north and south. These samples also exhibit anomalous values in other elements such as $\mathrm{Zn}, \mathrm{Pb}$ and Cu and might possibly have been contaminated. Resampling here would be recommended to verify the results. There is an anomalous zone coincident with the Buchans showing that extends 500 m to the north across 4 soil sample lines but it is quite weak, only encompassing one sample in the most northerly line and is sharply truncated to the south.

## Pb and Zn

The anomalous cut off for lead used in this analysis was 145.1 ppm and the highly anomalous cut off was 239 ppm. As with the gold and silver anomalies, the lead anomalies seem to be highly concentrated in the southern quarter of the soil grid, around the Rupert-L and Rupert/Silver King showings in particular. The largest anomalous zone in lead is between the Rupert-L showing and the Silver King showing and extending to the east of the Silver King showing. It measures $350 \times 250 \mathrm{~m}$ in area and is fairly consistent. Just a 100 m to the west of the Rupert-L showing is a very high anomalous zone $230 \times 120 \mathrm{~m}$ in area that covers 4 soil lines. Again there is a slight anomalous zone on line L5600N, coincident with the gold and silver anomalies but could be the result of possible contamination. Other than the very southern zone of the grid, the only other location of highly anomalous lead results if just north of the Buchans showing. This zone extends for 300 m and is strongly truncated to the south. As for zinc, the anomalous cut off used for this analysis is 198 ppm while the highly anomalous cut off is $0.1 \% \mathrm{Zn}$. On the entire grid there are only 4 samples that returned highly anomalous values for Zn . They are all found in the very southern end of the soil grid and 3 of them in close proximity to the Silver King showing, coinciding with the large anomalous lead zone. There is however a very high abundance of anomalous zinc values in almost every soil line to the southeast of the Rupert-L showing.

## Cu

The anomalous cut off for copper used for this analysis is 69 ppm while the highly anomalous cut off is 106 ppm Cu . There are strong Cu anomalous zones, in conjunction with anomalous $\mathrm{Au}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{Ag}$, to the west and south of the Rupert-L and Rupert/Silver King showings. The southern anomalous area consists of a zone 300 m $x 300 \mathrm{~m}$ and is open to the south, where the grid ends. There are two anomalous zones to the west of the Rupert-L showing, one 100 m to the west and consisting of an area $300 \mathrm{~m} \times 250 \mathrm{~m}$ and another $200 \mathrm{~m} \times 150 \mathrm{~m}$
that is open to the southwest, where the grid ends. Furthermore there is a small 250 m long anomalous associated with the Buchans showing.

## Mo

The anomalous cut off for molybdenum used for this analysis is 1.92 ppm while the highly anomalous cut off is 2.9 ppm Mo. Molybdenum results have only been acquired for 2007 Bootleg Exploration samples as the historic Placer Dome samples were not run for Mo. There is a strong Mo anomalous zone around the Rupert-N showing and continuing to the west and north. This encompasses both anomalous and highly anomalous samples and is open to the east and south. This anomalous area totals $650 \times 800 \mathrm{~m}$. This zone correlates quite well straddling the lithologic contact between two different metamorphic units. Other than this zone, there are more isolated incidents of anomalous and highly anomalous Mo values in the very north-northeast of the grid, especially lines TIL005 and TIL006. If possible, it would be prudent to acquire the sample pulps for the 1989 Placer Dome samples and to re-run them for molybdenum.

## Bi and As

The anomalous cut off for bismuth is 1.38 ppm and the highly anomalous cut off used is 2.29 ppm Bi . Values are only available for the 2007 soil samples taken by Bootleg Exploration as the historic samples taken by Placer Dome were not analyzed fro Bi . There are only 7 samples in the soil grid survey that returned highly anomalous values for Bi . Four are found on the very western edge of lines TI60+00N and TI61+00N, two on the very western extent of line TILO02, while the only other one is found just 50 m to the west of the Rupert-N showing. There are two small 100 m long linear anomalous zones on the eastern part of line TIL004. Other than these occurrences, the Bismuth signature is quite weak on this soil grid survey. As for Arsenic, the anomalous cut off values was 48.51 ppm and the highly anomalous cut off values was 80.91 ppm As. The majority of anomalous and highly anomalous arsenic values are found in the southern quarter of the soil grid, around the Silver King showing and to the southwest. The only anomalous occurrences found in the northern $3 / 4$ of the soil grid are found in small incidents just to the northeast of the Rupert-N showing.





## 2007 Exploration Program: Geophysical Results

Geophysical Airborne GPS, aeromagnetic and airborne radiometric data was acquired by McPhar Geosurveys Ltd. between 28 September and 9 October 2007. TerraNotes Ltd. analyzed the data, interpreted and created maps to image the subsurface structures, features and trends associated with possible precious and/or base metal deposits. The complete 2007 geophysical report produced by TerraNotes Ltd., with all results and conclusions on the Titan property airborne survey, is located in Appendix III.

## 2008 Exploration Program

Field crews assembled in Atlin BC on July 21 ${ }^{\text {st }}$, 2008. Work on the property thru to August $22^{\text {nd }}$ included mapping, prospecting, soil and stream-silt geochemical sampling, and an infill airborne geophysical survey. The ground crew of between 3 and 9 persons was lodged in Atlin and travelled daily to the property via Discovery Helicopters using a Jet Ranger 206B aircraft. The 2008 field program included 46 man-days, collection of 27 rock samples for assay, 53 stream-silt samples (Figure 6) and 301 soil samples (Figure 5). Concurrent to the field program, a 195 line-kilometer airborne geophysical infill survey was completed by CMG Airborne Ltd.. Survey parameters, results and basic interpretations are included in Appendix IV.

