## ASSESSMENT REPORT TITLE PAGE AND SUMMARY

| TITLE OF REPORT: Geological Report on the American Boy Property |
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| YEAR OF WORK: 2009 |
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| PROPERTY NAME: American Boy |
| CLAIM NAME(S) (on which work was done): 503449,509751 |
|  |
|  |

COMMODITIES SOUGHT: Au, Ag, Cu, Pb, $\mathrm{Zn}, \mathrm{Cd}$.

| MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN: 93M. 047 |
| :---: |
| MINING DIVISION: Omineca |
| NTS / BCGS: 93M .023, .032, .033. |
| LATITUDE: $55{ }^{\circ} \mathrm{l}$ (9 ' 14 " |
|  |
| UTM Zone: 9N EASTING: 0590535 NORTHING: 6131014 |


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| :--- |
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REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. Do not use abbreviations or codes)
The property is underlain by clastic sedimentary rocks (mainly calcareous tuff and argillite) of the Middle Jurassic to Lower Cretaceous Bowser Lake Group. The strata strike north, dipping approx. $15^{\circ}$ west. Granodiorite, of the Eocene Babine Intrusions intrudes the sedimentary rocks in the area.
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS
Can-Ex-6789, 12665, 15124, 15393, 10766. Tri-Con-8847,9121,10457
Golden Sabre 28862.


# GEOLOGICAL REPORT 

BC Geological Survey ON THE

## AMERICAN BOY PROPERTY

Omenica Mining Division, British Columbia, Canada<br>NTS MAP 93M.023, 93M.032, 93M. 033<br>Latitude 5519 14N<br>Longitude 12729 19W

for

# TAD CAPITAL CORPORATION <br> Suite 1470-701 West Georgia Street <br> Vancouver, British Columbia V7Y 1C6 

## By

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Dated: October $5^{\text {th }}, 2009$

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### 1.0 SUMMARY

This report summarizes the recent and historical exploration work carried out on the group of mineral claims known as the American Boy Property of which TAD Capital Incorporated of Vancouver, British Columbia owns a $94 \%$ interest. Cadre Capital Inc. of Vancouver, BC owns the remaining $6 \%$ interest. The American Boy Property lies along the east side of Skeena River, approximately 20 kilometres northeast of the town of Hazelton, B.C. (Figure 1).

The American Boy Property consists of 13 mineral claims having an area of 3682 hectares (Figure 2) and encompasses numerous high-grade polymetallic vein occurrences, which includes the past-producing American Boy Deposit.

A program of grid expansion, soil geochemistry, magnetic surveys, hand-trenching, rock sampling, and geologic mapping was performed on the American Boy Property from June to August 2009. Previously reported high gold assays associated with Type 2 veins of high arsenopyrite content have been confirmed. Detailed structural mapping in the vein systems revealed a set of conjugate fractures which describe all but one vein orientation on the property. Geophysics confirmed fault orientations noted in the field, and anomalous soil geochemical results confirmed known vein occurrences and suggested undiscovered vein systems may exist in the southwest area of the grid.

A follow-up program consisting of mechanized trenching, Induced Polarization geophysics, and diamond drilling is recommended.

### 2.0 INTRODUCTION

The American Boy Property is located approximately seven kilometres northeast of Hazleton, British Columbia in the Omineca Mining Division. Access to the property is gained by paved and gravel mining roads which transect the American Boy claim proper. Secondary mining roads provide access to the known mineralized zones. The property encompasses two past-producing polymetallic silver-lead-zinc $+/-$ gold vein occurrences and numerous showings. Mineralization consisting of gold, silver, copper, lead, zinc, and cadmium among other metals occur mainly within quartz veins that can typically be traced for over 100 metres. The veins are hosted in rocks of the Bowser Lake Group volcano-sedimentary package.

The American Boy property contains six quartz vein systems which have seen sporadic mining during the periods from 1913 to 1918, the early 1950's, and the late 1980's. The American Boy vein system contains at least 15 gold-silver-base metal bearing veins in which only the ore shoots of highest-grade have been partially mined. The property is considered to have good potential for outlining additional zones of vein-related silverlead, zinc mineralization as well as having a high potential for the discovery of new zones of enriched gold mineralization associated with the multiple vein systems.

In July and August of 2009, Rio Minerals Limited, on behalf of TAD Capital Corporation enacted a programme of grid surveys, geochemical sampling, geophysical surveys, handtrenching, and geological sampling and mapping which tested previously reported and newly discovered areas of anomalous multi-element precious and base metal values.

The programme consisted of 14.2 kilometers of grid extension, 40.0 kilometers of total field magnetics, 280 meters of hand-trenching, the collection of 423 soil samples and 23 rock samples, and geological work including detailed structural mapping.

### 3.0 PROPERTY DESCRIPTION AND LOCATION

The American Boy Property is located approximately seven kilometers northeast of Hazleton, British Columbia, in the Omineca Mining Division at the confluence of the Bulkley and Skeena Rivers (Figure 1). Hazelton and the surrounding communities have a population of approximately $1,000-2,000$ people. Hazelton lies on Highway 16, the major corridor connecting the main city of Prince George to the deep-sea port of Prince Rupert. The nearest major supply center is the all-service town of Smithers, located 70 kilometres south of Hazelton.

The American Boy property is located between Latitude 55 15' N. and Latitude 5523 ' N at approximately $127^{\circ} 32^{\prime}$ west longitude, located on NTS map sheets $93 \mathrm{M}-023,032$, and 033. The American Boy claim group consists of 13 unsurveyed contiguous MTO (Mineral Titles Online) tenures located in the Omineca Mining Division of British Columbia, Canada (Figure 2). The total claim area is 3,682 hectares.

Claim data is summarized in the following table and a map showing the claims is presented as Figure 2.

Table 1: American Boy Mineral Tenures

| Tenure <br> Number | Claim Name | Area (ha) | Good To Date |
| :---: | :---: | :---: | :--- |
| 502022 | Mohawk 2 | 442.067 | $2010 / \mathrm{aug} / 29$ |
| 503449 | American Boy | 460.202 | $2010 / \mathrm{aug} / 29$ |
| 503454 | Mohawk 3 | 460.443 | $2010 / \mathrm{aug} / 29$ |
| 505083 | American Boy.2 | 460.178 | $2010 / \mathrm{aug} / 29$ |
| 505084 | American Boy 3 | 110.465 | $2010 / \mathrm{aug} / 29$ |
| 509751 | Janelle | 73.654 | $2010 / \mathrm{aug} / 29$ |
| 509752 | Mohawk-4 | 92.159 | $2010 / \mathrm{aug} / 29$ |
| 512669 | NX | 110.46 | $2010 / \mathrm{aug} / 29$ |
| 524396 | MOHAWK | 460.668 | $2010 / \mathrm{aug} / 29$ |
| 524397 | MOHAWK | 73.704 | $2010 / \mathrm{aug} / 29$ |
| 529831 | AMEX | 460.221 | $2010 / \mathrm{aug} / 29$ |
| 529833 | AMEX 2 | 460.259 | $2010 / \mathrm{aug} / 29$ |
| 513259 | - | 18.43 | $2010 / \mathrm{aug} / 29$ |





### 4.0 ACCESSIBILITY, CLIMATE, AND INFRASTRUCTURE

The American Boy Property lies immediately northeast of Hazelton, British Columbia at the southern extent of the Skeena Mountains. The main part of the mineral property is bounded by Skeena River on the west, the Bulkley River to the south, and the deeply incised Shegunia (or Salmon) River to the north. The eastern side of the property is dominated by Nine Mile Mountain, a broad alpine ridge reaching an elevation of 1750 metres. Surrounding hills are generally lower, with an average elevation of 670 metres.

Access to the property is gained by traveling north from Hazelton via Highway 62 to 2Mile (Silver Standard) Road. Thence, north approximately two kilometres to the four-wheel-drive 9 -Mile Mountain road which transects the property. Most of the previously worked mineral zones have four wheel drive access.

Annual precipitation in the area ranges from 50 to 100 centimeters, with average summer temperatures around 15 degrees centigrade and winter temperatures arranging from -10 to - 15 degrees Celsius. Valleys and mountainsides are forested up to about 1400 metres, with various mixtures of hemlock, spruce, cedar, balsam fir, balsam poplar, and lodge pole pine.

Logging, mining, and tourism are the main economic activities in the area. The town of Smithers (pop. 5,400 ) is located 70 kilometres south of Hazelton and is the main supply center for the area with passenger and freight connections to Vancouver via its regional airport. The Regional Geologists Office for the Northwest Region of British Columbia is located in Smithers.

### 5.0 HISTORICAL EXPLORATION AND PRODUCTION

The American Boy past-producer (093M047) lies 7 kilometres northeast of Hazelton on the southwest flank of Nine Mile Mountain and was first staked in 1910. From 1911 to 1916, Harris Mines Ltd. carried out surface trenching and underground development on five veins. Small shipments of high-grade ore were made to the Trail Smelter from 1912 to 1915. In 1918, 240 tons of lower-grade development ore were hauled to the Silver Standard gravity mill on Two Mile Creek. American Standard Mines acquired the property in 1950 and performed stripping, diamond drilling, and underground work. A new high-grade vein (No.6) was discovered in the fall of 1951.

Pioneer Gold Mines of B.C. Ltd. carried out further stripping of veins in 1952. In 1955, J.Gallo shipped 21 tons of crude ore from a shoot on the No. 6 vein. The property was restaked in 1976, at which time Northwest Midland Development shipped 10.35 tonnes of previously stockpiled Wifly Table concentrate.

Tri-Con Mining Ltd. re-staked the property in 1976, and in 1978 and 1980, Tri-Con carried out backhoe trenching, sampling, and limited electromagnetic surveys. In 1981, the property was expanded, at which time a new vein was discovered, an old vein was rediscovered (Two Mile Creek showing-093M157), and mineralized float from a possible third vein was found.

