LOG NO: 0417	RD.
ACTION:	
FILE NO:	

Report on the Reconnaissance Geophysical Survey on the Gaspard Lake Property

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N T S 920/7,10

51° 30′ N, 122° 45′ W

Fame 1, Fortune 1, Gas 1-9, 11, 14-20 Claims

Clinton Mining Division

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

Table of Contents

List of Illustrations

1. Introduction

This report describes the reconnaissance geophysical survey that was conducted on the property from 27th February through 7th March. The object of the survey was to test the efficiency of VLF EM and/or VLF Resistivity in tracing the siliceous, epithermal type gold mineralization that had been discovered on the property.

Pacific Geophysical Limited of Vancouver conducted the survey. They supplied the instruments and a geophysicist, M. Cormier. B.K. Bowen and D.B. Petersen flagged the lines and assisted in the survey. P. Cartwright, P. Geoph, of Pacific Geophysical Limited interpreted the field data.

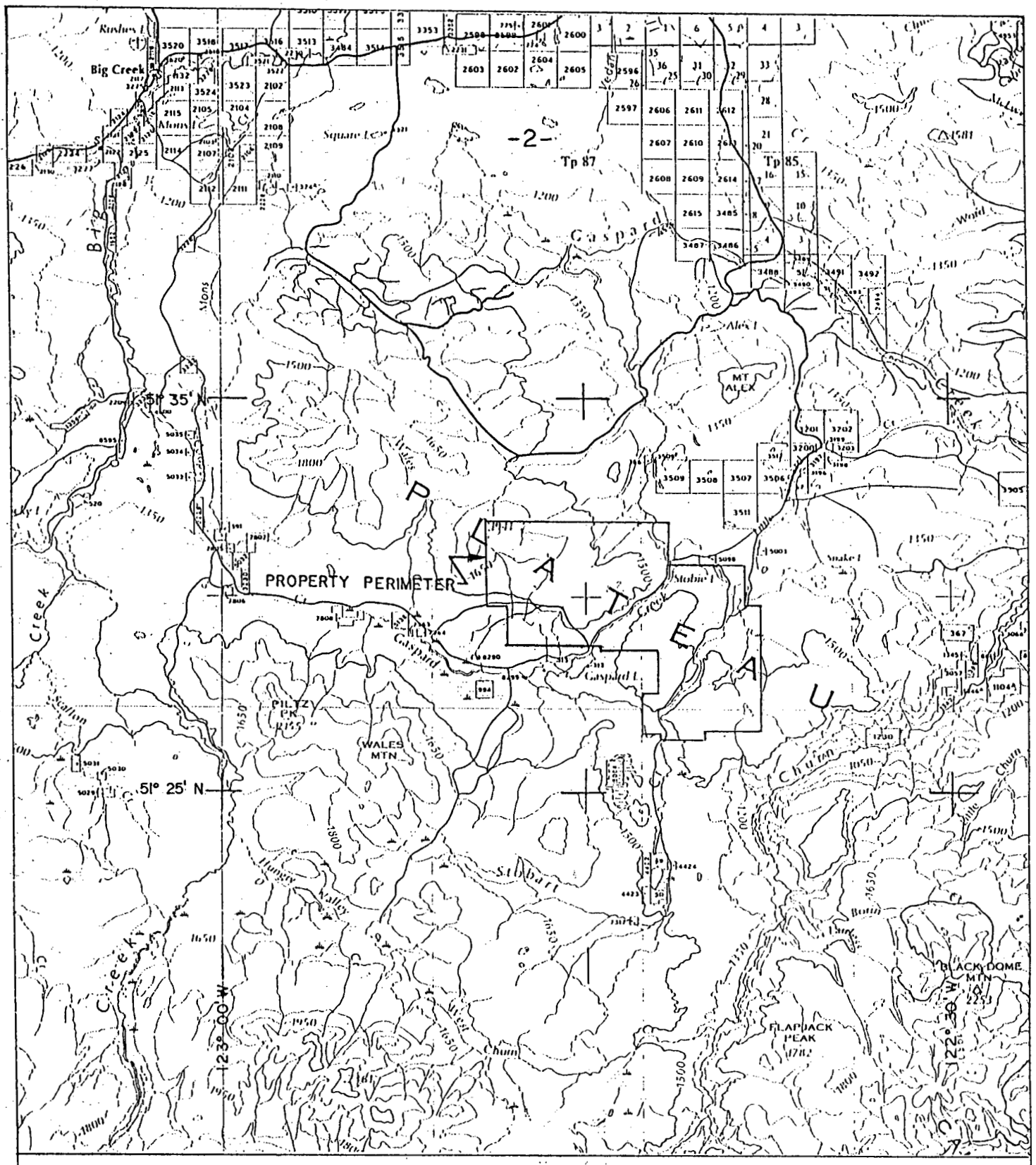
P.A. Cartwright and D.B. Petersen have co-authored the report; D. Petersen wrote Sections 1 through 7, 11, 12, and 13. P. Cartwright wrote Section 8. Sections 9 and 10 were written jointly by both authors.

The report is intended for use as an assessment report to cover the work performed from 27 February through 7 March on the Fame 1, Gas 9 and Gas 18 claims.

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 fig. 1, "Location Map".

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



A.B. Petersen

T N

Fig 1

LOCATION MAP

Scale 1 : 250, 000

2.5 0 5 10 15 km

3. Topography and Vegetation

The claims cover gently rolling up-land between elevations of 1300 and 1800m asl.

