NTS 92F / 5
Lat 49° 23' N
Long 125° 37' W

20,474

GEOLOGICAL and GEOCHEMICAL REPORT on the URSUS CREEK Property Alberni Mining Division, B.C.

for

PACIFIC SENTINEL GOLD CORP
#1020 - 800 W. Pender St
Vancouver, B.C. V6C 2V6
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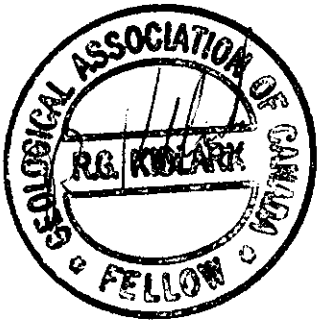

by

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SUMMARY

Reliance Geological Services Inc carried out an exploration program consisting of geological mapping, rock sampling, grid layout, and trench blasting on the Ursus Creek property for Pacific Sentinel Gold Corp during September and October 1990.

The Ursus Creek property consists of fifteen contiguous 4-post mineral claims, totalling 200 units, situated approximately 30 kilometers northeast of the town of Tofino on the west coast of Vancouver Island, B.C.

The claims are underlain by volcanic rocks belonging to the Upper-Middle Triassic Karmutsen Formation. The individual lithologic units consist of massive andesitic to basaltic flows, pillowed lavas, breccias, and minor beds of tuff. This package has been intruded by the Jurassic Island granodiorite and quartz diorite.

There are three styles of mineralization on the property: auriferous cataclastic zones; quartz veins; and magnetite-chalcopyrite replacement pods. All mineralization has been found along or close to the Ursus Creek cataclastic fault zone, a major structure crossing the central area of the claims at 112°.

Previous work identified six gold showings, three of which have indicated possible economic significance. Diamond drilling at the Junction Zone has yielded intersections including 0.27 opt Au over 1.8 meters, 0.25 opt Au over 1.7 meters, and 0.33 opt Au over 1.3 meters. The zone has been identified over a 220 meter strike length and 145 meter depth, and is open in all directions. Select and chip sampling at the Mid Pad Zone has given results up to 0.87 opt Au. Select and float sampling at the Elmer quartz veins has yielded results up to 0.61 opt Au.

The 1990 geological mapping, prospecting, and rock sampling program focused on the east and west ends of the property where very little previous work had been carried out. The Whistler Showing was discovered along the Ursus Creek cataclastic zone, 2.5 km upstream from the Junction Zone. Results up to 1755 ppb (.05 opt) Au over 1.0 meter were obtained. The Elmer Showing was blasted and chip sampled, with assay results up to 0.245 opt Au over 60 cm. The Lower Vein yielded results up to 0.275 opt Au over 60 cm. The strike length of the Elmer Showing has been established to be at least 200 meters.

Based on previous and 1990 work, a further exploration program has been recommended. This program proposes geological mapping, magnetometer and VLF-EM geophysics, and approximately 4500 feet of diamond drilling. The diamond driling will further test the extent of the strike and down dip of the Junction Zone, and will test the Elmer and Mid Pad Showings at depth.

Estimated budget is $ 385,000, before G.S.T.

TABLE OF CONTENTS

1.0 INTRODUCTION

This report was prepared at the request of Pacific Sentinel Gold Corp, #1020-800 West Pender Street, Vancouver, B.C., to describe and evaluate the results of the 1990 geological-geochemical-rock sampling program carried out by Reliance Geological Services Inc. The field work was carried out from September 20 to October 6 on the Ursus Creek Property, Port Alberni area, Vancouver Island, B.C.

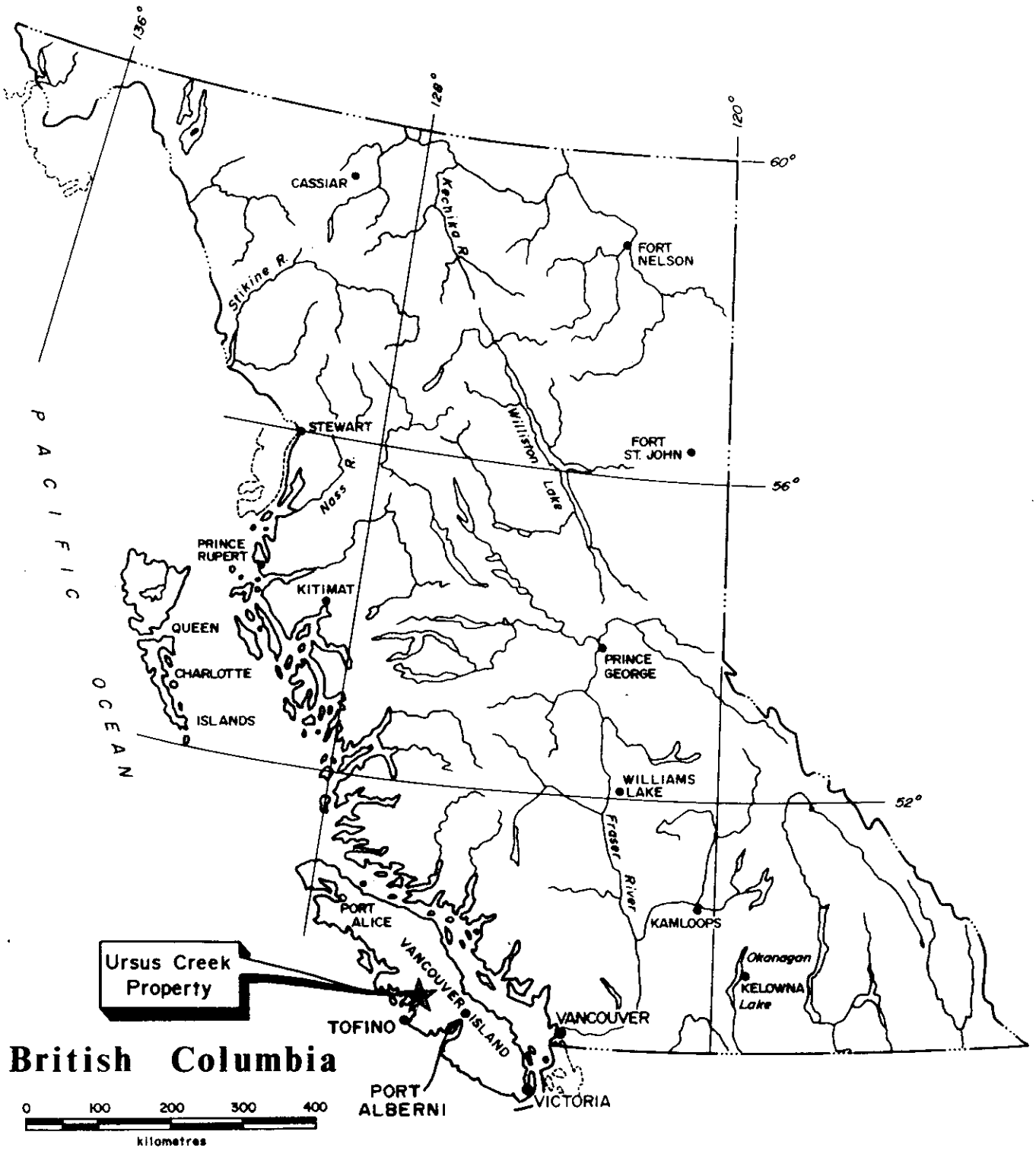
The report also describes the property and regional geology and exploration activities in the area, and outlines recommendations for a further exploration program.

2.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Ursus Creek Property is situated in the Alberni Mining Division, approximately 30 kilometers northeast of the town of Tofino on the west coast of Vancouver Island (Fig 1).
The claims are centred at latitude 49°23' North and longitude 125°37' West on NTS mapsheet 92F/5.

Access is by helicopter from Port Alberni, 60 kilometers to the southeast or from Nanaimo, 165 kilometers to the southeast. In the summer season, temporary helicopter bases may be active at Tofino, 55 kilometers to the southwest. Helicopter access for any major transportation such as a drilling job should be from the end of the Taylor River road.

The claims, which cover over 12,000 acres, extend easterly along the Ursus Creek Valley and southeasterly over the pass into the upper drainage of the Taylor River. Many slopes are steep, and elevations range from 40 meters at the west end of Ursus Creek to greater than 1400 meters at the eastern end of the property.



PACIFIC SENTINEL GOLD CORP.	
URSUS CREEK PROPERTY ALBERNI M.D., B.C.	
General Location Map	
Scale: as shown	N.T.S. 92F/5
Date: SEPT. 1990	Figure: 1
RELIANCE GEOLOGICAL SERVICES INC.	

GEOLOGICAL ASSOCIATION OF CANADA
R.G. KIDARK
FELLOW

313000 m.E.

5475000 m.N.

N

OPUS 1
3077

OPUS 2
3078

UREKA 1
3064

UREKA 2
3065

UREKA 3
3066

UREKA 4
3067

UREKA 5
3068

UREKA 6
3069

UREKA 7
3070

UREKA 8
3071

UREKA 9
3072

UREKA 10
3073

UREKA 11
3074

UREKA 12
3075

UREKA 13
3076

Ursus Creek

125°40'E.

49°20'N.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,474

GEOLOGICAL ASSOCIATION OF CANADA
R.G. KIDLARK
FELLOW

0 0·5 1 2 3 Km

PACIFIC SENTINEL GOLD CORP.

URSUS CREEK PROPERTY
ALBERNI M.D., B.C.

Claim Location Map

Scale: 1:50,000	N.T.S. 92F/5	Drawn by:
Date: SEPT./90	Geologist:	Figure: 2

RELIANCE GEOLOGICAL SERVICES INC.

The property is in the West Coast temperate rain forest region and rainfall is heavy. Vegetation consists of mature western cedar up to two meters in diameter, mixed with hemlock and Douglas fir. The open forest floor vegetation consists of salal, ferns and minor immature hemlock and yew trees. Parts of the main Ursus Creek Valley bottom are covered with dense thickets of buck brush and devil's club.
No logging has been carried out in the area.

3.0 CLAIM STATUS

The Ursus Creek property comprises fifteen contiguous mineral claims totalling 200 units and is wholly owned by Pacific Sentinel Gold Corp. (Fig 2). Pertinent claim data is as follows:

Claim Name	Record No.	Units	Record Date	Expiry Date
Ureka 1	3064	15	01 Dec 1986	01 Dec 1991
Ureka 2	3065	15	01 Dec 1986	01 Dec 1991
Ureka 3	3066	15	01 Dec 1986	01 Dec 1991
Ureka 4	3067	10	01 Dec 1986	01 Dec 1991
Ureka 5	3068	12	01 Dec 1986	01 Dec 1991
Ureka 6	3069	12	01 Dec 1986	01 Dec 1992
Ureka 7	3070	8	01 Dec 1986	01 Dec 1991
Ureka 8	3071	20	01 Dec 1986	01 Dec 1992
Ureka 9	3072	4	01 Dec 1986	01 Dec 1992
Ureka 10	3073	20	01 Dec 1986	01 Dec 1992
Ureka 11	3074	12	01 Dec 1986	01 Dec 1991
Ureka 12	3075	12	01 Dec 1986	01 Dec 1990
Ureka 13	3076	20	01 Dec 1986	01 Dec 1990
Opus 1	3077	15	01 Dec 1986	01 Dec 1991
Opus 2	3078	10	01 Dec 1986	01 Dec 1990
Total		200		

The total area, correcting for overlap, is approximately 5,000 hectares or 12,356 acres.

4.0 REGIONAL GEOLOGY (from Muller, 1977)

4.1 Stratigraphy

Vancouver Island is the main component of the Insular Belt, the westernmost major tectonic subdivision of the Canadian Cordillera. Narrow strips of land on the west and south coast are newly discovered fragments of the Pacific Belt that is well developed in the western United States and Alaska. The Insular Belt (Island Mountains) contains a middle Palaeozoic and a Jurassic volcanic-plutonic complex, both apparently underlain by gneiss-migmatite terranes and overlain respectively by Permo-Pennsylvanian and Cretaceous clastic sediments. A thick shield of Upper Triassic basalt, overlain by carbonate-clastic sediments, separates these two complexes in space and time. Post orogenic Tertiary clastic sediments fringe the west coast.

The Pacific Belt on the western and southern rim of the Island contains in its inner (eastern) part an assemblage of late Jurassic to Cretaceous slope and trench deposits, deformed to mélange and schist, and an outer part of Eocene oceanic basalt and subjacent basic crystalline rocks.

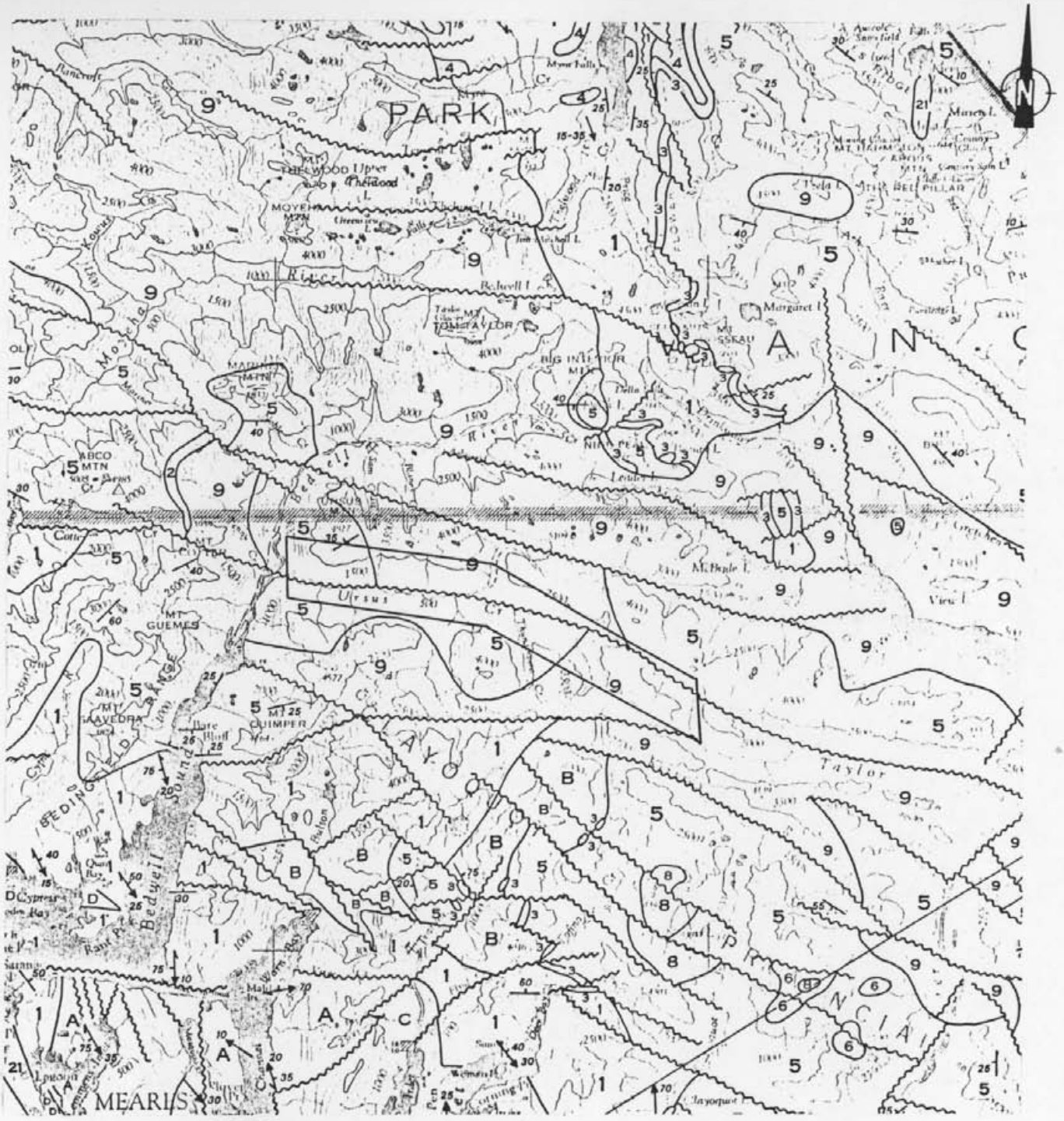
In the Ursus Creek Region the stratigraphy is as follows: (Fig 3).

a) Middle to Late Palaeozoic

Sicker Group

The Sicker Group comprises all known Palaeozoic rocks of Vancouver Island and is subdivided into a lower volcanic formation, a middle greywacke-argillite formation, and an upper limestone formation. The group is exposed in narrow, fault-bounded uplifts. In the Ursus Creek region, only the volcanic formation is represented.

The volcanic rocks range from fine grained banded tuffs to breccias with clasts 10 cm or more in size and agglomeratic lava flows. Flows, tuffs and related dykes commonly contain phenocrysts of uralitized pyroxene and albitized plagioclase. A few chemical analyses indicate chemical compositions ranging from basalt to rhyolite. Although internal structure is generally well preserved the rocks are mostly of low greenschist chlorite-actinolite metamorphic rank. Locally they are shear-folded and converted to well foliated chlorite-actinolite schist. The undetermined thickness is estimated to be between 1,000 and 3,000 meters.



GEOLOGICAL ASSOCIATION OF CANADA
FELLOW

0 5 10 15 Km.

PACIFIC SENTINEL GOLD CORP.

URSUS CREEK PROPERTY

ALBERNI M.D., B.C.

Regional Geology

Scale: 1:250,000	N.T.S. 92F/5	Drawn by:
Date: Sept/ 90	Geologist:	Figure: 3

RELIANCE GEOLOGICAL SERVICES INC.

