

85-255-14722

04/86

# G. SALAZAR S. & ASSOCIATES LTD.

INTERNATIONAL GEOLOGICAL CONSULTANTS

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ASSESSMENT REPORT

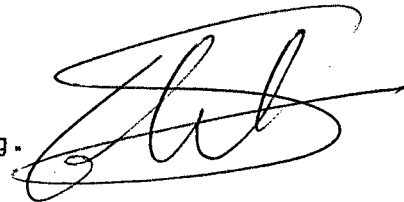
ON THE

GREAT WESTERN GROUP OF CLAIMS

BY

Guillermo Salazar S., P.Eng.

for



Lindex Explorations Ltd.

April 25, 1985

FILMED

N.T.S.: 82F/6W

PROVINCE: British Columbia.

COUNTRY: Canada.

LATITUDE: 49 26.5 N

LONGITUDE: 117 20.0 W

DIVISION: Nelson.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

14,722

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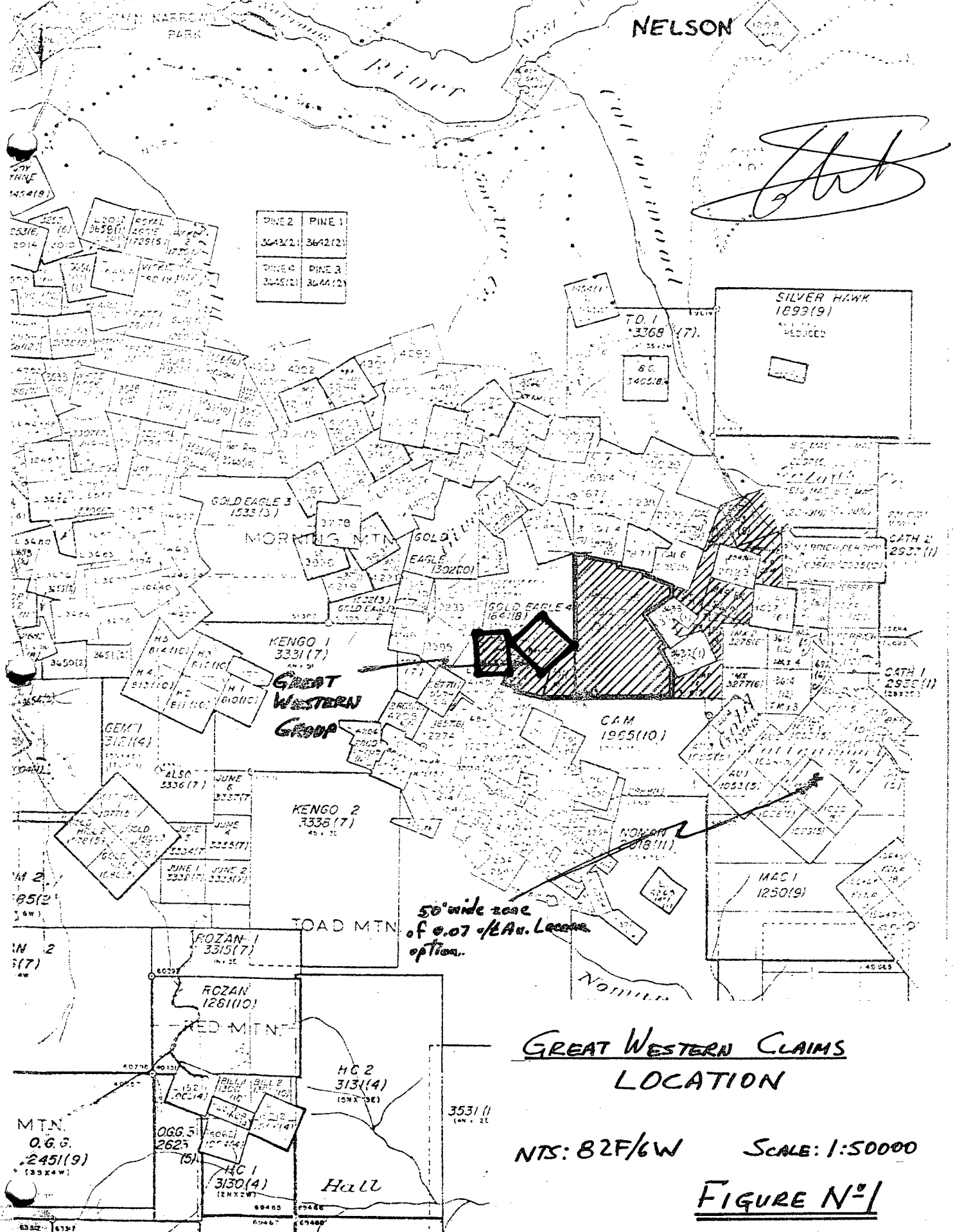
Figure N.1: Claim Map	af.2
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APPENDIX N. 1: Letter-Report by E. Trent Pezzot, of Western Geophysical Aero Data Ltd., dated January 7, 1985, including three figures and equipment specifications.

