

87-553 -16341
488

GEOCHEMICAL ASSESSMENT REPORT

on the

SOLSTICE PROPERTY

OMINECA MINING DIVISION

BRITISH COLUMBIA

Latitude 55° 40'N
Longitude 125° 35'W
34'30"
NTS: 93 N/12E

FILMED

Owners: David M. Nelles
4-8540 Blundell Rd.
Richmond, B.C.
V6Y 3P4

and

Steven F. Coombes
435 E 51st Street
Vancouver, B.C.
V5X 1C8

Operator: Golden Porphyrite Ltd.
218-744 W. Hastings Street
Vancouver, B.C.
V6C 1A5

by

H. S. MACFARLANE, M.Sc., F.G.A.C.

July 26, 1987

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ASSESSMENT REPORT

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16,341

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INTRODUCTION

The Solstice property consists of 4 modified grid mineral claims, comprising 64 units, situated at the southern end of the Omineca Mountains. The claims were located in June, 1986 as a result of a regional heavy mineral sediment geochemistry programme carried out in the Vital Range. This programme successfully outlined several creeks from which samples containing anomalous concentrations of gold and silver were obtained. The area drained by these creeks is now encompassed by the Sol claims and recently underwent preliminary assessment, the results of which form the basis of this report.

Location and Access

The Sol claims are located in the Omineca Mining Division, near 55° 40' north latitude, 125° 33' west longitude and can be found on NTS map sheet 93 N/12 (fig. 1). The property is situated east of Takla Lake in the Vital Range and lies approximately 260 km northwest of Prince George, British Columbia.

Access to the property can be gained from Prince George by travelling north to M^cLeod Lake on Highway 97, thence northeast on the Omineca Access Road to Manson Creek. From Manson Creek, an unimproved dirt road providing access to Takla Landing is followed for a distance of 78 km to Silver Creek. From here, a four wheel drive road provides access to Kenny Creek and the property. Self catering accomodation is available at a cabin on Silver Creek, six kilometres east of the property. The property may also be accessed from Takla Landing, approximately 35 km to the southwest. Helicopter transport is usually available in the summer months, from Takla Landing and Rainbow Lodge on Takla Lake or from Tsayta Lake.

The closest full service town to the property is Smithers situated on the Yellowhead Highway. Helicopter flight time from Smithers to the property is approximately one hour.

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VANCOUVER, B.C.	



GOLDEN PORPHYRITE LTD.		
SOLSTICE PROPERTY		
OMINECA MINING DIVISION, B.C.		
LOCATION MAP		
DATE: JULY, 1987	SCALE: 1:8,000,000	FIGURE No. 1

Physiography and Vegetation

The property is located within the Vital Range at the southern end of the Omineca Mountains. The property encompasses a north-northwest trending broad-backed ridge separating Vital Creek from Kelly Creek. Relief within the claims varies from 985m on Silver Lake to over 1830m within the Sol 1 claim. Property topography is characterized by moderately steep slopes and youthful creeks.

The Sol claims encompass the headwaters of two former placer gold producing drainages, Kelly Creek which flows south into Byrnes Lake and the Kenny Creek valley, and Vital Creek which flows northeast into Silver Creek. Several smaller creeks also drain the property to the south.