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

23 Glacial and alluvial deposits

TERTIARY

22 Rhyolitic, to dacitic tuff, breccia, ignimbrite

21 Hornblende quartz diorite, leucoquartz monzonite, porphyritic dacite, breccia

CRETACEOUS OR TERTIARY

20 Sandstone, conglomerate

CRETACEOUS AND (?) TERTIARY
UPPER CRETACEOUS AND (?) TERTIARY
NANAIMO GROUP (11-19)

19 GABRIOLA FORMATION: sandstone, conglomerate, shale

UPPER CRETACEOUS

18 SPRAY FORMATION: siltstone, shale, fine sandstone

17 GEOFFREY FORMATION: conglomerate, sandstone

16 NORTHUMBERLAND FORMATION: siltstone, shale, fine sandstone

15 DE COURCY FORMATION: conglomerate, sandstone

14 CEDAR DISTRICT FORMATION: shale, siltstone, fine sandstone

13 EXTENSION-PROTECTION FORMATION: sandstone, conglomerate, shale, coal

12 HASLAM FORMATION: shale, siltstone, fine sandstone

11 COMOX FORMATION: sandstone, conglomerate, shale, coal: 11a is BENSON MEMBER: mainly coarse conglomerate

MESOZOIC

UPPER JURASSIC AND/OR LOWER CRETACEOUS

10 'Tofino Area Greywacke Unit'
Greywacke, argillite, conglomerate

JURASSIC
MIDDLE TO UPPER JURASSIC

9 ISLAND INTRUSIONS: biotite-hornblende granodiorite, quartz diorite

TRIASSIC AND JURASSIC
LOWER JURASSIC(?)
VANCOUVER GROUP (5-8)
BONANZA SUBGROUP (7, 8)

8 VOLCANIC DIVISION: andesitic to latitic breccia, tuff and lava; minor greywacke, argillite and siltstone

UPPER TRIASSIC AND LOWER JURASSIC

7 SEDIMENTARY DIVISION: limestone and argillite, thin bedded, silty carbonaceous

UPPER TRIASSIC

6 QUATSINO FORMATION: limestone, mainly massive to thick bedded, minor thin bedded limestone

UPPER TRIASSIC AND OLDER

5 KARMUTSEN FORMATION: pillow-basalt and pillow-breccia, massive basalt flows; minor tuff volcanic breccia. Jasperoid tuff, breccia and conglomerate at base

TRIASSIC OR PERMIAN

4 Gabbro, peridotite, diabase

PALEOZOIC

PENNSYLVANIAN, PERMIAN AND OLDER
LOWER PERMIAN
SICKER GROUP (1-3)

3 BUTTLE LAKE FORMATION: limestone, chert

MIDDLE PENNSYLVANIAN

2 Argillite, greywacke, conglomerate; minor limestone, tuff

PENNSYLVANIAN AND OLDER

1 Volcanic breccia, tuff, argillite; greenstone, greenschist; dykes and sills of andesite-porphyry

'WESTCOAST CRYSTALLINE COMPLEX' (A-D)
'BASIC ROCKS'

D Gabbro, peridotite

'TOFINO INLET PLUTON'

C Hornblende-biotite quartz diorite, granodiorite

'WESTCOAST DIORITES'

B Hybrid hornblende diorite, quartz diorite, agmatite; includes masses of hornfelsic volcanic rocks

'WESTCOAST GNEISS COMPLEX'

A Hornblende-plagioclase gneiss, amphibolite, hornfels

Geological boundary (approximate)

Bedding (inclined, vertical, overturned)

Schistosity, foliation (inclined)

Schistosity, foliation and minor fold axes (inclined, vertical, arrow indicates plunge)

Lineation (axes of minor folds)

Fault (approximate); lineament

Geology by J. E. Muller, 1963-1967.
Includes contributions by W.G. Jeffery, D. J. T. Carson

To accompany GSC Paper 68-50 by J. E. Muller

This preliminary edition may be subject to revision and correction

Geological cartography by the Geological Survey of Canada, 1969

Base-map compiled by the Surveys and Mapping Branch, Department of Lands and Forests, British Columbia, 1961-62

Magnetic declination 1968 varies from 22° 51' easterly at centre of east edge to 23° 09' easterly at centre of west edge. Mean annual change decreasing 2.7'

Elevations in feet above mean sea-level

The apparent age of metamorphism is Middle Permian and the cooling age must be earlier Permian or older. Sicker Group rocks are the apparent remnant of a mid-Palaeozoic volcanic arc, built on oceanic crust or perhaps on the continental edge. After volcanism ceased, the volcanic rocks were covered by clastic and carbonate sediments.

b) Late to Middle Triassic

Vancouver Group:

Karmutsen Formation (Unit 5). The Karmutsen Formation, named by Gunning (1932), is composed of tholeitic volcanic rocks, up to 6,000 m thick. In Carlisle's (1974) standard section the formation is composed of a lower member, about 2,600 m thick, of pillow lava; a middle member, about 800 m thick, of pillow breccia and aquagene tuff; and an upper member, about 2,900 m thick, of massive flows with minor interbedded pillow lava, breccia and sedimentary layers. Except in contact zones with granitic intrusions, the volcanics exhibit low-grade metamorphism up to prehnite-pumpellyite grade. Their age is determined by that of the underlying Ladinian unit and by Upper Triassic, Karnian fossils in sediments in the upper member. The basaltic eruptions apparently started with pillow lavas in a deep marine rift basin, continued with aquagene tuff and breccia as the basin became shallower, and terminated with intrusion of subareal basalt flows. Because the volcanics were formed on a rifting oceanic crust they are probably only in some areas underlain by Sicker Group rocks, whereas elsewhere they constitute new oceanic floor.

c) Quatsino Formation (Unit 6)

Upper Triassic sediments generally overlie the Karmutsen volcanics, however, in the Ursus Creek region the sediments have mostly been eroded and only remnants remain.

The Quatsino Formation consists of limestone, mainly massive to thick-bedded calcilutite, varying from 25 m to 500 m in thickness and containing ammonites and other fossils of late Karnian to early Norian age. The succeeding Parson Bay Formation is in diachronous contact with the Quatsino and in places lies directly on Karmutsen volcanics. It is composed of interbedded calcareous black argillite, calcareous greywacke and sandy to shaly limestone and the proportion and grain size of clastic material generally increases upward.

The thickness is between 300m and 600m. Fossils are the pelagic pelecypods Halobia in the lower Karnian part and Monotis in the upper Norian part, together with many general of ammonites. The sediments were formed in near- and off-shore basins in the quiescent Karmutsen rift archipelago.

d) Jurassic

Island Intrusions (Unit 9) and Westcoast Complex (Unit A). The Island Intrusions are batholiths and stocks of granitoid rocks ranging from quartz diorite (potash feldspar <10% of total feldspar quartz 5-20%) to granite (potash feldspar >1/3 of total feldspar; quartz >20%) which intrude Sicker and Vancouver Group rocks.
The Westcoast Complex is genetically related to the Island Intrusions. It is a heterogeneous assemblage of hornblende-plagioclase gneiss, amphibolite, agmatite and quartz diorite or tonalite. One age determination on zircon from the complex has yielded near-concordant U/Pb dates of 264 m.y. and two K-Argon dates on hornblende rocks are 192 and 163 m.y. The complex is considered to be derived from Sicker and Vancouver Group rocks, migmatized in Early Jurassic time. Its mobilized granitoid part is considered to be the source of Island Intrusions. Available dating suggests that the plutonic-volcanic arc that formed these interrelated crystalline formations became extinct in Middle Jurassic time. A period of uplift and erosion followed.

4.2 Structure

The most dominant structures in the region are steep faults which generally trend in northerly or westerly directions. The faults affect both Sicker and Vancouver Group rocks and give a "patchwork" appearance to the geological map.

Faulting and rifting probably occurred during the outflow of Karmutsen lavas in Late Triassic time, establishing the northerly and westerly directed fault systems. Faulting in northwest direction, accompanied by southwestward tilting in the west, and later by northeastward tilting in the east, occurred in late Mesozoic to early Tertiary time. Faulting in a northeasterly direction affected younger Mesozoic and early Tertiary rocks.

4.3 Mineralization

At least seven past producers, five developed prospects and forty-six showings and prospects occur within 20 kilometers of the Ursus Creek Property (Minfile). Past producers and developed prospects are presented on Figure 4.

Mineralization can be classified as either shear-zone related auriferous polymetallic quartz veins or skarns.

i) Auriferous Quartz Veins:

Auriferous quartz veins containing variable amounts of chalcopyrite, pyrrhotite, pyrite, arsenopyrite, galena, sphalerite, and magnetite are associated with shear zones within Island Intrusives, Volcanics, and at contacts between intrusives and volcanics.

Past producers include: (Minfile).

a) Musketeer (Minfile 060)

> "The Musketeer occurrence is located in Strathcona Park, along the Bedwell River. The area is underlain by quartz diorite of the Bedwell River batholith which is part of the Early to Middle Jurassic Island Intrusions. Locally, fine-grained quartz diorite may represent a later phase of the intrusive. Andesite dykes, some of which are strongly altered, cut the intrusive rocks. Andesitic flows of the Upper Triassic Vancouver Group, Karmutsen Formation, lie 1.5 kilometers to the west.
>
> Five veins are recognized within a 260 meter area. The veins follow shears that occupy two orientation sets. One set strikes 010 to 030 degrees and dips 85 degrees west to 75 degrees east and the second set strikes 045 to 090 degrees with dips ranging from 45 to 75 degrees north.
>
> The Musketeer vein, hosted in the second set of shears, strikes 80 degrees, dips 50 degrees north and is 225 meters long. It cuts and slightly off-sets the Trail vein, the Rob vein, the Musketeer #1 vein and the Bonus vein, which all belong to the first set of shears.

The veins consist mainly of well-crystallized quartz and white carbonate, with varying amounts of fine free gold, pyrite, sphalerite, galena and chalcopyrite. Pyrite and sphalerite are locally coarse. Vein widths range from less than 1.0 centimeter to 30.0 centimeters, with wider sections occurring at splays in the veins. The sulphides occur as ribbons where the veins are banded, or as irregular masses elsewhere.

Assays from the 700 level of the Trail vein range up to 166.65 grams per tonne gold and 106.30 grams per tonne silver over 25.4 centimeters (sample No. 25, Bulletin 13, page 45). A sample over a strike length of 51.5 meters on the 850 level averaged 39.43 grams per tonne gold over 25.4 centimeters and 169.7 grams per tonne gold over 11.4 centimeters (Bulletin 13, page 40).

In 1942, reserves of 18,034 tonnes, grading 11.32 grams per tonne gold were reported (Northern Miner, November 28, 1974). Production from the Trail and Musketeer veins in 1942, 1961, 1962, 1963, 1974 and 1975 totalled 9,623 tonnes of 9.87 grams per tonne gold, 5.61 grams per tonne silver, 1.15 per cent lead and 0.005 per cent copper.

Production:

Year	Mined (tonnes)	Milled (tonnes)	Gold (gms)	Silver (gms)	Copper (kg)	Lead (kg)
1975	7	0	435	280	4	
1974	50	0	2,986	2,146	55	2,247
1963	2	0	2,488	1,182	5	130
1962	2,830	0	27,308	15,023	151	2,199
1961	308	0	4,323	3,204	44	626
1942	6,426	4,599	57,416	32,161	243	5,897
Total	9,623	4,599	94,956	53,996	522	11,099

In summary (from Woodcock, 1987):

"One of the characteristics of these veins is their very narrow width and their good gold content. A number of samples from the 1000-level of the Musketeer Vein presented by Sargent (1941, p.40) shows that the highest gold values are generally with the banded vein material and that a weighted average of ten samples, disregarding whether or not they are within ore shoots, is 1.48 oz/ton Au across 5.4 inches (14 cm), with values up to 4.95 oz/ton across 4.5 inches. Silver values are generally slightly less than the gold values."

b) Buccaneer (Minfile 061) - 1 km northwest of the Ursus property

"The Buccaneer occurrence is located in Strathcona Park on the Bedwell River. The area is underlain by quartz diorite of the Bedwell River batholith which is part of the Early to Middle Jurassic Island intrusions. Andesitic flows of the Upper Triassic Vancouver Group, Karmutsen Formation lie 2.4 kilometers to the west.

The occurrence comprises the West vein and the Craig vein which are 200 meters apart and follow altered andesite dykes for much of their length. The veins and dykes follow branching fractures that range in width from 0.05 meters to 7.6 meters, averaging 2.4 meters. The veins may be within the dykes or they may follow either side of the contact of the dyke and quartz diorite.

The veins are 0.05 to 0.51 meters wide, locally anastomosing to 1.2 meters. Vein material consists of well crystallized quartz, calcite, minor chlorite, and wallrock fragments that are sometimes altered to ankerite. Sulphide content is usually less than 1.0 per cent and includes scattered grains of chalcopyrite, pyrite, galena, and sphalerite. Locally, malachite, covellite, chalcocite, limonite and anglesite are present as alteration products. Fine-grained free gold is irregularly distributed in the gangue or with the sulphides.

The Craig vein has been traced underground for over 250 meters at two levels, and is up to 0.51 centimeters wide, averaging about 0.14 meters. Assays range up to 316.15 grams per tonne gold and 75.44 grams per tonne silver (sample number 32, Bulletin 13, page 59).

Results of 1939 surface sampling along a strike length of 134.1 meters indicates a weighted average value of 19.55 grams per tonne gold over 0.91 meters (Buccaneer Mines Limited, 1939 Assay Plan). It is not clear whether this information is from the Craig or the West vein.

Production:

Year	Mined (tonnes)	Milled (tonnes)	Gold (gms)	Silver (gms)	Copper (kg)	Lead (kg)
1959	0	1,450	30,170	17,169	48	2,993
1958	91	91	1,026	902	14	213
1947	44	0	1,886	467		
1942	2,722	2,649	72,439	17,604	253	
1941	2,130	1,767	16,080	2,986		
Total	4,987	5,957	121,521	39,128	315	3,206

c) Prosper (Minfile 053).

"The Prosper occurrence is underlain by volcanics of the Upper Triassic Karmutsen Formation, Vancouver Group. These consist of fine grained andesites and black or dark green basalts. Large areas to the immediate west of the head of Bedwell Sound and a few kilometers to the north are underlain by rock of the Early to Middle Jurassic Island Intrusions. These plutonic rocks vary in composition from gabbro to quartz monzonite but are mainly granodiorite and quartz diorite. Lenses of recrystallized limestone also occur in the region.

The Prosper vein occurs in a shear zone that ranges from about 0.3 to 1 meter in width, strikes generally at 65 degrees and dips between 56 and 68 degrees to the northwest. The vein ranges from 18 to 70 centimeters in width, but is typically 25 to 35 centimeters wide. The vein can vary from a solid vein of quartz, to parallel footwall and hanging-wall branches, to zones of silicified breccia. The vein is mineralized with pyrite, chalcopyrite galena, sphalerite, visible gold and malachite. A weighted average of assays from 11 samples taken on the vein gave 16 grams per tonne gold and 34.63 grams per tonne silver over an average width of 39 centimeters (Assessment Report 17620).

The vein has been explored intermittently since the beginning of the century and is currently exposed by two adits and two surface trenches. The lower adit, at an elevation of 110 meters, is reported to be 128 meters in length. The upper adit, at an elevation of 158 meters, follows the vein for 35 meters and then branches for 3 meters as the vein splits. A raise begun at a point 80 meters from the portal of the lower adit intersects the bottom of a winze in the upper adit.

Bralorne Mines Ltd held an option on the property, and, in 1942 and 1950, produced 90 tonnes of ore from the upper adit. 6,687 grams of gold, 6,283 grams of silver and 37 kilograms of copper were recovered (Mineral Policy data).

The vein has been calculated to contain probable reserves of 900 tonnes grading 26.74 grams per tonne gold and possible reserves of 7250 tonnes containing 32.57 grams per tonne gold (Assessment Report 17620).

The Isob vein occurs about 40 meters north of the Prosper vein, striking from 055 to 060 degrees and dipping moderately to the northwest. It consists of quartz, with minor calcite, containing chalcopyrite, pyrite, galena and visible gold. The observed part of the vein is from 30 to 40 centimeters wide. The assays of 5 samples taken on the vein gave a weighted average of 10.87 grams per tonne gold and 53.83 grams per tonne silver over an average vein width of 37 centimeters (Assessment Report 17620).

The Isob vein is exposed by a 5 meter long adit and two surface cuts over a strike length of 130 meters and a vertical distance of 65 meters."

Production:

Year	Mined (tonnes)	Milled (tonnes)	Gold (gms)	Silver (gms)	Copper (kg)
1950	4	0	249	311	37
1942	86	0	6,438	5,972	
Total	90	0	6,687	6,283	37

Comments for 1950: Some ore shipped. Amount not known.
Comments for 1942: Shipped by Buccaneer Mines to Tacoma.

d) Sherwood (Minfile 069)

"The Sherwood occurrence, located at the southern end of the Buttle Lake uplift, is underlain by cherty argillite and tuff of the Palaeozoic Sicker Group. The sediments and volcanics are overlain by limestone of the Permian to Pennsylvanian Azure Lake Formation, Buttle Lake Group. A large granodiorite stock of the Jurassic Island Intrusions is located approximately 2 to 4 kilometers east. See H-W (092F 330) for a discussion of the recent stratigraphic and nomenclature revisions in the uplift.

Andesite and basalt dykes in the area are related to volcanic activity that postdates the limestone. Locally, the quartz diorite dykes and stocks are related to the Early to Middle Jurassic Island Intrusions. Hybrid rocks are common, and there is evidence of granitization in the area southwest of Love Lake. A regional northwest trending fault extends from Bedwell Lake through Love Lake, and is located 0.5 kilometers east of the occurrence.

The Sherwood vein occupies a 070 to 080 degree striking shear zone that dips 65 to 72 degrees north. Strong open fractures bisect the shear zone at 090 to 120 degrees. The shear zone is up to 2.0 meters wide and contains intensely altered gouge, and lenses of quartz that range up to 0.76 meters in width. Several parallel quartz veins are present, separated by wall rock or clay gouge. Abundant, narrow quartz veins branch off the main structure.

Primary vein material consists of quartz, sphalerite, galena, covellite, chalcopyrite and pyrrhotite. Much of the vein has been reduced to rusty, crumbly and often porous material. Studies indicate the primary sulphide mineralogy is altered to malachite, marcasite, anglesite, covellite, and possibly other secondary minerals. Silver values are associated primarily with galena. The gold mineralogy is not known.

The vein has been exposed at three levels over an area of 212 meters. Samples from the Number 1 level returned assays of up to 328.50 grams per tonne gold over 24.1 centimeters and up to 462.92 grams per tonne silver over 40.6 centimeters (Bulletin 13, pages 92-93).

In 1942, 20 tonnes of ore were shipped, producing 1866 grams of gold, 3110 grams of silver, and values in lead and copper. The deposit is reported to contain 450,000 tonnes of proven reserves and a similar amount of inferred ore (Times-Colonist, December 27 1987). No grades are reported. A more conservative estimate of 25,247 tonnes of probable and possible ore, grading 17.15 grams per tonne gold is given by McDougall (1944). In 1988, the unclassified reserves are reported as 45,000 tonnes grading 51 grams per tonne gold (Map 65).

Production:

Year	Mined (tonnes)	Milled (tonnes)	Gold (gms)	Silver (gms)	Copper (kg)	Lead (kg)
1942	20	0	1,866	3,110	50	391

e) Gold Flake (Minfile 040)

"The Gold Flake occurrence lies 0.8 kilometers southwest of and on strike with Fandora (see 092F 041). The occurrence lies within greenstone of the pre-Jurassic Westcoast Complex near a contact with a quartz diorite intrusion of the Early to Middle Jurassic Island Intrusions (Tofino Batholith).

The occurrence is comprised of a quartz carbonate vein which parallels an andesite dyke that strikes approximately 070 degrees and dips between 49 to 53 degrees north. The vein is 5.7 to 7.5 centimeters wide and has been traced for about 25 meters. Details about the mineralogy are not given but the mineralization is thought to be similar to the Fandora.

Gold assays range from 5.49 to 442.68 grams per tonne (1:240 scale, Map of the Gold Flake Working). In 1940, 45 tonnes of ore were shipped from this property and produced 809 grams of gold.

f) Fandora (Minfile 041)

"The area of the Fandora occurrence is underlain by andesitic tuff and breccia of the pre-Jurassic Westcoast Complex. Quartz diorite stocks of the Tofino Batholith, which form part of the Early to Middle Jurassic Island Intrusions, lie about 1 kilometer to the south and 2 kilometers to the east.

The volcanic rocks have been altered to greenstone, and are cut by numerous feldspar porphyry dykes and sills, and andesitic to basaltic dykes. Steeply dipping fractures cut the altered rock and strike east-northeast to east-southeast.

An andesite porphyry dyke that is 3.0 to 6.1 meters wide strikes 070 to 080 degrees and dips 60 to 75 degrees north. This dyke hosts two parallel quartz vein-shear zones that have been traced along strike for more than 900 meters, and vertically for over 200 meters. The veins are 1.2 to 1.5 meters apart and range up to 0.45 meters in width. In places the veins are narrower and, as a result of post-vein movement, pass into gouge and crushed rock.

Well rocks along the shear zones contain thin quartz stringers and exhibit carbonate, sericite and pyrite alteration. Occasional fine needles or arsenopyrite are present.

The veins are comprised of quartz, calcite and altered wall rock fragments and appear banded, with thin partings of oxidized material or fine grained chalcopyrite, pyrite, galena, arsenopyrite and sphalerite. Fine free gold is present.

A sample from one of the veins at the 1700 level development averaging 0.3 meters in width, assayed 32.68 grams per tonne gold (George Cross Newsletter #201, 1983). Systematic sampling of the 2100 level yielded uncut assays consisting of 11.21 grams per tonne gold over an average width of 1.53 meters along 30.5 meters strike length, and 16.49 grams per tonne gold over 1.27 meters along 63.4 meters. Uncut assays from the 1900 level development averaged 12.34 grams per tonne over a mining width of 1.66 meters, along a strike length of 228.0 meters. Assays from the 1700 and 1500 level adits gave similar results (Campbell, 1950).

Potential tonnage has been estimated at about 630,000 tonnes grading 6.86 to 8.57 grams per tonne gold. This amount includes 181,500 tonnes grading (undiluted) 10.29 grams per tonne gold or 8,165 tonnes of 78.87 grams per tonne gold (George Cross Newsletter #197 (1984)).

