



**BEACON HILL  
CONSULTANTS LTD.**  
MINING ENGINEERS

**Amazon Petroleum Inc.  
Wayside Deposit  
Near Goldbridge, B. C.**

**Assessment Report on Geological Mapping  
Carried Out on the Lake #1, Lake #2,  
Lake #3, Lake #1 Fr. and Lake #2 Fr.  
Mineral Claims**

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Assessment Report on  
Geological Mapping Carried Out On  
the Lake #1, Lake #2, Lake #3, Lake  
#1, Fr. and Lake #2 Fr. Mineral Claims.  
Record Numbers 3010, 3009, 3008, 3011,  
and 3012 Respectively.

10/87

N.T.S.: 92J/15W, Zone 10

Mining Division: Lillooet

Longitude: 122 degrees 51.3' West

Latitude: 50 degrees <sup>52.3'</sup>~~50.5'~~ North

Dates of Work: September 23, 1986 to October 8, 1986

Owned by: Amazon Petroleum Corp. and Carpenter Lake Resources

Operated by: Amazon Petroleum Corp.

Consultant: Beacon Hill Consultants Ltd.

Author: R.S. Tolbert, B. Sc.

Endorsed by: W.P. Stokes, P. Eng.

Date: November 10, 1986

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

15,342

FILMED

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## SUMMARY

This report refers to geological mapping carried out by the Author, on the Lake claims totalling 16 units located near Goldbridge, B.C. in the Lillooet Mining Division.

The claims are underlain by volcanics and cherts of the Fergusson Series, of upper Paleozoic (?) age. These are intruded by feldspar porphyry, albitite (?) and hornblende porphyry dykes which are in places associated with major shear or fault zones. Carbonitized, silicified and clay altered zones associated with shears and dykes carry weak spotty gold values.

A program of additional geological mapping, biogeochemical sampling and trenching is recommended to test these zones along strike for economic gold mineralization.

## INTRODUCTION

Mr. W.P. Stokes P. Eng. of Beacon Hill Consultants Ltd., acting on behalf of Amazon Petroleum Corp., contracted this Author, Mr. R.S. Tolbert and requested him to carry out geological mapping on the Lake Claims in order to fulfil assessment requirements. The Lake Claims are located in the Lillooet Mining Division near Goldbridge, B.C. between Gun Lake and Carpenter Lake (Figure 2).

A program of geological mapping and limited rock geochemical sampling was carried out between September 23, 1986 and October 8, 1986 utilising aerial photographs and topographic maps, at a scale of 1:5000. The aerial photography and topographic maps were completed for Amazon Petroleum Corp. by Hugh Hamilton Ltd. of North Vancouver, B.C. during 1986.

Analysis of ten rock geochemical samples was completed by Chemex Laboratories Ltd. of North Vancouver, B.C.

## LOCATION AND ACCESS

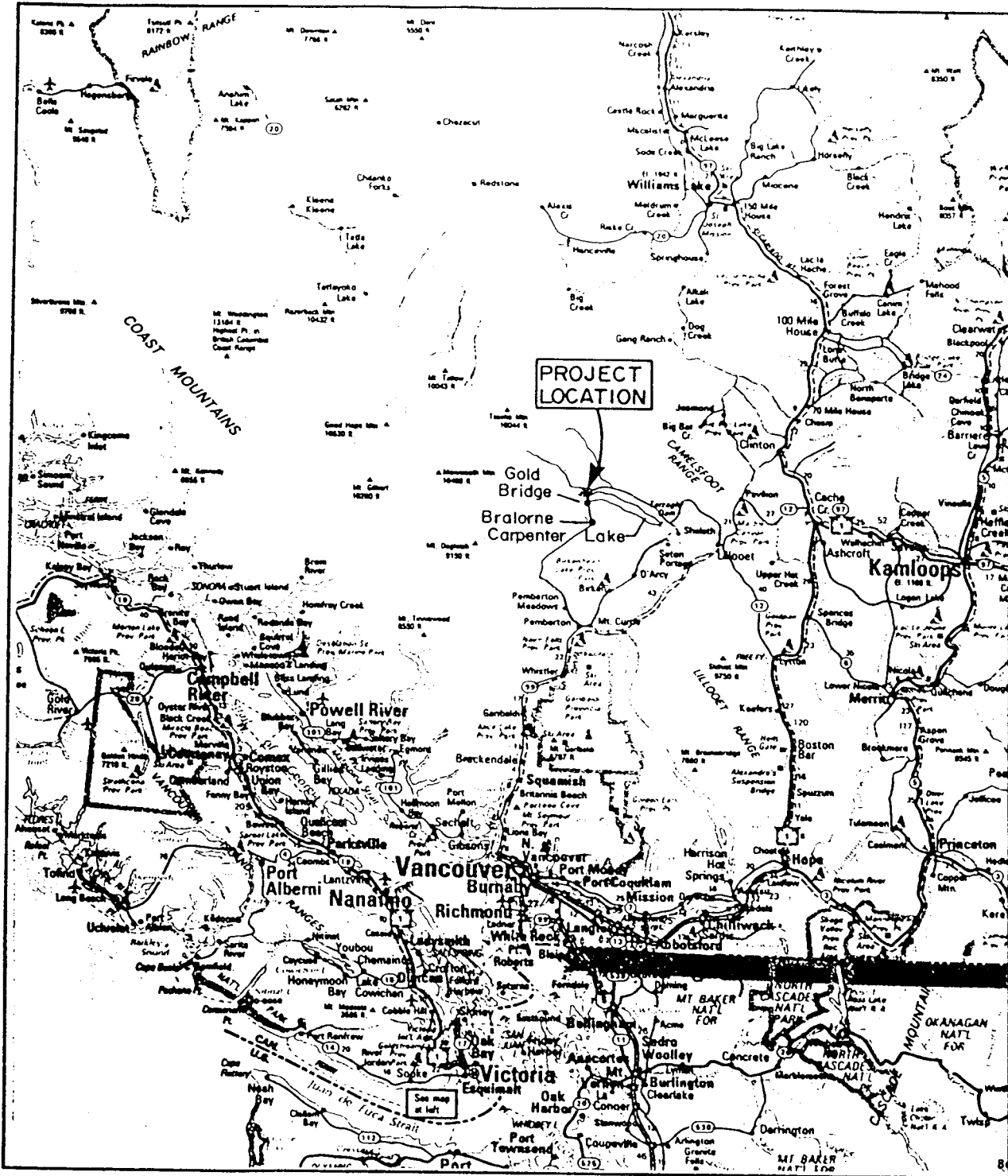
The Lake Claims are located in the Lillooet Mining Division, 2.5 kilometres north of Goldbridge, B.C. on a plateau area between Gun Lake and Carpenter Lake (Figure 1).

Access to the property from Vancouver is possible via the Trans-Canada Highway to Lytton, then north to Lillooet and then west to Goldbridge, a total distance of approximately 400 kilometres.

A second route, accessible during the summer months only, is possible via the Squamish Highway to Pemberton and then over the Hurley Valley Forest Access Road to Goldbridge, a distance of approximately 250 kilometres (Figure 1).

Immediately to the south of Gun Lake (Figure 5) is a lake access road running southwest to northeast and then curving round the north end of Gun Lake. This road which is being widened, straightened and surfaced with gravel during 1986/87 provides excellent access though the Lake Claims from Goldbridge .