In 1982, the property was vended to Can-Ex Resources Ltd. A program of geochemical and geophysical surveys, mapping, sampling, diamond drilling, and trenching was completed by the end of 1984. In 1986 further programs were carried out which consisted of soil sampling, VLF-EM surveys, backhoe trenching, ( 455 m on the Janelle claim) and 72.7 meters of diamond drilling in three drill holes. All exploration programs on the American Boy property, from 1978 to 1986, were carried out under the direction of A. Homenuke, P. Eng.

The American Boy area is underlain by clastic sedimentary rocks (mainly calcareous tuff and argillite) of the Middle Jurassic to Lower Cretaceous Bowser Lake Group. The strata strike north, dipping approximately 15 degrees west. Granodiorite of the Eocene Babine Intrusions intrudes the sedimentary rocks in the area. Six quartz veins comprising highgrade lenses totaling more than 212 metres long crosscut the tuffs and argillites on the property. Veins 1 to 4 strike north, dipping 40 to 70 degrees east. Veins 5 and 6 strike northeast, dipping 80 degrees southeast. The veins range in thickness from 10 to 120 centimeters and consist of quartz with stringers of carbonate and irregular patches and banded seams of sulphide minerals. These sulphide minerals in order of abundance are: galena, sphalerite, arsenopyrite, pyrite, chalcopyrite, and tetrahedrite (Geological Survey of Canada Memoir 223, Assessment Report 8847).

The weighted average of 18 samples from the number 1 vein was $1,069.54$ grams per tonne silver across 0.48 metre (George Cross Newsletter \#3, 1984). The weighted average of samples from a section of the number 4 vein, exposed on surface, was 946.13 grams per tonne silver and 5.38 grams per tonne gold (George Cross Newsletter \#41, 1984). Samples from the number 6 vein assayed between 6.856 and $14,671.8$ grams per tonne silver (George Cross Newsletter \#41, 1984).

In the period between 1913 and 1955, the American Boy workings produced 495,097 grams of silver, 528 grams of gold, 38,232 kilograms of lead, and 10,543 kilograms of zinc from 348 tonnes of mined ore. The bulk of the production was obtained during the period of 1913 to 1918. Nineteen tonnes were mined in 1955 from the No. 6 vein which produced 48,738 grams of silver and 31 grams of gold. Both galena and tetrahedrite carry high silver content and the arsenopyrite carries the highest gold values. In assessment report 15393, Homenuke states the presence of at least 15 silver-gold-base metal veins found in and around the main American Boy workings.

Historically the American Boy mineral zone was known to have 6 veins, but two more veins have been verified by recent prospecting work. Considerable gold and silver values have been obtained from the No. 1 vein, No. 3 vein, No. 4 vein, and No. 6 vein. The No. 3 vein and No. 4 vein may be continuations of the same vein. The No. 1 vein has returned results as high as 299.5 oz/ton silver and 0.116 oz/ton gold (Homenuke, grab sample, 1976).

A sample taken by Kindle (1954) from the No. 3 vein assayed $10.81 \mathrm{oz} /$ ton silver, 1.435 oz/ton gold, 13.46 \% lead, and $35.7 \%$ arsenic. Ten samples taken along 30 metres on the No. 4 vein ( 30 cm width) gave an average assay of $1.67 \mathrm{oz} /$ ton silver and $0.172 \mathrm{oz} /$ ton gold (Homenuke, 1978).

Exploration work carried out on behalf of Can-Ex Resources Ltd. in 1986 consisted of geochemical and VLF surveys covering the area of the No. 1 Vein and the more southerly No. 6 Vein. In the area of the main workings, limited diamond drilling indicates structural complexity for the No. 1 vein and continuity of mineralization for the No. 6 vein area. VLF-EM surveys show conductors parallel to, but further to the east of the No. 6 vein. A small underground vein occurrence named Surprise (093M048) lies within a crosscut adit 380 metres northeast of the portal of the main crosscut adit of the Silver Standard Mine. The Surprise zone is located about 3 kilometres west of the American Boy veins. This showing is also contained within the company's claim boundary and consists of two narrow quartz veins (up to 15 cms ), with one selected 10 cm sample assaying $0.3 \mathrm{~g} / \mathrm{t} \mathrm{Au}$, $98.8 \mathrm{~g} / \mathrm{t} \mathrm{Ag}, 1.5 \% \mathrm{~Pb}$, and $1.8 \% \mathrm{Zn}$.

Historically, the major producer in the Hazelton area was the Silver Standard Mine (93M049), located approximately 4 kilometres west of American Boy. Originally staked in 1910, the mine produced $237,837.8$ kilograms of silver and 464.6 kilograms of gold from 167,794 tonnes of milled ore over its lifetime (1913-1923, 1948-1989). Most of the ore, which contained significant values of silver, gold, copper lead, zinc, and cadmium, was produced from the number $1,4,6$ and 7 veins. More than sixty per cent of the production came from the No. 6 vein, which had an ore shoot 182 metres long and extended 304 metres down dip. The Silver Standard Mine is ranked as the 16th largest silver producer in British Columbia (BCMEPR Open File 1998-10).


|  | Regional Location Map | Legend |
| :---: | :---: | :---: |
| American Boy Property Minfile Map |  | $\begin{array}{ll} \text { 父 } & \text { Past producer } \\ \text { A } & \text { Showing } \\ \text { A } & \text { Prospect } \end{array}$ |
| TAD Capital Corp. |  | Claim boundary <br> Road (paved) |
| American Boy Property, British Columbia |  | Road (grav |
| Scale: 1:100,000 |  | Lake boundary <br> ~ River / creek |
| Datum: UTM NAD83 Zone 9 |  | Marsh Swamp |
| Map sheet(s): NTS 93M05, 93M06 |  | Contour line ( 100 m interval) |
| Prepared by: K. Cupit, Rio Minerals Limited |  | Contour line (20m interval) |
|  |  | 1 centimeter $=1,000$ meters |
| Date: September 2009 |  500 L 000 |  1,000 2,000 4,000 |

### 6.0 GEOLOGICAL SETTING

The overview of the regional geology provided below is taken from D.G. Thompson's 2007 Technical Report on the Hazelton Project (BCEMR assessment report \#28862), the B.C. Geological Survey mapping synopsis of the Hazelton Map Sheet 093M, G.S.C. Memoir 223, B.C. Minfile descriptions, B.C. Department of Mines annual reports, and filed assessment reports.

The Hazelton area is underlain primarily by rocks of the Stikinia Terrane and an overlap assemblage. The Stikinia Terrane consists of the Lower to Middle Jurassic Hazelton Group and the Upper Triassic Stuhini (Takla) Group island arc volcanic rocks. These are intruded by the Late Triassic to Middle Jurassic Omineca, Francois Lake, and Topley intrusions.

The overlap assemblage consists of the Middle Jurassic to Upper Cretaceous Bowser Lake, Lower Cretaceous Skeena, and Cretaceous Sustut groups. These mainly comprise clastic sedimentary and minor volcanic rocks deposited in local fault-bounded successor basins and in the Bowser basin, a portion of which underlies much of the northwestern portion of the Hazelton map area. Upper Cretaceous calc-alkaline volcanic rocks of the Kasalka Group extruded from several volcanic centers, while coeval plutonic rocks formed the Bulkley Intrusions. During the Cenozoic Era, important igneous activity occurred in the Eocene stage when the Babine, Kastberg, and Nanika intrusions and the Ootsa Lake Group calc-alkaline volcanic suite formed. Structurally, the area is dominated by block faulting which has controlled the location of the major mountain valley systems, as well as many of the intrusive rock suites and mineral deposits. Aside from contact effects near intrusive bodies, metamorphism is light, reaching prehnite-pumpellyite facies.

The country north, east, and west of Hazelton is underlain by a series of sedimentary rocks belonging to the Bowser Lake Group (Figure 4). The Bowser Lake sequence is about 1500 metres thick and includes tuffaceous rocks, sandstone, greywacke, arkose, argillite, conglomerate, and shale. Carbonaceous shales and thin coal seams occur at wide intervals throughout the succession.

Localized stocks and bosses of intrusive rock bodies occur throughout the Hazelton area. These intrusive rocks are divided into the Bulkley Intrusive and the Babine Intrusive Suite based upon lithology and age. North of the American Boy property, the predominant intrusive rock bodies belong to the Bulkley Intrusive suite. These rocks have particular economic significance in that many of the mineral deposits in the area occur either in the intrusives themselves or proximal in the invaded rocks of the Bowser Lake group.

The mineral deposits on Rocher Deboule, Nine Mile Mountain, and Sidina Mountain occur in or near granodiorite stocks of identical appearance. The Nine Mile stock (located immediately east of the American Boy property) is about 3 kilometres long by 0.8 kilometres wide. The numerous mineral showings found near the upper reaches of Nine Mile Mountain lie within the claim boundary and are closely associated with a body of Bulkley granodiorite.

The Babine intrusive rocks are of Eocene age and consist of generally felsic rock, ranging from equigranular granodiorite to feldspar porphyry. Babine intrusive rocks are found associated with vein mineralization at the American Boy prospect, Silver Standard Mine, and the cluster of mineral showings including the Mohawk prospect.


### 7.02009 FIELD PROGRAMME

Between June $7^{\text {th }}$ and August $9^{\text {th }}$ of 2009, Rio Minerals Limited, on behalf of TAD Capital Corporation conducted a program of grid line extension, total field geophysics, soil geochemical surveys, hand-trenching, rock sampling, and geologic mapping.

Fieldwork consisted of 14.2 kilometers of grid extension, 40.0 kilometers of total field magnetics, 280 meters of hand-trenching, the collection of 423 soil samples and 23 rock samples, and geological work including detailed structural mapping. The field crew was supplied by Rio Minerals Limited of Vancouver, BC and Halle Geological Services Limited of Whitehorse, YT and consisted of the following personnel: Jesse Halle, Kerry Cupit, Robert Paeseler, Andrew Molnar, Lyle Gregory, and Jared Earl.

Geological fieldwork was conducted by Jesse R. Halle of Halle Geological Services with the assistance of Kerry Cupit of Rio Minerals Ltd. The focus of the 2009 programme was to verify and compile existing geological mapping, add new data after re-exposure of outcrop, prospect soil geochemical anomalies, interpret new geochemical, geophysical, and geological information, and identify future exploratory drill targets based on new data.

