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REYMONT RESOURCES LTD. GEOPHYSICAL REPORT ON AN AIRBORNE MAGNETIC SURVEY UMI 3 AND UMI 4 CLAIMS CARIBOO MINING DIVISION LATITUDE: 53°09'N LONGITUDE: 122°12'W NTS 93G/1E AUTHORS: R.G. Hermary, B.Sc., Geophysicist Glen E. White, B.Sc., P.Eng., Consulting Geophysicist DATE OF WORK: November 6-12,1987 DATE OF REPORT: February 2,1988

> SUB-RECORDER RECEIVED FEB 1 1 1988 M.R. # ______ VANCOUVER, B.C.

GEOLOGICAL BRANCH ASSESSMENT REPORT

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INTRODUCTION

In August 1986 Western Geophysical Aero Data Ltd. conducted an airborne magnetic survey across the **Umi 3 and Umi 4** claims. Subsequently, Western Geophysical Aero Data Ltd. was commissioned by **Reymont Resources Ltd.** on November 5,1987 to recover, reprocess and examine in detail the magnetic data gathered across the **Umi 3 and Umi 4** claims.

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The Umi 3 and Umi 4 claims are situated within the northwesterly trending Quesnel Trough and lie between two significant gold discoveries; the Gabriel Resources zone to the northwest and the Mary Creek Resources discovery to the southeast. Very little outcrop is present on the claims. The claims are also covered by glacial till.

It is the intention of this survey and report to assist in the geological mapping of the area and direct ground exploration to any favorably anomalous locations. Approximately 80 line kilometers of data has been examined to evaluate the subject properties.

PROPERTY

The UMI 3 and Umi 4 claims are comprised of 40 contiguous units as described in the table below and illustrated on Figure 1.

CLAIM NAME	RECORD NUMBER	UNITS	RECORD DATE
UMI 3	7206	20	Nov.13,1985
UMI 4	7207	20	Nov.13,1985

LOCATION AND ACCESS

The property is located some 27 kilometres northeast of Quesnel, B.C. in the Cariboo Mining Division. The subject claims are located on NTS map sheet 93G/1E. The approximate geographical coordinates are latitude 53°09'N and longitude 122°12'W.

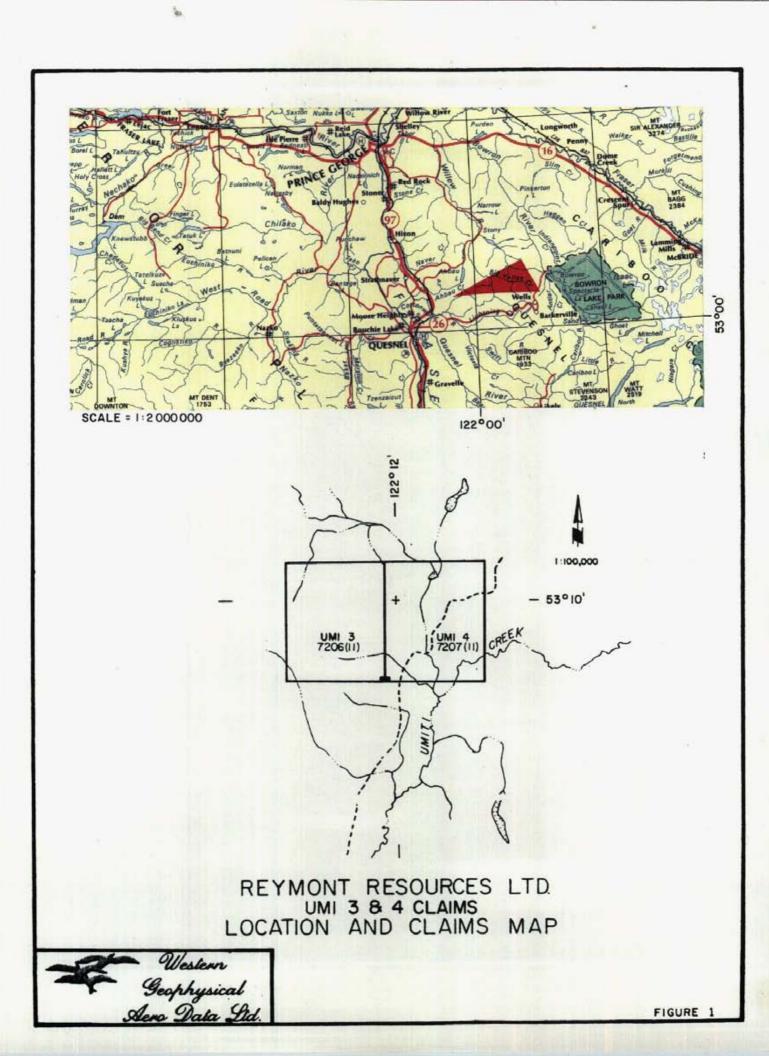
Logging activity in the area has provided an extensive road network which provides access to the property. These logging roads are accessible from both Highway 97 heading north from Quesnel and Highway 26 heading east from Quesnel.