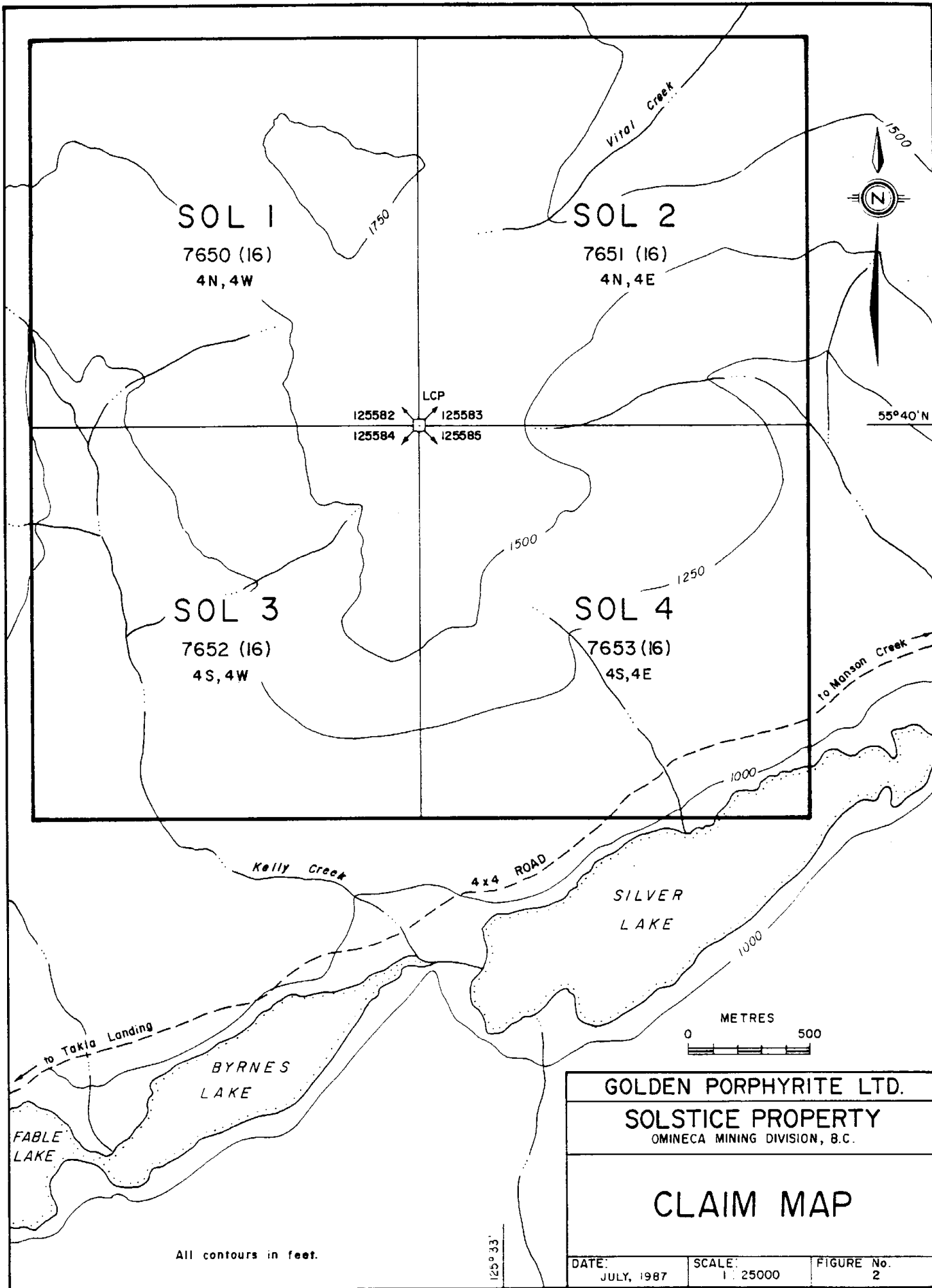
The majority of the property lies within the Engelmann Spruce Subalpine Fir biogeoclimatic zone which is characterized by high precipitation and severe winters with moderate snow cover. Vegetation indigenous to the area includes Engelmann spruce, alpine fir, lodgepole pine, white spruce and white bark pine. Mature and often dense stands of timber are common on the valley slopes but tend to thin around the 1600m elevation. Stunted scrub fir and grasses are present in the alpine regions of the property.

Property and Ownership

The Solstice property (fig. 2) consists of the following 4 modified grid mineral claims, comprising 64 units:

Claim	Units	Record Number	Expiry Date
Sol 1	16	7650	25 June 87
Sol 2	16	7651	25 June 87
Sol 3	16	7652	25 June 87
Sol 4	16	7653	25 June 87

The claims are currently in the ownership of Mr D. Nelles of Richmond and Mr S. Coombes of Vancouver, B.C., pending transfer to Golden Porphyrite Ltd of 218-744 W. Hastings Street, Vancouver, B.C., V6C 1A5. The claims have also been grouped under the name Solstice for assessment purposes.