Geological work consisted of detailed outcrop-scale geologic and structure mapping, chip sampling across vein widths, sampling of areas lacking historical assays, and investigating areas of anomalous gold highlighted by past and current geochemical soil sampling.

### 7.1 Geological Mapping

During the 2009 programme, detailed structural and geological investigations were conducted on the American Boy property. In general, outcrop on the American Boy property is very limited. In the immediate area around the six historical workings, trenches have been dug that have traced mineralized veins on surface. Trenches originating from shafts in the No. 1 Vein, the No. 4 Vein, and the No. 6 Vein areas were re-exposed periodically along the length of the trench. The trenches were found to delineate mineralized quartz veins. Several new exposures were uncovered outside the areas of the historic workings during prospecting for the source of geochemical anomalies. Trench exposures and areas of new exposures were targeted for the lithologic, alteration, structural, and mineralization observations, which are described in the following paragraphs.

## Lithologic Observations

The American Boy property is underlain by a fine-grained, medium to dark grey, buffweathering, homogenous tuffaceous rock that is locally hornblende - and feldspar-phyric. Hornblende phenocrysts can comprise up to $30 \%$ of the rock and measure up to 3 millimetres in the long dimension. Feldspars can be found as euhedral crystals comprising up to $20 \%$ of the rock, but are more commonly subrounded and submillimetre in size. The volcanic rocks are generally massive, and show little variation over several metres through the section. At the adit to the No. 1 Vein, the massive structure is interrupted by cryptic layering of faint, thin, dark grey bands, possibly tuff resedimentation. Locally, the rock may show up to $10 \%$ elongate, fine-grained, dark grey, to 3 centimetre lapilli loosely concentrated along stratigraphic planes. Rarely, the rock takes on a fissile texture parallel to bedding, which indirectly reflects a gross compositional layering that is difficult to see macroscopically. Petrographic reports of host rocks from this and adjoining properties have determined these tuffs to be latitic to andesitic in composition.

A system of hydrothermal quartz veins that carry minerals of economic interest cut the tuffaceous host rock. The veins have been exploited in six locations on the property covering an area of $0.6 \mathrm{~km}^{2}$ (Figure 5), historical reports note the presence of 15 veins. The 2009 field season discovered an additional previously unrecognized vein.

The hydrothermal quartz veins have been classified into principally two vein types. Type 1 veins are massive, milky quartz +/- ankerite with 1 to $20 \%$ combined sulphides consisting of (in order of abundance) galena, sphalerite, arsenopyrite, and chalcopyrite in disseminations and blebs. Type 1 veins may be banded with thin chloritic partings but are generally massive quartz and coarse-grained ankerite to $20 \%$. Vein thicknesses range between 2 and 20 centimetres and are uniform and continuous along lengths up to and exceeding 100 metres. Veins widen and bifurcate when approaching structural irregularities where thicknesses are observed to approach 3 metres near intersecting structures. Vein groupings strike NNW, N, and NE, usually dipping moderately-steeply to steeply east. This vein type represents about $90 \%$ of the known veins on the property and historically is the principle ore-bearing vein.

Type 2 veins are quartz veins that contain to $15 \%$ ankerite. They differ from Type 1 veins by exhibiting a banded structure owing to thin chloritic/sericitic partings between multiple, stacked, to 7 centimetre quartz veins, attaining to 30 centimetres in true thickness. Type 2 veins may contain blebby sulphides similar to those found in Type 1 veins to $10 \%$ but invariably have an arsenopyrite content that dominates other sulphides. Arsenopyrite occurs as coarse grains disseminated in quartz, and in massive veinlets to 7 centimetres in width. To date, Type 2 veins have been found at two locations on the property, specifically the No. 4 Vein and the No. 6 Vein.


Figure 5

## American Boy Property

 Property Geology MapTAD Capital Corp.
American Boy Property, British Columbia

| Scale: | 1:10,000 |
| :--- | :--- |
| Datum: | UTM NAD83 Zone 9 |
| Map sheet(s): | NTS 93M |
| Prepared by: | K. Cupit, J. Halle, Rio Minerals Limited |
| Date: | September 2009 |



## Alteration Observations

Ankerite disseminations to $15 \%$ are the most common form of alteration of the host rock seen on the property. Ankerite alteration is pervasive and ubiquitous throughout the tuffaceous volcanics on the property. Commonly, the ankerite content in a weathered rock displays pervasive to disseminated rust-colouring as limonite is formed. Powdered host rock will effervesce in a dilute solution of hydrochloric acid indicating the presence of Fe -carbonate.

The overall dark grey appearance of the country rock suggests dark-coloured chlorite and sericite have resulted from alteration of original mineralogy. Within zones of relatively high shear stress, in sheared quartz vein margins for example, chlorite and sericite is observed in shear planes. Previous petrographic descriptions of the host rock have noted pervasive saussuritization of original feldspar and sericitization of hornblende and the creation of carbonate/ankerite and pyrite as a result. Fine disseminated pyrite is seen in alteration halos extending a few feet from shear zones and sheared quartz veins. Direct quartz vein metasomatism of the host rock is otherwise non-existent.

## Structural Observations

Measurements of compositional layering and parallel jointing defines original stratigraphic layering in the tuffaceous volcanic host as shallowly-dipping throughout the property to no more than 20 degrees. The volcanics exposed on the west side of the grid area dip to southeast whereas those exposed in the central part of the area dip the southwest, implying large scale block-faulting occurring in the middle of the property (Figure 5).

The No. 1 Vein is exposed on surface for 60 metres and has reportedly been traced for over 160 meters (Figure 7A). The vein is a Type 1 vein with a unique orientation in that it is oriented north and dips steeply to the east. The vein has an apparent dextral offset to 50 centimeteres in at least two locations. Riedel-style veining is particularly apparent north of the shaft, indicating right-lateral displacement along the length of the vein. A complex high angle-fault and low-angle shear zone trending east-southeast truncates the No. 1 Vein south of the main shaft. It is possible the No. 1 Vein formed in response to dilation caused by this shear.

The No. 4 Vein has been exposed on surface for 57 metres of its known 85-metre length (Figure 7B). The vein strikes north-northwest dipping 60 degrees east, and varies between 20 and 50 centimetres in thickness. Gentle, open folding of the massive arsenopyrite horizon in the No. 4 Vein contains a fold axis plunging 20 degrees to the southwest.

In the No. 6 Vein area, a southeast-directed shear zone with apparent left-lateral displacement has offset the main vein by as much as 20 metres in two parallel discrete shear zones. The shear zone has resulted in the formation of a complex stockwork of Type 1 quartz-ankerite veins with widths of up to 3 meters in the immediate area. Type 1 quartz veins have been traced for over 160 meters north-northeast along strike while dipping steeply eastward (Figure 7C). Northeast from the main shaft in the No. 6 Vein area, a continuous Type 2 vein containing parallel arsenopyrite stringers and disseminations has been traced by the current program for 65 metres. The Type 2 vein of semi-massive stringers and arsenopyrite disseminations has several dextral displacements of up to 1 metre.

Approximately 125 metres east-southeast of the No. 3 Vein, a 15 centimetre Type 1 quartz vein was uncovered while prospecting for the source of a gold geochemical anomaly. In an outcrop of small aerial extent, the northeast striking quartz vein is gently Z-folded and later transposed along an east-southeast direction, structures similar to those affecting the No 1 and 4 Veins, in an orientation similar to the No. 6 vein.

Slickensides, chloritic rock, riedel shears, and z-folded quartz veins point to a faultcontrolled history governing the emplacement of the hydrothermal veins. Structural measurements conducted on outcrops of quartz veins cutting host rock has revealed that the highest gold-bearing veins currently known on the property (No. 4 and 6 veins) outline a conjugate set of fractures which explain the orientations of the majority of the hydrothermal quartz veins. Cursory analysis of vein and shear zone data suggest the No. 2,3 , and 4 veins lie along an identically-oriented fracture set ( $\sim 335$ degrees) whereas the No. 5 and 6 veins, a grouping of veins nearest the road, and the newly-exposed vein southeast of the No. 3 lie parallel to the other orientation of an idealized conjugate fracture set. The north-south orientation of the No. 1 Vein may have formed early in response to shearing and compression from the northeast. Late brittle-ductile deformation in an east-southeast direction is evident in the No. 1, 4, and 6 Veins, and is indirectly evident in the No. 2 vein locations.


Figure 6
American Boy Property Rock Sample Map

TAD Capital Corp.
American Boy Property, British Columbia
Scale: $\quad 1: 7,500$
Datum: UTM NAD83 Zone 9
Map sheet(s): NTS 93M
Prepared by: K. Cupit, Rio Minerals Limited
Date:





| Figure 7C <br> American Boy Property No 6 Vein Map |  |
| :---: | :---: |
| TAD Capital Corp. |  |
| American Boy Project, British Columbia |  |
| Scale: | 1:1,00 |
| Datum: | UTM NAD83 Zone 9 |
| Map sheet(s): | NTS 93M |
| Prepared by: | K. Cupit, J. Halle, Rio Minerals Limited |
| Date: | September 2009 |



|  | Legend |
| :---: | :---: |
| Shear | - Vein (known) <br> -": Vein (inferred) |
| Lineation <br> - Vein orientation | - Vein underground - known <br> - - - Vein underground - inferred <br> --- Road/trail <br> ~~R River / creek <br> -3 Outcrop |
| Shaft <br> Shaft at depth <br> Samples (2009) | Contour (100m interval) <br> - Contour (20m interval) |
| $\begin{aligned} & \text { Samples (2006) } \\ & \text { Trench } \end{aligned}$ | Background shading derived from Au soil geochemical anomaly map (See Figure 10A) |

## Mineralization

The No. 1, 4, and 6 Veins, have received the bulk of the historic gold and base metal mining activity and are of particular interest in terms of modern metal prices. As a result, attention was focused on these areas during the current field season. Work conducted during the current field season found traceable Type 2 vein outcroppings in two of the three mineralized quartz vein systems. Positive correlations between arsenic and gold content and lead and silver content that were previously noted by Thomson are supported by assays received from current work.

