85-448-13768

GOLDWEST RESOURCES LTD.
GEOPHYSICAL REPORT
ON AN

AIRBORNE VLF-ELECTROMAGNETOMETER
AND
MAGNETOMETER SURVEY
INKAMEEP,KETTLE,PICTOU,NORTH STAR CLAIMS
GREENWOOD MINING DIVISION

LAT.49°08'N LONG.119°11'W NTS 82E/3E

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Geophysicist
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Consulting Geophysicist

DATE OF WORK: May 22, 1985
DATE OF REPORT: June 26, 1985

WESTERN GEOPHYSICAL AERO DATA LTD.

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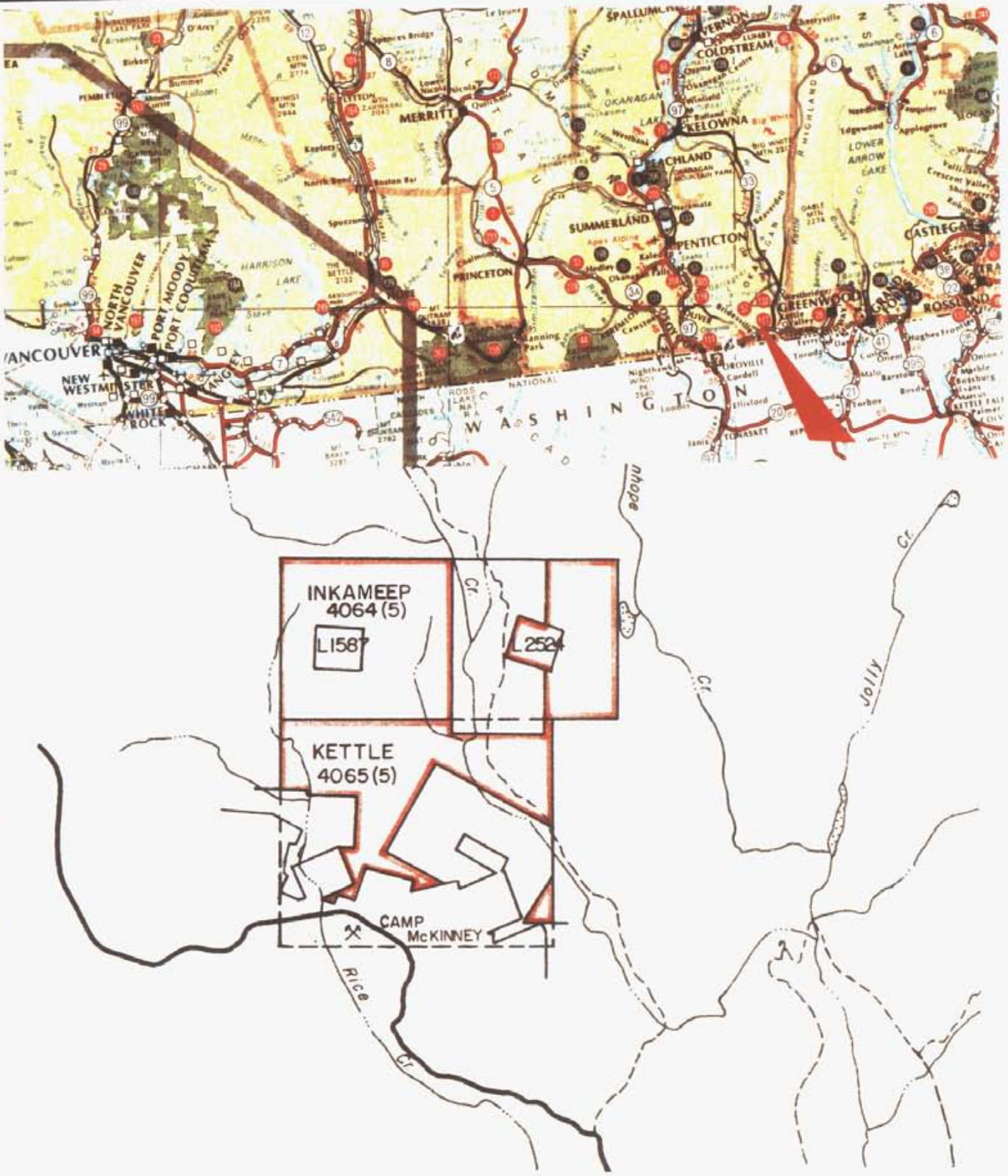
ILLUSTRATIONS



GOLDWEST RESOURCES LTD.
—INKAMEEP & KETTLE CLAIMS—
LOCATION AND CLAIMS MAP

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FIGURE 1

INTRODUCTION

A program of airborne magnetometer and VLF-electromagnetometer surveying was conducted on behalf of Goldwest Resources Ltd. across their Inkameep, Kettle, Pictou and North Star claims in the Camp McKinney area of southcentral B.C. The survey was flown on May 22, 1985 and totalled approximately 102 kilometres in length.

The Camp McKinney area was one of the early lode gold camps of B.C. It was the intention of this survey to determine whether a magnetic or electromagnetic signature could be associated with an old producing area along the southern claim boundary and if so, search for extensions to the area or similar geophysical responses elsewhere.

