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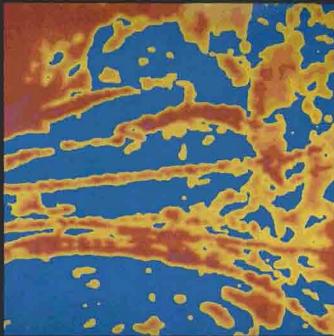
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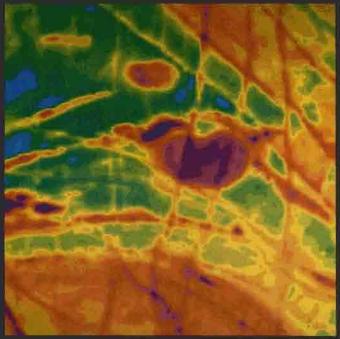
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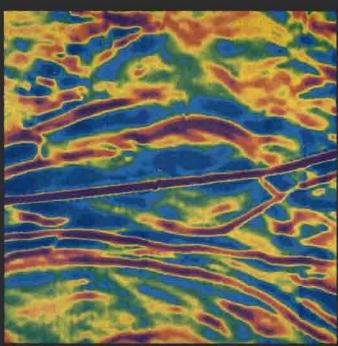
MAGNETIC VERTICAL GRADIENT



APPARENT RESISTIVITY



MAGNETIC TOTAL FIELD



VLF-EM TOTAL FIELD

The above map examples represent just some of the information collected by an Aerodat 3-frequency HEM / 2-frequency VLF-EM / magnetometer survey. The flight line spacing was 100 meters (1/16 mile) accurately controlled by a radar navigation system to a relative accuracy of about 5 meters. Such multisensor, low level, electronic navigation surveys map a variety of geophysical parameters with a resolution and sensitivity comparable to ground surveys at less cost and in shorter time. The above miniature maps each cover 100 square kilometers and contain 1000 line kilometers of geophysical information.



Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

### ASSESSMENT REPORT TITLE PAGE AND SUMMARY

AUTHOR(S) ZBYNEK DVORAK SIGN	••••••••••••••••	2
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DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILE PROPERTY NAME(S) . PHIZ		
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### **REPORT ON**

### **COMBINED HELICOPTERBORNE**

### MAGNETIC, ELECTROMAGNETIC AND VLF SURVEY

### PHIZ PROJECT

#### **BRITISH COLUMBIA**

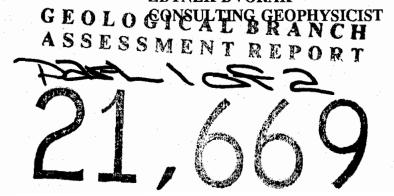
FOR

### ADRIAN RESOURCES LTD.

BY

### AERODAT LIMITED

J9116/ADR



**ZBYNEK DVORAK** 

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### LIST OF MAPS

#### (Scale 1:10,000)

#### Maps:

6.

#### **1.** ORTHOPHOTOMOSAIC BASE MAP;

prepared from an orthophotomosaic map supplied by the client and based on available Department of Energy, Mines and Resources, Surveys Mapping Branch topographic maps (NTS Series #104 B/12 Sheet, Edition 1; Scale 1:50,000), with registration marks referenced to the UTM grid.

#### 2. FLIGHT LINE MAP;

showing all flight lines, fiducials and EM anomalies with the base map.

#### 3. AIRBORNE ELECTROMAGNETIC SURVEY INTERPRETATION MAP;

showing flight lines, fiducials, conductor axes and anomaly peaks along with inphase and quadrature amplitudes with conductivity thickness ranges and estimated depth for the 4175 Hz coaxial coil system with the base map.

#### 4. TOTAL FIELD MAGNETIC CONTOURS;

showing magnetic values contoured at nanoTesla intervals, flight lines and fiducials with the base map.

#### 5. VERTICAL MAGNETIC GRADIENT CONTOURS;

showing magnetic gradient values contoured at 0.02 nanoTeslas per meter intervals, flight lines and fiducials with the base map.

