

Owner/Operator: **ENERGEX MINERALS LTD.** 06/84  
GEOPHYSICAL REPORT ON AN  
AIRBORNE VLF-EM AND MAGNETOMETER SURVEY  
**STURDEE CLAIM GROUP**  
OMINECA MINING DIVISION  
LAT. 57°25.5N, LONG. 127°12'W, NTS 94E/6E, 6W  
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DATE OF WORK: Feb 17,18, March 9,10,13,1986  
DATE OF REPORT: August 7, 1986

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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**15,185**



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## INTRODUCTION

A regional program, totalling over 10,000 line kilometers, of airborne magnetometer and VLF-electromagnetometer surveying was conducted across the Toodoggone Gold Belt area in early 1986. Western Geophysical Aero Data Ltd. was commissioned by Energex Minerals Ltd. to recover and examine in detail the data gathered across an 83 unit claim group referred to as the **Sturdee Group**.

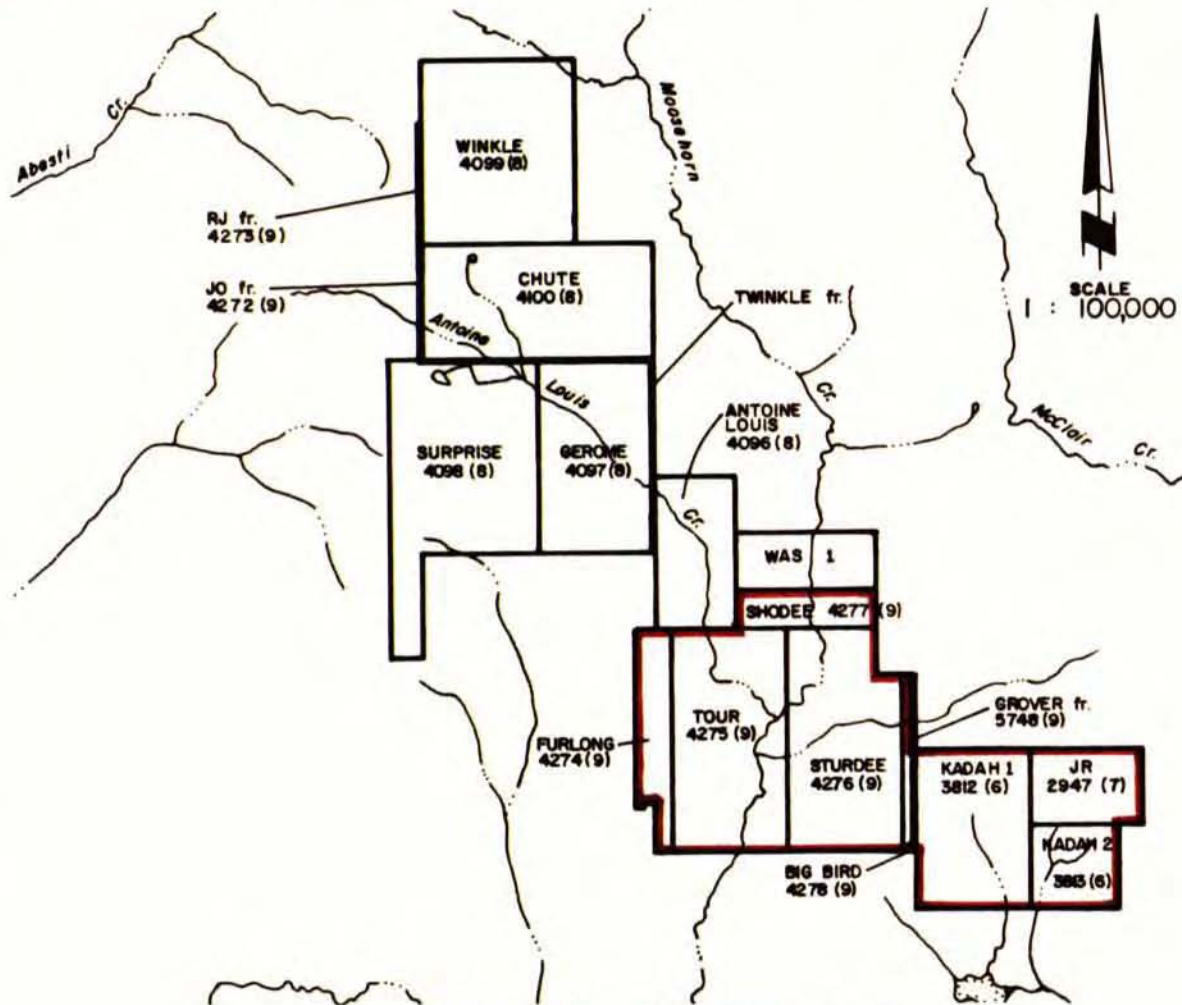
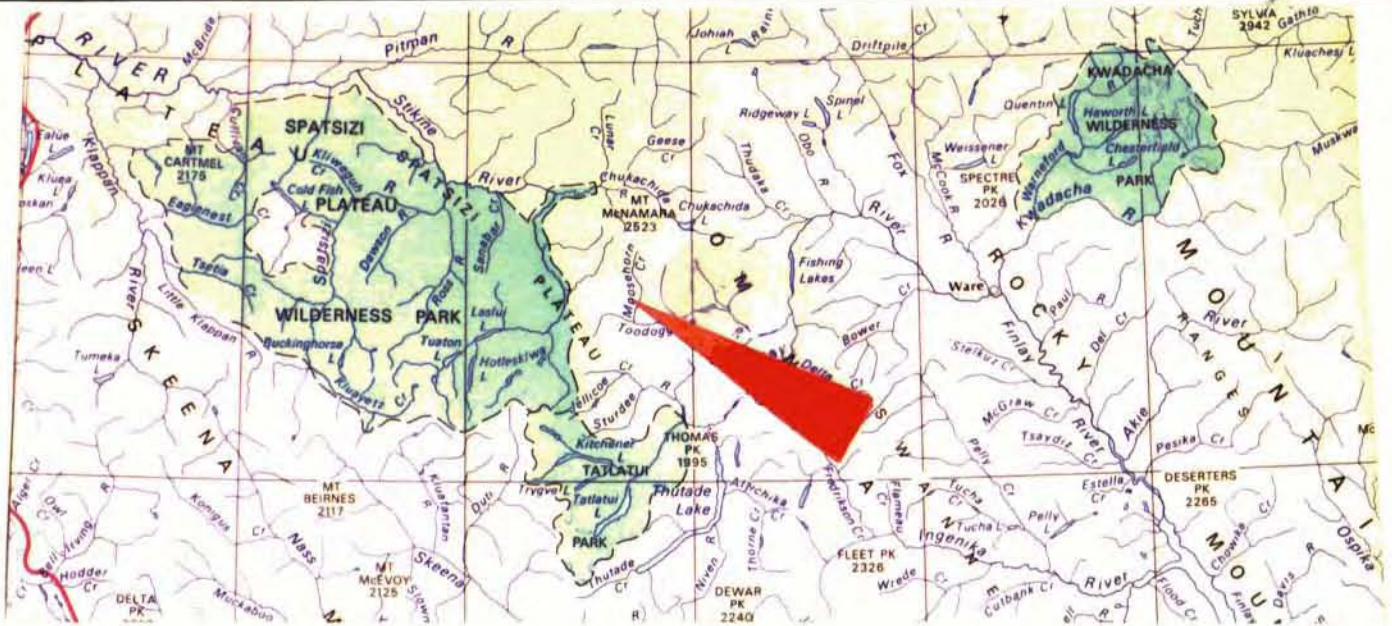
These claims are located southeast of the Thesis gold deposits. It was the intention of this survey to assist the geological mapping of the area and direct ground exploration to any favourably anomalous locations.

## PROPERTY

The property referred to in this report as the **Sturdee group** is comprised of 9 claims totalling 83 units as described in the table below.

