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Report on the Reconnaissance
Geophysical Survey II
on the
Gaspard Lake Property
by
P.A.Cartwright, P.Geoph and
D.B.Petersen, P.Eng

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NTS 920/7,10
51°30'N, 122°45'W

Fame 1, Fortune 1, Gas 1-9,11,14-20 Claims
Clinton Mining Division

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

20,798

Owner: B.K.Bowen, A.C.Gordon
Operator: Goldsmith Minerals Limited
Commodity: Au
Authors: P.A.Cartwright, P.Geoph., D.B.Petersen, P.Eng.
Date: December, 1990

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1. INTRODUCTION

This report describes the reconnaissance resistivity survey that was conducted on the subject property from the 6th through the 11th of November 1990. The object was to trace the extension of the favourable lineament that hosts the Twilight and Kelsch zones to the southwest and the northeast, and to search for additional lineaments and zones to the south and north of this lineament.

This report is intended for internal use and for submission as an assessment report.

P.A.Cartwright, P. Geoph., and D.B.Petersen, P.Eng., have co-authored the report. D.B.Petersen wrote sections 1 through 7 and 11 through 13. P.A.Cartwright write section 8. Sections 9 and 10 were written jointly by both authors.

2. LOCATION AND ACCESS

The property is located in the Clinton Mining Division approximately 85 kilometres southwest of Williams Lake and 25 kilometres northwest of the Blackdome Mine. It is centred at geographic coordinates 51° 30' N, 122° 45' W. NTS is 920/7 and 10. See Figure 1, "Location Map".

Access is by Highway 20 from Williams Lake to Riske Creek and then southerly by good gravel road to the Fletcher Challenge logging camp 25 kilometres northeast of the property. From there main and side logging roads lead to various parts of the property. See Figure 3, "Compilation Map". An alternative route is available from Clinton via the Gang Ranch.