GEOLOGY

The general geology of the claims area is outlined on G.S.C. map 1424A, Geology of the Parsnip River area. The area was originally mapped by Amos Bowman of the Geological Survey of Canada in 1885-86 and subsequently by H.W.Tipper, also of the G.S.C., in 1961 and further updated in 1974. The applicable portion of this map is reproduced as Figure 2 of this report.

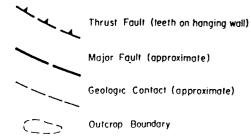
The Umiti Creek property lies within the northwesterly trending Quesnel Trough, which is predominantly underlain by the Upper Triassic - Lower Jurassic Takla Group. This unit consists of andesite flows, tuffs, agglomerate, basalt, breccia and argillite. The northwestern end of a sliver of Jurassic age shale, greywacke and conglomerate extends on to the UMI 4 claim. Early Cretaceous intrusions have been mapped both to the north and south of the subject property.

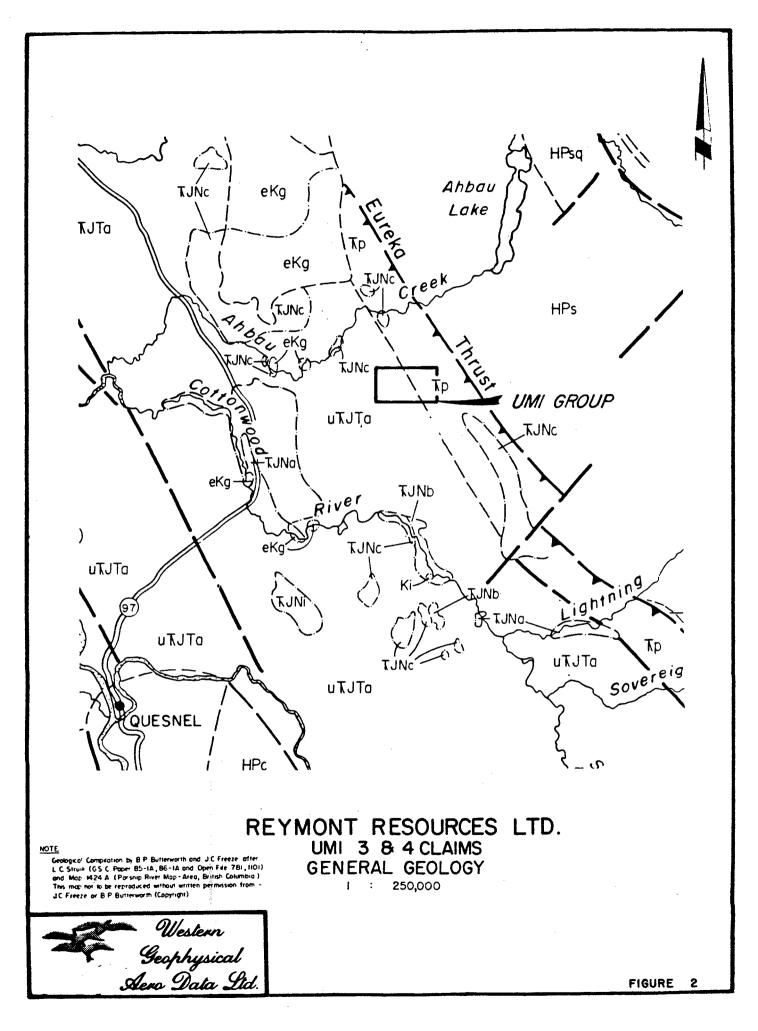
More detailed geological mapping of the property is not known of by the authors. Much of the claims area is overlain by glacial cover. The only known mineralization on