CLAIM NAME	RECORD NO.	UNITS	RECORD DATE
JR	2947	6	July 18, 1980
FURLONG	4274	6	Sept. 8, 1981
SHODEE	4277	4	Sept. 8, 1981
TOUR	4275	18	Sept. 8, 1981
STURDEE	4276	18	Sept. 8, 1981
BIG BIRD	4278	6	Sept. 8, 1981
GROVER (fr)	5748	1	Sept. 8, 1981
KADAH 1	3812	15	June 15, 1981
KADAH 2	3813	9	June 15, 1981





**ENERGEX MINERALS LTD.**  
 — STURDEE CLAIM GROUP —  
**LOCATION AND CLAIMS MAP**



## LOCATION AND ACCESS

The Toodoggone River area is located approximately 280 kilometres north of Smithers, B.C. The **Sturdee claim group** is centred about Moosehorn Creek, a major feeder stream to the Toodoggone River. The group is positioned approximately 12 km east-southeast of the Thesis and Alberts Hump mineral deposits, also held by Energex Minerals Ltd. The claim group lies within NTS 94E/6W and 6E and the Omineca Mining Division. The approximate geographical co-ordinates of the centre of the claim group are latitude 57°25'N and longitude 127°12'W (see Figure 1).

Access to the area is normally achieved via fixed wing aircraft from Smithers, B.C. to any of the larger lakes in the area or to the Sturdee River airstrip located some 25 kilometres south-southeast of the **Sturdee claim group**. Historically, a number of helicopter companies have established summer bases at the Sturdee River airstrip and are available for casual charter to nearby properties.

## HISTORY AND PREVIOUS WORK

The Toodoggone area was investigated for placer gold in the 1920's and 1930's. A public company, Two Brothers Valley Gold Mines Ltd., undertook considerable test work, including drilling in 1934. Most of this work was directed towards extensive gravel deposits principally near the junction of McClair Creek and the Toodoggone River.

Gold-silver mineralization was discovered on the Chappelle (Baker Mine) property by Kennco Explorations (Western) Ltd. in 1969. DuPont of Canada Exploration Ltd. acquired the property in 1974 and began production at a milling rate of 90 tonnes per day in 1980.



Numerous other gold-silver discoveries were made in the 1970's and 1980's, including the Lawyers deposit which was discovered by Kennco in 1973 and optioned by SEREM Ltd. in 1979. Work on this property to date has included considerable trenching, drilling and underground development and a feasibility study is currently underway.

The Toodoggone area has been the scene of intense exploration activity during the past four years with numerous companies exploring over 3,000 mineral claim units. Exploration and development expenditures to date are estimated to be in the order of \$33 million.

To the northwest of the Sturdee group is Energex Minerals Ltds.' Alberts Hump property. Exploration consisting of trenching and diamond drilling has outlined several gold bearing zones. To the north is Energex's Moosehorn property which was explored by diamond drilling during the summer of 1985.

No specific exploration of the Sturdee claim group is known of by the authors.

#### **GENERAL GEOLOGY**

The claim group lies within what is often termed the Toodoggone River epithermal precious metal district which is mapped as a 100 by 25 kilometre northwest trending belt of volcanic, sedimentary and intrusive rocks extending from Thuade Lake in the south to the Stikine River in the north. Permian age limestones, argillites and cherts of the Asitka group are the oldest rocks in the area and normally are in fault contact with Takla volcanic rocks of Upper Triassic age. Lower Jurassic Toodoggone volcanics, consisting predominantly of subaerial dacite, latite, trachyte and rhyotite pyroclastics, unconformably overlie the Takla group. These rocks are bordered to the east by the Hazelton



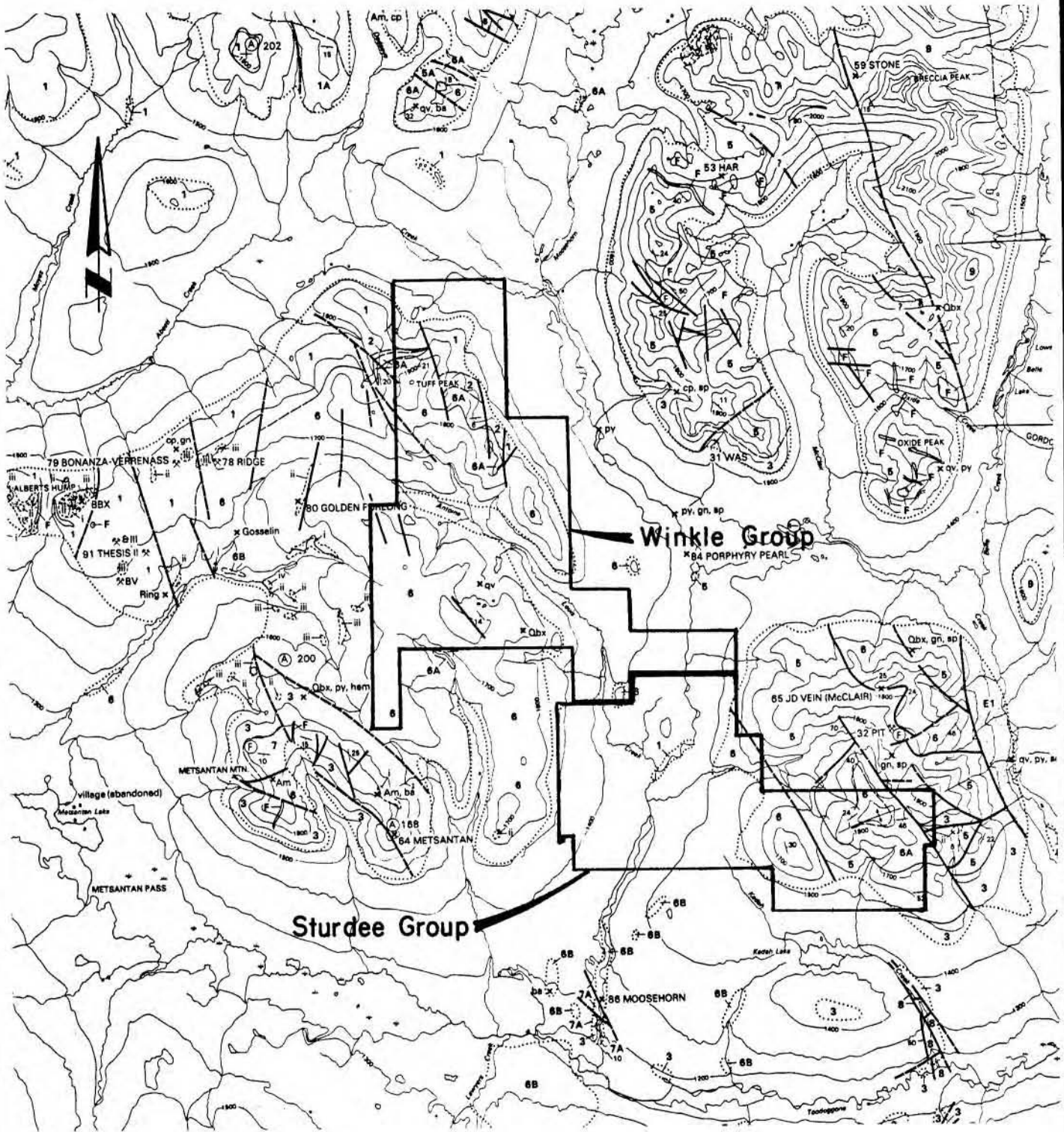
Group, consisting of intermediate volcanic conglomerate, breccia, lakas and feldspar porphyry dikes and sills. The Hazelton Group ranges from Lower to Upper Jurassic age and may include members of the Toodoggone Group. Acid to intermediate stocks and plugs intrude many of the sedimentary and volcanic rocks of the area.