APPENDIX N. 2: Statement of Qualifications for G. Salazar S., P.Eng.



PINE 2 3642(2)	PINE 1 3642(2)
PINE 4 3645(2)	PINE 3 3644(2)

50' wide zone  
of 0.07 g/t Au. Leases  
option.

GREAT WESTERN CLAIMS  
LOCATION

NTS: 82F/6W

SCALE: 1:50000

FIGURE N-1

PROPERTY DESCRIPTION

Table N. 1 summarizes all the pertinent title data related to this property, all of which was checked by the writer on December 7, 1984, at the Government Agent's office in Nelson, B.C..

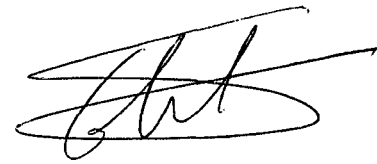


TABLE No. 1: CLAIM STATUS

<u>CLAIM NAME</u>	<u>CLAIM TYPE(1)</u>	<u>N. UNITS</u>	<u>RECORD N.</u>	<u>RECORD DATE</u>	<u>EXPIRY DATE</u>
Hillside	MGS	6	3512(9)	Sep.13/83	1985
Hilltop Fr.	MGS	1	3511(9)	Sep.13/84	1985
Great Western (ex.Lot 4148)	RCG	1	1551(2)	Feb.19/80	1988
Great Eastern (ex.Lot 4152)	RCG	1	1552(2)	Feb.19/80	1988
Irene (ex.Lot 4151)	RCG	1	1553(2)	Feb.19/80	1988

(1): MGS:Modified Grid System; RCG:Reverted Crown Grant.

The above claims were grouped September 12, 1984 (Notice to Group #2712) under the Great Western Group name. The following claims also form part of the Great Western Group: COT(Record N. 3513-9, expiry:1985); ROADSIDE FR.(3514-9,1985); COT FR.(3515-9,1985); MAS(3516-9,1985); TEE FR.(3517-9,1985); and FLAT FR.(3518-9,1985).(See Figure N. 1).



## LOCATION

The claims are located approximately six kilometers to the southwest of Nelson, B.C., up the east fork of Giveout Creek, a tributary to Cottonwood Creek which drains into the west arm of Kootenay Lake, at Nelson (See Figure N. 2).

## ACCESS

From Nelson, the property is accessed by a fairly good gravel road up Giveout Creek. ASARCO, who was the last operator in the area, reports that some road repair work is generally necessary each spring after run off (See Figure N. 2).

## WORK DONE IN 1984:

A helicopter supported, airborne magnetometer-VLF survey was carried out over the property on December 19, 1984. Four lines, for a total distance of approximately 2,400.0 meters, was flown across the Great Western claim.

## PREVIOUS EXPLORATION

The Silver King mine, located about one kilometer south of the claim group, was one of the earliest copper producers in British Columbia, beginning production about 1889. Over 200,000 tons of copper-silver ore was produced from

this mine.

Several small tunnels and pits dating back to the early 1900's are present on the Great Western and Great Eastern claims, but no significant tonnage of mineral inventory is exposed on them. Small shipments of ore have been made from the Irene and Great Eastern claims.

ASARCO's work in the area, their ABERDEEN GROUP PROJECT, represents the latest known exploration efforts and cover the period between 1979 and 1982. Assessment work reports filed by them show that their work included soil geochemistry along a grid of parallel lines 100.0 meters apart, with a 25.0 meters separation between sample stations. Ground magnetics and a induced polarization survey were also carried out to define those areas of pyrite concentration favorable to gold mineralization. A zone of magnetic susceptibility lows about 1,500.0 meters long and 200.0 meters wide was found to be associated with a zone of high chargeability response and to be spatially related to the highly anomalous values found in the soils. This zone runs northwesterly from the Gold Bell claim, through the claims subject of this report, to the Black Witch claim. ASARCO drilled approximately ten holes of varying depths. The property owners detailed ASARCO's soil anomaly by collecting another 35 soil

samples in between ASARCO's lines.