Vegetation consists almost exclusively of mature jack pine. Approximately one third of the claim 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 km in width and in Canada is flanked by the Omineca Crystalline Belt to the East and the Coast Crystalline Belt to the West.

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 granitic composition. In Central British Columbia Tertiary activity is evident in the form of acidic to intermediate volcanic activity that has been overlain by younger plateau type basalt 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 underlain mainly by Middle Jurassic andesitic and pyroclastic volcanics which have been intruded by a granodiorite stock in the northern portion 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 to intermediate Tertiany 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 600m by 300m in area on the Gas 1 claim and a zone of spotty gold highs (>50ppb) on the Gas 9 claim immediately west of Stobie Lake.

An URP stream sediment sample analyzed 23 ppm 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.

Separately, in 1986, B.K. Bowen discovered a gold-bearing alteration zone, and follow-up prospecting in 1987 by Bowen and 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 program 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.

7. Work Done in 1990

B.K. Bowen, M.J. Cormier and D.B. Petersen spent 9 days from 27th February through 7th March conducting reconnaissance VLF EM and VLF Resistivity surveys on three separate grids on the Fame 1, the Gas 9 and the Gas 18 claims. See fig. 3, "Compilation Map".

B. Bowen and D. Petersen flagged base-lines and traverse lines with stations spaced 20m apart and assisted M. Cormier with the surveys.

M. Cormier, geophysicist, conducted the VLF EM and VLF Resistivity surveys and recorded the data in a computer. A Geonics model EM16 was used for the VLF EM survey. Readings were taken at 10m intervals along lines OE, 100W and 200W on the Fame 1 grid and at 20m intervals along the other lines.

A Geonics model EM16R was used for the Resistivity survey. Electrode spacing was 10m. Readings were taken at the same intervals as the VLF EM survey.

The results are documented in Section 8, below, and are illustrated in Figures 4 through 9.

Winter conditions hampered the survey. Snow cover was approximately 70cm deep and necessitated traversing on snow shoes. The 2300 and 2900 main logging roads had been plowed, enabling 4-wheel drive access to the grids on the Fame 1 and Gas 18 claims. The side-road to the grid on Gas 9 claim, however, had not been plowed, resulting in a 1 1/4 hour travel time, each way, to the back of the grid. Approximately 7cm of frozen ground at the base of the snow pack slowed the Resistivity survey as the electrode pins had to be hammered through this layer to unfrozen soil in order to obtain efficient contact.

The survey was apportioned as follows:

FAME 1 grid	27,28 February, 1, 2(1/4day) March	3 1/4 days
GAS 9 grid	2 (3/4 day) 3, 4, 5, March	3 3/4 days
GAS 18 grid	6, 7 March	2 days

8. Results of Work Done in 1990

Three separate grid areas have been surveyed using both the VLF-EM method and the VLF-Resistivity method. This latter technique measures the electric field induced across the earth by a VLF-EM transmitter station. One horizontal component of the magnetic field is measured as well. The ratio of the electric over magnetic field times the inverse of 5 times the transmitted frequency yields the "Caignard" resistivity in ohm-meters. Silicified rocks would generally give rise to higher then normal Caignard resistivities.

The phase angle between the electric and magnetic fields is also recorded because this can five 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.

The VLF-EM technique, on the other hand, measures the tilt or dip of the magnetic field at the receiver site. In the absence of conductivity changes and variable terrain, the field should be horizontal. A conductive body will cause the magnetic field to flex upwards, due to the decreased penetration of a wave of given frequency into more conductive ground. The opposite occurs when surveying over a resistive body. A so called "proper crossover" is noted in the dip angle data over a narrow conductor, while a "reverse crossover" will be evident over a narrow resistive target.

Results for each grid area are noted in the following paragraphs.

FAME 1 Grid

Four northerly trending zones of higher than background resistivity are indicated by the VLF-Resistivity data recorded over this grid area.

The most prominent of these features is coincident with known gold mineralization (Twilight Zone) on the southwestern area of the grid. The geophysical anomaly consists of a 100 meter wide zone

of high resistivity values, enclosed by a wider zone of less than 45 degree phase angle data. This latter signature could be indicative of more deeply buried high resistivity material on the flanks of the central high resistivity trend. It should be noted, however, that this phase signature could also be caused by relatively conductive, near surface overburden covering an unremarkable, but more resistive bedrock. VLF-EM data over this same southwestern part of the FAME 1 Grid confirm the presence of a relatively wide resistor, as a series of reverse crossovers are evident coincident with the position of the high resistivity zone.

Three other relatively narrow zones of higher resistivity values are outlined by the VLF-Resistivity data from the northeastern part of this grid. One of these zones overlies the Kelsch and Double Diamond showings . In addition, a well defined VLF-EM conductor is detected in the vicinity of Station 10S on Line 1600E, coincident with a narrow resistivity low.