LEGE	ND	BARKERVILLE TERRANE
MIOCENE AND PLIOCENE MPvb Olivine basalt flows, breccia, tuff		HADRYNIAN AND PALEOZOIC Snowshoe Group HPs Undifferentiated grit, pelile, marble PPs grey and olive grey schistose, quartzite, schist, phyllite, marble, amphibolite, siltite and minor
OLIGOCENE AND MIOCENE OME Andesite, bosalt, dacite UPPER CRETACEOUS AND LOWER TERTIARY		white to dork grey quartzite. HPsq Grit, quartzite PIPsa Light grey orthoguartzite, grey schistose quartzite, schist, phyllite CARIBOO TERRANE
KTOL Rhyolite, docite, Irachyle, sondstone, shole, conglomerat		HADRYNIAN AND PALEOZOIC HPc Guyet Fm ; bosoli flow, aggl., limestone, conglomerate Black Stuart Group; chert, black pelife, sandstone
UPPER PALEOZOIC Cache Creek Group UPC Grey limestone, minor greenstone, chert and argililite, s ribbon chert and greenish micritic (?) limestone QUESNEL T UPPER TRIASSIC AND/OR LOWER JURASSIC Takta Group Td Diorite UTD Greywacke, siltstone, minor conglomerate UTD Sittite, pelite, limestone, minor bioclastic limestone Tp Phyllite, state	erpentinite, basalt, dark grey	Coriboo Group Vonks Peak and Midos Fm.; quartzite, phyllite, stillte. Yankee Belle Fm.; quartzite, phyllite. Cunningham Fm., limey marble Isaac Fm.; phyllite, calcareous phyllite, stillte, quartzite, marble Kaza Group Grit, quartzite, phyllite INTRUSIVE ROCKS LOWER CRETACEOUS Naver Pluton eKg Porphyritic granite, quartz monzonite, granodiorite, aplite and pegmatite Ki Biotire granite, quartz monzonite, monzonite, granodiorite (satellites of Nover Pluton) MIDDLE JURASSIC mJi Potossium feldspar mega crystalline hornblende quartz monzonite, granodiorite and granite JURASSIC OR YOUNGER UM Ultramotic intrusion LOWER TRIASSIC Takomkane Batholith ITg Porphyritic granite, granodiorite, quartz diorite, quartz monzonite
UPPER PALEOZOIC ? Pu Crooked amphibolite Serpentinite, amphibolite UPPER TRIASSIC UT Shale, sandstane UPPER PALEOZOIC UPSM Phyline, minor micritic ist, diorite, dacite tuff and aggl., dior, and minor serpentinite	N TERRANE grey and offive ribbon chert, slate and argillite, pillow basalt, brx.,	ITY Hornblende syenite and monzonite UNKNOWN AGE gn Augen granite, gneissic biolite granite

SYMBOLS





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the property consists of visible gold in panned concentrates obtained from Umiti Creek.

PREVIOUS WORK

Earlier work on the Umi 3 and 4 claims has consisted of an airborne survey, and a geological and geochemical report. An airborne magnetic and VLF-EM survey was conducted over the Umi 3 and 4 claims for Reymont Resources Ltd. in 1986. A geological and geochemical report on the Umiti Creek property was written for Kargen Development Corporation by J.C.Freeze of White Geophysical Inc. This report is dated January 1986 and was based on work done in November, 1985.

A total of 86 humus samples and six heavy mineral concentrate samples were collected and analyzed for gold, copper, lead and zinc. No strong anomalies were reported in either survey.

AIRBORNE MAGNETIC SURVEY

This survey simultaneously monitors and records the output signal from a proton precession magnetometer 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 is 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 direct, unfiltered recordings of the provides 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 The input signals are averaged and updated on the location. 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. The magnetic data was further processed by applying a second derivative filter, which is used to determine more precisely the local geological contacts and

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faults and remove large regional magnetic trends caused by very deeply buried structures. Furthermore, the second derivative filter enables a clearer and more precise interpretation of the magnetic data.

DISCUSSION OF RESULTS

The **Umi 3 and Umi 4** claims were surveyed on August 25,1986. In November 1987 eighty line kilometers of magnetic data was recovered and reprocessed in order to examine these claims and their surrounding area.