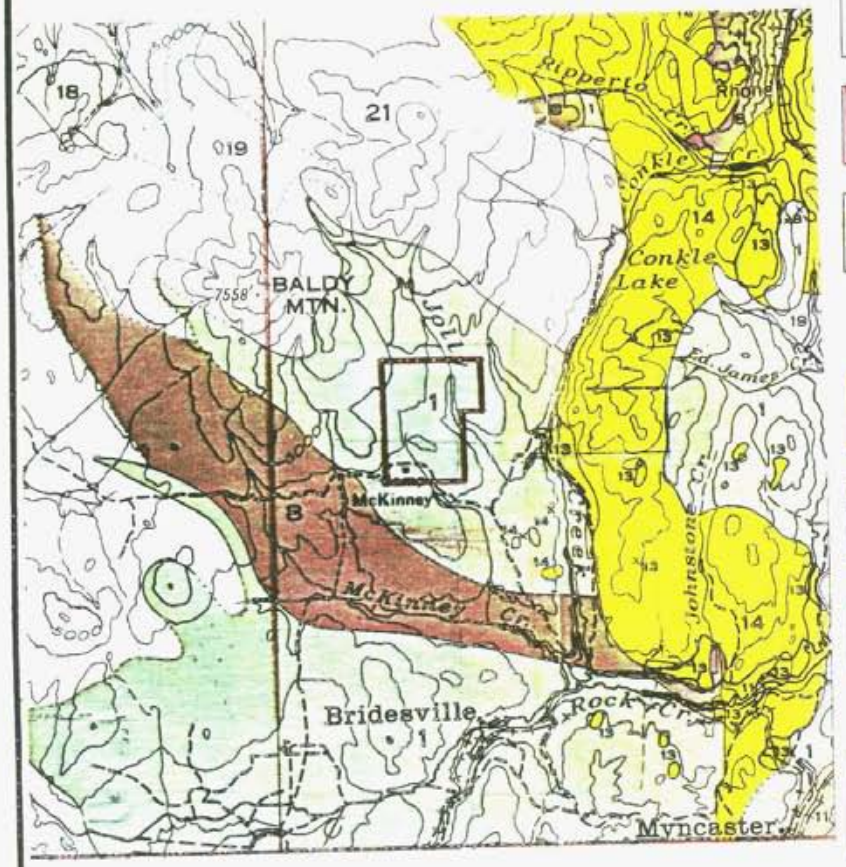
PROPERTY

The property consists of the claims listed below. Some of the mineral rights in the area covered by these claims are owned under different vehicles as illustrated on Figure 1.

CLAIM NAME	RECORD NO.	UNITS	EXPIRY DATE
INKAMEEP	4064	18	May 22, 1985
KETTLE	4065	20	May 22, 1985
PICTOU	1801	1 (RVCG)	Sept.26, 1985
NORTH STAR	1802	1 (RVCG)	Sept.26, 1985

LOCATION AND ACCESS

The claim group straddles Rock Creek, some 10 kilometres north of the town of Bridesville and 40 kilometres east of Osoyoos, B.C. The claims lie within the Greenwood Mining Division and NTS 82E/3E. The approximate geographical co-ordinates are latitude 49°08'N and longitude 119°11'W.



SHUSWAP COMPLEX

21	Biotite granite and granodiorite, mainly massive
20	Hornblende and hornblende-biotite granodiorite, and quartz diorite, massive and gneissic
19	Undivided Shuswap, mainly granite-gneiss, granodiorite-gneiss, pegmatite
18	Banded gneiss (paragneiss) amphibolitic and micaceous schists
17	Sheared and gneissic granodiorite and diorite

14	Basalt, andesite; some dacite and rhyolite; tuff, etc.
13	Talus debris, shale, sandstone, conglomerate, tuffaceous beds, thin coaly seams
8	Mainly diorite and quartz diorite

CARBONIFEROUS (?)

1	Siliceous and micaceous schists, argillite, quartzite, conglomerate, limestone; amphibolitic and chloritic schists; andesitic lava and tuff; basic intrusive bodies

LOCAL GEOLOGY (G.S.C.)

Western Geophysical Aero Data Ltd.

PLATE 1

A well maintained all weather road which intersects B.C. highway #3 approximately 3 kilometres east of Bridesville provides direct access to Camp McKinney and the southern part of the KETTLE claim. Additionally, a logging road leaves this main route and follows Rock Creek providing access to the northern part of the claim group (see Figure 1).

LOCAL GEOLOGY

The Geological Survey of Canadas' open file map #538A shows the claims area to be underlain entirely by the Permian Anarchist Group. In this area the Anarchist group consists very largely of highly metamorphosed sedimentary rocks but includes altered greenstones and possibly altered intrusive rocks. The sedimentary members of the group are the altered equivilents of quartzite, slate and limestone, micaceous quartzites, mica schists, and crystalline limestone. The sheared greenstones possibly represent both intrusive and extrusive types.