Regional fault systems trend northwesterly and northerly throughout the Toodoggone area. Epithermal deposits are the most common type of precious metal mineralization in the area and are predominantly associated with the Toodoggone volcanics. They occur as massive quartz veins or as silicified and amethystine breccia zones generally close to major northwest faults and associated with siliceous volcanic centres, exhalative vents and zones of alteration within the Triassic and Jurassic volcanics. Vein minerals are acanthite, pyrite, electrum, chalcopyrite, native gold, sphalerite and galena and grades range from 0.1 to 1.0 oz/T Au and 1.0 to 20.0 oz/T Ag.

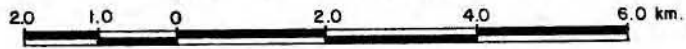
Examples include Baker mine, a fissure vein system developed in Takla volcanic rocks, but spatially related to dikes believed to be associated with Toodoggone volcanic rocks. Pre-mining indicated reserves were 90,000 tonnes grading 30 grams/tonne gold and 600 grams/tonne silver. Recovered grades during the three year mine life were about half the indicated grades due to initial mill recovery problems and greater than expected dilution during mining.

The Lawyers deposit has gold-silver mineralization in banded chalcedony-quartz stockwork veins and breccia zones developed in Toodoggone volcanic rocks. Three potential ore zones have been defined to date and recently announced reserves are 1 million tonnes grading 7.27 grams/tonne gold and 254 grams/tonne silver. Numerous other epithermal gold-silver deposits in the area are hosted by lower and middle units of the Toodoggone volcanic sequence. These





**LOCAL GEOLOGY**





include the Sha, Saunders, Graves, Moosehorn, Mets, Metasantan, AL, JD and Golden Lion prospects.

#### **PROPERTY GEOLOGY**

The B.C. Department of Mines preliminary map 61, titled "Geology of the Toadogone River Area, NTS 94E," is the most recently published geological map of the claims area. This work was authored by L.J. Diakow, A. Panteleyev and T.G. Schroeder in 1985 and the portion covering the subject claims is reproduced as Plate 1 of this report.

The western half of the claim group is covered by unconsolidated glacial material and with the exception of a small outcropping of Addogatcho Creek Formation rocks along Moosehorn Creek, is unmapped geologically.

Two subdivisions of the Toadogone Volcanic series, the Tuff Peak Formation and the McLair Creek Formation are mapped on the eastern half of the claim block. Two northwesterly trending faults are also observed in this area.

Additionally, in the northeast corner of the claim group, a northeasterly trending antiformal axis is mapped, between the two faults mentioned above.



## AIRBORNE VLF-ELECTROMAGNETIC AND MAGNETIC SURVEY

This survey simultaneously monitors and records the output signal from a proton precession magnetometer and two VLF-EM receivers installed in a bird designed to be towed 100 feet below a helicopter. A gimbal and shock mounted TV camera, fixed to the helicopter skid, provides input signal to a video cassette recorder allowing for accurate flight path recovery by correlation between the flight path cassette and air photographs of the survey area. A KING KRA-10A radar altimeter allows the pilot to continually monitor and control terrain clearance along any flight path.

Continuous measurements of the earth's total magnetic field intensity and of the total horizontal VLF-EM field strength of two transmission frequencies are stored in three independent modes: an analogue strip chart recorder, digital magnetic tapes and a digital video recovery system. A three-pen analogue power recorder provides direct, unfiltered recordings of the three geophysical instrument output signals. A Hewlett-Packard 9875 tape drive system digitally records all information as it is processed through an onboard micro-computer. The magnetic and electromagnetic data is also processed through the onboard micro-computer, incorporating an analogue to digital converter and a character generator, then superimposed along with the date, real time and terrain clearance upon the actual flight path video recording to allow exact correlation between geophysical data and ground location. The input signals are averaged and updated on the video display every second. Correlation between the strip chart, digital tape and the video flight path recovery tape is controlled via fiducial marks common to all systems. Line identification, flight direction and pertinent survey information are recorded on the audio track of the video recording tape.



## DATA PROCESSING

Field data is digitally recorded, with the time of day fiducial, on magnetic cassettes in a format compatible with the Hewlett-Packard 9845 computer. The recovered flight path locations are digitized and the field data is processed to produce plan maps of each of the parameters. A variety of formats are available in which to display this data.

Total field intensity magnetic information is routinely edited for noise spikes and corrected for any diurnal variations recorded on a base magnetometer located in the survey area.

Total field intensity VLF-EM signals are sensitive to topographic changes and sensor oscillation. Oscillation effects can be reduced by filters tuned to the dominant period. Long period effects attributable to topography can be removed by high pass filtering the planimetric data.