Survey lines were flown east-west and spaced at 200 metre centres with data being digitally recorded at one second intervals, providing an average station spacing of 25 meters. The sensors were towed beneath the helicopter and maintained an average terrain clearance of 60 meters. The magnetic data is presented in contour form on a photomosaic base map of the area as Figure 3. The second derivative magnetic data is presented in contour form on a photomosaic base map of the area as Figure 4.

The total field and second derivative magnetic data are very useful tools for mapping both regional and local geological structures. Many localized magnetic variations are observed which are attributed to lithological changes.

Three magnetic signatures are observed across the survey Firstly, possible dioritic intrusions appear area. as magnetic highs; typically with an intensity of greater than 58360 nT. Secondly, major faults and/or shear zones are associated with steep magnetic gradients. Finally, lithological contacts appear as changes in the magnetic gradient from steep to shallow and are usually associated with a broad and flat magnetic response. The magnetic response is interpreted as reflecting only the general geological environment of the area and does not map any mineralization directly.

The contoured total field and second derivative magnetic data on Figure 3 and 4 indicates possible intrusions, faulting, and contacts. The intrusions are evident by the high amplitude responses on both the total field and second derivative maps. Faulting is indicated by steep magnetic gradients on the total field magnetic contour map. However, on the second derivative contour map faulting is clearly evident by long linear zero level contours. Lithological contacts usually appear as a change in the magnetic gradient on the total field magnetic contour map and as low responses on the second derivative magnetic contour map. Both maps also give a flatter response along lithological contact. Some faults and contacts also appear as lineations on the photomosaic.

The magnetic contour map is dominated by a northwesterly trending magnetic high outlined by the 58300 nT contour level. The anomalous zone is approximately one kilometer wide at the southern edge of the claims and narrows to five hundred meters at the northwest corner of the claims. The second derivative magnetic contour map indicates that the high is not continuous but rather made up of several strong broken magnetic highs that are not as broad as the total field magnetic contour map indicates.

This high amplitude magnetic response is probably caused by Jurassic or Triassic intrusions of stocks and dykes of granodiorite or quartz diorite composition. The intrusions are probably covered by several hundred meters of glacial till and moraine. Thus, the intrusions produce a broad magnetic response.

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Steep magnetic gradients and long linear zero levels on the second derivative map indicates that the high amplitude magnetic response is bounded by faults. These faults trend north and northwest, and parallel the regional geology. The faults also parallel the major Eureka Thrust fault. The large thrust fault may have provided the necessary tension or compression to cause the faulting.

A lithological contact is apparent from the change in the magnetic gradient of the total field and a flatter and lower response in both the second derivative and total field magnetic contour maps. The contact is found in the eastern portion of the **Umi 4** claim and trends northwest. The contact is geologically mapped and is between an andesite, volcanoclastic greywacke and slate formation, and phyllite slate formation. The phyllite slate formation gives a flatter and lower magnetic response because of the low magnetic susceptibility of clay and phyllite minerals whereas the andesite volcaniclastics has a higher magnetic susceptibility and thus gives a higher magnetic response.

The total field and second derivative magnetic data clearly outlines a number of faults and one lithological contact on the Umi 3 and Umi 4 claims. The magnetic data has also indicated possible dioritic intrusions underlying the Umi 3 and Umi 4 properties.

SUMMARY AND CONCLUSIONS

The area covering the Umi 3 and Umi 4 claims was flown in August 1986 by Western Geophysical Aero Data Ltd. In November 1987, eighty line kilometers of magnetic data was recovered, reprocessed, filtered and examined in detail on behalf of **Reymont Resources Ltd.** to evaluate the subject claims. The magnetic data was recovered and computer contoured at 20 gamma contour levels to enhance local magnetic features and gradients. Then a second derivative filter was applied to remove large regional magnetic trends caused by deeply buried structures. Furthermore, the second derivative enhances and locates more precisely local geological contacts and faults.

Interpretation of the total field and second derivative magnetic data has delineated some possible intrusions, a number of faults and a lithological contact. A large magnetic high, approximately five hundred meters wide at the northwest corner of the Umi 3 claim and one kilometer wide at the southern edge of the claims strikes northwesterly across the claims. This high amplitude magnetic response is interpreted as a possible intrusions of dioritic Takla group The intrusions are bounded by faults which trend rocks. northwest and parallel the regional geology and the Eureka Thrust fault. A lithological contact is magnetically mapped on the northeast corner of the Umi 4 claim. The contact trends northwest and is between an andesite volcaniclastics formation and a phyllite slate formation.