A second group of rocks within the Anarchist series are light grey, granitic rocks, quite generally gneissic, the outcrops of which have in some cases a slightly rusty appearance. Quartz and microline predominate with orthoclase and albitic-oligoclase generally present. The granitic rocks are intrusive into the schists of the Anarchist series.

Another group of rocks within the Anarchist series consists of sheared basic intrusives which can in local areas be represented as serpentine with considerable pyrite development in association with shear zones.

Feldspar porphyry "dykes" are also common in the area. The rock is described as a pale pink to flesh colored, fine grained rock with granitic texture. Quartz is fairly common and feldspar, shreds of biotite, hornblende, small individuals of apatite and some iron ore make up the balance of the rock.

The gold bearing mineral zones at Camp McKinney are mainly of quartz veins occurring in the schists of the Anarchist series and in general paralleling the strike and dip of the schistosity. The quartz veins are mineralized with pyrite accompanied by galena and zinc blende and carry in places good values in gold. With only pyrite in the veins, the gold values are low.

South of Camp McKinney, gold mineralization is associated with shear zones within volcanic rocks with little or no quartz. The zones are "from 3 to 4 feet wide" and are impregnated with considerable amounts of ankeritic carbonates. Abundant pyrite is disseminated throughout the rock in the vicinity of the shear zones.

Placer gold has been derived from the creeks in the Camp McKinney area - the more significant ones being McKinney and Rock Creeks with reported values from Jolly Creek, a northern tributary of Rock Creek.

PREVIOUS WORK

The Camp McKinney area was one of the early lode gold camps of B.C., producing gold as early as 1894. The authors are however, unaware of any recent exploration activity which has been applied directly to the Goldwest Resources Ltds' claim group.

AIRBORNE VLF-ELECTROMAGNETIC AND MAGNETIC SURVEY

This survey system 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.

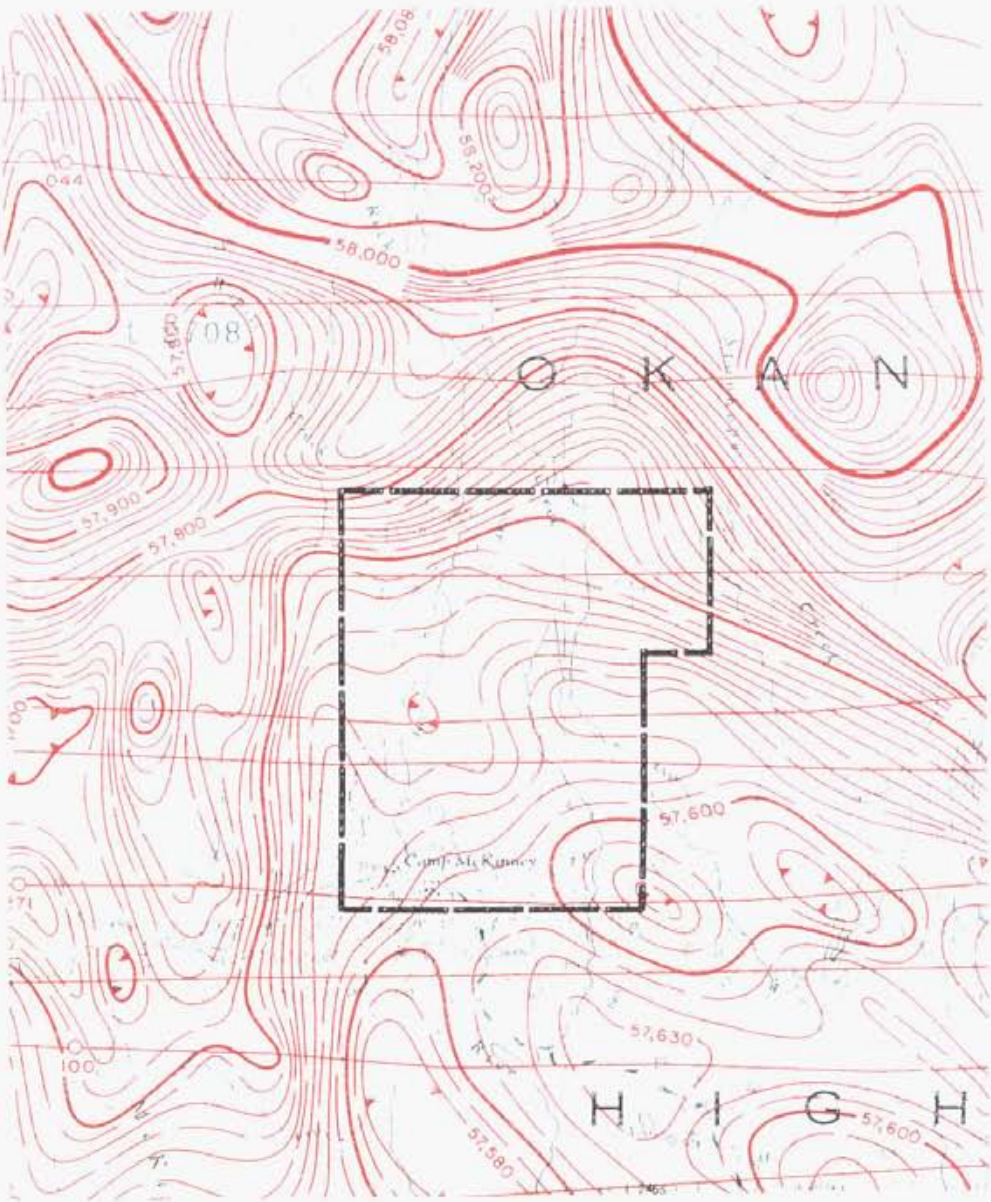
Continuous measurements of the earth's total magnetic field intensity and of the total horizontal VLF-EM field strength of two transmission frequencies are stored in three independent modes: an analogue strip chart recorder, digital magnetic tapes and a digital video recovery system. A three-pen analogue 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 on-board 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.



