87-243-16043

Owner/Operator: **RHYOLITE RESOURCES LTD.** 3/88

GEOPHYSICAL REPORT ON A
MAGNETOMETER SURVEY
OTTO, PAUL, ADRIAN, IAN and
ARGUS 1&2 CLAIMS
OMINECA MINING DIVISION
LATITUDE: 57°20'N LONGITUDE: 126°58'W
NTS 94E/7W

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DATE OF REPORT: April 7,1987

WESTERN GEOPHYSICAL AERO DATA LTD.

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ILLUSTRATIONS

INTRODUCTION

Rhyolite Resources Ltd. commissioned Western Geophysical Aero Data Ltd. to process and interpret magnetometer and VLF-electromagnetometer data gathered across the **Otto, Paul, Adrian, Ian, and Argus 1 & 2** claims located in the Toodoggone River area of north central B.C. The data was gathered as part of a regional program completed in early spring of 1986.

Two hundred kilometres of survey data has been examined to evaluate the subject claims.

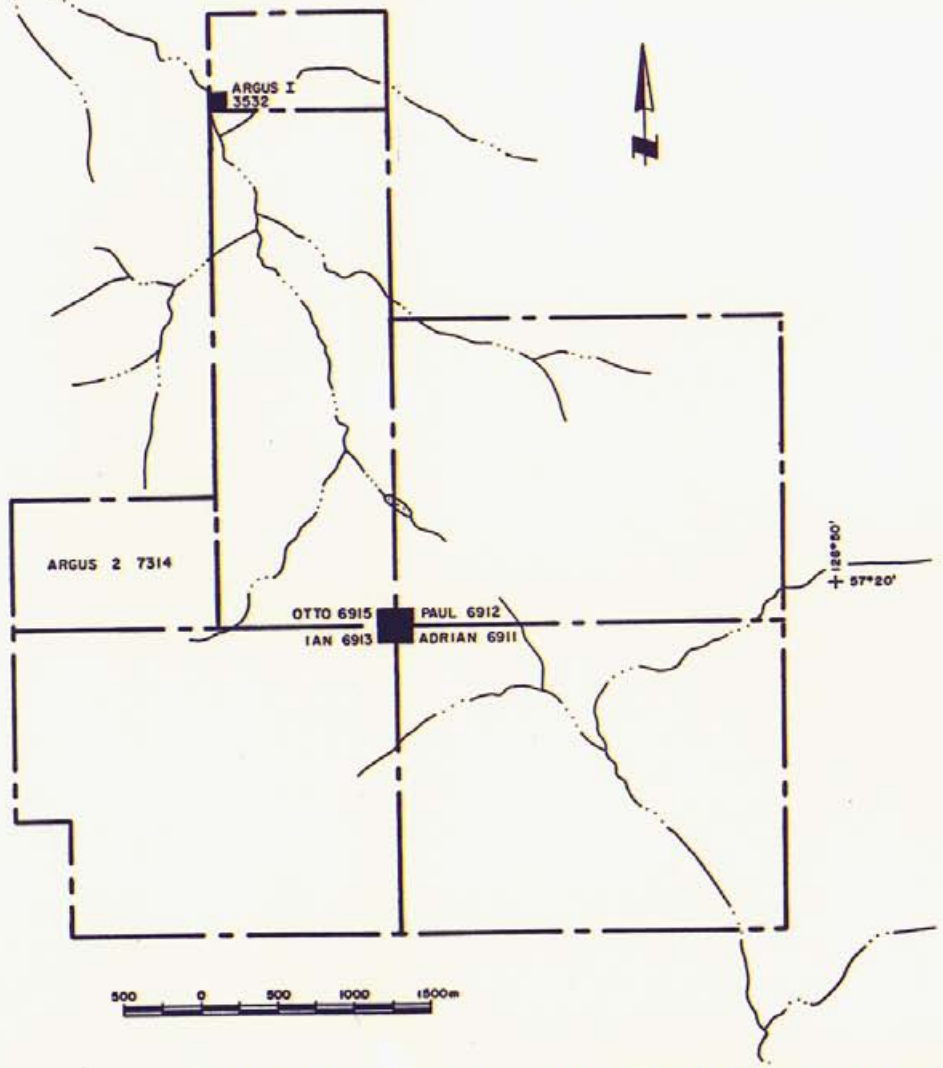
PROPERTY

The six claims studied are comprised of 88 contiguous units as described below and illustrated on Figure 1. These claims are owned by **Rhyolite Resources Ltd.** of Vancouver and have been known as the **Argus** group.

CLAIM NAME	RECORD NO.	UNITS	RECORD DATE
IAN	6911	20	March 25,1985
ADRIAN	6911	20	March 25,1985
PAUL	6911	20	March 25,1985
OTTO	6911	12	March 25,1985
ARGUS 1	7313	4	Sept. 17,1985
ARGUS 2	7314	6	Sept. 17,1985

LOCATION AND ACCESS

The Toodoggone River area is located approximately 280 kilometres north of Smithers, B.C. The subject claims are located some 9 kilometres south of Toodoggone Lake and 17 km northeast of the Sturdee River airstrip in NTS 94E/7W and the Omineca Mining Division. Approximate geographical coordinates of the centre of the claims are latitude 57°20'N and longitude 126°58'W.



RHYOLITE RESOURCES INC.

ARGUS 1 & 2, OTTO, PAUL, IAN & ADRIAN CLAIMS

LOCATION AND CLAIMS MAP

FIGURE 1

Western Geophysical Aero Data Ltd.

Access to the area is normally achieved via fixed wing aircraft from Smithers, B.C. to the Sturdee River airstrip. Historically, a number of helicopter companies have established summer bases at the Sturdee River airstrip and have been available for casual charter to nearby areas.

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.

Within the belt, three properties show ore reserves: Baker Mine (Du Pont of Canada) 52,000 tonnes 1.07 oz/tonne Au, 23,2 oz/tonne Ag, Lawyers (Serem Inc.) 561,000 tonnes 0.21 oz/tonne Au, 7.1 oz/tonne Ag, Al (Energex Minerals Ltd.) 160,000 tonnes 0.37 oz/tonne Au (subsequently, Lawyers reserves were increased to 1,4000,000 tonnes of unknown grade).

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 1985 are estimated to be in the order of $33 million.

The first recorded geological work done in the claim area was in 1981 when S.E.R.E.M. Ltd. conducted a reconnaissance geological and silt geochemical survey over what was then their Argus 1-4 group. Although stream geochemical anomalies were found the claims were allowed to lapse.

Geological and geochemical work on the ATLAS-HERCULES claim group to the south, done in 1981 and 1985 uncovered a quartz-calcedony, breccia with assays of up to 2.6 oz/t silver (over 7m) and to .024 oz/t gold (over 5 meters).

