

# Shangri-La Minerals Limited

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RECONNAISSANCE SURVEYS

ON THE

HEDLEY PROJECT

FOR

AVENUE RESOURCES INC.

NTS 92H/8E

LONGITUDE: 120°02' WEST  
LATITUDE: 49°20' NORTH

BY

FRANK DI SPIRITO, B.A.Sc., P.Eng.

NIGEL HULME, B.Sc.

BRUCE LAIRD, B.Sc.

SHANGRI-LA MINERALS LIMITED

1 APRIL 1986

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## SUMMARY

A combined geological, geophysical and geochemical reconnaissance of the Hedley Project claims held by Avenue Resources Inc. was conducted by Shangri-La Minerals Ltd. from February 15 to March 14, 1986.

Several gold occurrences have been located, which display signs of economic potential. These include an adit within interbedded volcanics and sediments on the Hedley North claim, bodies of skarn on that claim, an area underlain by a sediment-granodiorite contact on the Reverted Crown Grants, a northerly trending skarn zone associated with granodiorite contact on the Winters Gold 2 claim, and a series of faults on the Winters Gold and Winters Gold 2 claims.

Soil geochemistry results are rather inconclusive. No significant gold anomalies have been located in the soils, although trends are locally identifiable. The property is situated less than two kilometres south of the Mascot-Nickel Plate orebody and surrounds a portion of the former French (Oregon) Mine, both of which display skarn-hosted gold mineralization. The geology of the property is characterized by interbedded limestones, argillites, and quartzites intruded by numerous andesitic sills and granodiorite. Mineralization is associated with contact metamorphism at sedimentary/intrusive contacts.

Geophysical studies have revealed the presence of numerous electromagnetic conductors that may be attributed to structural features such as faults and contacts, or possibly mineralized areas. Magnetic surveys have aided geologic mapping by positively defining lithological boundaries and suggesting the possible presence of anomalous concentrations of magnetic minerals such as pyrrhotite.

High analytical results ranging up to 49500 ppb gold are found in several geological environments on the property. A good potential for a skarn-hosted or a replacement type mineral deposit exists on the property.

It is recommended that an aggressive second phase of exploration be undertaken to assess the geometry and size characteristics of target areas and to test them by diamond drilling.

Respectfully submitted at Vancouver, B.C.

A circular professional seal for the Province of British Columbia. The outer ring contains the text "PROFESSIONAL ENGINEER" at the top and "PROVINCE OF BRITISH COLUMBIA" at the bottom. The center of the seal contains the name "Frank Di Spirito" in a cursive signature, followed by "Frank Di Spirito, B.A.Sc., P.Eng." in a sans-serif font. The date "1 April 1986" is stamped at the bottom of the seal.  
Frank Di Spirito, B.A.Sc., P.Eng.  
1 April 1986

**PART A****Introduction**

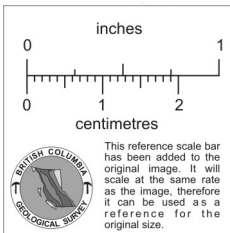
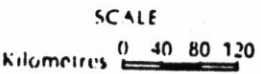
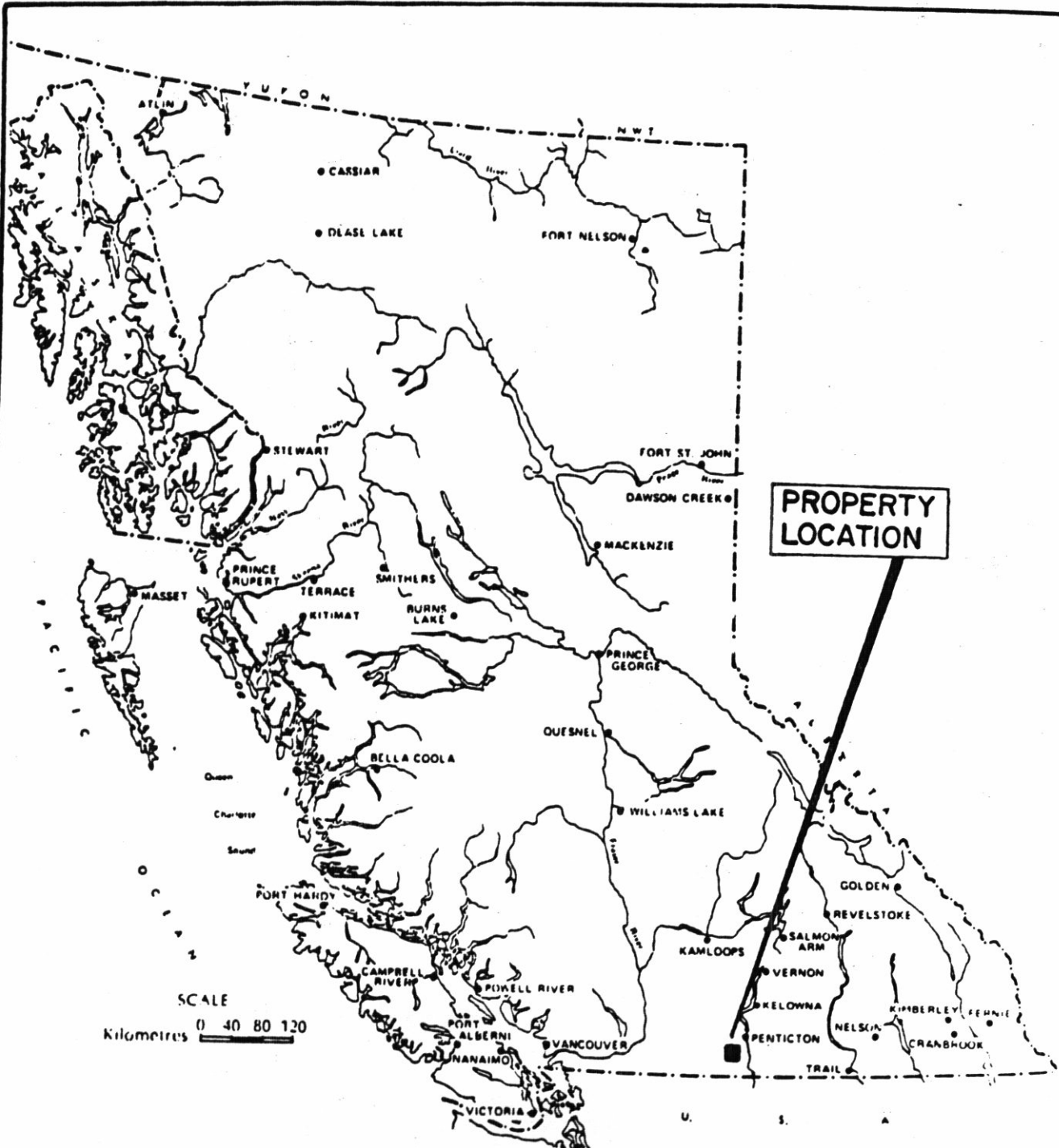
From February 15 to March 14, 1986 a program of permanent grid establishment, geological mapping, trenching, soil sampling, as well as a VLF-EM and a magnetometer survey, was conducted over the Hedley Project claims held by Avenue Resources Inc.

The purpose of this exploration program was to examine in detail an area of favorable geology adjoining the French Mine property and claims which are part of the Mascot-Nickel Plate Mine holdings.

This report summarizes the results of a program recommended by the author in February of 1986.

**Property Status**

The Hedley Project consists of seven Reverted Crown Granted claims, two fractional claims, and four located grid system claims.



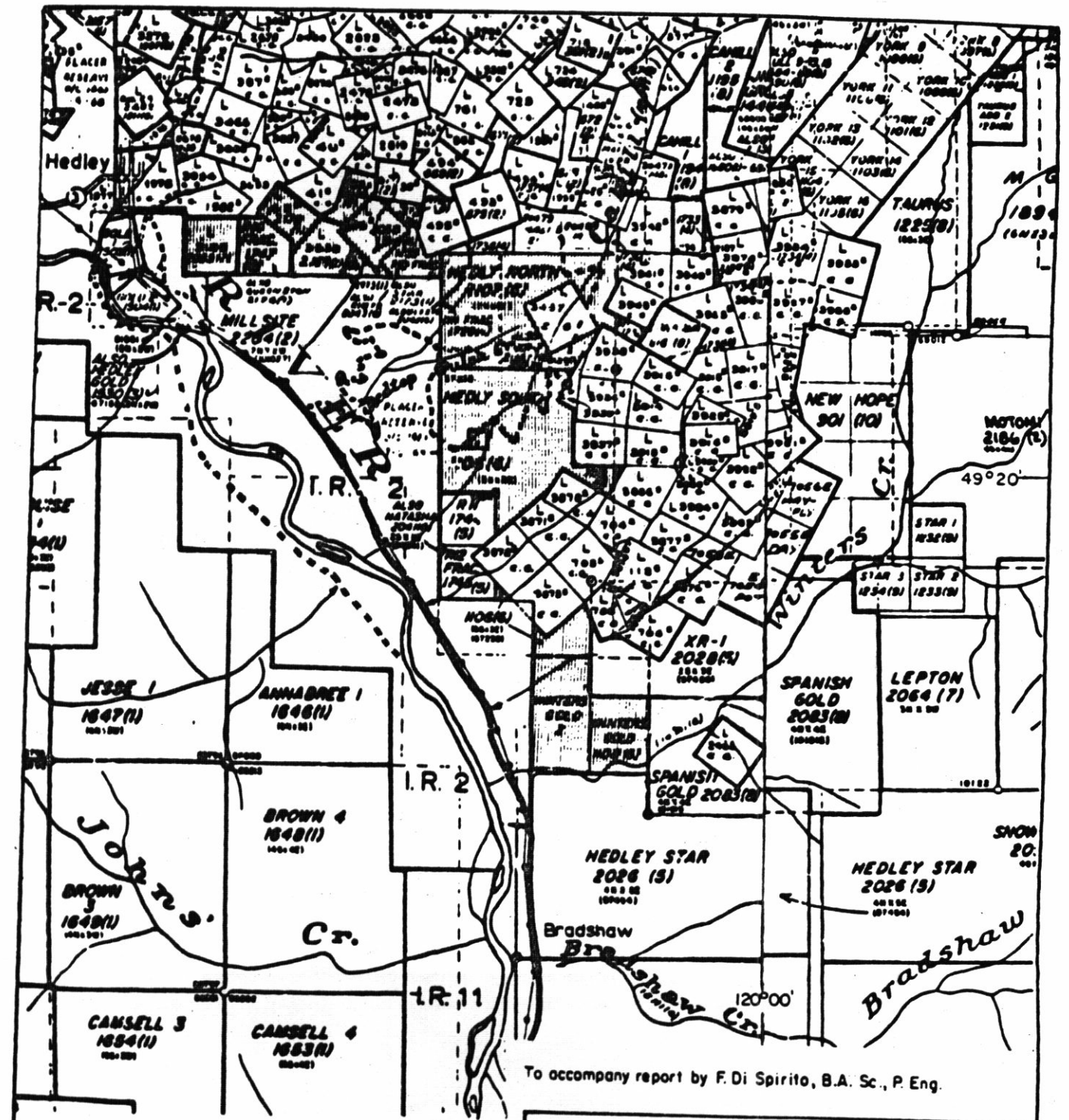
<b>HEDLEY PROJECT</b>	
<b>FOR: AVENUE RESOURCES INC.</b>	
<b>BY: SHANGRI-LA MINERAL LIMITED</b>	
<b>LOCATION MAP</b>	
<b>OSOYOOS M.D., B.C.</b>	
<b>N.T.S. 92H-8E</b>	<b>DATE: MARCH 1986</b>
<b>DRAWN BY: M R</b>	<b>FIGURE NO. 1</b>

TO ACCOMPANY REPORT BY F. DI SPIRITO, B.A. Sc., P. ENG.