The No. 1 Vein is exposed on surface for 60 metres. Local, blebby galena and chalcopyrite in massive quartz is typical of the mineralization style of this vein (Type 1). A small re-exposure north and along strike of the vein was sampled and returned 11.1 ppb Au (441022). Samples taken in 2006 from trenches of the No. 1 Vein returned $0.47 \mathrm{~g} / \mathrm{t}$ $\mathrm{Au},>200 \mathrm{ppm} \mathrm{Ag}, 1585 \mathrm{ppm} \mathrm{Cu}, 3.4 \% \mathrm{~Pb}, 1.24 \% \mathrm{Zn}(5006)$, and $0.45 \mathrm{~g} / \mathrm{t} \mathrm{Au},>200 \mathrm{ppm}$ $\mathrm{Ag}, 970 \mathrm{ppm} \mathrm{Cu}$ (5011) over 60 centimeter widths.

Type 1 veins comprise $60 \%$ of the No. 4 Vein, where it contains $20 \%$ combined sulphides consisting of (in decreasing abundance) galena, sphalerite, arsenopyrite and chalcopyrite in disseminations and blebs. A 5 to 7 centimetre-wide, massive to semimassive arsenopyrite-bearing Type 2 vein parallels the Type 1 vein for the entire exposed length of the No. 4 vein. Over 10 centimetres of massive quartz containing coarsegrained arsenopyrite to $10 \%$ also exists as part of the Type 2 vein. Historical assay values from samples taken in 2006 of arsenopyrite-rich zones in the No. 4 Vein range from 5.28 $\mathrm{g} / \mathrm{t} \mathrm{Au}$ with $76.9 \mathrm{~g} / \mathrm{t} \mathrm{Ag}$ (451066) to $9.9 \mathrm{~g} / \mathrm{t}$ Au with $1115 \mathrm{~g} / \mathrm{t} \mathrm{Ag}$ (451064) over 20 centimetres. Diamond drilling is recommended to test the continuity of this structure at depth.

In the area of the No. 6 Vein, a northeast-trending Type 1 vein extending from the main shaft attains 30 cm in thickness, dips steeply east, and has been traced along strike for over 160 metres. The vein typically contains up to $15 \%$ combined galena, pyrite, sphalerite, and chalcopyrite in blebs and disseminations. A continuous Type 2 vein containing parallel arsenopyrite stringers has been traced for a 65 -metre interval along a historical trench trending northeast from the main shaft.

Previously realized assays from the No. 6 - Type 2 vein area are $1.02 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ and $>200 \mathrm{ppm}$ Ag from sample \#5034. During the current season, two samples taken from this vein returned values of $3.5 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ with $5.8 \mathrm{~g} / \mathrm{t} \mathrm{Ag}$ (441016) and $5.8 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ with $3 \mathrm{~g} / \mathrm{t} \mathrm{Ag}$ (441017). Approximately 35 meters to the northeast, sample 441019 assayed $2.28 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ with over $100 \mathrm{~g} / \mathrm{t}$ Ag. Approximately 30 meters further along strike to the northeast, sample 441021 returned $0.7 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ with over $100 \mathrm{~g} / \mathrm{t} \mathrm{Ag}$. Arsenic content in this sample was relatively high at 3461 ppm , suggesting the system is successfully being traced in this direction. Future work consisting of trenching and diamond drilling is recommended to further trace this horizon and test the continuity of the structure at depth.

Four other known vein occurrences on the property received cursory visits due to their limited exposure. The No. 2 Vein exhibits a 1.3 metre wide boulder subcrop consisting of Type 1 vein material, and adjacent quartz and ankerite boulders containing semimassive galena and sphalerite blebs. The only outcrop located at the No. 2 Vein contains a 15 centimetre wide massive quartz vein surrounded by additional narrow, planar quartz veins cutting massive country rock. Sulphide mineralization was not noted. Immediately west and parallel to the main showing, a 25 centimetre-wide Type 1 quartz-ankerite vein exists in a historical trench. This vein was traced for 20 metres, and mineralization was not noted.

Outcrop was not located in the No. 3 Vein area. Presently, the area consists of a debris filled trench continuous with a collapsed adit entrance. A tailings pile located immediately outside the adit contains quartz-ankerite rocks and trench excavations include poly-phase quartz-ankerite-chlorite rocks attaining at least 30 centimetres wide with blebby galena, chalcopyrite, and pyrite. Samples of massive galena were uncovered in the trench excavations with sample number 441011 returning values of $13.1 \mathrm{ppb} \mathrm{Au}, 82$ $\mathrm{gm} / \mathrm{t} \mathrm{Ag}, 2.05 \% \mathrm{~Pb}$, and $0.73 \% \mathrm{Zn}$.

In the area of the No. 5 vein an adit which leads to a shaft begins in country rock with narrow (to 10 cm ) barren, milky quartz veins displaying two orientations. Waste dump piles exist locally but mineralized boulders were not found.

The No. 7 vein is purported to exist on the west side of the property. The location of sample 5025 exists on the access road but the location of the vein was not discovered during the current season and the vein is presumed to have been covered by road excavations.

### 7.2 ROCK SAMPLING

Rock samples were collected by Jesse Halle, Andrew Molnar, and Kerry Cupit, under the supervision of project geologist Jesse Halle. Soil and silt samples were collected by Robert Paeseler, Andrew Molnar, Jared Earl, and Lyle Gregory. Rock sampling consisted mainly of chip sampling across widths of in situ veins, except when representative grabs were taken proximal to trench excavations.

All rock sample sites were marked with labeled metal tags and flagging tape. Samples having individual weights of at least 2 kilograms were placed in poly ore bags along with sample number tags and the bags were sealed with zap-straps. Sample locations were recorded by GPS, given a UTM grid designation using the NAD 83 datum, and photographed. All rock samples were taken directly to Acme Analytical Laboratories in Smithers, BC for homogenization, and then sent by Acme to Vancouver, BC where they were analyzed for 36-element IDX2 - ICP-MS. See Appendix A for details on analytical procedures. A witness sample of each rock sample was retained and is available for viewing.

Rock sample descriptions are given in Table 2 and displayed in Figure 6. Assay results are presented in Appendix B.

Table 2: Rock Sample Descriptions

| $\begin{gathered} \text { Sample } \\ \text { ID } \end{gathered}$ | Locality | Lithology | Vein Characteristics |
| :---: | :---: | :---: | :---: |
| 441001 | \#6 vein | Quartz vein, to $15 \%$ ankerite | 50 cm ; quartz stockwork and massive veins with mineralized E margin, cpy/gal/sph |
| 441002 | \#6 vein | Quartz vein | 100 cm ; parallel narrow quartz veins with gossanous seams, aspy/gal/py |
| 441003 | \#6 vein | Multiple quartz veins in chloritic/sheared rock | 300 cm ; numerous massive quartz veins with 2 narrow banded gal/cpy/aspy veins |
| 441004 | \#6 vein | Quartz vein, to $25 \%$ ankerite | 15 cm vein; easterly, banded margin of newly exposed bull quartz vein |
| 441005 | \#6 vein | Quartz vein, to $10 \%$ ankerite | 23 cm vein; mineralized E margin; banded with chloritic partings, local cpy/gal |
| 441006 | \#6 vein | Quartz vein, to $40 \%$ ankerite | sampled from 301b boulder in trench dump |
| 441007 | \#6 vein | Quartz vein, to $35 \%$ ankerite | 41 cm vein; pyrite only sulphide noted |
| 441008 | \#6 vein | Quartz vein, to $40 \%$ ankerite | 17 cm vein |
| 441009 | SE of \#6 vein | Quartz vein with ankerite | 3 cm vein; milky white quartz with $20-40 \%$ limonitefilled subcentimetre vugs |
| 441010 | SW \#6 vein | Quartz vein with ankerite and limonite | Subrounded quartz vein float fragment |
| 441011 | \#3 vein | Quartz vein with galena | sampled from W side of trench dump; 15 lb quartz boulder |
| 441012 | \#3 vein | Quartz vein with galena and sphalerite | sampled from E side of trench dump; twe 5 lb cobbles |
| 441013 | NE of \#6 vein | Quartz vein with minor limonite | sampled from S side of trench dump amongst 6-8 quartz vein boulders |
| 441014 | NE \#6 vein | Quartz vein, slickensides, 10\% ankerite | sampled from quartz vein float boulder ( 45 cm diameter) in stream bed |
| 441015 | NE \#6 vein | Quartz vein ; 25\% ankerite, <5\% limonite | sampled from S side of trench dump amongst 5-6 quartz vein cobbles |
| 441016 | \#6 vein | Quartz vein with semi-massive arsenopyrite | 20 cm ; quartz vein with 1 cm wide massive aspy vein |
| 441017 | \#6 vein | Quartz vein with semi-massive arsenopyrite | local massive and belbby arsenopyrite |
| 441018 | SE Au anom. | Greywacke, minor pyrite disseminations | -- |
| 441019 | \#6 vein | Quartz vein with semi-massive arsenopyrite | 10 cm ; high grade aspy and galena in trench near SE fault |
| 441020 | \#6 vein | Quartz vein with semi-massive arsenopyrite | 35 cm ; galena and chalcopyrite in wide quartz vein near fault |
| 441021 | \#6 vein | Massive galena, sphalerite, and aspy | 25 cm ; semi massive galena with $25 \%$ sphalerite and narrow aspy margin |
| 441022 | \#2 vein | Quartz vein, 20\% limonite, $40 \%$ ankerite | 34 cm vein; milky white and grey banded quartz, with limonite in vugs and along bands |
| 441023 | \#1 vein | Quartz vein, $<5 \%$ limonite, $5 \%$ ankerite | 45 cm vein; milky white massive quartz |

### 7.3 GEOPHYSICS

A total field magnetic survey was conducted over the entire grid during the 2009 programme. The survey was conducted using two Gem GSM-19 V5.0 Overhauser System total field magnetometers, one of which was used as a base station. Readings were taken at measured 12.5-metre intervals along grid lines, with duplicate measurements taken at the ends of each grid line and at the 5000E baseline. Diurnal corrections were performed automatically by GEMLink software from the two devices at the time the data was downloaded to a laptop computer. The results of the survey are given in Figures 8 and 9.