The deposit produced 972 tonnes of ore between 1960 and 1964, containing 45,660 grams of gold and 8,367 grams of silver, and small quantities of copper, lead and zinc.

Other veins in greenstone are reported about 425 meters north and northwest from the Fandora workings, but no details are given (Minister of Mines Annual Report 1946, page 188).

Production:

Year	Mined (tonnes)	Milled (tonnes)	Gold (gms)	Silver (gms)	Copper (kg)	Lead (kg)	Zinc (kg)
1964	844	844	22,830	3,204	9	10	
1963	44	0	10,295	2,457			
1962	36	0	12,068	2,644			
1960	48	0	467	62		72	36
Total	972	844	45,660	8,367	9	82	36

Developed prospects include:

Name	Minfile	General Description
PDQ	070	Two parallel quartz veins within Sicker Group Volcanics. Number 1 vein: strike 020, dip 70 to 85° West. Vein consists of quartz, carbonate, pyrite, chalcopyrite and galena. Strike length >200m. A 45.7 cm wide sample averaged 63.09 grams per tonne gold and 89.15 grams per tonne silver. Number 2 vein: strike 020 to 030 degrees, dip 60 to 70° northwest. Strike length ≈100m. A sample taken across 38.1 cm assayed 32.23 grams per tonne gold, 44.02 grams per tonne silver and 1.4 per cent lead.
Free Gold	205	A quartz vein occurs within a shear zone hosted by quartz diorite. Vein varies from 0.2 to 1.0m wide, strikes 080° and dips steeply north. Mineralization consists of native gold and trace amounts of galena. Three bulk samples were shipped in 1941 and 1942. One 0.90 tonne sample contained 309 grams per tonne gold and 96 grams per tonne silver. A sample across 25 cm assayed 8.23 grams per tonne gold.
Maple Leaf	039	Four veins occur in fractures that cut quartz diorites, volcanics and breccias. The veins consist of quartz, carbonates, pyrite, chalcopyrite, arsenopyrite, sphalerite and galena. Free gold was also observed. The best channel sample across vein returned values of 73.71 grams per tonne gold across a 21.6 cm width.

Trophy (Minfile 066)

The Trophy group of claims, originally recorded in 1939, is on the North Fork of Ursus Creek, approximately one kilometer north of the Ureka 7 claim.

According to Minfile 066:

"The area is underlain by granitic rock of the Early to Middle Jurassic Island Intrusions. These plutonic rocks vary in composition from gabbro to quartz monzonite but are mainly granodiorite and quartz diorite. In the area of the Trophy occurrence quartz diorite is the dominant variety.

The Trophy vein, striking 070 degrees and dipping 80 degrees southeast, has been traced on both sides of a canyon for a horizontal distance of about 50 meters and a vertical distance of about 20 meters. The width of the vein varies from 15 to 40 centimeters.

The vein consists principally of quartz containing a small percentage of sulphides irregularly distributed. Gouge occurs along the walls of the vein and between plates of quartz giving the vein a banded appearance. The gouge bands are parallel to the wall and contain abundant sericite. Sulphide minerals occur as fine grains in the gouge bands and as small aggregates within the quartz. The sulphides consist of pyrite and lesser amounts of galena, sphalerite, and chalcopyrite. Free gold in small angular grains is commonly observed in the white quartz. A 24 centimeter sample taken across the vein assayed 10.29 grams per tonne gold (Bulletin 8, page 66).

In 1939, or shortly after, an adit was reported to have been driven in a southerly direction, from the western side of the canyon, to crosscut the vein; some drifting was done on the vein."

Skarn Mineralization:

Skarn alteration occurs in varying amounts in greenstones, in intrusives and at limestone contacts. Skarn mineralization generally consists of garnet, epidote, pyroxene, amphibole and calcite and occurs as massive lenses, veins or in disseminated form. Associated sulphide minerals consist of chalcopyrite, magnetite, pyrite and pyrrhotite.

One past producer and two developed prospects occur within 20 kilometers of the Ursus Creek Property.

These are described as follows:

a) Hetty Creek (Minfile 015)

"The Deer Bay area is underlain by the pre-Jurassic Westcoast Complex, an assemblage of greenstone, quartz diorite, granodiorite and basalt porphyry. Associated with the greenstone are lenses of white to grey limestone, striking northwest and dipping steeply northeast. The greenstone has been intruded by coarse-grained, dark diorite sills.

Skarn alteration occurs in varying amounts in the greenstone and at intrusive-limestone contacts, but little or no limestone has been replaced. Skarn consists of frequently coarse garnet, epidote, pyroxene, amphibole and calcite, and occurs as massive lenses or in disseminated form. Mineralization consists of chalcopyrite, magnetite, pyrite, and pyrrhotite, with minor amounts of bornite, molybdenite and powellite. All these minerals can be found together in varying proportions as small pods within the skarn. Magnetite and molybdenum minerals are mutually exclusive. A chip sample taken over 20 meters, assayed 0.511 per cent molybdenite (Assessment Report 8138, page 4).

The Hetty Green mine has been developed along two levels, the 120 and the 210 foot levels. The 120 level portal lies 10 meters east of Tofino Creek and exposes a 20 meter long, 5 meter wide skarn lens. The 210 level portal and the adjacent 10 by 5 meter open cut are located 75 meters east of the lower level adit, and may be the source of 194 tonnes of selected ore that was shipped in 1905. This material contained 62 grams of gold, 5,225 grams of silver and 13,326 kilograms of copper
(National Mineral Inventory Card 92F/4 Cu2).

Forty meters west of Tofino Creek, a limestone band dips irregularly into the hillside. Along the foot wall, greenstone and, locally, diorite are intensely mineralized with magnetite. An adit exposes the limestone hanging wall, where abundant chalcopyrite and pyrrhotite are present at the greenstone contact. A skarn-altered band higher up in the hanging wall contains some disseminated molybdenite. About 30 meters to the north, veinlets of molybdenite are present.

Production:

Year	Mined (tonnes)	Milled (tonnes)	Gold (gms)	Silver (gms)	Copper (kg)
1905	194	0	62	5,225	13,326

b) Crow (Minfile 025)

"The Deer Bay area is underlain by the pre-Jurassic Westcoast Complex, an assemblage of greenstone, diorite, granite, granodiorite and basalt porphyry. Associated with the greenstone are lenses of white to grey limestone, striking northwest and dipping steeply northeast.

Skarn alteration occurs in varying amounts in greenstone, intrusives and at limestone contacts. It consists of garnet, epidote, pyroxene, amphibole and calcite.

At the main Crow occurrence, an open cut has been driven on 1.5 meters of massive magnetite, containing minor chalcopyrite and pyrite, along the north contact of a vertically dipping greenstone dyke in limestone. At an elevation 12 meters below the open cut, an adit cuts only greenstone and limestone, but about 4.5 tonnes of magnetite is stockpiled at the portal. A second adit, 15 meters lower, has been driven in barren limestone, greenstone and diorite.

Approximately 300 meters to the west, a small open cut exposes two 1.5 meter bands of massive magnetite, striking southwest through diorite and granodiorite.

About 200 meters east of the main Crow opencut are four magnetite occurrences in limestone, greenstone and skarn, spread out over an area of approximately 150 meters. At the first, a 3.0 meter adit exposes 0.9 to 1.8 meters of magnetite in limestone and skarn. At the second occurrence, a small open cut exposes 0.3 meters of magnetite, with minor chalcopyrite and malachite in skarn. The third occurrence consists of nearly massive pyrrhotite-bearing magnetite, exposed over 9.0 by 4.5 meters in a (Onad?) creek. The last occurrence comprises 0.6 meters of massive magnetite in greenstone near a tongue of limestone."

c) White (Minfile 009)

"The Deer Bay area is underlain by the pre-Jurassic Westcoast Complex, an assemblage of greenstone, diorite, granite, granodiorite and basalt porphyry. Associated with the greenstone are lenses of white to grey limestone, striking northwest and dipping steeply northeast. The greenstone has been intruded by coarse-grained, dark diorite sills.

Skarn alteration occurs in varying amounts in the greenstone, in the intrusives and at limestone contacts, where little or no limestone has been replaced. The skarn consists of epidote, pyroxene, amphibole and calcite, and occurs as massive lenses or as veins. Mineralization consists of chalcopyrite and magnetite, which occur locally with pyrite, pyrrhotite, bornite, malachite and azurite.

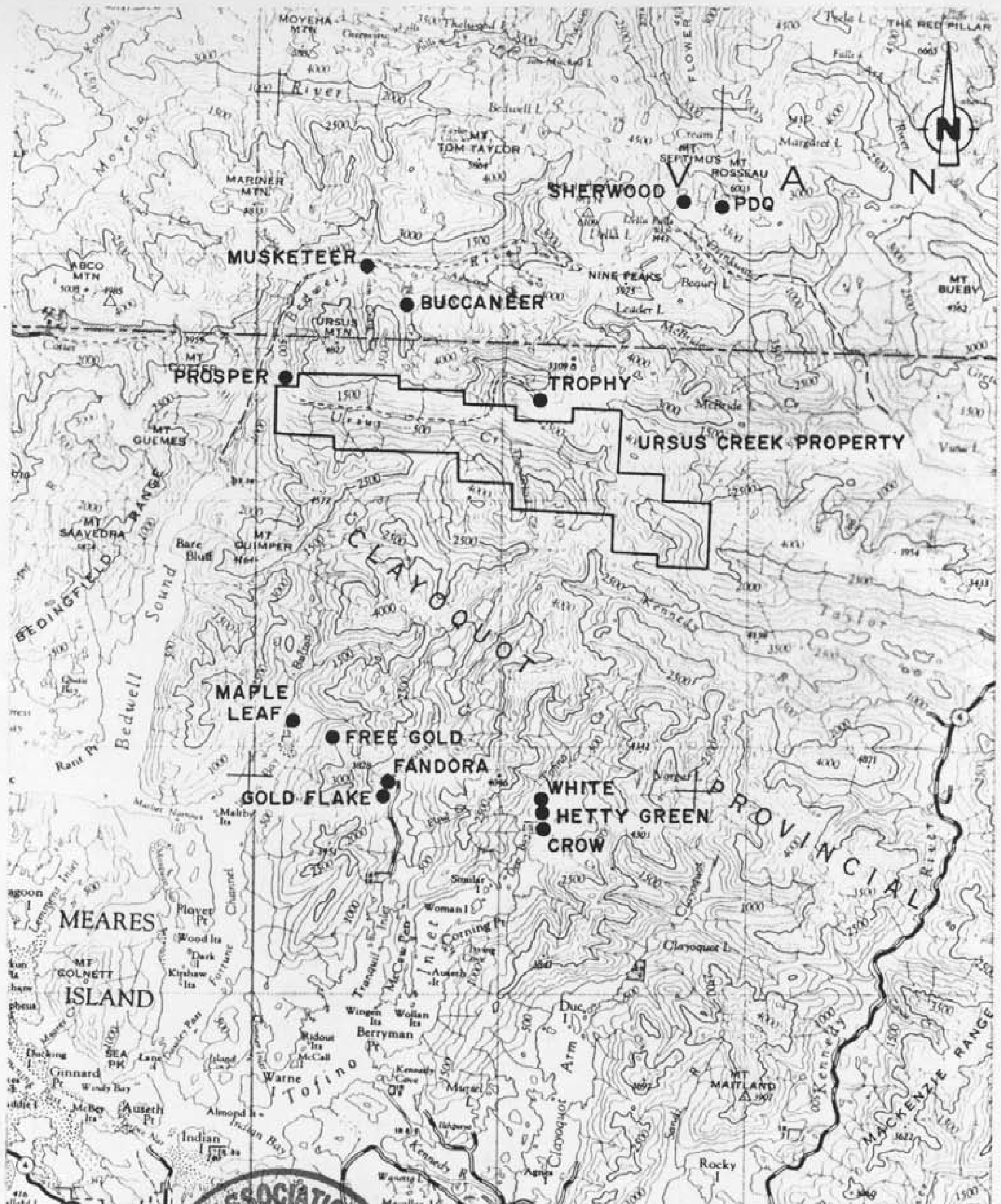
The White occurrence has been explored by four short adits located over about 120 meters:

(1) Adit Number One is 36 meters long and follows pyroxene-epidote skarn in andesite and diorite that has been cut by minor feldspar porphyry dykes. Only traces of sulphides are present, but a thin quartz vein at the face of the adit assayed 0.10 per cent nickel (sample 8503k, Assessment Report 14807).

(2) Adit Number Two, 5 meters long, is located 120 meters east northeast of adit Number One in skarn and diorite, and contains traces of sulphides.

(3) Adit Number Three is 10 meters long and lies 150 meters east-northeast of adit Number One and follows a diorite-andesite contact. Traces of sulphides are present.

(4) Adit Number Four is 3 meters long and lies 110 meters northeast of adit Number One. It exposes numerous patches, up to 3.0 meters wide, of massive chalcopyrite and pyrite with minor bornite, malachite and azurite in pyroxene-epidote skarn that is located at a diorite-andesite contact. A selected gram sample from adit Number Four mineralization assayed 5.87 per cent copper, 0.09 per cent cobalt, 0.09 per cent nickel, 1.27 grams per tonne gold and 20.57 grams per tonne silver (Assessment Report 14807, page 19)."



0 5 10 Kilometres

PACIFIC SENTINEL GOLD CORP.		
URSUS CREEK PROPERTY ALBERNI M.D., B.C.		
MAJOR REGIONAL MINERAL SHOWINGS		
Scale: 1:250,000	N.T.S. 92F/5	Drawn by:
Date: OCT./90	Geologist:	Figure 4
RELIANCE GEOLOGICAL SERVICES INC.		

5.0 HISTORY AND PREVIOUS WORK

The first mining activity on Ursus Creek was carried out by Chinese placer miners from 1860 to 1886.

The prospects near the junction of Thunderbird Creek and Ursus Creek (Camp Zone, Fig 5) were originally recorded in 1939 under a partnership agreement between G.A. Williams, B.H. Symons, J.W. Harvey, H.P. Martin, and D.V. Evans. In 1979, the property was acquired by Mr. Sam Craig who optioned it to Eldorado Minerals and Petroleum Ltd. In 1984, Eldorado conducted a program of exploration including trenching, sampling and soil geochemistry (Woodcock, 1987).

The trenching program indicated that a 3 meter wide zone of footwall to a pyrite-chalcopyrite-bornite bearing quartz vein carried gold values of up to 0.135 opt. The vein was hosted by a shear zone, and soil samples indicated a 30m by 75m area of greater than 100 ppb gold in the Camp Zone (LeBel, 1989).

The claims were allowed to lapse in 1984 and were restaked in December of 1986 by Pacific Sentinel Gold Corp.

LeBel (1989) states:

> "Work on the claims since then (1986) has included silt sampling of the drainages which feed Ursus Creek, soil sampling of the Camp Zone and a mag-EM survey over the Camp Zone (Woodcock, 1987).
>
> New Global Resources Ltd also conducted a program for Pacific Sentinel Gold in December of 1986 and February of 1987 which included silt sampling and prospecting over the entire property, as well as trenching, soil sampling, mapping and magnetometer and VLF surveys over the Camp zone grid.

Ninety-one silt samples were taken with gold values as high as 1150 ppb. Prospecting discovered three new showings. Grab samples were anomalous at the Junction Zone (5690-24900 ppb gold), the Mid Pad Showing (500-25900 ppb gold) and a float sample near the Dyke Showing assays 25700 ppb gold. The Mid Pad Showing consists of quartz veins and lenses within the Ursus Creek Cataclastic Zone. The Dyke Showing is an area of silicified pyrite and galena bearing granodiorite adjacent to a mafic dyke. Access to both these showings is very treacherous, and dependent on the height of the river.

Soil sampling expanded the Camp Zone soil anomaly to a 250m x 150m area with gold values of up to 1090 ppb. Geophysical surveys were inconclusive. Trenching in the Camp Zone exposed a zone of narrow quartz veinlets up to 2m wide cut and terminated by a second zone of quartz veinlets less than 1m wide. Chip samples of these zones contain gold values up to 780 ppb.

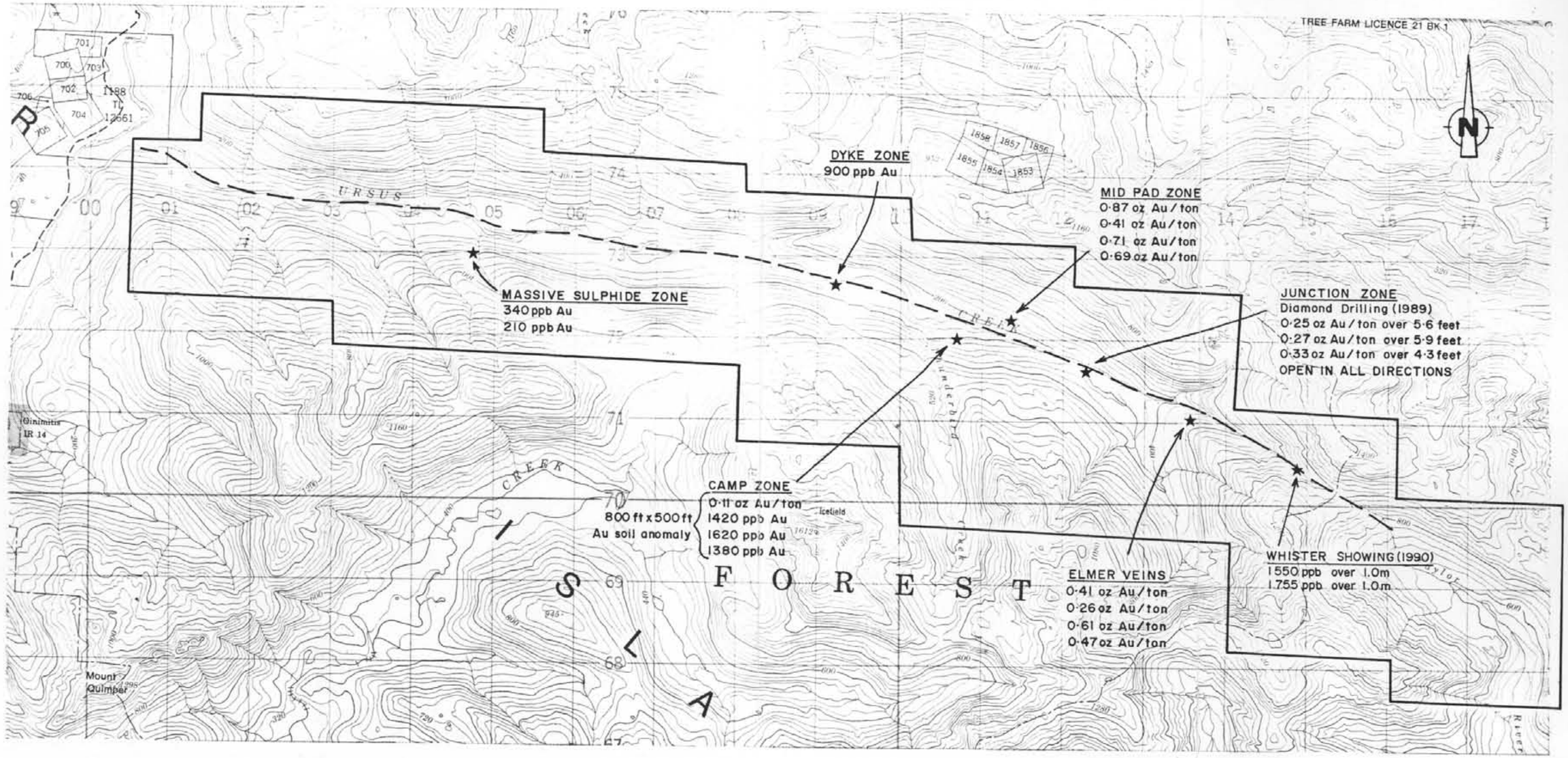
The property was optioned by Pezgold Resource Corp in 1988, and a program of prospecting along Ursus Creek and diamond drilling of the Junction Zone was carried out."