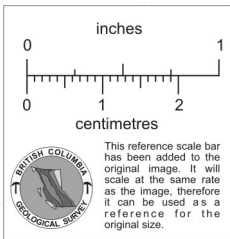
Particulars are as follows:

Name	Record No.	Lot No.	Anniversary	Area
Hedly North	2271		22 July/86	6 units
Hedly South	2272		22 July/86	15 units
Winters Gold*	2273		22 July/86	4 units
Winters Gold 2*	2389		6 Mar/87	4 units
Queenston Fr.	2174		21 Jan/88	4 units
Star Fr.	2173		21 Jan/87	1 unit
Redtop	2058	36S	13 July/87	20.61 Ha
Powell	2054	3102	13 July/87	20.90 Ha
Norfolk Fr.	2060	3539	13 July/87	11.86 Ha
Tower Fr.	2375	37S	3 Feb/87	5.09 Ha
Victor Fr.	2377	35S	3 Feb/87	3.16 Ha
Sweden Fr.	2371	42S	22 Jan/87	15.24 Ha
Stag Fr.	2370	3533	22 Jan/87	18.18 Ha

(\*) Subsequent to a preliminary evaluation of the property, it was noted that the Winters Gold claim was mislocated approximately 500 m to the east. In order to cover the original land position purchased, an additional claim, the Winters Gold 2, was staked.



To accompany report by F. Di Spirito, B.A. Sc., P. Eng.



SCALE 1:50,000



<b>HEDLEY PROJECT</b>	
FOR: AVENUE RESOURCES INC.	
BY: SHANGRI-LA MINERAL LIMITED	
<b>CLAIM MAP</b>	
OSOYOOS M.D., B.C.	
N.T.S. 92H-8E	DATE: MARCH 1986
DRAWN BY: M R	FIGURE NO. 2



### **Location and Access**

The Hedley project is comprised of a series of irregular shaped claims bordering the Chuchuwayha No. 2 Indian Reserve at Hedley, B.C. The northwestern portion begins approximately 500 metres east of the Hedley Townsite and extends along the reserve boundary up to the French Mine Crown Grants. The property also covers approximately 100 hectares beyond the former mine towards the south.

Access is best via a serviced gravel road that climbs the steep slopes of the Similkameen Valley and on to the Mascot-Nickel Plate, French, Goodhope, Canty and Strayhorse Mines. This road does not present any particular difficulties due to the level grades produced by the numerous switchbacks that have been built. But, it is also narrow and susceptible to hazardous rock falls from the cliffs above it. Yet, it is well travelled.

Avenue Resources Inc. has been approached by Mascot Gold Mines Ltd. with the suggestion of building a new and safer road to their proposed open pit gold mine due to open in 1987. Negotiations are proceeding on this matter. It is anticipated that Avenue shall incur no expenses related to the road.

The southernmost claims are located less than 200 metres from Provincial Highway No. 3. Road building along the lowest and highest elevations could be considered inexpensive. The majority of the intermediate ground is precipitous and would require rock blasting in numerous areas.

Generally, the property is easily accessible. Driving time from Vancouver is approximately four hours. The population centers of Princeton, Penticton and Osoyoos are all within one hour range.

### **History**

Placer gold workings in the 1860's led to the discovery of lode gold deposits on Nickel Plate Mountain in the 1897. The Nickel Plate Mine and the Hedley

Mascot Mine yielded about 1,760,000 oz. gold and 188,139 oz. silver. The Oregon (French) Mine yielded 52,000 oz. gold and 1,457 oz. silver.

The only record of work on the area covered by the Hedly North and South claims is that of three trenches and two pits excavated in 1982 near Cahill Creek. A short adit and numerous trenches were found on the Hedly North claim and the Reverted Crown Grants. No old workings were found on the Winters Gold claims.

Mascot Gold Mines Ltd., whose Nickel Plate orebody is situated less than two kilometres from the Hedley Project, has been developing their anticipated open pit gold mine since 1980. Expenditures on the project have been in the order of 10 million dollars. A further 43 million dollars is now being spent to develop an 1800 ton per day operation with a projected 11.5 year mine life.

## **PART B - SURVEY SPECIFICATIONS**

### **A) Grids**

A total of 6.150 kilometres of baselines and 70.325 kilometres of crosslines were surveyed.

Claim legal corner posts were used as bench marks with additional control points based on location of Crown Granted claim survey posts.

To facilitate future orientation on the property, the stations and baselines were marked with Tyvex plastic tags. All lines were established and slope corrected using compass, clinometer, altimeter and hip chains.

All lines are plotted as located in the field.

### **Hedly Grid**

Three baselines and two control lines were oriented at N45°E. Crosslines were run at right angles every 50 metres and stations established every 25 metres.

### **Winters Gold Grid**

Three parallel baselines were established, where topography permitted, and oriented at N45°E. Perpendicular crosslines were run every 100 metres and at 50 metre intervals along the lower elevations.

### **(B) VLF-EM Method**

The survey was conducted using a Sabre Electronics, Model 27, V.L.F. Electromagnetometer. This instrument acts as a receiver only. It utilizes the primary electromagnetic fields generated by the United States Navy V.L.F. marine communication stations. These stations operate at frequencies between 15 and 25 KHZ and have a vertical antenna-current resulting in a horizontal primary field. Thus, this V.L.F.-E.M. measures the dip angle of the secondary field induced in a conductor.

For maximum coupling, a transmitter station located in the same direction as the geological strike and/or the strike of possible conductors, is selected since the direction of the horizontal electromagnetic field is perpendicular to the direction of the transmitting station. In this case the transmitters at Seattle, Washington and Annapolis, Maryland were utilized.

Readings were taken at 25 metre intervals and the data was subsequently filtered as described by D.C. Fraser, Geophysics Vol.

34, No. 6 (December 1969). The advantage of this method is that it removes the DC and attenuates long spatial wave lengths to increase resolution of local anomalies. It also phase shifts the dip angle by  $90^\circ$  so that the cross-over and inflections will be transformed into peaks that yield contourable quantities.

To aid interpretation, only positive filtered dip angles were drafted. Positive values represent conductive zones.

#### **Magnetometer Method**

The survey was conducted using a Scintrex MP-2 Proton Precession Magnetometer. This instrument measures the magnitude of the total magnetic field of the earth to an accuracy of 1 gamma. Corrections for diurnal variation were made by tying into previously established stations and base stations at intervals not exceeding 30 minutes. Readings were taken at 25 metre intervals along the traverse lines. Diurnal variations ranged between 3 and 34 gammas with most changes observed over small periods of time. Some slight magnetic storm activity was reported on some days during the survey period.

#### **Geochemistry and Soil Survey Method**

A total of 880 soil and 88 rock samples were collected.

Soil samples were taken from the "B" horizon using a cast iron mattock. Samples of no less than 200 grams were placed in Kraft paper gusset bags and sun dried before selection and shipment to the laboratory. A total of 198 samples were analyzed by Acme Analytical Laboratories Ltd. using an Induction Coupled Plasma Spectrophotometer and Atomic Absorption (for gold).

### **Trenching Method**

A total of 7 cubic metres were excavated by pick and shovel to expose a slumped trench for geological evaluation.

## **PART C - GEOLOGY**

### **A) Regional Geology**

The Hedley district is underlain by a series of Triassic and slightly older sedimentary and volcanic rocks of the Nicola Group which have been intruded by igneous rocks of Jurassic and/or younger ages. The intrusive rocks consist of large bodies of granite and granodiorite and of smaller stocks of diorite and gabbro with innumerable sill and dyke apophyses.

The Nicola Group rocks have been sub-divided by various authors; this report follows those divisions as outlined by Bostock, 1940. The Triassic and older rocks of the region consist of the Bradshaw, Independence, Shoemaker, Old Tom, Redtop, Sunnyside, Hedley, Henry, and Wolf Creek Formations. These rocks form a large anticlinal fold whose axis strikes roughly north-south and whose continuity is broken by the bodies of igneous rocks. The Bradshaw, Independence, Shoemaker and Old Tom Formations comprise the east limb and dip moderately to the southeast. The west limb is formed by the younger Redtop, Sunnyside, Hedley, Henry and Wolfe Creek Formations. The Hedley project area is situated on a portion of the west limb.

## TABLE OF FORMATIONS

Quaternary.....	Stream and glacial deposits.
Early Cretaceous-.....	Granite
Late Jurassic	Granodiorite. Composing the batholith forming the base of Nickel Plate Mountain.
Jurassic.....	Diorite-gabbro Complex. Comprising stocks with innumerable sill and dyke apophyses. The andesite sills in the project area are a member of this complex.
	Wolfe Creek Formation. Consisting of andesite and basalt, breccia and tuff, and minor sediments.
	Henry Formation. Consisting of black argillite, tuff and impure limestones
Triassic.....	Hedley Formation. Consisting of massive limestone, argillite, breccia, and interbeds of limestone, quartzite, and argillite. The productive Nickel Plate and Mascot orebodies were located within this formation
	Sunnyside Formation. Consisting of limestone and minor argillite-quartzite interbeds.
	Redtop Formation. Consisting of interbedded argillite, limestone, and quartzite, volcanics, and minor breccia, resting on massive limestone.
Early Triassic or older.....	Old Tom Formation. Consisting of basalt, andesite, and minor chert.
	Shoemaker Formation. Consisting of chert, tuff, greenstone and limestone.
	Independence Formation. Consisting of chert, chert breccia, argillite, basalt, andesite, quartzite and limestone.
	Bradshaw Formation. Consisting of argillite, tuff, quartzite, breccia, andesite, and limestone.

**(B) Property Geology**

The area of the claims is underlain by rocks of the Triassic Hedley, Sunnyside and Redtop Formations, and cut by Jurassic sills and a Late Jurassic or Early Cretaceous granitic intrusion.

**Redtop Formation (Unit 1)**

The rocks of the Redtop Formation, the oldest rocks in the claim group, consist of: a basal limestone unit (1d) with minor marble lenses (1e); volcanic rocks of andesitic to dacitic composition (1b); breccia horizons with fragments of sediments and volcanics (1c); and an upper unit of interbedded argillites, limestones and quartzites (1a).

White and black, thin (up to 15 cm thick) bands of fine-grained argillite and quartzite with limestone horizons up to 0.5 m thick form the top of the Redtop Formation (1a). This unit is very similar to the base of the overlying Sunnyside Formation and probably grades into it, leaving the contact between the Redtop and the Sunnyside Formations poorly defined. On the W.G. grid the majority of the outcrops consist of this unit and include a chert pebble conglomerate member and argillites which are metamorphosed to hornfels.