### APPARENT RESISTIVITY CONTOURS;

showing Apparent Resistivity values, calculated for the 4175 Hz and 33 kHz data, contoured at 0.1 log (ohm-m) intervals, flight lines and fiducials with the base map.

#### 7. VLF-EM TOTAL FIELD CONTOURS;

showing contoured Total Field VLF values contoured at 1% intervals, flight lines and fiducials with the base map.

#### 1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Adrian Resources by Aerodat Limited. Equipment operated during the survey included a four frequency electromagnetic system, a high sensitivity cesium vapour magnetometer, a two frequency VLF-EM system, a video tracking camera, a radar altimeter, and Global Positioning and electronic navigation systems. Electromagnetic, magnetic, and altimeter data were recorded both in digital and analog forms. Positioning data was stored in digital form, encoded on VHS format video tape and recorded at regular intervals in UTM coordinates, as well as being marked on the flight path mosaic by the operator while in flight.

The survey area, comprising a single survey block in the northwestern British Columbia, approximately 70 kilometres east-northeast of Wrangell, Alaska. The area was flown on April 14, 1991. Data from three flights were used to compile the survey results. The flight line orientation was east-west, and the nominal flight line spacing was 100 metres. Coverage and data quality were considered to be well within the specifications described in the service contract.

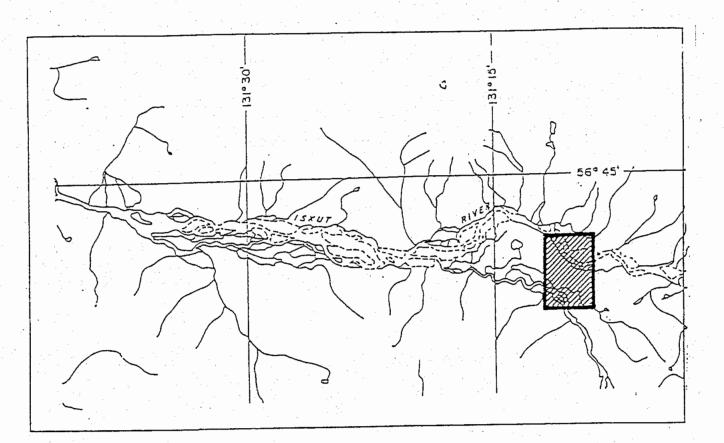
The purpose of the survey was to record airborne geophysical data over and around ground that is of interest to Adrian Resources Ltd.

A total of 70 line kilometres of the recorded data were compiled in map form. The maps are presented as part of this report according to specifications laid out by Adrian Resources Ltd.

### 2. SURVEY AREA LOCATION

The Phiz Property is depicted on the index map shown below. It is centred at approximate geographic latitude 56° 41' north, longitude 131° 10' west, approximately 110 kilometres northwest of the town of Stewart, British Columbia (NTS Reference Map No. 104 B/11).

The terrain in the area is moderately rugged with elevation varying from approximately 64 m a.s.l. to in excess of 245 m a.s.l.



### SURVEY CLAIM LIST

<u>Claim Name</u>	Record <u>Number</u>	Number of Units	Expiry Date
Rob 13	222564	12	12/05/98
Rob 14	222565	15	12/05/98
Rob 16	222599	20	12/22/94
Rob 15	222620	16	02/19/96

#### 3. AIRCRAFT AND EQUIPMENT

#### 3.1 <u>Aircraft</u>

An Aerospatiale Lama 315-B helicopter, (CG-PHQ), owned and operated by Peace Helicopters Limited, was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a mean terrain clearance of 60 metres.

#### 3.2 Equipment

#### 3.2.1 <u>Electromagnetic</u>

The electromagnetic system was an Aerodat 4-frequency system. Two vertical coaxial coil pairs were operated at 935 Hz and 4600 Hz and two horizontal coplanar coil pairs at 4175 Hz and 32 kHz. The transmitter-receiver separation was 7 metres. Inphase and quadrature signals were measured simultaneously for the 4 frequencies with a time constant of 0.2 seconds. The electromagnetic bird was towed 30 metres below the helicopter.