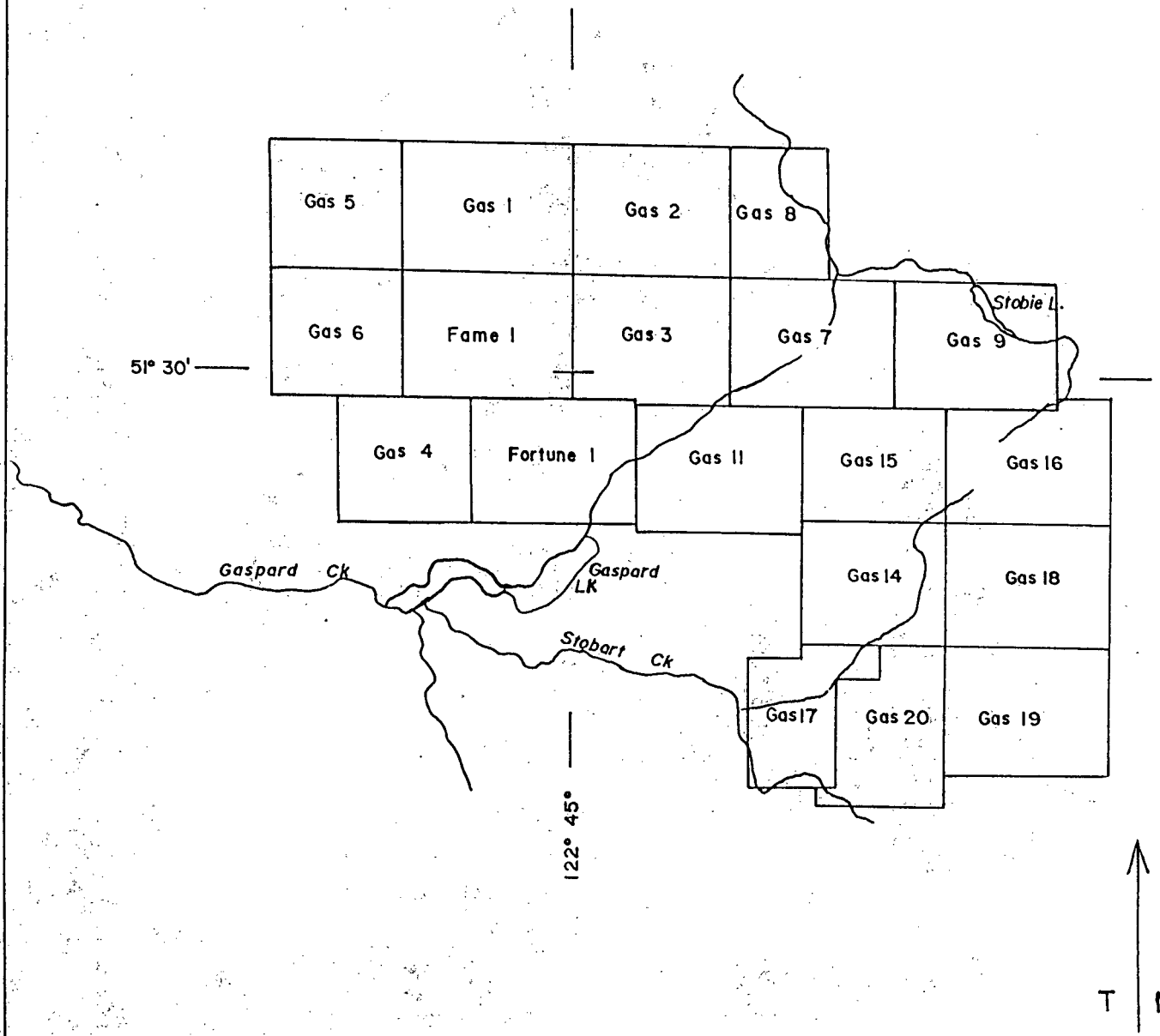
GAS 9 Grid

Three parallel, north westerly striking zones are outlined by the VLF Resistivity data measured over the western portion of this grid. Also, a distinct conductor crossover is observed in the VLF-EM data measured on Line 2200W, at Station 120N.

A single north-south trending line has been surveyed on the eastern part of the Gas 9 Grid. While no anomalous high resistivity values can be seen, the less than 45 degree phase angles evident indicate that the resistivity increases with increasing depth beneath the central portion of the line.

GAS 18 Grid

Higher than background resistivity values form two parallel, closely spaced zones striking in a northeasterly direction. Less than 45 degree phase angle, combined with reverse crossovers in the VLF-EM data all confirm the presence of high resistivity rocks. This signature is very similar to that seen on the south western end of the FAME 1 Grid.



D.B. Peterson

Fig 2

Scale 1: 100,000

2 0 2 4 km

CLAIM MAP

NTS 920/7,10

9. Conclusions

It is concluded that -

1. the reconnaissance geophysical survey has shown that the silicified zones that are known to host epithermal type gold mineralization are detectable by VLF Resistivity.

2. these zones are not conductive and do not respond to VLF EM.

10. Recommendations

It is recommended that -

1. detailed VLF Resistivity grids be completed on the anomalous resistive areas defined on the Fame 1, Gas 9 and the Gas 18 claims.

   A 100m line-spacing and 20m station spacing is suggested.

2. this is expected to cost:

Fame 1 grid	5 days @ $2,000 per day.....	$10,000
Gas 9 grid	3 days @ $2,000 per day.....	$ 6,000
Gas 18 grid	2 days @ $2,000 per day.....	$ 4,000
Total:	10 days	$20,000

3. depending on the results of the detailed Resistivity, follow up diamond drilling (approximately 1,500m) appears to be a justifiable means of evaluating the anomalies.