Results of the prospecting program are as follows (LeBel, 1989):

"Three types of mineralized showings were found to occur on the Ursus claims. They include cataclastic zones, quartz veins, and massive sulphide replacement pods in the volcanics.

Cataclastic zones were found to parallel Ursus Creek on both sides as far west as Thunderbird Creek and to occur along some of the feeder creeks such as Junction Creek. The zones are characterized by fine grained chlorite, sericite and quartz with local pyrite, granodiorite fragments and grey quartz fragments. Narrow quartz veinlets with minor sulphides and cockscomb texture cut the cataclastic zones. Assay values from these rocks range from 10 to 30 ppb gold for pyritic cataclastic zone material, and as high as 0.057 opt gold where quartz veinlets are included.

The recently located quartz veins named the Elmer Veins were found at 500m elevation, 1.5 km east of the Junction Showing on the south side of Ursus Creek. The veins are 20 to 80 cm wide and were detected over a 300m strike length open at both ends. They strike 060° and dip approximately 65° to the north.



★ GOLD DISCOVERIES

— — — URSUS CREEK CATACLASTIC ZONE

0 0·5 1 3 Kilometres

PACIFIC SENTINEL GOLD CORP.

URSUS CREEK PROPERTY
ALBERNI M.D., B.C.

PROPERTY GOLD SHOWINGS

Scale: 1:50,000	N.T.S. 92F/5	Drawn by:
Date: OCT./90	Geologist:	Figure 5

RELIANCE GEOLOGICAL SERVICES INC.

Sulphides in the veins include up to 20% pyrite, 10% galena and 5% sphalerite. The host rocks are granodiorites which have experienced chlorite and epidote alteration. Possible albitite dykes similar to those seen in the Junction Zone cut the granodiorite. The veins are very similar in strike orientation, mineralogy and intrusive association to both the Trophy and Prosper veins which occur on the north side of the Ursus Creek fault. Gold values from the Elmer vein samples range from 20 ppb to 0.614 opt.

Finally, massive sulphide mineralization was found to occur in pods 1m by 1.5m in the volcanics which are cut by dykes visually very similar to the albitite seen in the Junction Zone. Showings of this type occur west of Thunderbird Creek above 200m elevation. Gold values are weakly anomalous.

In the Junction Zone, cataclastic zones parallel both Ursus and Junction Creeks with 800m and 1km of known strike lengths respectively. They strike 104 to 116° and vary in width from 10 to 25m. The cataclastic zone has been invaded by a multiphase quartz vein up to 56cm wide. Post veining movement along the cataclastic zone is evidenced by varying orientation of the vein and local gradual brecciation to form a zone of 1cm sized quartz fragments healed by a chlorite-hematite matrix. The veins always occur in outcrop proximal to an albitite dyke.

Shorter cataclastic zones occur along the ridge between the two creeks. They form gullies 10 to 20m wide striking 130 to 140°, offset and cut off by perpendicular faulting.

The gradational boundary of the cataclastic zone is marked by the Transition Zone which demonstrates granitic texture and numerous chlorite veinlets. Grab samples from these zones carried very low gold levels.

Grab samples of outcrop were taken from each of the localities in the Camp Zone where high gold values were found in the soil samples. Soil profiles were 15 to 30cm deep. The rock assays are disappointing in comparison to the 1987 soil anomalies (5-450 ppb gold)."

Five diamond drill holes were drilled from three locations at the Junction Zone. The holes were drilled perpendicular to the zone over a strike length of 230m along the cataclastic zone.

Results of the drilling program are as follows (LeBel, 1989):

Drilling indicated the Junction Creek zone dips 72° north and maintains a 8 to 17m width to a depth of 145m. The Junction cataclastic zone is highly chloritic and sericitic with very fine grained quartz and locally up to 7% pyrite. A multi-phase quartz vein cuts the cataclastic zone and is locally brecciated within the zone. Barren and mineralized albitite dykes also cut the cataclastic zone. Albitite dykes with disseminated pyrite appear to be associated with the gold mineralization in the cataclastic zone. Post veining movement along the zone and shearing are indicated in the drill core.

High gold values were intersected in four of the five drill holes in the Junction Zone. Mineralization is restricted to a 8-17m wide cataclastic zone which dips 72°N. A quartz vein 0.4m wide assayed 1.057 opt gold while shear zone material assayed 0.254opt gold over 1.7m and 0.266 opt gold over 1.8m.

LeBel (1989) concluded the following:

"Mineralized showings on the Ursus Creek property include the Junction Zone, Elmer Veins, Camp Zone, Dyke Showing, Mid Pad Showing and Massive Sulphide Showing. The Ursus Creek Cataclastic Zone occurs along the length of Ursus Creek. Recent work on the Junction Zone indicates gold mineralization is restricted to late shear zones and quartz veins within the zone. The auriferous zones were found to occur in areas where pyritic albitite dykes and plugs invaded the receptive host rocks. The elevated gold levels of some of the albitite dykes support the idea that it was a source rock to the gold mineralization. Similar intrusive rocks are found at the Elmer vein showing and near replacement magnetite-chalcopyrite, as well as at the Trophy Veins just north of the central claim area, further supporting the importance of the albitite dykes to mineralization.

The Junction Zone shows good potential for economic gold grade and is therefore a high priority target for further drilling to determine geologic continuity and tonnage potential. A program of geologic mapping is recommended to determine the distribution of albitite dykes as an aid to targeting second phase drilling.

The Mid Pad Showing quartz veins and lenses also occur within the Ursus Creek Cataclastic Zone with gold values as high as 25,900 ppb. Surface work is recommended, when the river level allows, to determine if this showing has potential similar to the Junction Zone.

The Elmer veins are very similar to the Prosper Veins both in orientation and mineralogy. The Prosper Veins occur across the Ursus Creek shear zone just west of the claims some 20 k from the Elmer Veins. It is possible that the Elmer Veins represent the displaced extension of the Prosper Veins. The two veins referred to as the Elmer Veins are 10 to 80 cm wide and carry gold values up to 0.614 opt gold. The Elmer Veins therefore represent another high priority target.

The Elmer Veins are a new discovery, and to date have only been grab sampled at the limited points of exposure. A grid should be established over the area to geologically map the distribution and width of the veins and the distribution of late intrusive phases including the area near Ursus Creek which assayed 0.417 opt gold. This altered intrusive phase may be very important as it suggests a large tonnage potential. Trenching and chip sampling of the veins is then recommended to establish the grade potential. If these programs are successful, drilling is also recommended.

The intrusive phases near the Elmer Veins, the Dyke Showing and the massive sulphide showing to the west along Ursus Creek should be sampled and thin sectioned to determine if they are the same rock type as the albitites seen in the Junction Zone and possibly determine a very important control to mineralization.

The Camp Zone is a low priority target at this time since the surface work done to date has indicated the mineralization is disjointed and low grade."

6.0 PROPERTY GEOLOGY

Two main rock units occur on the property including batholithic rocks and the Triassic volcanic strata of the Karmutsen Group. Shearer (1987) has divided the batholitic rocks into granodiorite and a contact phase of quartz diorite.

Shearer's granodiorite is a light grey to buff-weathering, greenish grey hypidiomorphic rock with biotite and hornblende identified in the field. Until the ratio of potash feldspar to plagioclase feldspar is determined, only the field name can be used.

The quartz diorite is a dark green transition rock in which coarse quartz grains occur in a chlorite-rich matrix with some slight foliation. Relic feldspars are evident in most specimens and these are generally veined by very thin hair-line veins of calcite.

Lebel (1989) reported the following:

> "Thin section work on the granitic rocks at the Junction Zone indicates the host rocks are medium to coarse grained quartz diorites. They contain 20 to 25% chloritized hornblende and/or biotite and have undergone weak propylitic alteration.
>
> Albitites cut the quartz diorite in the Junction Zone. In hand specimen these rocks are pale green with up to 15% chloritized mafics consisting of possible primary pyroxene or biotite. Porphyritic white feldspar phenocrysts occur in some samples. Elsewhere grain boundaries are diffused by assimilation of the fine grained matrix giving the rock a homogeneous fine grained appearance. Rocks very similar to the Junction Zone albitites in hand specimens were given the field name quartz diorite in other areas of the property. These rocks are younger than the quartz diorites seen in the Junction Zone."

The Karmutsen Volcanics are fine grained to aphanitic, dark green "andesitic" varieties. Although only fine grained volcanic rocks were observed in outcrop on the Ureka Claims, the creek bars at the mouth of Ursus Creek contained many examples of diverse, coarse pyroclastics, bedded aquagene tuffs, pillow breccias and amygdaloidal lavas (all typical of the Karmutsen Volcanics elsewhere on Vancouver island).

The Karmutsen volcanics and the granodiorites have been offset by a major failure zone which occurs along Ursus Creek, hereafter called the Ursus Creek Cataclastic Zone or Fault.

Several phases of alteration have affected the Ursus Creek Cataclastic Zone. Original movement on the shear zone was accompanied by chloritic and possibly pyritic alteration. Later silicification and minor feldspar alteration occurred, possibly at the same time as quartz veins were emplaced in the shear zone. Remobilization of the shear zone brecciated earlier quartz veins giving the zone a cataclastic texture. Sericitic, chloritic and possible pyritic alteration accompanied this event. Late shearing and syngenetic quartz veining occurred in the cataclastic zone with sericite and pyrite emplacement. Albitite dykes were also emplaced late in the system with associated feldspar alteration and very late carbonate-pyrite fracture fillings.

7.0 1990 PROGRAM

7.1 Scope and Purpose

During September and October 1990, three geologists and two prospectors completed a program of geological mapping, rock sampling and trenching on the eastern and western portions of the property.

A total of sixteen days were spent on the Ureka 11, 12 and 13 claims (Eastern end) and on the Ureka 1, 2, 3, 4 and Opus 1, 2 claims (Western end).

The purpose of the program was to:

a) Trench, sample and map the Elmer Veins to evaluate their potential;
b) Cover unexplored parts of the property to locate gold mineralization and evaluate its potential.

7.2 Methods and Procedures

East End

Using a compass, hipchain, altimeter and topographic map for control, geological work was carried out at a scale of 1:10,000. Using a compass and hipchain, a flagged grid was laid out over the area of the Elmer Veins. Line intervals were at 50m and stations were flagged every 25m. The main Elmer Vein was blasted using a pionjar gas plugger, dynamite and B-line.

A total of 58 rock samples were collected and analyzed for gold (fire assay) and multi-element ICP by International Plasma Laboratory Ltd. See Appendix C for analytical results and techniques.

West End

Using a compass, hipchain, altimeter and topographic map for control, geological work was carried out at a scale of 1:10,000. A total of 31 rock samples were collected and analyzed for gold (fire assay) and multi-element ICP by International Plasma Laboratory Ltd. See Appendix C for analytical results and techniques.

Where possible, stream sediment samples were collected from the active part of selected drainages. A total of 14 silt samples were collected, placed into marked sand sample bags and sent to International Plasma Laboratory Ltd. for gold and multi-element ICP (Appendix C).

8.0 RESULTS

8.1 Rock Sampling and Geology

i) East End

Geology, rock sample location and gold values are presented on Figure 6.

The majority of the East end is underlain by granodiorite and quartz diorite intrusive rocks which are in fault contact with Karmutsen volcanics along the Ursus Creek Cataclastic Zone at the central and eastern parts of the area.
Rafts and xenoliths of volcanics occur in the intrusives in close proximity to the contact. The quartz diorite unit is a fine grained border phase of the granodiorite and occurs at the lithologic contact zone.

Epidote occurs along joints, fissures and vugs within volcanic rocks near the lithologic contact zone, and is probably the product of hydrothermal alteration of plagioclase feldspars.

The most distinctive structure is the Ursus Creek Cataclastic Zone which trends northwesterly across the central portion of the property. Where the zone is exposed in outcrops and crosscut intrusive rocks, the rocks are intensely altered. Alteration consists of sericitization of the feldspars, chloritization of mafic minerals, and a minor introduction of silica.

Rock sampling turned up two areas of interest:

a) Whistler Zone:

Two continuous chip samples taken across the Ursus Creek Cataclastic Zone along the west central portion of the area returned anomalous gold values.

Results are as follows:

Sample Number	Width	Gold Value (ppb)
BR02	1.0 m	1,755
BR03	1.0 m	1,580

The rock consists of highly sheared, crushed, and intensely altered granodiorite. Quartz veins and veinlets occur within the cataclastic zone and are also crushed and sheared. Fine grained pyrite is disseminated throughout the zone, averages less than one per cent and is concentrated on the edges of vein fragments.

b) Elmer Veins:

The geology, rock sample location and results are plotted on Figures 8 and 9.

At least two parallel auriferous quartz veins occur on or near prominent east-west trending lineaments within a granodiorite unit:

The first is the Elmer Vein which was exposed by blasting and subsequently sampled in detail (Figure 9). The vein consists of brecciated greyish blue coloured quartz with disseminated pyrite, arsenopyrite and galena. In the blasted trench the vein ranges from 60 cm to 100 cm wide, strikes 083° and dips steeply south. The wallrock consists of intensely altered granodiorite. Wallrock alteration consists of silica, sericite and chlorite. Alteration appears to die out within a few meters of the vein.

Four continuous chip samples were taken across the width of the vein.

Results are summarized in the following table:

Sample Number	Width (cm)	Gold (opt)	Silver (ppm)	Lead (ppm)	Zinc (ppm)	Arsenic (ppm)
BR22	100	0.060	0.7	265	213	4016
BR23	60	0.175	1.4	222	173	6776
BR24	60	0.158	1.5	400	446	6435
BR25	60	0.245	2.2	494	178	4805

Sample BR26, taken across the hanging wall, returned values of 270 ppb gold and 4,409 ppm arsenic.

One sample of vein material was sent to Vancouver Petrographics for a polished thin section analysis. Their comments are as follows: (Leitch 1990, Appendix B).

> "White to light grey, highly siliceous rock contains vague ghosted dark grey, pyritic fragments to 2 cm across and buff, chalky fragments to 1 cm in a light grey matrix. This is cut by white quartz veins to 1 cm thick and then by pyritic fractures, so there are several stages of silicification. In the polished thin section, minerals are:
>
> | | |
> |---|---|
> | Quartz (secondary) | 75% |
> | Muscovite | 10% |
> | Carbonate (?dolomite or ankerite) | 10% |
> | Pyrite | 3% |
> | Arsenopyrite | 2% |
>
> Although most of this sample is made up of secondary quartz, there are areas between veins that contain significant sericite (muscovite) and carbonate; these probably represent highly altered remnants of former wallrock. Quartz forms either large bladed crystals up to 5mm long (these are the veins) or finer, anhedral grains of 0.05 to 0.1mm diameter (in areas of altered wallrock). Mixed with the latter are flakes of fine-grained sericite (less than 0.05mm diameter) and subhedral grains of carbonate up to 0.1mm across. In places there are patches of carbonate up to 2mm long, and muscovite grains up to 0.5mm across. The carbonate is brownish, has high relief in places and does not react strongly to cold dilute HCl; it may be partly dolomite or even ankerite. The finer-grained areas are generally brecciated, and there is a suggestion that the sulphides are associated with the sericite, carbonate and brecciation.

The opaques include pyrite and arsenopyrite; there are rare 20 micron inclusions of sphalerite in the pyrite. The pyrite, as anhedral grains up to 1mm diameter, and the arsenopyrite, as euhedral crystals up to 0.5mm, occur separately or together. No other sulphides are visible.

There are clearly at least two stages of mineralization since there are fragments of pyritic material, and sulphides along fractures. There may be a tendency for arsenopyrite to be concentrated in the fragments and pyrite in the later fractures."

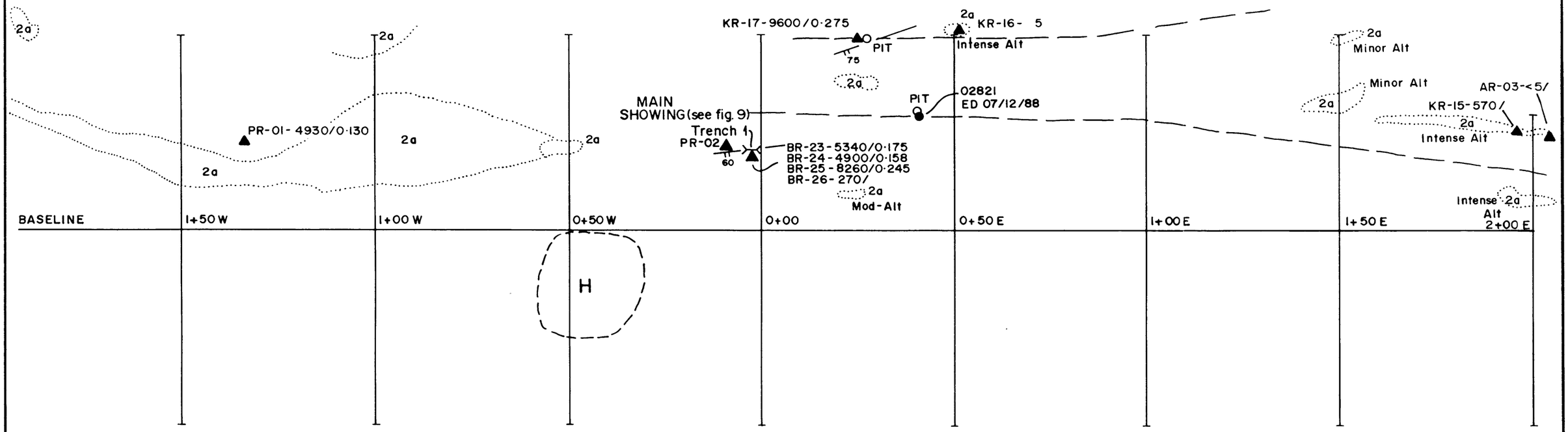
A 1988 rock sample (821) from a pit 50m northeast of the Elmer vein returned a value of 0.363 opt gold over a width of greater than 10 cm. This sample may be from an extension of the Elmer vein.

In 1990, rock sample KR15, taken from an intensely altered granodiorite along the upper lineament, returned values of 570 ppb gold and 604 ppm arsenic.

These results indicate that the Elmer vein system has a probable minimum strike length of 200m.

The second is the Lower Vein (Figure 8) which is a 60cm wide auriferous quartz vein occurring along a northeast trending lineament about 25m downslope from the Elmer Vein. The Lower Vein strikes 072°, dips steeply south and contains disseminated pyrite, arsenopyrite and galena.
The wallrock has undergone intense silica, sericite and chlorite alteration within several meters of the vein.

A continuous rock chip sample (KR17) taken across the vein returned values of 0.275 opt gold, 3.9 ppm silver, 210 ppm arsenic and 335 ppm lead over a width of 60cm.



LEGEND

JURASSIC

ISLAND INTRUSIONS

- Undifferentiated Granodiorite and Quartz-Diorite.
- 2a - Biotite-Hornblende Granodiorite.
- 2b - Quartz-Diorite.

ABBREVIATIONS

Alt	Alteration.
Mod	Moderate

SYMBOLS

- Rusty quartz-calcite stringer (inclined, vertical)
- Outcrop
- H — Helipad
- ▲ — Rock sample location (numbers prefixed by UC90)
- ● — Earlier rock sample location

KR-15-9600/0·275 Sample No.- Au(ppb)/Au(oz/t)

0 10 20 50 Metres

PACIFIC SENTINEL GOLD CORP.

URSUS CREEK PROPERTY
ALBERNI M.D., B.C.