Geological mapping focused on the high grade molybdenum mineralization associated with the contact between the cretaceous granodiorite and the metasediments. Mapping was also directed along Buchan Creek, polymetallic veins near the Rupert showings, and along steep drainage channels in the south of the propertywhich were assumed to be unexplored. A combined analysis of 2008 field data and airborne geophysical datasets has delimited a refined boundary for the granodiorite (EJgd)/gneiss contact. Figures 4 and 6 show the new updated boundary.

A small silting program was completed along Buchan creek in an attempt to expose any additional mineralization in the surrounding area. Contour soil lines were placed near the Rupert showings to assess the validity of previous soiling done by Placer Dome in 1990, and to extend the soil grid to the east in order to encompass gossans noted from mapping. A contour soil line was also placed on the southern flank of Buchan creek to determine the extent of mineralization.

Samples were shipped to the Eco Tech sample prep facility in Whitehorse, YK, and then analyzed at Eco Tech Laboratories in Kamloops, BC. Soil and silt samples were analyzed for 28 element ICP, plus an Au aqua regia ICPMS finish. Rock samples were analyzed for 28 element ICP, plus a fire assay for Au; ore grade analysis (AAS) was used on samples which were above ICP detection limit in either $\mathrm{Mo}, \mathrm{Cu}, \mathrm{Ag}, \mathrm{Pb}$, or Zn . All samples were collected, handled, catalogued and prepared for shipment by Eagle Plains Resources staff. The geochemical data was then entered into the Eagle Plains exploration GIS database for preliminary analysis.

All exploration work was carried out in accordance to the BC Mines Act and BC Workers Compensation board requirements. Total 2007 and 2008 field and geophysical expenditures were $\$ 198716.08$ (Table 3).

## 2008 Exploration Program Results

Ground work in 2008 focused on three areas of the property (Figures 5,6):

1) Prospecting, rock and silt sampling at the Titan-Moly showing, in vicinity of the granite-gneiss contact.
2) Prospecting, rock, silt and soil sampling along a 3.5 km stretch of Buchans Creek, beginning at the NW limit of the property area, including the tributary draining from the Titan-Moly Showing; and
3) Prospecting, rock, and silt (Figure 6) and soil sampling (Figure 5) at several of the Rupert Showings (I,J,K,L and approaching F). Findings for each of the 3 areas are discussed below.

## Titan Molybdenum Showing (MF 104M 089)

Three days of work were completed over the Titan-Moly showing area in 2008. Six traverses concentrated on further characterizing the lithology, alteration and mineralization within 1 kilometer of the granite/gneiss contact
(ETgr with PPMW: Figure 6). During these traverses, 12 stream-silt samples and 8 rock samples were collected. An RS-125 hand held spectrometer was also used one day to attempt a radiometric characterization of the barren vs. altered vs. mineralized granite at the Titan Showing (Table 2). The preliminary interpretation of this data suggests that K -alteration is not pre-requisite for favourable Mo-mineralization, but additional data is required to statistically validate.

Table 2 - Radiometric analyses of rock from the Titan-Mo showing area (Equivalent K,U,Th radiometric results using a hand held RS-125 spectometer)

| Station | Rock type | K eq <br> $\%$ | U eq <br> ppm | Th eq <br> ppm | K/Th | Description |
| :--- | :--- | :---: | :---: | :---: | :---: | :--- |
| JBTIG001 | gneiss | 0.3 | 5.4 | 17.1 | 175 | Leucocratic qtz-feld-bt gneiss; Tr. Py |
| JBTIG002 | gneiss | 0.1 | 8.8 | 10.2 | 98 | Rusty biotite orthogneiss with 1\% ds <br> py and 0.5\% FF Mo |
| JBTIG003 | Granite dyke | 0.9 | 17.5 | 33.5 | 269 | 2m dyke in qtz-feld gneiss |
| JBTIG004 | Granite | 1.8 | 25 | 53 | 340 | pinkish, massive, equigranular granite <br> with 5\% ds biotite |
| JBTIG005 | Granite | 3.3 | 59 | 96 | 344 | Jarosite stained massive granite |
| JBTIG006 | Pegmatitic <br> Granite | 0.4 | 11.3 | 10.8 | 370 | Rusty with minor Pyrite |
| JBTIG007 | Granite | 1.8 | 33 | 70 | 257 | pinkish, massive, equigranular granite <br> with 5\% ds biotite |
| JBTIG008 | granite - <br> unaltered | 1.2 | 25 | 58 | 207 | relatively unaltered |
| JBTIG008b | granite - altered | 1.6 | 26 | 54 | 296 | somewhat altered |
| JBTIG009 | granite - <br> mineralized | 1.4 | 25 | 53 | 264 | Mo mineralized - intense alteration |

The 2008 traverses verified that mineralization at the Titan-Moly showing appears to be constrained to within 325 meters either side of the granite/gneiss contact. Molybdenum mineralization was noted both within limonite stained, silicified, and clay altered gneiss at the main saddle (Photo 2: $536034 \mathrm{E}, 6590400 \mathrm{~N}$ ) and as granite hosted coarse disseminations at the main showing, and also with vuggy quartz-rich fracture fill - 325 m southwest of the contact (Photo 2: 535445 E, 6590438 N).


Photo 2 Titan Showing with known mineralization as approximate constraints to mineralized zone. Foreground cliff approximately parallel to suspected mineralized cross-structures on (225/65).

A traverse from the Mo-mineralized gneiss saddle along a down-contour resulted in the discovery of chalcopyrite bearing skarn mineralization at 1880 AMSL on the southwest slope of White Moose Mountain, immediately above the upper snow patch just above the main showing (Photo 2). At this locale, talus subcrop sample (TMTIR012 - Figure 6) comprising a pyrrhotite-chalcopyrite bearing diopside skarn hosted in grey gneiss returned 5500 ppm Cu, 15200 ppm Zn , 16 ppm Ag, and 100 ppm Pb.