HIGH LEVEL AIRBORNE MAGNETIC MAP

Western Geophysical Aero Data Ltd.

PLATE 2

DISCUSSION OF RESULTS

The airborne survey was flown on May 22, 1985 and totalled some 102 kilometres on east-west oriented lines spaced at 200 metre intervals. The magnetic data is presented in contour form as Figure 2 of this report and the VLF-EM data for the Seattle and Annapolis frequencies as profiles on Figures 3 and 4 respectively.

A major powerline crosses the KETTLE claim as shown on the accompanying geophysical maps. Magnetic readings within 150 metres of this feature were unreliable. The powerline also introduced a regionally high noise level in the VLF-EM data. This is particularly evident on the Annapolis data because of the high amplification required to measure the weaker Annapolis signal.

The magnetic map (Figure 2) shows very good correlation to the high altitude government magnetic survey presented as Plate 2. The claims area reflects relatively low magnetic intensities surrounded to the northeast, north and west by regional magnetic highs. This latest survey does however delineate a number of more subtle trends not observed on the regional survey. The southern most claim (KETTLE) is crossed by four northwest-southeast trending magnetic bands which, from southwest to northeast, are alternately higher and lower than the background magnetic intensity. Each of these zones appears to consist of small, discontinuous magnetic anomalies which align to form the more regional trend. Camp McKinney is located directly on the southernmost band of magnetic highs.

No similar magnetic banding is observed on the northern claims. The magnetic anomalies (both highs and lows) are similar in size to those observed to the south but are dominantly oriented north-south and do not align to form regional trends. The one unit NORTH STAR claim, is positioned directly over a small magnetic high and immediately west of a

narrow magnetic low. A second isolated magnetic high is located along Rock Creek near the centre of the INKAMEEP claim. The eastern border of the INKAMEEP claim is characterized by anomalous magnetic lows.

The VLF-EM data is presented as profiles on Figures 3 and 4. The Annapolis frequency data (Figure 4) contains more definitive responses than the Seattle data. The map is dominated by a zone of high amplitude responses, trending south from line 17 and closely following the course of Rock Creek. The VLF-EM trend splits near line 9 with one arm heading southeasterly, continuing to follow Rock Creek. The second arm strikes southwesterly and is mapped as far south as the power line. A projection, along strike, of this second feature intersects Camp McKinney. It is possible that Rock Creek is following a geological fault which may be related to the mineralization at Camp McKinney.

Most of the surface waterways in the survey area generate anomalous VLF-EM responses of varying degrees as evident on Figure 5. Those anomalies which do not correlate with any such features, or appear as part of a larger trend have been flagged on the appropriate profiles and transferred to the magnetic contour map.

SUMMARY AND CONCLUSIONS

Approximately 102 line kilometres of airborne magnetometer and VLF-electromagnetometer surveying was completed across the INKAMEEP, KETTLE, PICTOU and NORTH STAR claims in the Camp McKinney area on May 22, 1985. At Camp McKinney, along the southern claim border, gold has been produced from quartz veins occurring in schists of the Anarchist series and geological information suggests the claims area is completely underlain by similar rocks.

Both the high altitude regional magnetics and this latest detailing survey show Camp McKinney and the claim group to be situated in an area of quiet magnetic lows surrounded to the west and north by large magnetic highs. This latest survey shows Camp McKinney to be situated directly on top of a very subtle southeasterly trending magnetic high. A slightly higher amplitude magnetic high parallels this trend approximately 1 kilometre to the northeast. These responses likely reflect similar geological structures or lithologies.

The northernmost claims contain anomalous magnetic responses, similar in amplitude to those observed near Camp McKinney. These anomalies are oriented north-south and do not form large trends as observed to the south but could originate from similar geological structures or lithologies.

The VLF-EM data is relatively noisy, probably a result of the power lines crossing the property, but reflect a predominance of northeast-southwest lineations. The strongest of these is positioned near the centre of the grid and a southwesterly projection of the trend passes through Camp McKinney. Although most of the responses correlate with surface waterways, it is highly probable that they also reflect a complex fault pattern. This interpretation is supported by the discontinuous nature of the southeasterly trending magnetic lineations.