### REGIONAL GEOLOGY

According to GSC Map N. 1571A, "Bonnington Map Area" (1982, scale: 1:50,000), the area of the claims is underlain by Rossland Group rocks intruded by a Silver King porphyry stock and/or series of tongues, of possible Jurassic and (?) Cretaceous age (See Figure N. 2). Rossland Group rocks are represented by the Elise Formation andesitic and basaltic flows and flow breccias, agglomerates, augite porphyry and tuff.

### LOCAL GEOLOGY AND MINERALIZATION

The claims are underlain by strongly schistosed andesitic tuffs with abundant pyrite. Bedding is not apparent in the metamorphosed tuffs but foliation strikes northwest and dips 60-70 degrees southwest. The metamorphosed volcanic rocks are intruded by a stock of Silver King syenite porphyry, which underlies the width of the Hillside claim.

A shear parallel to the long axis of the Silver King stock occupies a zone of unknown width along its western flank.

### GEOPHYSICAL SURVEYS

Western Geophysical Aero Data was commissioned to fly a



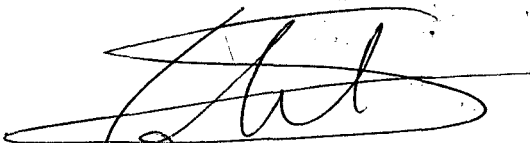
helicopter borne magnetometer and VLF surveys along widely spaced lines in an effort to confirm the presence of the magnetic anomalies(-y) in the area of the Silver King stock. Appendix A is their report.

#### CONCLUSIONS AND RECOMMENDATIONS

A 700.0 meters long gold anomaly in soil samples is defined by 22 samples taken from the "C" horizon within the Great Western claim group. It appears to be associated with a zone of shearing running subparallel to Giveout Creek, is about 1500-2000.0 meters long and two to three hundred meters wide. Limited sampling of outcrops along the road in a zone between the creek and the soil anomaly average 0.148 ounces/ton gold. The magnetic survey confirmed the presence of the magnetic anomaly reported by ASARCO. It also showed that the soil geochemical anomaly reported by ASARCO may be associated with a airborne magnetic anomaly.

#### REFERENCES

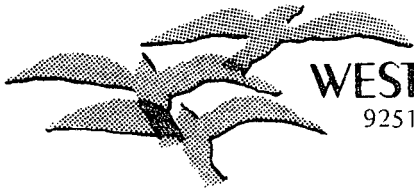
- ASARCO Assessment Report Nos. 8614 and 9461.
- GSC Map N. 1571A.
- Little, H.W.(1960): "Nelson Map Area, West Half", GSC. Mem. 308.
- B.C. Ministry of Mines' MINFILE.



Guillermo Salazar S., (P.Eng.)

April 25, 1985





## WESTERN GEOPHYSICAL AERO DATA LTD.

9251 BECKWITH ROAD RICHMOND, B.C. Telephone: 273-1636

January 7, 1985

Guillermo Salazar,  
G.Salazar S. & Associates Ltd.,  
312 Cedarbrae Cres.S.W.,  
Calgary, Alberta  
T2W 1Y4

Dear Guillermo:

As we discussed over the telephone, I am forwarding to you the results of the small test survey conducted across the Great Western Claims. Please remember when reviewing the accompanying maps that the flight path recovery should be considered questionable. Of the four lines we flew, I consider the two northernmost to be the most accurately positioned.