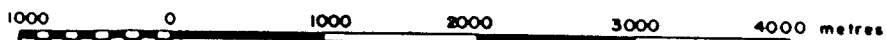
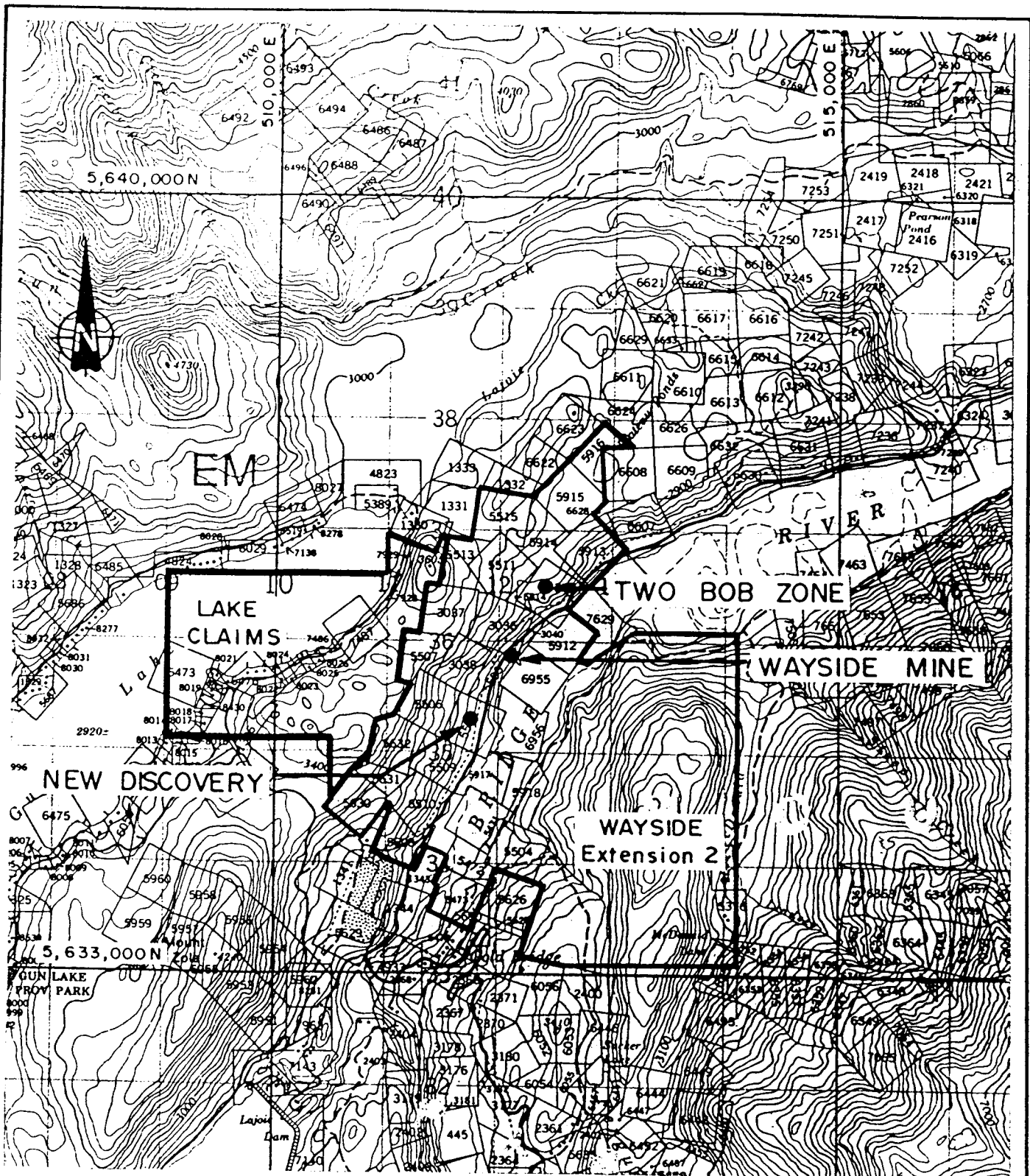
Further access is also provided by numerous logging roads and trails.



# PROJECT LOCATION PLAN

**BEACON HILL  
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Date	FIG. NO.  1
Apprvd.	
Project	



Scale - 1:50000

# LAKE CLAIMS AREA

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Date	FIG. NO.  <b>2</b>
Apprvd.	
Project	



### CLAIMS STATUS AND OWNERSHIP

The Lake Claims referred to in this report consist of 2 reverted Crown Granted Claims, 2 Fractional Claims and 1 located claim of 12 units totalling 16 units (Figures 2,3).

These Claims located in the Lillooet Mining Division are owned by Amazon Petroleum Corp. (60% interest) and Carpenter Lake Resources Ltd. (40% interest). Amazon Petroleum Corp. is the operator.

In order to provide continuity of geologic, interpretaion geologic mapping was carried out peripherally to, as well as on the Lake Claims.

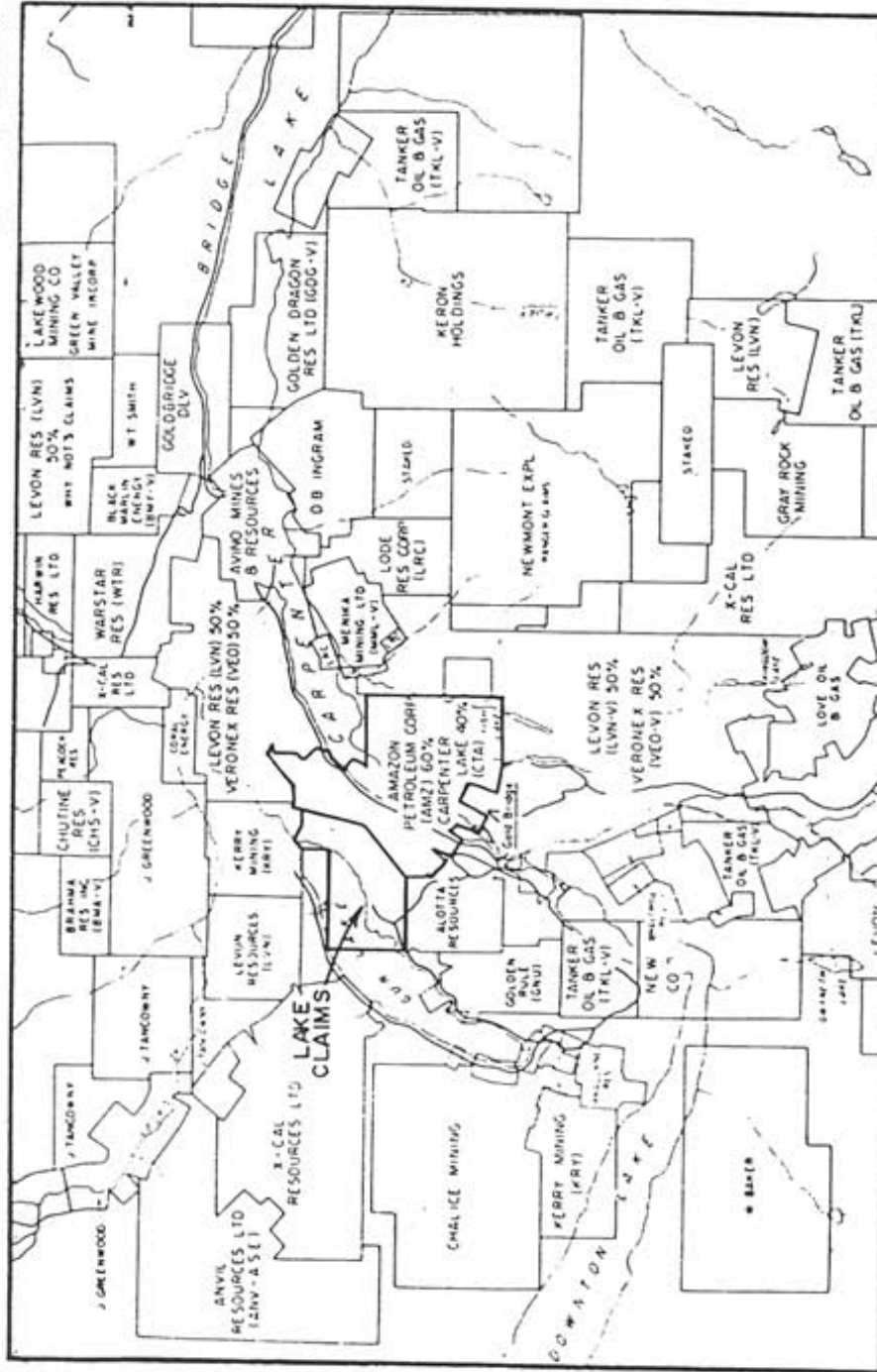
The program of geologic mapping was not carried out equally on all claims, so in order to provide equal application of assessment the 16 units described below were grouped together as the Lake Group.