RECOMMENDATIONS

The airborne survey has delineated a number of anomalous magnetic and conductivity anomalies which warrant further investigation. Particular attention should be afforded to the southeasterly trending magnetic high which parallels the trend associated with the Camp McKinney project.

The interference generated by the powerline crossing the property introduced a higher than normal noise level in the data and a minor amount of ground magnetometer and VLF-EM surveying are recommended to precisely locate the airborne delineated targets. Geochemical sampling and geological prospecting across the anomalous trends are recommended as the next exploration phase.

Contingent upon encouraging results, trenching and/or diamond drilling may be warranted.

Respectfully submitted,

E.Trent Pezzot, B.Sc.,
Geophysicist

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

INSTRUMENT SPECIFICATIONS

BARRINGER AIRBORNE MAGNETOMETER

MODEL:	Nimbin M-123
TYPE:	Proton Precession
RANGE:	20,000 to 100,000 gammas
ACCURACY:	± 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 SPECIFICATIONS

SABRE AIRBORNE VLF SYSTEM

Source of Primary Field:	- VLF radio stations in the frequency range of 14 KH_z to 30 KH_z.
Type of Measurement:	-Horizontal field strength
Number of Channels:	-Two; Seattle, Washington at 24.8 KH_z -Annapolis, Maryland at 21.4 KH_z
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 Specifications

FLIGHT PATH RECOVERY SYSTEM

i) 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 ($60H_Z$)
Tape:	Betamax ½" 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 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 50/60H_z (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 3 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.

COST BREAKDOWN

Field Personnel:		
Geophysicist	½ day @ 400.00/day	200.00
Technician	½ day @ 300.00/day	150.00
	Subtotal	350.00
Geophysicist, Processing, Supervision:		
Flight Path Recovery		435.00
Flight Path Digitizing		175.00
Data Analysis, Tapes, Charts		800.00
Computer Processing		
i) Magnetic map & Contouring		950.00
ii) VLF-EM Seattle		435.00
iii) VLF-EM Annapolis		435.00
	Subtotal	3,230.00
Support Charges;		
Instrument Lease		500.00
Helicopter & Fuel	4.1 hrs. @ 550/hr.	2,255.00
Vehicle		40.00
Meals & Accommodations		15.00
Photomosaic		480.00
Materials		80.00
Drafting		150.00
Reproduction		280.00
Interpretation & Report Compilation		820.00
	Subtotal	4,620.00
	TOTAL	8,200.00

STATEMENT OF QUALIFICATIONS

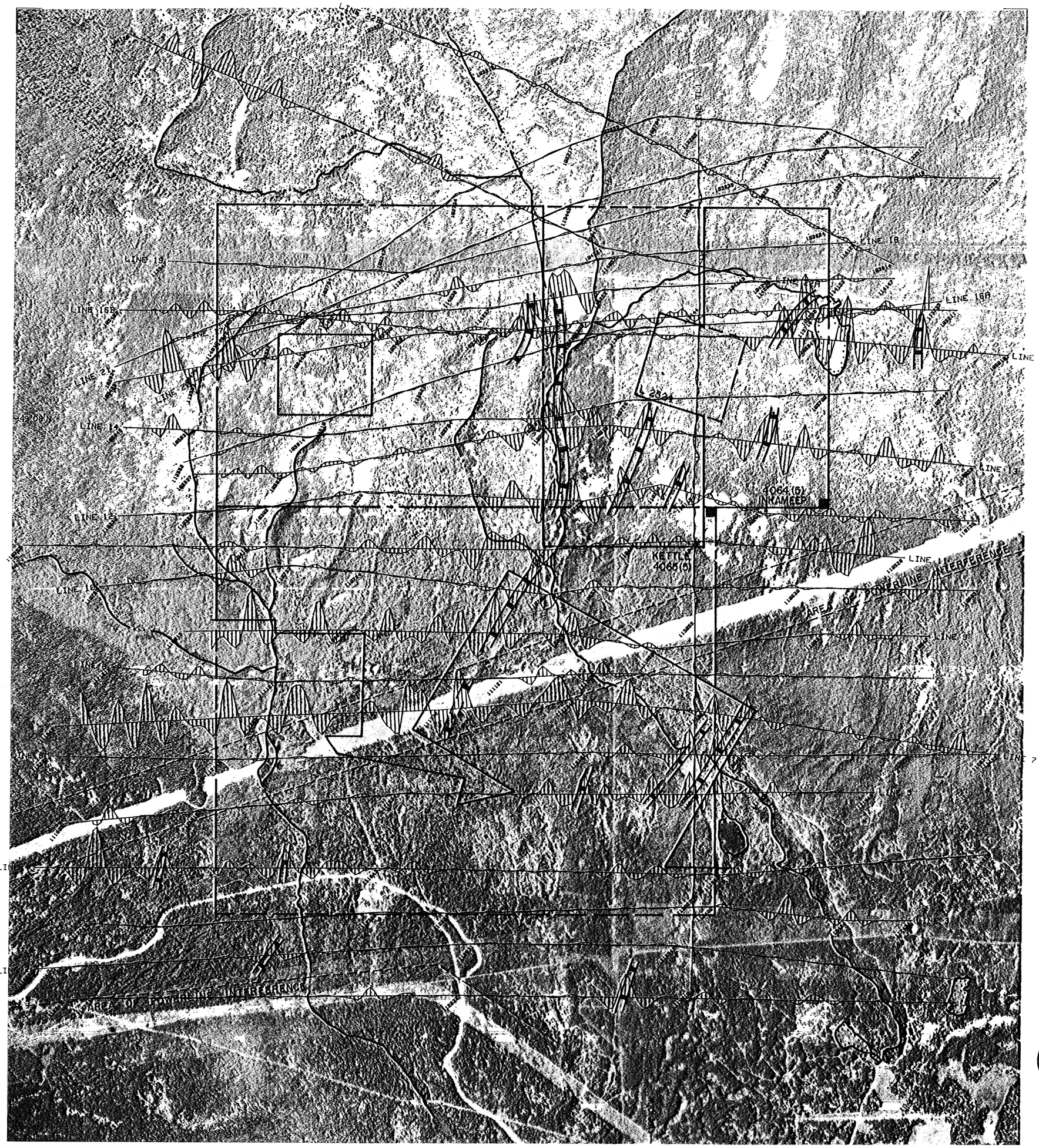
NAME:	PEZZOT, E. Trent
PROFESSION:	Geophysicist - Geologist
EDUCATION:	University of British Columbia - B.Sc. - Honors Geophysics and Geology
PROFESSIONAL ASSOCIATIONS:	Society of Exploration Geophysicist
EXPERIENCE:	Three years undergraduate work in geology - Geological Survey of Canada, consultants.
	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.
	Six years geophysicist with Glen E.White Geophysical Consulting & Services Ltd.