The total field magnetic signatures highlight numerous features present in bedrock. The broad anomalies seen in magnetics on the grid south of 4350 N may be explained through subtle compositional differences between the shallow southeast to southwest-dipping volcanic succession. Volcanic rock was observed in outcrop in this area while searching for soil geochemical anomalies. However, a nearby intrusive source rock for the polymetallic veins could create a similarly high magnetic response. Intrusive rock has not been observed on the property.

A north-northeast trending lineament existing 200 metres west of the No. 1 vein displays a fault interpreted by previous operators and supports structural observations of conjugate faulting noted at the outcrop scale. The orientation is parallel to the No. 6 and 7 veins, and purportedly, the No. 5 vein.

Similarly, a southeast-trending fault expressed as a line of magnetic lows extending from 5300 N and 4500 N , is interpreted to be the late shear zone that offsets the No. 6 Vein leftlaterally. Similar structures are directly and indirectly seen to truncate the No. 1 and 4 Veins.

Anomalous highs in the centre and the NE part of the grid can be attributed to cultural disturbances where metal dumps and mining tracks have been observed. A magnetic high in the central-east part of the grid has not been explained and may required mechanical trenching to expose bedrock. Pyrrhotite, a magnetic constituent of mineralized veins at the Silver Cup property, located 5 km from the American Boy property, may also exist in the volcanic host or in crosscutting veins located on the property.

Future geophysical work should include an Induced Polarization survey to help highlight mineralized veins possessing envelopes of pyritic country rock similar to those already observed in known vein areas. This may in turn discover new vein occurrences and assist in the delineation of drill targets.



### 7.4 SOIL GEOCHEMISTRY

A total of 3500 metres of grid were sampled during the 2009 field season. The grid consists of a 1600-metre north-oriented baseline, 19-1,300 metre, 4-1,200 metre, 4 1,100 metre, and $6-1,000$ metre east-west cross lines. Lines are 50 metres apart with stations placed on 25 metre centers. All stations are marked with orange and blue flagging tape. The 2006 grid was located and is well-preserved with grid stations readily visible in the field.

Grid extensions were completed in areas of anomalous geochemistry. A total of 423 soil samples were collected. Soil samples were taken with a shovel and spoon from the "B" horizon at an average depth of 30 to 50 cm . Soil samples were placed in marked kraft sample bags, placed in poly ore bags, sealed, and hand-delivered to Acme Analytical Laboratories in Smithers, British Columbia for Group 1DX - 31 element ICP-MS analysis and additional Group 3B gold fire assay. See Appendix A for details on analytical procedures. Results for $\mathrm{Au}, \mathrm{Ag}, \mathrm{Cu}, \mathrm{Pb}, \mathrm{Zn}$ and As from the 2009 survey, along with results from the 2006 survey are presented in Figures 10A through 10F respectively.

Anomalous $\mathrm{Au}-\mathrm{Ag}-\mathrm{Cu}-\mathrm{Pb}-\mathrm{Zn}-\mathrm{As}$ patterns in soils closely mimic recognized vein localities on the property. With the exception of the No. 2 Vein, all past-producing veins were anomalous in at least 4 of the 6 elements analyzed. Anomalous patterns have also identified extensions along strike from the recognized occurrences. For example, a trend of gold anomalies south-southwest from the main shaft of the No. 6 Vein area is in part attributable to vein extensions seen in trenches and shafts near those anomalies.

Multi-element anomalies similar to the known mineralized occurrences exist at 5350 N 4900E, 4850N-4900E, 4600N-4725E, 4350N-5275E, and 4100N-5275E. In addition, a cluster of multi-element anomalies exists in the extreme southwest portion of the grid, west of 4600E.

The anomaly at $5350 \mathrm{~N}-4900 \mathrm{E}$ and a As-Sb-Pb anomaly identified previously at 4750 N 4600E lie along strike with the No. 7 Vein. Outcrop from the No. 7 Vein was not located during this field season however, geophysical and indirect geological evidence suggests this to be the location of a property-wide fault trending NE, a structure known to host mineralized veins. The anomaly at $4850 \mathrm{~N}-4900 \mathrm{E}$, located east of the No. 3 Vein, lies along the north-northwest trending conjugate fault extending from the No. 4 Vein. The anomalies at $4350 \mathrm{~N}-5275 \mathrm{E}$ and $4100 \mathrm{~N}-5275 \mathrm{E}$ are within an interpreted regional fault that parallels the faults containing the No. 6 and 7 Veins. Follow-up work is recommended on these multi-element anomalies.

Several gold anomalies were investigated during the 2009 field season. A 4 centimetre vein uncovered in outcrop was sampled at $4200 \mathrm{~N}-5100 \mathrm{E}$ (441009) and is determined to not be the direct source of the anomaly. In the southwest area of the grid, investigations of geochemical anomalies uncovered sub-angular pieces of quartz float. The material was sampled (441010) and does not explain the gold anomaly. Hand-trenching on gold anomalies at $4100 \mathrm{~N}-5275 \mathrm{E}$ have uncovered host rock with up to $5 \%$ pyrite as disseminations (441018). The host rock is weakly anomalous in copper and does not explain the geochemical gold anomaly in this area.

A combination of compact boulder lag and till greater than 150 centimetres precluded follow-up of deeper anomalies. Typical soil profiles in the property consist of a boulderysilt 'hard pan' which sits directly on top of outcrop. Mechanized trenching is recommended in these areas.

Soil geochemical patterns were shown at times to be subdued in areas of known mineralization.

For example, the north-northeast-trending extension of the No. 6 Vein shows weak elemental gold anomalies. Similarly, weak strings of anomalous $\mathrm{Ag}, \mathrm{Cu}$, and Pb can be recognized along the recognized north-northwest strike of the No. 4 Vein. It is possible that the compact, clay-rich, soil profiles typical on the property may create perched water tables or limit upward mobility of metal ions, helping to disperse or confound anomaly identification.

Closely-spaced soil sampling using a soil auger around anomalies is recommended to constrain these anomalies by sampling closer to bedrock. Targeting anomalies and trends high in gold and arsenic remain paramount in follow-up work.









## Figure 10C 2009 Soil Geochemistry Cu (ppm)

| TAD Capital Corp. |  |
| :--- | :--- |
| American Boy Property, British Columbia |  |
| Scale: $\quad$ 1:10,000 $\quad$ Date: September 2009 |  |
| Datum: $\quad$ UTM NAD83 Zone 9 |  |
| Map sheet: | NTS 093M |
| Prepared by: | K. Cupit, Rio Minerals Limited |



| LEGENDS |  |
| :---: | :---: |
| Line Legend | $\mathrm{Cu}(\mathrm{ppm})$ |
| Sample locations (Cu) Grid (American Boy) Claim boundary Road (paved) Road (gravel) Road (rough) River / creek Topographic contour (100m interval) Topographic contour (20m interval) 0 | Values less than the detection limit are posted as half $0=\begin{aligned} & \text { no sample } \\ & \text { results } \end{aligned}$ |



| Figure 10D <br> 2009 Soil Geochemistry <br> Pb (ppm) |  |  |
| :---: | :---: | :---: |
| TAD Capital Corp. |  |  |
| American Boy Property, British Columbia |  |  |
| Scale: 1:10,000 Date: September 2009 |  |  |
| Datum: UTM NAD83 Zone 9 |  |  |
| Map sheet: NTS 093M |  |  |
| Prepared by: K. Cupit, Rio Minerals Limited |  |  |




| Figure 10E |
| :---: |
| 2009 Soil Geochemistry |
| Zn (ppm) |




| Figure 10F <br> 2009 <br> Soil Geochemistry <br> As (ppm) |  |
| :--- | :---: |
| TAD Capital Corp. |  |
| American Boy Property, British Columbia |  |
| Scale: $\quad$ 1:10,000 Date: September 2009  <br> Datum: $\quad$ UTM NAD83 Zone 9  <br> Map sheet: NTS 093M <br> Prepared by: K. Cupit, Rio Minerals Limited  |  |



| LEGENDS |  |
| :---: | :---: |
| Line Legend | As (ppm) |
| Sample locations (As) Grid (American Boy) Claim boundary Road (paved) Road (gravel) Road (rough) River / creek Topographic contour (100m interval) Topographic contour (20m interval) 0 | Values less than the detection limit are posted as half the detection limit $0=\underset{\text { no sample }}{\text { results }}$ |

### 8.0 DEPOSIT TYPES

The main type of mineralization found on the American Boy Property may be classified as polymetallic veins. The following paragraphs describe the typical characteristics and features of this deposit type, as well as a current theory of its genesis, and its relevance and any inconsistencies as related to the American Boy Property.

Polymetallic veins are silver, lead and zinc-bearing quartz-carbonate veins associated with felsic hypabyssal intrusions. Gangue minerals in the veins are quartz, chlorite, calcite, and possibly ankerite, barite, and/or fluorite. Sulphide minerals include pyrite ( $\mathrm{FeS}_{2}$ ), sphalerite ( ZnS ), chalcopyrite $\left(\mathrm{Cu}_{2} \mathrm{FeS}_{2}\right)$, galena ( PbS ), arsenopyrite ( FeAsS ), and possibly tetrahedrite-tennantite, Ag sulfosalts, and argentite. Native metals such as gold and silver may also be present in the form of electrum. Coarse-grained sulphide minerals occur as patches and pods. Some veins contain more chalcopyrite and gold at depth, and gold grades are normally low for the amount of sulphide minerals present.