With application of this assessment report the expiry dates of the 16 Lake units are as follows:-

<u>NAME</u>	<u># of UNITS</u>	<u>RECORD #</u>	<u>RECORDING DATE</u>	<u>EXPIRY YEAR</u>
Lake #3	1	3008	Nov.2, 1984	1993
Lake #2	1	3009	Nov.2, 1984	1993
Lake #1	12	3010	Nov.2, 1984	1990
Lake #1Fr.	1	3011	Nov.2, 1984	1993
Lake #2Fr.	1	3012	Nov.2, 1984	1993

The above claims are adjacent to and north of the Wayside property also owned by Amazon Petroleum Corp. and Carpenter Lake Resources Ltd.

Courtesy of  
George Cross News Letter Ltd



SCALE - 1:150,000 (APPROX.)

## ADJACENT PROPERTIES

## BEACON HILL CONSULTANTS LTD.

Date	FIG. NO.  3
Apprvd.	
Project	

## PHYSIOGRAPHY AND VEGETATION

The Lake Claims (Figure 2) occur within the Coast Ranges of B.C. Most of the claims area lies in a plateau area southeast of Gun Lake (elevation  $\pm$  895 metres) and northwest of the Bridge River/Carpenter Lake valley (elevation 665 metres).

To the northwest and southeast of the plateau, which is above the 1000 metre elevation, there are steep slopes and cliffs to about the 890 metre elevation.

Elevations on the plateau range from 1000 metres to just over 1100 metres. The plateau is dissected by minor northwest trending vallies, some of which have ponds or swamp filled depressions.

The main vegetation on the property consists of an open forest of Douglas Fir Ponderosa Pine with Poplars, Birch and Alder occurring in logged, burnt or wet areas.

The Bridge River valley is now part of the Carpenter Lake resevoir which is flooded to the 665 metre elevation from mid - July to March each year.

## PREVIOUS WORK

The Lake Claims are north of and adjacent to the Wayside property and geologically are an extension of the Wayside.

The Wayside Mine (Figure 5) from 1914 to 1937 produced 5,341 oz. gold and 842 oz. silver from 43,094 tons of ore. Minor exploration was carried out from 1946 to 1953.

Considerable exploration work has been carried out on the Wayside property from 1971 to 1986 however this author could find no record of work on the Lake Claims prior to their acquisition by Amazon Petroleum in 1984, other than Cairnes study in 1937.

- |      |   |              |  |
|------|---|--------------|--|
| 1937 | - | C.E. Cairnes | - Geological mapping Bridge area - G.S.C. Memoir 213                                     |
| 1985 | - | R.J. Morris  | - Geological Geochemical and Drilling Assessment Report -Wayside Property. July 28, 1985 |
| 1985 | - | A.H. Arik    | - Geological and Geochemical Assessment Report - Lake Claims October 17,1985             |

Both the 1985 surveys were carried out using tape and compass.

While Morris carried out reconnaissance geological mapping on the Wayside property, Arik completed reconnaissance geological mapping on a portion of the Lake Claims.

## PURPOSE OF THE 1986 MAPPING PROGRAM

The purpose of the mapping program carried out by this author in 1986 was:-

1. to determine if the vein zones on the Wayside property, or similar parallel structures, extend north onto the Lake Claims.
2. to determine if the Cadwallader Shear or similar parallel structures favourable for hosting gold mineralization, extend north onto the Lake Claims.
3. to locate any vein zone or alteration found during geological mapping and collect samples for assay.
4. to map the geology in detail on 1:5000 topographic maps produced in 1986.

## AERIAL PHOTOGRAPHY AND TOPOGRAPHIC MAPS

During 1986, Beacon Hill Consultants Ltd., acting on behalf of Amazon Petroleum Corp., contracted -

Hugh Hamilton Ltd.  
Suite 120 - 116 East 3rd St.,  
North Vancouver, B.C.

to complete an aerial photo survey of the Wayside Property including portions of the Lake Claims and to prepare an orthophoto and topographic map at a scale of 1:5000, and at a total cost of \$ 5,295.00. (Appendix III)

Thirty percent of this cost (\$ 1,588.50) representing the portion of the total map covered by the Lake Claims has been applied for assessment.

In addition \$ 374.75 was spent in extending the mapping coverage on the Lake Claims and obtaining air photo enlargements for field mapping. (Appendix III)

During field mapping, geology was plotted onto air photos enlarged three times (approximately 1:5000 scale). This information was transferred to an orthophoto (1:5000 scale) and thence to a topographic map. (Figure 5)

The topographic map scale is 1:5000 with 10 metre contour intervals and a U.T.M. coordinate system.

## GEOLOGY

### Regional Geology

The Wayside Property is within the Goldbridge-Bralorne Mining District and is part of the Coast Geanticline tectonic element of the Canadian Cordillera.

The district (Figure 5) is dominated by the eugeosynclinal volcano-sedimentary Bridge River Group of Triassic (and possibly upper Paleozoic) to upper Jurassic age which consists of:

Jurassic - Hurley Formation

Upper Triassic - Pioneer Formation

Triassic - Noel Formation

Triassic to possibly Paleozoic - Fergusson Series. (Ref. Cairnes 1937)

Intruded into this island arc volcano-sedimentary package are the northerly trending upper Jurassic Bralorne intrusives, which are bounded in places especially to the west by serpentinites possibly related to the intrusives.

The upper Paleozoic (?) Fergusson Series consisting of argillaceous, tuffaceous lithologies, cherts, argillites, minor limestones and perhaps volcanics is representative of a eugeosynclinal island arc depositional regime which dominated this area.

During the early Mesozoic abundant andesitic and basaltic volcanics were extruded from island arc volcanic centres into adjacent troughs and basins. Thick accumulations of terrigenous and volcanoclastics and volcanogenic sediments were also deposited from the arcs into the basin. The Pioneer Formation volcanics and Noel Formation sediments, volcanoclastics and volcanics are representative of this period.

The Hurley Formation argillaceous and tuffaceous strata was deposited into the Tyaughton Trough successor basin which was established following the mid-Jurassic tectonism.

The Bralorne intrusions of upper Jurassic age with a composition varying from gabbro to augite-diorite to soda granite are part of the Coast Plutonic Complex which is dominated by the Pacific Orogen.