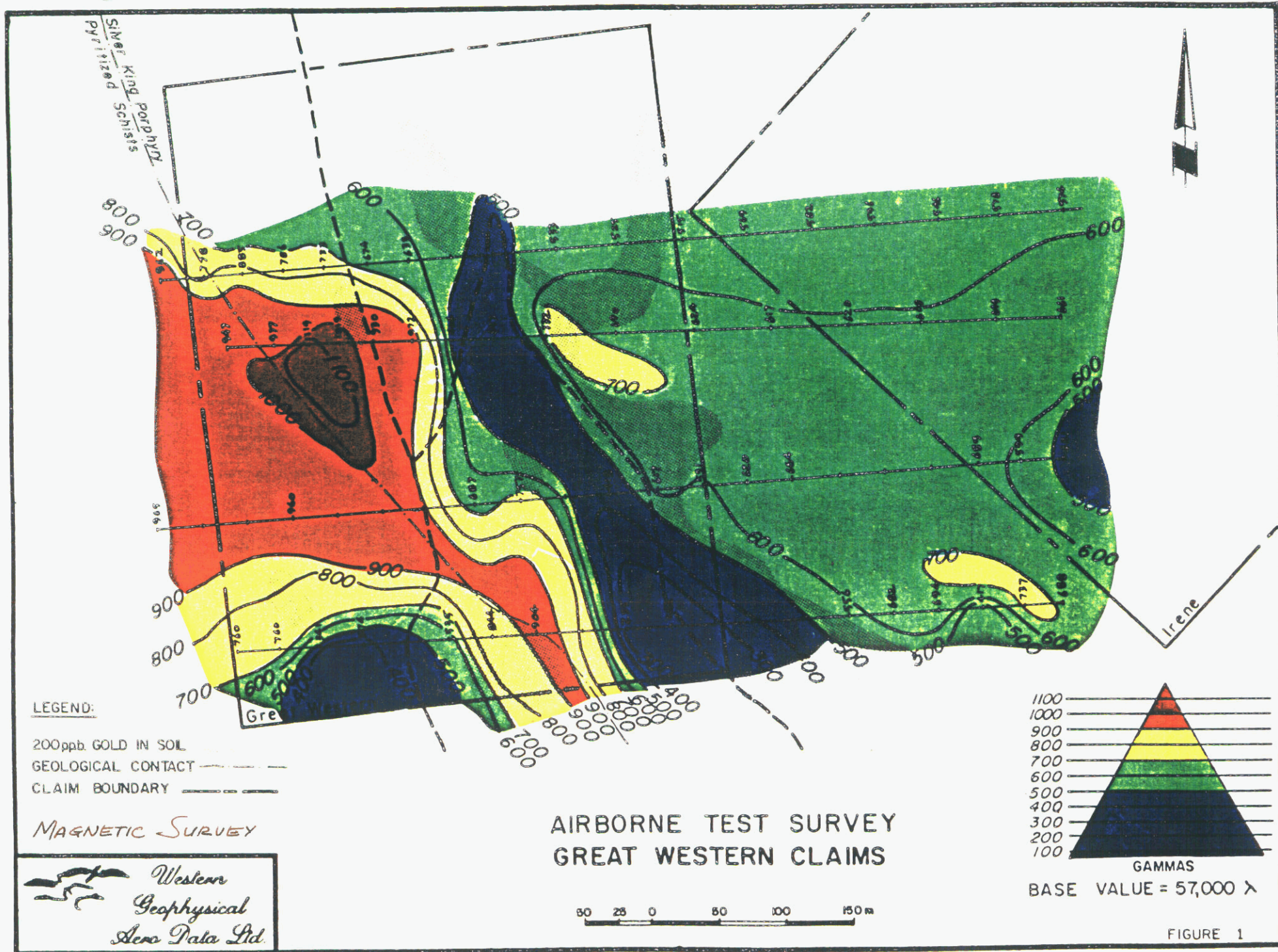
The survey clearly illustrated the usefulness of magnetics as a mapping tool in this environment. A narrow magnetic low appears to be associated with an anomalous gold geochemical trend. There are also indications that the contact between the pyritized schists and the Silver King Porphyry may be magnetically mappable.