ELMER GRID
GEOLOGY
AND ROCK SAMPLE LOCATIONS

Scale: 1:1000	N.T.S. 92F/5	Drawn by:
Date: OCT./90	Geologist:	Figure 8

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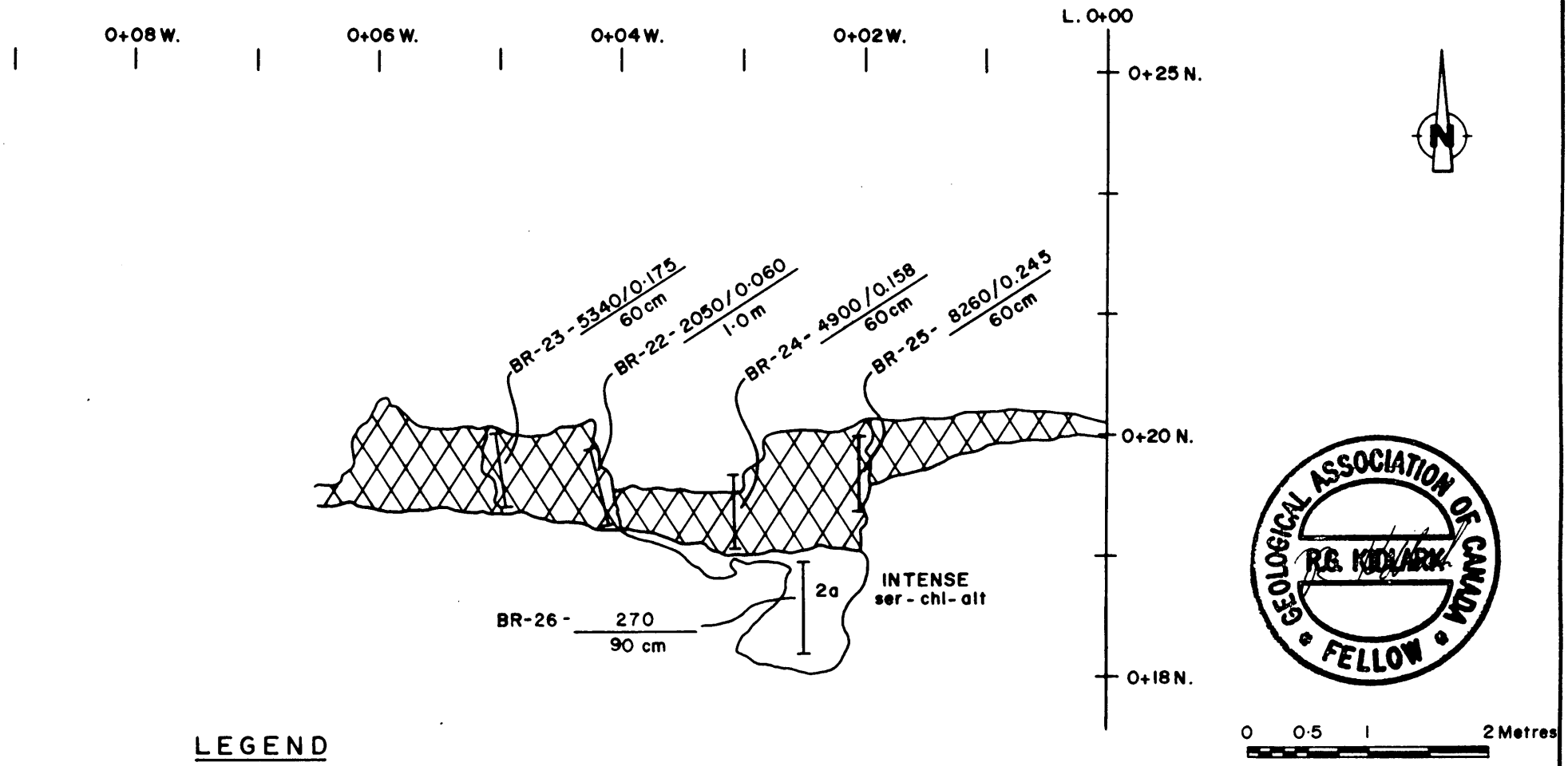

GEOLOGICAL ASSOCIATION OF CANADA
R.G. KIDLARK
FELLOW

LEGEND

JURASSIC

ISLAND INTRUSIONS

Undifferentiated Granodiorite and Quartz-Diorite.

2a - Biotite-Hornblende Granodiorite.

2b - Quartz-Diorite.

MINERALIZED QUARTZ VEIN

1990 SAMPLE LOCATION

BR-23 - 5340/0·175 / 60cm — Sample No. - Au (ppb)/Au oz/t / Sample width

PACIFIC SENTINEL GOLD CORP.		
URSUS CREEK PROPERTY ALBERNI M.D., B.C.		
ELMER GRID TRENCH 1 GEOLOGY AND ROCK SAMPLE LOCATIONS		
Scale: 1:50	N.T.S. 92F/5	Drawn by:
Date: OCT./90	Geologist:	Figure 9
RELIANCE GEOLOGICAL SERVICES INC.		

The surface trace of and intense alteration along the lineament indicate a minimum strike length of 150m for the Lower Vein system.

Additional Anomalous Rock Samples:
A mineralized sample of quartz float (PR01) located at 1+30W, 0+25N, returned values of 0.130 opt gold and 67 ppm arsenic.

Streams on the property are fast flowing, have steep gradients and generally have no silt sized sediment. No silt samples could be collected on the east end of the area.

ii) West End

Geology, rock sample location and results are presented on Figure 7. The southern and northwestern parts of the area are underlain by Karmutsen Volcanic rocks which are fault contacted to the northeast with the Island granodiorite intrusive. The Ursus Creek Cataclastic Zone trends east-west across the area. The Ursus Creek Valley is wide and flat and there is no exposure of cataclastic rocks.

No rock samples returned significant values. The Dyke Showing consists of an ankerite and sericite altered granodiorite with traces of fine grained pyrite. Sample BR27 taken from the Dyke Showing returned values of 30 ppb gold and 472 ppm arsenic. The Massive Sulphide Showing was located and sampled. Mineralization here consists of two small pods of massive magnetite with traces of pyrite and chalcopyrite. The pods are less than 1.0m in size, and rock sample KR20 returned values of 40 ppb gold.

Of 14 silt samples collected from the west end, one (BL01) returned an anomalous gold value of 240 ppb.

9.0 DISCUSSION

Exploration programs to date have located three types of mineralized showings on the Ursus Creek Property.

a) Cataclastic Zone

All of the major gold showings, including the Camp, Mid Pad, Junction and Dyke showings, are along the cataclastic zone or in close proximity to it.

Junction Zone:

The 1989 drill program located a cataclastic zone 8 to 17 meters wide, at least 145 meters in depth, and at least 220 meters long. Gold mineralization occurs in shears zones and quartz veins with in the cataclastic zone. Drill intersections include 0.254 opt gold over 1.7 meters. Drill results indicate that gold values increase at depth.

Mid Pad Zone:

Consists of a quartz vein and stringers along Ursus Creek. Select sampling has yielded results up to 0.87 opt

Whistler Showing:

The 1990 exploration program located a cataclastic zone 1 meter wide along Ursus Creek (2.3 km SE of the Junction Zone). Results ranged up to 1755 ppb (.05 opt) gold over one meter.

b) Quartz Veins

The Elmer Showing consists of at least two parallel brecciated quartz veins up to 1.0 m wide which subparallel the Ursus Creek cataclastic zone. Mineralization consists of fine grained pyrite, arsenopyrite and minor galena, disseminated and along fractures. The vein structures strike for at least 200 meters. Results from chip sampling range up to 0.245 opt gold over 60 cm. Further evaluation of this area should be carried out by testing grade, continuity, and geometry at depth.

c) Massive Sulphide Pods

Pods of massive pyrite, pyrrhotite and magnetite with minor amounts of chalcopyrite are common within the Karmutsen volcanics. None has proved economic.

10.0 CONCLUSIONS

As the geological environment along the cataclastic zone (intensely altered wallrocks adjacent to major auriferous cataclastic zones and proximal auriferous quartz veins) is favourable for hosting mineralized zones;
and
as the subject property lies in close proximity to several past producing mines and advanced stage gold properties in similar geological environments;
and
as 1990 and previous exploration programs have outlined four zones (Junction, Mid Pad, Elmer, and Whistler) with economic grade gold values, all of which are open along strike and down dip,
the authors conclude that the Ursus Creek Property has potential for hosting an economic gold deposit.

In addition, because the four zones mentioned above, plus several anomalous gold showings in soils and rocks, lie along or close to the Ursus Creek cataclastic zone, the authors conclude that good exploration potential exists along the entire length (14 km) of the cataclastic zone.

For these reasons, further exploration work has been recommended.

11.0 RECOMMENDATIONS

1) Diamond drilling (approximately 4500 feet total)

General:

To maximize drilling efficiency, drill core should be analyzed as quickly as possible so that assay results are available by the time the next drill hole is completed.

To minimize the number of drill pads, two holes should be drilled from each set up. Up to eight pads may have to be constructed.

For control, all drill holes should be surveyed in with a theodolite and sections drafted as holes are completed.

Priorities:

a) Junction Zone:

The Junction Zone has been defined over a 220 meter strike length, 145 meter down dip, and has comparatively more data available on it. Therefore it is considered the first priority of the proposed drill program.

Drill hole 89-5 appears to have gone over the top of the mineralized zone. The first drill hole of the proposed program should be located (along section) approximately 100 meters northeast of the collar of DDH89-5, and drilled in a 200° direction at an angle of -50°, to a length of approximately 200 meters. The cataclastic zone should be intersected near the 140 meter level.

The second drill hole should be located approximately 100 meters southeast of the collar of the first and drilled to a 200° direction. Estimated length is 150 meters.

Future drill hole locations would continue at 100 meter spacings along the strike of the cataclastic zone, with drilling in a compass direction of 200°.

Approximately 2500 feet of drilling will be needed to test the continuity and tenure of mineralization.

b) Mid Pad Zone

The second priority drill target is the Mid Pad Showing where drill holes should be field located to test the continuity and tenure of mineralization of both the auriferous quartz veins and the cataclastic zone. Approximately 800 feet of drilling is scheduled to test this area.

c) Elmer Area

The third priority drilling target is the Elmer Area, where the main Elmer Vein and the Lower Vein can be tested down dip by two drill holes from the same collar.

Using the 1990 grid, the drill should be set up at 0+15m E and 0+75m S. Drill hole directions will be due north.

The first hole should be drilled at an angle of -50° with an approximate length of 150 meters. Expected intersections are: Elmer Vein at 90 meters; Lower Vein at 140 meters.

The second hole should be drilled at an angle of -65° with an approximate length of 220 meters. Expected intersections are: Elmer Vein at 130 meters; Lower Vein at 210 meters.

Approximately 1200 feet of drilling is scheduled to test this area.

2) Lay out approximately 30 kilometers of grid over the Elmer and Junction areas. The cut base line should extend from the Elmer to the Camp zone. The grid will establish control for the drill program and the geophysics.

3) Perform detailed geological mapping on the grid area to aid in refining drill hole locations and to better understand geological controls.

4) Perform 25 km of magnetometer and VLF-EM geophysics on the grid to help locate the strike extensions of the Elmer vein and possibly identify other parallel mineralized structures.

12.0 PROPOSED BUDGET - URSUS CREEK - Drilling Phase

Scope: Camp setup;
30 days drilling;
30 line km grid;
25 line km geophysics

Project preparation	$ 2,000
Mobilization & demobilization	$ 5,000
Supervision	$ 5,000
Field Crew:	$ 51,030
Field Costs:	$ 80,952
Assays & Analysis:	$ 5,800
Drilling	$ 180,000
Geophysical	$ 8,125
Reclamation	$ 5,000
Report:	$ 7,675
Sub-total	$ 350,582
Administration, including Overheads & Profit	$ 33,000
TOTAL	$ 383,582

Rounded to $ 385,000 BEFORE G.S.T.

Please note: 7% G.S.T. will apply to any portion of this project which is performed in 1991.
Total estimated cost could therefore reach $417,000

GEOLOGICAL ASSOCIATION OF CANADA
P. D. LERICHE
FELLOW

GEOLOGICAL ASSOCIATION OF CANADA
R.G. McLARK
FELLOW

CERTIFICATE

I, **ROGER G. KIDLARK**, of 303 - 9110 Halston Court, Burnaby, B.C., do hereby certify that:

1. I am a graduate of the University of Toronto with a Bachelor of Science Degree in Geology, 1974.

2. I am a Fellow in good standing with the Geological Association of Canada.

3. I have practised my profession as a geologist for fourteen years in British Columbia, Ontario, Nova Scotia, the Yukon and Northwest Territories, and Montana.

4. The information, opinions and recommendations in this report are based on fieldwork carried out under my direct supervision and on published and unpublished literature. I was present on the subject property during 1990.

5. I have no interest, direct or indirect, in the subject claims or the securities of Pacific Sentinel Gold Corp.

6. I consent to the use of this report in a Prospectus or Statement of Material Facts for the purpose of private or public financing.

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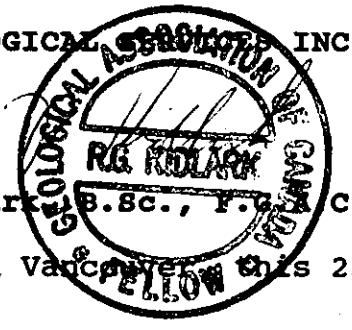


Roger G. Kidlark, B.Sc., F.G.A.C.

Dated at North Vancouver, this 25th day of October 1990.

CERTIFICATE

I, **PETER D. LERICHE**, of 3125 West 12th Avenue, Vancouver, B.C., do hereby state that:

1. I am a graduate of McMaster University, Hamilton, Ontario, with a Bachelor of Science Degree in Geology, 1980.

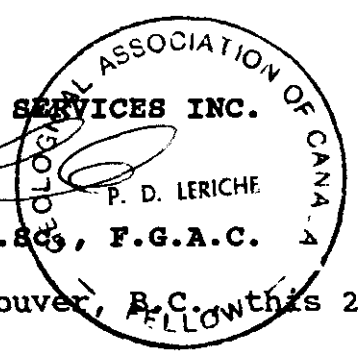
2. I am a Fellow in good standing with the Geological Association of Canada.

3. I have actively pursued my career as a geologist for eleven years in British Columbia, Ontario, the Yukon and Northwest Territories, Arizona, Nevada and California.

4. The information, opinions, and recommendations in this report are based on fieldwork carried out under my direction, and on published and unpublished literature. I was present on the subject property in 1990.

5. I have no interest, direct or indirect, in the subject claims or the securities of Pacific Sentinel Gold Corp.

6. I consent to the use of this report in a Prospectus or Statement of Material Facts for the purpose of private or public financing.



RELIANCE GEOLOGICAL SERVICES INC.

Peter D. Leriche, B.Sc., F.G.A.C.

Dated at North Vancouver, B.C. this 25th day of October 1990.

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ITEMIZED COST STATEMENT

Re: Ursus Creek Project, Vancouver Island
Ureka and Opus Claim Groups

Project Preparation			$ 750.
Mobilization & demobilization			$ 3,100.
Field Crew:			
Project Geologist	$325/day x 3 days	$ 975.	
(P. Leriche: Sep 28 - Sep 30/90)			
Project Geologist	$325/day x 16 days	$ 5,200.	
(R. Kidlark: Sep 21 - Oct 6/90)			
Field Geologist	$275/day x 16 days	$ 4,400.	
(B. Augsten: Sep 21 - Oct 6/90			
Prospector/Blaster(4)	$225/day x 36 mandays	$ 8,640.	$ 19,215.
(C. Gjendem: Sep 21 - Oct 6/90)			
(J. Fleishman: Sep 24 - Sep 30/90)			
(D. Atkinson: Sep 28 - Oct 6/90)			
(B. Chore: Sep 21 - Sep 24/90)			
Field Costs:			
Helicopter (at cost)	$ 680/hr x 13.6 hrs	$ 9,248.	
Food & Camp	$ 70/day x 71 mandays	$ 4,970.	
Communications	$ 50/day x 17 days	$ 850.	
Supplies	$ 10/day x 64 mandays	$ 640.	
Plugger rental	$200/wk x 3 weeks	$ 600.	
Blasting supplies		$ 475.	
Vehicle (1)standby:	$ 20/day x 17 days	$ 340.	$ 17,123.
Assays & Analysis:			
14 silt samples @ $14/sample		$ 196.	
(FA/AA gold and multi-element ICP)			
89 rock samples @ $17/sample		$ 1,513.	
(FA/AA gold and multi-element ICP)			
6 rock samples @ $ 7.50/sample		$ 45.	
(FA/Grav Au)			
Thin section analysis		$ 150.	$ 1,904.
Report			$ 3,200.
Sub-total			$ 45,292.
Admin, incl. Overheads & Profit			$ 4,429.
TOTAL			$ 49,821.

APPENDIX A

ROCK SAMPLE DESCRIPTIONS

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90KR91	Select Angular Float Boulder. Altered fine-grained quartz diorite. Approximately 20% sericite alteration and 40% chlorite alteration, with 5% fine grained disseminated pyrite.	60 cm
UC90KR02	Select angular float boulder. Altered fine grained andesite. Quartz-sericite-epidote alteration. Massive nodules of pyrite with traces of malachite and azurite up to 30 cm in diameter.	2.0 m
UC90KR03	Select angular float boulder of very fine grained to aphanitic andesite. Massive nodules of pyrite up to 2.5 cm in diameter.	60 cm
UC90KR04	Select chip from outcrop. Very fine grained quartz diorite with less than 10% sericite chlorite alteration with 1% fine grained disseminated pyrite.	1.0 m
UC90KR05	Select chip from a silicified, limonitic outcrop of very fine grained grey coloured quartz chlorite. Averaging 2% very fine grained disseminated pyrite.	1.0 m
UC90KR06	Select chip sample from an outcrop of altered quartz-diorite. Fine grained, 10% sericite-chlorite alteration. Hairline quartz-pyrite veinlets and averaging 2% fine grained disseminated pyrite.	10 m
UC90KR07	Select chip sample from an angular float boulder. Intense sericite-chlorite alteration of a quartz diorite. Trace of malachite along dry hairline fractures.	2.0 m

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90KR08	Select chip sample from an angular float boulder. Coarse grained hornblende-biotite-granodiorite with 1% very fine grained disseminated pyrite.	46 cm
UC90KR09	Select chip sample from outcrop. Fine grained hornblende-biotite granodiorite with a pyritic zone about 30 cm wide. Averaging 1% fine grained disseminated pyrite.	30 cm
UC90KR10	Select chip sample from a pyritic zone in a coarse grained hornblende-biotite granodiorite outcrop.	2.0 m
UC90KR11	Select chip sample from a pyritic zone in a coarse grained hornblende-biotite granodiorite outcrop (Same zone as KR10).	3.0 m
UC90KR12	Select chip sample from a pyritic zone in a coarse grained hornblende-biotite granodiorite outcrop (Same zone as KR10).	6.0 m
UC90KR13	Chip sample across an altered granodiorite outcrop at the contact with a raft of andesite. Granodiorite has undergone intense alteration of K-spar, moderate alteration of plagioclase to sericite, and moderate alteration of mafics to chlorite. Averaging 5% fine grained disseminated pyrite.	3.0 m
UC90KR14	Select chip sample across a shear zone in a granodiorite outcrop. Quartz veining in the shear zone up to 15 cm wide. Limonitic, trace of fine grained pyrite.	60 cm
UC90KR15	Select chip sample from a silicified zone in an altered granodiorite outcrop. Intense sericite-chlorite alteration. Averaging 5% fine grained pyrite and arsenopyrite.	60 cm

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90KR16	Select chip sample from a silicified zone in an altered granodiorite outcrop. Intense sericite-chlorite alteration. Limonitic with a trace of fine grained disseminated pyrite.	65 cm
UC90KR17	Select chip sample across a limonitic white quartz vein. Averaging 2% fine grained, disseminated pyrite and arsenopyrite with a trace of fine grained galena. Wallrock is altered granodiorite.	60 cm
UC90KR18	Select chip sample from a float boulder of fine grained andesite. Moderate chlorite alteration and averaging 5% fine grained disseminated pyrite.	50 cm
UC90KR19	Select chip sample from an angular float boulder. Boulder consists of 40% fine grained disseminated magnetite and 60% euhedral amphiboles.	7.0 cm
UC90KR20	Select chip sample from outcrop. Lenses of massive magnetite with 5% pyrite in an unaltered dark green, buff weathering, fine grained andesite.	75 cm
UC90KR21	Select chip from an outcrop of andesite. Very fine grained, greenish black colour with fine grained disseminated pyrite and pyrite stringers along dry fractures. Averaging 2% pyrite.	120 cm

