## **EXPLORATION REPORT**

on the

# HIT I AND 2 CLAIMS

of the

# HIT/MISS PROPERTY

Geological Mapping, Trenching and Sampling VLF-EM and Magnetometer Surveys

Missezula Mountain Area Similkameen Mining Division, B.C. NTS Ref 92H/10E

> Latitude: 49°40'27" Longitude: 120°30'26"

For: Vanco Explorations Ltd.

By:
I.M. Watson & Associates Ltd.

March, 1991

L.A. Westervett, B.A.Sc. I.M. Watson, P.Eng.

Vancouver, B.C.

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#### 1.0 INTRODUCTION

The HIT/MISS property is situated on the eastern flanks of Missezula Mountain, 25 kilometres north of Princeton, southwestern B.C.

The seven claim 65-unit group was originally staked by Canadian Nickel Company Limited (Canico) between 1981 and 1987, and is currently under option to Vanco Explorations Limited. Vanco also owns the adjacent SADIM property, a block of 88 mineral claim units, immediately north of the Canico option.

Both properties are underlain by volcanic, sedimentary and intrusive rocks of the Triassic Age Nicola Group. The geological setting is similar to that hosting the porphyry copper gold deposits of the Quesnel Belt in the Quesnel-Cariboo area 200 miles to the north.

In 1985 Vanco found gold bearing quartz veins on the SADIM property. Since then, exploration consisting of geological, geochemical, and geophysical surveys, followed by trenching and diamond drilling has revealed a shear related quartz vein stockwork. Recent cat work by a logging company on the HIT 1 claim in the northern part of the Canico property exposed gold bearing quartz float and host rock similar to that on the SADIM claims 2,000 metres to the north.

During the period August 21 to September 13, 1990, Vanco carried out an exploration programme over the northern half of the Canico property; work done consisted of trenching, geological mapping, prospecting, and VLF-EM and magnetometer surveys.

The results of the programme are summarised in this report.

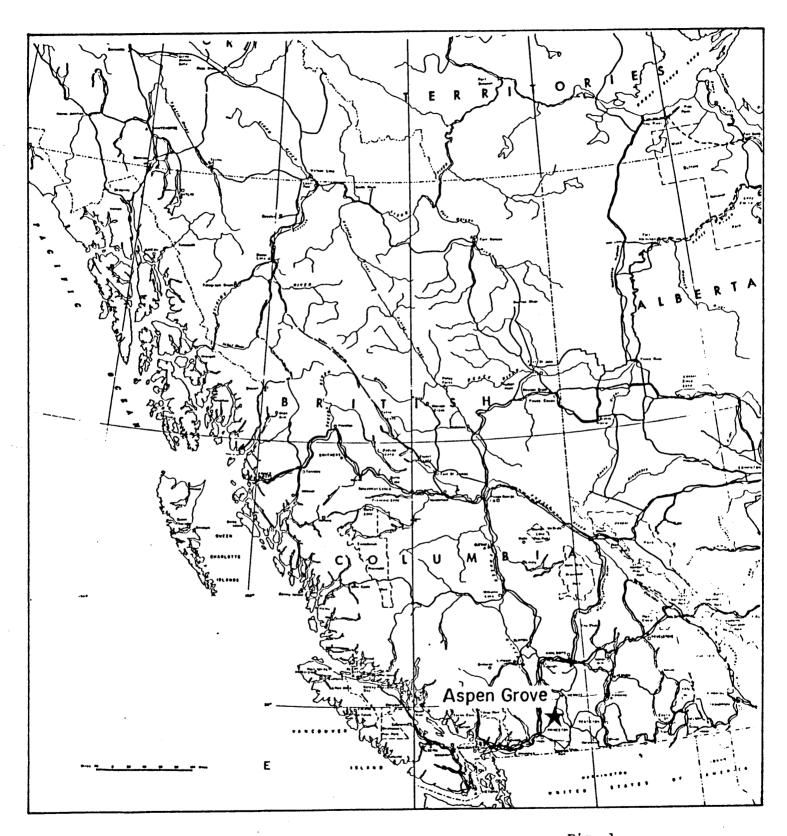


Fig. 1
VANCO EXPLORATIONS LTD.
ASPEN GROVE PROPERTY

#### 2.0 LOCATION, ACCESS, AND PHYSIOGRAPHY

The HIT and MISS property is situated on the eastern flanks and summit of Missezula Mountain, 25 kilometres north of Princeton, in the Similkameen Mining Division of southwestern B.C. The centre of the property is at 49°40'27"N, 120°30'26"W. The NTS reference is 92H/10E (Figures 1 and 2).

The property is two kilometres east of the Princeton-Merritt Highway 5A. Access to the claims is by the Dillard-Ketchan Creek main logging road which branches east from the highway about 48 kilometres north of Princeton and 12 kilometres south of the village of Aspen Grove. The Ketchan Creek logging road crosses the claim block from north to south. Distance from Highway 5A to the property by this route is 19 kilometres.

An alternate route to the claims is by the logging road which branches off Highway 5A at a point 2.5 kilometres north of Allison Lake. This road climbs east for 5 kilometres to join the Ketchan Creek road at kilometre 15, 4 kilometres north of the HIT/MISS claims.

The B.C. Hydro power line is within a kilometre of the property western boundary.

Most of the property area has been logged by Weyerhauser and there is good access by way of branch logging roads to most parts of the property except for the steep east facing slopes above Summers Creek.

Elevations on the property range from 1,657 metres at the summit of Missezula Mountain to 945 metres on Summers Creek. Between these extremes of elevation, the greater part of the claim occupies the broad north trending ridge separating the deep fault valleys of Summers Creek to the east and Allison Creek to the west. Topography is typical of this part of the Thompson Plateau, reflecting the trends of a predominantly

northerly structural trend, accentuated by glaciation; relatively gentle upland slopes are cut by deep, steep-sided north trending valleys. Bedrock exposure is largely a function of glaciation; generally outcrop is abundant on ridges and along the upper slopes of steep valleys, but lower slopes and valley bottoms bear a thick mantle of glacial overburden.

Away from the main north-south river valleys, drainage is generally weakly developed, and consists of ill-defined water courses. However, the northern part of the HIT 1 claim is cut by a deep east trending gulley which has been incised by a small but constantly flowing stream.

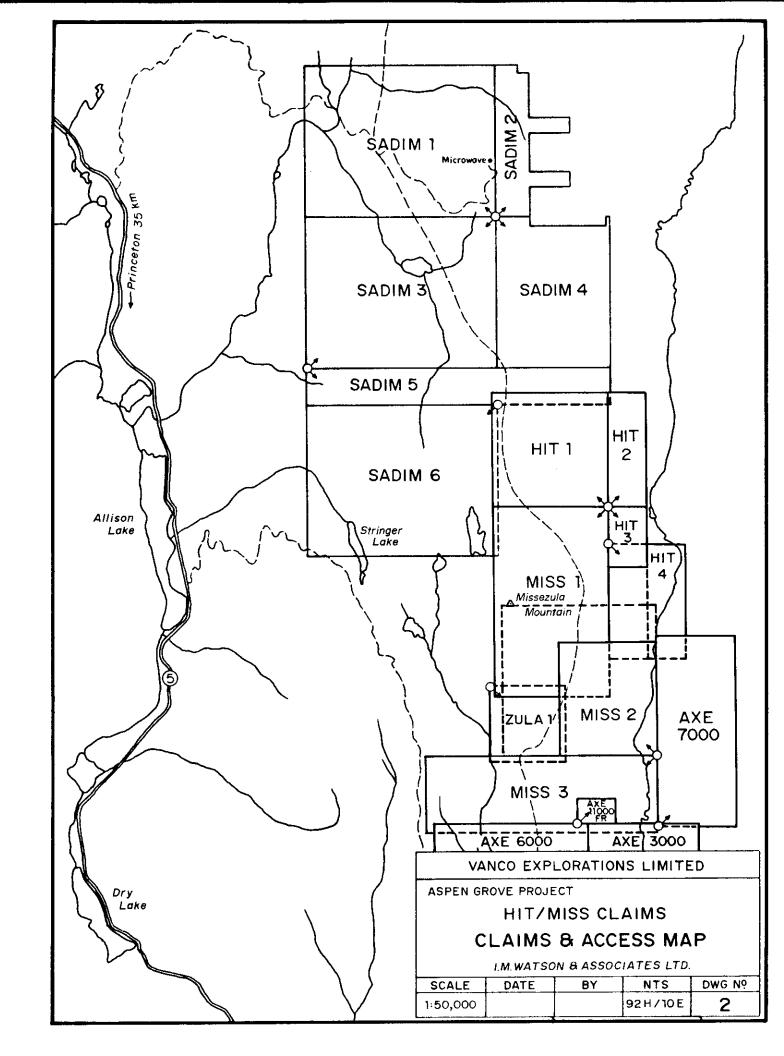
Much of the central and western part of the property has been clear-cut - only the eastern and northwestern areas of the claim group still retain a heavy cover of mixed conifers.