This tectonism has imparted deep steeply, dipping block faults and shear zones including the Cadwallader Shear Zone and the Fergusson Fault.

Carbonized serpentinite occurs on the western margin of the Bralorne Intrusion adjacent to the Cadwallader Shear Zone.

Quartz-carbonate-talc  $\pm$  mariposite ('epi-listwanite' - Kashkai, 1965) alteration associated with many of the veins of the district may be related to fluids that have emanated from these and similar unexposed serpentinite bodies.

Important late stage (?) feldspar porphyry, hornblende porphyry, rhyolite and albitite dykes and sills occur throughout the district and are often associated spatially at least with mineralized veins.





TABLE 1

## LEGEND TO ACCOMPANY FIGURE 4

<u>UNIT</u>	<u>AGE</u>	<u>FORMATION</u>	<u>DESCRIPTION</u>
B	U. Jurassic	Bralorne Intrusives	Augite-diorite, gabbro, soda-granite (albitite dykes, sills)
A	Undifferentiated		Serpentinite, serpentinized peridotite, carbonized serpentinite
6	Jurassic	Hurley Formation	Argillaceous, tuffaceous strata. minor sandstone, conglomerate and limestone
4	U. Triassic	Pioneer Formation	Greenstone (porphyritic lavas, pyroclastics) rhyolitic flows and minor breccia.
2	Triassic	Noel Formation	Banded to massive, grey to greenish, siliceous, argillaceous and tuffaceous beds. Minor interbedded volcanics.
1	Paleozoic(?)	Fergusson Formation	Argillaceous, tuffaceous strata, chert, argillite, minor limestone and possibly carbonized serpentinities.

C.F. Cadwallader Fault Zone

F.F. Fergusson Fault Zone

Modified after  
Cairnes (1937)

## Recent Geology

Glacial flow during the last ice age came from the southwest to northeast and has left a dissected plateau above 1000m elevation on the Lake Claims, with steep slopes and cliffs from 1000 metres to 890m. This plateau parallels the ice flow direction.

The hilltops on the plateau which are chert or greenstone outcroppings have erratic boulders of granite to granodiorite composition in places.

Minor vallies on the plateau trend in a north westerly direction and are filled to a greater or lesser degree with boulder clay and glacial fluvial gravels, the latter indicating these gullies were for a period of time meltwater channels.

The Bridge River Ash (locally called popcorn pumice) forms an unconsolidated deposit from < 0.3 metre to > 1 metre depth in places just below the mulch layer.

This ash which was erupted 1800 years b.p.(?) has sloughed into many of the gullies making soil and silt sampling difficult to impossible in places.

## Local Geology

### Detailed Description of Map Units (Figure 5)

#### Layered Rocks

##### Unit 1 (Fergusson Series, Paleozoic possibly Permian Age)

This unit consists of predominatly reddish to orange weathering fragmental to massive greenstone.

In the area of station 55 at the north end of the Lake Claims it is possible to distinguish massive greenstone (Unit 1b) from fragmental greenstone (Unit 1a).

The fragmental greenstone at station 55 consists of rounded greenstone fragments in a chloritic matrix and may represent a submarine flowtop deposit. The massive greenstone in the same area is aphanitic with a greenish hue and commonly is amygdaloidal with chlorite or epidote filling the amygdules.

Elsewhere the greenstones are highly fractured and sheared making it difficult at this level of mapping to easily distinguish massive flows from fragmental volcanoclastics.

At the north end of the plateau the greenstones are predominantly green with minor reddish to maroon bands. Moving southwest along the plateau increasing proportions of the volcanics are reddish to maroon in colour.

Occasionally elipsoidal textures can be distinguished in the fractured outcrops however one cannot say unequivocally that these represent pillows except at station 189.

Also as one progresses southward along the plateau increasing amounts of calcite veining occur in the greenstones.

At station 206 minor limestone bands up to 15 cm thick are interbanded with the greenstones.

#### Unit 2 (Fergusson Series, Paleozoic possibly Permian Age).

The cherts of this unit are variably thin to thick bedded (5-10 cms) and are grey to white or pink in colour with shaley partings.

As the shaley partings decrease the colour of the cherts tends towards white in colour. In places the cherts lose their partings and appear massive with little to distinguish the individual bands especially where fractured.

In places these white banded cherts are bleached and are stained orange to yellow from minor pyrite weathering to limonite.

At station 275 adjacent to a fault zone cherts are bleached white and recrystallised with a stockwork of fine chalcedonic quartz veinlets.

The 'quartz veins' previously mapped by Arik in 1985 are in fact thin-banded white chert outcrops with minor limonite staining.

#### Unit 3 (Fergusson Series, Paleozoic possibly Permian age)

This unit consisting of flaggy to slaty black argillite with minor greywacke with graded bedding occurs as minor interbands in Units 1 and 2.

South of station 189 a typical exposure has greywacke with graded bedding overlain by slaty black argillite to the south. This most likely represents a turbidite flow deposit. This unit youngs to the Southwest.

At station 275 black carbonaceous argillite with disseminated pyrite has been caught up and smeared along a fault zone in cherts of Unit 2.

Unit 4 (Fergusson Series, Paleozoic possibly Permian age)

This unit consists of grey crystalline limestone.

Minor limestone bands up to 15 cm thick are interbanded with greenstones at station 206.

At station 57 a grey crystalline limestone approximately 10 metres thick occurs as a lens at the top of the Fergusson Series volcanoclastics possibly representing a shallowing of the depositional basin.

Unit 5 (Triassic and/or Jurassic - Hurley Formation)

This conglomerate unit was first encountered in outcrop on the road just south of station 57. Here chert-pebble to cobble conglomerate is in contact with fragmental greenstone. Here the conglomerate is silicified with only minor volcanic and limestone fragments indicating it was deposited on the volcanics rather than eroded from them.

At station 274 coarse cobble to boulder conglomerate containing chert, volcanic and characteristic limestone clasts occurs and appears to trend northwest towards station 22 where similar outcrops occur.

It is uncertain, since this area has not been closely mapped, whether this latter conglomerate band is related to that occurring at station 57.

Unit 6 (Triassic and/or Jurassic - Hurley Formation)

This unit consists predominately of thin bedded (2-5 cm) grey to black argillites with minor lithic sandstone, siltstone and gritty conglomerate. Also at station 8 there is outcropping black porcellanite with disseminated pyrite which forms a minor part of this unit.

Most of the observed coarser clastics of this unit occur between stations 1 and 4. Elsewhere argillites dominate.

## Intrusive Rocks

### Unit a (Jurassic (?) - President Intrusives (??))

Characteristic augite-peridotite of this unit outcrops at station 222. Minor development of Serpentinite occurs along fracture surfaces.

At station 223 the ultramafics are highly sheared to serpentinite and talc-serpentinite rocks.

At stations 90 and 91 highly sheared black serpentinitised rock occurs in contact with the Wayside Stock. Here the rock tentitively identified as serpentinite has a cataclastic-knotted to mylonitic appearance.

Elsewhere (further described under Alteration) possible serpentinites occur in fault zones as highly altered quartz - carbonate +talc+fuchsite 'Listwanite' rocks. (Kashkai et al 1965)

These 'listwanite' rocks if they are in fact serpentinites, may represent ultramafics 'squeezed' up along deep seated fault zones which would be favourable locations for the development of hydrothermal convection cells.