The Argus property was acquired by **Rhyolite Resources Ltd.** after a large silt and soil geochemical anomaly was discovered. 1985 exploration work included geological mapping and geochemical surveys. Assays of mineralized rock returned up to 180 ppb Au, 3.8 ppm Ag and .91% Cu. Both silt and soil surveys returned highly anomalous precious and base metal values and one quartz vein assayed 180 ppb Au, 4.6 ppm Ag, 910 ppm Pb and 5,600 ppm Zn.

REGIONAL GEOLOGY

The general geology of the area is shown on Preliminary Map 61, B.C. Ministry of Energy, Mines and Petroleum Resources by L.J.Diakow, A.Panteleyev and T.G.Schroeder, 1985 and on Open File, Geologic Survey of Canada, by H.Gabrielse, C.J.Dodds, J.L.Mansy and G.H.Eisbacher, 1977.

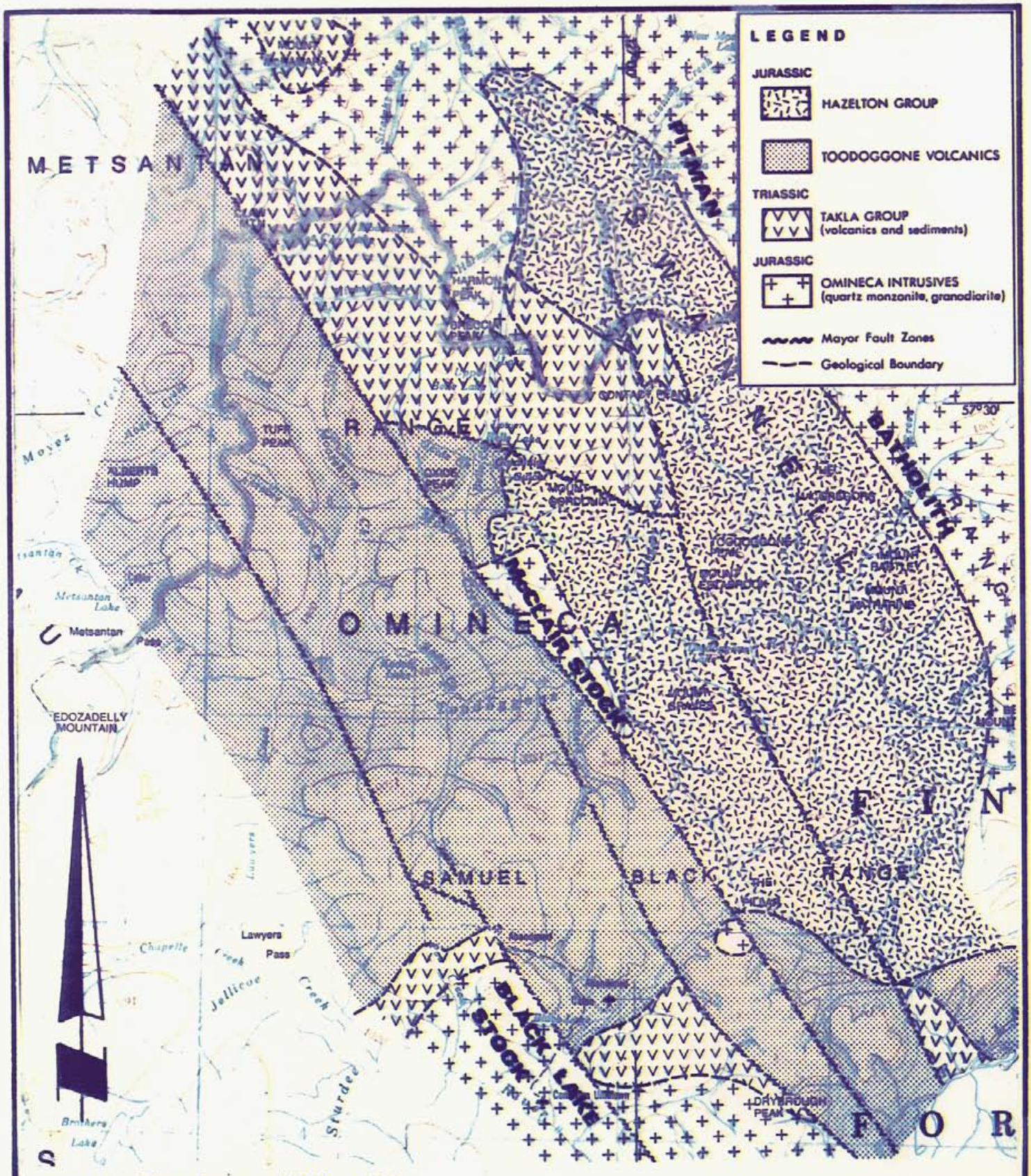
The Toodoggone River area is set within the Intermontaine Belt. The main geologic units are the Upper Cretaceous

Sustut Group, the Lower to Middle Jurassic Toodoggone Volcanics, the Upper Triassic Takla Group and Permian carbonate units thought to belong to the Asitka Group. Several intrusive bodies of quartz monzonitic to granodioritic composition, irregular in size and shape (belonging to the Omineca Intrusives) intruded the volcano-sedimentary complex in several localities. Swarms of dykes and small stocks are related to these intrusions.

The Asitka group limestones were deposited in a marine environment. The Takla rocks are the product of a volcanic event that may have been accompanied by an uplift of the whole area (possibly changing the environment from submarine to sub-areal). The result is a complex of interlayered volcanic and sedimentary units. This was followed by a period of regression and related deformations. These followed a volcanic episode during which the cyclic Toodoggone Volcanic rocks were formed. The event started with a quartzose acidic extrusion, followed by a mafic extrusion, and then by several intermediate extrusions. Much of the volcanics were porphyritic flows but within each cycle there are pyroclastic units and conglomerates, lahars and sandstones (reworked pyroclastics).

Of the structural elements, the most prominent are three fault zones, trending northwest-southeast, which are intermittently exposed where outcrop is developed and are clearly outlined by the airborne geophysics. They had a major role not only in distribution of geologic units, but also in the emplacement of minerals. The same, northwest-southeast trend is also the general strike of the majority of the lithostratigraphic members.

Local uplifts accompanying intrusions resulted in several domal structures, characterized by a circular distribution



Geology after L.J.Diakow, A.Panteleyev and T.G.Schroeter, 1985

GENERALIZED GEOLOGY TOOGGONE RIVER AREA

0 1 5 10 km

PLATE 1a

Western Geophysical Aero Data Ltd.

of volcano-sedimentary units surrounding an intrusive core.