## DISCUSSION OF RESULTS

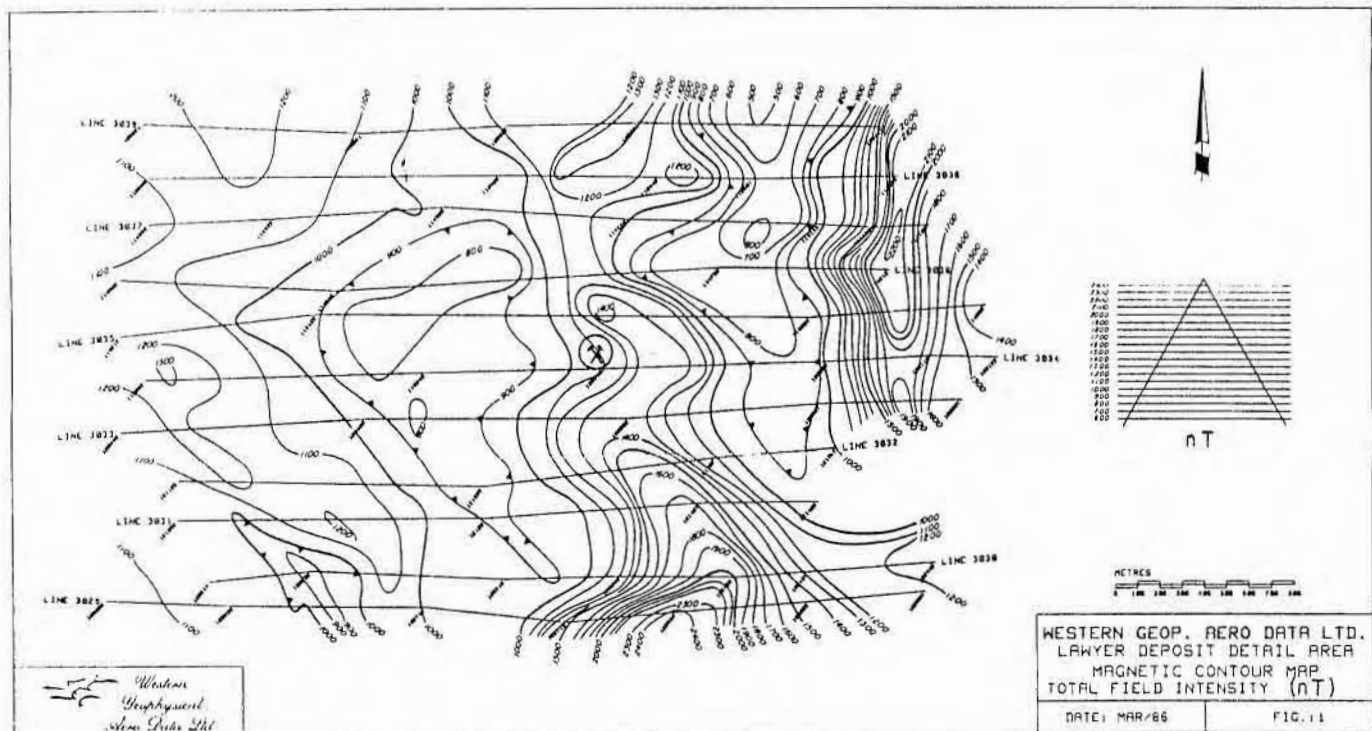
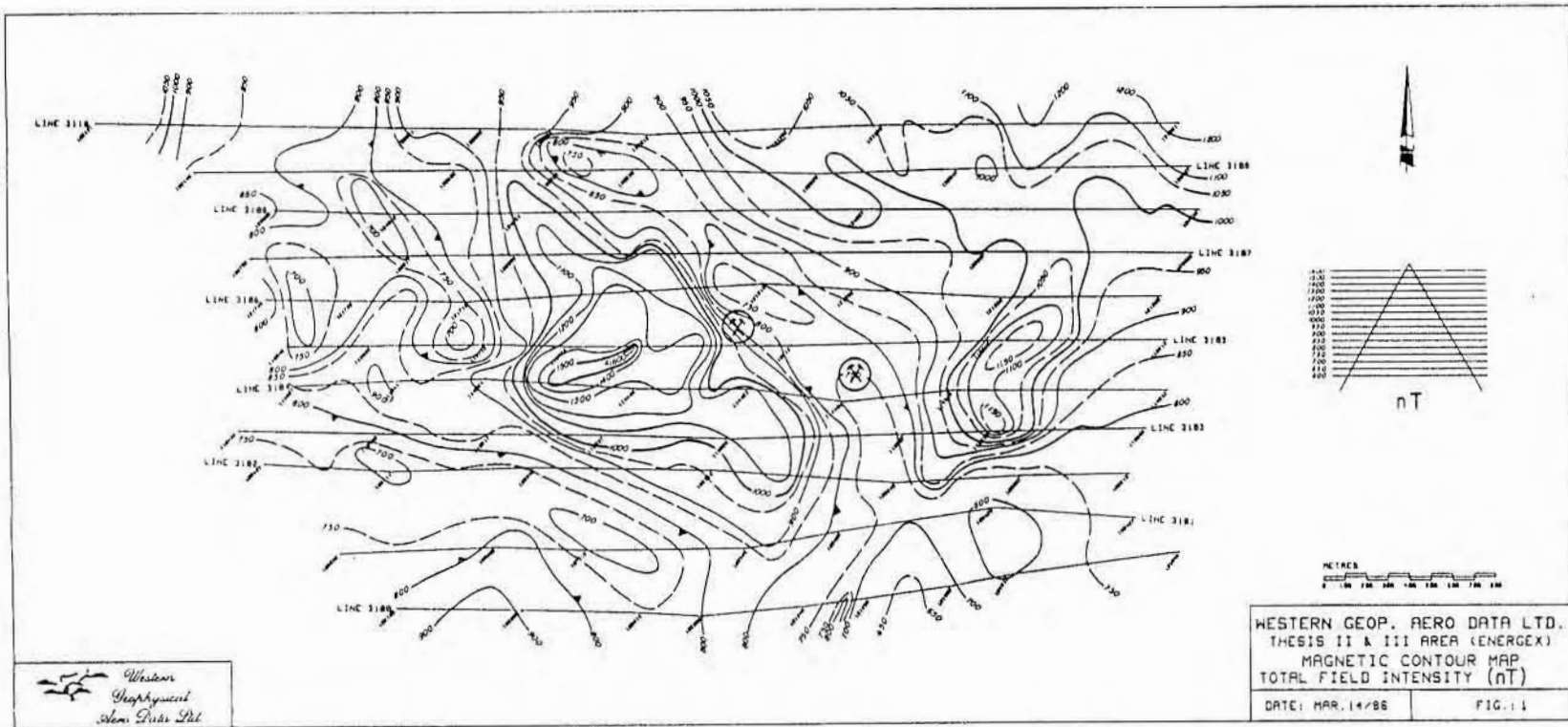
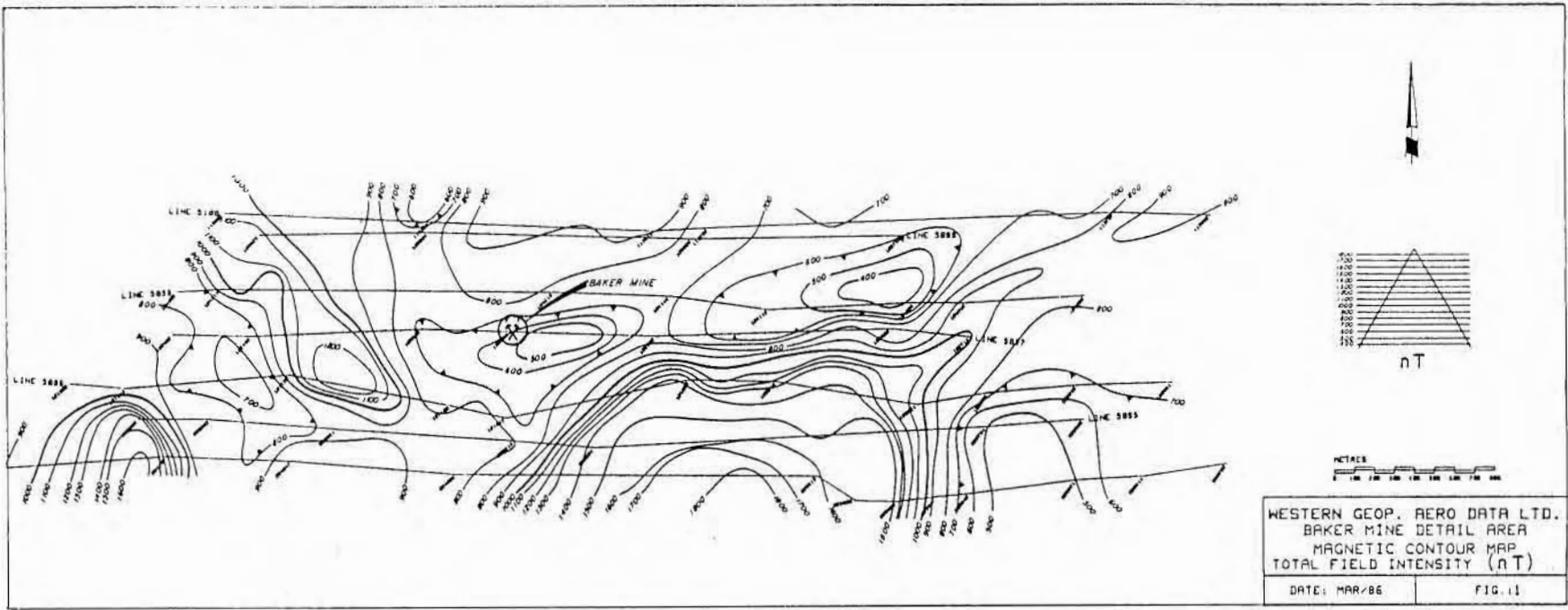
The **Sturdee claim group** was surveyed on Feb 17, 18 and March 9, 10 and 13, 1986. Some two hundred and sixty-five kilometres of airborne magnetometer and VLF-electromagnetometer data have been examined to evaluate the area. Survey lines were flown east-west on 200 metre centres with data being digitally recorded at one second intervals, providing an average sample spacing of 25 metres. The sensors were towed beneath the helicopter and maintained a terrain clearance of approximately 60 metres. The magnetic data is presented in contour form as Figure 2 of this report and the VLF-EM data is in profile format as Figures 3 and 4 representing Seattle and Annapolis frequencies respectively.

This survey was flown as part of a regional package covering the Toodoggone Gold Belt from the Finlay River in the south to the Chukachida River in the north. Over 10,000 line kilometres of data was gathered to assist the geological mapping of the area as well as to locate specific targets for ground exploration.

The magnetic data is a useful tool for mapping both regional and local geological structures. Many localized magnetic variations are observed which are attributed to lithological changes, however the geological information is too sparse to define direct correlations between magnetics and lithology.

There are however two distinctive magnetic signatures observed which appear consistent across the large survey area. Firstly, Jurassic intrusions appear as magnetic highs; typically with an intensity of greater than 59,300 nT. Secondly, major fault and shear zones appear as linear magnetic lows, generally with intensities of less than 58,600 nT, and often positioned along the flanks of intrusive bodies. The combination of these two signatures





MAGNETIC RESPONSE EXAMPLES  
BASE VALUE 58,000 — nT

are observed across many of the larger epithermal precious metal deposits in the area. Plate 2 of this report illustrates this effect at the Baker Mine, Lawyers and Thesis deposits. The magnetic response is interpreted as reflecting only the general geological environment of these areas and does not map any mineralization directly.