There are two structures that appear to have the most influence on mineralization. The first is a pronounced fracture set (120/58) host to some of the mineralization oriented subparallel to the main granite/gneiss contact. The second structure is oriented almost perpendicular to the first at (220/65) and parallel to the cliff face that exposes the main showing. Quartz-pyrite bearing veins on this orientation were noted in at least two locations in the flats just north of the 2004 drill holes. Both of these structures are clearly evident as vertical magnetic gradient troughs in the 2008 airborne geophysical data (Appendix IV).

A mineralized quartz vein was also noted in a gully on the south aspect at 1649m AMSL with the same orientation (220/64). The mineralized zone occurs at the granite/gneiss contact and consists of a 3-4m wide gossan comprising a 1.5 m central zone of intense gossan, including a 1 m wide quartz stockwork core with malachite along the margins and as disseminations within the quartz. Samples LFTIR001 and -002 (Figure 6), collected from this vein system, returned up to $4511 \mathrm{ppm} \mathrm{Cu}, 259 \mathrm{ppm} \mathrm{Mo}$, and 174 ppm Zn . Further down the gulley, at 1250 m AMSL, a large, very course grained, ultramafic boulder was encountered. The boulder exhibits spotty but intense iron staining and rusty pockets associated with abundant disseminated and fracture-filled
magnetite. LKTIR003, collected from this boulder, did not return appreciable Au or other metals in the standard ICP package. Platinum group elements should be considered in future programs.

Another traverse was completed down a parallel gully, 1 kilometre to the west of the previous mentioned gulley, entirely within the Eocene granite unit ( ETgr ). No appreciable mineralization was encountered along the gulley all the way to lake level. A brittle shear plane on 134/76 was noted in the floor of the gully, and coincides with a SE-trending magnetic trough in the vertical magnetic airborne results.

Buchan Creek Traverses
Two days were spent prospecting, and silt and soil sampling along Buchan creek and 800 meters up into the tributary draining the Titan-Moly showing. Reconnaissance mapping on the south side of Buchan Creek up to 1500 m AMSL encountered only granodiorite (Figure 6). One major exception was with a 150 metre exposure of gneiss at the 1300 m AMSL waterfall in the Titan-Moly tributary. A 6 m wide aplite dyke and several smaller diabase dykes were visible near the waterfall. The main early foliations (gneissocity) in the area are north trending with shallow to moderate dips to the east. Fractures and dykes trend close to Az200 with moderately steep west dips.

The outcrops in this area exhibit moderate to strong pervasive and fracture filled epidote+-chlorite alteration (propylitic). One sample (JBTIR005) was collected from a 2-3 meter wide quartz vein hosted in the gneiss comprising malachite stained, semimassive pyrrhotite in a matrix of quartz and epidote. The sample returned only slightly anomalous copper ( 316 ppm ). The quartz vein trends $083 / 42$ and intersects a strong chloritehematite stained fracture on 209/67.

Approximately 300 m upstream, a mineralized quartz vein was encountered hosted within greenish-grey granodiorite. The $10-20 \mathrm{~cm}$ wide quartz vein comprised disseminated and blebby galena and pyrite. Epidote and chlorite alteration were notable along the vein margins oriented 291/86 and along a strong fracture (208/70). A grab sample (JBTIR003) taken from this vein returned significant anomalous values: $\mathrm{Au}(62000 \mathrm{ppb}), \mathrm{Ag}(34$ ppm $), \mathrm{Pb}(2800 \mathrm{ppm})$, and $\mathrm{Zn}(2300 \mathrm{ppm})$.

Further to the east overlooking Buchans Creek, the granodiorite is generally a monotonous grey colour. Low intensity pervasive fracture controlled chlorite+epidote alteration is typical. Occasionally, green epidote alteration would increase substantially and was, in a few cases, associated with increased limonite staining and fracture density. Chasing up one such talus train led to the discovery of molybdenum mineralization along quartz-rich fractures in a strongly silicified and limonite stained granodiorite. Sample JBTIR006 was collected at the intersection of two ESE trending quartz veins, one steep dipping and the other shallow. The analysis returned 137 ppm Mo. During the 2008 field program, at least 3 other samples were collected to the east along the 1280 m AMSL contour, from similar assemblages comprising pyrite-quartz veins hosted in moderate epidotechlorite altered granodiorite. To ascertain if there was a geochemical signature associated with these structures, a 1 kilometre long contour soil line was established at the 1240 m level, near the limit of exposed rock (Figure 5). Despite clear evidence for insitu molybdenum mineralization above, the soil sample failed to highlight a discernable Mo anomaly, nor did the soil survey encounter other significant element values (i.e. $\mathrm{Ag}, \mathrm{Au}, \mathrm{Cu}, \mathrm{Pb}$, $\mathrm{Zn}, \mathrm{As}$ ).

In the Buchans creek area, 33 silt samples were collected (Figure 6). Of those, 10 were collected from tributaries on the north side of the creek. The remainder were collected from either Buchans creek itself, or from tributaries on the south side. A preliminary assessment of the analytical results for the silts indicates relatively consistent low values in $\mathrm{Pb}, \mathrm{Zn}, \mathrm{Mo}$ and Ag for all samples along Buchan Creek. With respect to Au , there are two anomalous samples (NTTIS024 and NTTIS031); both were collected from main tributaries that drain large basins downstream of the Rupert -K and -G showings.