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-BR-1	Bleached, sericitized, granodiorite, mafics chloritized and subdued. <<0.5% disseminated pyrite. Pyrite is a pale brassy colour and very very fine-grained. Rock has a 0.5-1.0 cm rusty weathering rind. Rock has not been appreciably sheared. CI=5; Non-magnetic.	100 cm
UC90-BR-2	Rock is a sheared, broken-up granodiorite with quartz veins/veinlets caught up in the shearing. Entire shear zone is about 2 m wide. Shear foliation: 315/74°N. Overall sulphide content very very low, <<0.5% disseminated fine grained pyrite with local concentrations to ≈1%. Pyrite is a very pale brassy colour.	100 cm
UC90-BR-3	Similar to BR-2. Pyrite seems concentrated on edges of vein fragments.	100 cm
UC90-BR-4	Massive pyrite in a 2-5 cm wide fracture within a granodiorite boulder. N.B., Boulder has probably not moved far.	Float Sample
UC90-BR-5	Bleached, sericitized, granodiorite with rusty brown weathered surface. Minor cross-cutting quartz veinlets. Traces visible disseminated pyrite. Sample includes a 5 cm wide shear trending 100°/70°S.	60 cm
UC90-BR-6	Sericitized shear within granodiorite including a 5 cm wide quartz Fe-carb vein. N.V.S. Shear: 328/60°N.	30 cm
UC90-BR-7	Zone of intense shearing and cataclastic action within an original granodiorite host(?). Some quartz veins look as if they have been caught up in the shearing. Outcrop has a pinkish-red to rusty brown weathered surface modified by	100 cm

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-BR-7 (cont'd)	numerous white quartz fragments, usually rounded, and about 0.5 - 1.0 cm in diameter. Larger quartz-quartz/carb(?) boudins are also present. Fe-carb. stringers and veinlets are common and are late (5%). Alteration is a combination of sericitization (15%) and silicification (5-7%). Mafics are chloritized. Overall pyrite content <<0.5% but locally to 5% as extremely fine disseminations, especially around quartz fragments. Strong shear foliation @ 324/71°N.	
UC90-BR-8	Similar to BR-7	100 cm
UC90-BR-9	Similar to BR-7	100 cm
UC90-BR-10	Similar to BR-7 Silicification is stronger in this sample, about 10-12%, with 2% overall pyrite.	100 cm
UC90-BR-11	Similar to BR-7 Silicification once again is stronger than at BR7-9, about 10%. Pyrite is about 1-2%.	100 cm
UC90-BR-12	Rock is a strongly sheared and ground-up intrusive. Could be a border phase of the granodiorite. Matrix is a medium green colour, fine-grained with <<1% disseminated pyrite. Within the groundmass are randomly oriented, round quartz eyes (10-12%). Groundmass is very soft, strongly sericitized. Weak to moderate foliation @ 310/74°N.	80 cm
UC90-BR-13	Similar to BR-12. About 1% very fine disseminated pyrite. Minor fracture-controlled calcite.	Selected Grab

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-BR-14	Moderately sericitized (10%) granodiorite with 2-3% disseminated pyrite. Shearing not strong. Mafics chloritized.	Grab sample
UC90-BR-15	Very silicified rock. Could be sheared altered granodiorite or altered volcanic. - 20% silicification; - 1-2% disseminated pyrite; - 5-7% cross-cutting Fe.-carb. veinlets. - Fresh surface is a dark green→grey glossy colour and fine grained.	100 cm
UC90-BR-16	Weak to moderately sericitized granodiorite. Trace to <0.5% disseminated fine-grained pyrite. Mafics are chloritized. Rusty fracture surfaces.	15 cm
UC90-BR-17	Strongly foliated granodiorite Strongly sericitized and carbonatized. Light to medium green on fresh surface. 3-5% disseminated pyrite (very fine grained) Foliation: 298/80°N.	20 cm
UC90-BR-18	Relatively unaltered granodiorite. Weak sericite alteration of plagioclase. Weak to moderate chloritization of mafics. 5-7% disseminated pyrite and minor pyrite within hairline fractures. 7-10% calcite replacement of mafics.	Selected grab
UC90-BR-19	20 cm wide quartz Fe-carb. vein hosted by granodiorite. N.V.S. Vein: 318/58°N	20 cm

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-BR-20	Exposure of strongly bleached granodiorite. Rock has been both strongly seriticized and strongly carbonated. Exposure is cut by a stockwork of Fe.-carb. veinlets (1mm →5mm) 5-7%. Rock is white to light green-beige on fresh surfaces. Fracture surfaces have a talcose feel to them. 10-15% fracture-controlled calcite. N.V.S. Prominent jointing/fracturing @ 310/60°N. Contact with unaltered granodiorite gradational. Exposure is about 7m x 4m. Proximal mafic dykes may be responsible for this alteration.	100 cm
UC90-BR-21	Medium-grained granodiorite altered by a late peripheral andesite dyke. Moderate sericite development of plagioclase. Weak to moderate chloritization of mafics. - 1-3% fine, disseminated pyrite; - 0.5-1.0 cm rusty, weathering rind; - minor fracture-controlled calcite.	20 cm chip
Elmer Vein Samples: UC90-BR-22 to BR-26 (See Sketch Map)		
UC90-BR-22	Sample taken across vein. Elmer vein is actually a vein breccia consisting of sulphide rich fragments in a quartz-rich matrix. Fragments comprise 15-20% of the rock. Sulphide-rich fragments include extremely fine-grained pyrite (5-10%), 1-3% very fine grained, acicular arsenopyrite and traces of galena. The late quartz matrix has comparatively little sulphide. A coarser, brassy pyrite (2-3%) may be related to this late quartz. The main vein trends 083°/60°S.	100 cm chip

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-BR-23	Very similar to UC90-BR-22. Sample taken about 50 cm west of BR-22. Sulphide-rich fragments seem to have about 10-15% py, 1-5% aspy, both of which are very, very fine grained.	60 cm
UC90-BR-24	Very similar to BR-22 and BR-23. This sample exhibited the breccia texture very well. Fragments appear to have "corroded" margins. In addition to being sulphide-rich, fragments are siliceous themselves and some look as though they may have an intrusive origin. The vein itself is strongly fractured, usually parallel to the vein trend. Some fracture surfaces are talcose.	60 cm
UC90-BR-25	Similar to BR-24	60 cm
UC-90-BR-26	Hanging wall altered zone of vein. Weak to moderate, argillically-altered granodiorite with minor siliceous stringers carrying arsenopyrite, pyrite ± galena. Density of stringers decreases away from vein.	90 cm
UC90-BR-27 (Dyke showing)	Iron-carbonate and sericite altered - less than 1% very fine disseminated pyrite. - minor fracture-controlled pyrite.	100 cm
UC90-BR-28	- Pervasively carbonatized Karmutsen volcanics. - 10-15% $CaCO_3$. - Moderately foliated @ 290°/85°N. - Contains 2-3% finely disseminated pyrite. Some pyrite also along foliation planes. - excellent development of chlorite along foliation planes. - 1-3% foliation-parallel stringers of iron-carbonate. - Non magnetic. - Fresh surface light to medium green colour.	

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-BR-29	- Weakly sericitized granodiorite - <0.5% disseminated pyrite. - chloritized mafics. - rusty weathering selvage about 1-2 cm wide.	Selected
UC90-BR-30	Rock is a strongly sheared and clay-altered granodiorite. Sample includes one 5 cm qtz vein. 1-3% disseminated pyrite through shear. Locally to 5%. Shear foliation: 326/66°E.	50 cm
UC90-BR-31	Clay and sericite-altered granodiorite Not shear, but forms the wall-rock of the shear at BR-30. Bleached. To →<<0.5% disseminated pyrite.	30 cm
UC90-BR-32	Bleached, sericitized granodiorite with 1-2% disseminated pyrite. 1 cm rusty weathering rind.	Selected

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-GR-1	Coarse grained granodiorite, quartz stringers. Contains disseminated pyrite (5-10%) outcrop.	Select sample
UC90-GR-2	Fine grained green/grey volcanic andesite hosting 5% pyrites. Shear 116/20° outcrop.	Select
TC90-GR-3	Fine grain green/grey andesite containing fairly massive pyrite, sm.% chalcopyrite. Also present: quartz stringers, epidote alteration. Shear 294°/30°N. outcrop.	Select
TC90-GR-4	Similar to GR-3, except no visible sulphides. Epidote/quartz are present. Rusty brown/orange weathering. Intense fracturing in all different orientations outcrop.	Select
TC90-GR-5	Fine grained green/grey volcanic. No sulphides. High % of quartz, epidote and pillowed andesite striking roughly N/S outcrop.	Select

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-GR-6	Dark grey fine grained volcanic (andesite) quartz multi-fractured with 10% pyrite. Zone 1 meter wide, striking 110°E/50°S.	(40 cm)
UC90-GR-7	Dark green/grey volcanic (Karmutsen) highly silicified, with quartz stringers. Traces of epidote. 10% pyrite/traces disseminated chalcopyrite. Striking 116°S/60°W.	(60 cm)
UC90-GR-8	This highly altered dark grey coarse grain volcanic has small quartz stringers, traces of epidote, 15% pyrite.	(75 cm)
UC90-GR-9	Fine grained andesite, non magnetic, with quartz stringers. 10% pyrite disseminated. Zone 2 m wide striking 158°S/64°W.	(60 cm)
UC90-GR-10	Fine grained volcanic (Karmutsen) contains small amount of quartz, traces of epidote. Sulphides throughout 10%. Disseminated also small stringers of pyrite along fractures. Flecks of chalcopyrite. Small traces of malachite striking 328°N/dipping 60°E. (non magnetic).	(100 cm)
UC90-GR-11	Sample fine grain volcanic (Karmutsen) It is magnetic with traces of epidote and quartz. Pyrite 3-5%, fairly massive, striking 294°W, dipping 50°N.	60 cm
UC90-GR-12	Same as #11, taken directly above	(2 m).
UC90-GR-13	Karmutsen volcanic medium grain. Sulphides are fairly massive 10-15%, including small amounts of chalcopyrite, fairly magnetic striking 274°W, dipping	(2 m).

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-GR-14	This light green fine grain Karmutsen is non magnetic. It contains small quartz stringers, traces of epidote, 1-2% pyrite - striking 220° south	100 cm
UC90-GR-15	Medium grain Karmutsen with quartz stringers, 1-2% pyrite. Non magnetic. Taken in small shear zone, striking 336°N/dipping 80°E.	75 cm

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90-FR-01	From same alteration zone as KR13. Chip sample across an altered granodiorite outcrop at the contact with a raft of andesite.	3.0 m
UC90-FR-02	Same description as KR13	
UC90-FR-03	Same description as KR13	
UC90-FR-04	Select chip sample from an altered outcrop of granodiorite. Minor sericite-chlorite alteration. Trace of epidote. Averaging 1% fine grained disseminated pyrite.	10 m
UC90-FR-05	Select chip sample from an outcrop of altered granodiorite. Minor sericite-chlorite alteration. Fine grained disseminated pyrite averages 1%.	30 m
UC90-FR-06	Select chip sample from a fine grained andesite dyke, averaging 1% fine grained disseminated pyrite.	3 m
UC90-FR-07	Select chip sample from a vuggy, limonitic quartz vein. The host rock is granodiorite.	5.0 cm
UC90-FR-08	Select chip sample across a shear zone in a granodiorite. Limonitic, epidote bearing quartz vein in shear zone up to 30 cm wide.	60 cm

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90AR01	Chip sample in weakly foliated granodiorite. 1-2% disseminated pyrite associated with chloritized mafics. Mafics comprise 15-20%, 30% quartz crystals, 50% feldspar crystals.	200
UC90AR02	Chip sample across massive diorite. 35-40% hornblende in irregular masses up to 1 cm size. 60-65% plagioclase. 1-2% disseminate pyrite. Rock is cut by 5% quartz veinlets up to 1 cm wide. Chlorite and epidote alteration in 2 cm of rock adjacent quartz veinlets.	75
UC90AR03	Chip sample across intensely altered, fine grained diorite. Light green, weakly siliceous and sericitic altering off-white. Trace to 0.5% disseminate arsenopyrite.	100
UC90AR04	Chip sample across moderately sheared andesite (Karmutsen Volcanics). Green altering to gossanous brown. Cut by epidote veinlets comprising 5-10% of rock with pyrite-bearing fractures <1 mm wide, disseminate pyrite and pyritiferous blebs. 3-5% pyrite overall.	40
UC90AR05	Chip sample across 3 m wide sheared andesite (Karmutsen Volcanics) trending Az.316°/73°NE. Dark green, weakly chloritic, 1% disseminate pyrite, locally 5%. Cut by rare blue/grey quartz veins <1 mm wide.	100
UC90AR07	Select sample from weakly altered andesite (Karmutsen volcanics). Generally massive, cut by quartz/calcite/epidote veins trending Az.000°/71°E. 1% pyrite filling fractures <1mm wide.	

SAMPLE NO.	DESCRIPTION	WIDTH (cm)
UC90AR08	Chip sample across strongly altered andesite (Karmutsen volcanics). 40% white quartz parallel fault. Strongly sericitic 5-10 cm fault gouge. Trace pyrite.	40
UC90AR09	Chip sample across hanging wall. Weakly altered andesite (Karmutsen volcanics). Weakly sericitic. Weak to moderate shear. 1% disseminate pyrite.	150
UC90AR10	Chip sample across moderately sheared andesite (Karmutsen volcanics). Weakly sericitic and chloritic. Cut by epidote/quartz veins paralleling fault structure. Trace pyrite disseminated throughout.	150
UC90AR11	Chip sample across fault in granodiorite. Weakly to strongly altered, sericitic, siliceous. Most strongly altered over middle 10 cm (see UC90AR12). Greenish white altering gray or rusty brown. 2-3% disseminate fine grained pyrite. Fault trends Az.215°/50°NW.	50
UC90AR12	Select sample from middle 10 cm of UC90AR11. Strongly sericitic, moderately silicic. White altering rusty brown. 2% disseminate pyrite. Fault trends Az.215°/50°NW.	
UC90PR01	Select float sample. Limonitic milky quartz boulder.	
UC90PR02	Select chip from pit. Limonitic fine-grained quartz diorite. Moderate argillic alteration and traces of fine-grained disseminated pyrite.	80

APPENDIX B

PETROGRAPHIC REPORT

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph.D. Geologist
CRAIG LEITCH, Ph.D. Geologist
JEFF HARRIS, Ph.D. Geologist
KEN E. NORTHCOTE, Ph.D. Geologist

P.O. BOX 39
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FORT LANGLEY, B.C.
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PHONE (604) 888-1323
FAX. (604) 888-3642

Report for: Peter D. Leriche
Reliance Geological Services
241 E. 1st Street
North Vancouver, B.C.
V7L 1B4.

Invoice CL-23-90

Job # 86
Re: Project 665
Oct. 22, 1990

White to light grey, highly siliceous rock containing vague ghosted dark grey, pyritic fragments to 2 cm across and buff, chalky fragments to 1 cm in a light grey matrix. This is cut by white quartz veins to 1 cm thick and then by pyritic fractures, so there are several stages of silicification. In the polished thin section, minerals are:

Quartz (secondary)	75%
Muscovite	10%
Carbonate (?dolomite or ankerite)	10%
Pyrite	3%
Arsenopyrite	2%

Although most of this sample is made up of secondary quartz, there are areas between veins that contain significant sericite (muscovite) and carbonate; these probably represent hihgly altered remnants of former wallrock. Quartz forms either large bladed crystals up to 5 mm long (these are the veins) or finer, anhedral grains of 0.05 to 0.1 mm diameter (in areas of altered wallrock). Mixed with the latter are flakes of fine-grained sericite (less than 0.05 mm diameter) and subhedral grains of carbonate up to 0.1 mm across. In places there are patches of carbonate up to 2 mm long, and muscovite grains up to 0.5 mm across. The carbonate is brownish, has high relief in places and does not react strongly to cold dilute HCl; it may be partly dolomite or even ankerite. The finer-grained areas are generally brecciated, and there is a suggestion that the sulfides are associated with the sericite, carbonate and brecciation.

The opaques include pyrite and arsenopyrite; there are rare 20 micron inclusions of sphalerite in the pyrite. The pyrite, as anhedral grains up to 1 mm diameter, and the arsenopyrite, as euhedral crystals up to 0.5 mm, occur separately or together. No other sulfides are visible.

There are clearly at least two stages of mineralization since there are fragments of pyritic material, and sulfides along fractures. There may be a tendency for arsenopyrite to be concentrated in the fragments and pyrite in the later fractures.

C H B Leitch

Craig H.B. Leitch, Ph.D., P. Eng.

APPENDIX C

GEOCHEMICAL ANALYTICAL REPORTS and TECHNIQUES

INTERNATIONAL PLASMA LABORATORY LTD

2036 Columbia Street
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Canada V5Y 3E1
Phone (604) 879-7878
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R E P O R T S U M M A R Y Report:[9000928 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Oct 01, 1990]

Client:[	200	Reliance Geological Services Ltd.]
Contact:[		Peter Leriche]
Project:[	0	665]
Amount/Type:[	35	Rock/Silt -Rock Reject Stored 3 Mon]
[		-Soil Reject Discarded]

Analytical Requisition

Geochemical:[	ICP(AqR)30]		
Assay:[	Au(FA/AAS 20g)]	ICP:[	30]
Comments:[	None		]

Delivery Information Reporting Date:[Oct 04, 1990]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[	Reliance Geological Services Ltd.]
Address:[	241 East 1st Street]
City/Province:[	North Vancouver, B.C.]
Country/Postal:[	V7L 1B4]
Attention:[	Peter Leriche]
Fascimile:[	(604)988-4653]

Secondary Destination (Hardcopy)

Company:[	]
Address:[	]
City/Province:[	]
Country/Postal:[	]
Attention:[	]
Fascimile:[	]

1 data pages in this report. Approved by: _____

B.C. Certified Assayers

iPL CODE: 901004-15:28:44

Report: 9000928 R Reliance Geological Services Ltd. Project: 665 Page 1 of 1 Section 1 of 2