The two northwesterly trending fault zones observed crossing the southeastern claims are clearly evident on Figure 2 of this report as linear magnetic lows. The magnetic data shows these structures continue to the southeast, beneath a cover of unconsolidated sediments. A third magnetic low lineation, trending north-south suggests another major fault zone is located along the western border of the **Tour claim**. This area is covered by glacial till and no geological verification of the fault interpretation is available.

The **Tour and Sturdee claims** are underlain by a broad magnetic low. This feature is interpreted as the reflection of a thick overburden layer filling the Moosehorn Creek Valley. A number of isolated magnetic lows are observed within this larger feature. They may be generated from fault activity however the masking effect of the overburden limits the resolution of the data in this area.

Two anomalous magnetic highs are observed on this property which are interpreted as reflecting small Jurassic intrusions. One is located straddling the border between the **Tour and Sturdee claims**. This intrusion is buried beneath the Moosehorn Creek Valley overburden and unconfirmed by geological investigations. The second feature is centred on the **JR claim** and lies between two geologically and geophysically mapped faults. The intrusion underlies a small window of Tuff Peak Formation rocks which are mapped on a localized antiform. It is most probable that the antiform observed is a result of draping over the geophysically mapped buried intrusion.



The VLF-EM data for the Seattle and Annapolis frequencies are presented in profile format as Figures 3 and 4 respectively. Anomalous responses have been flagged on these maps and have also been transferred to Figure 2 for easy correlation with the magnetic data. No VLF-EM data is available for lines 4067 to 4087, which cover extreme eastern edge of the subject property.

The Seattle VLF-EM data is extremely quiet. One high amplitude response observed on line 3091 to the west of the claim group, is generated by electronic noise and is not considered as reflecting any conductivity source. Two weak responses observed on the KADAH 1 claim are considered to be anomalous. The western-most response correlates with one of the major northwesterly trending fault zones and the second lies above a magnetically interpreted intrusion.

More anomalous responses are observed in the Annapolis frequency data than in the Seattle information. This is a result of the general northwesterly geological strike of the Toodoggone area and its' relationship to the Annapolis VLF-EM transmitter location. The anomalies flagged are generally weak and localized. No discernable patterns are evident which reflect either faults or geological contacts. Rather, they appear to be mapping small near surface inhomogenities. Variations in either the thickness or composition of the overburden are the most likely sources of these features.

#### **SUMMARY AND CONCLUSIONS**

The area of the Sturdee claim group was included as part of a regional airborne magnetic and VLF-electromagnetic survey conducted in the Toodoggone Gold Belt area. Two hundred and sixty-five line kilometers of this data was recovered and examined in detail on behalf of Energex Minerals Ltd. to evaluate these properties.



Geological mapping is restricted by overburden to the eastern half of this property. In this area Toodoggone Volcanics are mapped as the country rock and two northwesterly trending faults are observed. The magnetic data clearly delineates these faults as narrow magnetic lows and shows them to continue to the southeast, beneath the cover of glacial till which fills the Toodoggone River Valley. A couple of smaller faults are also magnetically mapped in this area. A third major fault zone is observed in the magnetic data as trending north-south along the western border of the **Tour claim**. This area is covered by glacial till and no geological confirmation of this interpretation is presently available.

Two small magnetic highs are observed on the subject property and interpreted as reflecting Jurassic intrusions in a Toodoggone volcanic host. One is located near the southern borders of the **Tour and Sturdee claims**, covered by glacial till. The second is a northwesterly elongated feature, centred on the **JR claim** between two northwesterly trending faults. A small window of Tuff Peak Formation rocks, formed into an antiformal structure, is mapped in this area. This unit is suspected of being relatively thin and the structural deformation as being a result of the intrusive activity.

No significant VLF-EM anomalies were observed in the claims area.

#### **RECOMMENDATIONS**

Two geological conditions appear to be common to most of the epithermal mineral deposits discovered to date in the Toodoggone Gold Belt; the proximity of Jurassic intrusive activity and the presence of silicified and altered faults and shear zones. Both of these environments are magnetically mappable.





Evidence of this geological environment is observed on the four eastern-most claims of this group; the **KADAH 1 and 2, Grover and JR.** Ground exploration of this area is strongly recommended. Exploration efforts should be concentrated about the two northwesterly trending fault zones and should initially consist of geochemical soil analysis and geological prospecting and mapping.

Secondary priority should be afforded the northerly trending fault mapped on the western border of the **Tour claim** and the small intrusive body noted in the southern portion of the **Tour and Sturdee claims.** Extensive overburden limits the initial methods in these areas to the geochemical analysis of humas samples and trenching or drilling to determine the depth to and composition of bedrock.

Respectfully submitted



E. Trent Pezzot, B.Sc.  
Geophysicist



Glen E. White, B.Sc., P.Eng  
Consulting Geophysicist



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 air foil.



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 300 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 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, 75Ω 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 SPECIFICATIONSDATA RECORDING SYSTEMi) 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 50/60 Hz  
(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 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.



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.



**COST BREAKDOWN**

The geophysical data was analyzed and this report prepared for an all inclusive fee of \$10,000.00. This figure includes the proportional cost of the larger field program as well as the computer and office expenses and is considered to be the full assessment value of this report.

**TOTAL ASSESSMENT VALUE****\$10,000.00***265.0 line km*



**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 - British Columbia,  
Alberta, Saskatchewan, N.W.T., Yukon,  
Western U.S.A.

Seven years geophysicist with  
White Geophysical Inc. and Western  
Geophysical Aero Data.



**STATEMENT OF QUALIFICATIONS**

**NAME:** WHITE, Glen E., P.Eng.

**PROFESSION:** Geophysicist

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

**PROFESSIONAL ASSOCIATIONS:** Registered Professional Engineer,  
Province of British Columbia.

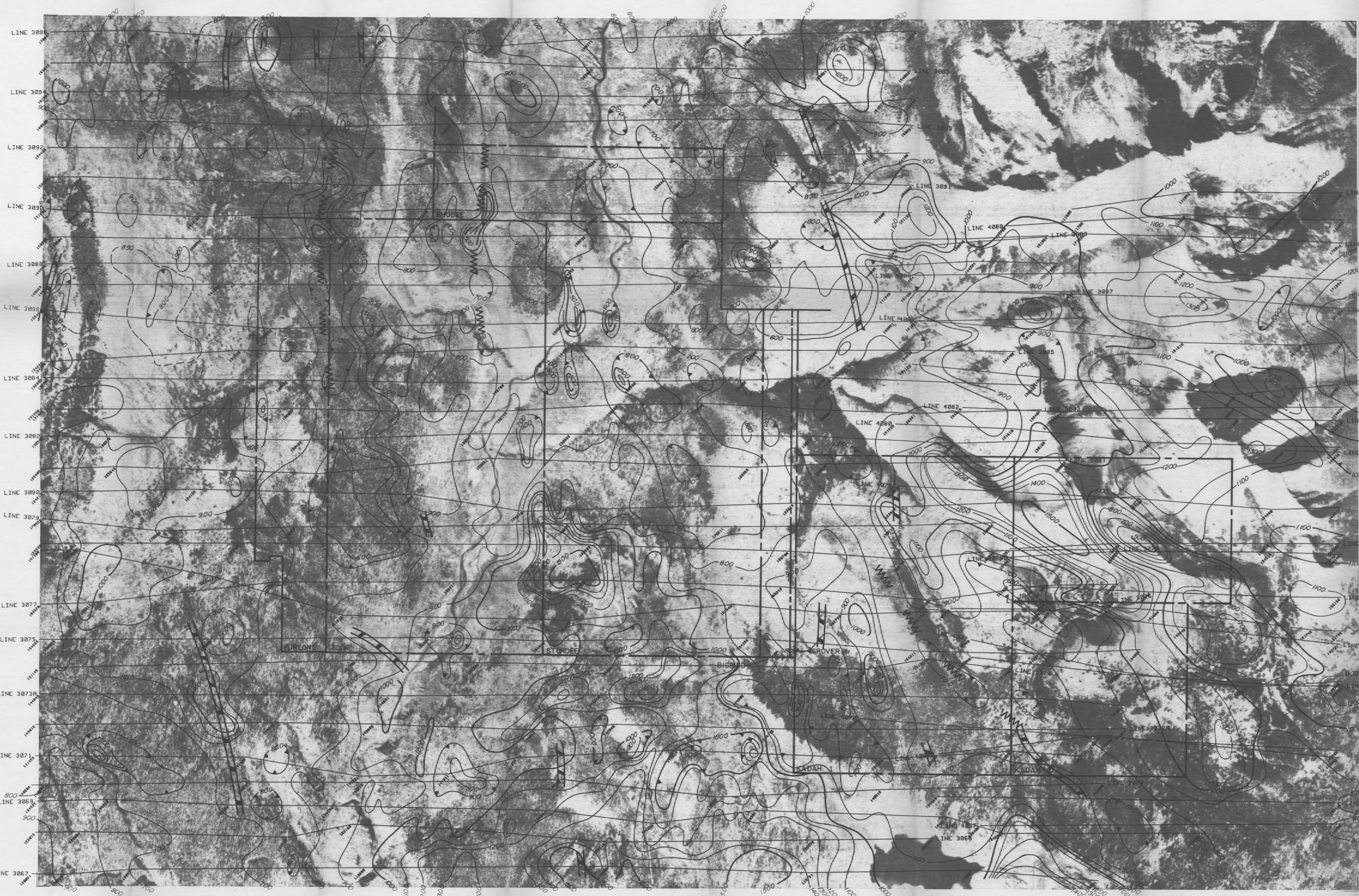
Associate Member of Society of Exploration  
Geophysicists.