## Rupert Showings Traverses

## Rupert-K (FEE GLACIER - MF 104M 037)

Half a day was spent examining freshly exposed outcrop at the Rupert-K showing. The most obvious target was an island of rusty, well banded gneiss situated near the top of the Fee glacier on the NE face of White Moose Mountain (Photo 3) Sample TMTIR009 (Figure 6) was collected here and comprises a yellow and orange stained paragneiss with intense sericite-clay-silica alteration, and minor disseminated pyrite. There is a strong penetrative foliation on 291/31 (RH rule) and crosscutting shear on 294/72. The one analytical result only returned a weakly anomalous value in copper ( 261 ppm ). This showing is noteworthy in that gossanous outcrop disappears to the north and west under a rapidly diminishing glacier. Historical sampling reported up to 530 ppb $\mathrm{Au}, 2300 \mathrm{ppm} \mathrm{Cu}, 0.35 \% \mathrm{~Pb}$ and 650 ppm zinc (AR 1990 21114). As is evident in Photo 3, rope and crampon assisted chip sampling is warranted over the cliff face.


Photo 3 Rupert-K showing requires detailed prospecting of newly exposed bedrock.

## Rupert-I-L nearing F (MF 104M 008)

Four traverses and 3 days of soil/silt sampling were completed on the east flank of White Moose Mountain, between 1800 m and 800 m AMSL. The primary focus was follow-up of soil geochem anomalies at, and between, the Rupert I and L showing areas, and assessment of two gossans lower in two parallel gullies between 9001000 m AMSL. A total of 8 contour soil lines on successive 100 meter contours from 1600 m AMSL to 800 m AMSL were completed (except 1400 m AMSL). Stations were every 25 meters, with lines varying from 750 to 1100 m long.

Reconnaissance mapping by the author in comparison to mapping completed by previous workers (AR 21114, 08384) verifies the location of the Hale Mountain granodiorite and paragneiss contact which separates the Rupert-L and Rupert-I showings (Figure 6). The Rupert-L is hosted in greenish-grey to grey gneiss with moderate to intense sericite-phyllite alteration accompanied by increasing goethite-limonite staining in proximity to the main trenches and gulleys. Maheux (1991) reported that mineralization exposed in trenches was
associated with quartz vein material and dyke rocks hosted in an ENE trending shear zone. Structurally below this structure occurs a series of feldspar porphyry dykes followed by bands of amphibolite gneiss. At several outcrops in the area, this amphibolite gneiss is commonly coupled with a 1-3 meter thick band of light grey to white limestone. Interestingly, limestone and/or amphibolite bands are observed mid-way between both the Rupert-L and Rupert-I showings, and the Rupert-I and Rupert-H showing. Detailed mapping of these units in relation to structural elements is warranted.

The Rupert-I showing comprises a 0.3-2 metre mineralized quartz vein hosted entirely within chlorite+- epidote altered, salt-and-pepper textured granodiorite. Limonite alteration of the host is elevated in proximity to the quartz vein system. One of the best mineralized samples of 2008 (TMTIR014), a grab of the quartz vein, returned $5.8 \% \mathrm{~Pb}, 91 \mathrm{ppm} \mathrm{Ag}, 500 \mathrm{ppm} \mathrm{Zn}, 96 \mathrm{ppm} \mathrm{Cu}$, and 200 ppb Au . The quartz vein is oriented on 139/83 with periodic jogs along a fracture network on $011 / 79$. The quartz vein is cut by a 1 metre wide shear zone with apparent dextral motion, oriented 241/69. This latter structure is similar in orientation and style to the shear zone hosted mineralization at the Rupert-L showing noted by previous workers (AR 21114).

During the initial flight into the property in 2008, two prominent gossans were noted lower in the valley: one located in the same gully, approximately 800 m east of the Rupert-L, and the other in the next gulley to the south, 1 km southeast of the Rupert-L (Figure 6). When plotted with the gossan at the Rupert-I showing, the three gossans appear to be roughly in line and collinear to several structural elements controlling the known mineralization. As such, a contour soil geochem survey was established, in part, to ascertain continuity of anomalous mineralization between the 3 gossans.

The two lower gossans consist entirely of limonite-goethite stained, weakly pyritiferous, moderately chloritized, and variably silicified granodiorite. Quartz veins and stringer zones were noted in at least 5 locales. The northeasternmost gossan exhibited quartz veining on both $334 / 25$ and $001 / 81$, with the latter confined to a 1 m wide shear zone - the projection of which, is on apparent strike with the Rupert-I showing. Five granodiorite wall rock samples containing 3-5\% disseminated pyrite were collected for assay. None of the samples returned appreciable values of $\mathrm{Pb}, \mathrm{Zn}, \mathrm{Ag}, \mathrm{Au}, \mathrm{Mo}$ or Cu . In general, soil geochemical results for the same suite of elements are consistently low in comparison to soil results from above 1200 m AMSL (Figure 6). The most noteworthy exception is molybdenum in soils at the 900 m level in the southernmost gully. Here 9 anomalous (including 3 highly anomalous) stations in a row contain 10 to 63 ppm Mo, over a background (25th percentile) of 2.4 ppm . The one feature of this area that stands out is the existence of at least two dykes, one a quartz-eye "rhyolite" and the other an aplite dyke. Both dykes are oriented close to $346 / 69$, and open the possibility for further study. The other exception in regards to soil geochem anomalies are weak 3 station anomalies of Pb and Cu in both gulleys at all 4 lines, and a broad elevated background of these elements along the lowermost line (800m AMSL).


## Sampling Method and Approach

## Field sampling techniques

All 2007 and 2008 samples were collected by Bootleg Exploration Inc employees and sub-contractors. The sampling process is standardized and continually monitored for quality assurance and quality control. 3 types of samples were collected in the field, these include: rock, silt and soil samples. All samples are described in a digital form on a Palm Pilot in the field at the time of collection and also have a GPS location recorded at the site. Sample data was also recorded in field books and locations plotted on field maps as a backup to the digital forms. Upon return to town each day the digital forms are uploaded to a relational database where quality control is conducted to assure all pertinent attribute information has been recorded and the spatial coordinates of each sample is correct.