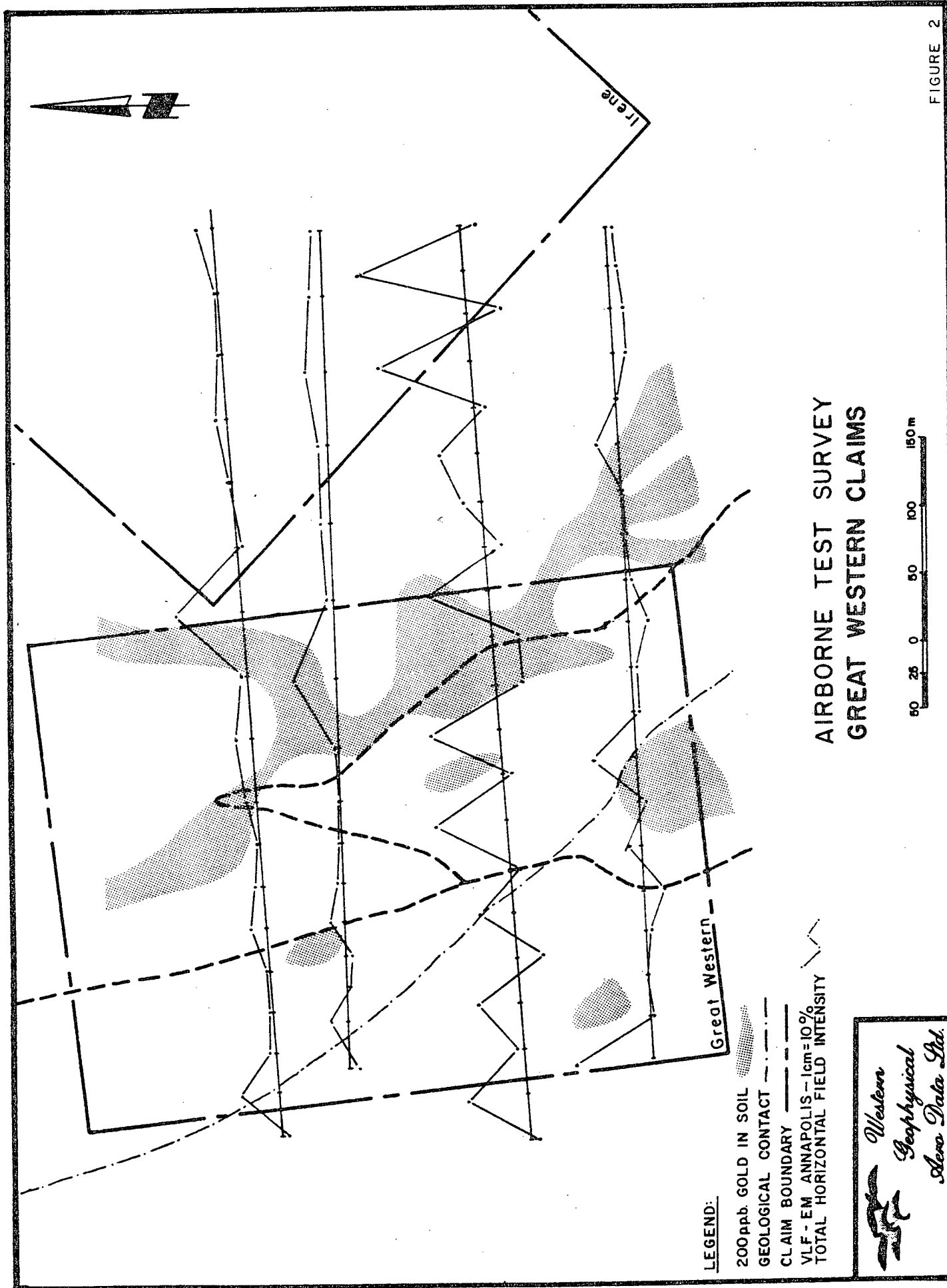
The VLF-EM data does not clearly delineate any of the features mapped geologically or magnetically. Some variations in the signal amplitude are observed, which may be related to geological sources, but for the most part they appear to be noise. Future VLF-EM surveying for southeasterly trending targets in this area would likely be more effective if the Panama VLF-EM transmitter was used as the primary source.

The results of this test show that an airborne magnetic survey would be a useful method for searching for similar geological targets. This type of survey should be conducted during the winter months and used to guide ground exploration during the relatively short summer field season in this area.

You will find an invoice for this additional surveying attached to this letter. If you have questions concerning either the invoice or the results of the test, please feel free to contact me at your convenience.