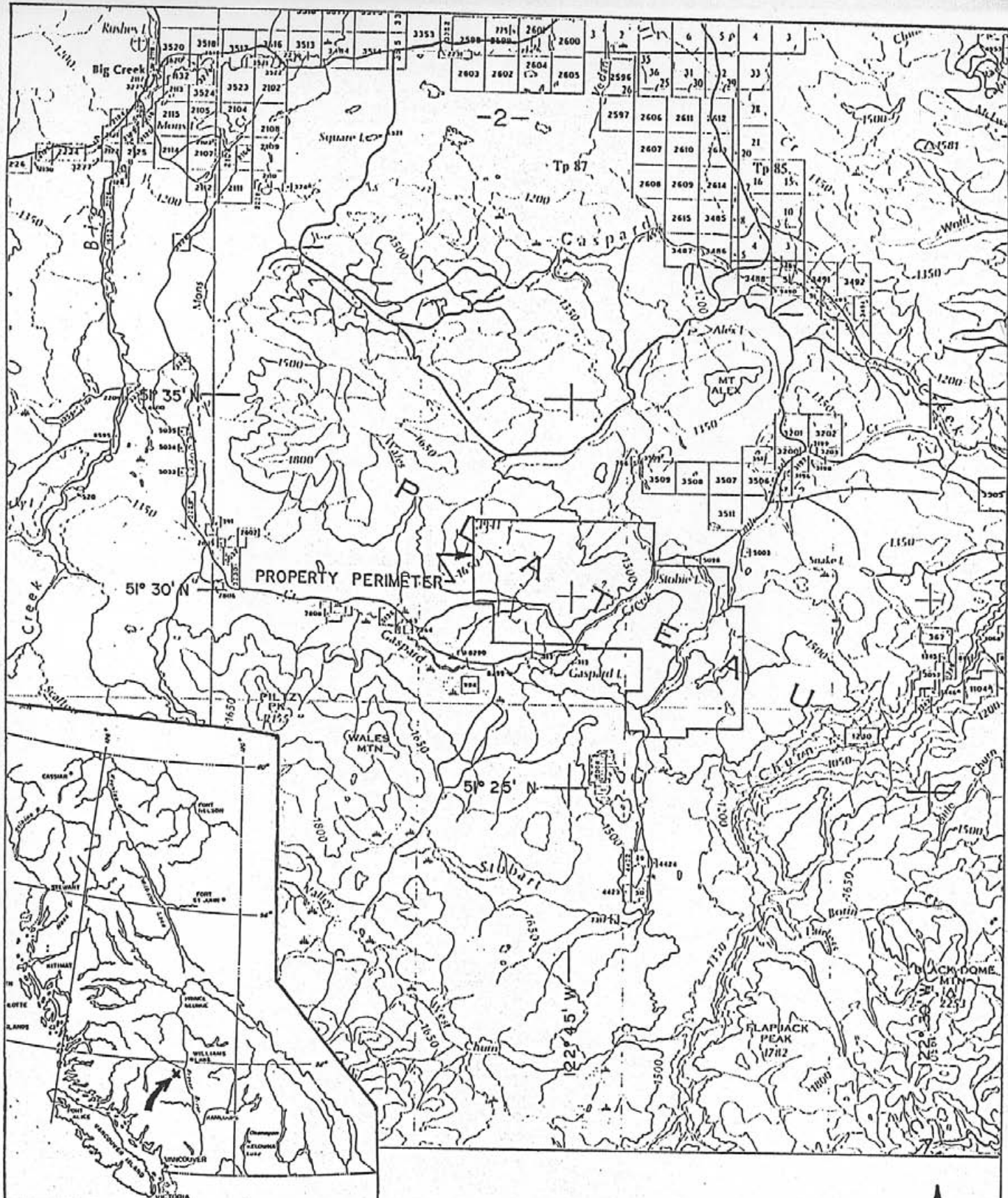
3. TOPOGRAPHY AND VEGETATION

The claims cover gently rolling up-land between elevations of 1300 and 1800 metres above sea level.

Vegetation consist almost exclusively of mature jack pine. Approximately one third of the area has been logged, in both selective and clear cut manner.

4. REGIONAL GEOLOGY

The property lies in a structurally controlled northwesterly trending belt of rocks known as the Intermontane Belt that extends with interruptions from the Yukon in the northwest to Mexico in the southeast. It varies from approximately 100 to 300 kilometres in width and in Canada is flanked by the Omineca Crystalline Belt to the east and the Coast Crystalline Belt to the west.



OB Petersen

Fig 1

LOCATION MAP



Scale 1 : 250,000



In British Columbia the rocks that comprise the belt consist essentially of Triassic volcanic rocks of intermediate composition that have been intruded by Triassic and Jurassic plutons and stocks of granite composition. In Central British Columbia Tertiary activity is evident in the form of acidic to intermediate volcanic rocks that have been overlain by younger plateau type basalt type flows.

The Intermontane Belt is of great economic importance and hosts a variety of mineral deposits. These include porphyry type copper and molybdenum (Highland Valley Copper, Brenda, Granisle, Gibraltar), copper and gold (Copper Mountain, Continental Gold, Afton) and molybdenum deposits (Endako, Boss Mountain). Precious metal producers include silver and copper (Equity Silver) and several gold deposits (Bralorne-Pioneer, Silbak-Premier) and the epithermal Cheni, Baker, Dusty Mac and Blackdome mines.

5. CLAIM GEOLOGY

The property is overlain by an extensive cover of overburden. A few outcrops are exposed in rare, steep-walled creeks and in occasional logging cuts, and one area contains sharp angled float that has probably been derived from a proximal source.

Geological mapping by Harris (1988) showed that the property is overlain mainly by Middle Jurassic andesitic and pyroclastic volcanics which have been intruded by a granodiorite stock in the northern portions of the claims and by smaller bodies elsewhere. These rocks have been cut by Tertiary mafic dykes, felsic tuffs and flow-banded rhyolite dykes. A northeasterly striking fault on the Gas 18 and 16 claims separates Jurassic volcanics to the northwest from a variety of felsic intermediate Tertiary volcanics to the southeast.

Prospecting by Bowen and Gordon (Bowen, 1989) has shown that epithermal type gold mineralization is present in vuggy quartz veins that exhibit some degree of argillic alteration and have been exposed in logging cuts and in the sides of a steep-walled creek on the Fame 1 claim.

Soil geochemistry (Harris, 1988) has defined a broad arsenic and gold anomaly some 600 metres by 300 metres in area on the Gas 9 claim immediately west of Stobie Lake.

An URP stream sediment sample analyzed 23ppm As on the Gas 18 claim.

6. HISTORY

Interest in the property was first generated in the area of what is now the Gas 18 claim as a result of the URP sampling high. Equinox Resources staked approximately 40 units in two claims to cover the sample area and conducted a programme of reconnaissance geochemical soil sampling and prospecting. The results failed to justify expectations and the claims were abandoned.

Seperately in 1986, B.K.Bowen discovered a gold bearing alteration zone, and follow-up prospecting in 1987 by Bowen and his partner A.C.Gordon led to staking in stages of the Fame 1, Fortune 1 and Gas claims shortly thereafter.

The property was subsequently optioned to Canamax Resources, Inc. In 1988 they carried out a programme of additional staking, grid soil sampling, geological mapping, hand and limited backhoe trenching and 702 metres of NQ diamond drilling in 9 holes. They relinquished their option in 1989.