The HIT/MISS claims lie immediately north of the AXE property which contains a porphyry copper deposit of 57.5 million tons averaging 0.5% Cu in three zones. The AXE claims are currently held by Cominco.

Vanco's SADIM claims adjoin the HIT/MISS property to the north. The gold bearing quartz-vein stockwork on the SADIM property is within 500 metres of the HIT/MISS northern boundary.

#### 3.0 CLAIMS

The HIT/MISS property consists of seven claims totalling 65 units, as follows (Figure 2):



| Claim Name | No. of Units | Record No. | Date Staked      | Date Recorded  |
|------------|--------------|------------|------------------|----------------|
| MISS       | 15           | 1423       | May 23, 1981     | June 10, 1981  |
| MISS 2     | 16           | 2821       | February 5, 1987 | March 9, 1987  |
| MISS 3     | 12           | 2822       | February 5, 1987 | March 9, 1987  |
| HIT 1      | 9            | 1489       | July 31, 1981    | August 5, 1981 |
| HIT 2      | 3            | 1490       | August 1, 1981   | August 5, 1981 |
| HIT 3      | 4            | 1491       | August 1, 1981   | August 5, 1981 |
| HIT 4      | 6            | 2166       | June 1, 1984     | June 12, 1984  |

The claims were originally staked by or on behalf of Canadian Nickel Company Ltd., and are currently under option to Vanco Explorations Ltd. by agreement dated March 25th, 1990.

#### 4.0 HISTORY

The HIT/MISS claims occupy ground previously held, in part, by Texas Gulf Sulphur and Sheba Copper Mines Ltd.

In 1970 Texas Gulf carried out reconnaissance soil sampling and mapping in the course of evaluation of the BO prospect.

The northeastern area of the HIT 1 claim, formerly part of the MDA-CORB claims, was mapped and sampled by Sheba Copper Mines Ltd. (Saleken, 1972).

In 1981 Canico staked the HIT 1-3 and MISS claims, and carried out a programme of linecutting, prospecting, geological mapping, rock and soil geochemical sampling, and VLF-EM and magnetometer surveys (Peto, 1982).

During 1982, work was confined to two areas - the south part of the MISS claim and the western portion of the HIT 3 claim; and the east central part of the HIT 1 claim (Debicki 1982).

In 1983 Canico's exploration was restricted to the southern part of the property, where a new grid was established, and geological mapping and rock geochemistry surveys were carried out. In addition, a soil gas survey - gas chromatography for CO<sub>2</sub>, CS<sub>2</sub>, COS, H<sub>2</sub>S, and SO<sub>2</sub> - was completed (Clifton 1984), and studies involving X-ray diffraction and fluid inclusions were carried out (Booth 1983).

In June 1984 the HIT 4 claim was staked to cover ground which had fallen open following the expiry of a competitor's claim. During 1984 attention was again focused on the southern part of the MISS claim and western part of the HIT 3 claim. Work consisted of refurbishing grid lines, prospecting, geological mapping, rock sampling, and a 4,400-metre induced polarization geophysical survey (Debicki 1985).

In February 1987, Canico optioned the HIT/MISS property to First Western Platinum Corporation, and in May and June 1987, five diamond drill holes totalling 745 metres were completed. This work was carried out by Canico and funded by First Western Platinum Corporation. The holes were drilled on sections 1800S and 2000S on the MISS and MISS 2 claims, and were intended to test a strong alteration zone and adjoining quartz-siderite stockwork containing pyrite, chalcopyrite, sphalerite, and galena.

In March 1990 Vanco Explorations Ltd. concluded an option agreement with Inco Limited and in August 1990 embarked upon the exploration programme that is the subject of this report.

#### 5.0 SUMMARY OF WORK AUGUST - SEPTEMBER 1990

#### 5.1 Summary

The Vanco exploration programme on the HIT/MISS property was completed during the period August 21 to September 13, 1990. The 4-man crew was based in Aspen Grove.

Work was confined mainly to the northern half of the property, i.e. the HIT 1 claim and the western part of the HIT 2 claim. The main objectives of the programme were to investigate gold bearing quartz vein float exposed by logging follow-up work in the central part of the HIT 1 claim; and to explore for possible southerly extensions of the SADIM quartz-vein stockwork.

The programme consisted of grid preparation, prospecting, trenching/sampling, geological mapping, and VLF-EM and magnetometer surveys.

#### 5.2 Grid Preparation

Control for the geophysical and geological surveys was established by means of a 20-kilometre chain and compass flagged grid, with line and station spacings of 100 metres and 25 metres, respectively. The grid numbering, orientation, and spacing is coincident with that previously established by Canico; however, little of the Canico grid has survived the recent logging over the HIT/MISS property.

#### 5.3 Prospecting

A two-man crew carried out a preliminary prospecting of the north half of the HIT/MISS property while re-establishing the grid. This work was later continued after geophysical targets had been defined by the VLF-EM/magnetometer surveys, and geological mapping had established potential areas/trends of interest. Two days were also spent prospecting and re-investigating specific areas of interest in the southern half of the Canico ground.

#### 5.4 Geological Mapping

The northern half of the property was mapped at 1:2,500 scale. Control for mapping was provided by the Vanco grid, by 1:2,500 topographic base maps and by the B.C. government 1985 coloured air photos of the area (Figure 5).

#### 5.5 Trenching/Sampling

Trenching was carried out in two stages, during the periods August 22-24 and September 6-11, 1991. The machine employed was a UH07-7 excavator owned and operated by N.D. Houlind Ltd. of Merritt.

Work was focused entirely on the area of gold-bearing quartz vein float in the central part of the HIT 1 claim. Initially, two trenches were cut, one east-west, the other north-south, to establish structural and stratigraphic orientation. Thereafter, the trenches were oriented normal to the trend of the exposed shear/vein system, which varied from north to northwest.

14 trenches, totalling 853 lineal metres, were completed, spaced at approximately 25 metres across the structures, along a strike length of 340 metres. The southerly extent of the zone could not be determined because of depth of heavy glacial overburden, and further work to the north was curtailed by budget constraints.

The trenches were mapped at 1:200 scale (Figures 6, 7). Zones of veining and alteration were systematically sampled; continuous two-metre chip/panel samples were taken along trench walls. A total of 318 samples was collected. All were shipped to Acme Analytical Labs Ltd. in Vancouver for analysis by the inductively coupled argon plasma method (ICP) for 30 elements, and for gold by atomic absorption (AA). Results are shown on Figures 8 and 9.

#### 5.6 Geophysical Surveys

The VLF-EM/magnetometer survey was carried out by Delta Geoscience Ltd. of Delta, B.C. using the Scintrex IGS system configured as VLF-EM and magnetometer units. This system permits the VLF-EM and magnetometer surveys to be carried out simultaneously. A Scintrex MP3 magnetometer was used as a base station to record diurnal magnetic variation.

Control for the survey was provided by the grid established on the HIT 1/2 claims. Readings were taken at 12.5-metre spacings. The Seattle transmitter was used for the VLF-EM survey. The EM and magnetometer data stored by the IGS instrument were downloaded to and processed by a Toshiba 3200 field computer, and then plotted by a Fujitsu printer plotter. In this way, survey printouts were available on a daily basis.

Survey results are plotted on Figures 13-17. Total magnetic field is shown in both profile and contour form. VLF-EM results are plotted in profile, and 'filtered' data is also shown as profiles and contour plan. The filtered values are obtained by applying the 'Fraser filter' formula  $[(M_3 + M_4) - (M_1 + M_2)]$  where  $M_{14}$  are any four consecutive data points which transforms 'noisy' data into more readily contourable values.

A total of 20 kilometres of survey (1,600 VLF-EM and magnetometer readings) was completed during the period August 31 to September 5, 1990.