PROFESSIONAL GEOPHYSICIST ALBERTA
PAUL A. CARTWRIGHT
LICENSED TO PRACTISE

D.B. Petersen

11. Costs Incurred

The following costs were incurred in the programme:-

Project Preparation

B. Bowen, Geologist, 25 February - 1 day @ $345	345
D. Petersen, Geologist, 16, 23 February - 2 days @ $345	690
SUB-TOTAL	1,035

Mobilization and Demobilization

B. Bowen 26 February, 8 March 2 days @ $345	690
D. Petersen 26 February 8 March 2 days @ $345	690
Pacific Geophysical 26 February 8 March 2 days @ $420	840
Truck Rental 2 days @ $98	196
Gasoline	114
Meals	21
SUB-TOTAL	2,551

Field Costs

B. Bowen 27 February through 7 March 9 days @ $345	3,105
D. Petersen 27 February through 7 March 9 days @ $345	3,105
Pacific Geophysical 27 February through 7 March 9 days @ $420	3,780
Meals and Accommodation 30 man days @ $55	1,650
Truck Rental 9 days @ $98	882
Gasoline	272
Supplies	303
SUB-TOTAL	13,097

Reporting

D. Petersen 12, 13, 14 March 3 days @ $345	1,035
P. Cartwright 12, 13, 14 March 3 days @ $419	1,257
Data Plotting	575
Typing 8 hrs. @ $35	280
SUB-TOTAL	3,147

TOTAL: $ 19,830

The costs have been apportioned as follows:

Fame 1 claim 3 1/4 days	7,162
Gas 9 claim 3 3/4 days	8,262
Gas 18 claim 2 days	4,406
	$19,830

D Petersen

12. Claims

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

Group Name	Claim Name	Record No.	Units	Anniversary
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
Not Grouped	Fortune 1	2489	20	10 Dec
	Gas 1	2551	20	10 Mar
	Gas 2	2552	20	10 Mar
	Gas 4	2554	16	10 Mar
	Gas 6	2556	16	10 Mar
	Total 19		360	

13. References

Bowen, B.K., 1989, Prospecting and Soil Geochemical Surveys on the Gaspard Lake Property.

Harris, F.R., 1988, 1988 Property Report; Canamax Resources Inc. Report.

GAS 5

GAS 1

GAS 2

GAS 8

GAS 6

Fame 1 Grid

FAME 1

GAS 3

GAS 7

Gas 9 Grid

GAS 9

GAS 10

GAS 4

FORTUNE 1

GAS 11

GAS 15

GAS 16

Gaspard Lake

Gas 18 Grid

GAS 18

GAS 14

GAS 17

GAS 20

GAS 19

Main Logging Roads

Side

Creeks

Mineral Showings

Geochemical Soil Anomalies

URP As Anomaly

VLF EM

VLF Resistivity

High Resistivity Responses

Outline of Possible High Resistivity

March 1990 Survey

T N

SCALE 1: 20,000

400 0 400 800 1200 m

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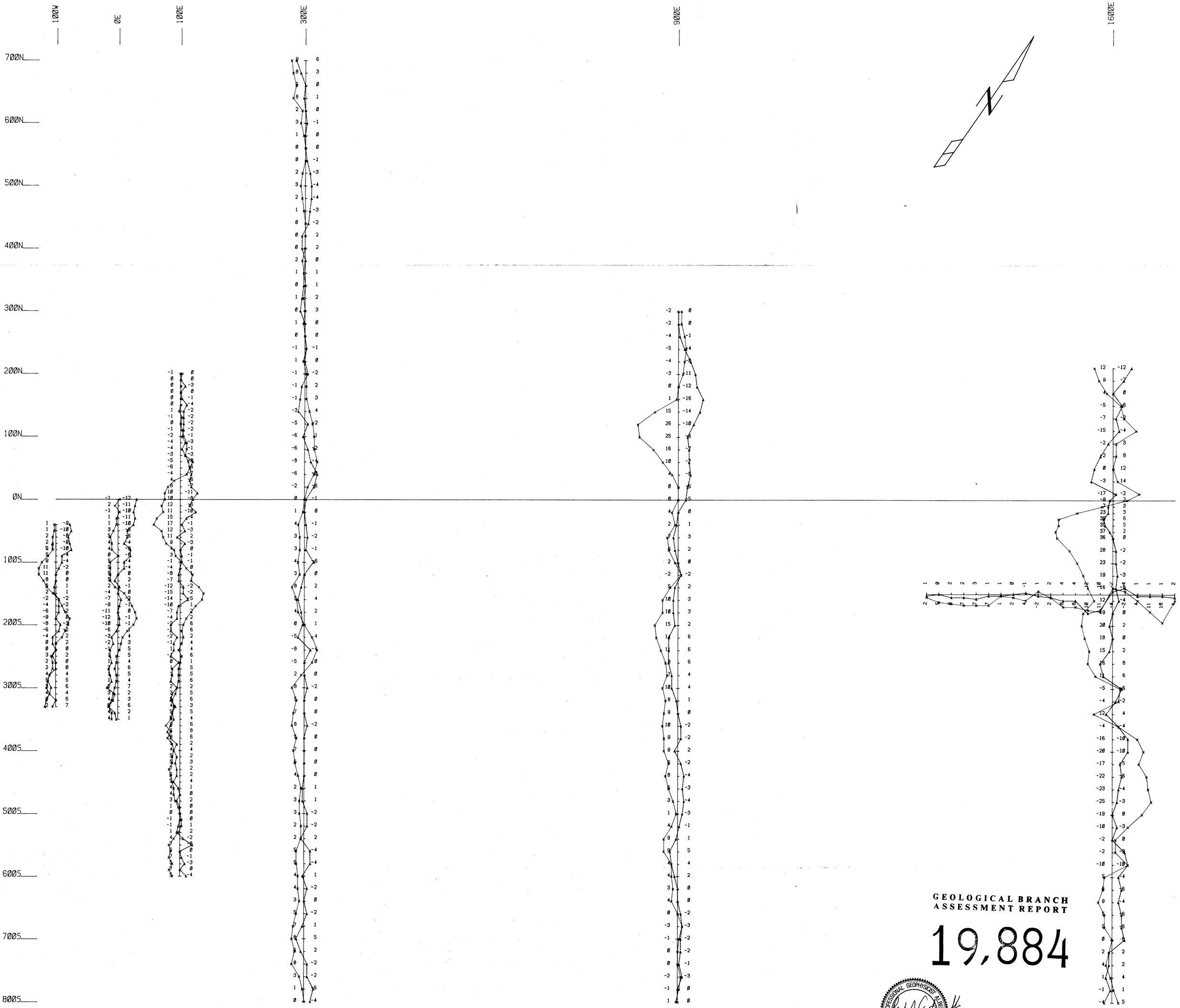
FIG. 3