Sample Name	Type	Au ppb	Au oz/st	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %
UC90 AR 01	Rock	5	--	0.1	1.11	7	56	<2	0.35	0.2	7	118	1	2.34	<3	0.18
UC90 AR 02	Rock	<5	--	0.1	3.22	10	4	3	1.39	0.7	29	37	16	>5.00	<3	0.06
UC90 AR 03	Rock	<5	--	0.1	0.51	21	34	<2	0.84	<0.1	2	78	1	1.13	<3	0.21
UC90 BR 16	Rock	<5	--	0.1	0.87	<5	76	4	2.21	<0.1	5	114	1	1.65	<3	0.34
UC90 BR 17	Rock	<5	--	0.2	1.21	<5	50	<2	2.98	0.1	8	59	13	2.27	<3	0.32
UC90 BR 18	Rock	<5	--	0.1	1.65	<5	234	<2	2.79	0.3	9	68	<1	2.84	<3	0.24
UC90 BR 19	Rock	<5	--	0.1	0.62	<5	673	<2	5.93	<0.1	8	123	<1	2.61	<3	0.21
UC90 BR 20	Rock	5	--	0.1	0.43	<5	27	<2	2.48	0.3	2	130	<1	1.05	<3	0.14
UC90 BR 21	Rock	5	--	<0.1	0.73	8	370	5	1.39	0.3	8	109	2	2.11	<3	0.27
UC90 BR 22	Rock	2050	0.060	0.7	0.35	4016	34	3	0.25	5.2	4	148	1	2.00	<3	0.18
UC90 BR 23	Rock	5340	0.175	1.4	0.27	6776	27	<2	0.04	4.0	2	226	3	1.67	<3	0.15
UC90 BR 24	Rock	4900	0.158	1.5	0.29	6435	17	<2	0.87	9.3	4	173	1	2.02	<3	0.16
UC90 BR 25	Rock	8260	0.245	2.2	0.26	4805	29	<2	0.21	4.4	3	201	3	1.55	<3	0.15
UC90 BR 26	Rock	270	--	0.2	0.55	4409	57	<2	0.08	0.4	4	140	3	2.62	<3	0.23
UC90 FR 01	Rock	5	--	0.1	1.24	31	110	<2	0.17	0.3	5	85	8	2.67	<3	0.11
UC90 FR 02	Rock	<5	--	0.1	0.96	14	139	2	0.19	0.5	12	96	3	4.83	<3	0.13
UC90 FR 03	Rock	<5	--	0.1	1.20	12	65	<2	0.09	0.3	4	102	10	2.69	<3	0.10
UC90 FR 04	Rock	5	--	<0.1	1.25	24	169	<2	0.28	0.3	7	120	3	2.74	<3	0.11
UC90 FR 05	Rock	<5	--	<0.1	2.38	21	50	<2	0.90	0.2	10	80	<1	3.47	<3	0.06
UC90 FR 06	Rock	<5	--	0.2	3.53	11	18	<2	1.92	0.7	39	89	156	>5.00	<3	0.02
UC90 FR 07	Rock	20	--	0.1	0.55	18	202	3	0.08	0.2	4	184	4	1.41	<3	0.19
UC90 FR 08	Rock	<5	--	0.1	1.00	7	23	<2	0.03	0.3	4	200	2	2.11	<3	0.11
UC90 GR 06	Rock	40	--	1.6	2.23	25	<2	<2	1.54	1.3	63	47	3711	4.76	<3	0.02
UC90 KR 13	Rock	<5	--	0.1	0.99	8	82	<2	0.13	0.2	4	111	10	2.14	<3	0.12
UC90 KR 14	Rock	<5	--	0.2	0.45	8	62	<2	0.25	0.1	4	145	26	1.63	<3	0.18
UC90 KR 15	Rock	570	--	0.2	0.51	604	38	<2	3.09	0.4	7	73	5	2.67	<3	0.24
UC90 KR 16	Rock	<5	--	0.1	1.19	33	38	<2	0.16	0.3	7	111	6	2.49	<3	0.17
UC90 KR 17	Rock	9600	0.275	3.9	0.14	210	10	5	0.01	1.4	4	192	8	1.38	<3	0.08
UC90 PR 01	Rock	4930	0.130	1.0	0.05	67	4	<2	0.01	6.4	1	232	14	0.74	<3	0.03
UC90 PR 02	Rock	90	--	0.1	1.04	675	29	<2	0.03	0.5	4	149	25	2.65	<3	0.19
UC90 AT 01	Silt	85	--	0.1	1.56	28	36	<2	0.45	0.4	9	7	8	2.64	<3	0.06
UC90 AT 02	Silt	20	--	0.3	3.55	20	31	<2	1.85	0.7	19	71	68	2.93	<3	0.05
UC90 AT 03	Silt	10	--	0.2	3.74	16	15	<2	1.22	0.9	45	98	171	>5.00	<3	0.04
UC90 KL 01	Silt	5	--	0.2	2.88	15	20	<2	0.92	0.6	24	48	53	>5.00	<3	0.08
UC90 KL 02	Silt	10	--	0.1	2.82	21	18	<2	0.99	0.8	22	17	45	>5.00	<3	0.09
Minimum Detection		5	0.005	0.1	0.01	5	2	2	0.01	0.1	1	1	1	0.01	3	0.01
Maximum Detection		10000	1000.000	100.0	5.00	10000	10000	10000	10.00	10000.0	10000	10000	20000	5.00	10000	10.00
Method		FA/AAS	FAGrav	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

-- = Not Analysed unr = Not Requested ins = Insufficient Sample

ipl
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Report: 9000928 R Reliance Geological Services Ltd. Project: 665 Page 1 of 1 Section 2 of 2

Sample Name	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %	V ppm	W ppm	Zn ppm	Zr ppm
UC90 AR 01	7	0.72	475	2	0.06	5	0.04	5	<5	2	11	<10	<0.01	17	<5	32	<1
UC90 AR 02	4	2.10	750	4	0.05	5	0.08	<2	9	7	59	10	0.33	150	<5	46	2
UC90 AR 03	15	0.12	450	3	0.05	2	0.02	3	<5	1	14	<10	<0.01	<5	<5	17	<1
UC90 BR 16	8	0.43	543	4	0.02	4	0.05	2	<5	2	34	<10	<0.01	8	<5	25	<1
UC90 BR 17	5	0.59	527	3	<0.01	3	0.05	4	<5	2	43	<10	<0.01	11	<5	41	<1
UC90 BR 18	11	1.07	886	2	0.04	4	0.05	<2	<5	2	35	<10	<0.01	21	<5	44	<1
UC90 BR 19	9	0.73	879	2	<0.01	3	0.04	2	<5	1	77	<10	<0.01	5	<5	43	<1
UC90 BR 20	12	0.31	475	3	0.05	4	0.03	16	<5	2	33	<10	<0.01	<5	<5	5	<1
UC90 BR 21	9	0.48	706	2	0.04	3	0.04	4	6	2	66	<10	<0.01	8	<5	35	<1
UC90 BR 22	5	0.06	397	1	0.02	5	0.03	265	5	1	6	<10	<0.01	<5	<5	213	<1
UC90 BR 23	4	0.02	123	6	0.01	7	0.01	222	7	1	2	<10	<0.01	<5	<5	173	<1
UC90 BR 24	3	0.29	432	1	0.01	4	0.02	400	6	1	20	<10	<0.01	<5	25	446	<1
UC90 BR 25	3	0.07	224	2	0.01	4	0.01	494	13	1	6	<10	<0.01	<5	<5	178	<1
UC90 BR 26	10	0.07	418	1	0.04	4	0.03	28	<5	2	6	<10	<0.01	6	<5	34	<1
UC90 FR 01	5	0.60	176	3	0.07	4	0.04	3	<5	4	22	<10	0.07	31	<5	17	2
UC90 FR 02	5	0.44	107	10	0.06	5	0.04	2	7	3	15	10	0.07	24	<5	8	1
UC90 FR 03	6	0.75	149	5	0.07	3	0.03	<2	<5	5	53	<10	0.07	32	<5	10	1
UC90 FR 04	4	0.70	108	8	0.10	5	0.04	3	<5	5	23	<10	0.10	33	<5	5	1
UC90 FR 05	3	1.85	437	2	0.05	3	0.09	<2	5	8	115	<10	0.16	69	<5	22	1
UC90 FR 06	2	2.41	835	2	0.05	55	0.05	<2	10	8	47	<10	0.41	138	<5	76	19
UC90 FR 07	10	0.11	325	3	0.01	3	0.02	4	<5	1	3	<10	<0.01	6	<5	9	<1
UC90 FR 08	3	0.68	771	5	<0.01	7	0.01	<2	7	1	2	<10	<0.01	7	<5	31	<1
UC90 GR 06	<2	1.30	655	2	0.02	43	0.08	<2	8	4	67	<10	0.38	78	<5	118	6
UC90 KR 13	5	0.59	111	4	0.07	5	0.03	4	6	4	10	<10	0.06	23	<5	7	2
UC90 KR 14	11	0.06	135	4	<0.01	3	0.03	2	5	1	8	<10	<0.01	5	<5	7	<1
UC90 KR 15	7	0.22	877	21	0.04	3	0.08	10	<5	4	37	<10	<0.01	6	<5	29	<1
UC90 KR 16	14	0.55	732	4	0.05	6	0.04	<2	<5	2	5	<10	<0.01	12	<5	39	<1
UC90 KR 17	2	0.01	154	2	<0.01	19	0.01	335	7	2	1	<10	<0.01	<5	<5	56	<1
UC90 PR 01	<2	<0.01	73	2	<0.01	5	<0.01	134	8	<1	1	<10	<0.01	<5	<5	158	<1
UC90 PR 02	13	0.28	329	2	0.05	4	0.02	10	<5	3	3	<10	<0.01	12	<5	65	<1
UC90 AT 01	8	0.82	493	3	<0.01	6	0.05	3	<5	3	16	<10	0.04	30	<5	44	<1
UC90 AT 02	5	0.97	1390	2	0.01	28	0.06	<2	<5	4	36	<10	0.08	54	<5	47	<1
UC90 AT 03	2	2.86	1267	2	0.01	67	0.05	<2	9	7	43	<10	0.32	128	<5	74	4
UC90 KL 01	4	1.91	1119	3	0.01	17	0.09	<2	<5	6	39	10	0.15	84	<5	113	2
UC90 KL 02	5	1.78	1207	2	0.01	14	0.08	<2	5	5	34	10	0.10	65	<5	108	1
Minimum Detection	2	0.01	1	1	0.01	1	0.01	2	5	1	1	10	0.01	5	5	1	1
Maximum Detection	10000	10.00	10000	1000	5.00	10000	5.00	20000	1000	10000	10000	1000	1.00	10000	1000	20000	10000
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

-- = Not Analysed unr = Not Requested ins = Insufficient Sample

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R E P O R T S U M M A R Y Report:[9000910 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Sep 26, 1990]

Client:[	200	Reliance Geological Services Ltd.]
Contact:[		Roger Kidlark]
Project:[	0	665]
Amount/Type:[	32	Rock -Rock Reject Stored 3 Mon]
[		-Soil Reject Discarded]

Analytical Requisition

Geochemical:[ICP(AqR)30]
Assay:[Au(FA/AAS 20g)] ICP:[30]
Comments:[None]

Delivery Information Reporting Date:[Oct 01, 1990]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[Reliance Geological Services Ltd.]
Address:[241 East 1st Street]
City/Province:[North Vancouver, B.C.]
Country/Postal:[V7L 1B4]
Attention:[Roger Kidlark]
Fascimile:[(604)988-4653]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
Country/Postal:[ ]
Attention:[ ]
Fascimile:[ ]

1 data pages in this report. Approved by: _____

B.C. Certified Assayers

iPL CODE: 901001-10:55:54

Report: 9000910 R Reliance Geological Services Ltd. Project: 665 Page 1 of 1 Section 1 of 2

Sample Name	Type	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm
TC90GR 3	Rock	<5	<0.1	2.96	12	10	<2	1.24	0.7	26	32	4	>5.00	<3	0.04	4
TC90GR 4	Rock	<5	0.1	3.39	<5	<2	<2	3.50	0.5	39	63	140	4.92	<3	<0.01	2
TC90GR 5	Rock	<5	<0.1	3.46	7	<2	3	1.53	0.8	46	132	182	>5.00	<3	<0.01	2
UC90BR 1	Rock	<5	<0.1	0.51	<5	27	<2	1.88	0.2	8	136	6	2.36	<3	0.16	8
UC90BR 2	Rock	1755	0.1	0.61	<5	35	<2	2.70	0.4	9	74	80	2.94	<3	0.18	3
UC90BR 3	Rock	1560	<0.1	0.36	<5	29	<2	1.66	<0.1	5	138	93	1.98	<3	0.11	3
UC90BR 4	Rock	5	<0.1	0.86	6	<2	3	0.70	0.7	41	52	4	>5.00	<3	0.26	2
UC90BR 5	Rock	<5	<0.1	0.52	<5	52	<2	1.81	0.1	7	114	2	2.16	<3	0.23	11
UC90BR 6	Rock	<5	<0.1	0.63	<5	89	<2	3.69	0.1	7	80	1	2.83	<3	0.23	10
UC90BR 7	Rock	<5	<0.1	0.77	<5	23	<2	3.20	0.2	7	114	2	2.72	<3	0.10	7
UC90BR 8	Rock	<5	<0.1	1.21	<5	23	<2	4.37	0.3	12	82	8	3.93	<3	0.11	6
UC90BR 9	Rock	<5	0.1	1.62	<5	29	<2	4.80	0.4	16	80	23	4.83	<3	0.12	13
UC90BR 10	Rock	5	<0.1	1.00	<5	26	<2	4.01	0.1	11	63	29	3.51	<3	0.15	6
UC90BR 11	Rock	<5	<0.1	0.89	<5	24	<2	3.98	0.2	8	75	17	3.04	<3	0.14	6
UC90BR 12	Rock	<5	<0.1	0.98	<5	43	5	1.78	<0.1	5	58	1	1.90	<3	0.20	8
UC90BR 13	Rock	<5	<0.1	0.83	<5	31	3	2.29	<0.1	4	85	<1	1.91	<3	0.18	2
UC90BR 14	Rock	<5	<0.1	1.34	<5	32	<2	1.89	0.3	9	61	1	3.33	<3	0.13	7
UC90BR 15	Rock	<5	<0.1	1.55	<5	43	<2	3.00	0.2	11	39	20	3.30	<3	0.18	11
UC90GR 1	Rock	<5	<0.1	1.70	<5	88	4	1.63	0.3	11	79	<1	3.34	<3	0.13	9
UC90GR 2	Rock	<5	0.1	>5.00	<5	161	3	4.11	1.4	58	128	238	>5.00	<3	0.02	5
UC90KR 1	Rock	<5	<0.1	1.94	6	13	2	0.62	0.3	10	56	6	3.80	<3	0.09	4
UC90KR 2	Rock	<5	1.6	3.74	17	<2	<2	4.77	1.6	47	100	1384	>5.00	<3	<0.01	<2
UC90KR 3	Rock	5	0.1	2.30	12	6	5	1.80	0.5	31	92	15	4.12	<3	0.01	<2
UC90KR 4	Rock	10	<0.1	1.56	<5	23	<2	1.38	0.1	8	76	1	2.97	<3	0.11	6
UC90KR 5	Rock	5	<0.1	0.65	<5	71	<2	0.79	<0.1	2	75	1	1.15	<3	0.15	12
UC90KR 6	Rock	5	<0.1	1.09	<5	22	<2	0.99	<0.1	5	89	1	2.34	<3	0.12	8
UC90KR 7	Rock	5	2.2	1.26	11	57	<2	0.23	0.8	29	92	3269	2.87	<3	0.10	7
UC90KR 8	Rock	<5	<0.1	1.25	<5	71	<2	0.49	0.1	8	98	12	2.31	<3	0.08	7
UC90KR 9	Rock	<5	<0.1	0.99	<5	64	<2	0.17	0.2	7	93	62	2.48	<3	0.16	12
UC90KR 10	Rock	<5	<0.1	0.56	<5	50	<2	0.53	<0.1	4	102	4	1.86	<3	0.14	13
UC90KR 11	Rock	<5	<0.1	0.40	<5	135	<2	1.39	<0.1	5	111	1	1.80	<3	0.16	12
UC90KR 12	Rock	5	<0.1	0.55	<5	42	4	0.56	0.2	5	109	11	1.99	<3	0.17	14
Minimum Detection		5	0.1	0.01	5	2	2	0.01	0.1	1	1	1	0.01	3	0.01	2
Maximum Detection		10000	100.0	5.00	10000	10000	10000	10.00	10000.0	10000	10000	20000	5.00	10000	10.00	10000
Method		FA/AAS	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

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Report: 9000910 R Reliance Geological Services Ltd. Project: 665 Page 1 of 1 Section 2 of 2

Sample Name	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %	V ppm	W ppm	Zn ppm	Zr ppm
TC90GR 3	2.74	1408	4	0.02	5	0.10	2	9	16	37	12	0.30	158	<5	112	7
TC90GR 4	1.77	650	2	0.02	58	0.04	<2	12	6	49	<10	0.52	128	<5	67	21
TC90GR 5	3.53	943	3	0.02	69	0.04	2	14	10	66	11	0.54	167	<5	111	22
UC90BR 1	0.39	669	2	0.05	3	0.04	2	5	3	30	<10	<0.01	10	<5	32	1
UC90BR 2	0.74	922	4	0.04	9	0.04	9	8	3	61	<10	<0.01	10	<5	14	1
UC90BR 3	0.41	582	2	0.04	3	0.03	4	6	2	42	<10	<0.01	5	<5	5	<1
UC90BR 4	0.39	201	161	<0.01	5	0.02	12	6	1	9	14	<0.01	9	<5	4	<1
UC90BR 5	0.52	782	4	0.04	3	0.05	3	7	2	50	<10	<0.01	8	<5	25	<1
UC90BR 6	0.76	1412	2	0.01	3	0.04	3	5	2	80	<10	<0.01	7	<5	35	<1
UC90BR 7	0.60	858	2	0.06	3	0.04	2	7	4	44	<10	<0.01	12	<5	34	<1
UC90BR 8	1.47	1087	3	0.05	4	0.04	<2	7	7	81	<10	<0.01	28	<5	56	<1
UC90BR 9	1.52	1210	2	0.06	13	0.15	<2	7	8	95	10	<0.01	38	<5	68	1
UC90BR 10	1.11	876	9	0.04	4	0.05	4	5	6	69	<10	<0.01	19	<5	42	<1
UC90BR 11	1.00	813	5	0.05	4	0.05	2	<5	5	75	<10	<0.01	12	<5	38	<1
UC90BR 12	0.49	428	3	0.02	3	0.03	3	8	3	26	<10	<0.01	8	<5	25	1
UC90BR 13	0.47	432	2	0.04	3	0.03	2	5	2	32	<10	<0.01	6	<5	26	<1
UC90BR 14	0.99	901	3	0.05	5	0.05	3	7	5	31	<10	<0.01	22	<5	55	1
UC90BR 15	0.81	743	4	0.02	4	0.04	2	<5	5	33	<10	<0.01	27	<5	50	<1
UC90GR 1	1.17	1081	3	0.04	4	0.05	2	6	5	43	10	0.06	35	<5	69	1
UC90GR 2	4.44	2298	4	<0.01	83	0.10	35	15	23	418	15	0.35	266	<5	188	5
UC90KR 1	1.57	865	4	0.05	4	0.08	<2	7	7	20	<10	0.16	52	<5	61	11
UC90KR 2	2.47	1657	4	<0.01	57	0.04	2	9	9	60	12	0.23	144	<5	83	4
UC90KR 3	2.28	687	2	0.02	45	0.03	29	18	5	53	<10	0.42	92	<5	59	10
UC90KR 4	1.23	468	4	0.06	4	0.05	4	<5	3	33	<10	0.01	21	<5	32	1
UC90KR 5	0.13	241	1	0.05	2	0.02	7	<5	1	25	<10	<0.01	<5	<5	9	1
UC90KR 6	0.68	481	4	0.05	3	0.05	<2	<5	2	17	<10	<0.01	16	<5	39	1
UC90KR 7	0.67	600	4	0.07	6	0.04	<2	6	3	17	<10	0.01	19	<5	90	2
UC90KR 8	0.89	568	2	0.07	3	0.05	2	7	6	18	<10	0.11	34	<5	30	1
UC90KR 9	0.61	489	3	0.05	4	0.05	3	6	2	7	<10	0.01	16	<5	24	1
UC90KR 10	0.19	480	2	0.04	2	0.03	3	<5	2	8	<10	<0.01	9	<5	19	<1
UC90KR 11	0.11	690	2	0.04	3	0.03	4	7	3	19	<10	<0.01	6	<5	17	<1
UC90KR 12	0.10	479	8	0.05	3	0.04	3	7	2	8	<10	<0.01	10	<5	25	1
Minimum Detection	0.01	1	1	0.01	1	0.01	2	5	1	1	10	0.01	5	5	1	1
Maximum Detection	10.00	10000	1000	5.00	10000	5.00	20000	1000	10000	10000	1000	1.00	10000	1000	20000	10000
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

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R E P O R T S U M M A R Y Report:[9000948 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Oct 10, 1990]

Client:[	200	Reliance Geological Services Ltd.]
Contact:[		Peter Leriche]
Project:[	0	665]
Amount/Type:[	36	Rock -Rock Reject Stored 3 Mon]
[		-Soil Reject Discarded]

Analytical Requisition

Geochemical:[ICP(AqR)30]
Assay:[Au(FA/AAS 20g)] ICP:[30]
Comments:[None]