Porphyritic volcanic flows of andesitic to dacitic composition (1b) with phenocrysts of plagioclase up to 3 mm long occur near the base line on the WG grid and across the northern portion of Hedley North. The rock is generally fine-grained, black to pale green, and may contain plagioclase phenocrysts. The pale green volcanics often resemble sandstone in hand specimen.

Breccias (1c) containing fragments of plagioclase porphyritic andesite, argillite and quartzite up to 6 cm across and supported in a matrix of diopside, and epidote are found in the vicinity of Adit A. The majority of

the fragments are volcanic.

Grey, granular, massive limestone (1d) with rare disseminated pyrite and a foetid odor when broken, outcrops in the northwest corner of the Hedly North claim and the south central portion of the WG grid. The base of the limestone rests on top of granodiorite (5).

Thin lenses of white, coarse-grained marble (1e) are found in the northwest corner of the Hedly North claim in contact with limestone (1d), volcanics (1b) and breccia (1c).

### **Sunnyside Formation (Unit 2)**

The Sunnyside Formation is divided into two units, a distinct massive limestone unit and a basal unit of interbedded argillites and quartzites.

Grey, granular, massive limestone (2a) with rare disseminated pyrite and a foetid odor when broken, is found on the Reverted Crown Grants. This rock often forms cliffs such as those northwest of B.L.C.G.

Fine-grained white and black strongly silicified band up to 6 cm thick of argillite and quartzite (2b) form the base of the Sunnyside Formation. These rocks are very similar to the rocks at the top of the Redtop Formation, masking a definite contact between the two formations.

### **Hedley Formation (Unit 3)**

The Hedley Formation outcrops on the western edge of the Hedly grid and on the property consists of argillite (3a), breccia (3b), and interbedded limestone, quartzite, and argillite (3c).

The argillite (3a) is a fine-grained black rock with lightly disseminated with pyrite. It has been strongly silicified and fractures conchoidally



when broken with a hammer.

The breccia (3b) is present as a horizon approximately 5 m thick. It is composed of angular fragments averaging 0.5 mm to 2 cm in size, but which can be as large as 10 cm and are set in a matrix consisting of diopside, sodium-rich scapolite, calcite, and minor quartz. The fragments consist largely of light green volcanoclastics, purplish plagioclase porphyritic intermediate volcanics, and lesser fragments of argillite. Pyrite and pyrrhotite are present as disseminations and clots up to 3%; chalcopyrite is rare.

Interbedded limestone, quartzite, and argillite (3c) comprise the remainder of the Hedley Formation on the property. The limestone varies from 0.1 m to 1 m wide and occasionally thicker beds of grey weakly cemented calcite. The argillite consists of 2 cm wide beds of fine-grained, dark grey silicified rock. The quartzite is dark green to black in colour, forming thicker beds near the northwestern edge of the Hedley grid.

#### **Intrusive Rocks (Units 4 and 5)**

Two types of intrusive rocks cut the sedimentary package. Unit 4 consists of a series of andesitic sills up to 3 m thick and Unit 5 is a large granodiorite batholith.

Light to dark green, medium to fine-grained sills (4) with hornblende phenocrysts (up to 1.5 mm long), plagioclase phenocrysts (up to 3 mm long) and up to 10% pyrrhotite are found throughout the sedimentary rocks, although more commonly found in the northwestern area, and appear to have been intruded along bedding planes. The sediments along the margins of the sills show a narrow band of strong silicification. Locally, these sills appear basaltic.

Medium to coarse-grained granodiorite (5) with up to 10% biotite covers

much of the area from Redtop Gulch to the east of Cahill Creek and outcrops along the western edge of the W.G. Grid A band of granodiorite trending NNW cuts across the Reverted Crown Grants. The sediments in contact with the granodiorite are strongly silicified with the limestones altered to skarn.

### **Structure**

The rocks of the project area form the western dipping limb of a broad anticline. The general trend is to the northeast with moderate to steep dips to the northwest. Interpretation of VLF-EM data indicates a possible fault coincident with Cahill Creek, on the Hedly North and South claims. Folding is found on a local scale within the sedimentary and volcanic packages. Minor faults generally north to northeasterly trending and steeply-dipping to the west are locally found.

Folding or crumpling of the sediments is observed in the northern portion of the Reverted Crown Grants. Here, both the sediments and the intruding sills have been gently folded. The general trend of these rocks is to the northeast with moderate dips to the northwest. West of this, the trend of the rocks swings around to the northwest dipping shallowly to the northeast. The strata found on the W.G. grid trends approximately 20° east of north dipping moderately to steeply to the west.

Steep west dipping northerly-trending faults are found in the vicinity of Adit A. Faults on the W.G. grid occur near the baseline and trend northeast and dip steeply to the northwest.

### **Alteration and Mineralization**

Alteration in the project area consists of silicification of the argillites and quartzites, and to a lesser degree of the limestone (consisting of the formation of a 5 cm wide silicified skin at sill contacts), and of the formation of skarns near limestone - granodiorite contacts. All

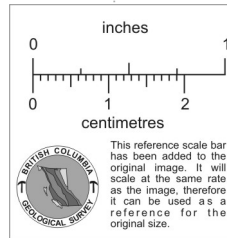
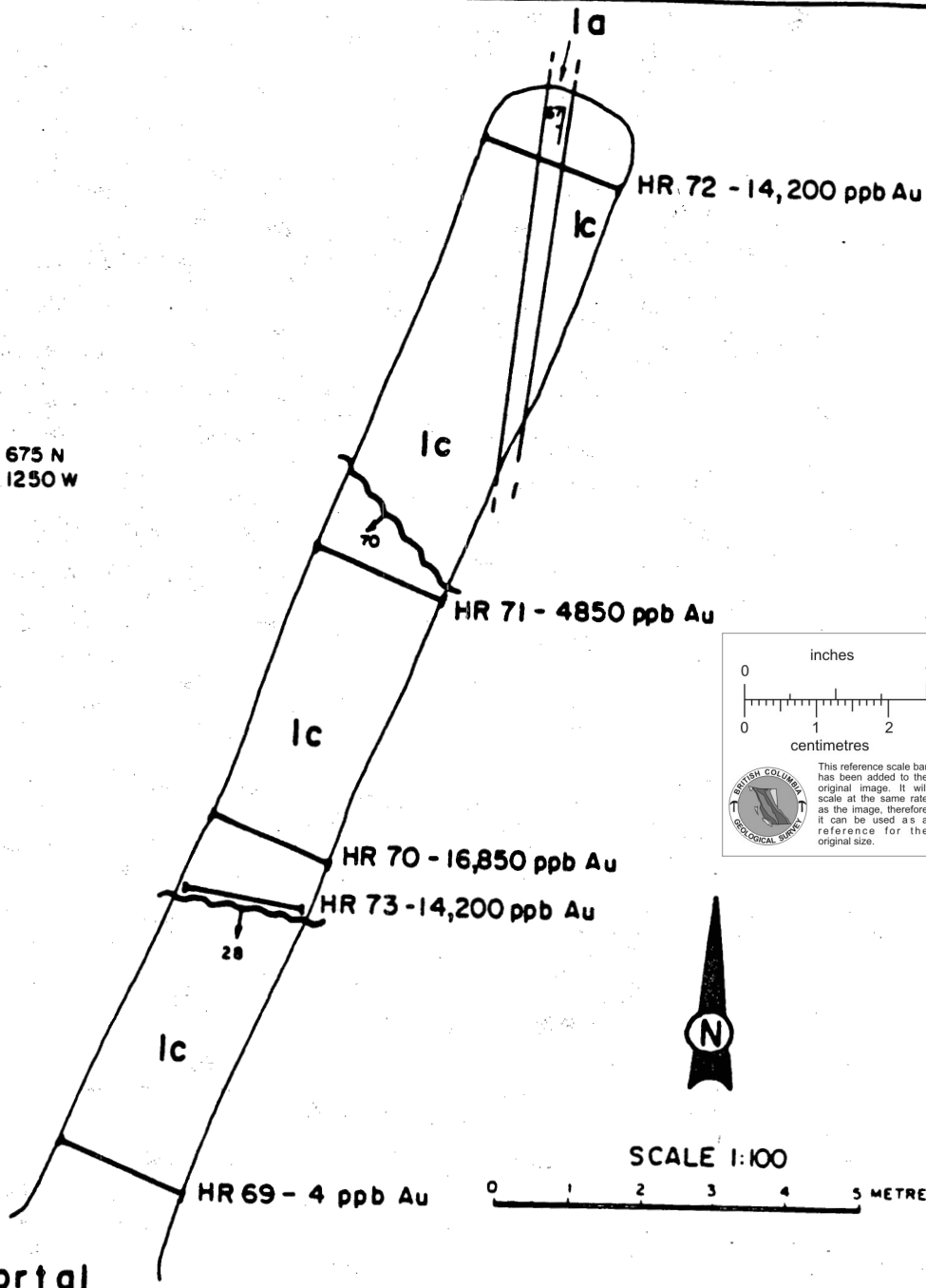
alteration is due to contact metamorphism and metasomatism resulting from the intrusion of the andesite sills and the granodiorite.

Four bodies of skarn are present on the Hedly grid. These are located in the central and northwestern portions of the Hedly North claim, and on the Reverted Crown Grant L3539. A northerly trending body is also present on the Winters Gold 2 claim (on trend with the French Mine, but separated by granodiorite), as well as light skarn on the Winters Gold claim. The skarns are generally mottled light and dark green, and weather to a light brown colour. They consist of red-brown fine-grained masses and imperfect crystals of grossularite, rare light green fibrous aggregates of wollastonite, minor calcite, and argillaceous fragments in a fine-grained siliceous matrix. The presence of diopside is the probable cause of the overall green colour. Scapolite is also present in minor quantities.

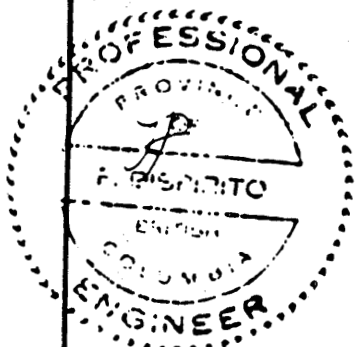
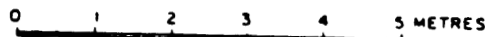
The skarns are usually mineralized with disseminations of pyrite and pyrrhotite, lesser arsenopyrite, and rare galena and chalcopyrite. Old trenches show that the skarns have been examined in the past. The assay results of samples from the skarn on the Hedly grid show some correlation between gold, lead, silver, and arsenopyrite. This is not evident from samples of skarn from the W.G. grid. Gold values from the skarns ranged from a low of 1 ppb to a high of 9800 ppb (0.29 oz/ton) with the majority falling in the 1000 ppb to 4000 ppb range.

One adit (Figure 4) has been previously excavated on the property. The adit is located at LH 675W, 1225W. Consisting of a short tunnel 17 m long, it explores an outcrop of rusty weathering breccia composed of plagioclase porphyritic volcanic fragments and lesser argillite fragments which is interbedded with a narrow horizon of the Redtop Formation which strike to the north and dip moderately westward. Two faults trending  $100^{\circ}/27^{\circ}\text{S}$  and  $140^{\circ}/70^{\circ}\text{SW}$  are present. Chip samples across the 2 m width of the adit (HR 69 to 73) assayed 4 ppb Au (HR 69), 0.49 oz/ton Au (HR 70), 0.14 oz/ton Au (HR 71), 0.18 oz/ton Au (HR 72), and 0.41 oz/ton Au (HR 73, fault gouge). All

⊕ LH 675 N  
1250 W



SCALE 1:100



To accompany report by F. Di Spirito, B.A. Sc., P. Eng.