In early 1990 the property was optioned to Goldsmith Minerals Limited who conducted a reconnaissance VLF Resistivity and magnetic surveys over the resistivity anomalies (Cartwright and Petersen, 1990).

In September and October, a 6-hole 818 metre diamond drilling programme was conducted that explored four resistivity anomalies (Petersen, 1990). The drilling proved that these anomalies are real and caused by zones of high quartz content.

7. WORK DONE

As a result of this diamond drilling a reconnaissance VLF Resistivity Survey II was conducted from 6th November through 11th November. The object was to trace the extension of the favourable lineament that hosts the Twilight and Kelsch zones to the southwest and northeast (Cartwright and Petersen, 1990) and to search for additional lineaments and zones to the south and north of this lineament.

M.St.Pierre, A.Sperling and D.Petersen spent 6 days from 6th November through 11th November conducting reconnaissance VLF resistivity on these grids on the Fame 1, Gas 1, Gas 2, Gas 4, Fortune 1, Gas 5 and Gas 6 claims and follow up detailing on these anomalous zones on the Fortune 1 and Gas 5 and Gas 2 claims. See Figure 3, "Compilation Map".

D. Petersen supervised the project and flagged the lines with stations at 200 metre intervals. M.St.Pierre, Geophysicist, conducted the VLF survey and recorded the data in a computer. A Geonics Model EML6R was used for the survey. Electrode spacing was 10 metres. Readings were taken at 10 metre intervals along the line. A.Sperling assisted M.St.Pierre with the resistivity survey.

Coverage was as follows:

<u>Claim</u>	<u>Line-Km</u>	<u>Applied Costs</u>
Fame 1	0.8	953
Fortune 1	1.00	1,192
Gas 2	3.30	3,934
Gas 3	0.35	417
Gas 4	2.40	2,861
Gas 5	1.20	1,430
Gas 6	1.95	2,324
Total	11.00 Km	\$13,111

The results are documented in Section 8 below, and are illustrated in Figures 4 through 6.

8. RESULTS OF WORK DONE

The present reconnaissance geophysical program has extended the VLF resistivity coverage northwest, southwest and southeast of the Twilight area, as well as northeast of the Kelsch area. The VLF resistivity technique measures the electric field induced across the earth by a VLF-EM transmitter station. One horizontal component of the magnetic field is also measured, in a direction perpendicular to the line joining the measurement point and the transmitter station. The ratio of the electric field (mv/km) over the magnetic field (mgamma) times the inverse of 5 times the transmitted frequency yields the "Caignard" resistivity in ohm-metre units.

Gold bearing silicified rocks would generally be expected to give rise to higher than normal Caignard resistivity values.

The phase angle between the electric and magnetic fields is also recorded because this can provide valuable information as to the vertical resistivity distribution beneath the measurement site. For example, a phase angle of 45 degrees between the electric and magnetic fields indicates a homogeneous situation, whereas a phase value of less than 45 degrees points to increasing resistivity with increasing depth and vice-versa.

Results for each map area are discussed below:

Gas 5,6, Fame 1 Plan Map

Line 400W of the original Twilight Grid has been extended several kilometres towards the northwest across the Gas 6 claim onto the Gas 5 claim. A weakly anomalous high resistivity response was detected on the Gas 5 claim. Detail lines were surveyed 100 metres

on either side of Line 400W; however, even lower magnitude results were observed.

Gas 4,6, Fame 1, Fortune 1 Plan Map

Three lines were surveyed to test for the possible extension of the Twilight zone towards the southwest. While distinctly lower than 45 degree phase angle values are noted on Line 600W, no anomalous resistivity readings were recorded.

Line 1000W was extended towards the southeast across the Gas 4 claim before terminating on the Fortune 1 claim, where another weakly resistive event can be seen. Detail lines on either side of Line 1000W did not provide encouragement.

Gas 2 Plan Map

The region to the northeast of the Kelsch grid was evaluated by three widely spaced northwesterly trending lines. Low phase angle readings are noted on the extreme northern ends of Line 2900E and Line 3900E, and probably represent extensions of the Kelsch zone, although no elevated resistivity values can be seen.

A marginally anomalous resistivity response is evident in the data recorded in the vicinity of Line 2900E, Station 350S, however, greater than 45 degree phase angles correlate with the resistivity readings and could indicate that a near surface, flat lying source is present.

The most encouraging results of the November 1990 survey are outlined near the southeastern end of Line 3900E, where a strongly resistive zone is evident in the data, combined with lower than normal phase angles. This zone has been further detailed with parallel lines that reveal the source of the zone to be in the order of 100 to 200 metres in length.