Yours truly,





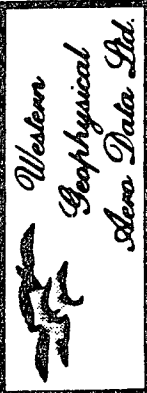
**LEGEND:**

200ppb. GOLD IN SOIL

GEOLOGICAL CONTACT

CLAIM BOUNDARY

VLF - EM ANNAPOLIS - 1cm=10%  
TOTAL HORIZONTAL FIELD INTENSITY

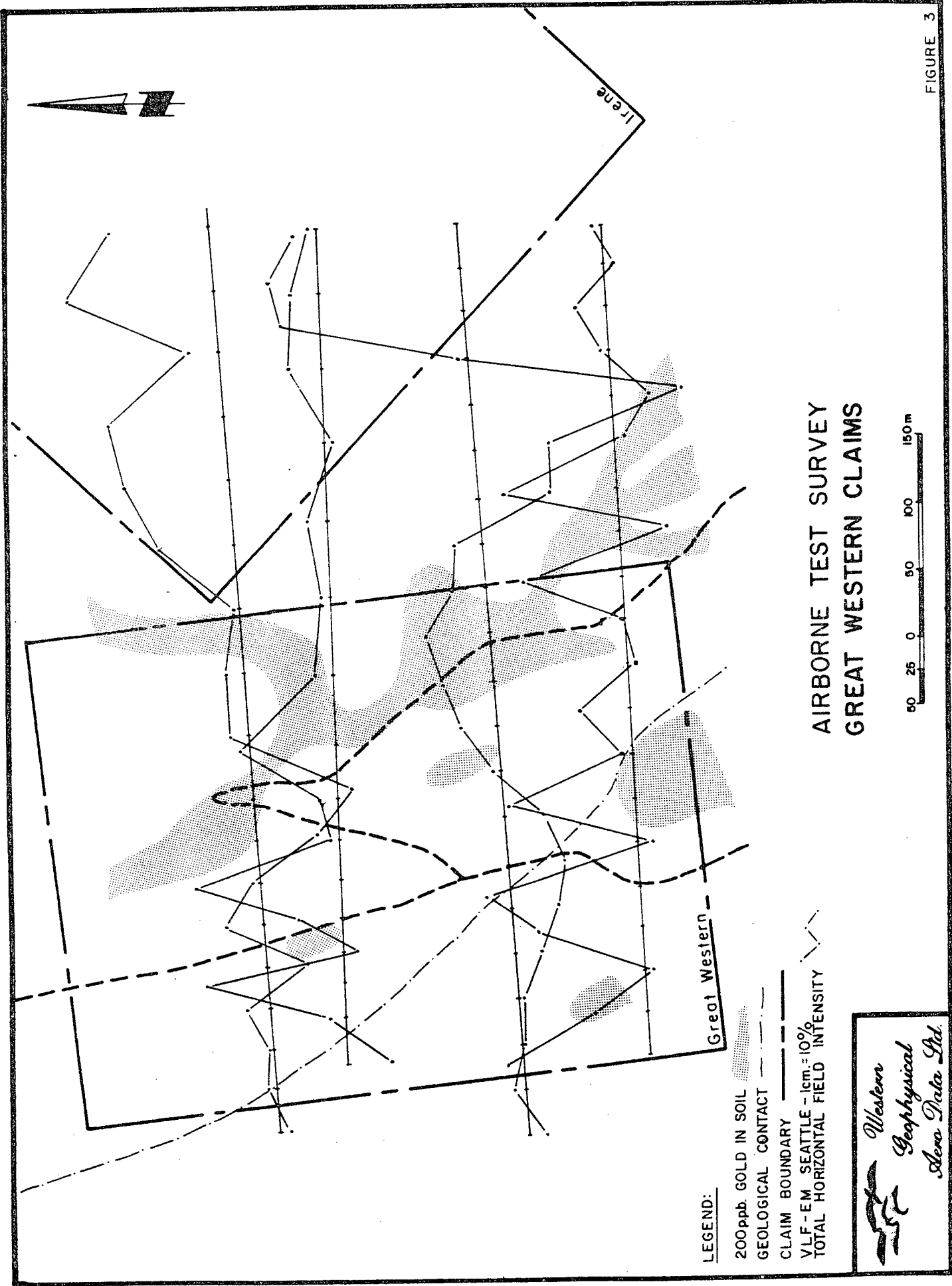


*Western  
Geophysical  
Services Ltd.*

**AIRBORNE TEST SURVEY  
GREAT WESTERN CLAIMS**



FIGURE 2



**LEGEND:**

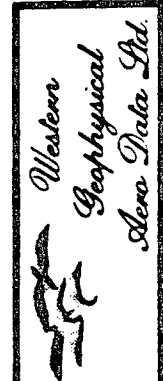
200 ppb. GOLD IN SOIL

GEOLOGICAL CONTACT

CLAIM BOUNDARY

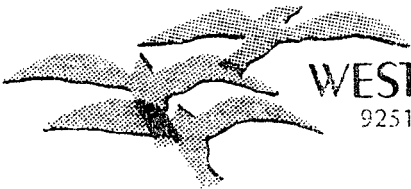
VLF-EM SEATTLE - 1cm. = 10%

TOTAL HORIZONTAL FIELD INTENSITY



**AIRBORNE TEST SURVEY  
GREAT WESTERN CLAIMS**





**WESTERN GEOPHYSICAL AERO DATA LTD.**

9251 BECKWITH ROAD RICHMOND, B.C. Telephone: 273-1636

January 10, 1985

G. Salazar S. & Associates Ltd.,  
312 Cedarbrae Cres. S.W.,  
Calgary, Alberta  
T2W 1Y4

INVOICE #111

Re: Airborne magnetometer and VLF-electromagnetometer test  
survey - Great Western Claims, 82F/6W