GOLDSMITH MINERALS LIMITED

GASPARD LAKE PROJECT
CLINTON M.D.

COMPILATION MAP

DBP/ dbp March 1990



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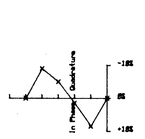
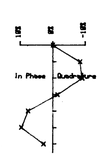
PROFESSIONAL GEOPHYSICIST ALBERTA
PAUL A. CARTWRIGHT
LICENSED TO PRACTISE

Fig 4



Proper Crossover
(Looking North on E-W Line)



Proper Crossover
(Looking west on N-S Lines)

Instrument : EM 16
Vertical Scale Inphase/Quad : 1 cm = 10.0%

Tx Locations : Hawaii (N-S Lines)
: Seattle (E-W Line)
In-phase :
Quadrature :

To accompany report by
D. Petersen, P. Eng. and P. A. Cartwright, P. Geoph.

50m 25m 0m 50m 100m

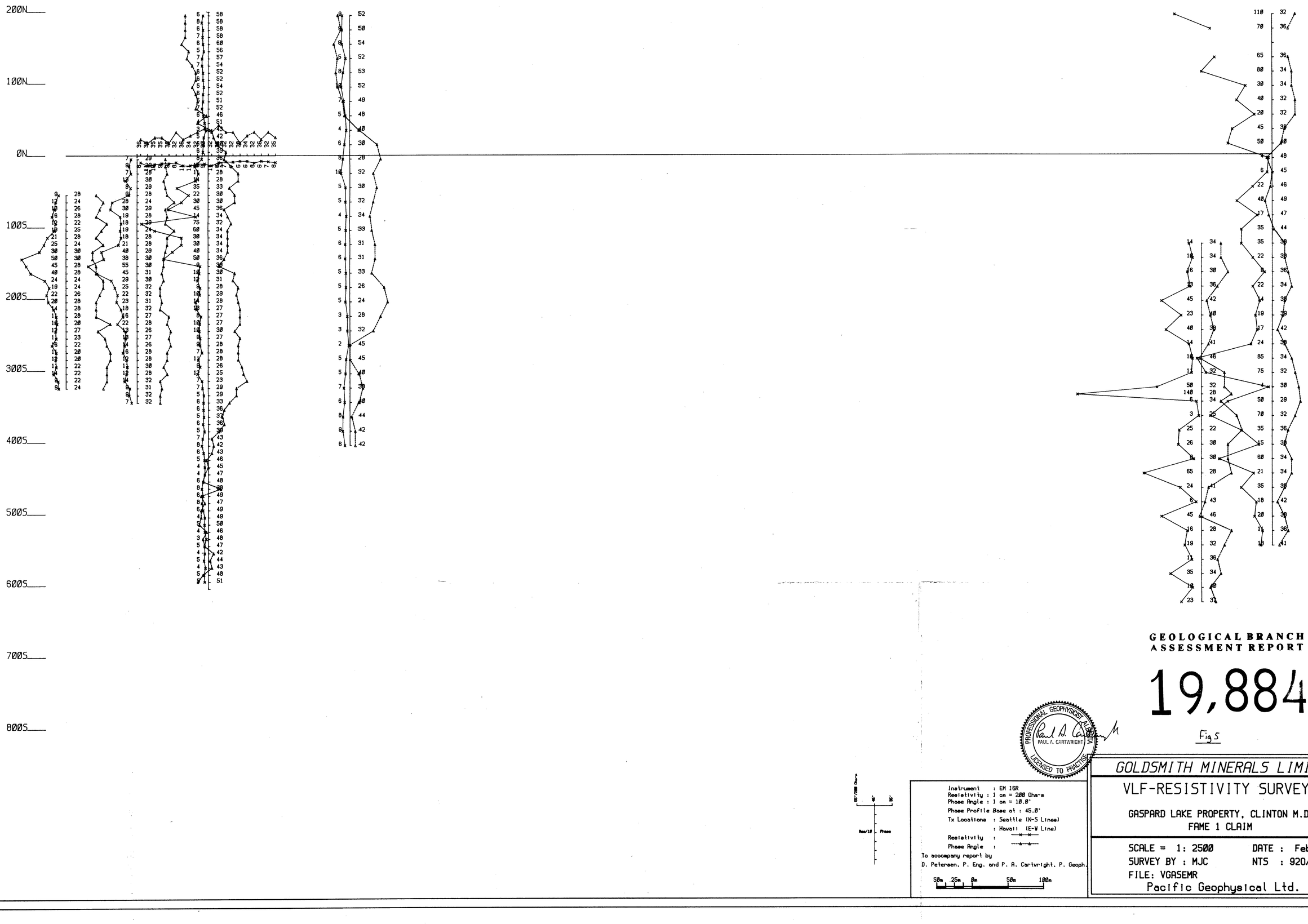
GOLDSMITH MINERALS LIMITED

VLF-EM SURVEY

GASPARD LAKE PROPERTY, CLINTON M.D., B.C.
FAME 1 CLAIM

SCALE = 1: 2500 DATE : Feb,Mar/90
SURVEY BY : MJC NTS : 920/7W
FILE: VGASEM