**LEGEND**

- REDTOP FORMATION
  - la argillite - limestone - quartzite interbeds
  - lc breccia
- STRIKE & DIP
- FAULT WITH DIP
- GEOLOGICAL CONTACT
- HR 71 CHIP SAMPLE LOCATION & NO.

<b>HEDLEY PROJECT</b>	
FOR: AVENUE RESOURCES INC.	
BY: SHANGRI-LA MINERAL LIMITED	
<b>ADIT A</b> <b>GEOLOGY &amp; ROCK CHIP SAMPLE</b> <b>LOCATIONS</b> OSOYOOS MD., B.C.	
N.T.S. 92H-8 E	DATE: MARCH 1986
DRAWN BY: B.L.N.H.	FIGURE NO. 4

samples are disseminated with pyrrhotite. Approximately 350 m to the south of this adit limestone of the Redtop Formation has been intruded by plagioclase porphyritic rock of andesitic composition tentatively correlated with Unit 4. This may be continuation of the breccia located at the adit. Samples HR 74 to 76 are of the andesite and assayed 33 ppb Au, 54 ppb Au, and 0.23 oz./ton Au, respectively. Pyrrhotite is disseminated throughout, and trace arsenopyrite was noted in HR 76. The limestone was also sampled here (HR 78) and assayed 46 ppb Au. Numerous 1-2 cm wide fractures are present in the andesite which are filled with a light grey powder at first thought to be scorodite. A sample of this powder (HR 77) assayed 10 ppm arsenic (therefore, it is not scoridite), 0.51 oz./ton Ag and 1.44 oz/ton Au. The high concentration of gold is attributed to a leaching effect of water.

A trench is located at LH 75N 2025W where rocks of the Redtop Formation (interbedded limestone, argillite, and quartzite) are in contact with granodiorite. Massive sulphide float was sampled here; the rock was heavily mineralized with pyrrhotite, pyrite and lesser arsenopyrite (HR 16, 17 and 26). The samples assayed 0.055 oz./ton Au, 0.72 oz/ton Au, and 0.23 oz/ton Au. The massive sulphides were only present as float. Samples of the outcrop assayed 0.17 oz/ton Au (HR 15, grab), 0.13 oz/ton Au (HR 24, 50 m wide chip sample) and 0.004 oz/ton Au (HR 25, 150 m wide chip sample). Several of the trench samples are anomalous in bismuth; gold mineralization at the French Mine is associated with a bismuth telluride (Jones, 1982).

A series of 3 trenches present at L150N, 2300W explore argillite - quartzite-andesite contacts. Samples from these trenches (HR 60, 61, 62) assayed low in gold. A trench at LH 50S, 2570W in breccia of the Hedley Formation was also sampled (HR 53). This sample contained up to 5% disseminated pyrrhotite and trace chalcopyrite and assayed 0.11 oz/ton Au. Another trench which explored the same type of contact is located at LH 75N 2350W. A sample from this trench (HR52) assayed 31 ppb Au.

Mineralization on the W.G. Grid does not seem to conform to a single rock type but is found close to the granodiorite contacts in altered limestone and quartzite. Samples near the contact range from 1 ppm Au to 15,200 ppb Au with most in the 1000 to 3000 ppb range. Samples from faults found near the baseline also returned anomalous Au values between 3000 and 5500 ppb.

Samples WGR 9, 13, 19, and 21 show a strong correlation between lead, silver, arsenic and gold values. All these samples are from near the granodiorite contact.

### (C) Discussion

Several areas of interest were discovered in the project area. These are located at the vicinity of Adit A, where high gold values were found in a body of breccia which may extend 350 m to the south where andesitic rocks intrude limestone of the Redtop Formation and where high gold values were also found. Another area is at LH 75N, 2025 W, where massive sulphides are located in a trench located at the contact of limestone-argillite-quartzite and granodiorite.

The western portion of the Hedley grid (Reverted Crown Grants) is also considered to be a favourable environment for mineralization because of the large number of sills which are related to the diorite-gabbro complex of the Nickel Plate and Mascot mines. The breccia in this area may be related to the Climax Breccia as described by Billingsly and Hume (1941). Thin section examinations of this breccia have confirmed the presence of scapolite, which has been shown to be associated with the mineralization of the Nickel Plate and Mascot orebodies. Although stratigraphically below the Nickel Plate and Mascot orebodies, it is felt that the Hedley Project is a favourable environment because of high gold values in rocks analyzed. The presence of the numerous sills and the close proximity of granodiorite has been demonstrated in this report to have some effect on mineralization.

The northerly-trending body of skarn on the WG grid may be a continuation of the skarn of the French Mine, in which case it would also be a favourable area for mineralization. The limestone-quartzite beds are also similar to those of the French Mine.

The skarns found on the Hedly and WG grids were formed as a result of the intrusion of granodiorite. Gold mineralization is present here, and seems to be associated (in the Hedly grid) with arsenopyrite and galena.

#### **PART D - DISCUSSION OF GEOCHEMICAL RESULTS**

Although no detailed interpretation of the geochemical results can be made due to the limited number of samples analyzed (198), some points can be made:

##### **Hedly Grid**

Slightly higher values in gold, silver and arsenic are present on LH 50N, from 2075W to 1750W. These may reflect mineralization associated with the sediment-granodiorite contact present in that area. Values also appear slightly anomalous further to the west on LH 50 N and also to the south. Mineralization associated with the intrusion of andesitic sills may be the cause of the higher geochemical values in this location. Geochemical results from areas underlain by bodies of skarn on the Hedly North claims are inconclusive. Isolated highs of gold, silver, arsenic and copper are present. Samples collected over the granodiorite show a high gold and silver at LH 1200N 275W (possibly due to contamination from the road), and isolated gold highs at LH 1200N 50E, and LH 200N 150W.

### **WG Grid**

An isolated gold and arsenic high is located at LW 900N 450W, near a sediment-granodiorite contact. An area underlain by skarn and a fault in the southwest corner of the grid are anomalous in arsenic and copper. Anomalous values in arsenic are present to the east on LW 900N. The area underlain by skarn in the southeast is also anomalous in arsenic and copper.

## **PART E - DISCUSSION OF GEOPHYSICAL RESULTS**

### **Magnetometer Survey**

The total magnetic field recorded over the property ranges between about 57,000 and 58,000 gammas, a total variation of over 1,000 gammas. The readings over about 57,500 gammas appear to correspond to granodiorite, while values below about 57,500 gammas correspond to sedimentary rocks. Thus, generally the magnetic field readings reflect the relative thickness of the sedimentary section overlying the granodiorite.

An area with no outcrop, situated along baseline HS-00 centred at about LH-00, correlates to a magnetic low suggesting the presence of a sedimentary section or an alteration zone. This magnetic low also correlates to a VLF-EM conductor.

A strong magnetic gradient located about 250 metres west of baseline - HN defines a clear contact between the granodiorite and the Redtop Formation. This contact is also apparent in the WG grid about 50 metres east of 500W-T.L.



### **VLF-Electromagnetic Survey (Seattle)**

Several northeast-southwest trending VLF-EM conductors have been outlined by the present survey. A number of moderate strength VLF-EM conductors, between 50 and 150 metres in length appear in the northwest portion of the property, and correlate to an area of anomalous gold values in rock specimens.

A VLF-EM conductor labelled - A on Figure 9A, possibly 200 metres in length, and open to the northeast, corresponds to a contact and is in close proximity to a skarn. About 100 metres to the northwest of conductor - A, another conductor correlates directly to a skarn area.

VLF-EM conductor - B correlates directly to Cahill Creek and a coincident magnetic low. Conductor - B may represent a fault or shear zone, possibly over 1 kilometre in length.

VLF-EM conductor zones C and D are a linear trend of conductors parallel to conductor -B. The conductors in zone C and D have been defined between 50 metres to 300 metres in length.

The depth to the top of the conductors outlined is within 50 metres of surface.

**VLF-EM ELECTROMAGNETIC SURVEY (ANNAPOLIS)**

The VLF-EM data collected utilizing the transmitter located at Annapolis, Maryland is shown on Figures 4, 4A, 6 and 6A. The Fraser filtered dip angles above +10 degrees are considered anomalous. Several anomalies of about 100 metres in length and arising from sources of less than 50 metres subsurface have been outlined.

It is apparent from the shape of the contours that the structural trend on both the Hedley grid and the Winters Gold grid is not in the direction of the Annapolis transmitter. That is to say, the geology does not strike in a southeast-northwest direction. This is confirmed by the data collected using Seattle, Washington as the VLF-EM transmitting station, where several long linear conductors were uncovered.

Exploration targets corresponding to VLF-EM anomalies should be thus established by using the data from the Seattle transmitter. The general trend of the geologic structures and VLF-EM conductors appear to be southwest-northeast.

**CONCLUSIONS AND RECOMMENDATIONS**

A review of the data compiled on the Hedley Project suggests a number of targets worth investigating.

1) **Adit A**

Significant widths and grades of samples collected from this adit makes this zone a viable target. This zone may continue approximately 300 m to the south.

2) **Sediment-granodiorite contact on Reverted Crown Grants.**

Relatively higher soil geochemical results, and the presence of massive sulphide mineralization associated with the sediment-granodiorite contact, indicate that this is also a favourable area for mineralization.

3) **Skarn bodies on Hedly and WG grids**

Several rock samples collected from the skarns returned anomalous values in gold. Areas of skarn are also associated VLF-EM conductors. In the general property area, all economic deposits to date have been hosted in skarn.

4) **Cahill Creek is coincident with a long VLF-EM conductor and a magnetic low. This suggests a possible fault zone with associated alteration.**

**ESTIMATED COST OF PROPOSED EXPLORATION PROGRAM**

It is recommended that a second phase of exploration be conducted in order to better define the economic potential of the gold occurrences that have been located on the Hedley Project.

Phase II exploration is advised as follows:

Test drilling, allow	\$ 60,000.00
Induced Polarization Surveys, say	15,000.00
Geological support, allow	10,000.00
Assays, allow	10,000.00
Trenching, access road and drill pad construction	15,000.00
Engineering, supervision and report	7,500.00
Logistics and contingencies	7,500.00
	<hr/>
	\$ 125,000.00
	=====

Contingent on favorable results during the second phase of work, a sum of up to \$ 250,000.00 could be allocated to determine geometry and grade characteristics of the best target areas.

Respectfully submitted at Vancouver, B.C.

*Frank Di Spirito*  
 PROFESSIONAL ENGINEER  
 FRANK DI SPIRITO, B.S.Sc., P.Eng.  
 1 April 1986  
 PIONEER

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Golden North Resources Corp; Mascot Gold Mines Ltd.; Zurich Energy Corp.