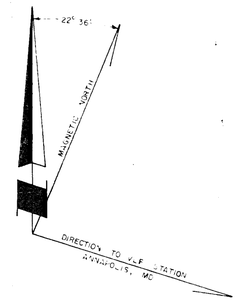
STATEMENT OF QUALIFICATIONS

NAME:	WHITE, Glen E., P.Eng.
PROFESSION:	Geophysicist
EDUCATION:	B.Sc. Geophysicist - 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.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,768





KEY

INSTRUMENT: Sabre Total Field Intensity VLF-EM

Transmitter Station, Annapolis (21.4 Khz.)

Data corrected for long period terrain effects

Vertical Scale = 40%/cm.

Roads

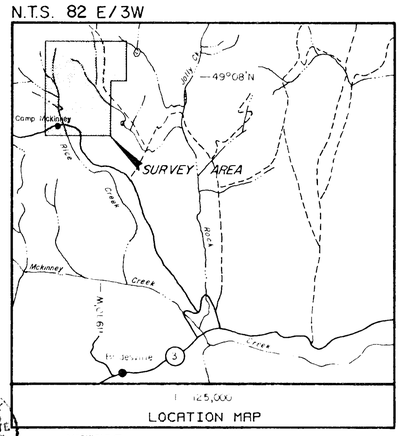
Claim boundary

Claim post

Inferred Fault

VLF-EM Conductor

N.T.S. 82 E/3W



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
GLEN E. WHITE

METRES
0 100 200 300 400 500 600 700 800

Western Geophysical Aero Data Ltd.