#### 3.2.2 VLF-EM System

The VLF-EM System was a Herz Totem 2A. This instrument measured the total field and quadrature components of two selected transmitters, preferably oriented at right angles to one another. The sensor was towed in a bird 12 metres below the helicopter. The transmitters monitored were NLK, Jim Creek, Washington, broadcasting at 24.8 kHz, NSS, Annapolis, Maryland, at 21.4 kHz, and NAA, Cutler, Maine, at 24.0 kHz for the "line" stations and NAA and NLK for the "Ortho" stations, depending on availability and suitability of transmission.

#### 3.2.3 Magnetometer

The magnetometer employed was a Scintrex Model VIW-2321 H8 cesium, optically pumped magnetometer sensor. The sensitivity of this instrument was 0.1 nanoTeslas at 0.2 second sampling rate. The sensor was towed in a bird 12 metres below the helicopter.

#### 3.2.4 Magnetic Base Station

An IFG-2 proton precession magnetometer was operated at the base of operations to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

#### 3.2.5 Radar Altimeter

A King Air KRA-10 radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

### 3.2.6 Tracking Camera

A Panasonic video camera was used to record flight path on VHS video tape. The camera was operated in continuous mode and the fiducial numbers and time marks for cross reference to the analog and digital data were encoded on the video tape.

### 3.2.7 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data were recorded:

Channel	Input	Scale
CXI1	935 Hz Coaxial Inphase	2.5 ppm/mm
CXQ1	935 Hz Coaxial Quadrature	2.5 ppm/mm
CXI2	4600 Hz Coaxial Inphase	2.5 ppm/mm
CXQ2	4600 Hz Coaxial Quadrature	2.5 ppm/mm
CPI1	4175 Hz Coplanar Inphase	10 ppm/mm
CPQ1	4175 Hz Coplanar Quadrature	10 ppm/mm
CPI2	32 kHz Coplanar Inphase	20 ppm/mm
CPQ2	32 kHz Coplanar Quadrature	20 ppm/mm
PWRL	Power Line	60 Hz
VLT	VLF-EM Total Field, Line	2.5%
ppm/mm		
VLQ	VLF-EM Quadrature, Line	2.5%
ppm/mm		
VOT	VLF-EM Total Field, Ortho	2.5%
ppm/mm		· · · ·
VOQ	VLF-EM Quadrature, Ortho	2.5%
ppm/mm		
RALT	Radar Altimeter	10 ft./mm
MAGF	Magnetometer, fine	2.5 nT/mm
MAGC	Magnetometer, coarse	25 nT/mm

### 3.2.8 Digital Recorder

A DGR-33 data system recorded the survey on magnetic tape. Information recorded was as follows:

Equipment	<b>Recording Interval</b>
EM System	0.1 seconds
VLF-EM	0.2 seconds
Magnetometer	0.2 seconds
Altimeter	0.2 seconds

3 - 2

#### 4. DATA PRESENTATION

4 - 1

#### 4.1 <u>Base Map</u>

An orthophotomosaic base map at a scale of 1:10,000 was prepared from an orthophotomosaic map, supplied by the client, as a screened mylar base.

### 4.2 Flight Path Map

The flight path map was derived from the video camera flight path record and the navigator's positioning marks as recorded on the navigation map. It is estimated that the flight path is generally accurate to about 20 metres with respect to the topographic detail of the base map.

#### 4.3 <u>Airborne Electromagnetic Survey Interpretation Map</u>

The electromagnetic data were recorded digitally at a sample rate of 10 per second with a time constant of 0.1 seconds. A two stage digital filtering process was carried out to reject major sferic events and to reduce system noise. Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events.

The signal to noise ratio was further enhanced by the application of a low pass digital filter. It has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 0.25 seconds. This low effective time constant permits maximum profile shape resolution.

Following the filtering process, a base level correction was made. The correction applied is a linear function of time that ensures the corrected amplitude of the various inphase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data were used in the interpretation of the electromagnetics. An interpretation map was prepared showing flight lines, fiducials, peak locations of anomalies and conductor axes. The data have been presented on a Cronaflex copy of the orthophotomosaic base map with flight path.