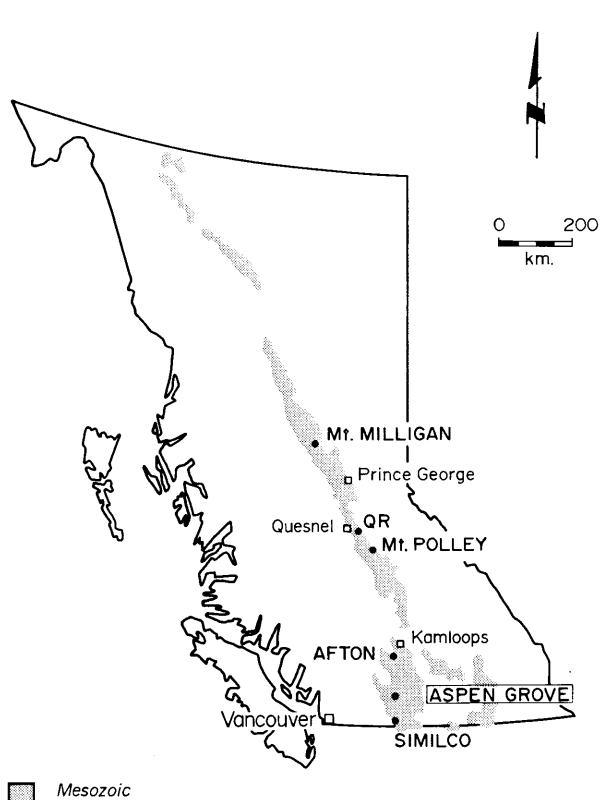
#### 6.0 GEOLOGY

#### 6.1 Regional

The property is underlain by Upper Triassic Nicola Group volcanic rocks which form the southern part of the island arc assemblages known as the Quesnellia Terrane; most of B.C.'s porphyry copper-gold (and gold skarn) deposits occur within this major belt (Figure 3).

The volcanics of the Quesnel and Nicola Belts form a mixed alkaline and calcalkaline sequence of basalts and derived breccias, tuffs, and minor sediments.

The volcanic rocks are intruded by comagmatic alkaline plutons, ranging in composition from syenogabbro to alkaline syenite. The intrusions appear to be structure related and occur in belts along major lineaments and faults. They vary in size from plugs to small batholiths, and have been emplaced into the volcanic centres which produced the abundance of volcanic material (Barr et al, 1976).



Quesnellia Terrane

Cu-Au deposits

VANCO EXPLORATIONS LTD. SADIM PROPERTY

Au-Cu DEPOSITS in the

QUESNELLIA TERRANE, B.C.

May 1990

'Fig. 3

In the Allison Lake-Missezula area, Preto (1979) lineated three assemblages - a Western Belt of easterly dipping calc-alkaline flows, pyroclastics and sediments; a Central Belt of alkaline and calc-alkaline volcanics and intrusions, and minor sediments; and an Eastern belt of westerly dipping volcanic sediments, tuffs and alkaline flows associated with small monzonite porphyry stocks. The belts are separated by north-striking faults.

Preto believes that the Central Belt of dominantly volcanic rocks originates from eruptive centres along the major fault system, and points out the greater concentrations of mineral deposits along the belt.

In the property area, the volcanics and sediments marginal to intrusions have been propylitically altered and locally host erratically distributed copper-pyrite zones. The Axe "porphyry copper" deposits, containing a resource of about 60 MMT averaging 0.5% copper, are located 2.4 kilometres south of the HIT/MISS property boundary.

#### 6.2 Hit 1 Claim

The HIT 1 claim lies immediately west of the Summers Creek Fault, which marks the eastern boundary of Preto's Central Belt.

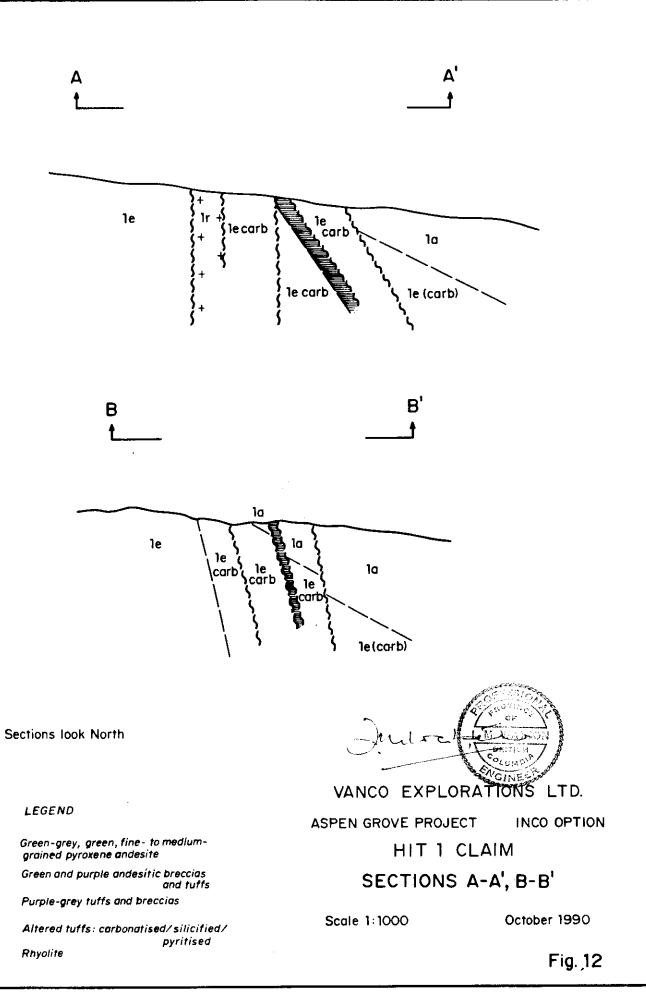
Outcrop is relatively abundant on the higher ground on the western side of the HIT 1 claim, and along the steep slopes above Summers Creek on the HIT 2 claim. Outcrop is sparse in the central part of the claim and is confined mainly to exposures along access and skid roads created by logging activity.

The geological setting is shown on the 1:10,000 and 1:2,500 scale geological plans (Figures 4 and 5). The property is underlain by northerly striking, easterly dipping intermediate to basic flows (Ia), green monolithic and polylithic breccias (Id, 1df), tuffs (Ie), and less abundant limestones (If). The argillites (Ig) noted in the geological legend and seen to the north of the property on the SADIM claims, have yet to be identified on the Hit 1 claim. All these rocks have been intruded by irregular bodies of gabbroic to dioritic composition (5) seen mostly at the north end of the claim. Volcanics and sediments marginal to the intrusions have been variably propylitised (epidote-pyrite-chlorite-carbonate) and locally host erratically distributed copper-pyrite zones. A highly altered sericitic felsic unit of uncertain origin, referred to by the field name rhyolite (Ir), is possibly intrusive, and outcrops in the vicinity of the HIT mineralised zone.

#### 6.3 Hit Zone

Trenching has exposed 340 metres of a major northerly trending easterly dipping shear zone. The width of the zone ranges from 30 metres at the north end of the exposure to slightly more than 100 metres at the south end. The north-northwesterly strike of the shearing is generally that of the volcanics, but to the north the fault trends more northerly and cuts across the rocks at a small angle, passing from tuffs into andesites. The dip of the structure is quite variable, and is generally steep (about 70°) in the south, flattening slightly to the North (60°), but is overall steeper than that of the volcanics it cuts (Figures 10, 12).

The fault zone has caused extensive fracturing, shearing, and alteration of the volcanics, particularly the tuffs (*le/le carb*) and rhyolite (*Ir*). Fracturing has provided conduits for the development of quartz veining and stockworks. Veins range from hair fractures to two metres in thickness, and are most commonly concordant with the shearing. The strongest vein can be followed for the length



10

1d

le

le carb

1r

of the structure, and is thickest and most heavily mineralised along and adjacent to an abrupt strong flexure, well exposed in trenches 1, 2, and 6 (Figure 6). Locally the quartz veins are offset and sheared by small displacement faults subparallel to nearly normal to the veins. The minor displacements may give the vein an en echelon or fragmented appearance, as seen in trench 12 (Figure 7).