Pacific Geophysical Ltd.



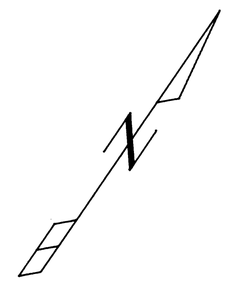


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Fig 5

PROFESSIONAL GEOPHYSICIST ALBERTA
PAUL A. CARTWRIGHT
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Instrument : EM 16R
Resistivity : 1 cm = 200 Ohm-m
Phase Angle : 1 cm = 10.0°
Phase Profile Base at : 45.0°
Tx Locations : Seattle (N-S Lines)
: Hawaii (E-W Lines)
Resistivity :
Phase Angle :

To accompany report by
D. Petersen, P. Eng. and P. A. Cartwright, P. Geoph.

50m 25m 0m 50m 100m

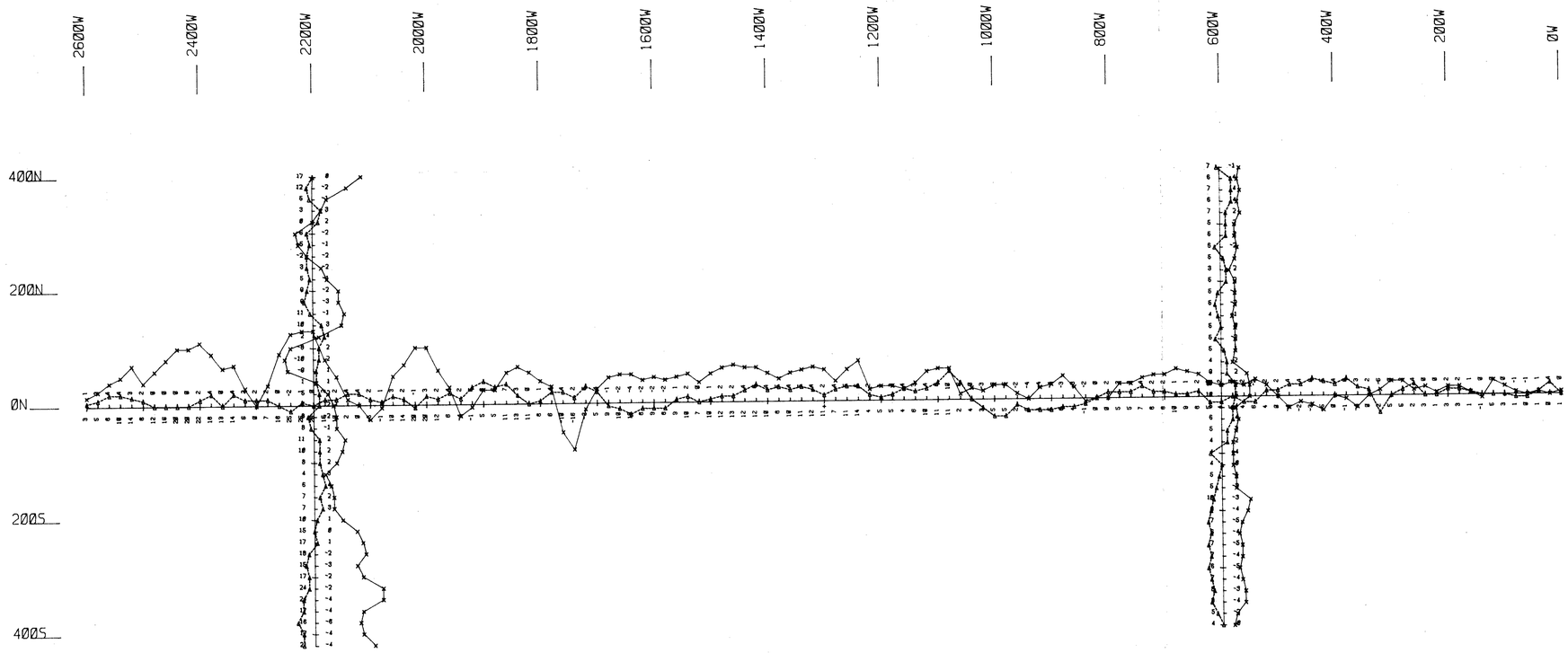
GOLDSMITH MINERALS LIMITED

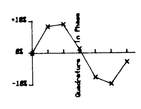
VLF-RESISTIVITY SURVEY

GASPARD LAKE PROPERTY, CLINTON M.D., B.C.
FAME 1 CLAIM

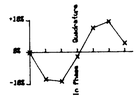
SCALE = 1: 2500 DATE : Feb,Mar/90
SURVEY BY : MJC NTS : 920/7W
FILE: VGASEMR

Pacific Geophysical Ltd.