History and Previous Work

Exploration in this area dates back to the mid-19th Century with the discovery of placer gold in the Vital Range. The first placer gold was recovered from Vital Creek in 1869. This creek was worked for some years, first as drift diggings and later by ground sluicing and hydraulicking. Between 1922 and 1934 the creek was developed by means of a 285m adit driven along the bedrock-overburden contact. In 1935 Northern Ventures, Limited acquired many of the claims on the creek and decided to abandon the drift mining in favour of hydraulicking. Hydraulic operations commenced in 1936 but were quickly abandoned as a result of a lack of dumping facilities. A shaft, 27m deep, was then sunk to bedrock. The company withdrew from the area a year or so later without any reported production (Armstrong, 1949). Production from Vital Creek to 1950 is, however, reported as 4,602 ounces of gold, the majority as coarse flakes (Holland 1950).

Kelly Creek has had an intermittent history of placer mining since the discovery of gold in 1931 at a point 2.4 km above its confluence with Kenny Creek (Armstrong, 1949). A half ounce nugget is reported to have been recovered from the drainage in the early 1930's (Lay, 1933). Although extensive work appears to have occurred along Kelly Creek, a record of placer gold production is not available.

In 1983 the area now encompassed by the Solstice property was staked as the Jo claims by Golden Porphyrite Ltd on behalf of Arklatex Petroleum Corporation. An area comprising the Kelly Creek drainage basin was subsequently held by Fable Lake Mines Ltd, while the Vital Creek drainage basin was held by Silver Creek Mines Ltd. Geological exploration was performed on the Jo claims in a number of phases in 1983 and 1984. This exploration consisted of prospecting, geological mapping, heavy mineral sediment sampling and soil and lithochemical surveys. A total of 8 heavy mineral sediment, 63 soil and 10 rock samples were taken from the area of the present Solstice claims (fig. 3).

Summary of Work

A total of 12 heavy mineral sediment samples were collected from the Solstice property from the 19-21 June, 1987.