Past President of B.C. Society of Mining  
Geophysicists.

**EXPERIENCE:**

- Pre-Graduate experience in Geology -  
Geochemistry - Geophysics with Anaconda  
American Brass.
- Two years Mining Geophysicist with Sulmac  
Exploration Ltd. and Airborne Geophysics  
with Spartan Air Services Ltd.
- One year Mining Geophysicist and Technical  
Sales Manager in the Pacific north-west for  
W.P. McGill and Associates.
- Two years Mining Geophysicist and  
supervisor airborne and ground geophysical  
divisions with Geo-X Surveys Ltd.
- Two years Chief Geophysicist Tri-Con  
Exploration Surveys Ltd.
- Fourteen years Consulting Geophysicist.
- Active experience in all Geologic provinces  
of Canada.

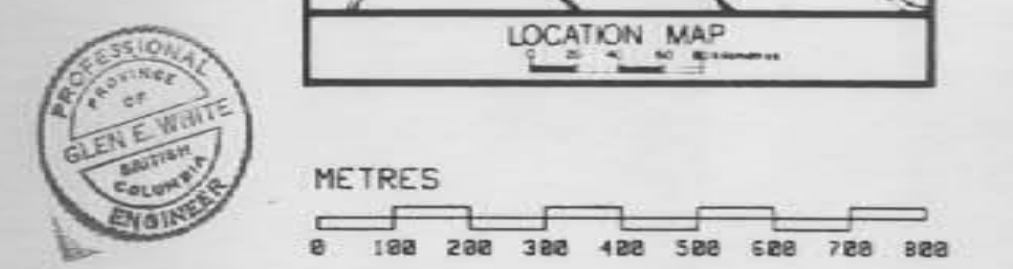




KEY

INSTRUMENT: Barringer M-123 Magnetometer  
 Data corrected for diurnal variations  
 Base value= 58020 nT  
 Contour interval= 100 nT  
 Sensor Elevation = 60 metres

--- Claim boundary  
 ■ Claim post  
 ○ Magnetic Low  
 WWW Inferred Fault  
 VLF-EM Conductor



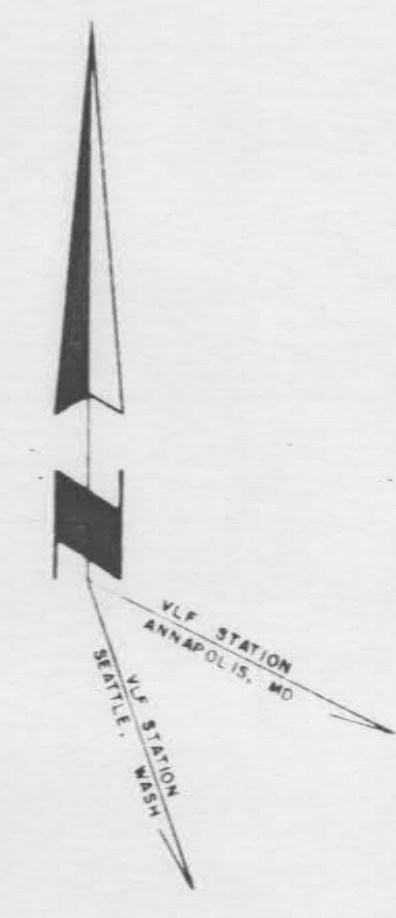
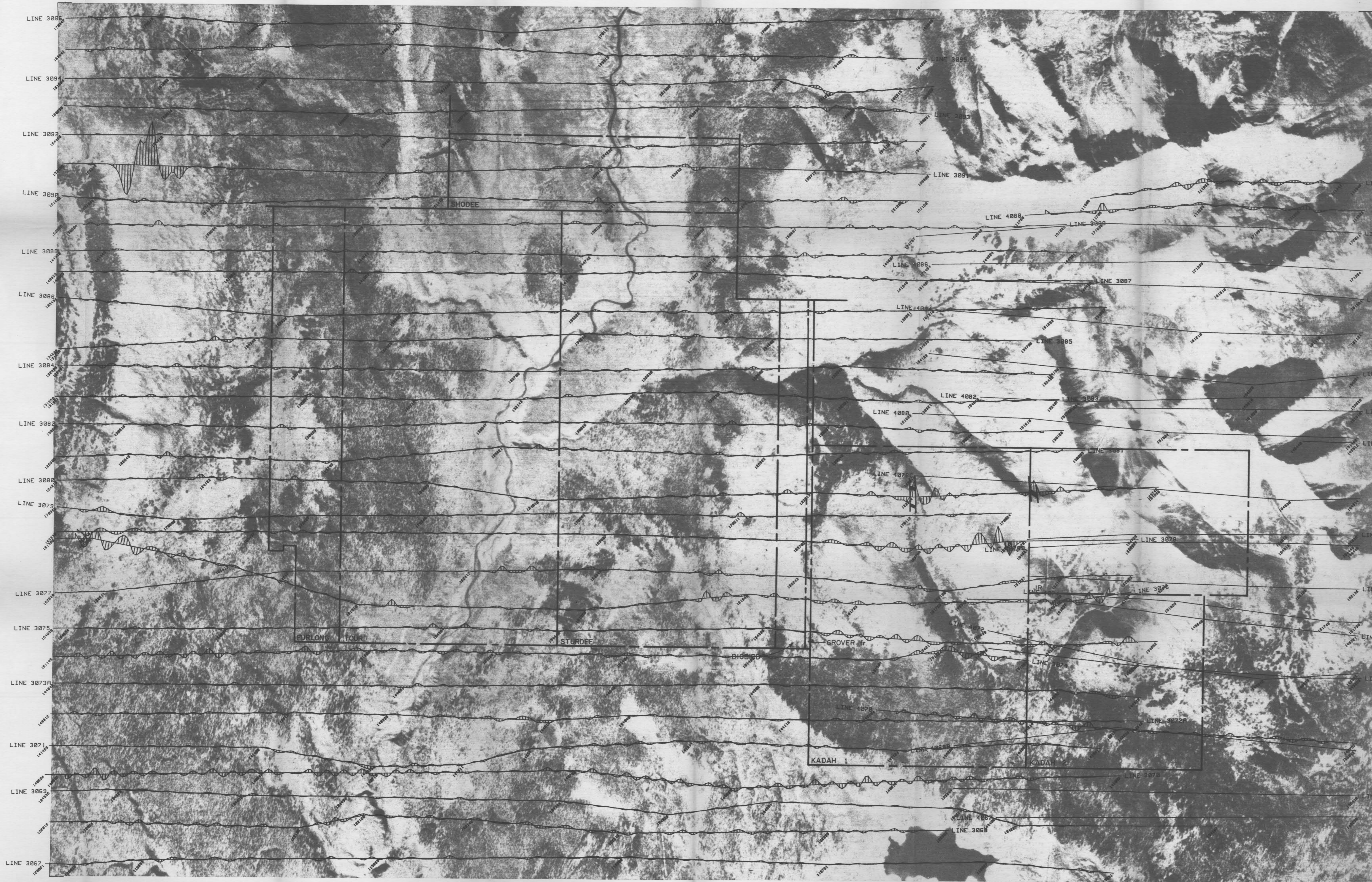
Western Geophysical Services Ltd.