The location of these sheared 'ultramafics' adjacent to the Wayside stock indicates that they may predate the Bralorne Intrusives in this area.

### Unit b (Jurassic - Bralorne Intrusives)

This unit has been called gabbro-diorite and aptly named since it shows a wide variety of textures and composition often over a few centimetres.

It is a greyish-green, medium to coarse grained rock ranging from micro-diorite to diorite to gabbro. It has commonly developed a stockwork of chlorite-epidote-calcite and minor quartz veinlets.

The Wayside Stock of the north end of the Lake Claims exhibits a wide variety of intertonguing phases of gabbro-diorite. At the south end of the claims north of station 222 this unit is more consistantly diorite in composition.

The developed veins on the Wayside property occur in this unit and though it was not the mandate of this mapping program it would be prudent to map and prospect the north

end of the main Bralorne stock, occurring just south of the Lake Claims on the Wayside property, for similar vein structures.

Unit c (Jurassic - Bralorne Intrusives)

Unit c has been separated from Unit b because it is a distinctly mappable separate unit. This unit is soda-granite consisting of quartz, albite, minor chlorite after hornblende and minor sericite. It is light coloured and medium to coarse grained in texture. There is occasionally a minor mineral lineation developed.

In places (eg. station 70) it appears to be a differentiated phase of the Wayside intrusive.

At station 49 the contacts are sheared chloritised diorite giving an intrusive appearance. This is similar to the observations made by Cairnes (1937) elsewhere.

The soda-granite in the area mapped appear to be apophyses occurring in the roof of the Wayside Stock.

Unit d (Jurassic (?))

The unit encompasses buff-coloured to white fine grained dykes and sills termed felsite (albitite (?)). Some of these dykes may be albitite however no detailed petrographic examination has been made of the samples.

These dykes postdate the Wayside Stock though no cross cutting relationships were observed.

This type of dyke is commonly associated with alteration and vein development on the Wayside property and elsewhere in the district. (Cairnes 1937)

Unit e (Post Lower Cretaceous ?)

At station 203 metre wide light coloured feldspar porphyry dyke is intruded parallel to a major north trending fault zone.

Dykes of this composition have been rarely observed elsewhere on the Wayside property, associated with shear zones.

This rock is fine grained light to dark-grey with conspicuous 0.25 cm feldspar phenocrysts.

This rock may be related to the following unit since in places feldspar phenocrysts are developed with only minor hornblende phenocrysts in Unit f giving it a similar appearance to Unit e.

A silicified feldspar porphyry occurs around station 39.

Unit f (Post Lower Cretaceous (?))

This unit is composed of hornblende ± feldspar porphyry dykes. They are blocky, orange weathering greenish-grey aphanitic rocks with prominent hornblende phenocrysts up to 1 cm long and in some locations minor feldspar phenocrysts as noted in the previous unit.

Though Cairnes (1937) noted this as a late stage dyke, at station 132 a hornblende porphyry dyke is intruded by a felsite (albitite ?) dyke, which may mean the albite (?) dyke emplacement occurred over a considerable period of time.

A major hornblende porphyry dyke swarm occurs at the north end of the Lake Claims trending in a east-west to north-easterly direction. Some of these dykes intrude the Wayside Stock therefore postdating it.

This area of intense dyke development may indicate extension of the crust to depth providing a locus for the development of hydrothermal convection cells as possibly indicated by the silicification and quartz breccia development in a hornblende porphyry at station 132.



## STRUCTURE

### Folding

The bedding on the Lake Claims, mostly observed in cherts and argillites is steeply dipping and highly folded.

Northeast of the Wayside Stock there is a predominant strike to the northwest with mostly steep dips to the east. The younging direction in the Hurley Formation here appears to be to the east.

South of the Wayside Stock dips are steep with more varied strike directions.

In the time available for this study limited examination of highly folded cherts show at least 3 directions of fold orientation. The folds observed are tightly folded on a scale of a few to several metres. Minor crenulation foliation was observed but not measured.

#### Fold Direction 1

	<u>AXIS</u>	<u>AXIAL PLANE</u>
a)	75 degrees direction ; 75 degrees dip	75 degrees-92 degrees/80 degrees north
b)	255 degrees direction 45 degrees dip	

The axis direction a) is the dominant direction of axes observed on the property. These directions are an average of a number of observed measurements.

#### Fold Direction 2

	<u>AXIS</u>	<u>AXIAL PLANE</u>
	150 direction 60 degrees dip	112 degrees/72 degrees S

#### Fold Direction 3

	<u>AXIS</u>	<u>AXIAL PLANE</u>
	320 direction 6-24 degree dip	145 degrees/50 degrees W

The relationship of these folds to each other is uncertain.

The steeply plunging anticline observed in the centre of the claim area is consistent with fold direction 3.

## Faulting

Three main directions of faulting are observed on the Lake Claims:-

1) North striking, steeply dipping, sinistral faults with vertical throws in the tens of metres. These occur dominantly at the south end of the claims and are parallel to the Cadwallader Shear. The maximum horizontal movement interpreted on these faults is in order of 200 metres.

2) At the north end of the Lake Claims a major fault was observed at station 13 (Figure 5). This fault may be related to the Fergusson Fault. Movement directions are uncertain though it is normal to the east.

3) Between the two above fault zones east-west to south east trending faults of uncertain displacement dominate.

The faults of this trend may be extensional and certainly the greatest observed alteration and mineralization is associated with them.

Late in the mapping program two thrust fault zones were observed at station 275 and west of station 79.

Also it was observed that the western margin of the Wayside stock is sheared and may be in fault contact with the Fergusson Series to its west.

In the limited time available for this program it has not been possible to fully ascertain the relationship of the above describe structures to one another.

## ALTERATION AND MINERALIZATION

There are three types of alteration observed during this geological survey:-

### 1) Carbonitization ('Listwanitization')

This alteration is characteristically light tan weathering and consists of a mineral assemblage of quartz-carbonate (ankerite and/or breunnerite) -  $\pm$  talc -  $\pm$  chlorite  $\pm$  fuchsite (mariposite).

The tan colour comes from the iron carbonates. This type of alteration has been described by Kashkai and Allakhverdiev (1965) as listwanite in Russia and is associated with gold mineralization.

This type of alteration is also associated with gold mineralization in the Bralorne - Goldbridge district.

Alteration of this type was observed at Stations 79, 139, 195, and 271.

### 2) Silicification

Silicification in the form of quartz flooding was observed at Stations 39 and 132. In addition quartz breccia and a stockwork of quartz veins were observed at Station 132 in hornblende porphyry. Quartz veining was observed at Station 54

A stockwork of quartz veining was observed in recrystallised chert in a complex fault zone at station 275.

### 3) Clay Alteration

Clay Alteration is developed in shears in purple pillow lavas adjacent to a major fault zone at station 189. Minor clay alteration is also developed adjacent to a calcite breccia at station 4.