The Toodoggone River area is an important host of numerous precious metal and base metal prospects. Four main mineral deposit types have been identified:

- porphyry - occurring mainly in Takla Group volcanics and Omineca intrusives.
- skarn - contact of limestones (Asitka, and some in Takla) with intrusive.
- stratabound - occurring in Takla limestones interbedded with cherts.
- epithermal - occurring mainly in Toodoggone Volcanics and in Takla rocks.

Of the four, the epithermal type is the most important, and has been subdivided into two subtypes: fissure vein deposits associated with fracture zones and possibly cauldera formations, and hydrothermally altered and mineralized deposits (associated with major fault zones).

Most common ore minerals in epithermal type deposits are argentite, electrum, native gold and silver. Baker Mine and Lawyers Deposit are the two most prominent deposits of this type in the area. For the generalized geology refer to Plate 1A.

LOCAL GEOLOGY

The claim group is situated south of Toodoggone lake at the headwaters of the eastern fork of Saunders creek, SEREM Ltd.'s Lawyers properties lie to the south and Lacona Minings properties are to the SW, towards the Baker mine.

Underlying the claim group centrally is a contact between the Lawyers quartzose andesite to the west, McClair stock

MINISTRY MAPPING 1971 TO 1984, MAINLY 1981–1984; ADDITIONAL SOURCES OF INFORMATION: ASSESSMENT REPORTS; GEOLOGICAL SURVEY OF CANADA OPEN FILE 483, 1977; RADIOMETRIC DATING (K/Ar) BY J. HARAKAL, THE UNIVERSITY OF BRITISH COLUMBIA

LEGEND

QUATERNARY

PLEISTOCENE AND RECENT

UNCONSOLIDATED GLACIAL, FLUVIOGLACIAL, ALLUVIAL, AND COLLUVIAL DEPOSITS

CRETACEOUS

UPPER CRETACEOUS

SUSTUT GROUP (TANGO CREEK FORMATION)

K — POLYMICTIC CONGLOMERATE, SANDSTONE, SHALE, CARBONACEOUS MUDSTONE

JURASSIC

LOWER AND (?) MIDDLE JURASSIC

"TOODOGGONE VOLCANICS" (?) HAZELTON GROUP

9 — UNDIVIDED, PREDOMINANTLY GREY, GREEN, PURPLE AND ORANGE-BROWN HORNBLENDE PLAGIOCLASE AND PLAGIOCLASE PHYRIC ANDESITE PORPHYRY FLOWS, TUFFS, BRECCIA, SOME LAHAR, CONGLOMERATE, GREYWACKE, SILTSTONE; RARE RHYOLITE-PERLITE; INCLUDES SOME DYKES AND SILLS

LOWER TO MIDDLE JURASSIC

"TOODOGGONE VOLCANICS" (CARTER, 1972)

GREY DACITE

8 — DARK TO PALE GREY OR GREEN QUARTZOSE BIOTITE HORNBLENDE PLAGIOCLASE ASH FLOWS OF ANDESITIC AND RARELY DACITIC COMPOSITION, VARIABLY WELDED WITH LOCALLY WELL-DEVELOPED COMPACTION LAYERING; CONTAINS ABUNDANT GREY DACITE AND RARE GRANITIC CLASTS; OUTCROPS ARE COMMONLY BLOCKY AND STRONGLY JOINTED — 182 ± 8, 183 ± 8 Ma (GSC) HORNBLENDE

8A — POLYMICTIC CONGLOMERATE WITH ABUNDANT TAKLA AND GREY DACITE CLASTS IN A QUARTZOSE SANDSTONE MATRIX

8B — GREYWACKE, CONGLOMERATE DERIVED ENTIRELY FROM GREY DACITE

TODOGGONE CRYSTAL ASH TUFFS AND FLOWS

7 — RECESSIVE, GREY, MAUVE, PURPLE QUARTZOSE PLAGIOCLASE CRYSTAL TUFF, LAPILLI TUFF AND BRECCIA WITH LESSER AGGLOMERATE, LAHAR, AND EPICLASTIC BEDS; INCLUDES SOME WELDED TUFFS AND PYROXENE HORNBLENDE FELDSPAR PORPHYRY FLOWS WHICH ARE LOCALLY DOMINANT; SOME MEMBERS CONTAIN NO QUARTZ; PINK WEATHERING WHERE LAUMONTITE IS ABUNDANT — 189 ± 8 Ma HORNBLENDE

7A — *EPICLASTIC RED BEDS* — ARKOSIC SANDSTONE, SILTSTONE, CONGLOMERATE AND SLIDE DEBRIS; CONTAINS SOME CRYSTAL TUFF

TUFF PEAK FORMATION

6 — PALE PURPLE, GREY, AND GREEN BIOTITE AUGITE HORNBLENDE PLAGIOCLASE PORPHYRY FLOWS; SOME AUTOBRECCIATED FLOWS; MINOR SILLS AND PLUGS; SOME CRYSTAL AND LAPILLI TUFF — 197 ± 7 Ma BIOTITE, 200 ± 7 Ma HORNBLENDE

6A — CONGLOMERATE OR LAHAR DERIVED FROM UNITS 6 AND 6B, WITH GRADED AND CROSSLAMINATED MUDSTONE AND SANDSTONE INTERBEDS; DEBRIS FLOWS; LAPILLI AND CRYSTAL TUFFS

6B — FLOWS SIMILAR TO UNIT 6 BUT CONTAINING SPARSE ORTHOCLASE MEGACRYSTS

McCLAIR CREEK FORMATION

5 — PURPLE, LAVENDER, GREY, RARELY GREY-GREEN, CROWDED, FINE TO MEDIUM-GRAINED PLAGIOCLASE PORPHYRITIC FLOWS; INCLUDES SOME LAPILLI TUFF, BRECCIA, AND MINOR EPICLASTIC BEDS

5A — INTRUSIVE DOME WITH AUTOBRECCIATED CARAPACE AND FLANKING BRECCIA

MAFIC FLOW AND TUFF UNIT

4 — *BASALT FLOWS*—THIN BEDDED, PURPLE TO DARK GREEN, COMMONLY EPIDOTIZED FINE-GRAINED PYROXENE BASALT FLOWS AND TUFFS; INCLUDES SOME SILLS AND DYKES

4A — PURPLE TO MAUVE, MEDIUM-GRAINED PORPHYRITIC BASALT, LOCALLY MAUVE TO PINK, ZEOLITIZED WITH LAUMONTITE; POSSIBLE INTRUSIVE (LACCOLITH)