## Rock Samples

Rock samples were collected where mineralization was noted. Transported rock materials were sampled as Float, Talus or Subcrop rock sample types, depending on the perceived distance the rock had traveled from its source. Rocks were collected from outcrops as fist sized Grab samples, or as Chip samples. A Chip sample is a series of continuous and representative samples taken over a set direction and length. In each case rock samples are recorded on the digital forms with a spatial location and a variety of attributes which include: map unit, major rock type, minor rock type, colour fresh, colour weathered, texture, grain size, mineralization major and mineralization minor. All samples were shipped in plastic rice bags with locking plastic straps with unique identification numbers to prevent tampering during the chain of custody.

## Soil Samples

Samplers conducted soil sampling traverses over both grids and contour lines. Soil grids were laid out using compass bearings and hip chains. Sample spacing on grids was 25 m with line spacing that was kept at one hundred metres. Contour soil sample lines were continued on terrain where the grid was not as effective. Soil samples were collected from pits dug with geo-tools to an average depth of 10-20 cm. Where possible the soil sample was collected from the B-Horizon of the soil profile. Attribute data collected for each soil sample included: sample size, quality, depth, slope of sample site, soil horizon, colour and other notes. Sample size is rated from 1-5 with one being much too small sample size and 5 being the perfect sample size, filling roughly $3 / 4$ of the sample bag. Quality of the sample rated from 1-5 with 1 being very poor quality and 5 being excellent quality. Factors that include: sample size, soil development and quality (the lack of organics), and depth of sample all contribute to the overall quality attribute.

## Silt Samples

Samplers and geologists collected silt samples at any stream they crossed while on a soil line. Attribute data collected for each silt sample included: sample size, quality, depth, water velocity and tributary order. Samples size is rated on a scale of 1-5 with 1 being a very small sample and 5 being the perfect sample amount, filling roughly $3 / 4$ of the sample bag. Factors that include: sample size and silt quality (lack or pebbles or mud) contribute to the overall quality attribute.

## Sample Handling and Shipping Procedure

At the end of each field day all samples were taken back to the field house in Atlin; here soil and silt samples were arranged in order and hung to dry. Rock samples were also lined up in order of sampler and number. Samples with damaged bags or unclear labels were re-bagged and placed back into order. At the end of the program, a shipment was prepared. This would require one person going through each sample ensuring that all samples were in order and that any missing samples were accounted for with an empty bag marked with the sample number and "LS" for lost sample. The other person would record each sample number to be shipped.

Once recorded, the samples were placed in rice bags labeled with the shipment number and addresses. Each shipping bag was kept under 25 kg . The list of samples was compared to the database and any discrepancies investigated. Once the list of samples to be shipped matched the database's records, the bags were sealed with a zip tie security seal. The bags were shipped by Greyhound Courier from Whitehorse to the Eco-Tech Labs in Kamloops.

## Sample Preparation, Analysis and Security

All soil, rock and silt samples were collected by Bootleg Exploration Inc. employees or sub contractors. Soil and silt samples were collected using standard kraft sample bags and were dried prior to shipping. Samples were placed in double rice bags and sealed with cable ties and shipped directly to the analytical laboratory using Greyhound Bus lines Freight service from Whitehorse. Sample cataloging and shipping was overseen by Project Geologist Aaron Higgs, B.Sc. Analytical work was contracted to Eco Tech Laboratory Ltd. 10041 Dallas Drive, Kamloops BC, an ISO 9002 Accredited Company. The samples were analyzed using ICP-MS (Mass Spectrometer) methods. A 36 element (Group1DX) package was used for initial analyses, with samples exceeding detection limits reanalyzed using either a multi-element assay by ICP (Group 7AR) or precious metal assay (Group 6). The Eco-Tech Laboratory Methods and Specifications information for the analytical packages is as follows:

## Eco Tech Laboratory Ltd. - ICP-MS <br> Analytical Procedures

Samples are catalogued and dried. Rock samples are 2 stage crushed followed by pulverizing a 250 gram subsample. The subsample is rolled and homogenized and bagged in a prenumbered bag. A suitable sample weight is digested with aqua regia. The sample is allowed to cool, bulked up to a suitable volume and analyzed by an atomic absorption instrument, to . 01 \% detection limit. Appropriate certified reference materials accompany the samples through the process providing accurate quality control. Result data is entered along with standards and repeat values and are faxed and/or mailed to the client.