### Description of Altered or Mineralized Targets

<u>STATION</u>	<u>ALTERATION TYPE</u>	<u>DESCRIPTION</u>
4, 13	3	A calcite breccia zone 0.5 m wide: trending 135 degrees/77 degrees E is developed in argilliles peripheral to a gully with albitite float and 4 ppb gold in a Douglas Fir sample. This is along strike of a major fault.
22	2	Albitite dyke 6 metres wide with minor pyrite and quartz stockwork veining with limonite in vugs. This dyke trends onto the Wayside property.
79	1	Float quartz-carbonate-fuchsite and minor pyrite similar to station 139.
132	2	Silica flooding and quartz stockwork is developed in a hornblende porphyry dyke in a shear zone trending at 135 degrees (?). (Figure 6) Three silicified quartz breccia zones are developed with disseminated pyrite. One grab sample (4035H) contained 60 ppb gold. A sample from this area in 1985 was collected by Morris and contained 0.058 oz/t Au over 2 metres.
139	1	Figure 7. Listwanite shear intruded by albitite dyke peripheral to Wayside stock. Disseminated pyrite up to 5-10 % in places. One sample assayed 150 ppb Au. (4029H)
189, 203	3, 1	Figure 8, 5. Clay altered shear zone along strike from and part of major fault to station 203 where feldspar porphyry is intruded. Along strike of axis of main

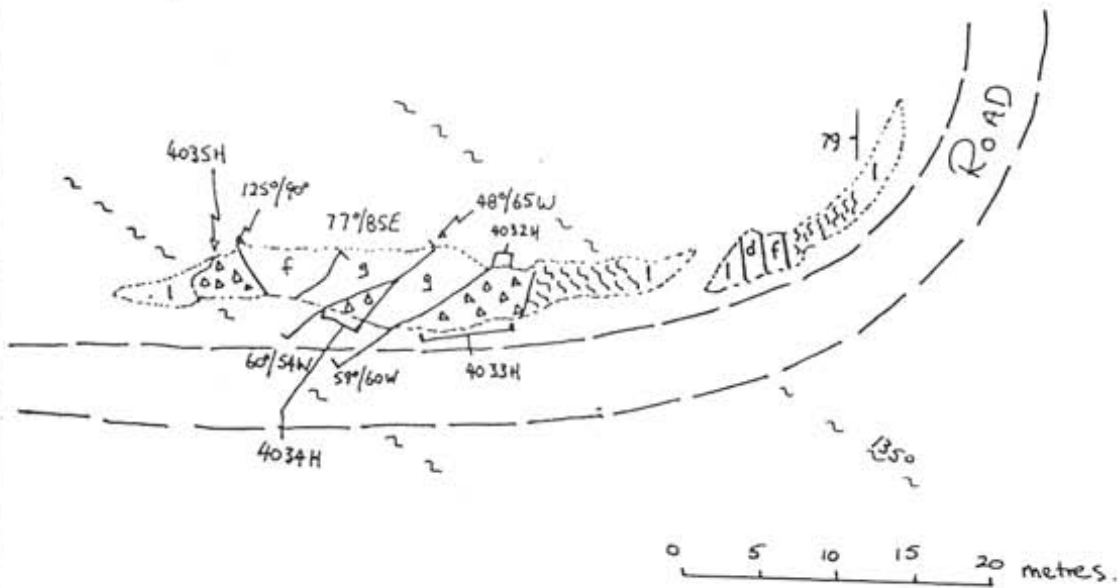
Bralorne stock. Carbonitised  
volcanics with vuggy quartz  
veins bulldozed from adjacent  
overburden filled gully.

<u>STATION</u>	<u>ALTERATION TYPE</u>	<u>DESCRIPTION</u>
193	-	Albitite dyke or sill (165 degrees/54 degrees E) intruding argillites between stations 189 and 195.
195	1	Quartz-carbonite-fuchsite (listwanite) developed in fault zone trending 85/88 degrees N.
271	1	Quartz-carbonate-fuchsite alteration minor quartz veining and calcite veining developed in shear in major hornblende porphyry dyke. Alteration extends over 20 metres, shearing at 10 degrees and a 0.3 m calcite vein dips 140 degrees /30 degrees E.
275	2	Bleached recrystallised chert in complex fault zone with pyritic carbonaceous argillite smeared into gouge zone.

Due to limited budget only samples from stations 132, 139 and 189 have been analysed for gold and arsenic. (Appendix II).



- △△△ Siliceous quartz breccia.
- g Silica flooded hornblende porphyry with qtz stockwork.
- d Felsite (albitite?) dyke
- f Hornblende porphyry dyke.
- ||||| Sheared chloritised greenstone.
- | Greenstone.



SAMPLE	TYPE	WIDTH (m)	Au (ppb)	As (ppm)
4032 H	grab	0.3	<5	1
4033 H	grab	2.0	<5	2
4034 H	grab	1.0	<5	1
4035 H	grab	—	60	3

GEOLOGY - STA. 132

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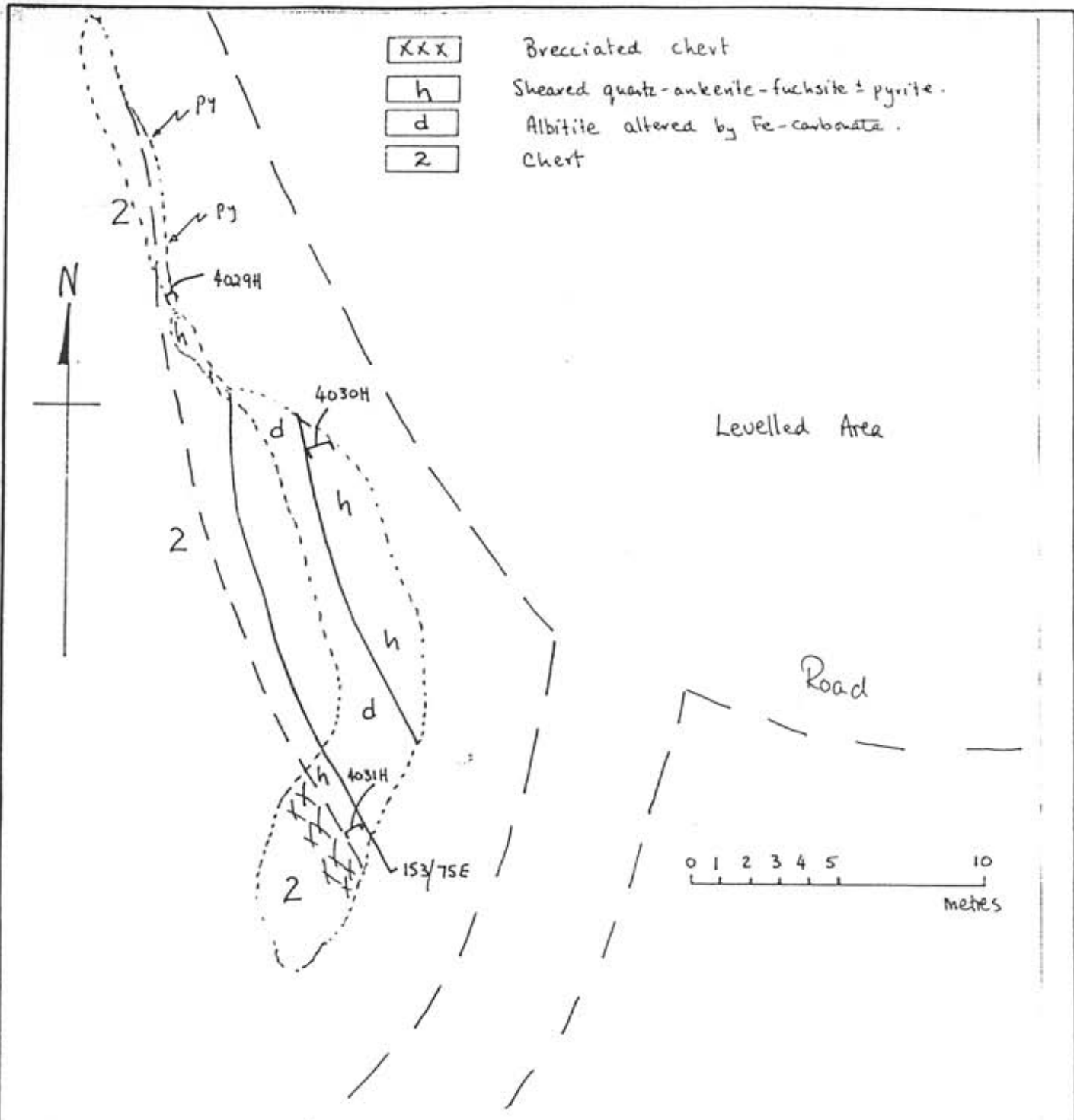
Date

FIG. NO.