**APPENDIX 'A'**

**COST BREAKDOWN OF PHASE I PROGRAM**

**VLF-EM SURVEY**

a) Seattle, Washington Tx: 70.325 km @ \$ 135.00/km \$ 9,493.88  
b) Annapolis, Maryland Tx: 33.00 km @ \$ 135.00/km 4,455.00

**MAGNETOMETER SURVEY 70.325 km @ \$ 130.00/km 9,142.25**

**GRID ESTABLISHMENT**

- baselines 6.15 @ \$ 300/km 1,845.00  
- crosslines 70.325 km @ \$ 100/km 7,032.50

**GEOLOGICAL MAPPING, RESEARCH, PETROGRAPHICAL STUDIES**

- N. Hulme, B.Sc., 46 days @ \$225.00/day 10,350.00  
- B. Laird, B.Sc., 46 days @ \$175.00/day 8,050.00  
- J. Getsinger, PhD., (Petrographic Consultation) 250.00

**REPORT PREPARATION, DRAFTING, COPYING 1,950.00**

**COMPUTER ENHANCED COLOUR GRAPHICS (Geophysical Surveys) 3,250.00**

**ENGINEERING AND INTERPRETATION 3,950.00**

**GEOCHEMICAL ANALYSES 198 soils @ 10.75 each 1,915.65**  
**88 rocks @ 14.75 each 1,298.00**

**SOIL SAMPLING, 880 SAMPLES @ \$ 7.00 each 6,160.00**

**\$ 69,142.28**  
=====

**APPENDIX 'B'**

**CERTIFICATES**

**FRANK DI SPIRITO, B.A.Sc., P.Eng.**

**NIGEL HULME, B.Sc.**

**BRUCE LAIRD, B.SC.**

## CERTIFICATE

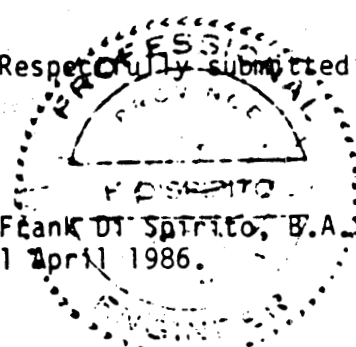
I, Frank Di Spirito, of the City of Vancouver in the Province of British Columbia, do hereby certify:

That I am a Consulting Engineer with the firm of Shangri-La Minerals Ltd. of 200-675 West Hastings Street, Vancouver, B.C., V6B 4Z1.

I further certify that:

- I) I am a graduate of the University of British Columbia (1974) and hold a Bachelor of Applied Science in Geological Engineering.
- II) I am a registered member, in good standing, of the Association of Professional Engineers of British Columbia.
- III) Since graduation I have been involved in numerous mineral exploration programs throughout Canada and the United States of America.
- IV) This report is based on a personal property examination conducted in November of 1985 and February of 1986, and on an evaluation of privately and publicly held data pertaining to the said properties.
- V) Neither I nor Shangri-La Minerals Ltd. hold any direct or indirect interest in the property described herein, or in Avenue Resources Incorporated, or any associated companies, nor do we expect to receive any.
- VI) This report may be utilized by Avenue Resources Incorporated for inclusion in a Prospectus or Statement of Material Facts.

Respectfully submitted at Vancouver, B.C.

A circular professional seal for a registered professional engineer in British Columbia. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" and "BRITISH COLUMBIA". The inner circle contains the name "FRANK DI SPIRITO" and the number "10000".  
FRANK DI SPIRITO, B.A.Sc., P.Eng.  
1 April 1986.

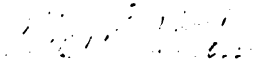


## CERTIFICATE

I, Nigel J. Hulme, do hereby certify:

- I) I am a Consulting Geologist, with the firm of Shangri-La Minerals Limited at 200-675 West Hastings Street, Vancouver, B.C., V6B 4Z1.
- II) I graduated in 1982 from Carleton University, Ottawa, Ontario with an Honours B.Sc. in Geology.
- III) I have been involved in mineral exploration since 1979.
- IV) This report is based upon field work carried out by this author and a Shangri-La Minerals Limited crew between February 15 and March 14, 1986.
- V) I hold no direct interest or indirect interest in the property, or in any securities of Avenue Resources Incorporated, or in any associated companies, nor do I expect to receive any.
- VI) This report may be utilized by Avenue Resources Incorporated for inclusion in a Prospectus or Statement of Material Facts.

Respectfully submitted at Vancouver, B.C.

  
Nigel J. Hulme, B.Sc.  
1 April 1986

## CERTIFICATE

I, Bruce L. Laird, do hereby certify:

- 1) I am a Consulting Geologist with the firm of Shangri-La Minerals Limited situated at 200-675 West Hastings Street, Vancouver, B.C., V6B 4Z1
- 2) I graduated in 1984 from the University of British Columbia, Vancouver, British Columbia, with a B.Sc., (geology) degree.
- 3) I have been involved in mineral exploration since 1980.
- 4) This report is based on field work carried out by this author and a Shangri-La Minerals Limited crew between February 15, 1986 and March 14, 1986.
- 5) I hold no direct interest, or indirect interest in the property, or in any securities of Avenue Resources Incorporated, or in any associated companies, nor do I expect to receive any.
- 6) This report may be utilized by Avenue Resources Incorporated for inclusion in a Prospectus or Statement of Material Facts.

Respectfully submitted at Vancouver, B.C.



Bruce L. Laird, B.Sc.  
1 April 1986

**APPENDIX 'C'**

**SAMPLE DESCRIPTIONS**

**THIN SECTION DESCRIPTIONS**

**ANALYTICAL RESULTS**

## SAMPLE DESCRIPTIONS

- HR 1: LH 1475N, 650S Grab sample  
Sample of iron-stained fracture in volcanics of Redtop Formation. Fracture varies from 2 to 5 mm wide, rock is bleached 5 mm on both sides.
- HR 2: LH 550N, 1895W Grab Sample  
Fine-grained, siliceous, grey rock, possibly silicified argillite. Gives conchoidal fracture when broken with hammer. 3% disseminated pyrrhotite.
- HR 3: LH 140S, 2550W Grab Sample  
60 cm wide andesite sill at base of limestone. Contains 3 mm sized hornblende and smaller plagioclase. Rock has rusty weathered surface, a grey fresh surface and is siliceous. Contains 2-3% disseminated pyrite and pyrrhotite.
- HR 4: LH 170S, 2540W Grab Sample  
Sample of 2 x 3 m lense of siliceous rock. Rusty brown weathered surface, grey, purple-grey, and greenish semi-translucent fresh surface. 2% pyrite and pyrrhotite in blebs. Possible skarn.
- HR 5: LH 170S, 2540W Grab Sample  
Altered limestone containing veins of wollastonite in radiating aggregates. 1% pyrite and rare chalcopyrite are associated with the wollastonite.
- HR 6: LH 1805S, 2625W Grab Sample  
Silicified limestone and argillite containing 1% pyrite and pyrrhotite. Wollastonite is present within the limestone. Located beneath andesite sill.
- HR 7: LH 230S, 2415W Grab Sample  
Chilled margin of andesite sill. Contains 6 mm long phenocrysts of hornblende and 1 to 2 mm sized equant plagioclase. Sill has rusty brown weathered surface and grey fresh surface. 3% pyrite and pyrrhotite in fractures and as powdery clots.
- HR 8: LH 230S, 2415W Grab Sample  
Limestone in contact with sill. The limestone is mottled grey in colour and consists mainly of weakly cemented calcite crystals 1/2 to 3 mm large. Lighter grey and white patches give off sulphurous odour. Adjacent to the sill the limestone has a 5 cm wide silicified zone. No visible sulphides.
- HR 9: LH 10N 2095W Grab Sample  
Black and red-black microcrystalline quartz with rusty weathered surface. <1% pyrite in streaks. Possibly altered argillite or basalt.

- HR 10: LH 20S 2075W Grab Sample  
Grey microcrystalline quartz with rusty weathered surface. 2% clots and streaks of pyrite.
- HR 11: LH 40S 2075W Grab Sample  
Rusty weathering grey to purple-grey microcrystalline quartz. Up to 5% disseminated pyrite and pyrrhotite.
- HR 12: LH 480N 2000W Grab Sample  
Silicified argillite near contact with andesite sill. Dark and light grey in colour, <1% disseminated pyrite.
- HR 13: LH 420N 1985W Grab Sample  
Plagioclase porphyry sill (diorite). Grey-green fresh surface, rusty weathered surface. Equant plagioclase is 2 mm size. 1% pyrite is disseminated and in streaks.
- HR 14: LH 225N 2000W Grab Sample  
2 cm wide rusty horizon within interbedded limestone and argillite. Light and dark grey microcrystalline quartz with 1-2% disseminated pyrrhotite and pyrite.
- HR 15: LH 75N 2025W (Trench) Grab Sample  
Contact area of granodiorite and sediments. Sample contains bleached granodiorite and argillitic rock. Up to 10% disseminated pyrite.
- HR 16: LH 75N 2025W Grab Sample, trench float  
Heavily mineralized dark green rock (possible skarn). Up to 40% pyrite, pyrrhotite, and arsenopyrite in a branching network. High S.G.
- HR 17: LH 75N 2025W Grab Sample, trench float  
Yellowish weathering altered rock with disseminated pyrite. Massive granular pyrite in cavities, up to 80%. <3% arsenopyrite.
- HR 18: LH 700N 1185W Grab Sample  
Small skarn containing particles of argillite. Light green fresh surface, very siliceous, scattered fine-grained masses of garnet. 2-3% disseminated pyrrhotite and pyrite.
- HR 19: LH 750N 1175W Grab sample from trench  
Sample of skarn. Rock has mottled light to dark green, black, and light grey fresh surface, and a brown weathered surface. Contains granular grossularite, fragments of argillite and basalt, 2% pyrrhotite and trace chalcopyrite. Silicified.
- HR 20: LH 815N 1100W Grab Sample  
Sample of skarn. Mottled light to dark green fresh surface, to brown weathered surface. Grossularite in fine-grained masses and partial crystals. Crystal masses of calcite. Contains 1% pyrrhotite.

- HR 21: LH 850N 1075W Grab Sample  
Sample of skarn. Mottled pink, black, and light to dark green fresh surface, grey-brown weathered surface. Green colour is possibly due to diopside. Sample contains small argillite fragments, fine-grained garnet masses (grossularite) and <1% sulphides - pyrrhotite and possibly galena.
- HR 22: LH 870N 1075W Grab Sample  
Sample of light brown weathering skarn. The fresh surface is mottled light and dark green. Grossularite is present as red-brown masses and imperfect crystals. Sulphides are <1%, mainly pyrrhotite and trace galena and chalcopyrite.
- HR 23: LH 950N 1050W Grab sample from trench  
Sample of skarn with mottled light and dark green fresh surface. Sample contains a few argillite fragments, garnet is not evident. <1% pyrrhotite.
- HR 24a: LH 950N 1050W Grab sample from trench  
Sample of buff to grey weathering skarn with mottled light and dark green and red/purple fresh surface. Grossularite is present as fine-grained masses and imperfect crystals. Patches of calcite crystals are also present. Trace galena is associated with the garnet, while trace arsenopyrite is present in light green silica patches.
- HR 24: LH L75N 2025W Trench  
Vertical chip sample over 50 cm. Sample of interbedded argillite, quartzite and limestone near granodiorite contact. Argillite is very rusty. <1 % pyrrhotite and pyrite.
- HR 25: LH 75N 2025W Trench  
Vertical chip sample over 1.5 m (below HR 24).  
  