Table 3 - Statement of 2007-2008 Expenditures

| Exploration Work type | Comment | Days |  |  | Totals |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Personnel (Name)* / Position | Field Days (list actual days) | Days | Rate | Subtotal* |  |
| Seguin, Mike | Sept 22- Oct 3, 2007 | 1.64 | \$174.96 | \$286.93 |  |
| Higgs, Aaron A | Sept 22- Oct 3, 2007 | 15.59 | \$291.50 | \$4,544.49 |  |
| Jones, Lewis. | Sept 22- Oct 3, 2007 | 12.5 | \$194.68 | \$2,433.50 |  |
| Rae, Kamal I | Sept 22- Oct 3, 2007 | 13 | \$291.53 | \$3,789.89 |  |
| Downie, Chuck | Aug 8, 2008 to August 11, 2008 | 4.5 | \$450.86 | \$2,028.87 |  |
| Fodor, Lukas | July 21, 2008 to August 22, 2008 | 12.33 | \$191.24 | \$2,357.99 |  |
| Mumford, Thomas | July 21, 2008 to August 22, 2008 | 12.33 | \$300.42 | \$3,704.18 |  |
| Taylor, Nathan. | July 21, 2008 to August 22, 2008 | 13.83 | \$191.01 | \$2,641.67 |  |
| Brown, Jarrod A (80\%) - $20 \%$ to report writing | July 21, 2008 to August 11, 2008 | 10 | \$331.90 | \$3,319.00 |  |
| Gumption Inc | July 23, 2008 to July 31, 2008 | 0 | \$0.00 | \$0.00 |  |
|  |  |  | \$0.00 | \$0.00 |  |
|  |  |  |  | \$25,106.52 | \$25,106.52 |
| Office Studies | List Personnel (note - Office only, do not include field days |  |  |  |  |
| Literature search, Permitting | Ryley, J im | 2.0 | \$380.44 | \$760.88 |  |
| Pre field Map acquisition and Databi | Hendrickson, Glen 2007 and 2008 | 2.8 | \$271.81 | \$747.48 |  |
| Computer modelling | Gallagher, Chris S 2007 and 2008 | 2.0 | \$371.28 | \$742.56 |  |
| Reprocessing of data | Campbell, Jesse T | 2.6 | \$297.96 | \$759.80 |  |
| Database compilation and Map Prod | Robison, Brad | 20.8 | \$260.52 | \$5,426.63 |  |
| Report preparation | Higgs, Aaron A 2008 (100\%) | 18.0 | \$262.31 | \$4,721.58 |  |
| Report preparation | Brown, Jarrod A 2008 (20\%) | 4.8 | \$331.90 | \$1,593.12 |  |
| Other (specify) | Downie, Chuck - Manager 2007 | 1.1 | \$456.38 | \$502.02 |  |
|  |  |  |  | \$15,254.07 | \$15,254.07 |
| Airborne Exploration Surveys | Line Kilometres / Enter total invoiced amount |  |  |  |  |
| Aeromagnetics | 327 | 1.0 | \$11,970.00 | \$11,970.00 |  |
| Radiometrics | 327 | 1.0 | \$11,970.00 | \$11,970.00 |  |
| Electromagnetics |  |  | \$0.00 | \$0.00 |  |
| Gravity |  |  | \$0.00 | \$0.00 |  |
| Digital terrain modelling |  |  | \$0.00 | \$0.00 |  |
| Other (specify) | Advanced Interp by Terranotes | 1.0 | \$18,864.28 | \$18,864.28 |  |
|  |  |  |  | \$42,804.28 | \$42,804.28 |
| Remote Sensing | Area in Hectares / Enter total invoiced amount or list personnel |  |  |  |  |
| Aerial photography |  |  | \$0.00 | \$0.00 |  |
| LANDSAT |  |  | \$0.00 | \$0.00 |  |
| Other (specify) |  |  | \$0.00 | \$0.00 |  |
|  |  |  |  | \$0.00 | \$0.00 |
| Ground Exploration Surveys | Area in Hectares/ List Personnel |  |  |  |  |
| Geological mapping | 600 /J arrod and Thomas |  |  |  |  |
| Regional | 1000/J arrod and Thomas | note: expenditures here |  |  |  |
| Reconnaissance |  | should be captured in Personnel |  |  |  |
| Prospect | 1600/ Jarrod, Lukas, Thomas, Natha field expenditures above |  |  |  |  |
| Underground | none |  |  |  |  |
| Trenches | none |  |  | \$0.00 | \$0.00 |
|  |  |  |  |  |  |
| Ground geophysics | Line Kilometres/ Enter total amount invoiced list personnel |  |  |  |  |
| Other (specify) |  |  |  |  |  |
|  |  |  |  | \$0.00 | \$0.00 |
| Geochemical Surveying | Number of Samples | No. | Rate | Subtotal |  |
|  |  |  |  |  |  |
| Drill (cuttings, core, etc.) |  |  | \$0.00 | \$0.00 |  |
| Stream sediment |  | 55.0 | \$64.80 | \$3,564.00 |  |
| Soil | note: This is for assays or | 1041.0 | \$15.71 | \$16,354.11 |  |
| Rock | laboratory costs | 31.0 | \$28.07 | \$870.17 |  |

Table 3-Statement of 2007-2008 Expenditures

| Water |  |  | \$0.00 | \$0.00 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Biogeochemistry |  |  | \$0.00 | \$0.00 |  |
| Whole rock |  |  | \$0.00 | \$0.00 |  |
| Petrology |  |  | \$0.00 | \$0.00 |  |
| Other (specify) |  |  | \$0.00 | \$0.00 |  |
|  |  |  |  | \$20,788.28 | \$20,788.28 |
| Drilling | No. of Holes, Size of Core and Metres | No. | Rate | Subtotal |  |
| Other (specify) |  |  | \$0.00 | \$0.00 |  |
|  |  |  |  | \$0.00 | \$0.00 |
| Other Operations | Clarify | No. | Rate | Subtotal |  |
| Other (specify) |  |  | \$0.00 | \$0.00 |  |
|  |  |  |  | \$0.00 | \$0.00 |
| Reclamation | Clarify | No. | Rate | Subtotal |  |
| Other (specify) |  |  | \$0.00 | \$0.00 |  |
|  |  |  |  |  |  |
| Transportation |  | No. | Rate | Subtotal |  |
|  |  |  |  |  |  |
| Airfare |  | 25.00 | \$363.75 | \$9,093.75 |  |
| Taxi |  |  | \$0.00 | \$0.00 |  |
| truck rental |  | 15.00 | \$162.49 | \$2,437.35 |  |
| kilometers |  |  | \$0.00 | \$0.00 |  |
| ATV |  |  | \$0.00 | \$0.00 |  |
| fuel |  | 6.00 | \$151.71 | \$910.26 |  |
| Helicopter (hours) |  | 57 | \$1,197.05 | \$67,753.03 |  |
| Fuel (litres/hour) |  |  | \$0.00 | \$0.00 |  |
| Other |  |  |  |  |  |
|  |  |  |  | \$80,194.39 | \$80,194.39 |
| Accommodation \& Food | Rates per day |  |  |  |  |
| Hotel |  | 55.00 | \$99.37 | \$5,465.35 |  |
| Camp |  |  | \$0.00 | \$0.00 |  |
| Meals | day rate or actual costs-specify | 55.00 | \$16.39 | \$901.45 |  |
|  |  |  |  | \$6,366.80 | \$6,366.80 |
| Miscellaneous |  |  |  |  |  |
| Telephone |  |  | \$0.00 | \$0.00 |  |
| Other (Specify) |  |  |  |  |  |
|  |  |  |  | \$0.00 | \$0.00 |
| Equipment Rentals |  |  |  |  |  |
| Field Gear (Specify) | radios, sat phones | 45.00 | \$46.51 | \$2,092.95 |  |
| Other (Specify) | sample tags, bags \& other supplies | 1.00 | \$4,795.30 | \$4,795.30 |  |
|  |  |  |  | \$6,888.25 | \$6,888.25 |
| Freight, rock samples |  |  |  |  |  |
| Air North |  | 1.0 | \$257.64 | \$257.64 |  |
| Greyhound Couriers |  | 2.00 | \$527.93 | \$1,055.86 |  |
|  |  |  |  | \$1,313.50 | \$1,313.50 |
|  |  |  |  |  |  |
| TOTAL Expenditures |  |  |  |  | \$198,716.08 |