Apprvd. 

6

Project



SAMPLE	TYPE	WIDTH(m)	Au(ppb)	As(ppm)
4029H	grab	0.6	150	4
4030H	"	1.0	<5	3
4031H	"	1.0	<5	9




GEOLOGY - STA. 139

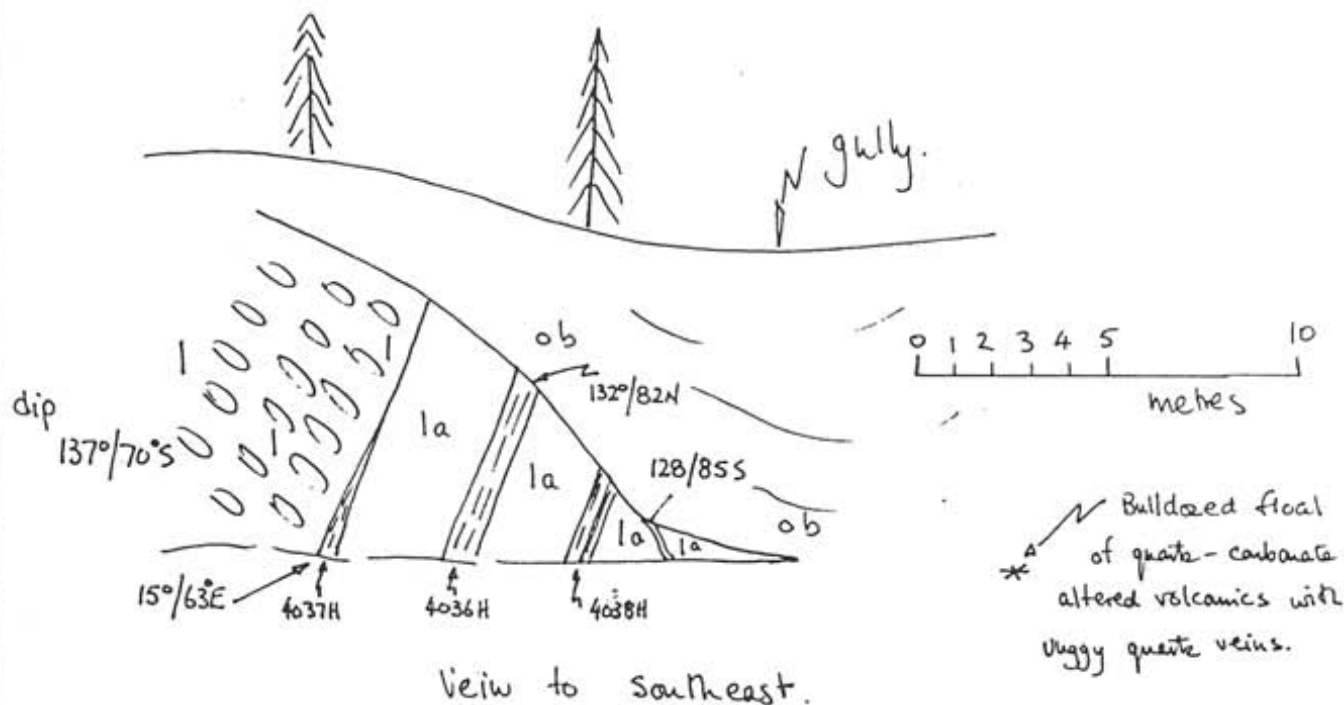
BEACON HILL  
CONSULTANTS LTD.

Date  
 Apprvd. *[Signature]*  
 Project

FIG. NO.  
 7



-  Clay altered shear zone.
-  Weakly altered purple pillow volcanics
-  Purple pillow volcanics



View to Southeast.

SAMPLE	TYPE	WIDTH (m)	Hu(ppb)	As(ppm)	NOTES
4036H	Channel	0.6	<5	1	Clay altered shear zone minor qtz-veining.
4037H	"	0.4	<5	2	Clay altered shear.
4038H	"	0.5	<5	1	Clay altered shear.

GEOLOGY - STA. 189

BEACON HILL  
CONSULTANTS LTD.

Date

FIG. NO.

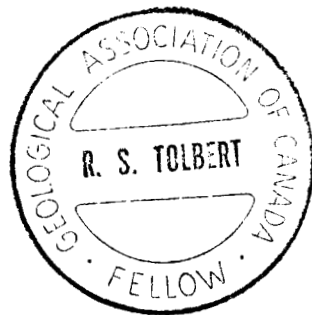
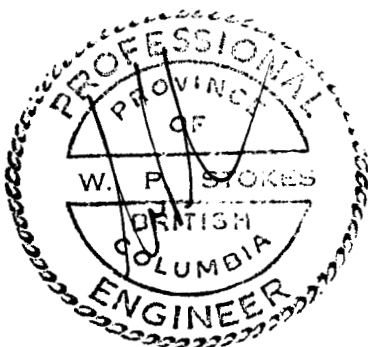
Apprvd. *[Signature]*

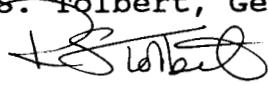
8

Project

CONCLUSIONS AND RECOMMENDATIONS

- 1) A total of ten areas, which are structurally favourable or contain alteration, have been located during geologic mapping on the Lake Claims.
- 2) Ten rock samples take from three areas show weakly anomalous gold values in two of these samples.
- 3) Geological mapping should be extended to those areas on the Lake Claims not reached by this survey, particularly in the various gullies.
- 4) A program of biogeochemical sampling should be carried out along strike from favourable areas to determine if anomalous concentrations of gold or arsenic exist indicating mineralization in bedrock.
- 5) A program of trenching should follow if 4) above proves successful.



Respectfully submitted,  
R.S. Tolbert, Geologist, Bsc.  
  
Endorsed by,  
W.P. Stokes, P.Eng.

## REFERENCES

- Arik, A.H.  
October 17, 1985; Assessment Report on Geological Mapping  
on Lake Claims.
- Cairnes, C.H.  
1938; G.S.C. Memoir 213
- Kashkai, M.A., Allakhverdiev, I.  
1965; Listwanites Their Origin and  
Classification (U.S.G.S. Translation by  
B. Vitaliano, January, 1982).
- Morris, R.J.  
1985; Assessment Report on Geological,  
Geochemical surveys and Drilling on the  
Wayside Property.

APPENDIX I

ITEMISED COST STATEMENT

Geological Mapping

R.S. Tolbert, 16 days @ \$ 250.00/day \$ 4000.00

Food/Accomadation/Truck/Gas \$ 798.00

Writing Report

R.S. Tolbert, 4 days @ 250.00/day \$ 1000.00

Secretarial, Drafting, Xeroxing, Blueprinting.\$ 929.00

Assaying

Chemex Labs Ltd., 212 Brooksbank Avenue,  
North Vancouver, B.C.