9. CONCLUSIONS

It is concluded that:

1. The survey has shown that the favourable lineaments (as defined by the phase angle low) that hosts the Twilight and Kelsch zones terminates to the southwest, but is partially open to the northeast, at least to the Line 3900E. It is possible that it re-appears beyond the areas surveyed.
2. Follow-up detailing showed the resistivity highs on the Gas 5 and Fortune 1 claims to be confined to single lines. The anomaly on the Gas 2 claim is between 100 and 200 metres long and is intense. It represents a drillable target.
3. The survey shows that the drillable resistivity targets are not confined to the Kelsch-Twilight lineament, and can be expected at any location on the property.

10. RECOMMENDATIONS

It is recommended that:

1. Consideration be given to a staged reconnaissance resistivity survey on lines spread 250 metres apart.

ss Petersen

PA. Cantu

11. COSTS

The following costs were incurred in the programme:

<u>Project Preparation</u>		<u>\$</u>
D. Petersen	2 days @ \$345 per day	690
Supplies		<u>80</u>
Sub-Total		770
 <u>Field Costs</u>		
Mobilisation	5th November	1,164
De-mobilisation	12th November	1,164
D. Petersen	6th - 11th November 6 days @ \$345 per day	2,070
A. Sperling	6th - 11th November 6 days @ \$125 per day	750
Pacific Geophysical	6th - 11th November 6 days @ \$550 per day	3,300
Truck Rental	6 days @ \$81 per day	486
Gasoline		87
Meals and Accomodation	21 man days @ \$55 per day	<u>1,155</u>
Sub-Total		10,176
 <u>Reporting</u>		
D. Petersen	3 days @ \$345 per day	1,035
P. Cartwright	1 day @ \$400 per day	400
Data Plotting	3 grids @ \$100 per grid	300
Profiling	11 kms @ \$15 per km	165
Printing		55
Typing	6 hours @ \$35 per hour	<u>210</u>
Sub-Total		2,165
GRAND TOTAL		<u>\$13,111</u>