ENERGEX MINERALS LTD.  
 STURDEE GROUP  
 MAGNETIC CONTOUR MAP  
 TOTAL FIELD INTENSITY (nT)

To accompany the Geophysical Report on the Sturdee Claim Group

DATE: FEB-MAR/86

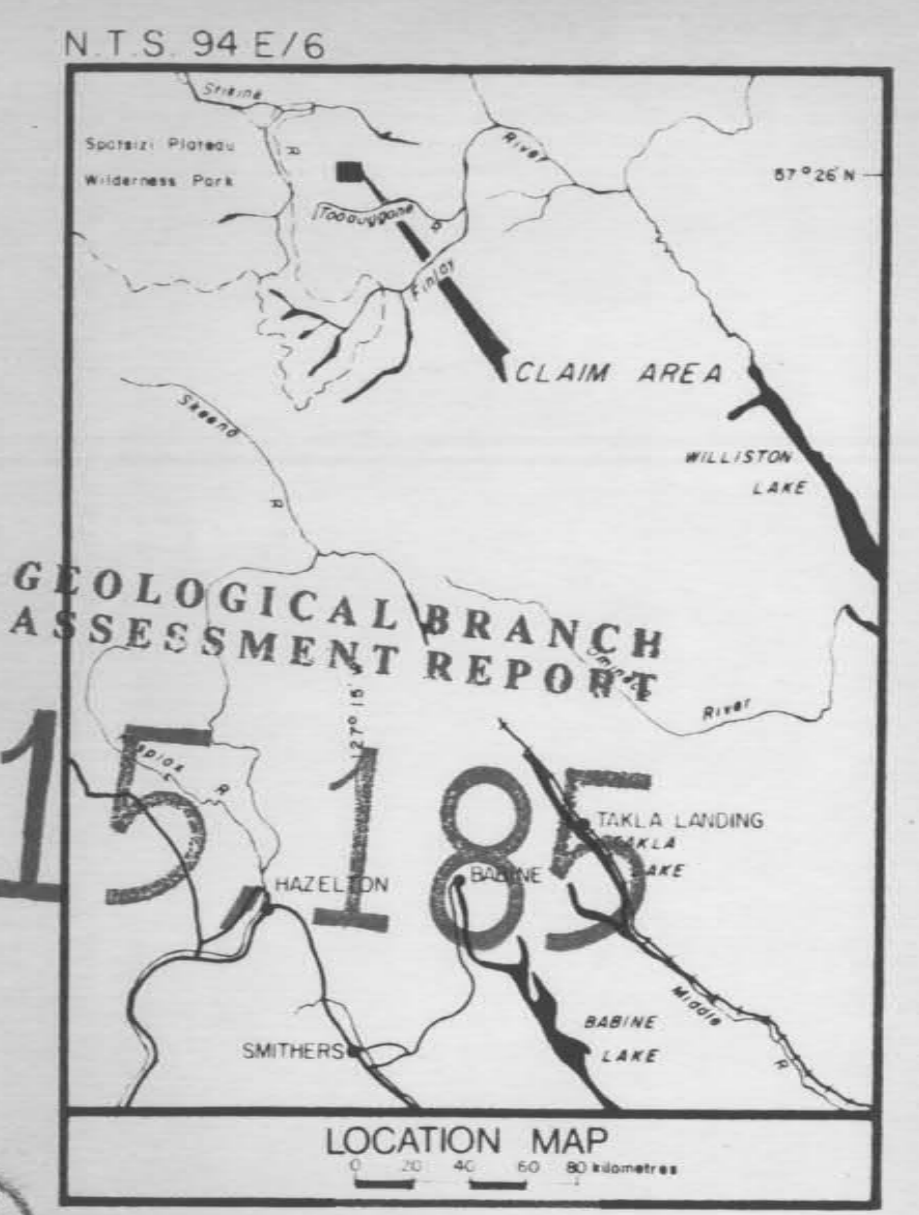
FIG.: 2



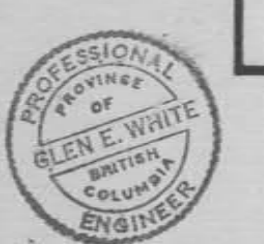
KEY

INSTRUMENT: Sabre Total Field Intensity VLF-EM  
 Transmitter Station: Seattle, Wa. (24.8 Khz.)  
 Vertical Scale: 10%/cm.  
 Sensor Elevation: 60 metres

--- Claim boundary  
 ■ Claim post  
 WWW Inferred Fault  
 --- VLF-EM Conductor Axis