10 rock samples for Au, As-rock geochem \$ 129.00

Supervision

W.P. Stokes, 2 days @ \$ 522.00/day \$ 1044.00

Total \$ 7900.00

APPENDIX II



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.  
North Vancouver, B.C.  
Canada V7J 2C1  
Phone: (604) 984-0221  
Telex: 043-52597

## CERTIFICATE OF ANALYSIS

TO : BEACON HILL CONSULTANTS

10771 ARGENTIA DR.  
RICHMOND, B.C.  
V7E 4K6

306-145 E. 12TH ST  
N. VANCOUVER, B.C.  
V7L 2J3

\*\* CERT. # : A8619904-001-A  
INVOICE # : I8619904  
DATE : 3-NCV-86  
P.O. # : NONE

✓CC: ROBIN TOLBERT

Sample description	Prep code	AS ppm	Au ppb FA+AA				
4029 H	205	4	150	--	--	--	--
4030 H	205	3	<5	--	--	--	--
4031 H	205	9	<5	--	STAT. 139	--	--
4032 H	205	1	<5	--	--	--	--
4033 H	205	2	<5	--	--	--	--
4034 H	205	1	<5	--	STAT 132	--	--
4035 H	205	3	60	--	--	--	--
4036 H	205	1	<5	--	--	--	--
4037 H	205	2	<5	--	STAT. 189	--	--
4038 H	205	1	<5	--	--	--	--

VOI rev. 4/85

Certified by Hart Bichler

APPENDIX III



**HUGH HAMILTON LTD.**

850 West 15th Street, North Vancouver, British Columbia,  
Canada V7P 1M6 Telephone [604] 980-5061

September 23, 1986

In account with:

Beacon Hill Consultants  
#801 - 1030 West Georgia Street  
Vancouver, B.C.  
V6E 2Y3

Attention: Peter Stokes

Invoice #86-232

To mapping services rendered:

OUR PROJECT #86-083 - Wayside Property

1. To provide additional mapping at a scale of 1:5000 with a 10 metre contour, to join to previous map area near Gun Lake.	\$ 265.00
2. To provide 3x enlargement of SRS 3431 #007, 009 and 011. Costs include taxes, shipping and handling.	109.75
	<hr/>
TOTAL THIS INVOICE	\$ 374.75
	<hr/> <hr/>

PAYABLE UPON RECEIPT  
or 2% per month interest on overdue balance





APPENDIX IV

STATEMENT OF QUALIFICATIONS

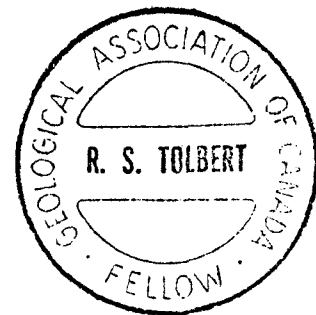
I, Robin Stuart Tolbert, of 306 - 145 East 12th Street, North Vancouver, B.C., V7L 2J3, state that:

- 1) I graduated in 1972 from Edinburgh University, Scotland with a B.Sc. in Geology.
- 2) From 1974-1978 I was employed by UMEX as Geologist, and from 1979-1981 as Senior Geologist, on exploration programs in B.C., Yukon and western United States.
- 3) From 1981-1985 I was employed by Cyprus Anvil Mining Corporation, as District Geologist, based in Faro, Yukon involved in exploring and developing deposits within the Anvil District.
- 4) From 1985-present I have been a Consulting Geologist.
- 5) I am a Fellow of the Geological Association of Canada.
- 6) The findings of this report are based on my personal inspection and observations of the Lake Claims during September 23, 1986 to October 8, 1986.

DATED at Vancouver this 10th day of November, 1986.



R. S. Tolbert







Gun Lake

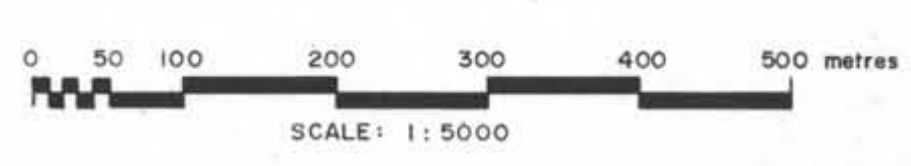
Carpenter Lake / Bridge River

LITHOLOGY		UNIT	DESCRIPTION
TRADIC AND/OR JURASSIC	HURLEY	6	THIN-BEDDED GREY TO BLACK ARGILLITE TO SLATE, ARGILLITE, MINOR LITH. SANDSTONE, SILESTONE AND SIFTY CONGLOMERATE
	HURLEY	5	CONGLOMERATE, PEBBLE TO COBBLE SIZE WITH PREDOMINANTLY CHERT, MINOR VOLCANIC, AND CHARACTERISTIC LIMESTONE FRAGMENTS
PALEOZOIC FERUSSON?		4	LIMESTONE - GREY CRYSTALLINE
PALEOZOIC FERUSSON?		3	FLAGGY TO SLATY BLACK ARGILLITE AND MINOR GREY-WACKES WITH GRADED BEDDING
PALEOZOIC FERUSSON		2	CHERT - THIN BEDDED GREY CHERT WITH MINOR ARGILLITE BEDDING TO MEDIUM WHITE LIMONITE STAINED CHERT
		1	UNDIFFERENTIATED FRAGMENTAL TO MASSIVE GREEN-PURPLE GREENSTONE TO FERRUGINOUS IRONSTONE TO MASSIVE GREENSTONE (massive, irregularly pillow textured)
INTRUSIVE ROCKS			
	AGE	UNIT	
POST LOWER CRETACEOUS		7	HORNBLANDIC FELDSPAR PORPHYRY
POST LOWER CRETACEOUS (?)		8	FELDSPAR PORPHYRY
AFRICANIC (?)		9	FELSITE - ALBITITE (?)
JURASSIC (MAGMAIC INTRUSIVE)		C	SODIA GRANITE
JURASSIC (MAGMAIC INTRUSIVE)		B	GABBRO-DIOBASE
JURASSIC (PRESIDENT (?) INTRUSIVES)		A	SUGITE PERIDOTITE, SERPENTINITE

LEGEND	
	ROAD
	TRAIL
	OUTCROP
	GEOLOGIC STATION
	POWER POLE
	GOVERNMENT TRIANGULATION STATION
	CLAIM POST
	ADIT
	CONTACT DEFINED, APPROXIMATE, ASSUMED
	FAULT DEFINED WITH STRIKE & DIP, APPROXIMATE, ASSUMED
	DIP OF BEDDING, INCLINED, VERTICAL
	JOINTS, FRACTURED, INCLINED, VERTICAL
	VEIN, INCLINED, VERTICAL
	YOUNGING DIRECTION
	AXIS OF ANTICLINE, DEFINED
	AXIAL PLANE, INCLINED, VERTICAL
	MINERAL LINEATION
	FLAT

GEOLOGICAL BRANCH ASSESSMENT REPORT  
**15,342**

Mapping by R. Tolbert Interpretation by R. Tolbert  
Drawn by M. Hammond



Map to accompany Assessment Report on Geological Mapping of Lake Claims, B.C.  
by R.S. Tolbert  
Endorsed by W.P. Stokes  
Dated October 15, 1986



BEACON HILL CONSULTANTS LTD.	DATE
AMAZON PETROLEUM CORP. LAKE CLAIMS GEOLOGY	PROJ. NO.
	APPROVED
	NO.
	<b>5</b>