As on the SADIM property, the carbonatised tuffs (*Ie carb*) appear to be altered equivalents of the pale purple and green tuffs (*Ie*). Alteration is related to the intensity of fracturing, and proximity to the main shear and quartz veining. Alteration of the tuffs varies from purple and green, friable, clay altered, and locally pyritic to massive, pale grey, fine grained, intensely carbonatised and pyritic. The latter variety is most commonly associated with the more intensely mineralised sections of the vein.

Thin-section examination of similarly carbonatised tuffs from the SADIM claim (Harris 1987) shows that the andesitic tuff (*Ie*) has been strongly carbonatised, and the plagioclase and minor quartz crystals have been cemented by a fine grained carbonate matrix. The carbonate also occurs as fine veinlets and segregations, many with quartz or cherty silica intergrowths.

The altered 'rhyolites' (Ir) are pale grey to purple, variably sericitic and clay altered, and are usually strongly sheared. They are intimately associated with the main shear zone and appear to be slightly cross-cutting suggesting that they may be intrusive in origin.

#### 6.3.1 Mineralisation

The quartz veins contain erratically disseminated sulphides - mainly pyrite with local concentrations of sphalerite, chalcopyrite and galena. Sulphide concentration is related to the vein size and density of fracturing of the host rocks. Trench sampling results show a close relationship between precious metal content, quartz veining and sulphide concentration. The presence of galena, in particular, is a good indication of elevated gold and silver content.

No visible gold has been noted to date. Thin and polished section examination of sulphide bearing vein quartz (Harris 1990) revealed sphalerite with pyrite, galena and chalcopyrite, but no native gold. These findings are similar to those from the SADIM claim (Harris 1987) where, however, lead and silver tellurides (altaite and hessite) were recognised in the vein material.

Thin sections of vein and host material indicate that the rocks have undergone numerous phases of cataclastic deformation followed by recrystallization. According to Harris, the sulphides appear to postdate the main period of deformation and recrystallization.

Sampling of the main quartz vein system (Figure 11) reveals a contained zone of 109.7 metres (360 feet) length containing 12.3 gm/t (0.36 opt) Au over an average width of 1.4 metres (4.6 feet). Within this zone is a section assaying 24.6 gm/t (0.72 opt) Au over 2 metres (6.6 feet) and a grab sample of heavily mineralised vein which yielded 206 gm/t (6.01 opt). The zone is open both to the north and south, and at depth.

#### 6.4 Comparison of SADIM and HIT Zones

The HIT zone closely resembles the Main and East showings on the SADIM property 2,000 metres to the north. Host rock lithology, alteration, structural setting, and the mineralogy of the veins are all similar. In both areas, the zones are related to major north-northwesterly trending, easterly dipping shears. Also, the zones are most strongly developed and most heavily mineralised where the veins occur within the tuff (1e) unit; the veins diminish and weaken where they pass into andesite (1a) on the HIT claim, and in both andesite and calcareous tuff (1e cal) or limestone (1f) on the SADIM property. In both areas, mineralisation is accompanied by the same type of alteration - pervasive carbonatisation accompanied by pyritisation.

Quartz veins contain pyrite, chalcopyrite, sphalerite, and galena, and the gold to silver ratio is approximately 1:8.

The greatest differences between the two zones is the orientation and distribution of the quartz veins. On the SADIM property, the veins occur above the east dipping main shear zone and form a stockwork in which the veins strike easterly and dip moderately to steeply south. The HIT veins occur within and generally parallel to the shear zone.

#### 7.0 GEOPHYSICAL SURVEYS

#### 7.1 Magnetometer

Results of the survey are plotted in profile and contour form (Figures 13 and 14).

The magnetics confirm the north-northwesterly general trend. The most prominent feature is the strong, complex, northwest trending high along the western flank of the HIT 1 claim. This high correlates with steep andesite (1a) ridges and is probably due to the combination of the higher magnetic susceptibility of the andesites and topographic effect.

Less prominent magnetic highs fringe the eastern edge of the claim where andesites outcrop along the steep upper slopes of Summers Creek valley and in the north and northeastern part of the area underlain by diorite (5).

The central part of the claim, including the HIT zone, is an area of low magnetic relief with no prominent features or strong trends, probably the result of more recessive lithology, weakly magnetic tuffs and sediments, and alteration.

The SADIM zone to the north produces a similar featureless magnetic response.

#### **7.2 VLF-EM**

The VLF-EM results are shown in profile and contour form (Figures 15, 16, and 17). The filtered data in contoured format (Figure 17) shows that the strongest and more persistent anomalies correlate with northerly trending linear topographic lows. This is particularly evident on the western side of the survey area where the anomalies correlate with swamps and wet draws west of the Ketchan Creek main logging road. Similar, less prominent anomalies are coincident with benches and draws along the edge of the steep slopes on the west side of Summers Creek.

There are a number of weaker and less persistent anomalies in the central part of the claim. The most interesting of these correlates with the mapped trace of the HIT zone shear. This anomaly trend persists to the southern boundary of the surveyed area at 0N, 0E some 500 metres south of the showings. To the north, the trend is not as well defined or continuous, but a series of weak anomalies lies close to the strike for a distance of at least 600 metres. There are, as well, a number of parallel weak anomalies to the east and west.

Preliminary investigation of anomaly traces on the ground established the topographic correlations with the stronger anomalies described above, but apart from the HIT zone anomaly, there are no obvious geological/topographic features to explain the other EM features.

#### 8.0 DISCUSSION OF RESULTS

- 1. The first phase of exploration covering the northern half of the HIT/MISS property has established a new zone (HIT zone), similar to that 2,000 metres to the north on the Vanco SADIM claims.
- 2. Gold bearing quartz veins containing galena, sphalerite, chalcopyrite, and pyrite occur within and along a major shear zone which has been exposed by trenching along a strike length exceeding 300 metres and over widths up to 100 metres.
- 3. Veins range in size from small stringers to massive veins exceeding 2 metres in width, trend roughly parallel to the shearing, and dip moderately to steeply east.
- 4. Sampling of the main quartz vein system reveals a contained zone of 110 metres length assaying 12.3 g/t Au over an average width of 1.4 metres. Within this zone there is a section assaying 24.6 g/t Au over 2.0 metres.

- 5. The zone is open both to the north and south, and at depth.
- 6. A weak VLF-EM anomaly correlates with the HIT shear zone and extends for at least 600 metres both north and south of the exposed zone. Similar parallel anomalies may represent potential targets.
- 7. The evidence available to date indicates that structure and lithology are the prime controls for both the HIT and SADIM zones. Ongoing exploration should focus on tracing the shears and the host tuff unit (*Ie*) associated with the gold zones.
- 8. Earlier work by Canico in the southeastern part of the HIT/MISS property revealed a poorly exposed quartz-siderite vein stockwork, which was traced for 350 metres. Veins contain pyrite, chalcopyrite, sphalerite, and galena. The stockwork was also intersected by two holes (411 and 412) drilled by Canico. Surface and core sampling of the stockwork yielded low but anomalous concentrations of Au, Ag, Cu, Pb, Zn, and As (Groeneweg, 1988).

Given the similarities of geological setting and nature of the SADIM, HIT, and Canico zones, there is excellent exploration potential for further deposits of this type along the 4,800 metres possible strike length they cover.

#### 9.0 PROPOSED PROGRAMME 1991

A two-stage programme is proposed for the 1991 exploration of the HIT/MISS claims.

Stage I is a continuation of the 1990 trending programme and is intended to fully delineate the HIT shear zone and to test the VLF-EM anomalies on trend with and parallel to the zone.

Stage II will explore the southern half of the HIT/MISS property, using the same procedures and techniques as employed during Stage I.

- Line cutting/grid establishment
- VLF-EM/magnetometer surveys
- Prospecting
- · Geological mapping
- Trenching/sampling

Particular attention will be paid to the alteration and stockwork zones detected by Canico in the southeastern part of the property.