4B — LAPILLI, CRYSTAL, AND ASH TUFF, WELL BEDDED; INCLUDES MINOR THINLY BEDDED SANDSTONE AND RARE CALCAREOUS SILTSTONE (MARL) TOTALLY OR IN PART EQUIVALENT TO UNIT 7

4C — PYROXENE BIOTITE HORNBLENDE PORPHYRY FLOWS WITH TRACES OF QUARTZ AND K-FELDSPAR; INTERBEDDED MINOR BRECCIA AND LAPILLI TUFF; TOTALLY OR IN PART EQUIVALENT TO UNIT 6

JURASSIC (CONTINUED)

LOWER TO MIDDLE JURASSIC (CONTINUED)

"TOODOGGONE VOLCANICS" (CARTER, 1972) (CONTINUED)

LAWYERS—METSANTAN QUARTZOSE ANDESITE

3 — GREEN TO GREY QUARTZOSE PYROXENE (?) BIOTITE HORNBLENDE PLAGIOCLASE PORPHYRY FLOWS AND TUFFS; QUARTZ CONTENT RANGES FROM NEGLIGIBLE TO ABOUT 3 PER CENT IN THE NORTH; FLOWS PREDOMINATE WITH LOCAL FLOW BRECCIA, LAPILLI TUFF, AND RARE WELDED TUFF UNITS; TOWARD THE SOUTH ASH FLOWS ARE COMMON, INCLUDING RARE SURGE DEPOSITS; THE UNIT CONTAINS EXTENSIVE ZONES OF EPIDOTIZED, PYRITIC ROCK WITH CHARACTERISTIC SALMON, PINK, AND ORANGE PLAGIOCLASE CRYSTALS — 188 ± 6 Ma HYDROTHERMAL ADULARIA

MOYEZ CREEK VOLCANICLASTICS

2 — CONGLOMERATE WITH SOME GRANITIC CLASTS, GRADED, CROSS-BEDDED GREYWACKE, WELL-BEDDED CRYSTAL TUFF, EPICLASTIC SEDIMENTS; LOCAL LAMINATED CALCAREOUS SILT (MARL); RARE THIN LIMESTONE AND CHERT; LOCAL COARSE LANDSLIDE DEBRIS AND LAHAR; IN PART OR TOTALLY EQUIVALENT TO UNIT 6A

2A — CRYSTAL TUFFS IN THIN, WELL-LAYERED UNITS; SOME EPICLASTIC SANDSTONE AND MUDSTONE; RARE PLANT FRAGMENTS IN SOME BEDS; MINOR LAPILLI TUFF

ADDOOGATCHO CREEK FORMATION

1 — PALE REDDISH GREY TO DARK RED-BROWN QUARTZOSE BIOTITE HORNBLENDE PHYRIC ASH FLOWS; THE ROCKS CONTAIN MINOR SANIDINE AND RARE AUGITE; WELDING IS WIDESPREAD AND RANGES FROM INCIPIENT TO EUTAXITIC; LOCALLY ORANGE TO BROWN VITROPHYRIC CLASTS ARE COMMON; INCLUDES LAPILLI TUFF AND BRECCIA UNITS AS WELL AS MINOR LAYERED GROUND SURGE DEPOSITS — 199 ± 7, 202 ± 7 Ma BIOTITE, 200 ± 7 Ma HORNBLENDE, 190 ± 7 Ma HYDROTHERMAL ALUNITE (WHOLE ROCK)

1A — CRYSTAL ASH TUFF, LAPILLI TUFF, AND RARE AGGLOMERATE WITH INTERSPERSED EPICLASTIC BEDS; TUFFACEOUS SEDIMENTS AND MINOR CONGLOMERATE THAT LOCALLY CONTAINS GRANITIC CLASTS; MINOR HORNBLENDE PLAGIOCLASE PHYRIC FLOWS FORMING SINGLE OR THIN COMPOSITE FLOW UNITS — 204 ± 7 Ma BIOTITE

1B — *QUARTZOSE PLAGIOCLASE PORPHYRY* — JOINTED DOMAL INTRUSION (?) OF HOMOGENOUS-APPEARING GREY TO GREEN, CHLORITIZED AND EPIDOTE-ALTERED ROCK CONTAINING ABUNDANT INCLUSIONS OF TAKLA VOLCANICS AND RARE METAMORPHIC ROCK CLASTS

TRIASSIC

UPPER TRIASSIC

TAKLA GROUP

Ta — DARK GREEN AUGITE PORPHYRY BASALT FLOWS AND BRECCIAS WITH LESSER FINE-GRAINED ANDESITE TO BASALT FLOWS AND MINOR INTERBEDDED SILTSTONE, TUFFACEOUS SEDIMENTS, AND CHERT; CONTAINS LIMESTONE LENSES THAT MAY BE PART OF THE ASITKA GROUP

PALEOZOIC

PERMIAN

P — **ASITKA GROUP?**

PREDOMINANTLY LIMESTONE (INCLUDING MARBLE AND MINOR SKARN) WITH SOME ARGILLITE, BLACK SHALE, AND CHERT UNITS COMPOSED OF LIMESTONE, CHERT, ARGILLITE, AND BASALT (IPv, c); MAY BE, IN PART OR TOTALLY, TAKLA GROUP

INTRUSIVE ROCKS

JURASSIC

LOWER JURASSIC (DYKES, SILLS, AND SMALL PLUGS)

A — BASALT

B — AUGITE HORNBLENDE PORPHYRY — BASALTIC STOCK; DOMAL INTRUSION (OR TAKLA INLIER) — 210 ± 6 Ma HORNBLENDE

C — BIOTITE HORNBLENDE DIORITE GABBRO

D — PYROXENE PLAGIOCLASE PORPHYRY

LOWER TO MIDDLE JURASSIC (DYKES AND STOCKS)