Interbedded argillite, quartzite, and limestone. Limestone is slightly altered to skarn. <1% sulphides.
- HR 26: LH 75N 2025W Float  
Sample of massive sulphide float. Up to 50% pyrrhotite, small amount of chalcopyrite. Possibly from a discontinuous lense which was trenched out.
- HR 51 LH 50N 815E Grab Sample  
Massive, dark green to purple to black, felted, and fine-grained basaltic rock. Grey black weathering with rusty fractures. Sample taken within 5 m of contact with granodiorite.
- HR 52: LH 75N 2350W Grab Sample  
Fine-grained highly siliceous rock with patches of fine-grained pink mineral and Wollastonite?. Some breccia fragments present. Disseminated pyrrhotite (2%), and chalcopyrite (trace) associated with pyrrhotite. Strongly magnetic. Sample from old hand pit.

- HR 53: LH 50S 2570W Grab Sample  
Silicified rusty weathering sediments with breccia fragments. Mottled light to dark green to pink fresh surface with up to 5% disseminated sulfides including 3-4% pyrrhotite, and trace chalcopyrite associated with pyrrhotite. Gypsum crystals are found on fractures and traces of hairline chalcedonic quartz veins cut the rock. Sample from old trench.
- HR 54: LH 50S 2650W Grab Sample  
Fine-grained black silicified argillite with up to 1% finely disseminated pyrite. Rusty weathering fractures and non-magnetic.
- HR 55: LH 100S 2525W Grab Sample  
Fine-grained black to purple basaltic remnants (may be fragments) in a white bleached matrix with 1% pyrrhotite in blebs up to 5 mm and along fractures, trace chalcopyrite associated with pyrrhotite.
- HR 56: LH 75S 2560W Grab Sample  
Breccia fragments of argillite and basalt and a pale fine-grained green rock in a grey-white siliceous matrix. Rusty weathering fractures and trace to 1% disseminated and blebby pyrrhotite associated with a fine-grained mineral (chlorite?). Trace chalcopyrite associated with pyrrhotite. Strongly magnetic.
- HR 57: LH 25N 2425W Grab Sample  
Grey medium-grained limestone with trace disseminated pyrite. Weak sulfur odor when broken.
- HR 58: LH 250W 2325W Grab Sample  
Granodiorite with 10% biotite up to 3 mm and trace pyrite associated with biotite.
- HR 59: LH 250W 2125W Grab Sample  
Silicified argillite with alternating light and dark bands on weathered surface, conchoidal fracture, gypsum and calcite on fractures, finely disseminated pyrite (1%) and trace of fine-grained metallic blue sulfide.
- HR 60: LH 155W 2310W Grab Sample  
Hornblende porphyritic andesite (5% up to 10 mm long) in fine-grained green matrix. Trace plagioclase phenocrysts trace to 1% disseminated pyrrhotite. Sample from trench.
- HR 61: LH 150N 2335W Grab Sample  
Interbedded argillite and limestone, silicified, with trace to 1% pyrite disseminated in argillaceous bands and trace pyrite in limestone bands. Sample from trench.

- HR 62: LH 150N 2350W Grab Sample  
Interbedded strongly silicified argillite and limestone with trace to 1% disseminated pyrrhotite in contact with thin sill of andesitic hornblende porphyry. Strongly magnetic.
- HR 63: LH 50N 2313W Grab Sample  
Andesitic hornblende porphyry with plagioclase phenocrysts up to 2mm and 2% disseminated pyrrhotite. Rusty weathering with gypsum on the fractures.
- HR 64: LH 380N 2150 Grab Sample  
Andesitic sill in limestone with 5% hornblende phenocrysts and 3% plagioclase phenocrysts in green fine-grained matrix with 2% disseminated and blebby pyrrhotite. Rusty weathering.
- HR 65: LH 400N 2475W Grab Sample  
Diorite/granodiorite with inclusions of andesitic fragments up to 10 cm.
- HR 66: LH 460N 2350W Grab Sample  
Andesitic hornblende porphyry with trace plagioclase phenocrysts and trace to 1% disseminated pyrrhotite. Strongly magnetic.
- HR 67, 68: LH 325N 2260W Grab Sample  
Skarn with tremolite? and grossularite (fine-grained masses and imperfect crystals). Disseminated traces of arsenopyrite with associated pyrite cubes.
- HR 69: LH 675N 1250W 2m Chip Sample  
Rusty weathering dark green to black andesite, trace plagioclase and 3-5% disseminated pyrrhotite. Sample from Adit A.
- HR 70: LH 675N 1250W 2m Chip Sample  
Rusty weathering green to black siliceous rock with rare plagioclase (3 mm) and disseminated and fracture controlled pyrrhotite (3-5%). Sample from Adit A.
- HR 71: LH 675N 1250W 2m Chip Sample  
Rusty weathering, green to black andesitic with rare plagioclase and trace pyrrhotite. Sample from Adit A.
- HR 72: LH 675N 1250W 2m Chip sample  
Rusty weathering, interbedded silicified argillite, chert/limestone, and andesite with trace disseminated pyrrhotite. Sample from Adit A.



- HR 73: LH 675N 1250W  
Rusty yellow to brown fault gouge, 1-3 cm wide. Sample from Adit A. Sampled over length of fault.
- HR 74: LH 480N 1250W Grab Sample  
Rusty weathering andesite with 1-3% disseminated pyrrhotite similar to Adit A. Strongly magnetic.
- HR 75: LH 500N 1205W Grab Sample  
Rusty weathering andesite with trace to 1% disseminated pyrrhotite. Strongly magnetic. Gypsum crystals on fractures.
- HR 76: LH 500N 1205W Grab Sample  
Rusty weathering andesite with trace to 1% disseminated pyrrhotite and gypsum crystals on fractures. Strongly magnetic. Trace arsenopyrite.
- HR 77: LH 500N 1205W Grab Sample  
Grey powder along fractures.
- HR 78: LH 200S 2600W Grab Sample  
Silicified limestone/chert, white weathering, white to grey banding with 1-2% disseminated pyrrhotite, calcite vein 5 mm wide.
- HR 79: LH 200S 2600W Grab Sample  
Silicified limestone/chert, white weathering, white to grey banding with 1-2% disseminated pyrrhotite. Calcite vein 5 mm wide.
- HR 80: LH 650N 710W Grab Sample  
Grey weathering, fine-grained altered limestone (skarn) with tremolite? and garnets (fine-grained masses up to 3 mm and trace disseminated pyrrhotite and pyrite.
- HR 81: LH 700N 675W Grab Sample  
Grey weathering light green skarn rock with trace garnet up to 5 mm. No visible sulfides.
- HR 82: LH 725N 700W Grab Sample  
Grey weathering, light green, strongly silicified, skarn rock with trace garnets, pink and dark green mottling, trace to 1% disseminated pyrrhotite.
- HR 83: LH 775N 700W Grab Sample  
Brown to grey weathering green andesite with 1% disseminated pyrrhotite. Strongly magnetic and rusty weathering fractures.
- HR 84: LH 800N 650W Grab Sample  
Grey weathering mottled light and dark green to black to purple strongly silicified breccia? with trace to 1% disseminated pyrrhotite and garnet masses up to 5 mm.

- WGR-1            LW 855N 25W Grab Sample  
Rusty brown to yellow weathering sugary black silicified limestone? with 1% disseminated pyrrhotite. Sample from shear in interbedded chert and argillite.
- WGR-2            LW 275N 10W 0.75m Chip Sample  
Narrow shear (0.75 m). Fine-grained black to purple (quartzite?).
- WGR-3            LW 275N 10W Grab Sample  
Fine-grained green silicified dacite with trace disseminated plagioclase crystals.
- WGR-4            LW 290N 00 Grab Sample  
White silicified limestone with tremolite and garnets trace calcite on fractures and trace disseminated pyrrhotite.
- WGR-5            LW 300N 25W Grab Sample  
Fine-grained pale green silicified rock with garnets up to 1.5 cm across.
- WGR-6            LW 525N 110W Grab Sample  
Fine-grained silicified banded skarn rock. Bands of diopside? tremolite? and garnet. Trace disseminated pyrrhotite.
- WGR-7            LW 425W 110W Grab Sample  
Grey-brown weathering brown quartzite with pyrolusite on fractures.
- WGR-8            LW 425N 110W 5m Chip Sample  
  
Fine-grained green silicified rock with garnets up to 2 mm and trace disseminated pyrrhotite skarn.
- WGR-9            LW 425N 110W 5m Chip Sample  
Strong rusty weathering quartzite in contact with skarn. Trace disseminated pyrrhotite and trace arsenopyrite.
- WGR-10           LW 425W 110W 1 m Chip Sample  
Skarn. White weathering light green rock with dark green bands and up to 5% garnets. Trace disseminated pyrrhotite and associated with pyrrhotite. Bands trend 022°/67°SW.
- WGR-11           LW 425N 110W Grab Sample  
Skarn. White weathering light green rock with up to 10% garnets and trace to 1% disseminated pyrrhotite.
- WGR-12           LW 425N 110W Grab Sample  
Granodiorite

- WGR-13 LW 590N 355W Grab Sample  
Skarn. Fine-grained light green rock with dark green and garnet bands up to 10 cm wide. Quartzite fragments in skarn. Trace to 1% disseminated pyrrhotite and trace disseminated arsenopyrite? Sulfides associated with quartzite fragments.
- WGR-14 LH 1000N 450W Grab Sample  
Black fine-grained hornfels with trace quartz eyes (1 cm)
- WGR-15 LW 975N 00 2m Chip Sample  
Shear zone 2 m wide. Fine-grained purple to light green rocks with vein 2-3 cm wide of fine-grained pale green to white mineral. Trace pyrite associated with pyrrhotite. Shear trends 040°/78°NW.
- WGR-16 LW 900N 025E Grab Sample  
Pale green feldspar crystal dacite. Plagioclase phenocrysts are altered. Fine-grained green matrix with disseminated trace pyrrhotite.
- WGR-17 LW 850N 20W 2 m Chip Sample  
Shear zone up to 3 m wide. Rusty weathering quartzite/hornfels, fine-grained black strongly silicified with 1% disseminated pyrrhotite. Rusty weathering fractures with gypsum crystals. Banding trends 090°/64°N.
- WGR-18 LW 700N 400W Grab Sample  
Skarn, trending 020°. Light green fine-grained siliceous rock with calcite along fractures. Local garnets up to 5 mm forming 16% of rock. Light and dark green mottling, trace to 1% disseminated pyrrhotite.
- WGR-19 &  
WGR-20 LW 700N 400W Grab Samples  
Quartzite with coarse-grained yellow quartz with trace pyrite in patches up to 1 cm across and along fractures. Rusty weathering. Trace arsenopyrite.
- WGR-21 LW 650N 350W Grab Sample  
Rusty weathering quartzite with trace to 1% disseminated pyrrhotite and trace disseminated arsenopyrite.
- WGR-22 LW 850N 150E Grab Samples  
White to grey quartz bed. Quartz fragment up to 3 mm cemented together. (Quartz pebble conglomerate) with trace disseminated pyrrhotite. Bed is up to 0.5 m thick in black fine-grained silicified argillite package.
- WGR-23 LW 800N 125E Grab Sample  
Black, fine-grained, strongly silicified argillite with trace disseminated pyrrhotite. Fractures trending 020°/60°NW. Thin section shows this to be a cordierite hornfels.