#### 4.4 <u>Total Field Magnetic Contours</u>

The aeromagnetic data were corrected for diurnal variations by adjustment with the recorded base station magnetic values. No correction for regional variation was applied. The corrected profile data were interpolated into a regular grid at a 25 metre true scale interval using an Akima spline technique. The grid provided the basis for threading the presented contours at a 2 nanoTesla interval.

The contoured aeromagnetic data have been presented on a Cronaflex copy of the orthophotomosaic base with flight lines.

#### 4.5 Vertical Magnetic Gradient Contours

The vertical magnetic gradient was calculated from the gridded total field magnetic data. Contoured at a 0.02 nT/m interval, the gradient data were presented on a Cronaflex copy of the base map with flight lines.

#### 4.6 Apparent Resistivity Contours

The electromagnetic information was processed to yield a map of the apparent resistivity of the ground.

The approach taken in computing apparent resistivity was to assume a model of a 200 metre thick conductive layer (i.e., effectively a half space) over a resistive bedrock. The computer then generated, from nomograms for this model, the resistivity that would be consistent with the bird elevation and recorded amplitude for the 4175 Hz coaxial frequency pair used. The apparent resistivity profile data were interpolated onto a regular grid at a 25 metres true scale interval using an Akima spline technique. The contoured apparent resistivity data were presented on a Cronaflex copy of the base map with the flight path.

#### 4.7 VLF-EM Total Field

The VLF-EM signals using NLK (Jim Creek, Washington), broadcasting at 24.8 kHz, were compiled as contours in map form and presented on a Cronaflex overlay of the base map along with flight lines. The orthogonal VLF data from NAA, (Cutler, Maine) was not utilized in the compilation as the line direction data set was complete. The orthogonal data remains valid, and may be processed at a later date. The data was recorded on the analog records and on digital tape.

#### 5. INTERPRETATION

#### 5.1 Geology

No geological information was provided by Adrian Resources Ltd. The Phiz Project area is located in the rugged Coast Mountains, in the Iskut River area of northwestern British Columbia. It is favourably positioned within the so-called "Golden Triangle".

Geologically, the property occurs immediately to the southeast from the Black Dog deposit of Eurus Resource Corp. and Thios Resources Inc. which is hosted by the Coast Plutonic Complex. Rocks of this tectonic belt are dominantly quartz diorite and granodiorite with foliated plutonic bodies, gneiss and schist forming northwesterly trending, steeply dipping pendants between the younger plutons. East of the Stikine River, the complex is interpreted to represent the roots of an arc sequence.

Resting unconformably on older parts of the complex are highly metamorphosed, Mesozoic volcanic, volcaniclastic and clastic rock sequences that record the construction of marine to subaerial volcanic highlands. These highlands were subsequently eroded and fluvially reworked to a relatively flat topographic surface which was then intruded by northwest trending belts of Late Cretaceous to Early Tertiary plutons (eg. quartz monzonites). Flat lying lavas and relatively undeformed felsic ash flows of Tertiary to Quaternary age top the stratigraphic succession. Much of the property is apparently underlain by volcanics and sediments.

Late Palaeozoic pendants are strongly metamorphosed and, in places, preserve older northeasterly trending structures. Along the eastern margin of the complex, northerly and northeasterly trending normal faults occur. In the vicinity of the property recognized regional faults are few in number and masked by the younger plutons and volcanic piles.

At least eleven significant mineral occurrences are known within 20 km of the property, including the Snip and Johnny Mountain Deposits. Gold bearing, high grade, epithermal and mesothermal veins are associated with alkaline plutons, and dykes or stocks of a feldspar phyric (porphyry) nature. Most base metal mineralization occurs in veins, fractures and shears and as replacement products within volcanics and sediments. At the Eskay Creek deposit, mineralization is somewhat different, in that veins are apparently stratabound within a sedimentary horizon located between felsic volcanics and pillowed andesites.