Helicopter and Fuel	¼ hour .....	\$115.25
Geophysicist - Field survey, data analysis, interpretation, letter		
	2 days @ \$300/day .....	600.00
Drafting	3 hours @ \$35/hour .....	105.00
Reproduction	.....	<u>6.00</u>
		\$826.25

*Paid  
cheque # 212  
Jan. 25/85  
LDX-~~064~~*

Amount of this invoice ..... \$826.25

INSTRUMENT SPECIFICATIONSBARRINGER AIRBORNE MAGNETOMETER

**MODEL:** Nimbin M-123  
**TYPE:** Proton Precession  
**RANGE:** 20,000 to 100,000 gammas  
**ACCURACY:**  $\pm 1$  gamma at 24 V d.c.  
**SENSITIVITY:** 1 gamma throughout range  
**CYCLE RATES:**  
     Continuous 0.6, 0.8, 1.2 and 1.9 seconds  
     Automatic 2 seconds to 99 minutes in 1 second steps  
     Manual Pushbutton single cycling at 1.9 seconds  
     External Actuated by a 2.5 to 12 volt pulse longer than 1 millisecond.

**OUTPUTS:**  
     Analogue 0 to 99 gammas or 0 to 990 gammas  
             - automatic stepping  
     Visual 5 digit numeric display directly in gammas

**EXTERNAL OUTPUTS:**  
     Analogue 2 channels, 0 to 99 gammas or 0 to 990 gammas at 1 m.a. or 1 volt full scale deflection.  
     Digital BCD 1, 2, 4, 8 code, TTL compatible.

**SIZE:** Instrument set in console  
           30 cm X 10 cm X 25 cm

**WEIGHT:** 3.5 Kg

**POWER REQUIREMENTS:** 12 to 30 volts dc, 60 to 200 milliamps maximum.

**DETECTOR:** Noise cancelling torroidal coil installed in airfoil.



INSTRUMENT SPECIFICATIONSSABRE AIRBORNE VLF SYSTEM

## Source of Primary

Field: - VLF radio stations in the frequency range of 14 KHz to 30 KHz.

Type of Measurement: - Horizontal field strength

Number of Channels: - Two; Seattle, Washington at 24.8 KHz  
- Annapolis, Maryland at 21.4 KHz

Type of Sensor: - Two ferrite antennae arrays, one for each channel, mounted in magnetometer bird.

Output: - 0 - 100 mV displayed on two analogue meters (one for each channel)

- recorder output posts mounted on rear of instrument panel

Power Supply: - Eight alkaline 'AA' cells in main instrument case (life 100 hours)

- Two 9-volt alkaline transistor batteries in bird (life 300 hours)

Instrument Console: - Dimensions - 30 cm x 10 cm x 25 cm

- Weight - 3.5 Kg.

Instrument SpecificationsFLIGHT PATH RECOVERY SYSTEMi) T.V. Camera:

Model: RCA TC2055 Vidicon  
Power Supply: 12 volt DC  
Lens: variable, selected on basis of expected terrain clearance  
Mounting: Gimbal and shock mounted in housing, mounted on helicopter skid

ii) Video Recorder:

Model: Sony SLO - 340  
Power Supply: 12 volt DC / 120 volt AC (60Hz)  
Tape: Betamax  $\frac{1}{2}$ " video cassette - optional length  
Dimensions: 30 cm x 13 cm x 35 cm  
Weight: 8.8 Kg  
Audio Input: Microphone in - 60 db low impedance microphone  
Video Input: 1.0 volt P-P, 75 $\Omega$  unbalanced, sync negative from camera

iii) Altimeter:

Model: KING KRA-10A Radar Altimeter  
Power Supply: 27.5 volts DC  
Output: 0-25 volt ( 1 volt / 1000 feet) DC signal to analogue meter, 0-10 v (4mv/ft) analogue signal to microprocessor  
Mounting: fixed to T.V. camera housing, attached to helicopter skid



## Instrument Specifications

### DATA RECORDING SYSTEM

#### i) Chart Recorder

**Type:** Esterline Angus Miniservo III Bench AC  
 Ammeter - Voltmeter Power Recorder  
**Model:** MS 413B  
**Specification:** S-22719, 3-pen servo recorder  
**Amplifiers:** Three independent isolated DC amplifiers  
 (1 per channel) providing range of  
 acceptable input signals  
**Chart:** 10 cm calibrated width Z-fold chart  
**Chart Drive:** Multispeed stepper motor chart drive,  
 Type D850, with speeds of 2,5,10,15,30  
 and 60 cm/hr. and cm/min.  
**Controls:** Separate front mounted slide switches for  
 power on-off, chart drive on-off, chart  
 speed cm/hr.- cm/min. Six position chart  
 speed selector, Individual front zero  
 controls for each channel.  
**Power Requirements:** 115/230 volts AC at 50/60Hz (Approximately 30 W.  
**Writing System:** Disposable fibre tipped ink cartridge  
 (variable colors)  
**Dimensions:** 38.6 cm x 16.5 cm x 43.2 cm  
**Weight:** 9.3 kg.