#### Stage I (northern half of Inco HIT/MISS claims)

- 1. Follow-up of August/September 1990 programme Phase I and II (northern half of Inco HIT/MISS claim block)
  - a) Trenching of HIT Zone (continued)
  - b) Investigation of VLF EM anomalies on trend of/parallel to HIT Zone by:
    - 1) prospecting
    - 2) trenching

Period: June 1 - 25 (25 days)

## Stage II (southern half of Inco HIT/MISS claims)

- 1. Line cutting (20 kms.)
- 2. Prospecting
- 3. Geological mapping
- 4. VLF EM/magnetometer surveys (20 kms)
- 5. Trenching

Period: June 25 - August 4 (45 days)

# 10.0 STATEMENT OF COSTS - HIT/MISS PROPERTY (August 21 - September 13, 1991)

## 1. Geological Mapping/Sampling

#### Salaries and Fees

| L.A. Westervelt, Geologist (Aug. 21 - Sept. 13) 24 days @ \$185.00/day   | \$ 4,440.00      |             |
|--|------------------|-------------|
| L. Kiss, Field Assistant/Prospector<br>(Aug. 21, 25, 30, 31, Sept. 1-13)<br>17 days @ \$185.00/day                     | 3,145.00         |             |
| I. Saunders, Field Assistant/Prospector (Aug. 21, 25, 30, 31, Sept. 1-13) 17 days @ \$185.00/day                       | 3,145.00         |             |
| I. Watson, Consulting Geologist/Project Manager  |                  |             |
| (Aug. 21-26, 29, Sept. 5-12)<br>11.5 days @ \$400.00/day   | 4,600.00         |             |
| Accommodation and Board (Pro Rated Cost)   | 1,916.29         |             |
| Telephone, Freight, Mail   | 502.26           |             |
| Vehicle Rental (Toyota L/C)<br>#1 - 17 days @ \$55.00/day<br>#2 - 16 days @ \$55.0/day                                 | 935.00<br>880.00 |             |
| Fuel (Pro Rated Cost)  | 316.58           |             |
| Supplies, Equipment (Pro Rated Cost)   | 248.65           |             |
| Reproduction/Maps  | 978.41           |             |
| Drafting (D. Phillips Drafting Services)   | 2,387.50         |             |
| Assays/Geochemical Analysis (Acme Analytical Labs) 313 rock samples @ \$13.72/sample (Cu, Ag, Pb, Au by ICP, + Au (AA) | 4,295.75         |             |
| Thin Section Analysis (Harris Exploration Services)  | 314.00           |             |
| Total Geological Mapping/Sampling  | 28,104.44        | \$28,104.44 |

|    | Total Geological Mapping/Sampling |   |                                       |           |                     |  |  |
|----|-----------------------------------|---|---------------------------------------|-----------|---------------------|--|--|
| 2. | Lin                               | ecutting and Trenching  |                                       |           |                     |  |  |
|    | (a)                               | Linecutting   |                                       |           |                     |  |  |
|    |                                   | Salaries I. Saunders - 7 days @ \$185.00/day L. Kiss - 7 days @ \$185.00                                    | 1,295.00<br>1,295.00                  |           |                     |  |  |
|    |                                   | Accommodation and Board (Pro Rated Cost)  | 390.00                                |           |                     |  |  |
|    |                                   | Vehicle Rental (Toyota L/C 4 x 4)<br>7 days @ \$55.00/day   | 385.00                                |           |                     |  |  |
|    |                                   | Fuel (Pro Rated Cost)   | 65.00                                 |           |                     |  |  |
|    |                                   | Supplies, Equipment (Pro Rated Cost)  | 102.38                                |           |                     |  |  |
|    |                                   | Sub-total Linecutting   | 3,532.38                              | 3,532.38  |                     |  |  |
|    | (b)                               | Trenching  Equipment Rental (Aug. 22-24, Sept. 6-8, 10-1 N. Howlind Ltd., Merritt                           |                                       |           |                     |  |  |
|    |                                   |   | r. 5,145.00 hrs. hrs. hrs.            |           |                     |  |  |
|    |                                   | 22 hrs. @ \$70.00/hr.   | 1,540.00                              |           |                     |  |  |
|    |                                   | Subtotal Trenching  | 6,685.00                              | 6,685.00  |                     |  |  |
|    |                                   | Total Linecutting/Trenching   |                                       | 10,217.38 | 10,217.38           |  |  |
| 3. | Geo                               | ophysical VLF-EM/Magnetometer Survey  |                                       |           |                     |  |  |
|    | Del                               | ta Geoscience   |                                       |           | 3,820.58            |  |  |
| то | TAL                               | COSTS   |                                       |           | \$ <u>42,142.40</u> |  |  |
|    |                                   | Summary of Cost   | S                                     |           |                     |  |  |
|    |                                   | <ol> <li>Geological Mapping/Sampling</li> <li>Linecutting/Trenching</li> <li>Geophysical Surveys</li> </ol> | \$ 28,104.44<br>10,217.38<br>3,820.58 |           |                     |  |  |

**TOTAL** 

\$ <u>42,142.40</u>

## 11.0 CERTIFICATE OF QUALIFICATIONS

- I, Leslie Alexander Westervelt, of 226 6015 Tisdall Street, Vancouver, British Columbia, hereby certify that:
  - 1. I am a geological engineer.
  - 2. I am a graduate of the University of British Columbia (B.A.Sc., 1985).
  - 3. I have practised my profession continuously since graduation.
  - 4. I worked as a geologist on the HIT/MISS property during the period of August 21, to September 13, 1990.

March 28, 1991 Vancouver, B.C.

Leslie Westervelt, B.A.Sc.

## CERTIFICATE OF QUALIFICATIONS

I, Ivor Moir Watson, of 584 East Braemar Road, North Vancouver, British Columbia, hereby certify that:

- 1. I am a consulting geologist with offices at 904 675 West Hastings Street, Vancouver, B.C.
- 2. I am a graduate of the University of St. Andrews, Scotland (B.Sc. Geology 1955).
- 3. I have practised my profession continuously since graduation.
- 4. I am a member in good standing of the Association of Professional Engineers of B.C.
- 5. Work on the HIT/MISS Property was carried out between August 21st and September 13th, 1990 by the following personnel working under my supervision during the periods noted:

L. Westervelt - Geologist August 21 to September 13

L. Kiss - Prospector August 21 to September 13

I. Saunders - Prospector August 21 to September 13

March 28, 1991 Vancouver, B.C.

I.M. Watson, B.Sc., P.Eng

#### 12.0 REFERENCES

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  - 1988. Reconnaissance Geochemical Rock Sampling, VLF-EM & Magnetometer Surveys, Trenching, Geological Mapping & Sampling, and Diamond Drilling Programmes on the SADIM Property for Laramide Resources Ltd.

# APPENDIX GEOCHEMICAL ANALYTICAL REPORTS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAI(604)253-1716

DATE RECEIVED: AUG 28 1990

DATE REPORT MAILED, Sept 4/90

## **GEOCHEMICAL ANALYSIS CERTIFICATE**

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-3929 816 - 675 W. Hastings St., Vancouver BC V6B 1N2 Attn: 1.M. WATSON

| SAMPLE# | Cu   | Ag     | Au*   |
|---------|------|--------|-------|
|         | ppm  | ppm    | ppb   |
| F 5751  | _    | . 1    | 49    |
| F 5752  | 2728 | 11.3   | 520   |
| F 5753  | 6117 | 28.2   | 400   |
| F 5754  | 755  | 122.5√ | 12700 |
| F 5755  | -    | 35.4√  | 3720  |
| F 5756  | -    | 27.4   | 3440  |
| F 5757  | -    | 4.2    | 570   |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK

SIGNED BY ..... D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

✓ ASSAY RECOMMENDED

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716

DATE RECEIVED: AUG 30 1990

DATE REPORT MAILED:

Sept. 1/90

#### **GEOCHEMICAL ANALYSIS CERTIFICATE**

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4022 Page 1 816 - 675 W. Hastings St., Vancouver BC V6B 1N2

| SAMPLE#         | Cu   | Pb    | Ag    | Au*    |
|-----------------|------|-------|-------|--------|
|                 | ppm  | ppm   | ppm   | ppb    |
| F 5851          | 909  | 7057  | 21.9  | 1630   |
| F 5852          | 35   | 1830  | 28.0  | 2540   |
| F 5853          | 558  | 3999  | 24.2  | 1980   |
| F 5854          | _    | -     | 109.4 | 11400  |
| F 5855          | -    | -     | 17.2  | 1560   |
| F 5856          | 654  | 807   | 31.8  | 2630   |
| F 5857          | 67   | 222   | 5.6   | 460    |
| F 5858          | _    | -     | 3.1   | 310    |
| F 5859          | _    | _     | 30.7  | 3130   |
| F 5860          | -    | -     | 31.5  | 3720   |
| F 5861          | l –  | _     | 43.2  | 4630   |
| F 5862          | -    | _     | 106.5 | 14300  |
| F 5863          | 683  | 38634 | 321.4 | 206000 |
| F 5864          | 164  | 3609  | 124.2 | 13200  |
| F 5865          | _    | _     | 8.2   | 1240   |
| F 5866          |      | _     | 41.2  | 4430   |
| F 5867          | -    | _     | 59.6  | 6050   |
| F 5868          | 35   | 102   | 1.3   | 97     |
| F 5869          | _    |       | 4.8   |        |
| F 5870          | -    | _     | .1    | 35     |
| F 5871          | 325  | 2274  | 14.8  | 1780   |
| F 5872          | -    | _     | 1.4   | 176    |
| F 5873          | -    | _     | 13.2  | 1120   |
| F 5874          | 1927 | 133   | 12.3  | 1050   |
| F 5875          | _    | -     | 5.6   | 530    |
| F 5876          | _    | _     | . 4   | 43     |
| F 5877          | 1049 | 4960  | 53.9  | 3620   |
| F 5878          | _    | _     | 1.2   | 47     |
| F 5879          | _    | _     | 21.8  |        |
| F 5880          | _    | -     | 1.9   | 400    |
| F 5881          | _    | -     | 1.7   | 126    |
| F 5882          | _    | _     | 2.3   | 420    |
| F 5883          | _    | _     | 2.4   | 149    |
| F 5884          | -    | _     | 2.8   | 330    |
| F 5885          | _    | -     | 3.0   | 620    |
| F 5886          | _    | -     | 2.5   | 360    |
| STANDARD C/AU-R | 59   | 37    | 7.1   | 530    |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU\* ANALYSIS BY AGID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY .... D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

## I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4022 Page 2

| SAMPLE#      | ppm<br>Ag | Au*<br>ppb |
|--------------|-----------|------------|
| F 5887       | 3.3       | 350        |
| L4+00N 1+25W | 1.6       | 78         |

DATE RECEIVED: SEP 10 1990

DATE REPORT MAILED:

Sept 17/90

## **GEOCHEMICAL ANALYSIS CERTIFICATE**

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4269 Page 1 816 - 675 W. Hastings St., Vancouver BC V6B 1N2

| SAMPLE#         | ppm<br>Ag | Au*  | SAMPLE<br>lb |
|-----------------|-----------|------|--------------|
| F 5758          | 1.6       | 170  | 25           |
| F 5759          | 1.7       | 430  | 32           |
| F 5760          | .6        | 250  | 29           |
| F 5761          | . 4       | 135  | 28           |
| F 5762          | . 4       | 250  | 25           |
| F 5763          | 4.4       | 510  | 24           |
| F 5764          | 1.3       | 138  | 24           |
| F 5765          | • 5       | 44   | 25           |
| F 5766          | .1        | 5    | 24           |
| F 5767          | .1        | 3    | 22           |
| F 5768          | .2        | 7    | 21           |
| F 5769          | 1.2       | 11   | 18           |
| F 5770          | .1        | 4    | 21           |
| F 5771          | .1        | 2    | 21           |
| F 5772          | .1        | 3    | 22           |
| F 5773          | .1        | 2    | 19           |
| F 5774          | .1        | 1    | 20           |
| F 5775          | .1        | 7    | 21           |
| F 5776          | .2        | 2    | 23           |
| F 5777          | .1        | 23   | 16           |
| F 5778          | .3        | 26   | 18           |
| F 5779          | .7        | 50   | 15           |
| F 5780          | .1        | 9    | 18           |
| F 5781          | 2.8       | 250  | 17           |
| F 5782          | 3.7       | 420  | 16           |
| F 5783          | 1.3       | 130  | 14           |
| F 5784          | 2.4       | 640  | 17           |
| F 5785          | 6.2       | 720  | 16           |
| F 5786          | 13.4      | 1320 | 15           |
| F 5787          | 2.6       | 210  | 18           |
| F 5788          | .3        | 64   | 23           |
| F 5789 .        | .1        | 26   | 20           |
| F 5790          | .1        | 22   | 24           |
| F 5791          | .1        | 20   | 18           |
| F 5792          | .3        | 20   | 23           |
| F 5793          | .1        | 19   | 25           |
| STANDARD C/AU-R | 7.0       | 510  | -            |

<sup>1</sup>CP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACLA LEACH AA FROM 10 GM SAMPLE.

SIGNED BY .. A. ...... D. TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

| SI           | AMPLE#    |        | Cu  | Pb    | Аg    | Au*   |  |
|--------------|-----------|--------|-----|-------|-------|-------|--|
|              |           |        | mqq | ppm   | ppm   | ppb   | 1b   |
| F            | 5794      |        | _   | -     | 1.0   | 36    | 19   |
| F            | 5795      |        | _   | _     | .6    | 38    | 11   |
| F            | 5796      |        | _   | _     | 5.9   | 650   | 16   |
| F            | 5797      |        | _   | _     | .5    | 109   | 16   |
| F            | 5798      |        | _   | -     | . 8   | 210   | 19   |
| F            | 5799      |        | _   | -     | .1    | 6     | 16   |
| F            | 5800      |        | _   | -     | .1    | 4     | 9  |
| $\mathbf{F}$ | 5888      |        |     | -     | 44.1  | 3590  | 15   |
| F            | 5889      |        |     | -     | 14.5  | 1630  | 12   |
| F            | 5890      | ļ      | _   | _     | 33.9  | 4100  | 14   |
| F            | 5891      | 1      | _   | -     | .8    | 107   | 17   |
|              | 5892      | ·      |     |       | 1.2   | 105   | 15   |
|              | 5893      |        | 70  | 2803  |       |       | 16   |
| F            | 5894      |        | 66  | 2738  | 14.0  | 1210  | 15   |
| F            | 5895      |        | 50  | 13600 | 35.7  | 3080  | 14   |
| F            | 5896      |        |     | 28029 |       | 19600 | 20   |
| F            | 5897      |        | 65  | 22305 | 111.1 | 6760  | 15   |
| F            | 5898      |        | 26  | 21382 | 111.7 |       | 13   |
| F            | 5899      |        | -   | -     | 1.6   | 117   | 16   |
| F            | 5900      |        | -   | -     | 2.5   | 270   | 15   |
| D            | 51501     |        | _   | _     | .7    | 43    | 18   |
| D            |           |        | -   | -     | 2.2   | 114   | 18   |
| D            |           |        | -   | -     | . 4   | 11    | 17   |
| D            | 51504     |        | _   | -     | 1.0   | 82    | 18   |
| D            | 51505     |        | -   |       | .3    | 15    | 17   |
| i            | 51506     |        | -   | _     | .3    | 10    | 19   |
| D            |           |        | _   | -     | . 4   | 14    | 20   |
| D            |           |        |     | -     | . 5   | 21    | 21   |
| מ            | 51509     |        | _   | -     | • 5   | 16    | <ul> <li>695669000000000000000000000000000000000</li></ul>   |
| D            | 51510     |        | -   | -     | 2.2   | 280   | 17   |
|              | 51511     |        | _   | •     | 3.0   | 420   | CANADA CA |
|              | 51512     |        |     | -     | 8.8   | 880   | <ul> <li>A Marinesto del ristationo del control nel</li> </ul>   |
| •            | 51513     |        | -   |       | 21.6  |       | 100000000000000000000000000000000000000  |
|              | 51514     |        | -   | -     | 1.1   | 130   | <ul> <li>Other States and Associations</li> </ul>  |
| D            | 51515     |        | -   | -     | .9    | 145   | 15   |
|              | 51516     |        | _   | _     | .4    |       |  |
| S            | TANDARD ( | C/AU-R | 61  | 41    | 7.0   | 520   |  |

Regular Assey for correct result.