GEOLOGY

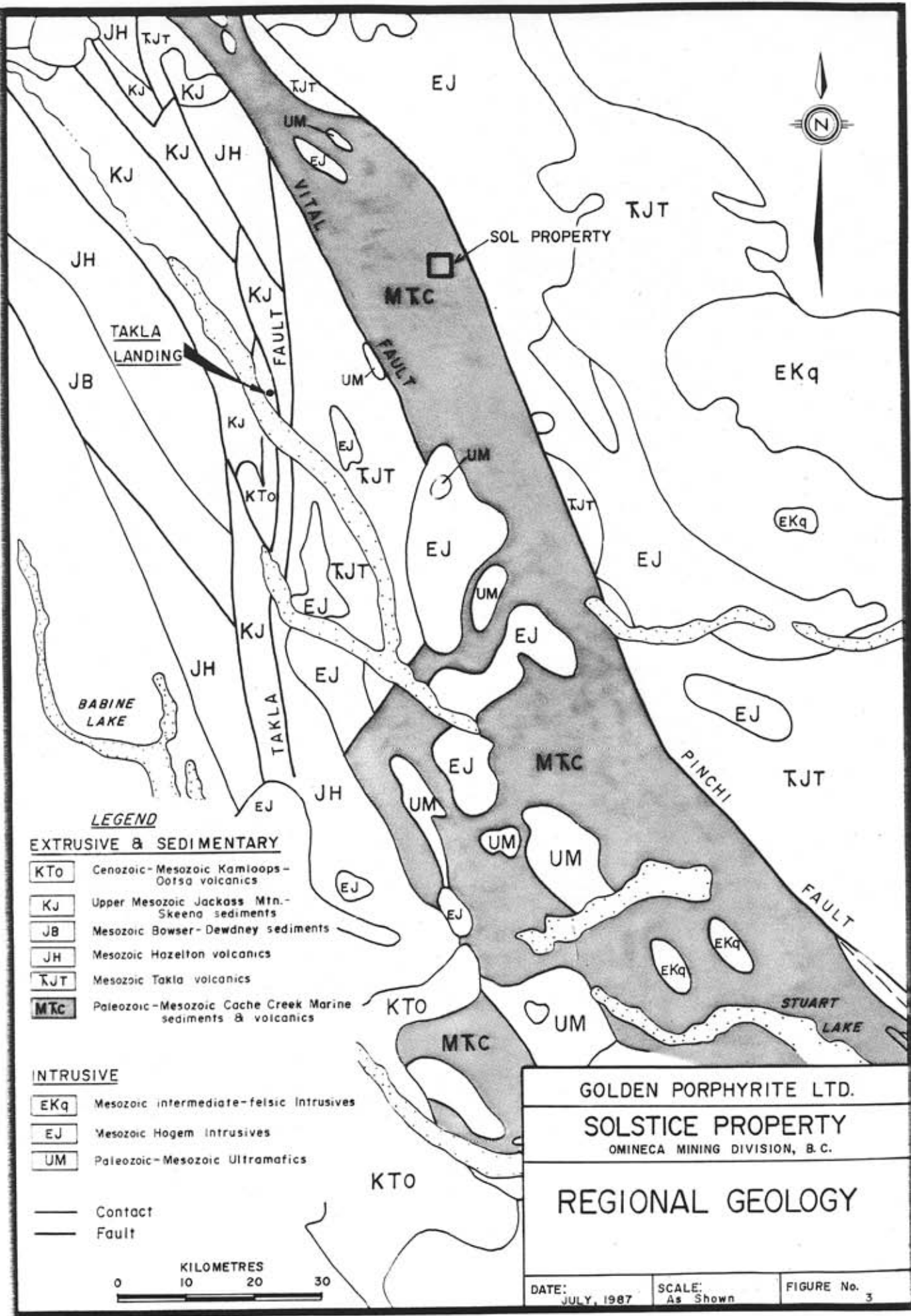
The Vital Range of mountains is underlain by rocks belonging to the Permo-Triassic Cache Creek Group, a sedimentary assemblage of highly deformed phyllite, chert and argillite with local, discontinuous bodies of limestone and metavolcanic rocks (Armstrong, 1949 and Paterson, 1974). The property is situated within the Omineca Tectonic Belt of the Canadian Cordillera, just west of the Pinchi Fault. The Jurassic Hogem Batholith occurs to the east of this major structural feature (fig. 3).

Within the Sol claims, rocks belonging to the Cache Creek Group include cherty argillite, limestone, phyllite, tuff (locally intercalated with limestone and phyllite) and an intermediate to felsic igneous unit. A stratigraphic sequence for this complex package has not been determined.

These rocks strike north to northwest with a predominantly moderate easterly dip. Bedding and foliation are parallel to sub-parallel, with the latter thought to have developed parallel to north-south fold axes. Folding has resulted in the formation of antiforms and synforms, evident on a regional scale. The phyllite and tuff units are locally isoclinally folded and appear to have behaved incompetently with respect to the more competent limestone units.

The rocks underlying the Solstice property appear to have undergone low-grade regional metamorphism to greenschist facies. This has resulted in the recrystallization of limestone and the alteration of original sediments to argillite, slate and phyllite.

Mineralization observed within the claims consists of pyrite blebs and stringers within the tuff and phyllite units, and as pyrite cubes within the intermediate to felsic igneous unit. Background and sub-anomalous gold values have been obtained from samples of this pyrite mineralization as well as from soil and rock samples taken adjacent to this mineralization. The source of the coarse placer gold recovered in Vital and Kelly Creek has yet to be located, as has the source of the silver, thought to have been derived from arquerite (Ag_{12}Hg), a natural amalgam of mercury with silver.



LEGEND

EXTRUSIVE & SEDIMENTARY

- KTO** Cenozoic-Mesozoic Kamloops-Ootsa volcanics
- KJ** Upper Mesozoic Jackass Mtn.-Skeena sediments
- JB** Mesozoic Bowser-Dewdney sediments
- JH** Mesozoic Hazelton volcanics
- TJT** Mesozoic Takla volcanics
- MTC** Paleozoic-Mesozoic Cache Creek Marine sediments & volcanics

INTRUSIVE

- EKq** Mesozoic intermediate-felsic intrusives
- EJ** Mesozoic Hogen intrusives
- UM** Paleozoic-Mesozoic Ultramafics

- Contact
- Fault



GOLDEN PORPHYRITE LTD.
 SOLSTICE PROPERTY
 OMINECA MINING DIVISION, B.C.