ss Petersen

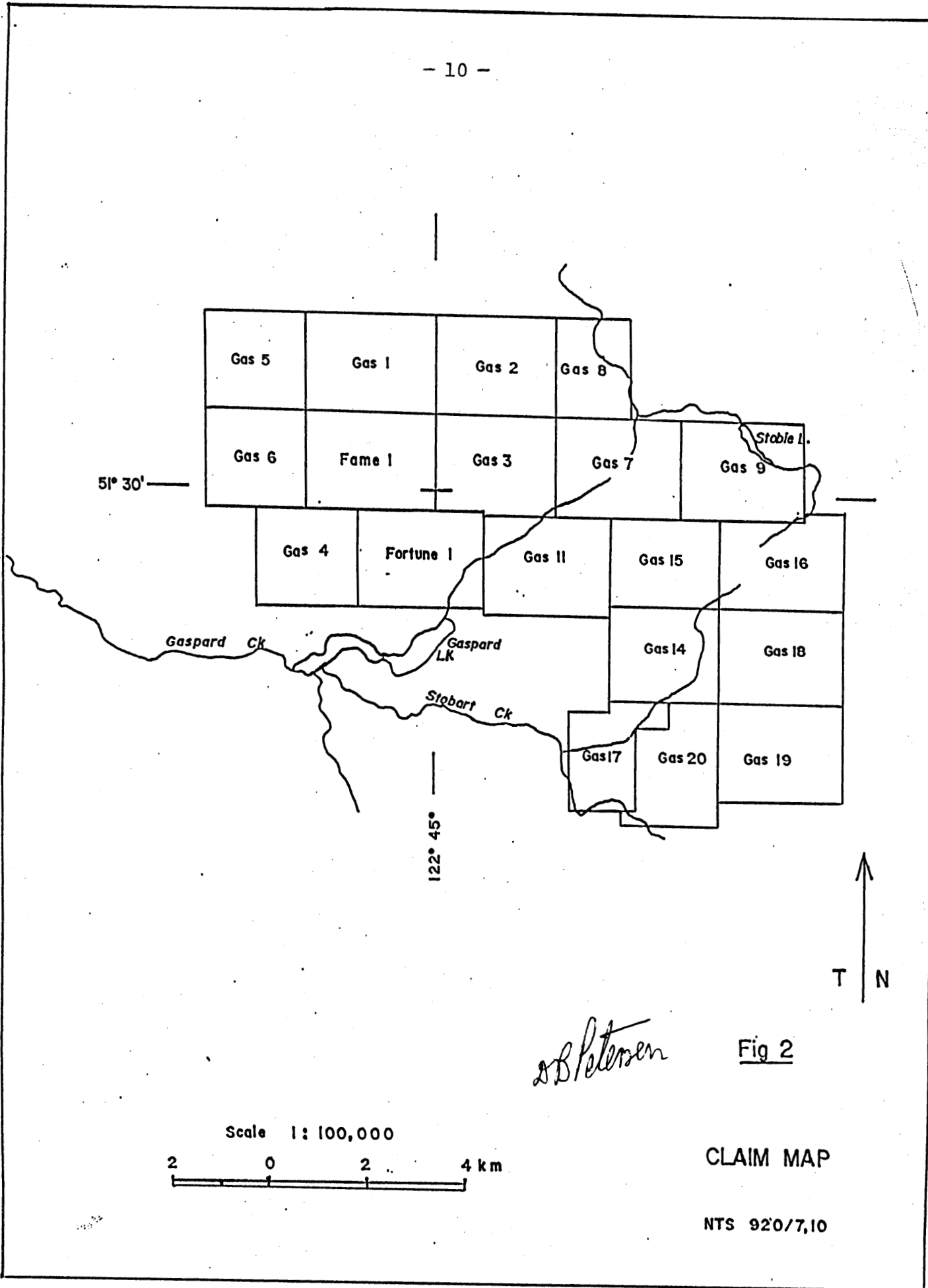
12. CLAIMS

The following contiguous claims comprise the property. They are located in the Clinton Mining District. See Figure 2, "Claim Map".

<u>Group Name</u>	<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Anniversary</u>
Fame 1	Fame 1	2147	20	18 Feb
Fame 1	Gas 3	2553	20	10 Mar
Fame 1	Gas 5	2555	16	10 Mar
Fame 1	Gas 7	2557	20	10 Mar
Fame 1	Gas 8	2558	12	10 Mar
Gas 9	Gas 9	2559	20	10 Mar
Gas 9	Gas 11	2561	20	10 Mar
Gas 9	Gas 15	2565	20	10 Mar
Gas 9	Gas 16	2566	20	10 Mar
Gas 14	Gas 14	2564	20	10 Mar
Gas 14	Gas 17	2567	20	10 Mar
Gas 14	Gas 18	2654	20	5 Aug
Gas 14	Gas 19	2655	20	5 Aug
Gas 14	Gas 20	2656	20	5 Aug
Gas 1	Fortune 1	2489	20	10 Dec
Gas 1	Gas 1	2551	20	10 Mar
Gas 1	Gas 2	2552	20	10 Mar
Gas 1	Gas 4	2554	16	10 Mar
Gas 1	Gas 6	2556	16	10 Mar
Totals	19 Claims		360 Units	

13. REFERENCES

- Bowen B.K., Prospecting and Soil Geochemical Surveys on the Gaspard Lake Property.
- Cartwright P.A., Petersen D.B., 1990, Report on the Reconnaissance Geophysical Survey on the Gaspard Lake Property; Assessment Report No. 19884
- Cartwright P.A., Petersen D.B., 1990, Report of the Detailed Geophysical Survey on the Gaspard Lake Property
- Harris F.R., 1988, 1988 Property Report; Canamax Resources Inc., Report
- Petersen D.B., 1990 Diamond Drilling Report on the Gaspard Lake Property



51° 30'

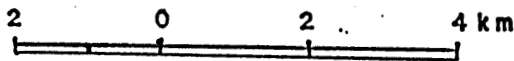
122° 45'



S.B. Petersen

Fig 2

Scale 1:100,000



CLAIM MAP

NTS 92'0/7,10



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- Main Logging Roads
 - Side
 - Creeks
 - Mineral Showings
 - Geochemical Soil Anomalies
 - URP As Anomaly
 - High Resistivity Response
 - Outline of Possible High Resistivity
- JULY 1990
DETAILED SURVEY
- NOVEMBER 1990
RECONNAISSANCE SURVEY

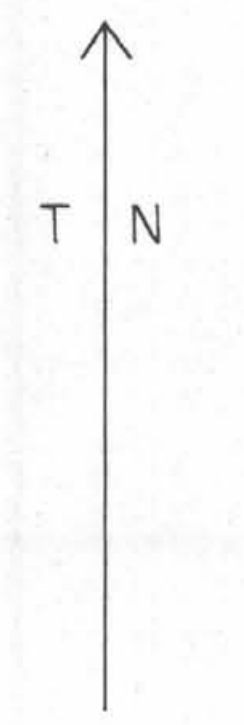
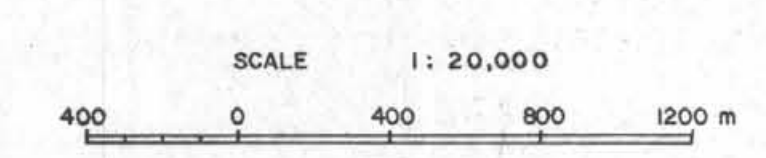