In most cases, polymetallic vein deposition occurs in clastic sedimentary rocks or in intermediate to felsic volcanic rocks. Veins are often compound veins with a complex, multi-phase, paragenetic sequence and may exhibit crustification, colloform, and/or drusy textures. Individual veins vary from centimetres up to more than 3 metres wide and can be followed from a few hundred to more than 1000 metres in length and depth. Veins may widen or grade into broad zones to tens of metres in width in stockwork zones or breccias. Typically, sets of parallel and offset veins are common. Veins postdate deformation and metamorphism.

In a typical polymetallic vein deposit, veins are deposited in areas of high permeability such as intrusive contacts, fault intersections, and breccias marginal to small, near-surface intrusions. The intrusive rocks are geochemically calcalkaline to alkaline, and when in the form of small intrusions, range from diorite to monzonite to granodioritic in composition. Intrusive rocks may also occur as subvolcanic necks and dikes of andesitic to rhyolitic composition. Texturally, they are fine- to medium-grained, and equigranular to porphyroaphanitic.

A continuum from porphyry copper deposits to polymetallic veins exists. Porphyry copper stockwork vein deposits originate from an initial magmatic phase while polymetallic veins are paragenetically later and are derived from mixed meteoric and magmatic fluids. Each deposit type is typically found in close spatial proximity to strikeslip fault systems. Within these fault systems, extensional and compressional strain features develop that generate magmas at shallow crustal levels. In the case of polymetallic vein systems, brittle extensional and shear fractures allow meteoric waters to mix with magmatic fluids, introducing metals such as Pb and Zn into the hydrothermal system. In host rocks of polymetallic vein deposits, alteration is broadly propylitic but argillic, sericitic, or chloritic alteration may be quite extensive as well. Metasedimentary rocks that host polymetallic veins typically display sericitization, silicification, and/or pyritization.

Examples of polymetallic vein deposits include the Slocan-New Denver-Ainsworth district and the Hazelton district of British Columbia, the Elsa-Mayo-Keno district of the Yukon Territory, and the Wallapai District of Arizona, the Marysville District of Montana, and Pachuca (Mexico). Individual vein systems can range from several hundred to several million tons grading from 5 to $1500 \mathrm{~g} / \mathrm{t} \mathrm{Ag}, 0.5$ to $20 \% \mathrm{~Pb}$ and 0.5 to $8 \% \mathrm{Zn}$. Copper and gold are reported in some of the occurrences with average grades of $0.09 \%$ Cu and $4 \mathrm{~g} / \mathrm{t} \mathrm{Au}$.

Polymetallic $\mathrm{Ag}-\mathrm{Pb}-\mathrm{Zn}$ veins are the most common deposit type in British Columbia, with over 2,000 recorded occurrences. They have provided important sources of silver, lead, and zinc in the past, with larger vein deposits remaining attractive because of their high grades and relative ease of benefaction. They are also potential sources of cadmium and germanium. In British Columbia, these forms of vein deposits generally range in age from Cretaceous to Tertiary. In the Hazelton area, veins originating from Babine and Bulkley Intrusive stocks are hosted by Bowser Group metasedimentary or volcanic rocks.

The American Boy property is similar to the descriptive model noted above, however evidence of a felsic intrusive source of the veins, possibly a more local source than the intrusive located further east on Nine Mile Mountain is yet to be found. Additionally, the mineralogical mode of occurrence of gold and silver in these systems has not been documented.

The bulk of the veins on the property are lone or stockworked but otherwise discrete, individual veins. Parallel vein sets have been noted at the No. 2 Vein to the metre scale. Secondly, the folded, faulted, and multi-stage nature of all veins on the property suggests that veins were emplaced during deformation, not afterwards. Thirdly, gold grades are dependant on sulphide minerals present. The current, well-supported theory on the American Boy property is that gold concentration is positively correlatable with arsenopyrite.

### 9.0 CONCLUSIONS AND RECOMMENDATIONS

Work conducted during the 2009 field season resulted in the successful compilation, reinterpretation, and confirmation of past geological mapping and sampling, and has added to the knowledge base relating to the areas of known mineralization on the property.

Soil geochemistry has identified multi-element targets similar to those found near mineralized bodies and require follow-up work. A cluster of soil anomalies in the southwest of the grid should be a priority for future exploration. Mechanized trenching is recommended to explore deeper anomalies.

Total Field Magnetics highlighted orientations of faults directly observed in outcrop and interpreted by property-wide mapping. Unexplained magnetic anomalies may lead to the discovery of the intrusive source. Future geophysics should include Induced Polarization geophysics which may highlight the disseminated and blebby sulphides in mineralized quartz veins. This technique would confirm known mineralized bodies, outline possible extensions to mineralized structures, and potentially lead to the discovery of new veins on the property.

Geological investigations of higher-grade gold samples have confirmed that positive relationships exist between gold and arsenic content. The most prospective areas of gold mineralization surround the Type 2 veins located in the No. 4 and No. 6 Areas. At both locations, trenches terminate while following the gold rich horizons to the north. Backhoe trenching to trace the strike of these veins is recommended. A comprehensive program of NQ diameter diamond drilling focused to test lateral, shallow, and deeper extensions to surface mineralization is recommended.

The main elements of Phase II fieldwork include the following:
i) Additional geochemical sampling with dense grids and utilization of a soil auger to assist in the delineation of anomalies.
ii) Induced Polarization geophysics to highlight mineralized veins with envelopes of pyritic country rock and to assist in the delineation of drill targets around known occurrences.
iii) Backhoe or excavator trenching and sampling of previously recognized or newly indicated areas of prospective vein mineralization to trace the arsenopyrite-rich No. 4 and 6 veins.
iv) A series of diamond drill holes, totaling approximately 2,000 meters to test deeper extensions of mineralization encountered at surface and/or within the shallow holes. It is expected that these holes will range in depth to between 50 and 150 metres. Drilling will offer validation and possible extensions to the mineral zones located by previous operators.

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Preliminary Report on the Economic Geology of the Hazelton District Geological Survey of Canada, Memoir 110

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Geological Survey of Canada, Open File 2322
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Geology of the Rocher Deboule Range
BCDMPR, Bulletin No. 43

The following data table outlines the various assessment reports that pertain to past exploration work carried out on the mineral showings, prospects and past-producers, lying within the claim boundaries now held by TAD Capital Corporation.

| Mineral Zone | Minfile No. | Year of work | Company | Assess. Rpt | Work done |
| :---: | :---: | :---: | :---: | :---: | :---: |
| American Boy | 093M047 | 1978 | Can-Ex Res. | 6789 | VLF-EM, geoch., trench. |
| American Boy | 093M047 | 1980 | Tri -Con Min. | 8847 | VLF-EM, airphoto interp. |
| American Boy | 093M047 | 1980 | " | 9121 | geoch., prosp |
| American Boy | 093M047 | 1981 | " | 10457 | geoch., prosp |
| American Boy | 093M047 | 1982 | Can-Ex Res. | 11165 | geoch.,VLF- <br> EM |
| American Boy | 093M047 | 1983 | " | 12665 | $\begin{aligned} & \text { geoch., geol., } \\ & \text { dd } \end{aligned}$ |
| American Boy | 093M047 | 1986 | " | 15124 | geoch. |
| American Boy | 093M047 | 1986 | " | 15393 | geoch., dd geol., VLFEM, trench. |
| American Boy | 093M047 | 1982 | " | 10766 | I. P. surveys |
| American Boy | 093M047 | 2007 | Golden Sabre Resources | 28862 | Geology, prop. Geochem. |

### 11.0 STATEMENT OF QUALIFICATIONS

I, Jesse R. Halle, hereby certify that:

1. I am the part owner and operator of Halle Geologcial Services Limited located at Unit 3E - 508 Hanson Street, Whitehorse, YT, Y1A 1Z1
2. I am a graduate of the University of Toronto with an Honors B.Sc. (Env. Sci.) and of Lakehead University with an Honors B.Sc. (Geology).
3. I have been employed as a geological assistant intermittently between 1996 - 2000 with the Ontario Geological Survey, and as a geologist with numerous junior, intermediate, and major mining companies from 2001 to the present.
4. I have worked in my chosen field in 6 provinces or territories in Canada and in the United States of America. The majority of my mineral exploration career has been carried out in the province of British Columbia.
5. I am a Phase 1 applicant to the Association of Professional Engineers and Geoscientists of BC ("APEGBC"), and am currently under review.
6. I performed the described mapping and sampling on the American Boy property during the months of July and August, 2009. I have based this report on results obtained from this programme.
7. I have no direct or indirect interest in TAD Capital Incorporated or any related companies. I have no direct or indirect interest in the American Boy Property.
8. I am not aware of any material fact or material change, the omission of which would make the technical report misleading.