Proper Crossover
(Looking East on N-S Lines)



Proper Crossover
(Looking North on E-W Lines)

Instrument : EM 16
Vertical Scale Inphase/Quad : 1 cm = 10.0%

Tx Locations : Annapolis (N-S Lines)
: Seattle (E-W Lines)

In-phase :
Quadrature :

To accompany report by
D. Petersen, P. Eng. and P. A. Cartwright, P. Geoph.

100m 50m 0m 100m 200m

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Fig 6

GOLDSMITH MINERALS LIMITED

VLF-EM SURVEY

GASPARD LAKE PROPERTY, CLINTON M.D., B.C.
GAS 9 CLAIM

SCALE = 1: 5000 DATE : Feb,Mar/90
SURVEY BY : MJC NTS : 920/10E
FILE: VGAS9EM

Pacific Geophysical Ltd.

2400W

2200W

2000W

1800W

1600W

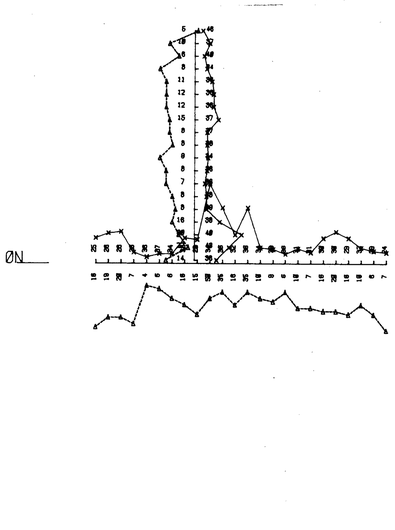
1400W

1200W

1000W

800W

600W



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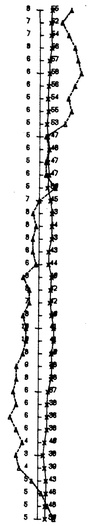

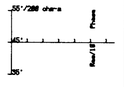

Instrument : EM 16R
Resistivity : 1 cm = 200 Ohm-m
Phase Angle : 1 cm = 10.0°
Phase Profile Base at : 45.0°
Tx Locations : Seattle (N-S Lines)
: Annapolis (E-W Line)
Resistivity :
Phase Angle :

To accompany report written by
D. Petersen, P. Eng. and P. A. Cartwright, P.Geoph.

100m 50m 0m 100m 200m

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Fig 7

GOLDSMITH MINERALS LIMITED

VLF-RESISTIVITY SURVEY

GASPARD LAKE PROJECT, CLINTON M.D., B.C.
GAS 9 CLAIM

SCALE = 1: 5000 DATE : Feb,Mar/90
SURVEY BY : MJC NTS : 920/10E
FILE: VGAS9EMR

Pacific Geophysical Ltd.

500N
400N
300N
200N
100N
0N
100S
200S
300S

200E

0W

400W

800W

1200W

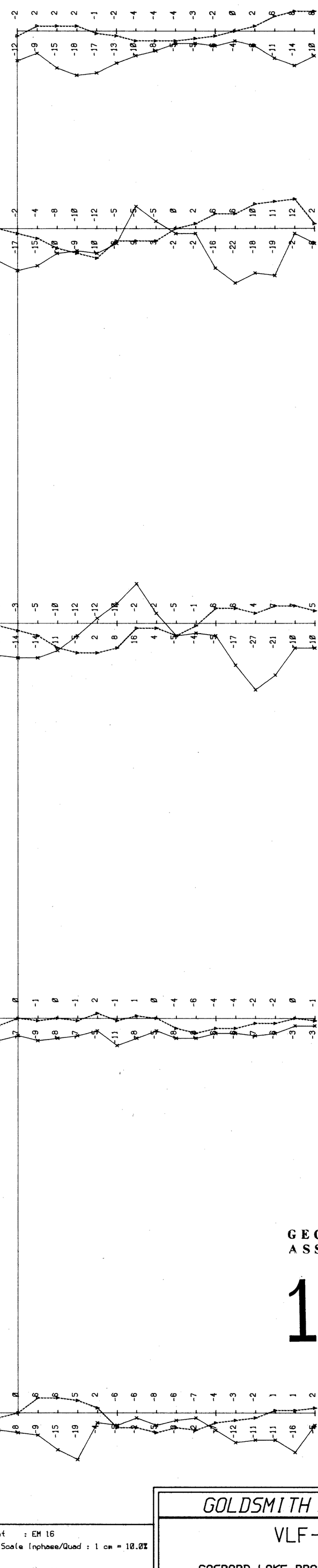

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Fig 8

Proper Crossover

Instrument : EM 16
Vertical Scale Inphase/Quad : 1 cm = 10.0%

Tx Location : Hawaii

In-phase :
Quadrature :

To accompany report by
D. Petersen, P.Eng. and P. A. Cartwright, P.Geoph.