The origin of the gold deposits in the Quesnel trough is most likely caused by the secondary enrichment and remobilization of the gold from the Snowshoe group, which underlies the Takla group in the Umiti Creek area. The secondary enrichment and remobilization is probably initiated and controlled by fault and thermal activity. The thermal activity was generated by the intrusions of the youngest Takla group unit, a diorite, into the country rock, with the gold precipitating out from solutions into structural or intrusions. around the lithologically permeable sites Structural and lithological permeable sites would be faults, shear zones and contacts. Furthermore, gold deposits in the

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Quesnel trough have been found to be controlled by faults. The total field and second derivative magnetic data suggests that these conditions exist within the **Umi 3 and Umi 4** claims.

Based upon the interpretation of the magnetic data and with known mineralization nearby, namely the Gabriel Resources and Mary Creek zones, the **Umi 3 and Umi 4** claims have excellent potential for economical mineralization of precious and base metals.

RECOMMENDATIONS

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The airborne magnetic survey over the **Umi 3 and Umi 4** claims indicates a necessity for a detailed and comprehensive ground program. Exploration efforts should be concentrated about the steep magnetic gradients and magnetic highs with priority being given to those anomalies associated with fault and intrusive activity. Primary targets would be along the magnetically mapped faults and contact.

The ground program should consist of detailed geological mapping, systematic geochemical soil sampling with analysis for gold, silver and other base metals and detailed ground magnetics and VLF-EM. Contingent upon encouraging results from these efforts, an Induced Polarization survey may be warranted followed by trenching and diamond drilling.

Respectfully Submitted,

R. Hermary

Richard Hermary, B.Sc.,

Geophysi

Glen E. Wille, P.Eng., B.Sc., Consulting Geophysicist The geophysical data was analyzed, geological information researched and compiled, and this report prepared for an all inclusive fee of \$4,800.00. This total is based on a cost of \$35/km for magnetic data.

80 km of Magnetic data @ \$35/km \$2,800.00

GEOPHYSICAL SUBTOTAL \$2,800.00

 Geological compilation
 500.00

 Interpretation & report
 1,500.00

TOTAL \$4,800.00

TOTAL ASSESSMENT VALUE OF THIS REPORT

\$4,800.00

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REFERENCES

- FREEZE, J.C. Geological and Geochemical report on the Umiti Creek Property, Cariboo Mining Division for Kargen Development Corp.; Jan.1986.
- PEZZOT, E.T. Airborne VLF-Electromagnetometer and Magnetometer Survey Umiti Creek Property, Cariboo Mining Division for Reymont Resources Ltd.

TIPPER, H.W. Geology of the Parsnip River Area: G.S.C. map 1424A; 1961, 1974.

INSTRUMENT SPECIFICATIONS

BARRINGER 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 OUTPUT	'S:			
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 SPECIFICATIONS

FLIGHT PATH RECOVERY SYSTEM

i) <u>T.V. Camera:</u>

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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, 75 Ω unbalanced, sync		
	negative from camera.		

iii) <u>Altimeter:</u>

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.

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INSTRUMENT SPECIFICATIONS			
DATA RECORDING SYSTEM			
······			
i) <u>Chart Recorder</u>			
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.		

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ii) Digital Video Recording System

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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) <u>Digital Magnetic Tape</u>	

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Type:	Hewlett Packard cartridge
	tape unit.
Model:	9875A
Power Requirements:	24 volt d.c.
Data Format:	HP'S Standard Interchange
	Format (SIF)

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WESTERN GEOPHYSICAL AERO DATA LTD.

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.

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STATEMENT OF QUALIFICATIONS:		
NAME :	HERMARY, Richard G.	
PROFESSION:	Geophysicist	
EDUCATION:	University of British Columbia - B.Sc Major Geophysics	
PROFESSIONAL ASSOCIATIONS:	B.C. Society of Exploration Geophysicist	
EXPERIENCE:	Six months as field geophysicist, A & M Exploration Ltd.	

One year with 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 Registered Professional Engineer, ASSOCIATIONS: 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.