FIG. 3



GOLDSMITH MINERALS LIMITED		
GASPARD LAKE PROJECT		
CLINTON M.D.		
COMPILATION MAP		
DBP/dbp		Dec. 1990

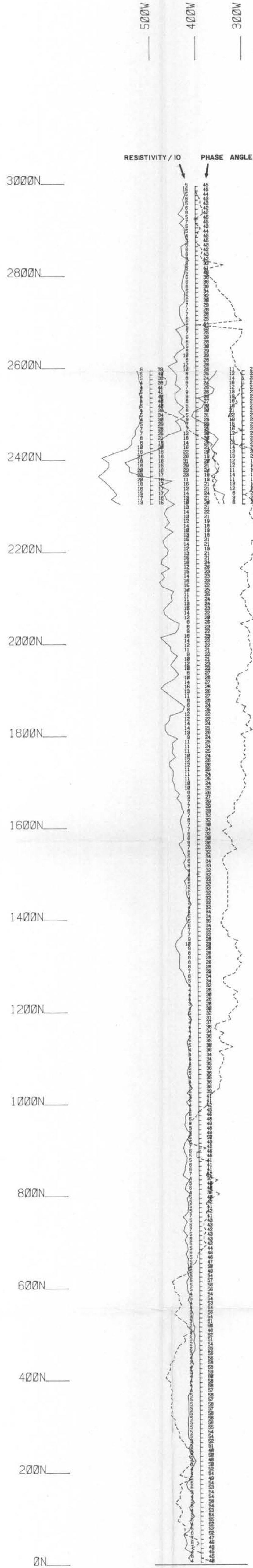
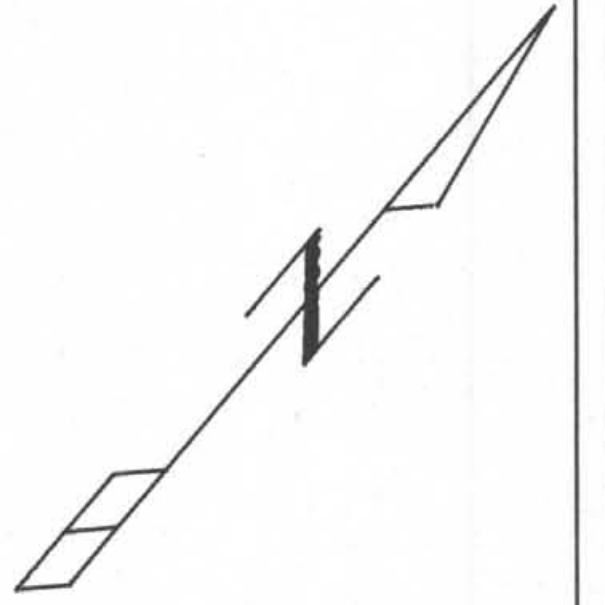


FIG. 4

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GOLDSMITH MINERALS LTD.

VLF RESISTIVITY SURVEY

GASPARD LAKE PROPERTY, Clinton M.D., B.C.
GAS 5, GAS 6, FAME 1 Claims

SCALE = 1: 5000	DATE : NOV., 1990
SURVEY BY : MST.P/AS	NTS : 920/10
FILE: VNW	FREQ.: 24.8 KHz.
Pacific Geophysical Ltd.	

Instrument : EM16R
 Vertical Scale-RESISTIVITY: 1cm=100.0 Ohm-m
 RESISTIVITY = divided by 10
 Vertical Scale-PHASE ANGLE : 1 cm = 10.0'
 PHASE ANGLE Profile Base at : 45.0'
 Tx Location : NLK Seattle, Wash.
 Baseline Azimuth : 50 deg.
 RESISTIVITY : _____
 PHASE ANGLE : _____