- WGR-24      LW 680W 075E Grab Samples  
                 Silicified limestone (skarn), coarse to fine-grained, white  
                 to light green with trace disseminated sulfides.
- WGR-25      LW 68N 080E Grab Sample  
                 Silicified argillite, black, fine-grained, with trace to 1%  
                 disseminated pyrrhotite.
- WGR-26      LW 550W 300E Grab Samples  
                 Silicified limestone with trace disseminated pyrite.
- WGR-27      LW 300N 200E Grab Samples  
                 Silicified limestone (skarn) with trace to 1% disseminated  
                 and blebby pyrrhotite.

## THIN SECTION DESCRIPTIONS

### Sample LW 810N 125W

Sedimentary breccia/conglomerate containing variously coloured clasts 1-5 mm in size and up to 3% disseminated sulphides. Under microscope, clasts are shown to be fine-grained mosaics of quartz, and are therefore probably chert. Rock is composed of 90% quartz, 7% biotite (recrystallized), and 3% opagues.

### Sample LW 900N 25E

Sample of dacitic to andesitic feldspar porphyry. Contains 30% feldspar as subhedral to euhedral blocky phenocrysts 2-5 mm in size; 15% biotite (altered hornblende), 5% chlorite situated near opaque minerals (sulphides). Groundmass makes up approximately 50% of the rock and consists of quartz, feldspar, and calcite.

### Sample LW 690N 400W

Sample of recrystallized chert breccia. Composition is greater than 95% quartz, with the remainder being biotite in some argillitic clasts.

### Sample WGR-23, LW 800N 125E (analyzed by ICP-AA/Au)

Sample of fine-grained, black, mottled rock containing finely disseminated pyrite. Composition: 45% poikilitic cordierite, 20% red-brown biotite, 30% granular quartz, 4% muscovite, 1% pyrite. Sample is a cordierite hornfels, probably a metamudstone.

### Sample HR 16, LH 75N 2025W (analyzed by ICP - AA/Au)

Sample of massive sulphide at contact of granodiorite and interbedded limestone, argillite and quartzite. Sample contains 40% sulphides (15% pyrrhotite, 15% pyrite, 5% arsenopyrite, 5% chalcopyrite), 20% chlorite, 20% relict plagioclase, 10% idocrase or scapolite, and 10% iron carbonate, associated with the sulphides.

### Sample LH 350N 1900W

Sample of fine-grained light greenish grey rock. Under microscope is shown to contain rare plagioclase phenocrysts. The bulk of the rock consists of 60% plagioclase which exhibits a felted, trachytic texture and has been altered to chlorite, 20% chlorite, 10% secondary biotite (altered hornblende?), 4% calcite, 1% hornblende. A few relict pyroxenes were noted as well as possible apatite and spinel. 5% of the rock is made up of an unknown mineral which displays high relief, rusty margins and is optically positive and may be uniaxial or low biaxial. Rock type: andesite? volcanic.

### Sample Adit A Portal

Black fine-grained intermediate volcanic rock fragments, with up to 25% white plagioclase phenocrysts that have been altered to clays, biotite and

iron oxides, are supported in a green fine-grained altered matrix composed of epidote (flashy birefringence) and a clinopyroxene, probably diopside (optically positive with a medium to high 2V). Finely disseminated sulfides (pyrrhotite) occupies 5% of the rock.

**Sample HR-75, LH 500N 1205W (analyzed by ICP- AA/Au)**

A blocky fine-grained volcanic/intrusive, probably an andesitic rock. Up to 60% of the rock is composed of relic plagioclase feldspars with 20% biotite as a result of alteration of hornblende. Less than 5% quartz and 1% muscovite are present with 5% finely disseminated opaques, likely made up of pyrite, pyrrhotite and arsenopyrite.

**Sample LH150S 2600W**

Trachytic hornblende porphyritic andesite sill composed of 25% black sub-parallel hornblende crystals up to 3 mm long and altered to red-brown high Ti-biotite. Zoned plagioclase, showing both carlsbad and albite twinning makes up 60% of the rock and occurs as microphenocrysts in a fine-grained crystalline groundmass. Pyrrhotite occupies 5% of the rock and quartz less the 5%, is present. Flow textures such as trachytic hornblendes are present.

**Sample 130S 625E**

Fine-grained grey to black basalt with 1-2% disseminated pyrite.

Thin section analysis shows this rock to be composed of 10 to 15% forsterite or clinopyroxene that is euhedral, optically positive and has a high 2V. A zoned amphibole, optically positive, with a large 2V, low birefringence and pleochroism from pale beige to pinkish brown to olive brown makes up 20 to 25% of the rock. Chlorite occupies 20% and biotite occupies 10% of the rock. A low relief, blocky, nearly isotropic mineral, thought to be nepheline, forms fine-grained mineral that is probably plagioclase is also found in the rock.

**Sample 140S 2600W**

Angular green, pink and purple volcanic fragments supported in a fine-grained green matrix. Purplish fragments are of altered fine-grained intermediate volcanic with plagioclase phenocrysts, and the green fragments appear to be a fine-grained volcanoclastic or siltstone.

The matrix is composed of a blocky, high relief mineral, probably diopside, with a positive 2V of approximately 40°. Occurring with the diopside is a quartz-like uniaxially negative mineral that is likely Na rich scapolite.

**Sample HR-5 LH 170 S 2540W (analyzed by ICP - AA/Au)**

White crystalline rock composed of radiating laths of a white mineral that appears to be tremolite in hand specimen. Pyrite, occurring in small pods,

comprises less than 1% of the rock.

Thin section analysis of the rock shows the white radiating laths to be uniaxially negative, length slow, with low relief and a low extinction angle (less than  $5^\circ$ ). This mineral could either be scapolite or wollastonite and comprises approximately 95% of the rock with 5% of the rock made up of epidote.





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SAMPLE	No PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Ni PPH	Co PPH	Mn PPH	Fe PPH	As PPH	U PPH	Au PPH	Th PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca PPH	P PPH	La PPH	Cr PPH	Mg PPH	Ba PPH	Ti PPH	B PPH	Al PPH	Na PPH	K PPH	M PPH	Au* PPH
HR-60	1	35	8	43	.3	8	17	399	4.28	23	5	ND	1	309	1	4	2	96	2.68	.08	5	15	.98	41	.21	9	4.10	.54	.42	1	7
HR-61	5	54	11	32	.1	51	10	232	1.27	158	5	ND	1	588	1	3	2	32	2.91	.11	7	16	.27	51	.13	10	1.85	.29	.08	1	15
HR-62	4	27	8	9	.2	27	4	122	1.13	25	5	ND	3	3161	1	3	2	7	0.23	.07	6	3	.51	31	.07	16	1.61	.14	.05	1	2
HR-63	1	41	2	41	.2	6	13	376	3.78	22	5	ND	1	364	1	2	2	86	2.35	.07	4	9	.88	80	.21	4	3.49	.48	.38	1	34
HR-64	1	35	9	64	.3	6	16	390	4.09	6	5	ND	1	559	1	3	2	111	2.85	.07	3	11	1.20	92	.20	8	4.62	.68	.56	1	4
HR-65	1	10	9	56	.1	2	6	589	2.50	2	5	ND	8	33	1	2	2	41	.56	.05	13	4	.56	368	.20	3	1.00	.13	.29	1	1
HR-66	1	26	35	58	.4	8	14	568	3.78	8	8	ND	1	248	1	6	2	198	3.08	.08	3	12	1.19	277	.18	4	4.87	.56	.40	1	3
HR-67	1	21	624	62	4.2	19	9	625	1.06	1948	7	4	3	120	1	9	2	38	7.97	.07	2	5	.16	9	.10	20	2.02	.08	.02	1	4250
HR-68	1	6	9	30	.1	45	17	541	.29	583	5	ND	3	487	1	53	3	65	0.86	.09	8	42	.24	9	.18	155	4.24	.32	.01	1	19
HR-69	1	38	20	181	.5	39	13	218	6.60	13	5	ND	1	309	1	2	2	115	2.24	.10	2	144	.92	34	.10	4	2.46	.30	.25	1	4
HR-70	1	50	9	111	2.5	21	11	160	6.36	4	5	13	1	312	1	2	2	135	1.43	.17	4	223	1.16	18	.19	2	2.05	.23	.45	1	16850
HR-71	1	67	77	129	3.2	36	14	246	5.27	1215	5	8	1	214	1	2	2	127	1.35	.14	4	193	.97	48	.18	10	2.71	.24	.45	1	4850
HR-72	3	78	9	68	1.7	47	16	249	3.28	20	5	8	2	207	1	2	2	80	4.87	.07	3	62	1.14	49	.17	11	1.93	.16	.35	1	6100
HR-73	1	49	67	128	3.2	20	16	658	19.47	327	5	9	2	117	1	2	47	88	.86	.12	2	106	.43	54	.04	2	1.64	.06	.26	1	14200
HR-74	1	24	7	26	.2	16	14	308	3.98	2	5	ND	2	167	1	2	2	65	1.26	.06	3	25	.82	66	.15	10	1.68	.24	.18	1	32
HR-75	2	21	7	28	.3	11	10	301	2.56	6	5	ND	2	154	1	2	2	83	2.40	.06	6	27	.90	68	.23	2	3.17	.33	.33	1	54
HR-76	3	32	38	242	4.6	34	10	529	2.77	1336	11	24	5	353	1	3	2	20	16.20	.13	6	10	.10	9	.11	6	2.32	.06	.02	1	7780
HR-77	5	137	24	15	17.8	36	53	166	16.60	10	5	104	1	48	1	2	11	11	1.70	.03	2	3	.17	13	.04	5	.83	.08	.05	1	49500 ✓
HR-78	1	8	5	39	.1	4	1	781	.59	9	5	ND	1	952	1	2	5	1	33.46	.04	4	2	.07	14	.01	16	.15	.01	.02	1	46
HR-79	2	70	6	15	.9	38	7	669	1.18	39	13	3	5	169	1	2	2	8	13.03	.10	12	8	.09	32	.06	9	1.18	.10	.03	1	3050
HR-80	1	12	2	16	.1	12	2	679	.47	6	5	ND	3	149	1	2	3	9	12.18	.06	7	4	.16	26	.09	7	.36	.10	.02	1	4
HR-81	1	10	2	12	.1	2	1	427	.41	3	5	ND	1	15	1	2	2	12	4.12	.07	8	4	.05	41	.16	4	.15	.06	.03	1	24
HR-82	10	56	8	20	.2	40	6	601	1.00	2	11	ND	6	159	1	2	2	16	13.86	.30	15	12	.03	24	.09	8	2.86	.29	.03	1	1
HR-83	1	67	7	36	.1	19	10	155	1.46	2	5	ND	1	376	1	2	2	29	4.49	.18	8	11	.15	49	.18	7	4.68	.51	.04	1	1
HR-84	1	16	9	34	.1	9	5	241	1.26	2	5	ND	1	56	1	2	2	32	2.31	.04	6	9	.27	132	.16	7	1.92	.19	.14	1	2
STD C/AU-0.5	22	62	41	139	7.0	75	31	1220	3.96	38	19	8	34	49	18	15	20	60	.48	.10	38	58	.88	178	.08	36	1.71	.06	.11	14	505

✓ Saturated optically - regular spiking suggested.