REGIONAL GEOLOGY

DATE: JULY, 1987 SCALE: As Shown FIGURE No. 3

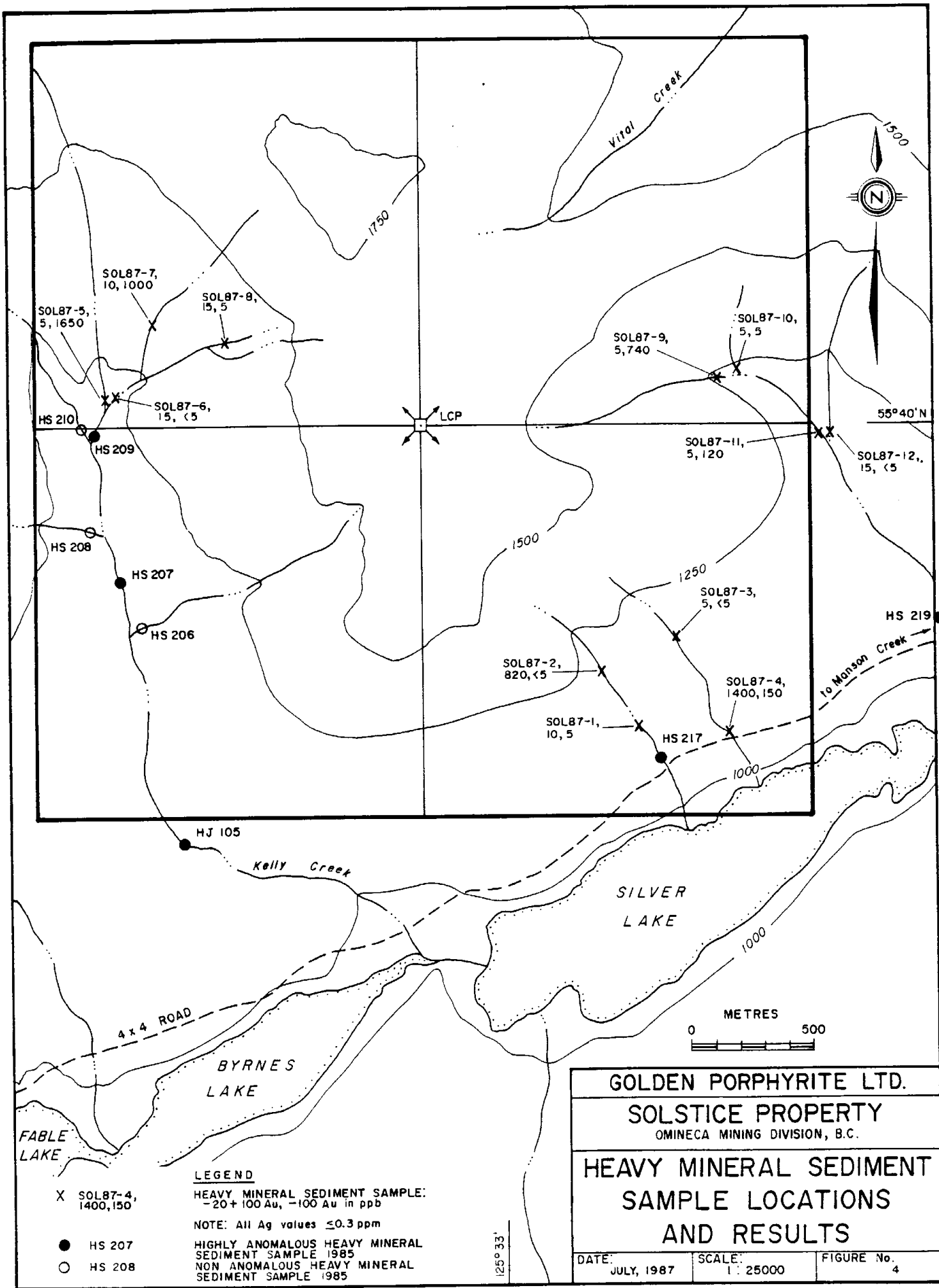
GEOCHEMISTRY

Between June 19 and 21, 1987, as part of a preliminary assessment of the property, 12 heavy mineral sediment samples were collected from three areas of the property: from the headwaters of Kelly Creek, from two creeks draining into Silver Lake and from a creek draining the east central part of the property, (fig. 4). Previous heavy mineral sediment sampling undertaken on the property delineated several highly anomalous gold bearing creeks draining the property. The samples collected during the 1987 exploration programme were taken to further isolate the source or sources of the gold entering the creeks.

These samples consisted of approximately 5 kg of concentrate derived from between 0.25 - 0.75 m³ of alluvial material. This concentrate was placed in plastic bags, labelled and shipped to Bondar-Clegg and Company Ltd, 130 Pemberton Ave, North Vancouver, B.C., V7P 2R5 for analysis. Here, the samples were dried and split into -20+100 and -100 mesh fractions. The weight of each fraction was then noted. The -20+100 fraction was subsequently floated in tetrabromoethane to isolate minerals with a specific gravity greater than 2.95 ± 0.1 g/cm³. The weight of the heavy fraction was then noted. Subsamples of both this heavy fraction and the -100 fraction were then geochemically analyzed for gold and silver.

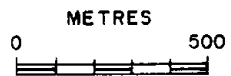
Gold analysis required ten gram subsamples to be fused with 10 mg of gold-free silver metal. The fusion was then cupelled and the resulting silver bead parted with dilute nitric acid and treated with aqua regia. The remaining salts were then dissolved in dilute HCl and analyzed for gold via atomic absorption spectrometer with a five parts per billion (ppb) detection limit.