E — QUARTZ MONZONITE, GRANODIORITE—MEGACRYSTIC IN PART; MINOR SYENITE OR QUARTZOSE SYENITE ALONG CONTACTS

E1 — GRANODIORITE, QUARTZ DIORITE — MEDIUM GRAINED, PORPHYRITIC, FOLIATED IN PART

F — FELDSPAR PORPHYRY, HORNBLENDE FELDSPAR PORPHYRY — DYKES AND PLUGS; RARE QUARTZ FELDSPAR PORPHYRY

SYMBOLS

MINERAL OCCURRENCE (MINERAL INVENTORY FILE NUMBER) — × 43

MINERAL PROSPECT (MINERAL INVENTORY FILE NUMBER) — ⚒ 34

EXPLORATION CAMP — ⊖

PLACER WORKINGS — ⛏

PARK BOUNDARY — — —

ROAD — – – –

MAIN OUTCROP AREAS — ⋰⋱

FAULT (OBSERVED, INFERRED) — ——— ———

THRUST OR REVERSE FAULT (OBSERVED, INFERRED) — ▲▲▲▲▲▲ ▲▲▲▲▲▲

GEOLOGIC CONTACT (DEFINED, ASSUMED) — ——— – – –

BEDDING, LAYERING, FOLIATION (HORIZONTAL, INCLINED, VERTICAL) — + 10 / ✗

FOLD AXES — ⌒

FOSSIL LOCALITY (PLANT DEBRIS) — Ⓕ

RADIOMETRIC DATE SAMPLE SITE, AGE IN Ma — Ⓐ104

VOLCANIC VENT — ⊙

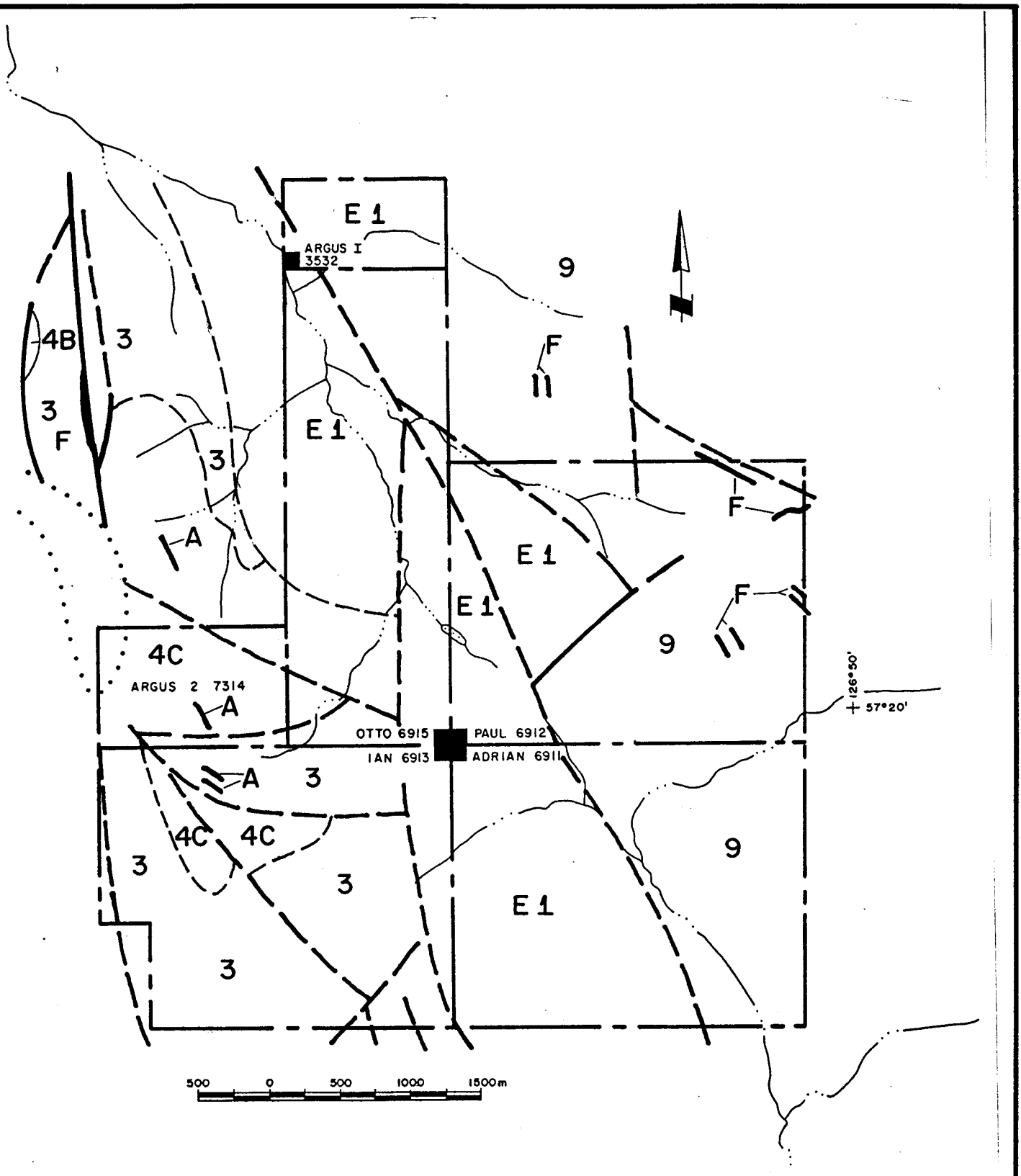
HYDROTHERMAL ALTERATION

FERRICRETE, QUATERNARY FERRUGINOUS BRECCIA — (iv)

SILICA, CLAY MINERALS ± ALUNITE, BARITE — (iii)

CLAY MINERALS ± ALUNITE, SILICA, HEMATITE — (ii)

GOSSAN, LIMONITIC ZONE — (i)



RHYOLITE RESOURCES INC.

ARGUS 1 & 2, OTTO, PAUL, IAN & ADRIAN CLAIMS

LOCAL GEOLOGY MAP

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PLATE 1b

Jurassic granodiorite intrusive center and Toodoggone Volcanics brecciated tuffs and flows on the east.

The andesite in the area of the **Ian** claim is extensively fractured in a network pattern of normal block faulting. Dykes and sills are mapped on the **Paul and Ian** claims, primarily diorites, feldspar porphyry and basalts.

Abundant clayey gossans of limonite exist on the ridges of the **Ian and Paul** claims complete with argillite alteration and quartz stockwork, thought to be related to the emplacement of the central granodiorite intrusive.

AIRBORNE MAGNETIC SURVEY

This survey simultaneously monitors and records the output signal from a proton precession magnetometer and two 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 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.