50m 25m 0m 50m 100m

GOLDSMITH MINERALS LIMITED

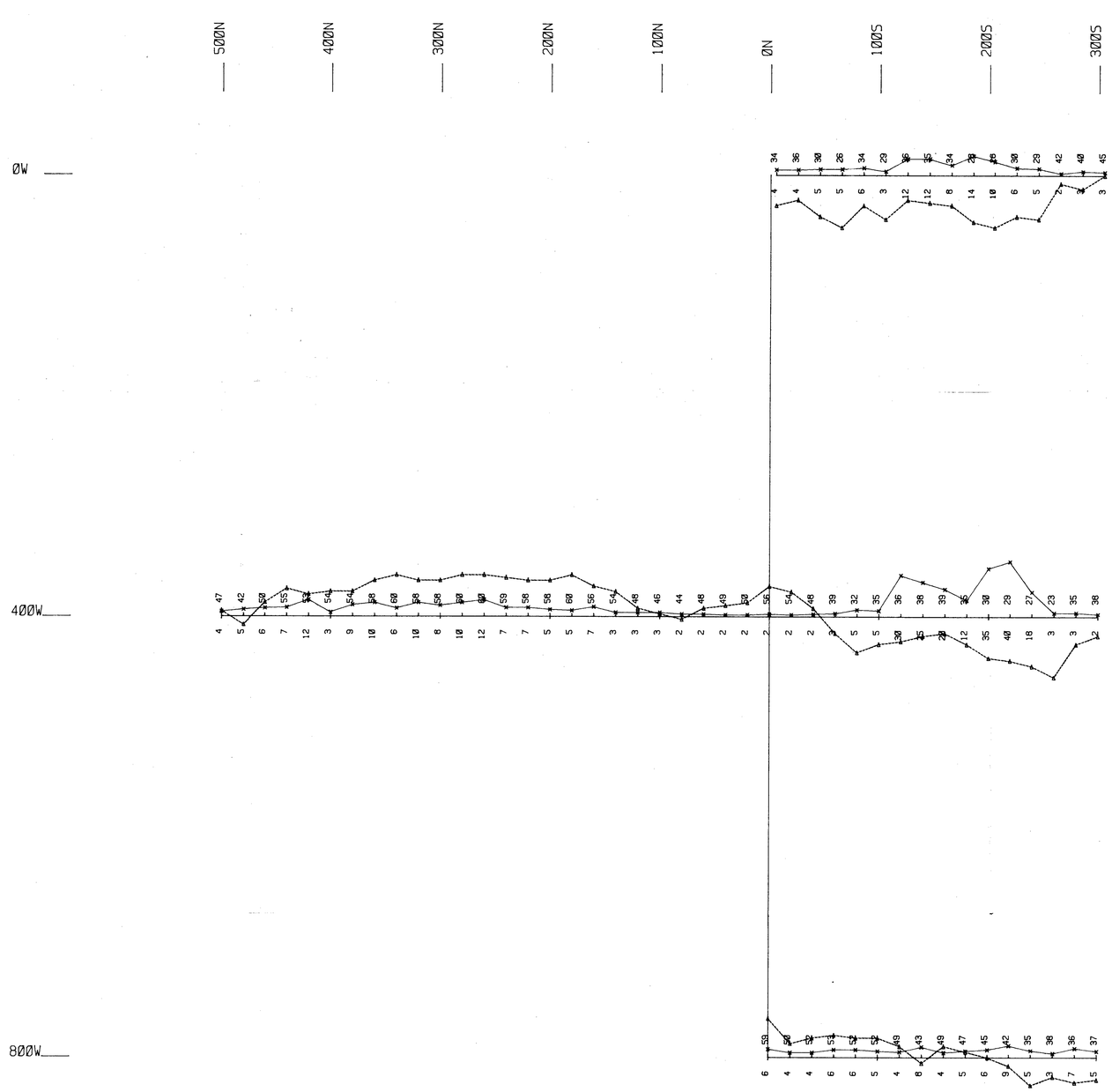
VLF-EM SURVEY

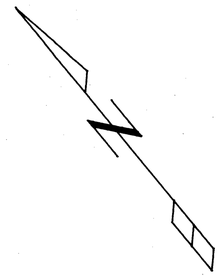
GASPARD LAKE PROPERTY, CLINTON M.D., B.C.
GAS 18 CLAIM

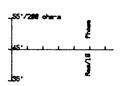
SCALE = 1: 2500 DATE : Feb,Mar/90
SURVEY BY : MJC NTS : 920/7E
FILE: VG18EM

Pacific Geophysical Ltd.

PROFESSIONAL GEOPHYSICIST
PAUL A. CARTWRIGHT
LICENSED TO PRACTISE







Instrument : EM 16R
Resistivity : 1 cm = 200 Ohm-m
Phase Angle : 1 cm = 10.0°
Phase Profile Base at : 45.0°
Tx Location : Seattle

Resistivity : —x—x—
Phase Angle : ---▲---▲---

To accompany report by
D. Petersen, P. Eng. and P.A. Cartwright, P.Geoph.

50m 25m 0m 50m 100m

PROFESSIONAL GEOPHYSICIST
PAUL A. CARTWRIGHT
LICENSED TO PRACTISE

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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Fig 9

GOLDSMITH MINERALS LIMITED

VLF-RESISTIVITY SURVEY

GASPARD LAKE PROPERTY, CLINTON M.D., B.C.
GAS 18 CLAIM

SCALE = 1: 2500 DATE : Feb,Mar/90
SURVEY BY : MJC NTS : 920/7E
FILE: VG18EMR
Pacific Geophysical Ltd.