## Conclusions

2007 Work on the Titan property included:

1) A 132 Line km airborne geophysical survey which included both magnetic and radiometric analysis. A detailed geophysical interpretation was completed on the results of this survey.
2) A two week exploration program concentrating on expanding the historic soil sampling grid found in the northern part of the property.

2008 Work on the Titan property included:
3) A 195 Line km airborne geophysical survey which included both magnetic and radiometric analysis. Detailed geophysical integration with the 2007 survey and interpretation was not completed in time for the publishing of this report
4) A 46 man-day field program of prospecting/mapping and collection of 27 rock samples, 53 stream-silt samples and 301 soil samples.

2007 Conclusions on the Titan property

1) The geophysical interpretation located six locations of interest on the Titan property, based on both radiometric and aeromagnetic data collected by the airborne geophysical survey. The one region of interest in the south end of the property is quite interesting as there is a direct correlation between aeromagnetic derived intersecting magnetic lineaments and strong radiometric anomalies high in Uranium/Thorium, Uranium/Potassium and Thorium/Potassium ratios. The five regions of interest in the northern end of the property are less distinct and only one has a correlation between magnetic lineaments and radiometric anomalies. The rest of the locations are based on radiometric anomalies alone.
2) The soil sample grid that was completed by Placer Dome in 1989 and digitized by Bootleg Exploration, along with the infill and expansion of such grid during the 2007 Exploration program, located many multielement anomalies. There is a strong signature of $\mathrm{Au}, \mathrm{Ag}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{Cu}$ and As found in the proximity of the Rupert/Silver King and Rupert-L showings. This anomalous area encompasses a maximum area 1.4 km long and 750 m wide. In addition to this zone, there are further zones anomalous in $\mathrm{Cu}, \mathrm{Pb}$ and Ag at the edge of the soil grid and open to the southeast, southwest and northeast. There is an anomalous trend derived from the Buchans Showing, with anomalous values of $\mathrm{Au}, \mathrm{Pb}, \mathrm{Ag}$, and Cu extending north of the showing for 300 m . Other than these areas, there were only a limited amount of other anomalous zones, which seem to be more isolated. One to mention is a zone anomalous in Mo surrounding the Rupert- N and is open in the east, north and south.

## 2008 Conclusions

Ground work in 2008 focused on three areas of the property:

1) Prospecting, rock and silt sampling at the Titan-Moly showing, in vicinity of the granite-gneiss contact.
a. The 2008 traverses verified that mineralization at the Titan-Moly showing appears to be constrained to within 325 meters either side of the granite/gneiss contact.
b. There are two structures that appear to have the most influence on mineralization. The first is a pronounced fracture set $(120 / 58)$ host to some of the mineralization oriented subparallel to the main granite/gneiss contact. The second structure is oriented almost perpendicular to the first at (220/65) and parallel to the cliff face that exposes the main showing (Photos 1 and 2).
c. A new quartz vein discovery, 6 km north of the Titan-Mo showing on the same cross-structure (208/70) returned 62000 ppb Au (JBTIR003). A similar Cu-rich quartz vein on (220/64) was also discovered 1 km SE of the main showing (LFTIR001 and 002).
2) Prospecting, rock, silt and soil sampling along a 3.5 km stretch of Buchans Creek, beginning at the NW limit of the property area, including the tributary draining from the Titan-Moly Showing.
a. Reconnaissance mapping on the south side of Buchan Creek up to 1500 m AMSL encountered only granodiorite. One major exception was a 150 metre exposure of gneiss at the 1300 m AMSL waterfall in the Titan-Moly tributary.
b. The outcrops in this area exhibit moderate to strong pervasive and fracture filled epidote+chlorite alteration (propylitic).
c. A 10-20 cm wide quartz vein containing disseminated and blebby galena and pyrite and epidote and chlorite alteration was discovered oriented 291/86 and along a strong fracture (208/70). A grab sample (JBTIR003) taken from this vein returned significant anomalous values: Au (62000 ppb), Ag (34 ppm), Pb (2800 ppm), and Zn (2300 ppm).
d. A train of intensely epidote altered granite boulders let to the discovery of molybdenum mineralization in a strongly silicified and limonite stained granodiorite. As a follow-up, a 1 kilometre long contour soil line was established at the 1240 m level, near the limit of exposed rock. Despite clear evidence for insitu molybdenum mineralization the soil sample line failed to highlight a discernable Mo anomaly, nor did the soil survey encounter other significant element values (i.e. $\mathrm{Ag}, \mathrm{Au}, \mathrm{Cu}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{As}$ ).
3) Mapping, rock, soil and silt sampling at several of the Rupert Showings (I,J,K,L and approaching F).
a. Reconnaissance mapping and incorporation of the 2007-2008 airborne dataset and comparison to mapping completed by previous workers (AR 21114, 08384) has refined the location of the Hale Mountain granodiorite and paragneiss contact which separates the Rupert-L and Rupert-I showings.
b. A contour soil geochem survey was established, in part, to ascertain continuity of anomalous mineralization between the Rupert-I showing, in apparent alignment with two other understudied gossans lower in the valley to the southeast. The northeasternmost gossan exhibited quartz veining on both 334/25 and 001/81. These structures match lineations apparent in the 2008 airborne geophysical magnetic data (Figure 6; Appendix IV).
c. Sample TMTIR014, a grab of the quartz vein from the Rupert-I showing, returned $5.8 \% \mathrm{~Pb}, 91$ ppm Ag, $500 \mathrm{ppm} \mathrm{Zn}, 96 \mathrm{ppm} \mathrm{Cu}$, and 200 ppb Au . The quartz vein is oriented on $139 / 83$ with periodic jogs along a fracture network on 011/79.
d. An integration of all the known datasets suggests a strong association of mineral occurrences with NNW-trending magnetic lineations that clearly transect granodiorite/gneiss contacts at multiple locations (Figure 6). Soil geochemical anomalies along these lineation and lineation/contact intersections clearly require follow-up as do extensions of the lineations beyond the current detailed soil and mapping grids. If it can be unequivocally demonstrated that the NNW trending lineations are indeed the main mineralized structures, then at least three parallel mineralized systems can be defined; from east to west the three trends would be centred on: i) the Rupert-I, ii) Rupert-L, and iii) the Rupert-K.