| SAMPLE#         | Ag    | Au*   | SAMPLE |
|-----------------|-------|-------|--------|
|                 | ppm   | ppb   | lb     |
|                 | FF    |       |        |
| D 51517         | .6    | 230   | 18     |
| D 51518         | .7    | 240   | 19     |
| D 51519         | 1.3   | 200   | 18     |
| D 51520         | 1.5   | 200   | 16     |
| D 51521         | 1.3   | 97    | 14     |
| D 31321         | 1.5   | 91    | 14     |
| D 51522         | 1.1   | 43    | 15     |
| D 51523         | .5    | 22    | 15     |
| D 51524         | .6    | 46    | 14     |
|                 | .3    | 17    | 12     |
| [               | .3    |       |        |
| D 51526         |       | 13    | 13     |
| D 51527         | .5    | 16    | 17     |
| D 51528         | 3.2   | 320   | 17     |
| D 51529         | 9.9   | 62    | 16     |
| D 51530         | 1 .7  | 81    | 13     |
| D 51531         | 2.4   | 410   | 13     |
| D 51551         | 2.4   | 410   | 13     |
| D 51532         | .9    | 340   | 14     |
| D 51533         | .8    | 66    | 15     |
| D 51534         | .5    | 240   | 17     |
| D 51535         | 2.1   | 310   | 17     |
| D 51536         | 85.9  | 7540  | 12     |
|                 | 03.3  | 7510  |        |
| D 51537         | 80.2  | 8850  | 19     |
| D 51538         | 10.3  | 1250  | 19     |
| D 51539         | 18.2  | 2110  | 14     |
| D 51540         | .8    | 48    | 15     |
| D 51541         | .4    | 3     | 15     |
|                 | '     |       |        |
| D 51542         | .5    | 17    | 14     |
| D 51543         | .5    | 1     | 13     |
| D 51544         | .9    | 15    | 15     |
| D 51545         | 1.2   | 41    | 17     |
| D 51546         | .8    | 2     | 14     |
|                 |       | _     |        |
| D 51547         | .5    | 350   | 14     |
| D 51548         | .5    | 210   | 16     |
| D 51549         | 10.2  | 1510  | 19     |
| D 51550         | 212.0 | 24600 | 18     |
| D 51551         | .6    | 210   | 18     |
|                 |       |       |        |
| D 51552         | .6    | 250   | 14     |
| STANDARD C/AU~R | 6.9   | 510   |        |
| <u> </u>        | L     |       |        |

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4269 Page 4

| S  | AMPLE#         | λg   | Au*  | SAMPLE |
|----|----------------|------|------|--------|
|    |                | ppm  | ppb  | lb     |
| D  | 51553          | .6   | 63   | 12     |
| D  | 51554          | 1.2  | 89   | 13     |
| D  | 51555          | .2   | 12   | 8      |
| D  | 51556          | .1   | 6    | 4      |
| D  | 51557          | .1   | 6    | 2      |
| D  | 51558          | .8   | 77   | 23     |
|    | 51559          | 3.4  | 250  | 25     |
| D  | 51560          | 33.3 | 2950 | 23     |
| D  | 51561          | 1.4  | 129  | 24     |
| D  | 51562          | .6   | 153  | 23     |
| D  | 51563          | .9   | 250  | 23     |
| D  | 51564          | .6   | 85   | 21     |
| D  | 51565          | 17.2 | 2270 | 21     |
| D  | 51566          | .7   | 39   | 13     |
| D  | 51567          | .6   | 7    | 19     |
| D  | 51568          | .3   | 6    | 22     |
| នា | CANDARD C/AU-R | 7.0  | 530  |        |

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: SEP 13 1990

DATE REPORT MAILED:

Sept. 20/90.

## **GEOCHEMICAL ANALYSIS CERTIFICATE**

I.M. Watson & Assoc. Ltd. PROJECT SADIM HIT FILE # 90-4437 Page 1 816 - 675 W. Hastings St., Vancouver BC V68 1N2 Attn: I.M. WATSON

| SAMPLE#         | Ag   |     | SAMPLE<br>lb |
|-----------------|------|-----|--------------|
|                 | ppm  | ppb | 10           |
| G 3301          | .1   | 4   | 17           |
| G 3302          | .1   | 1   | 16           |
| G 3303          | .1   | ī   | 14           |
| G 3304          | .1   | ī   | 15           |
| G 3305          | .1   | 3   | 18           |
| G 2202          | • •  | 3   |              |
| G 3306          | .1   | 1   | 11           |
| G 3307          | . 1  | 4   | 9            |
| G 3308          | .1   | 5   | 12           |
| G 3309          | .1   | 6   | 17           |
| G 3310          | .2   | 22  | 13           |
| C 2211          | 10.2 | 880 | 17           |
| G 3311          | 3.9  | 310 | 18           |
| G 3312          |      |     |              |
| G 3313          | 1.4  | 103 | 10           |
| G 3314          | 8.   | 43  | 14           |
| G 3315          | .9   | 64  | 15           |
| G 3316          | 3.5  | 320 | 13           |
| G 3317          | 4.6  | 108 | 9            |
| G 3318          | 7.4  | 650 | 10           |
| G 3319          | 5.0  | 370 | 12           |
| G 3320          | 1.6  | 90  | 13           |
| G 3321          | 1.4  | 60  | 15           |
| G 3322          | .6   | 37  | 10           |
| G 3322          | .2   | 5   | 15           |
| G 3324          | .1   | 3   | 13           |
|                 | 1 .1 | 2   | 15           |
| G 3325          | ••   | L   | 10           |
| G 3326          | .1   | 4   | 16           |
| G 3327          | .1   | 2   | 19           |
| G 3328          | .1   | 5   | 16           |
| G 3329          | .1   | 7   | 15           |
| G 3330          | .1   | 4   | 13           |
| G 3331          | .3   | 17  | 15           |
| G 3332          | 10.0 | 960 | 15           |
|                 | 1.3  | 74  | 19           |
| G 3333          |      |     |              |
| G 3334          | 1.1  | 77  | 11           |
| G 3335          | .2   | 10  | 12           |
| G 3336          | .1   | 6   | 11           |
| STANDARD C/AU-R | 6.9  | 520 | _            |
| -,              |      |     |              |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID 1 FACH/AA FROM 10 GM SAMPLE.

SIGNED BY . A . D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

| SAMPLE#         | Ag<br>ppm | Au*<br>ppb | SAMPLE<br>lb |
|-----------------|-----------|------------|--------------|
| G 3337          | .1        | 10         | 11           |
| G 3338          | .5        | 13         | 9            |
| G 3339          | .1        | 44         | 15           |
| G 3340          | .6        | 89         | 17           |
| G 3341          | .9        | 70         | 20           |
| G 3342          | .1        | 9          | 19           |
| G 3343          | .1        | 21         | 17           |
| G 3344          | 2.4       | 510        | 22           |
| G 3345          | 2.8       | 430        | 19           |
| G 3346          | .3        | 11         | 12           |
| G 3347          | .5        | 15         | 13           |
| G 3348          | .2        | 4          | 16           |
| G 3349          | .5        | 8          | 15           |
| G 3350          | 2.2       | 210        | 13           |
| G 3901          | 1.2       | 95         | 15           |
| G 3902          | .1        | 28         | 19           |
| G 3903          | . 3       | 14         | 14           |
| G 3904          | .6        | 10         | 15           |
| G 3905          | .6        | 28         | 17           |
| G 3906          | . 2       | 9          | 16           |
| G 3907          | .1        | 7          | 15           |
| G 3908          | .1        | 40         | 11           |
| G 3909          | .7        | 8          | 12           |
| G 3910          | . 2       | 5          | 8            |
| G 3911          | 1.1       | 40         | 2            |
| G 3912          | 67.5      | 250        | 2            |
| G 3913          | 1.4       | 18         | 2            |
| G 3914          | 2.5       | 55         |              |
| G 3915          | 12.8      | 580        | 5            |
| G 3916          | .1        | 7          | 4            |
| G 3917          | . 2       | 4          | 3            |
| RX 38770        | 1.6       | 8          | 1            |
| STANDARD C/AU-R | 7.0       | 530        |              |

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: SEP 14 1990

DATE REPORT MAILED:

Sept 21/90

#### **GEOCHEMICAL ANALYSIS CERTIFICATE**

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4469 Page 1
B16 - 675 W. Hastings St., Vancouver BC V6B 1N2

| SAMPLE#         | Ag   |      | SAMPLE |  |  |  |  |  |  |  |
|-----------------|------|------|--------|--|--|--|--|--|--|--|
|                 | ppm  | ppb  | 1b     |  |  |  |  |  |  |  |
| D 51571         | . 4  | 5    | 16     |  |  |  |  |  |  |  |
| D 51572         | 3.5  | 475  | 19     |  |  |  |  |  |  |  |
| D 51573         | 2.6  | 276  | 24     |  |  |  |  |  |  |  |
| D 51574         | 1.7  | 238  | 22     |  |  |  |  |  |  |  |
| D 51575         | .5   | 76   | 22     |  |  |  |  |  |  |  |
| D 51576         | .7   | 54   | 17     |  |  |  |  |  |  |  |
| D 51577         | 1.3  | 247  | 15     |  |  |  |  |  |  |  |
| D 51578         | .5   | 69   | 22     |  |  |  |  |  |  |  |
| D 51579         | 1.5  | 333  | 20     |  |  |  |  |  |  |  |
| D 51580         | 2.1  | 342  | 18     |  |  |  |  |  |  |  |
| D 51581         | .4   | 29   | 19     |  |  |  |  |  |  |  |
| D 51582         | .2   | 8    | 13     |  |  |  |  |  |  |  |
| D 51583         | .2   | 6    | 11     |  |  |  |  |  |  |  |
| D 51584         | .7   | 47   | 12     |  |  |  |  |  |  |  |
| D 51585         | 4.4  | 504  | 18     |  |  |  |  |  |  |  |
| D 51586         | 1.0  | 190  | 20     |  |  |  |  |  |  |  |
| D 51587         | .6   | 47   | 19     |  |  |  |  |  |  |  |
| D 51588         | 1.6  | 266  | 19     |  |  |  |  |  |  |  |
| D 51589         | .9   | 247  | 22     |  |  |  |  |  |  |  |
| D 51590         | 2.0  | 285  | 19     |  |  |  |  |  |  |  |
| D 51591         | 1.8  | 266  | 19     |  |  |  |  |  |  |  |
| D 51592         | 7.1  | 969  | 23     |  |  |  |  |  |  |  |
| D 51593         | 1.4  | 169  | 20     |  |  |  |  |  |  |  |
| D 51594         | 12.4 | 1938 | 16     |  |  |  |  |  |  |  |
| D 51595         | .1   | 17   | 13     |  |  |  |  |  |  |  |
| D 51596         | 3.1  | 238  | 17     |  |  |  |  |  |  |  |
| D 51597         | 8.0  | 646  | 17     |  |  |  |  |  |  |  |
| D 51598         | 4.6  | 570  | 19     |  |  |  |  |  |  |  |
| D 51599         | 4.8  | 542  | 13     |  |  |  |  |  |  |  |
| D 51600         | .5   | 24   | 18     |  |  |  |  |  |  |  |
| D 51601         | 2.2  | 361  | 22     |  |  |  |  |  |  |  |
| D 51602         | .4   | 8    | 14     |  |  |  |  |  |  |  |
| D 51603         | .3   | 4    | 18     |  |  |  |  |  |  |  |
| D 51604         | . 8  | 33   | 16     |  |  |  |  |  |  |  |
| D 51605         | 4.2  | 485  | 16     |  |  |  |  |  |  |  |
| D 51606         | 5.8  | 684  | 21     |  |  |  |  |  |  |  |
| STANDARD C/AU-R | 6.9  | 530  | -      |  |  |  |  |  |  |  |
| = <b>-, -</b> - | L    | +    |        |  |  |  |  |  |  |  |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 TO P3 ROCK P4 STREAM SEP P5 M.M. AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY. D. D. D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

| SAMPLE#         | Cu  | Pb    | Ag    | Au*   | and the second second                     |
|-----------------|-----|-------|-------|-------|---|
|                 | ppm | ppm   | ppm   | ppb   | lb  |
| D 51607         | -   | -     | 1.0   | 87    | 17  |
| D 51608         | _   | -     | . 5   | 34    | 15  |
| D 51609         | -   | -     | . 4   | 180   | 15  |
| D 51610         | _   | -     | .1    | 20    | 13  |
| D 51611         | -   | -     | . 1   | 12    | 16  |
| D 51612         | _   | -     | 3.3   | 470   | 20  |
| D 51613         | _   | -     | 1.1   | 105   | 20  |
| D 51614         | _   | _     | .8    | 139   | 21  |
| D 51615         | _   | -     | . 3   | 14    | 16  |
| D 51617         | _   | -     | . 2   | 9     | 5   |
| D 51618         | _   | •     | .1    | 3     | 4   |
| D 51619         | _   | _     | .1    | 7     | 6   |
| D 51620         | _   | _     | .3    | 7     | 2   |
| D 51621         | _   | _     | .2    | 13    | _<br>2                                    |
| D 51622         | l _ | _     | 3.8   | 9     | 5   |
| D 21622         | _   | _     | 3.0   | ,     |   |
| D 51623         | _   | -     | .1    | 13    | 4   |
| D 51651         | -   | _     | /22.4 | 3400  | 14  |
| D 51652         | 229 | 13121 | 165.6 | 22360 | 17  |
| D 51653         | _   | _     | 3.2   | 710   | 16  |
| D 51654         | 26  | 926   | 8.1   | 870   | 14  |
| D 51655         | 39  | 6570  | 47.3  | 6440  | 15  |
| D 51656         | _   | _     | 2.2   | 360   | 15  |
| D 51657         | _   | _     | 1.1   | 230   | 16  |
| D 51658         | _   | _     | 1.9   | 200   | 15  |
| D 51659         | -   | _     | 1.7   | 280   | 15  |
| D 51660         | _   | _     | 8.6   | 1640  | 15  |
|                 |     | _     | 1.5   | 370   | 17  |
| D 51661         |     | _     |       |       | and the first of the control of the first |
| D 51662         | _   | -     | 12.9  | 1730  | 15  |
| D 51663         | -   | -     | 18.5  | 2850  | 16  |
| D 51664         | -   | _     | . 4   | 220   | 18  |
| D 51665         | -   | -     | 11.7  |       | 16  |
| D 51666         | _   | -     | 24.3  | 3590  | 15  |
| D 51667         | -   | _     | .8    | 230   | 18  |
| D 51668         | _   | -     | 3.6   | 210   | 18  |
| D 51669         | -   | -     | 16.3  | 2910  | 21  |
| D 51670         | _   | _     | 6.2   | 540   | 21  |
| STANDARD C/AU-R | 57  | 40    | 7.2   | 540   |   |

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4469 Page 3

| SAMPLE# | ppm<br>Ag | Au*<br>ppb | SAMPLE<br>1b |
|---------|-----------|------------|--------------|
| D 51671 | 1.6       | 220        | 14           |
| D 51672 | . 4       | 17         | 22           |
| D 51674 | 2.5       | 280        | 21           |
| D 51675 | 30.3      | 4100       | 20           |

# I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4469 Page 4

| SAMPLE# | Ag<br>ppm | Au*<br>ppb |
|---------|-----------|------------|
| D 51570 | .3        | 12         |

# I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT FILE # 90-4469 Page 5

| SAMPLE# | Ag<br>ppm | Au* ppb | H.M.<br>% | H.M.   |
|---------|-----------|---------|-----------|--------|
| D 51569 | .2        | 4       | 3.37      | 305.90 |
| D 51616 |           | 6       | 1.32      | 78.10  |

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER B.C. VOA 1Ro

PHUNE (604) 253-3136 FAA (604) 233-1710

#### GEOCHEMICAL ANALYSIS CERTIFICATE

I.M. Watson & Assoc. Ltd. PROJECT SADIM-HIT File # 90-4784 816 - 675 W. Hastings St., Vancouver BC V6B 1N2

| SAMPLE#            | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm    | Zn<br>ppm | • | Ni<br>ppm | Co<br>ppm | Mn<br>ppm   | Fe As | D<br>D | Au<br>ppm | Th<br>ppm | Sr Co<br>ppm ppm      | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>%       |        | Cr Mg<br>ppm %   | Ba Tí<br>ppm %x  | ppm<br>B | Al<br>%    | Na<br>%    | К<br>% р   | .¥IAu*<br>pp _mop | ٠L |
|--------------------|-----------|-----------|--------------|-----------|---|-----------|-----------|-------------|-------|--------|-----------|-----------|-----------------------|-----------|-----------|----------|---------|--------------|--------|------------------|------------------|----------|------------|------------|------------|-------------------|----|
| D 51673<br>D 51951 | 1 9       |           | 4098<br>2498 |           |   | 7<br>5    |           | 990<br>4715 |       | 5<br>5 | ND<br>ND  | 1         | 163 216.6<br>267 79.5 |           | 2         | 13<br>11 |         | .126<br>.139 | 5<br>2 | 6 1.41<br>1 3.94 | 89 .01<br>21 .01 | 2<br>2   | .40<br>.17 | .02<br>.01 | .19<br>.10 | 1 14<br>1 26      | 7  |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY 1CP IS 3 PPM.