Silver analysis required one gram portions of each sample to be digested in concentrate perchloric-nitric acid for approximately two hours. The digested sample was then cooled and made up to 25 mL with distilled water. The solution was then mixed and solids were allowed to settle. Silver concentration was determined using corrected atomic absorption techniques with a detection limit of 0.1 parts per million (ppm).



1500

55°40'N



GOLDEN PORPHYRITE LTD.		
SOLSTICE PROPERTY		
OMINECA MINING DIVISION, B.C.		
HEAVY MINERAL SEDIMENT		
SAMPLE LOCATIONS		
AND RESULTS		
DATE:	SCALE:	FIGURE No.
JULY, 1987	1:25000	4

LEGEND
 X SOL87-4, 1400, 150
 ● HS 207
 ○ HS 208

HEAVY MINERAL SEDIMENT SAMPLE:
 -20+100 Au, -100 Au in ppb

NOTE: All Ag values ≤0.3 ppm

HIGHLY ANOMALOUS HEAVY MINERAL
 SEDIMENT SAMPLE 1985

NON ANOMALOUS HEAVY MINERAL
 SEDIMENT SAMPLE 1985

- X SOL87-4, 1400, 150
- HS 207
- HS 208

125°33'

RESULTS AND INTERPRETATIONS

Four samples were taken from the headwaters of Kelly Creek, upstream of a highly anomalous sample taken in 1985. Two of these samples gave fine gold, -100 mesh, values of 1650 and 1000 ppb. Two of the four samples taken from the two creeks draining into Silver lake returned coarse gold, -20 +100 mesh, values of 1400 and 820 ppb. One of the four samples taken from the creek draining the east central part of the property gave a fine gold value of 740 ppb.

The fine and coarse gold recovered from creeks draining the same ridge on the property may indicate that two differing styles of mineralization are present within the property.

Further sampling and geological investigation is required upstream and upslope of those areas sampled to date to determine the location of the fine and coarse gold mineralization.

COST STATEMENT

Assessment Programme (June 17-23, 1987).