## Recommendations

1) An 800 m drill program is warranted to test the Titan-Moly $120 / 58$ and $220 / 65$ structural features contained within a structural panel identified in the 2008 airborne magnetic survey. The panel is located under the hanging ice sheet on the bench above the 2004 drilling.
2) Detailed prospecting along the Eocene Sloko-Hydor plutonic suite boundary should continue to the South at Lake level; and from the 2004 drilling area northwards. Special note should be made of crossstructures oriented close to 220/65.
3) I.P. or EM ground geophysical grids should be established to test the conductance of the most prospective magnetic and ground truthed targets.
4) The Titan and Buchans showings warrant further evaluation. Detailed mapping, channel sampling and grab samples should be taken for further geochemical and possibly petrographical analysis. Alteration studies using Radiometrics and Na-Co Nitrate staining of core and rock should commence.
5) Further exploration around the soil geochemical anomalies, in close proximity to the Silver King and Rupert-L showings. This would include infill and expansion in the soil sampling grid. The grid warrants expansion to the southeast with particular emphasis on the granodiorite contact and intersecting NNW and East trending structures. If possible, the pulps for this area should be recovered and re-analyzed using ICP-MS to get a full geochemical spectrum. Anomalous areas would require detailed mapping and prospecting to define any mineralization on surface.
6) Particular emphasis should be placed on relating structural elements noted on the ground and/or airborne geophysics to mineralization. If it can be unequivocally demonstrated that the NNW trending lineations are indeed the main mineralized structures, then at least three parallel mineralized systems can be defined; from east to west the three trends would be centred on: i) the Rupert-I, ii) Rupert-L, and iii) the Rupert-K. Projections of these structures require close scrutiny.
7) The White Moose Showings (A-F) near lake level requires careful assessment of available literature, followed by detailed ground assessment and airborne geophysics groundtruthing. Some considerations should be made to the potential for sub-lake mineralization. (e.g. detailed lake bottom geochem sampling)
8) Crampon and rope assisted prospecting at the Rupert-K showing is warranted to examine newly exposed rocks in the middle of the receding Fee glacier.
9) Geophysical anomalies from the 2007 program, especially in the very southern end of the property warrant verification and follow up work, including prospecting, mapping and some limited geochemical sampling and rock sampling if possible.
10) Age dating of the Rupert/Buchans/White Moose mineralization would assist in the unravelling of the source of the mineralization, and limit exploration vectors. Is the mineralization associated with the Eocene molybdenum mineralization, or part of the larger Llewellyn fault system and associated mines such as the Engineer?

Table 4 - Proposed Exploration Budget for 2009

| Type | Details | FIELD BUDGET (20 days) | DDH BUDGET (10 days) | Total Proposed |
| :---: | :---: | :---: | :---: | :---: |
| Geophysics all inclusive | Proposed IP survey from 2004 | \$30,345.00 |  | \$30,345.00 |
| Drilling Expenses | 800 m @ \$120/m |  | \$96,000.00 | \$96,000.00 |
| Analytical expense |  | \$10,000.00 | \$12,800.00 | \$22,800.00 |
| Helicopter |  | \$30,000.00 | \$31,700.00 | \$61,700.00 |
| Equipment rentals |  | \$1,800.00 | \$1,000.00 | \$2,800.00 |
| Field supplies |  | \$600.00 | \$600.00 | \$1,200.00 |
| Consultants/Su bcontractors |  | \$6,000.00 |  | \$6,000.00 |
| Freight expense |  | \$300.00 | \$600.00 | \$900.00 |
| Wages total |  | \$27,000.00 | \$6,750.00 | \$33,750.00 |
| Automotive expenses |  | \$600.00 | \$1,000.00 | \$1,600.00 |
| Meals |  | \$500.00 | \$1,500.00 | \$2,000.00 |
| Travel expenses |  | \$8,000.00 | \$5,000.00 | \$13,000.00 |
| Camp expenses |  | \$600.00 | \$1,000.00 | \$1,600.00 |
| TOTAL PROPOSED BUDGETS |  | \$115,745.00 | \$157,950.00 | \$273,695.00 |

## References

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