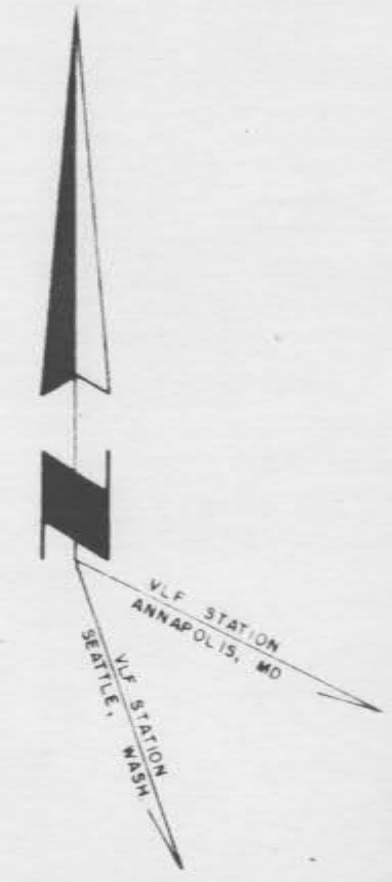
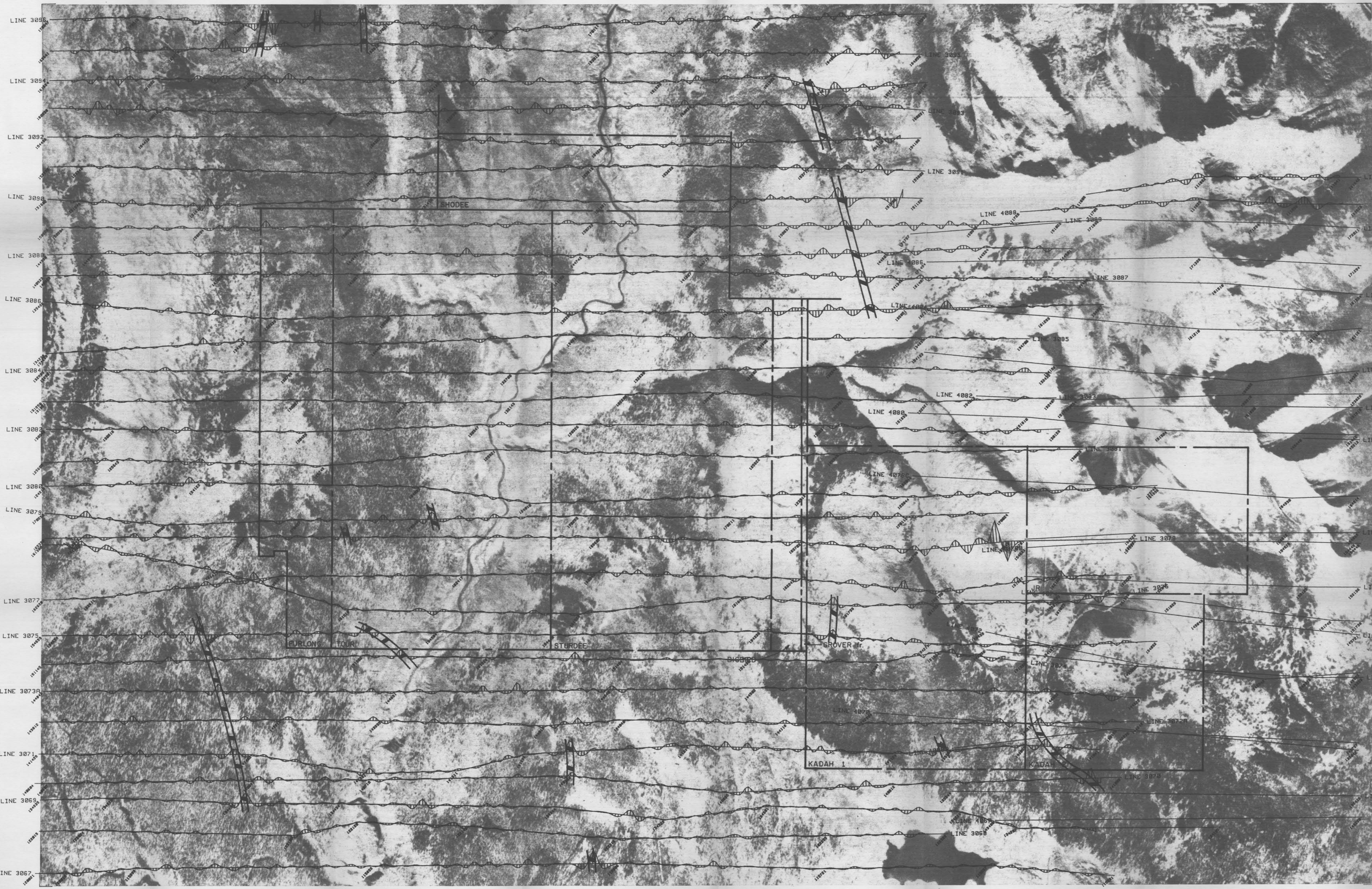
*Western Geophysical Aero Data Ltd.*



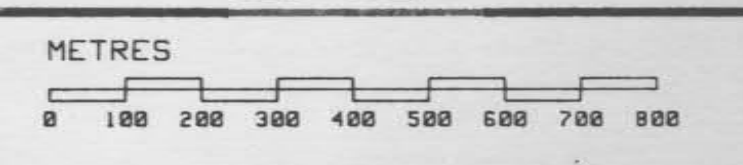
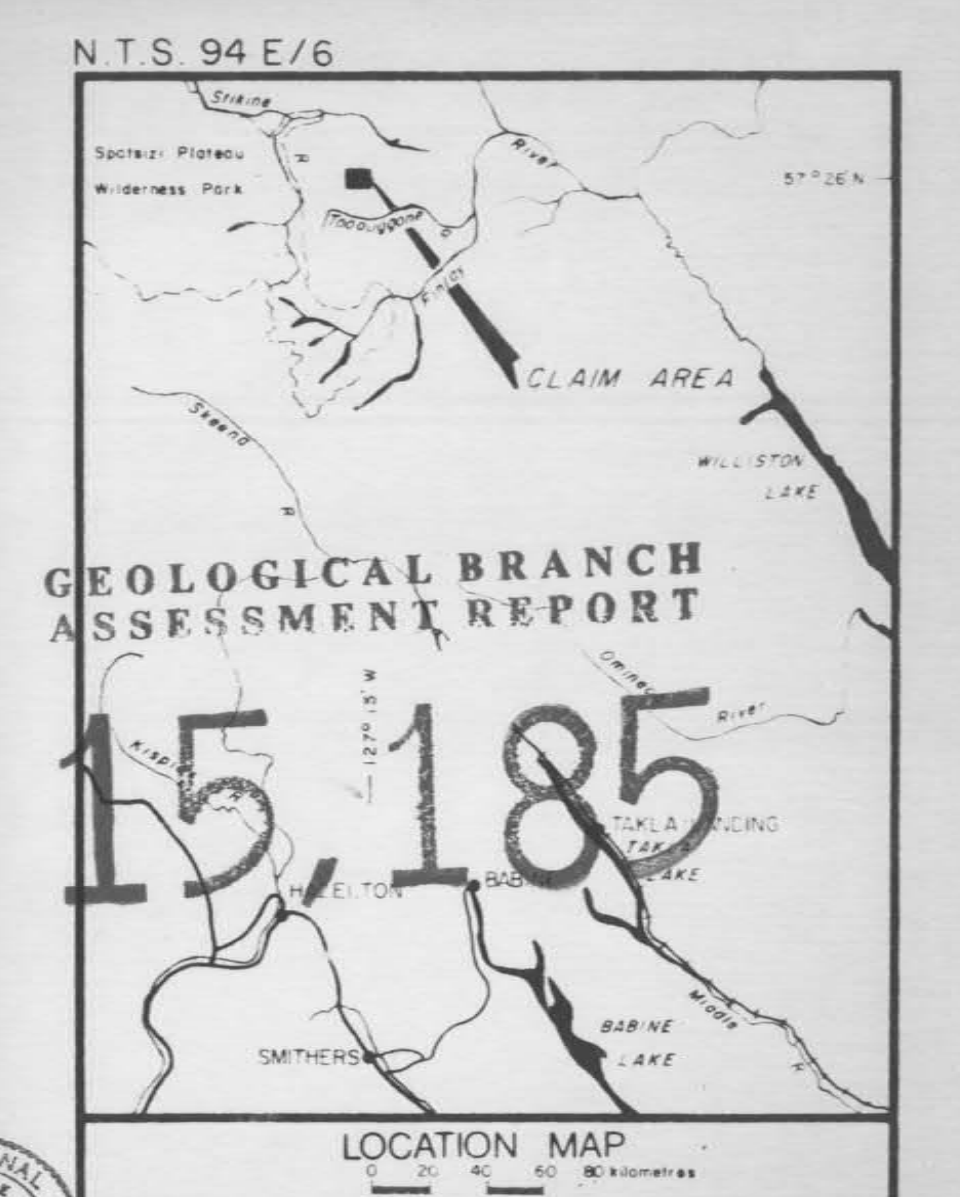
ENERGEX MINERALS LTD.  
 STURDEE GROUP  
 VLF-EM PROFILE MAP (SEATTLE)  
 TOTAL HORIZONTAL FIELD INTENSITY (%)

To accompany the Geophysical Report on the Sturdee Claim Group

DATE: FEB-MAR/86 FIG.: 3



**KEY**  
 INSTRUMENT: Sabre Total Field Intensity VLF-EM  
 Transmitter Station: Annapolis, Md. (21.4 Khz.)  
 Vertical Scale: 10%/cm.  
 Sensor Elevation: 60 metres  
 --- Claim boundary  
 ■ Claim post  
 WWW Inferred Fault  
 III VLF-EM Conductor Axis



*Western Geophysical Services Ltd.*

To accompany the Geophysical Report on the Sturdee Claim Group

**ENERGEX MINERALS LTD.**  
 STURDEE GROUP  
 VLF-EM PROFILE MAP (ANNAPOLIS)  
 TOTAL HORIZONTAL FIELD INTENSITY (%)  
 DATE: FEB-MAR/86  
 FIG.: 4