Mobilization/Demobilization

D. Nelles: 17-18 & 22-23 June 4 days @ \$225	\$900.00
H. Macfarlane: 17-18 & 22-23 June 4 days @ \$225	\$900.00
Truck Rental: 17-18 & 22-23 June 4 days @ \$50	\$200.00
+ 1600 km @ \$0.15	\$240.00
Gas and oil	\$290.58
Room 17 & 22 June 4 man days @ \$25.27	\$101.09
Board 17-18 & 22-23 June 8 man days @ \$25.58	\$204.60

Field

D. Nelles: 19-21 June 3 days @ \$225	\$675.00
H. Macfarlane: 19-21 June 3 days @ \$225	\$675.00
Truck Rental: 19-21 June 3 days @ \$50	\$150.00
Board 19-21 June 6 man days @ \$28.95	\$173.70
Assays: 12 HM for Au,Ag @ \$43.80	\$525.60
Equipment rental:	
Generator	\$100.00
FM Radios	\$70.00
Chainsaw	\$50.00
Miscellaneous	\$200.00

Office

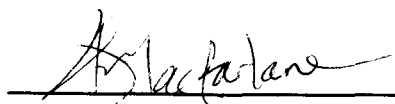
Report preparation: 4 days @ \$187.50	\$750.00
Drafting	\$150.00
Computer and copying	<u>\$150.00</u>

Total	\$6,505.57
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CERTIFICATE

I, H. S. Macfarlane, do hereby certify that:

1. I am a consulting geologist, residing in Vancouver, British Columbia.
2. I am a graduate in geology of the University of London, (B.Sc. Honours, 1976), and of the University of Leicester, (M.Sc., 1981).
3. I am a Member of the Institution of Mining and Metallurgy, London, a Registered Chartered Engineer of the Engineering Council, London, and a Fellow of the Geological Association of Canada.
4. I have practiced my profession as a geologist in Africa and the Cordillera of North America for the past ten years.
5. The information in the attached report is based on the supervision of the 1983, 1984 and 1987 exploration programmes on the Kelly, Vital Creek and Solstice Properties, B.C.
6. I have no interest, direct or indirect, in the property herein described, nor do I expect to receive any interest.


H. S. Macfarlane, M.Sc., F.G.A.C.

Dated at Vancouver, B.C., this 26th day of July, 1987.

BIBLIOGRAPHY

- Armstrong, J.E. 1949. Fort St James Map Area, Cassiar and Coast Districts, *B.C. Geol. Surv. Can. Memoir 243*.
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- Paterson, I.A. 1974. Geology of Cache Creek Group and Mesozoic Rocks at the Northern End of the Stuart Lake Belt, Central B.C. *Geol. Surv. Can., Paper 74-1, Pt A*.

Appendix A: Sample Results

REPORT: 127-4288

PROJECT: SOLSTICE

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Ag PPM	Au PPB	WT gm	WT. G
C2 -20+100 SOL 87-01		<0.1	10	10.2	250
C2 -20+100 SOL 87-02		<0.1	820	12.6	295
C2 -20+100 SOL 87-03		<0.1	5	13.8	300
C2 -20+100 SOL 87-04		<0.1	1400	9.2	280
C2 -20+100 SOL 87-05		<0.1	5	4.7	290
C2 -20+100 SOL 87-06		<0.1	15	5.8	260
C2 -20+100 SOL 87-07		<0.1	10	3.9	285
C2 -20+100 SOL 87-08		<0.1	15	6.4	260
C2 -20+100 SOL 87-09		<0.1	5	10.1	270
C2 -20+100 SOL 87-10		<0.1	5	5.6	260
C2 -20+100 SOL 87-11		<0.1	5	12.9	290
C2 -20+100 SOL 87-12		<0.1	15	6.2	270
C2 -100 SOL 87-01		<0.1	5		
C2 -100 SOL 87-02		<0.1	<5		
C2 -100 SOL 87-03		0.2	<5		
C2 -100 SOL 87-04		0.1	150		
C2 -100 SOL 87-05		0.1	1650		
C2 -100 SOL 87-06		<0.1	<5		
C2 -100 SOL 87-07		<0.1	1000		
C2 -100 SOL 87-08		0.1	5		
C2 -100 SOL 87-09		<0.1	740		
C2 -100 SOL 87-10		0.2	5		
C2 -100 SOL 87-11		0.2	120		
C2 -100 SOL 87-12		0.3	<5		

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