DISCUSSION OF RESULTS

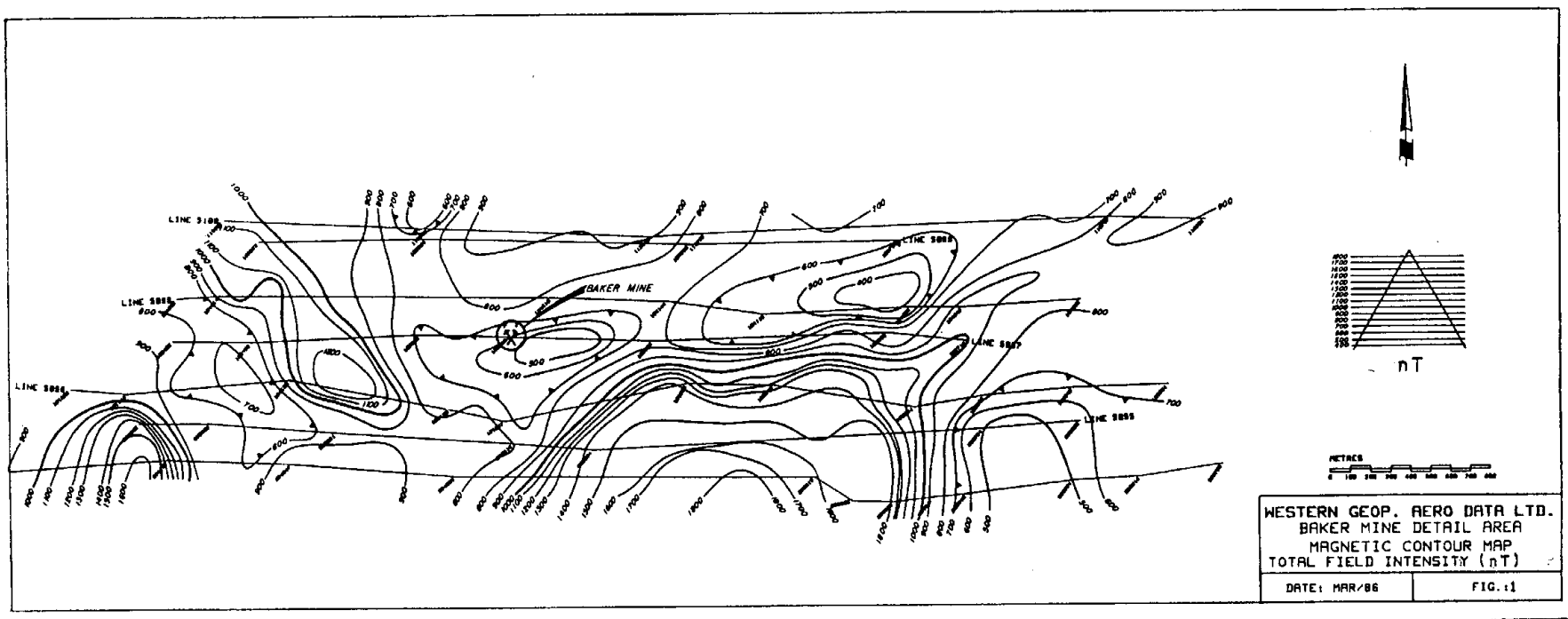
The **Otto, Paul, Adrian, Ian and Argus 1 & 2** claims were surveyed on Feb 25, 27, March 6, 10,and 13,1986. Two hundred line kilometres of data have been recovered to examine in detail these claims and the surrounding area. Survey lines were flown east-west on 200

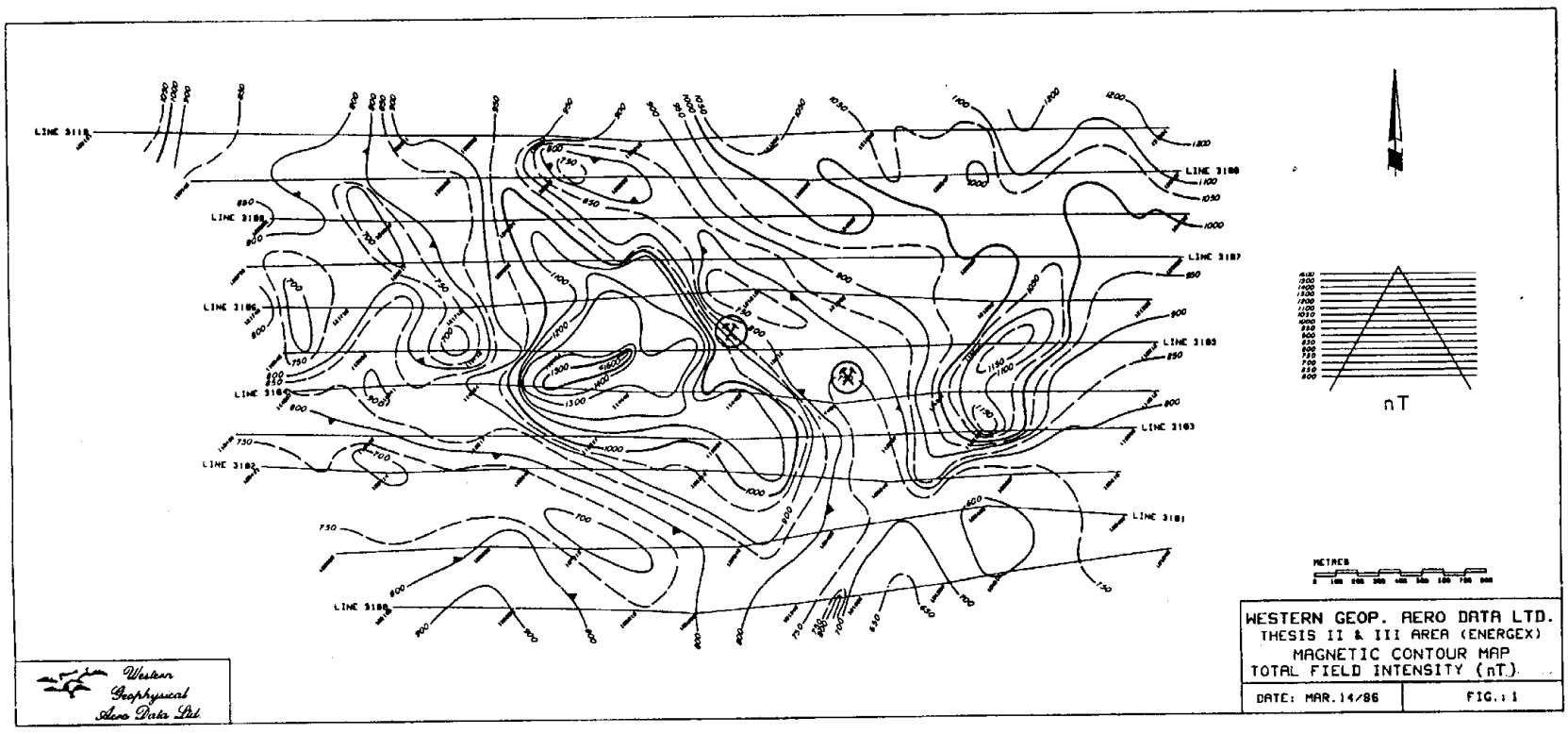
metre centres with data being digitally recorded at one second intervals, providing an average sample spacing of 25 metres. The sensors were towed beneath the helicopter and maintained a terrain clearance of approximately 60 metres. The magnetic data is presented in contour form on an orthophotomosaic base map of the area as Figure 2.