## GEOCHEMICAL ICP ANALYSIS

.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 NH, FE, CA, P, CR, MG, BA, TI, B, AL, NA, K, U, SI, ZR, CE, SM, V, ND AND TA. NO DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK CHIPS AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: MAR 20 1986

DATE REPORT MAILED: *Mar 25/86*ASSAYER: *D. J. ...* DEAN TOYE, CERTIFIED B.C. ASSAYER.

SHANGRI-LA PROJECT - AVLNIE FILE # B6-0348

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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Tl	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	M	Au*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
MGR-1	3	36	3	28	.3	29	6	199	2.72	22	5	2	1	14	1	2	2	33	.35	.03	6	23	.33	41	.05	5	.83	.04	.15	1	3200
MGR-2	1	37	9	78	2.1	19	8	654	3.33	28	5	13	2	65	1	2	2	76	1.55	.03	7	16	1.25	280	.20	4	2.48	.09	.71	1	5540
MGR-3	1	5	3	57	.1	2	1	973	1.54	2	5	ND	2	126	1	2	2	3	2.75	.05	16	1	.39	101	.01	2	1.02	.06	.19	1	25
MGR-4	1	18	2	7	.1	7	1	305	.43	3	5	ND	5	130	1	2	5	6	9.24	.03	4	3	.05	28	.07	7	1.29	.07	.03	1	11
MGR-5	1	7	4	26	1.1	2	1	461	.49	4	5	7	6	226	3	2	7	6	25.73	.03	5	3	.08	8	.05	42	.51	.01	.01	1	5600
MGR-6	1	17	2	16	.4	2	1	170	.43	5	9	ND	5	136	1	2	7	10	7.33	.05	10	3	.10	44	.15	7	1.53	.19	.05	1	880
MGR-7	1	22	172	19	.8	16	3	186	.96	311	5	ND	1	18	1	2	3	20	1.04	.03	6	12	.35	92	.04	10	.65	.02	.09	1	105
MGR-8	1	5	11	72	.9	4	1	1048	1.78	5	5	6	2	46	1	2	2	4	2.23	.07	15	1	.50	155	.01	4	1.11	.06	.17	1	3300
MGR-9	3	56	597	86	4.3	13	8	148	4.12	9270	5	2	2	15	1	12	2	54	.18	.02	4	36	1.16	53	.07	9	1.81	.05	.45	1	1450
MGR-10	1	49	10	22	4.6	7	3	166	.67	154	5	29	4	198	1	2	7	13	6.38	.05	9	5	.15	120	.15	9	3.63	.29	.05	1	3200
MGR-11	1	9	2	22	.8	1	1	492	.54	42	5	4	8	220	1	7	8	9	18.36	.05	10	2	.09	136	.12	29	1.92	.06	.03	2	9800
MGR-12	4	13	4	58	.1	6	8	536	2.87	2	5	ND	3	36	1	3	6	70	.84	.08	8	9	.85	401	.33	6	1.42	.20	.68	1	6
MGR-13	2	17	127	46	9.2	14	3	129	1.31	1496	5	3	1	77	1	3	2	19	1.83	.02	5	19	.36	170	.12	7	1.61	.14	.17	1	4800
MGR-14	1	59	2	33	.1	39	16	252	2.15	27	5	ND	2	19	1	2	2	64	1.89	.13	9	17	.50	27	.32	9	.78	.13	.06	1	8
MGR-15	1	21	17	207	.5	17	6	872	1.34	26	6	ND	3	112	2	2	7	33	4.51	.04	8	10	.29	66	.19	12	3.14	.16	.12	1	5
MGR-16	1	9	2	55	.1	3	5	796	2.42	79	5	ND	2	24	1	3	2	47	.97	.06	10	7	.70	48	.11	6	1.19	.08	.10	1	2300
MGR-17	3	76	7	48	.3	30	10	238	2.97	8	5	ND	2	25	1	2	2	40	.74	.03	4	28	.46	82	.09	5	1.55	.06	.20	1	6
MGR-18	1	5	2	18	.1	1	1	471	.52	7	6	ND	7	163	1	2	4	10	17.39	.07	9	3	.10	138	.11	60	2.10	.30	.04	1	1
MGR-19	2	51	824	94	23.8	25	7	213	3.10	3451	5	5	2	17	2	6	2	43	.46	.03	4	20	.55	62	.10	4	1.05	.05	.24	1	3700
MGR-20	2	42	3	20	.1	17	4	218	1.06	16	5	ND	1	4	1	2	7	2	.23	.02	5	15	.27	31	.01	4	.39	.01	.07	1	1050
MGR-21	4	76	2981	171	24.5	23	11	210	6.07	7616	5	16	4	27	5	5	4	63	.65	.04	5	25	.80	38	.14	5	1.81	.09	.41	1	15200
MGR-22	1	9	20	16	.2	8	1	742	.60	45	5	ND	3	44	1	2	4	9	4.53	.03	6	8	.07	27	.08	6	1.16	.04	.03	1	130
MGR-23	1	43	44	141	.6	35	12	388	5.13	86	5	ND	3	19	1	4	4	134	.15	.04	10	53	1.34	235	.41	4	3.79	.07	1.05	1	60
MGR-24	1	7	12	10	.2	2	1	485	.45	21	5	ND	5	291	1	2	7	2	29.94	.05	4	1	.07	36	.02	23	.42	.17	.04	1	2
MGR-25	1	36	2	22	.1	32	7	268	1.54	34	5	ND	2	61	1	2	3	27	1.68	.04	8	20	.33	69	.12	7	1.34	.04	.14	1	9
MGR-26	1	47	28	39	2.9	8	4	604	.88	17	5	17	6	215	1	13	5	12	25.89	.04	11	4	.12	38	.09	85	.85	.06	.05	1	7100
MGR-27	3	33	5	10	.1	19	5	461	.85	18	5	ND	6	50	1	2	2	11	9.42	.03	6	6	.06	85	.08	13	.75	.04	.05	1	1550
STD. C/MU-0.5	22	57	42	140	7.0	73	29	1222	3.96	35	20	8	33	49	18	16	20	60	.48	.11	37	59	.88	182	.08	36	1.71	.06	.10	12	510









## SHANGRI-LA MINERALS PROJECT - AVENUE FILE # 136-0050

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SAMPLE#	No PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Ni PPH	Co PPH	Mn PPH	Fe %	As PPH	U PPH	Au PPH	Tl PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca %	P %	La PPH	Cr PPH	Mg %	Ba PPH	Ti %	B PPH	Al %	Na %	K %	H PPH	Au# PPB
LW2005 500E	1	43	3	80	.2	12	9	719	3.14	5	5	ND	6	43	1	2	2	60	.49	.04	15	18	.50	250	.23	8	1.92	.03	.37	1	1
LW2005 550E	2	26	9	125	.1	13	9	1607	3.12	6	5	ND	5	50	1	2	2	52	.58	.05	19	19	.45	400	.20	8	2.50	.04	.35	1	1
LW2005 600E	2	29	7	133	.1	14	9	1417	3.01	5	5	ND	4	65	1	2	2	50	.88	.07	18	17	.44	402	.19	7	2.48	.03	.34	1	2
LW2005 650E	2	26	2	149	.3	13	10	2040	3.35	5	5	ND	5	49	1	2	2	55	.69	.07	18	18	.53	582	.20	5	2.55	.03	.41	1	3
STB C/AU-0.5	21	58	40	134	7.3	49	28	1172	3.96	36	16	8	32	47	18	17	20	58	.48	.10	38	57	.87	179	.07	36	1.74	.06	.10	13	495





SHANGRI-LA PROJECT - AVENUE FILE # B6-0350

PAGE 2

SAMPLE#	No	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Co	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Mo	K	N	Au1
	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH
LN300N 00E	2	89	10	134	.2	35	10	1999	2.53	30	0	ND	2	33	1	2	2	29	2.51	.09	10	12	.65	142	.05	19	.94	.01	.21	4	2
LN275N 50E CL3	1	64	5	153	.3	11	17	2110	3.02	27	5	ND	1	53	1	2	3	69	2.29	.12	6	10	1.05	350	.32	23	1.60	.01	.03	1	1
LN275N 100E CL3	1	60	0	179	.4	14	17	2105	4.23	74	5	ND	2	30	1	2	2	64	.62	.07	9	12	.83	298	.21	7	1.00	.02	.55	1	6
LN275N 150E CL3	1	37	0	114	.1	25	12	1100	2.74	22	5	ND	1	31	1	2	2	35	.37	.03	0	13	.41	169	.12	7	2.09	.03	.29	1	1
LN250SN 200E CL3	1	54	9	150	.3	15	7	1122	1.24	14	5	ND	7	65	2	2	4	9	13.41	.10	3	4	.21	76	.02	10	.41	.02	.12	1	1
LN250N 250N	1	50	11	111	.2	17	11	1233	2.92	12	9	ND	4	39	1	2	2	41	5.42	.06	6	0	.00	164	.13	13	1.29	.03	.47	1	1
LN250N 75N	2	123	6	150	.3	17	23	1043	4.32	102	5	ND	2	24	1	2	3	76	.52	.10	11	11	.71	247	.22	4	1.05	.02	.55	1	9
LN250N 50N	2	73	20	150	.3	20	20	2040	4.09	71	5	ND	2	31	1	2	2	77	.00	.10	10	10	.04	228	.23	9	1.65	.02	.53	1	14
LN200N 200N	1	30	9	141	.1	17	9	1240	2.53	11	5	ND	1	24	1	2	2	32	.01	.02	0	12	.30	103	.11	11	1.75	.02	.20	1	1
LN200N 150N	1	49	11	120	.1	23	11	1141	2.44	9	5	ND	2	41	1	2	3	30	.65	.06	7	15	.41	240	.12	6	1.30	.02	.27	1	2
LN200N 100N	2	33	6	90	.1	10	10	1031	2.43	0	5	ND	2	29	1	2	2	41	.41	.04	9	17	.40	200	.12	6	1.51	.02	.21	1	1
LN200N 50N	1	24	5	92	.1	17	7	790	2.19	4	5	ND	2	28	1	2	2	36	.45	.03	6	13	.39	167	.11	5	1.32	.02	.20	1	1
LN200N 50E	1	35	12	117	.1	21	11	1160	3.17	14	5	ND	2	35	1	2	2	43	.43	.03	10	16	.47	190	.14	6	2.27	.02	.33	1	1
LN200N 100E	1	33	13	109	.1	10	9	760	3.30	15	5	ND	2	31	1	2	2	40	.47	.02	11	15	.54	177	.13	6	2.27	.02	.29	1	1
LN200N 150E	1	24	10	105	.1	14	0	076	2.59	9	5	ND	1	34	1	2	3	34	.63	.02	7	13	.41	146	.09	9	1.53	.03	.26	1	10
STD C/AU-0.5	22	57	39	130	6.9	72	29	1200	3.97	35	20	0	32	40	17	17	20	60	.49	.11	36	50	.05	179	.00	40	1.60	.06	.10	12	500