Respectfully submitted:

Dated at Whitehorse, Yukon. this 5th Day of October 2009


Jesse R. Halle

## APPENDIX A: ROCK SAMPLE LOCATIONS AND DESCRIPTIONS

| Sample Number | Location | Easting NAD 83 | $\begin{aligned} & \hline \text { Northing } \\ & \text { NAD } 83 \end{aligned}$ | Sample Type | Lithology | Rock Sample Characteristics | Vein Strike | $\begin{aligned} & \text { Vein } \\ & \text { Dip } \end{aligned}$ | Sample Width (cm) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 441001 | $\mathrm{AB} \# 6$ vein | 590452 | 6130081 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \end{aligned}$ | Quartz vein, to $15 \%$ ankerite | 50 cm ; quartz stockwork and massive veins with mineralized E margin, cpy/gal/sph | 45 | 90 | 100 |
| 441002 | $\begin{aligned} & \mathrm{AB} \# 6 \\ & \text { vein } \end{aligned}$ | 590462 | 6130087 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \end{aligned}$ | Quartz vein | 100 cm ; parallel narrow quartz veins with gossanous seams, aspy/gal/py | 28 | 70 | 50 |
| 441003 | AB \#6 vein | 590454 | 6130055 | Outcrop - <br> chip <br> sample | Multiple quartz veins in chloritic/sheared rock | 300 cm ; numerous massive quartz veins with 2 narrow banded gal/cpy/aspy veins | 24 | 60 | 300 |
| 441004 | $\begin{aligned} & \mathrm{AB} \# 6 \\ & \text { vein } \end{aligned}$ | 590462 | 6130021 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \end{aligned}$ | Quartz vein, to $25 \%$ ankerite | 15 cm vein; easterly, banded margin of newly exposed bull quartz vein | 223 | 87 | 15 |
| 441005 | AB \#6 vein | 590469 | 6130013 | Outcrop - <br> chip <br> sample | Quartz vein, to $10 \%$ ankerite | 23 cm vein; mineralized E margin; banded with chloritic partings, local cpy/gal | 227 | 82 | 23 |
| 441006 | $\begin{aligned} & \mathrm{AB} \# 6 \\ & \text { vein } \\ & \hline \end{aligned}$ | 590568 | 6130175 | Grab | Quartz vein, to $40 \%$ ankerite | sampled from 30lb boulder in trench dump | -- | -- | -- |
| 441007 | $\mathrm{AB} \# 6$ vein | 590391 | 6129942 | Outcrop - <br> chip <br> sample | Quartz vein, to 35\% ankerite | 41 cm vein; pyrite only sulphide noted, Vein exposed in wall of shaft | 63 | 76 | 41 |
| 441008 | AB \#6 vein | 590367 | 6129929 | Outcrop - <br> chip <br> sample | Quartz vein, to 40\% ankerite | 17 cm vein, Broad, flat outcrop along strike from sample above | 57 | 87 | 17 |
| 441009 | Southeast of $A B \# 6$ vein | 590493 | 6129919 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \end{aligned}$ | Quartz vein with ankerite | 3 cm vein; milky white quartz with 20-40\% limonite-filled subcentimetre vugs | 51 | 81 | 3 |
| 441010 | $\begin{aligned} & \hline \text { SW of } \\ & \text { AB \#6 } \\ & \text { vein } \\ & \hline \end{aligned}$ | 589770 | 6129732 | Grab | Quartz vein with ankerite and limonite | Subrounded quartz vein float fragment | -- | -- | -- |
| 441011 | $\begin{aligned} & \hline \mathrm{AB} \# 3 \\ & \text { vein } \end{aligned}$ | 590577 | 6131045 | Grab | Quartz vein with galena | sampled from W side of trench dump; 15 lb quartz boulder, no outcrop in area | -- | -- | -- |
| 441012 | AB \#3 vein | 590577 | 6131045 | Grab | Quartz vein with galena and sphalerite | sampled from E side of trench dump; twe 5 lb cobbles, no outcrop in area | -- | -- | -- |
| 441013 | Northeast of AB \#6 vein | 590774 | 6130558 | Grab | Quartz vein with minor limonite | 2 cm wide vein fragments, massive, semi-crystalline, milky-grey white quartz. abundant limonite alteration around vein fracture edges. | -- | -- | -- |
| 441014 | Northeast of AB \#6 vein | 590798 | 6130484 | Grab | Quartz vein, slickensides, $10 \%$ ankerite | sampled from quartz vein float boulder ( 45 cm diameter) in stream bed | -- | -- | -- |
| 441015 | Northeast of $A B$ \#6 vein | 590638 | 6130274 | Grab | Quartz vein ; 25\% ankerite, <5\% limonite | sampled from S side of trench dump amongst 5-6 quartz vein cobbles | -- | -- | -- |
| 441016 | AB \#6 <br> vein | 590467 | 6130094 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \\ & \hline \end{aligned}$ | Quartz vein with semi-massive arsenopyrite | 20 cm ; quartz vein with 1 cm wide massive aspy vein | 32 | 67 | 20 |
| 441017 | AB \#6 vein | 590469 | 6130096 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \\ & \hline \end{aligned}$ | Quartz vein with semi-massive arsenopyrite | 20 cm ; local massive and blebby arsenopyrite | 31 | 72 | 20 |
| 441018 | SE <br> geochem anomaly <br> (Au) | 590885 | 6129940 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \end{aligned}$ | Greywacke, minor pyrite disseminations | Outcrop sample from excavated outcrop atop soil geochemical anomaly. | -- | -- | 10 |
| 441019 | $\mathrm{AB} \# 6$ vein | 590480 | 6130140 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \\ & \hline \end{aligned}$ | Quartz vein with semi-massive arsenopyrite | 10 cm ; high grade aspy and galena in trench near SE fault | 43 | 71 | 10 |
| 441020 | AB \#6 vein | 590485 | 6130145 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \\ & \hline \end{aligned}$ | Quartz vein with semi-massive arsenopyrite | 35 cm ; galena and chalcopyrite in wide quartz vein near fault | 227 | 75 | 35 |
| 441021 | $\begin{aligned} & \hline \mathrm{AB} \# 6 \\ & \text { vein } \end{aligned}$ | 590505 | 6130152 | $\begin{aligned} & \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \end{aligned}$ | Massive galena, sphalerite, and aspy | 25 cm ; semi massive galina with $25 \%$ sphalerite and narrow aspy margin | 33 | 73 | 25 |
| 441022 | AB \#2 vein | 590493 | 6130916 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \\ & \hline \end{aligned}$ | Quartz vein, 20\% limonite, 40\% ankerite | 34 cm vein; milky white and grey banded quartz, with limonite in vugs and along bands | 3 | 78 | 34 |
| 441023 | $\begin{aligned} & \hline \mathrm{AB} \# 1 \\ & \text { vein } \end{aligned}$ | 590422 | 6130879 | $\begin{aligned} & \hline \text { Outcrop - } \\ & \text { chip } \\ & \text { sample } \\ & \hline \end{aligned}$ | Quartz vein, <5\% limonite, 5\% ankerite | 45 cm vein; milky white massive quartz | 214 | 82 | 45 |

## APPENDIX B: SAMPLE PREPARATION AND ANALYSES

## 

General Sample Preparation Methods


1020 Cordova Street East, Vancouver BC V6A 4A3
Phone (604) 2533158 Fax (604) 2531716 e-mail: acmeinfo@acmelab.com

MeTHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE
GRoup 1D \& 1DX - ICP \& ICP-MS ANALYSIS - AqUA REGIA

Analytical Process


Comments
Sample Preparation
All samples are dried at $60^{\circ} \mathrm{C}$. Soil and sedment are sieved to -80 mesh $(-180 \mu \mathrm{~m})$. Moss-mats are disaggregated then sieved to yield -80 mesh sediment. Vegetation is pulverized or ashed $\left(475^{\circ} \mathrm{C}\right)$. Rock and drill core is jaw crushed to $70 \%$ passing 10 mesh ( 2 mm ), a 250 g riffe split is then pulverized to $85 \%$ passing 200 mesh $(75 \mu \mathrm{~m})$ in a mild-steel ring-and-puck mil. Pulp spits of 0.5 g are weighed into test tubes, 15 and 30 g splits are weighed into beakers.

## Sample Digestion

A modifed Aqua Regia solution of equal parts concentrated ACS grade HCl and $\mathrm{HNO}_{3}$ and de-mineralised $\mathrm{H}_{2} \mathrm{O}$ is added to each sample to leach for one hour in a heating block or hot water bath ( $>95^{\circ} \mathrm{C}$ ). After cooling the solution is made up to final volume with $5 \% \mathrm{HCl}$. Sample weight to solution volume is 1 g per 20 mL .

## Sample Analysis

Group 1D: solutions aspirated into a Spectro Ciros Vision or Varian 735 emission spectrometer are analysed for 30 elements: $\mathrm{Ag}, \mathrm{Al}, \mathrm{As}, \mathrm{Au}, \mathrm{B}, \mathrm{Ba}, \mathrm{Bi}, \mathrm{Ca}, \mathrm{Cd}, \mathrm{Co}, \mathrm{Cr}, \mathrm{Cu}, \mathrm{Fe}, \mathrm{K}, \mathrm{La}, \mathrm{Mg}, \mathrm{Mn}$, $\mathrm{Mo}, \mathrm{Na}, \mathrm{Ni}, \mathrm{P}, \mathrm{Pb}, \mathrm{Sb}, \mathrm{Sr}, \mathrm{Th}, \mathrm{Ti}, \mathrm{U}, \mathrm{V}, \mathrm{W}, \mathrm{Zn}$.

Group 1DX: solutions aspirated into a Perkin Elmer Elan 6000/9000 ICP mass spectrometer are analysed for 36 elements: $\mathrm{Ag}, \mathrm{Al}, \mathrm{As}, \mathrm{Au}, \mathrm{B}, \mathrm{Ba}, \mathrm{Bi}, \mathrm{Ca}, \mathrm{Cd}, \mathrm{Co}, \mathrm{Cr}, \mathrm{Cu}, \mathrm{Fe}, \mathrm{Ga}, \mathrm{Hg}, \mathrm{K}, \mathrm{La}$, $\mathrm{Mg}, \mathrm{Mn}, \mathrm{Mo}, \mathrm{Na}, \mathrm{Ni}, \mathrm{P}, \mathrm{Pb}, \mathrm{S}, \mathrm{Sb}, \mathrm{Sc}, \mathrm{Se}, \mathrm{TI}, \mathrm{Sr}, \mathrm{Th}, \mathrm{Ti}, \mathrm{U}, \mathrm{V}, \mathrm{W}$, Zn .

Quality Control and Data Verification
QA/QC protocol incorporates a sample-prep blank (G-1) as the first sample in the job which is carried through all stages of preparation to analysis. An Analytical Batch comprises 36 client samples and incorporates a pulp duplicate to monitor analytical precision, a -10 mesh rejects duplicate to monitor sub-sampling variation (drill core only), a reagent blank to measure background and aliquots of in-house Reference Material like STD DS7. Data undergoes a final verification by a British Columbia Certified Assayer who then validates results before it is released to the client.