Delivery Information Reporting Date:[Oct 12, 1990]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[Reliance Geological Services Ltd.]
Address:[241 East 1st Street]
City/Province:[North Vancouver, B.C.]
Country/Postal:[V7L 1B4]
Attention:[Peter Leriche/Roger Kidlark]
Fascimile:[(604)988-4653]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
Country/Postal:[ ]
Attention:[ ]
Fascimile:[ ]

1 data pages in this report. Approved by: _____

B.C. Certified Assayers

iPL CODE: 901012-17:54:38

Report: 9000948 R Reliance Geological Services Ltd. Project: 665 Page 1 of 1 Section 1 of 2

Sample Name	Type	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm
UC90AR 04	Rock	5	0.1	2.51	8	3	<2	0.88	0.3	22	24	1	>5.00	<3	0.04	<2
UC90AR 05	Rock	10	0.1	4.51	<5	5	<2	2.22	0.2	53	249	135	>5.00	<3	0.03	<2
UC90AR 07	Rock	5	<0.1	2.26	7	<2	3	1.76	0.1	39	114	35	4.09	<3	0.02	<2
UC90AR 08	Rock	170	0.1	1.49	<5	11	<2	>10.00	<0.1	14	39	67	2.41	<3	0.13	<2
UC90AR 09	Rock	10	0.1	3.49	<5	4	<2	7.16	<0.1	29	90	92	>5.00	<3	0.17	2
UC90AR 10	Rock	5	0.1	4.15	<5	<2	<2	7.37	0.1	41	194	66	>5.00	<3	0.09	<2
UC90AR 11	Rock	50	1.8	0.98	87	38	<2	0.14	2.0	3	85	60	2.84	<3	0.21	7
UC90AR 12	Rock	150	8.3	0.56	472	8	3	0.11	24.2	4	42	267	>5.00	<3	0.32	<2
UC90BR 27	Rock	30	<0.1	0.50	6	45	<2	1.76	0.1	5	85	3	2.01	<3	0.24	9
UC90BR 28	Rock	20	0.2	3.05	7	<2	5	3.54	0.1	23	93	30	>5.00	<3	0.05	2
UC90BR 29	Rock	20	<0.1	0.55	6	55	<2	1.31	<0.1	4	79	2	1.78	<3	0.26	9
UC90BR 30	Rock	145	<0.1	0.51	32	29	<2	5.50	<0.1	4	76	3	1.58	<3	0.21	3
UC90BR 31	Rock	<5	<0.1	0.44	<5	42	<2	1.96	<0.1	3	64	3	1.45	<3	0.28	10
UC90BR 32	Rock	<5	<0.1	0.45	<5	80	<2	1.90	<0.1	4	66	4	1.54	<3	0.29	6
UC90GR 07	Rock	<5	0.1	2.09	7	<2	<2	3.30	0.1	36	47	161	3.71	<3	0.01	<2
UC90GR 08	Rock	<5	0.3	3.70	16	<2	<2	1.69	0.5	50	207	385	>5.00	<3	0.01	<2
UC90GR 09	Rock	<5	0.1	>5.00	<5	<2	<2	1.41	0.5	52	27	149	>5.00	<3	<0.01	<2
UC90GR 10	Rock	<5	0.4	2.20	37	<2	<2	0.91	0.2	101	66	1057	>5.00	<3	0.04	<2
UC90GR 11	Rock	5	0.3	2.44	15	4	<2	1.40	0.4	114	100	337	>5.00	<3	0.02	<2
UC90GR 12	Rock	<5	0.1	1.88	9	5	<2	0.96	0.3	76	58	24	>5.00	<3	0.04	<2
UC90GR 13	Rock	<5	0.2	2.37	9	<2	6	0.84	0.2	49	30	148	>5.00	<3	0.03	2
UC90GR 14	Rock	<5	0.2	4.05	15	21	<2	2.89	0.3	36	88	130	>5.00	<3	0.09	2
UC90GR 15	Rock	<5	0.2	2.75	10	24	<2	1.15	0.1	26	31	101	>5.00	<3	0.06	<2
UC90KR 18	Rock	5	0.1	3.00	10	<2	<2	0.65	0.4	31	40	102	>5.00	<3	0.03	2
UC90KR 19	Rock	<5	0.2	0.15	83	4	11	0.86	1.1	10	10	5	>5.00	<3	0.02	<2
UC90KR 20	Rock	40	0.7	2.27	44	<2	3	0.46	1.0	43	72	1886	>5.00	<3	<0.01	<2
UC90KR 21	Rock	<5	0.1	2.01	12	<2	<2	1.20	0.1	23	32	25	4.72	<3	<0.01	3
UC90AL 04	Silt	15	<0.1	2.76	5	5	<2	0.25	0.3	88	39	64	>5.00	<3	0.03	2
UC90AL 05	Silt	30	0.3	3.47	<5	12	<2	0.72	0.6	52	54	232	>5.00	<3	0.02	3
UC90BL 01	Silt	240	<0.1	1.52	72	43	<2	0.40	0.1	9	18	15	2.78	<3	0.06	5
UC90BL 02	Silt	5	<0.1	1.29	18	38	<2	0.42	0.2	7	5	25	2.28	<3	0.04	5
UC90KL 03	Silt	<5	<0.1	4.87	23	14	<2	0.72	0.5	50	34	56	4.85	<3	0.02	2
UC90KL 04	Silt	<5	0.1	2.74	24	22	<2	1.21	0.4	25	44	43	3.59	<3	0.04	3
UC90KL 05	Silt	<5	<0.1	3.56	32	20	<2	0.94	0.7	32	57	108	>5.00	<3	0.04	4
UC90KL 06	Silt	5	<0.1	2.67	10	22	<2	0.67	0.5	22	21	57	4.70	<3	0.06	3
UC90GS 01	Soil	5	0.1	3.25	9	14	2	0.93	0.4	27	47	54	>5.00	<3	0.03	2
Minimum Detection		5	0.1	0.01	5	2	2	0.01	0.1	1	1	1	0.01	3	0.01	2
Maximum Detection		10000	100.0	5.00	10000	10000	10000	10.00	10000.0	10000	10000	20000	5.00	10000	10.00	10000
Method		FA/AAS	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

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Report: 9000948 R Reliance Geological Services Ltd. Project: 665 Page 1 of 1 Section 2 of 2

Sample Name	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %	V ppm	W ppm	Zn ppm	Zr ppm
UC90AR 04	2.01	767	2	0.06	3	0.14	<2	<5	5	36	<10	0.19	56	<5	39	2
UC90AR 05	4.12	1309	2	0.05	94	0.06	<2	12	7	22	<10	0.41	189	<5	95	6
UC90AR 07	1.72	510	2	0.01	57	0.04	<2	9	7	95	<10	0.53	124	<5	41	15
UC90AR 08	1.11	1157	4	<0.01	22	0.02	<2	<5	4	231	<10	0.10	41	222	22	1
UC90AR 09	3.14	999	2	0.01	45	0.04	<2	5	7	60	<10	0.13	79	10	55	1
UC90AR 10	4.03	1126	2	<0.01	74	0.03	<2	9	12	92	<10	0.26	133	<5	69	5
UC90AR 11	0.40	304	8	0.06	4	0.03	733	6	1	5	<10	0.01	7	<5	393	1
UC90AR 12	0.07	113	19	0.01	4	0.06	5305	6	1	5	<10	<0.01	<5	<5	3816	<1
UC90BR 27	0.34	725	3	0.05	4	0.05	25	<5	2	39	<10	<0.01	5	<5	64	<1
UC90BR 28	2.42	857	2	0.04	28	0.06	<2	<5	15	48	<10	0.01	92	<5	65	<1
UC90BR 29	0.30	650	2	0.06	4	0.04	4	<5	1	42	<10	<0.01	7	<5	32	<1
UC90BR 30	0.18	854	2	0.02	2	0.03	10	<5	1	216	<10	<0.01	5	<5	27	<1
UC90BR 31	0.19	475	1	0.04	1	0.04	4	<5	1	40	<10	<0.01	<5	<5	27	<1
UC90BR 32	0.31	491	2	0.04	3	0.04	5	<5	1	48	<10	<0.01	<5	<5	15	<1
UC90GR 07	1.63	645	2	0.02	32	0.08	<2	8	4	40	<10	0.32	71	<5	40	2
UC90GR 08	2.79	558	2	0.05	100	<0.01	<2	6	4	28	<10	0.16	178	<5	40	<1
UC90GR 09	5.18	1232	2	0.01	21	0.01	<2	<5	9	9	12	0.23	458	<5	76	1
UC90GR 10	1.19	461	1	0.06	96	0.04	<2	<5	2	24	<10	0.17	89	<5	36	2
UC90GR 11	2.57	720	3	0.05	152	0.08	<2	10	10	23	11	0.41	146	<5	114	6
UC90GR 12	1.17	514	3	0.10	53	0.05	<2	6	4	33	<10	0.27	90	<5	31	2
UC90GR 13	1.82	574	4	0.06	7	0.11	<2	<5	5	48	<10	0.17	73	<5	30	<1
UC90GR 14	2.88	1403	2	0.04	43	0.06	<2	7	13	32	<10	0.27	176	<5	64	3
UC90GR 15	1.63	745	2	0.07	13	0.09	4	<5	5	28	<10	0.15	98	<5	52	<1
UC90KR 18	2.56	814	3	0.04	23	0.13	<2	<5	6	23	<10	0.24	100	<5	75	1
UC90KR 19	0.18	253	2	<0.01	8	<0.01	<2	6	<1	2	46	<0.01	17	<5	13	<1
UC90KR 20	1.27	716	3	<0.01	54	0.06	<2	8	4	20	33	0.31	142	<5	111	3
UC90KR 21	1.17	539	3	0.07	14	0.14	<2	<5	4	25	<10	0.25	63	<5	52	4
UC90AL 04	1.13	2204	1	0.01	20	0.05	5	<5	4	15	<10	0.20	101	<5	44	1
UC90AL 05	1.97	2921	2	0.01	45	0.06	9	<5	8	26	<10	0.24	128	<5	80	2
UC90BL 01	0.82	822	2	0.02	4	0.05	18	<5	3	23	<10	0.04	30	<5	55	<1
UC90BL 02	0.70	471	2	0.02	4	0.05	22	<5	2	16	<10	0.03	26	<5	37	<1
UC90KL 03	1.15	2275	2	0.01	38	0.04	16	<5	6	25	<10	0.20	104	<5	137	<1
UC90KL 04	1.38	1345	1	0.01	29	0.07	26	<5	5	33	<10	0.06	67	<5	107	<1
UC90KL 05	2.36	1408	2	0.01	43	0.10	10	<5	9	26	<10	0.10	117	<5	227	<1
UC90KL 06	1.65	1064	1	0.02	15	0.07	7	<5	5	27	<10	0.12	69	<5	100	1
UC90GS 01	2.19	784	2	0.04	29	0.06	<2	<5	5	23	<10	0.13	99	<5	68	1
Minimum Detection	0.01	1	1	0.01	1	0.01	2	5	1	1	10	0.01	5	5	1	1
Maximum Detection	10.00	10000	1000	5.00	10000	5.00	20000	1000	10000	10000	1000	1.00	10000	1000	20000	10000
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

-- = Not Analysed unr = Not Requested ins = Insufficient Sample

ipl
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Method of Silver & Gold Analyses by Fire Assay

(a) 1/4 to 1 assay tonne of the pulp sample is mixed with a combination of fluxes in a fusion pot and fused at a high temperature to form a lead "button".

(b) The precious metals are extracted by cupellation and weighed as a dore bead. The silver is then dissolved with diluted nitric acid and decanted.

(c) The resulting gold bead is annealed and weighed using a Sartorius micro-balance. The weight lost from the original bead is used to calculate the silver content. Both the silver and the gold are reported in Ounces per short tonne (OPT).

QUALITY CONTROL

- Every fusion of 24 pots contains 22 samples, one internal standard or blank, and a random reweigh of one of the samples.
- Anomalous gold values greater than 0.2 OPT and silver values greater than 1.0 OPT are automatically checked.
- Any indication of other precious metals is noted on the final report.

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Method of ICP Multi-element Analyses

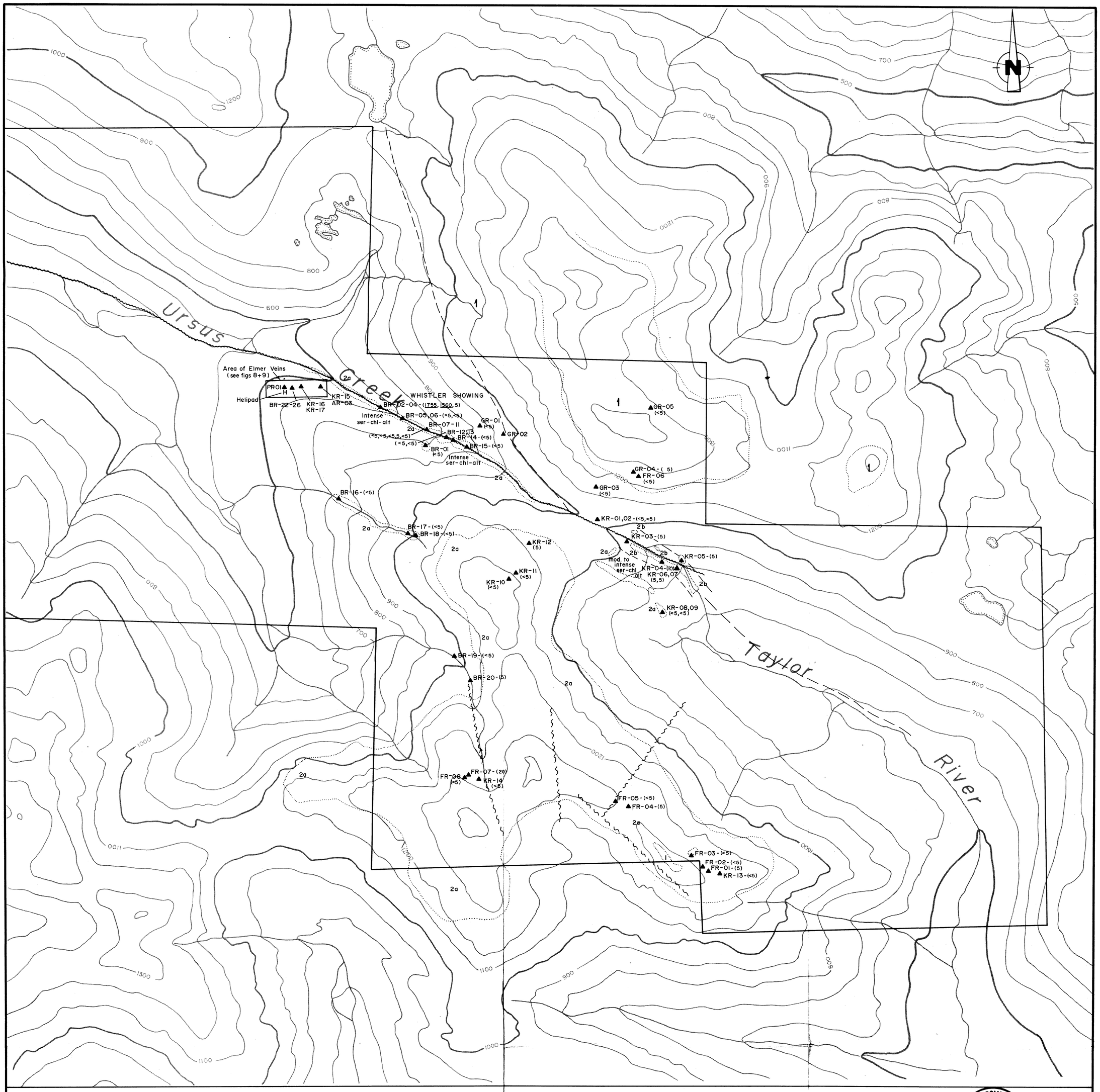
(a) 0.50 grams of sample is digested with diluted aqua regia solution by heating in a hot water bath for 90 minutes, then cooled, bulked up to a fixed volume with demineralized water, and thoroughly mixed.

(b) The specific elements are determined using an Inductively Coupled Argon Plasma spectrophotometer. All elements are corrected for inter-element interference. All data are subsequently stored onto computer diskette.

* Aqua regia leaching is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

QUALITY CONTROL

The machine is calibrated using six known standards and a blank. Another blank, which was digested with the samples, and a standard are tested before any samples to confirm the calibration. A maximum of 20 samples are analysed, and then a standard, also digested with the samples, is run. A known standard with characteristics best matching the samples is chosen and tested. Another 20 samples are analysed, with the last one being a random reweigh of one of the samples. The standard used at the beginning is rerun. This procedure is repeated for all of the samples.



SYMBOLS

- Contour (interval 100m.)
- Water course.
- Road.
- Icefield.
- Swamp
- Claim boundary.
- Outcrop.
- Geological contact.
- Ursus Creek cataclastic zone.
- Fault (approximate)
- ▲KR-01 Rock sample location.(numbers prefixed by UC90)
- ■BL-02 Silt sample location. (" " " ")
- Rusty quartz-calcite stringer (inclined, vertical)
- Strike and dip of bedding (inclined, vertical)
- Foliation (inclined, vertical)
- Jointing (inclined, vertical)
- (1755) Au values >100 ppb
- (20) Au values in ppb

LEGEND

JURASSIC

ISLAND INTRUSION

2. Undifferentiated Granodiorite and Quartz Diorite.
- 2(a) Biotite-Hornblende Granodiorite.
- 2(b) Quartz-Diorite.

TRIASSIC

KARMUTSEN FORMATION

1. Undifferentiated pillow lavas, massive Andesite flows, tuffs.
- 1(a) Dolomite - fine grained, buff weathering.

ABBREVIATIONS

ser	Sericite.
chl	Chlorite.
carb	Carbonate
alt	Alteration

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,474

GEOLOGICAL ASSOCIATION OF CANADA
R.G. KIRKHAM
FELLOW

0 100 200 500 1000 Metres

PACIFIC SENTINEL GOLD CORP.

URSUS CREEK PROPERTY
ALBERNI M.D., B.C.

EAST END
GEOLOGY
SAMPLE LOCATION AND GOLD GEOCHEMISTRY MAP

Scale: 1:10,000	N.T.S. 92F/5	Drawn by:
Date: SEPT. 1990	Geologist:	Figure: 6

RELIANCE GEOLOGICAL SERVICES INC.

△ Ursus Mountain

Ursus Creek

Icefield

MASSIVE SULPHIDE SHOWING

DYKE SHOWING

SYMBOLS

- Contour (interval 100m.)
- Water course.
- Road.
- Icefield.
- Swamp
- Claim boundary.
- Outcrop.
- Geological contact.
- Ursus Creek cataclastic zone.
- Fault (approximate)
- ▲ KR-01 — Rock sample location.(numbers prefixed by UC90)
- ■ BL-02 — Silt sample location.(" " " ")
- Rusty quartz-calcite stringer (inclined, vertical)
- Strike and dip of bedding (inclined, vertical)
- Foliation (inclined, vertical)
- Jointing (inclined, vertical)
- (240) — Au values >100ppb
- (20) — Au values in ppb

LEGEND

JURASSIC

ISLAND INTRUSION

2 — Undifferentiated Granodiorite and Quartz Diorite.
2(a) Biotite-Hornblende Granodiorite.
2(b) Quartz-Diorite.

TRIASSIC

KARMUTSEN FORMATION

1 — Undifferentiated pillow lavas, massive Andesite flows, tuffs.
1(a) Dolomite - fine grained, buff weathering.

ABBREVIATIONS

ser Sericite.
chl Chlorite.
carb Carbonate
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0 100 300 500 1000 Metres

PACIFIC SENTINEL GOLD CORP.

URSUS CREEK PROPERTY
ALBERNI M.D., B.C.

WEST END

GEOLOGY

SAMPLE LOCATION
AND GOLD GEOCHEMISTRY MAP

Scale: 1:10,000	N.T.S. 92F/5	Drawn by:
Date: SEPT. 1990	Geologist:	Figure: 7

RELIANCE GEOLOGICAL SERVICES INC.