100m 50m 0m 100m 200m

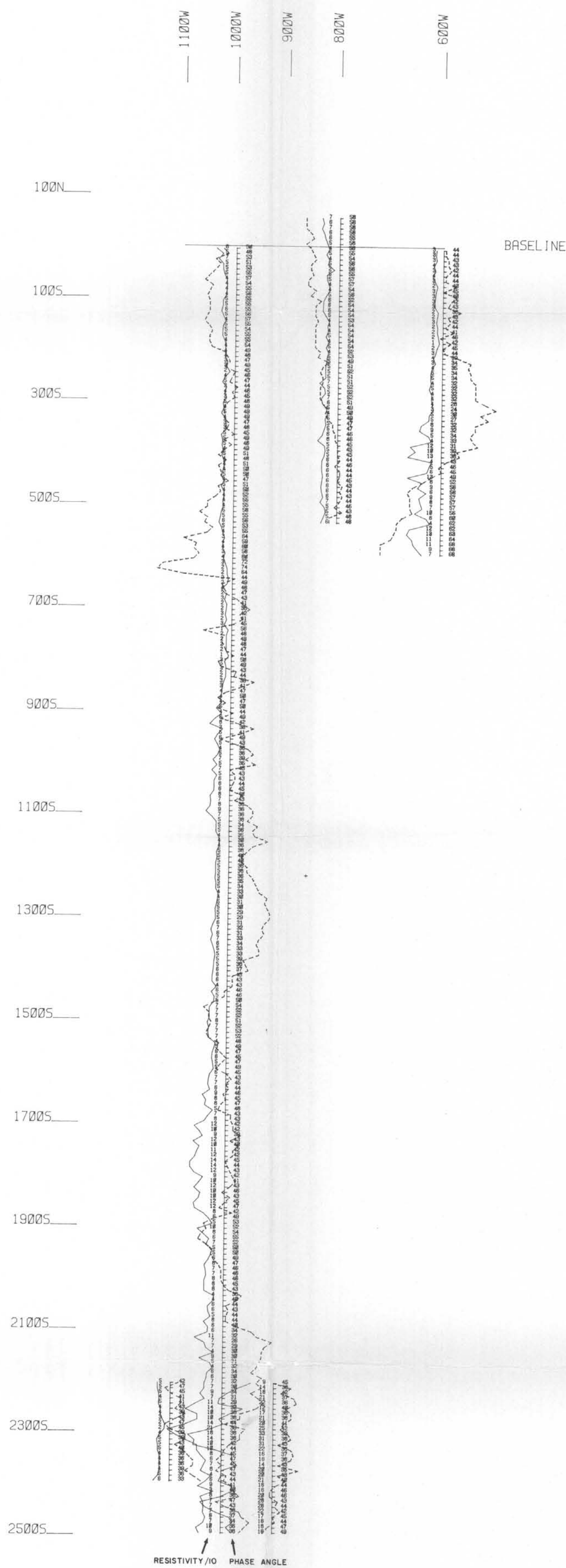
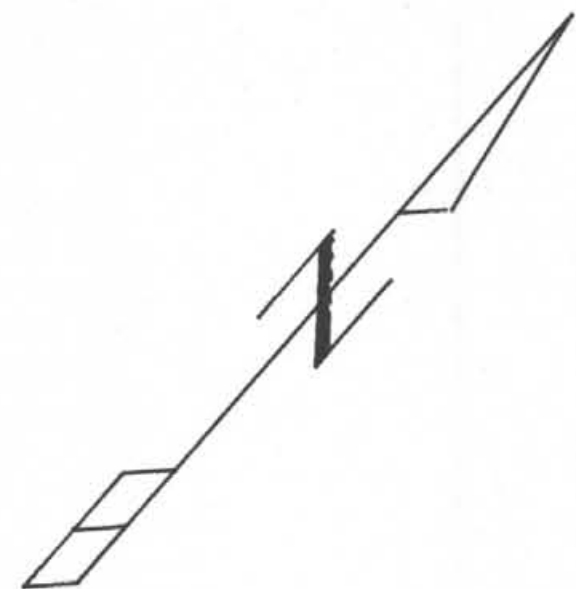


FIG. 5

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GOLDSMITH MINERALS LTD.
VLF RESISTIVITY SURVEY

GASPARD LAKE PROPERTY, Clinton M.D., B.C.
GAS 4, GAS 6, FAME 1, FORTUNE 1 Claims

SCALE = 1: 5000	DATE : NOV., 1990
SURVEY BY : MST.P/AS	NTS : 920/10
FILE: VSW	FREQ.: 24.8 KHz.
Pacific Geophysical Ltd.	

Instrument : EM16R
 Vertical Scale-RESISTIVITY: 1cm=100.0 Ohm-m
 RESISTIVITY = divided by 10
 Vertical Scale-PHASE ANGLE : 1 cm = 10.0°
 PHASE ANGLE Profile Base at : 45.0°
 Tx Location : NLK Seattle, Wash.
 Baseline Azimuth : 50 deg.
 RESISTIVITY : _____
 PHASE ANGLE : _____