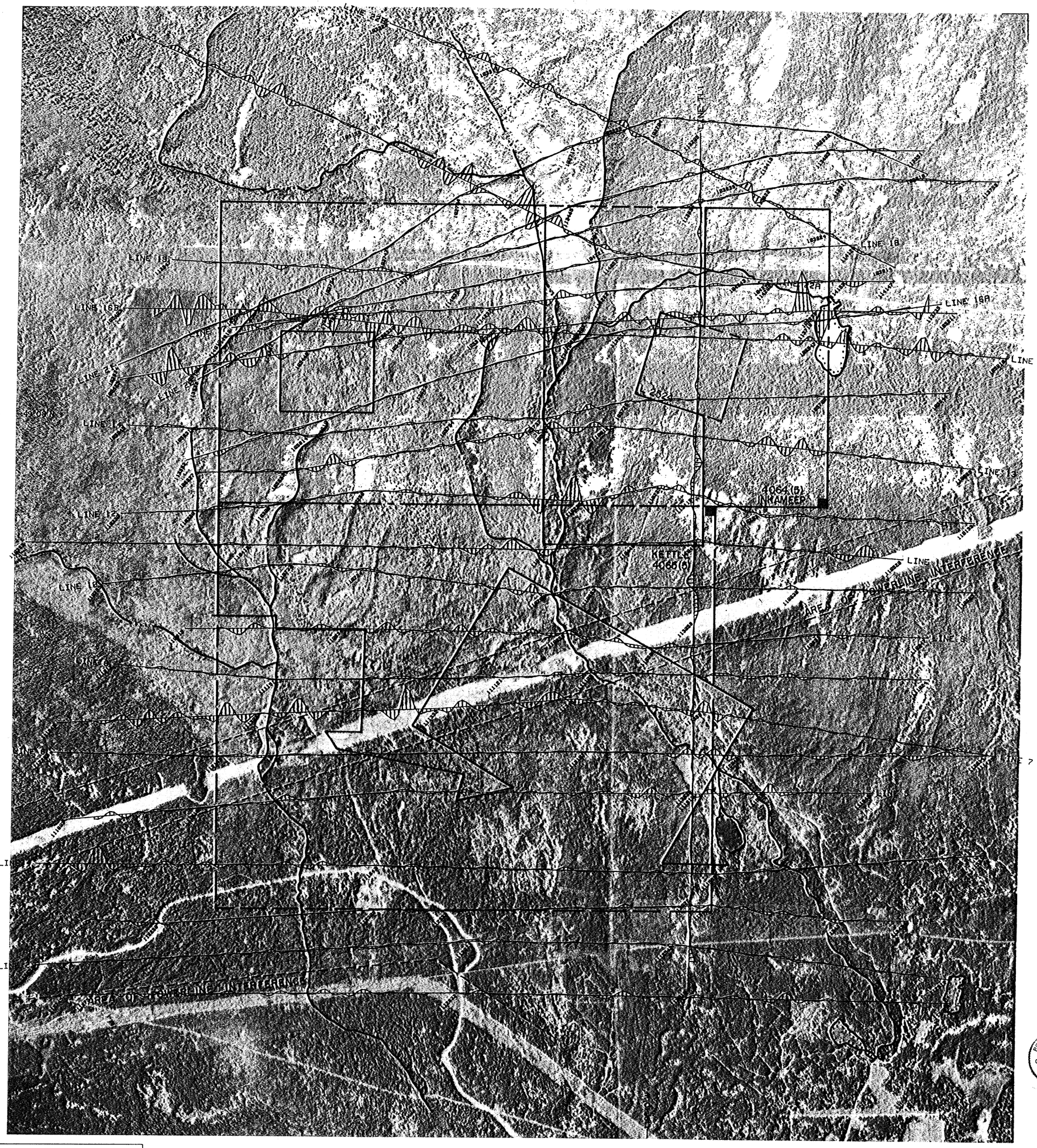
GOLDWEST RESOURCES LTD.
CAMP McKINNEY PROJECT
VLF-EM PROFILES (ANNAPOLIS)
TOTAL HORIZONTAL FIELD INTENSITY (%)

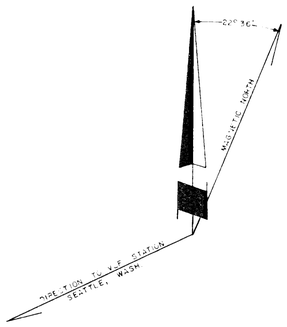
DATE: MAY 22/85 | FIG.: 4

...o accompany the Geophysical Report on the INKAMEEP & KETTLE Claims

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,768





KEY

INSTRUMENT: Sabre Total Field Intensity VLF-EM

Transmitter Station, Seattle (24.8 Khz.)

Data corrected for long period terrain effects

Vertical Scale = 20%/cm.