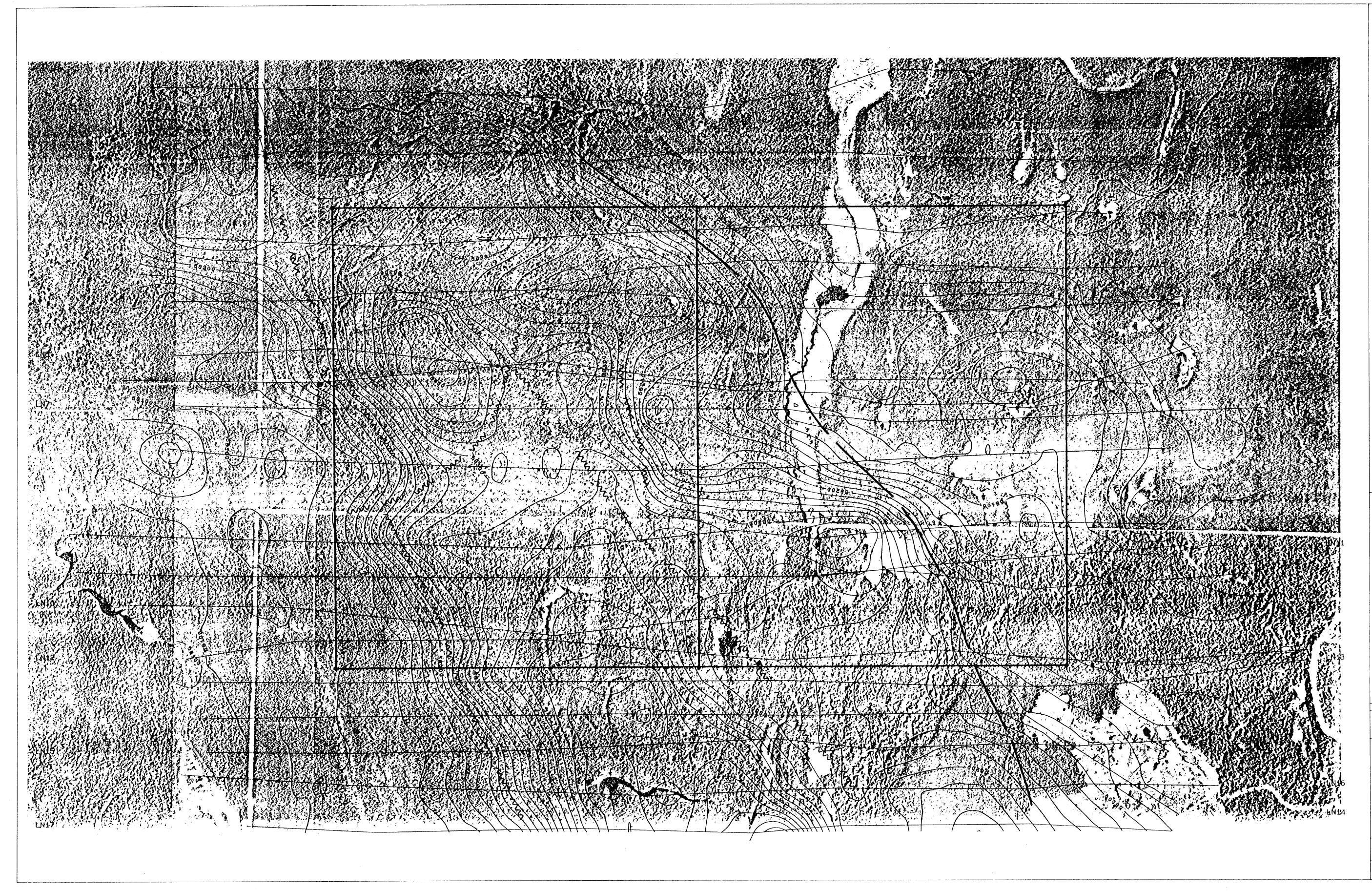
-One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W.P. McGill and Associates.

- -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.

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LEGEND Inferred fault Lithological contact	
N.T.S. 93G/IE	
	BRANCH Province BRANCH
REYMONT RESOURC	ES LTD.
UMI 3 & UMI 4 AIRBORNE MAGNETI CONTOURED TOTAL FIELD Scale 1: 1000	C SURVEY D magnetics
Date: NOVEMBER 1987 WESTERN GEOPHYSICAL AEF	FIG. 3 RO DATA LTD.