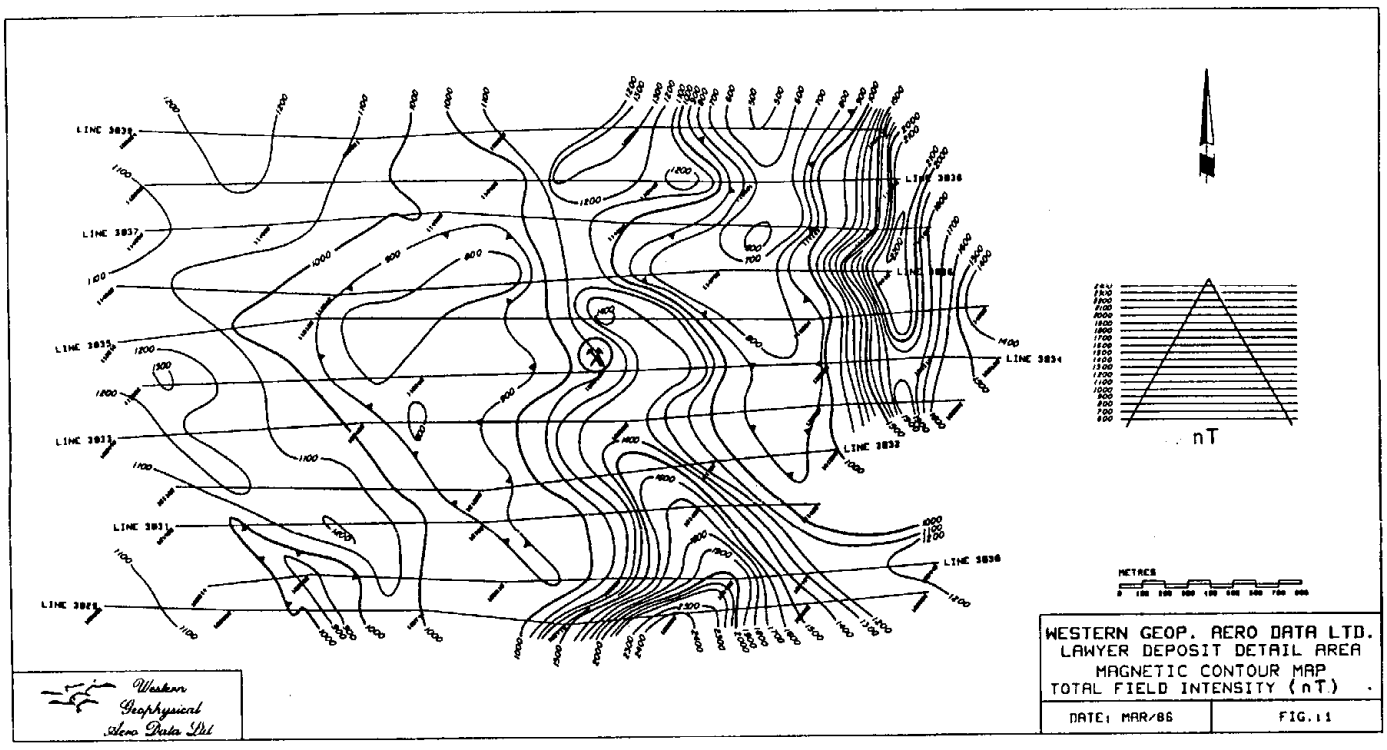
This survey was flown as part of a regional package covering the Toodoggone Gold Belt from the Finlay River in the south to the Chukachida River in the north. Over 10,000 line kilometres of data were gathered to assist the geological mapping of the area as well as to locate specific targets for ground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

There are 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 59,000 nT, and often positioned along the flanks of intrusive bodies. The combination of these two signatures 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.







MAGNETIC RESPONSE EXAMPLES
BASE VALUE 58,000 – nT

Western Geophysical Aero Data Ltd.

Regional magnetic structures strike NW in the Toodoggone area as does the major fault which divides the claims NW-SE along the east side of Jock Creek. To the west of this fault numerous magnetic highs greater than 1300 nT above the map base of 58000 nT are interpreted as fault controlled Omineca intrusives of granodiorite. These features are indicated on Figure 2. Adjacent to the highs are small lineations of magnetic lows, averaging 900 nT above base, which are favorable environments for mineralization similar to the features found on nearby producing properties.

The major low on the property, found on the east half of the **Adrian** claim is a large area of 800 nT above base, striking NW-SE towards the Lawyers deposit to the south. This can be interpreted structurally as a horst or graben associated with the major fault - or lithologically as a 3 km long alteration zone associated with hydrothermal processes. Zones of interest on the magnetic map have been chosen over lows adjacent to intrusives and over the major low.

SUMMARY AND CONCLUSIONS

The area of the **Otto, Paul, Ian, Adrian and Argus 1 & 2** claims were surveyed as part of a regional airborne magnetic and VLF-EM survey. One hundred thirty kilometers of magnetic data has been recovered and examined for **Rhyolite Resources Ltd.** to evaluate the claim group.

The most extensive faulting is interpreted on the **Ian** claim and correlates well with geological information. West of Jock Creek four Omineca intrusives of granodiorite are indicated by magnetic highs along with attendant outliers and dyke like structures. The older N-W major fault in the valley of Jock Creek has large linear lows along its margin whereas smaller sublinear lows representing potential

mineralization are present near the intrusives indicated on Figure 2.

The geological setting of the claims is favorable for the emplacement of base and precious metals in both fault shear zones and intrusive contact areas. Features on the property trend south towards the Lawyers Deposit of precious metals.

RECOMMENDATIONS

The most important type of economic mineralization identified in the Toodoggone area is epithermal precious and base metal deposits, hosted principally by lower and middle units of Toodoggone volcanics. Mineralization occurs principally in fissure veins, quartz stockworks, breccia zones and areas of silicification, generally close to major fault systems and associated with intrusive activity.

The **Ian, Paul, Adrian, Otto and Argus** claim group with its fault contact between host Toodoggone volcanics and the hydrothermal heat sources present during the Omineca intrusions are a favorable setting for epithermal deposition.

Exploration efforts should be concentrated about the flanks of magnetic highs with priority being given to those anomalies which are also associated with fault activity. Five areas have been outlined as "Areas of Interest" on Figure 2 and assigned a priority number from 1 to 5.

Initial Reconnaissance geophysical work over the unexplored graben like feature central to the **Adrian** claim should be done with VLF-EM resistivity or EM-31 for conductivity anomalies giving evidence of a massive shearing zone or alteration signatures. The more poorly mapped **Paul** zone

should similarly be explored for faults and silicified conductors. Over the gossan areas of the **Paul and Ian** claims showing Au anomalies IP surveying will trace evidence of alteration in the underlying structures to depth in the dyke system.