#### ii) Digital Video Recording System

**Type:** L.M. Microcontrols Ltd. Microprocessor  
 Control Data Acquisition System  
**Model:** DADG - 68  
**Power Requirements:** 10 - 14 volts DC, Maximum 2 amps.  
**Input Signal:** 3,0 - 100 mvolt DC signals  
 1,0 - 25 volt DC signals  
**Microprocessor:** Motorola MC-6800  
**CRT Controller:** Motorola MC-6845  
**Character Generator:** Motorola MCM-6670  
**Analogue/Digital  
 Convertor:** Intersil 7109  
**Multiplexer:** Intersil IH 6208  
**Digital Clock:** National MM 5318 chip  
 9 volt internal rechargeable nickle-  
 cadmium battery  
**Fiducial Generator:** internally variable time set controls  
 relay contact and audio output  
**Dimensions:** 30 cm x 30 cm x 13 cm  
**Weight:** 3 kg.



DATA RECORDING SYSTEM (CON'T)iii) Digital Magnetic Tape

Type: Hewlett Packard cartridge tape unit

Model: 9875A

Power Requirements: 24 volt d.c.

Data Format: HP's Standard Interchange Format (SIF)

Tape Cartridge: HP 98200A 225K byte cartridge compatible with HP Series 9800 desktop computers.

Tape Drive: Dual tape drives providing up to 8 hours continual recording time.

Controller: Internal micro-computer provides 23 built in commands.

: External computer generated commands.

STATEMENT OF QUALIFICATIONS

NAME: PEZZOT, E. Trent

PROFESSION: Geophysicist - Geologist

EDUCATION: University of British Columbia-  
B.Sc.- Honors Geophysics and Geology

PROFESSIONAL ASSOCIATIONS: Society of Exploration Geophysicist

EXPERIENCE: Three years undergraduate work in  
geology - Geological Survey of Canada,  
consultants.

Three years Petroleum Geophysicist,  
Senior Grade, Amoco Canada Petroleum  
Co. Ltd.

Two Years consulting geophysicist,  
Consulting geologist - B.C., Alberta,  
Saskatchewan, N.W.T., Yukon, western  
U.S.A.

Four years geophysicist with Glen E.  
White Geophysical Consulting & Services  
Ltd.

STATEMENT OF QUALIFICATIONS

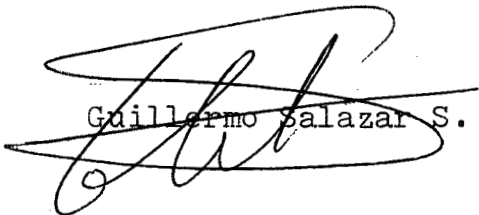
GUILLERMO SALAZAR S.

NATIONALITY: Peruvian, with Canadian Citizenship

- DEGREES:
- 1) B. Sc. and Engineering degree in Mining, Engineering and Mining Geology from the Universidad Nacional de Ingenieria de Lima, Peru (1967).
  - 2) M. Sc. in Economic Geology from Harvard University (1969).
  - 3) Member of the Associations of Professional Engineers of British Columbia and Alberta.
  - 4) Member of the Society of Economic Geologists, AIME, CIMM, etc..

EXPERIENCE:

- Peru: Engineer training programs while going to University. In the last two years at school, I provided prospect and property evaluation services to medium sized mining companies based in Lima.
- U.S.A.: Grass roots exploration and property evaluation programs in New Mexico, Arizona, Montana and Washington. While in Montana, I was involved in properties, carrying out core logging, field mapping, ore reserve calculations and pre-feasibility studies. I was also the Stewart Mine geologist for one year.
- Canada: Involved in mineral explorations and development programs searching for porphyry copper-molybdenum and volcanogenic massive sulphide and uranium deposits since 1970 across Canada. This included economic feasibility analysis of a porphyry copper-molybdenum deposit in northern B.C. and in-depth geological studies of the economic potential of several Cu-Mo, Cu-Zn-Ag, Ag-Au prospects.

  
Guillermo Salazar S. P.Eng.  
(B.C.)