BB Petersen

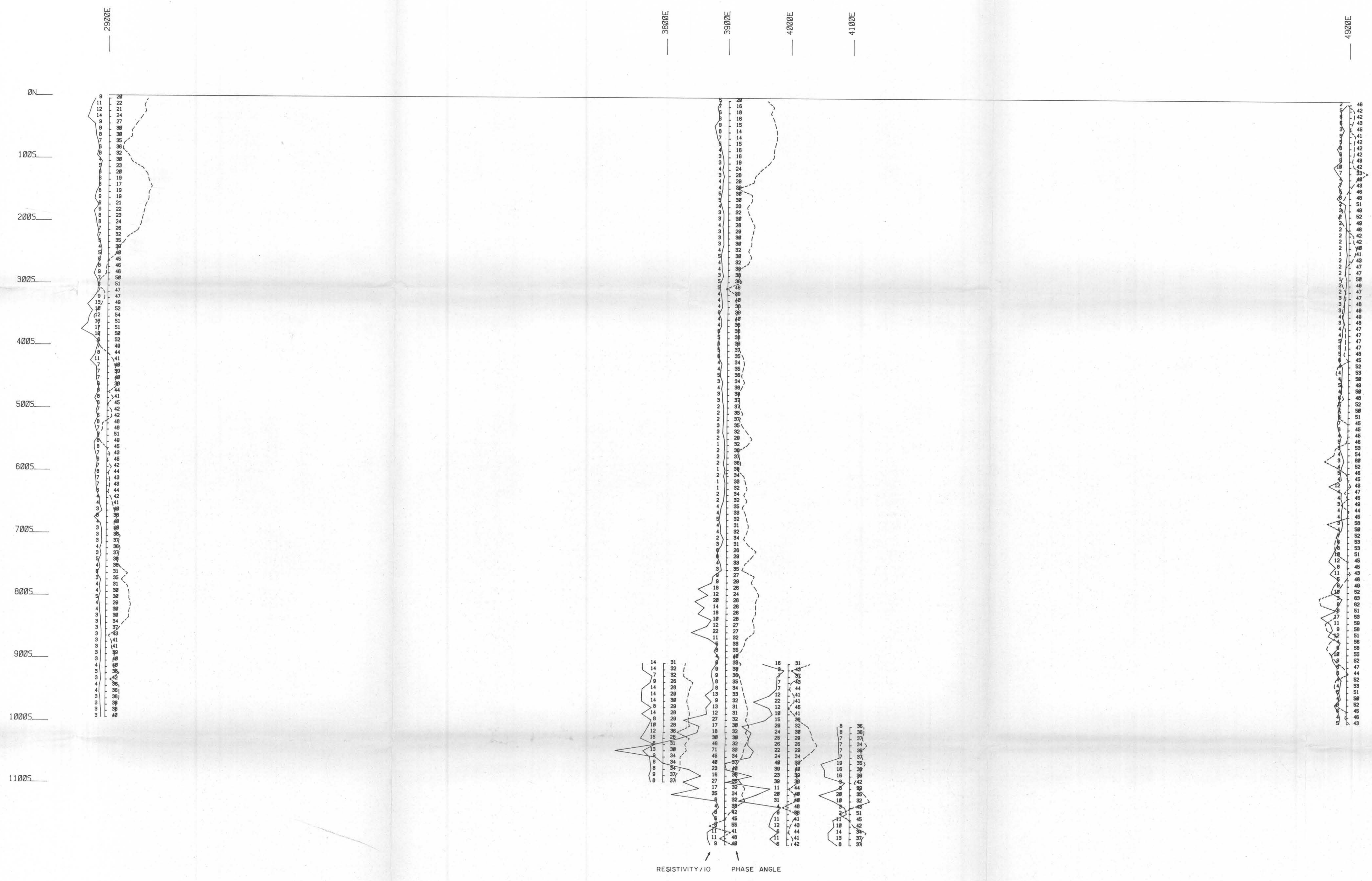


FIG. 6

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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GOLDSMITH MINERALS LTD.
VLF RESISTIVITY SURVEY
GASPARD LAKE PROPERTY, Clinton M.D., B.C.
GRS 2 Claim

SCALE = 1: 2500 DATE : Nov., 1990
SURVEY BY : MST.P/AS NTS : 920/10
FILE: VE FREQ.: 24.8 KHz.
Pacific Geophysical Ltd.

Instrument : SRIIR
Vertical Scale=RESISTIVITY in 100.0 Ohm-m
RESISTIVITY * divided by 10
Vertical Scale=PHASE ANGLE : 1 cm = 10.0°
PHASE ANGLE Profile Base at : 45.0°
To Location : S.E. Seattle, Wash.
Baseline (Dip) : 50 deg.
RESISTIVITY : _____
PHASE ANGLE : _____

50m 25m 10m 5m 1m

M. Peterson

RESISTIVITY / 10 PHASE ANGLE