Structural features in common with nearby Toodoggone properties producing precious metals indicate further exploration of this property.

Respectfully Submitted,

J. Graham Parkinson, 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 air foil.

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 (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 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 50/60 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

This report detailing the results of the airborne magnetometer survey was prepared for an all inclusive fee of $8,400.00. This total is based on a cost structure of $35/km for magnetometer data.

200 km magnetic @ $35/km	$7,000.00
Interpretation & Report	1,400.00
TOTAL	**$8,400.00**

TOTAL ASSESSMENT VALUE OF THIS REPORT $8,400.00

STATEMENT OF QUALIFICATIONS

NAME: Parkinson, J. Graham

PROFESSION: Geophysicist

EDUCATION: B.Sc. Physics - UBC
Cert. Geophysics - U of A

EXPERIENCE: One Year Consulting Geophysicist, B.C.

One Year Geophysical Engineer
SCHLUMBERGER WELL LOGGING, ALBERTA.

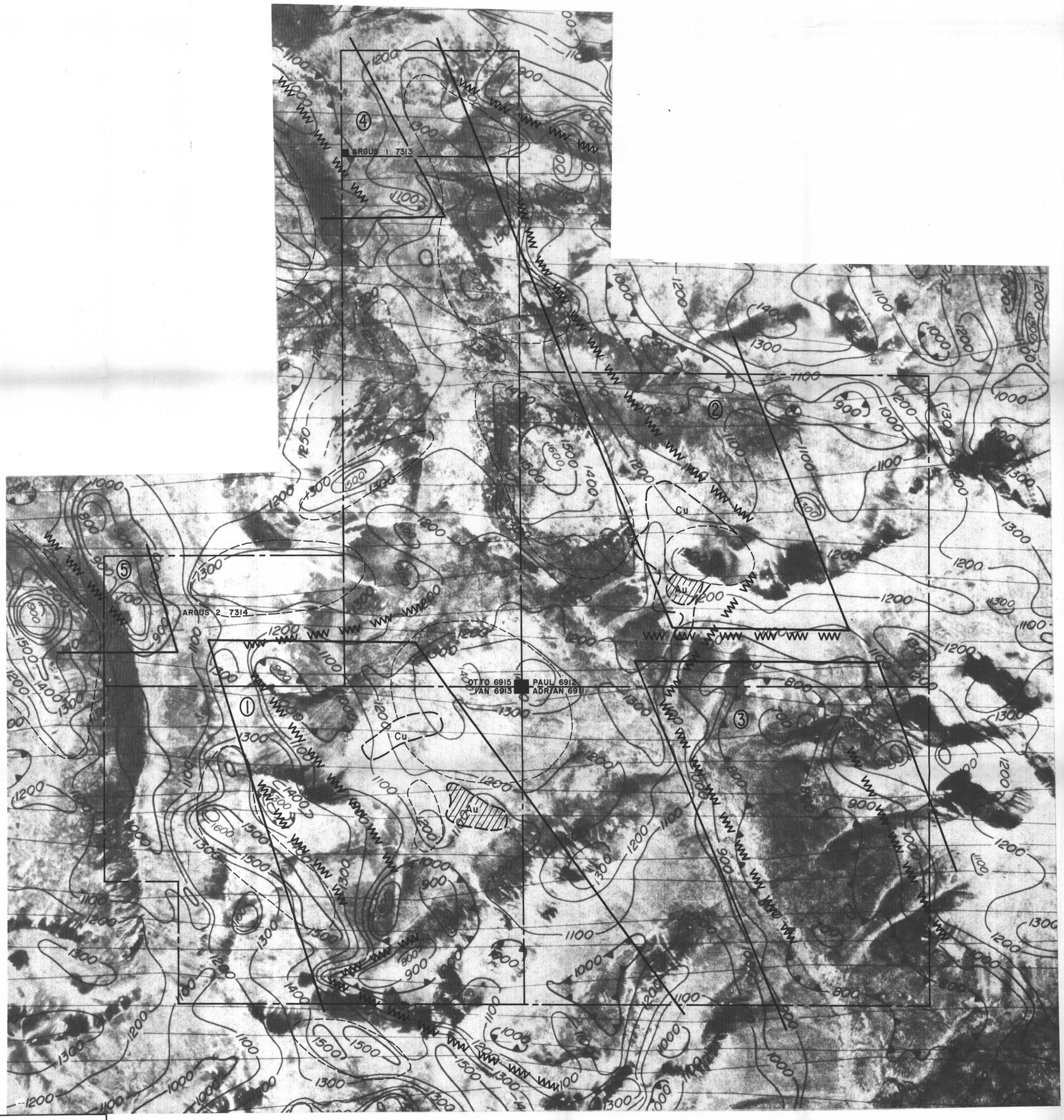
Two years research work Geological Assaying
U of A SLOWPOKE Reactor.

One year teaching geophysics/physics, BCIT.

One year developing geotechnical instrumentation. PACIFIC AUTOMATION INSTRUMENTS.

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.



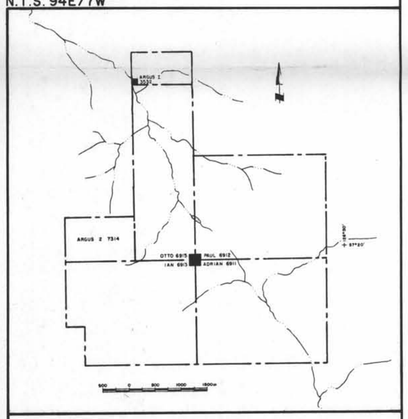
KEY

INSTRUMENT : Barringer M-123 Magnetometer
Data corrected for diurnal variations
Base value = 58 000 nt
Contour interval = 50 nt
Sensor elevation = 60 metres
Claim line = —— - ——
Claim post = ■
Inferred fault WW WW WW
Magnetic low
Zone of interest (2)
Interpreted quartz zone
Au geochemical anomaly
Mineralization

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,043

N.T.S. 94E/7W



LOCATION MAP

100 0 200 400 600 800 1000 1200m

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA GLEN E. WHITE

RHYOLITE RESOURCES INC.
ARGUS 1 & 2, OTTO, PAUL, IAN & ADRIAN CLAIMS
MAGNETIC INTENSITY CONTOUR MAP

DATE: FEB/86 - APRIL/87 | FIG. : 2

Western Geophysical Aero Data Ltd.

To accompany Geophysical Report on ARGUS 1 & 2, OTTO, PAUL, IAN & ADRIAN CLAIMS