1020 Cordova St East, Vancouver BC V6A 4A3
Phone (604) 2533158 Fax (604) 2531716 e-mail: acmeinfomacmelab.com

Group 1D, 1DX ICP-ES \& ICP-MS DETECTION LIMITS

|  | Group 1D Detection | Group 1DX Detection | Upper Limit |
| :---: | :---: | :---: | :---: |
| Ag | 0.3 ppm | 0.1 ppm | 100 ppm |
| $\mathrm{Al}^{*}$ | 0.01 \% | 0.01 \% | 10 \% |
| As | 2 ppm | 0.5 ppm | 10000 ppm |
| Au | 2 ppm | 0.5 ppb | 100 ppm |
| $\mathrm{B}^{\text {A }}$ | 20 ppm | 20 ppm | 2000 ppm |
| $\mathrm{Ba}^{*}$ | 1 ppm | 1 ppm | 10000 ppm |
| Bi | 3 ppm | 0.1 ppm | 2000 ppm |
| $\mathrm{Ca}^{*}$ | 0.01 \% | 0.01 \% | 40\% |
| Cd | 0.5 ppm | 0.1 ppm | 2000 ppm |
| Co | 1 ppm | 0.1 ppm | 2000 ppm |
| $\mathrm{Cr}^{*}$ | 1 ppm | 1 ppm | 10000 ppm |
| Cu | 1 ppm | 0.1 ppm | 10000 ppm |
| $\mathrm{Fe}^{*}$ | 0.01 \% | 0.01 \% | 40 \% |
| $\mathrm{Ga}^{+}$ | - | 1 ppm | 1000 ppm |
| Hg | 1 ppm | 0.01 ppm | 100 ppm |
| K ${ }^{\text {+ }}$ | 0.01 \% | 0.01 \% | $10 \%$ |
| $\mathrm{La}^{+}$ | 1 ppm | 1 ppm | 10000 ppm |
| $\mathrm{Mg}^{*}$ | 0.01 \% | 0.01 \% | 30 \% |
| $\mathrm{Mn}^{\text {+ }}$ | 2 ppm | 1 ppm | 10000 ppm |
| Mo | 1 ppm | 0.1 ppm | 2000 ppm |
| $\mathrm{Na}^{+}$ | 0.01 \% | 0.001 \% | 10 \% |
| Ni | 1 ppm | 0.1 ppm | 10000 ppm |
| P* | 0.001 \% | 0.001 \% | 5 \% |
| Pb | 3 ppm | 0.1 ppm | 10000 ppm |
| S | - | 0.05 \% | 10 \% |
| Sb | 3 ppm | 0.1 ppm | 2000 ppm |
| Sc | - | 0.1 ppm | 100 ppm |
| Se | - | 0.5 ppm | 100 ppm |
| $\mathrm{Sr}{ }^{*}$ | 1 ppm | 1 ppm | 10000 ppm |
| $\mathrm{Th}^{+}$ | 2 ppm | 0.1 ppm | 2000 ppm |
| Ti* | 0.01 \% | 0.001 \% | 10 \% |
| TI | 5 ppm | 0.1 ppm | 1000 ppm |
| $\mathrm{U}^{*}$ | 8 ppm | 0.1 ppm | 2000 ppm |
| $\mathrm{V}^{*}$ | 1 ppm | 2 ppm | 10000 ppm |
| W ${ }^{\text { }}$ | 2 ppm | 0.1 ppm | 100 ppm |
| Zn | 1 ppm | 1 ppm | 10000 ppm |

*Solucility of some elements will be limited by mineral species present.
NDetection limit = 1 ppm for $15 \mathrm{~g} / 30 \mathrm{~g}$ analysis.

## Methods and Specifications for Analytical Package <br> Group 3B \& 3B-MS - Preclous Metals by Fire Geochem



## Comments

Sample Preparation
Sols and sediments are dried $\left(60^{\circ} \mathrm{C}\right)$ and sieved to -80 mesh ASTM ( -180 om ). Rocks and drill core are crushed and pulverized to $85 \%-200$ mesh ASTM ( $75 \mu \mathrm{~m}$ ). Spits of 30 gm (client may select 50 gm option) are weighed into fire assay crucibles.

Sample Digestion
A fire assay charge comprising fluxes, litharge and a Ag inquart is custom mixed for each sample. Fusing at $1050^{\circ} \mathrm{C}$ for 1 hour liberates $\mathrm{Au}, \mathrm{Ag}, \mathrm{Pt}, \mathrm{Pd}$ and Rh . The Po button is recovered after cooling and cupeled at $950^{\circ} \mathrm{C}$ to render a $\mathrm{Ag} \pm \mathrm{Au} \pm \mathrm{Pt} \pm \mathrm{Pd}$ dore bead. After weighing, the bead is parted in $\mathrm{HNO}_{3}$ leaving $\mathrm{Au}( \pm$ PGE) sponge. Adding concentrated HCl dssolves the sponges.

Sample Analysis
Solutions are analysed by ICP-ES (Varian 735) analysis of the solutions to determine $\mathrm{Au}, \mathrm{Pt}$, and Pd . Group 3BMS analyses the same solutions by ICP-MS (Perkin Elmer Elan 6000) to determine $\mathrm{Au}, \mathrm{Pt}$ and Pd to much lower detection imits.

Quality Control and Data Verification
QA/QC protocol incorporates a sample-prep blank (G-1) as the first sample in the job which is carried through all stages of preparation to analysis. An Analytical Batch comprises $35-36$ cient samples and incorporates a puip duplicate to monitor analytical precision, a -10 mesh rejects duplicate to monitor sub-sampling variation (drill core only), a reagent blank to measure background and aliquots of Cerified Reference Materials from Rocklabs. Data undergoes a final verfication by a Brtish Columbia Certfied Assayer who then validates results before it is released to the client.

GROUP 3B and 3B-MS AU \& PGMs By FIRE GEOCHEM

| Package | Element | Detection | Upper Limits |
| :---: | :---: | :---: | :---: |
| Group 3B | Au | 2 ppb | 10 ppm |
|  | $\begin{gathered} \mathrm{Au} \\ \mathrm{Pt} \\ \mathrm{Pd} \end{gathered}$ | $\begin{aligned} & 2 \mathrm{ppb} \\ & 2 \mathrm{ppb} \\ & 2 \mathrm{ppb} \end{aligned}$ | 10 ppm <br> 10 ppm <br> 10 ppm |
| Group 3B-MS | $\begin{gathered} \mathrm{Au} \\ \mathrm{Pt} \end{gathered}$ $\mathrm{Pd}$ | 1 ppb 0.1 ppb 0.5 ppb | 10 ppm <br> 10 ppm <br> 10 ppm |

## APPENDIX C: STATEMENT OF COSTS

| Personnel |  | Amount | Rate | Cost |
| :---: | :---: | :---: | :---: | :---: |
| Jesse Halle-Geologist | July 29 - August 8, 2009 | 11 | \$ 600 | \$ 6600.00 |
| Kerry Cupit-Geologist | July 29 - August 8, 2009 | 11 | \$ 600 | \$ 6600.00 |
| J. Earl | June 7 - August 8, 2009 | 34.5 | \$ 400 | \$ 13800.00 |
| L. Gregory | June 7 - August 8, 2009 | 34.5 | \$ 400 | \$ 13800.00 |
| A. Molnar | June 7 - August 8, 2009 | 34.5 | \$ 400 | \$ 13800.00 |
| R. Paeseler | June 7 - August 8, 2009 | 34.5 | \$ 400 | \$ 13800.00 |
| Sub-total |  | - |  | \$ 68400.00 |
| Magnetometer Survey |  | 40 kms |  | \$ 16000.00 |
|  |  |  |  |  |
| Expenses |  |  |  |  |
| Analytical | ACME Labs - 423 soil 23 Rock samples IDX + G3B | 446 |  | \$ 10607.43 |
| Transportation | 4x4 Vehicles | 73 | 105 | \$ 7665.00 |
| Report | - | - | - | \$ 12500.00 |
|  |  |  |  |  |
|  |  |  |  |  |
| Communications |  |  |  | \$ 281.48 |
| Shipping |  |  |  | \$ 122.09 |
| Field Supplies |  |  |  | \$ 1345.10 |
| Fuel |  |  |  | \$ 2637.58 |
| Lodging \& Meals |  |  |  | \$ 13508.84 |
| Maps \& Publications |  |  |  | \$ 265.59 |
| Misc., Consumables |  |  |  | \$ 1064.37 |
| SubTotal |  |  |  | \$ 19225.05 |
|  |  |  |  |  |
| TOTAL EXPENDITURES: |  |  |  | \$ 134397.48 |

## APPENDIX D: PHASE 3 BUDGET

| Description |  | Cost |
| :---: | :---: | :---: |
| Time Charges: |  |  |
| Project Preparation |  | \$ 850 |
| Mob and Demob | 4 persons -4 days | \$ 10000 |
| Field | 2 persons - 25 days | \$ 20000 |
| Geologist/assistant | 2 persons - 25 days | \$ 31250 |
| Drilling | 2000 meters @ 110/meter | \$ 220000 |
|  | Sub total: | \$ 282100 |
| GST | 5\% | \$ 14105 |
|  | Sub total: | \$ 296205 |
| Expenses: |  |  |
| Reclamation Bond |  | \$ 6000 |
| Road Clearing |  | \$ 2000 |
| Meals-Accommodation | 4 persons - 100 mandays | \$ 9500 |
| Supplies and Rentals |  | \$ 4000 |
| $4 \times 4$ vehicle rental | 50 days | \$ 5250 |
| Fuel |  | \$ 2000 |
| Communications |  | \$ 400 |
| Assays and shipping |  | \$ 37500 |
| Reports | Geological | \$ 15000 |
|  | Subtotal: | \$ 81650 |
|  |  |  |
|  | Subtotal: | \$ 377855 |
| Administration | 05\% | \$ 18893 |
|  |  |  |
|  |  |  |
|  | Total: | \$ 396748 |

## APPENDIX E: ASSAY RESULTS





 1020 Cordova St East Vancouver BC V6A 4 A3 Canada Phone (604) 253-3158 Fax (604) 253-1716
www.somelab.oom

| client: | Rio Minerals Ltd. 1502 - 475 heme Steret |
| :---: | :---: |
|  | Vancouw BC vec 283 Can | Vanourwe BC VBC 283 Cmada

