Roads

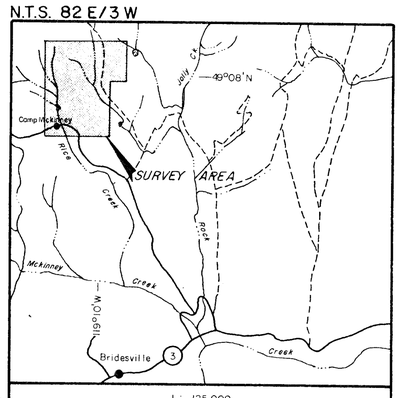
Claim boundary

Claim post

Inferred Fault

VLF-EM Conductor

N.T.S. 82 E/3 W



METRES

0 100 200 300 400 500 600 700 800

PROVINCE OF BRITISH COLUMBIA
GLEN E. WHITE
ENGINEER

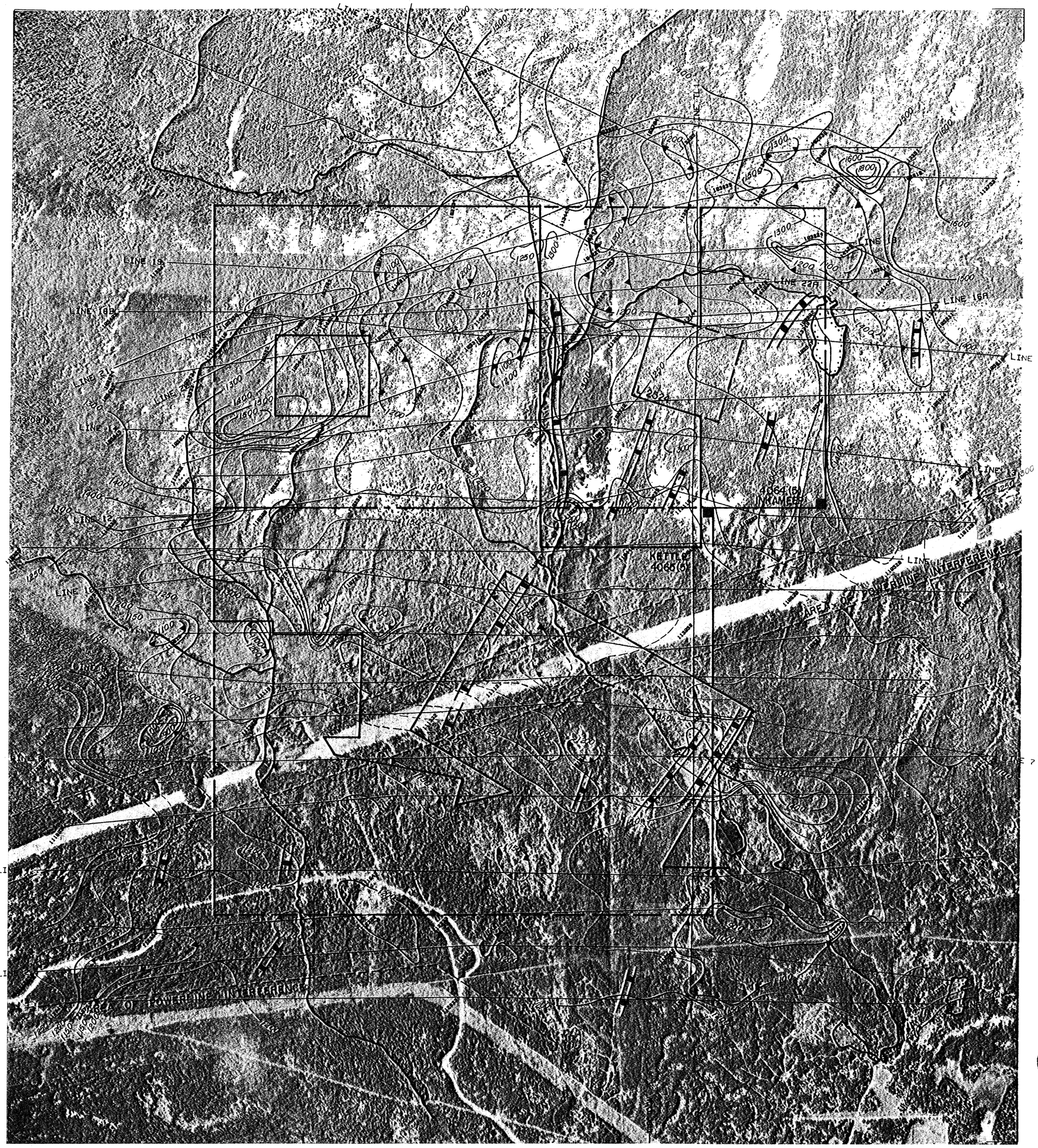
Western Geophysical Aero Data Ltd.

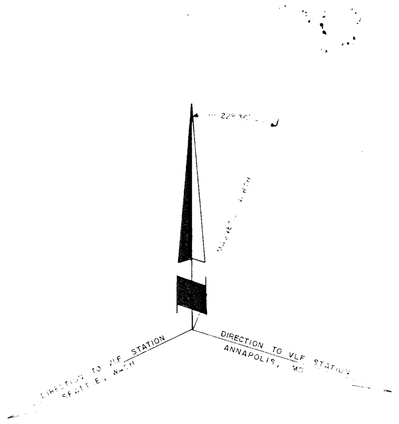
To accompany the Geophysical Report on the INKAMEEP & KETTLE Claims

GOLDWEST RESOURCES LTD.
CAMP McKINNEY PROJECT
VLF-EM PROFILES (SEATTLE)
TOTAL HORIZONTAL FIELD INTENSITY (%)

DATE: MAY 22/85

FIG.: 3





GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,768

KEY

INSTRUMENT: Barringer M-123 Magnetometer

Data corrected for diurnal variations

Base Value= 56000 gammas

Contour Interval= 100 gammas

Roads

Claim boundary

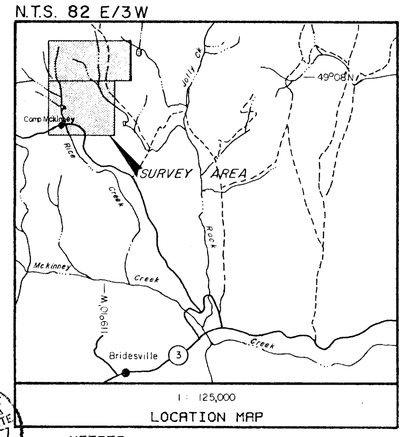
Claim post

Inferred Fault

VLF-EM Conductor

Magnetic Low

N.T.S. 82 E/3W



METRES

0 100 200 300 400 500 600 700 800

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA GLEN E. WHITE

Western Geophysical Aero Data Ltd.

To accompany the Geophysical Report on the INKAMEEP & KETTLE CLAIMS

GOLDWEST RESOURCES LTD.
CAMP McKINNEY PROJECT
MAGNETIC INTENSITY CONTOUR MAP
TOTAL MAGNETIC FIELD INTENSITY (GAMMAS)

DATE: MAY 22/85 | FIG.: 2