#### 5.2 <u>Magnetics</u>

The magnetic data from the high sensitivity cesium magnetometer provided virtually continuous magnetic reading when recording at two-tenth second intervals. The system is also noise free for all practical purposes. The sensitivity of 0.1 nT allows for the mapping of very small inflections in the magnetic field, resulting in a contour map that is comparable in quality to ground data.

The total magnetic field in the survey area varies over a narrow range of values, from less than 56,610 nT to in excess of 57,270 nT. High magnetic values occur in the northeast half of the area, which contains an extensive oval high, and in a semi-oval shaped zone open to the northwest in the northwestern corner of the area. The latter high is from the south bordered by a series of smaller secondary highs which are considered to be extensions of a similar secondary magnetic trend from the area of Black Dog horizon.

The two main magnetic highs are separated by a narrow winding low which is interpreted to follow or indicate a contact, possibly between the Triassic and Palaeozoic volcanosedimentary units. In the northwest, the low/contact follows the south bank of Iskut River until it reaches the north-central part of the block, where it turns sharply southward along a gully separating two hills. The northeastern magnetic high is from the south bordered by a series of small secondary highs which occur along an east-west strike. (It is not clear whether or not these highs are continuation of similar features from the Black Dog area.) At this location, the contact becomes fuzzy. It is assumed to swing to the southeast or ESE.

Magnetic patterns at the southeast end of the northeastern high suggest that the anomaly may be of intrusive origin. A small high centred at the time mark 17:23:04 on line 20310 displays similar characteristics and could also reflect an intrusive body.

In the southwest part of the are, the magnetic patterns indicate the presence of a WNW-ESE oriented trend extending in both directions beyond the survey boundary. Due to the small size of the area, it is not possible to estimate the trend direction beyond the survey boundary.

The magnetic and calculated vertical magnetic gradient patterns display frequent terminations, offsets, and distortions of the contours suggesting a complex structural setting. This is, however, difficult to evaluate for the reasons mentioned in the previous paragraph. Structures of orientations ranging from northwesterly to northeasterly are apparent. For example, a north-south trend may be present along the west survey boundary; Northwest-southeast oriented trends appear to be present in the northeast corner of the area; already mentioned WNW-ESE trend or trends in the southwest corner; and northeasterly oriented trends in the southeast of the area. Their exact locations are, however, difficult to estimate. Data from the adjacent areas have to be used and a more regional approach adopted.

#### 5.3 Total Field VLF-EM

The NLK, Jim Creek, Washington, transmitter which operates at a frequency of 24.8 kHz, and occurs at an azimuth of approximately 143°, was monitored during the survey. The area is dominated by a northwest-southeasterly oriented broad zone of high VLF-EM response. In the northwest, the zone correlates with one of the main magnetic highs. It is interrupted in its central portion by the north-south oriented proposed contact. Further southeast, the VLF-EM zone occurs over the south shore of Iskut River. Here, the zone contains a central narrow, highly anomalous core. At present time, there is no obvious explanation for this feature, except that its orientation corresponds to the direction of a proposed fault(?) west of the contact.

The VLF-EM data away from the main anomaly is only weakly to moderately active. It shows relatively poor correlation with electromagnetic anomalies and conductors.

#### 5.4 Apparent Resistivity

The apparent resistivity values were calculated from the 4,100 Hz coplanar electromagnetic data. The values range from approximate-ly 8 ohm-m to more than 8,000 ohm-m. The data indicates close correlation with topography. High ground is mostly resistive, low ground conductive. For example, the two hills in the central part of the area are clearly outlined by the resistivity patterns. Other high elevation features display similar correlation.

The Iskut River valley in the northwest and the Craig River valley in the southwest are both shown as broad conductive zones. The north and south edges of the Craig River valley show vague correlation with very weak magnetic secondary and tertiary anomalies. As one of possible explanations, magnetic anomalies near the present or old shore line may reflect river sediments containing higher concentrations of magnetite. The Iskut River conductive zone is in its eastern portion broken by an NNE-SSW trend of higher resistivity. This is a unique feature without any obvious explanation at this time.

The most attractive anomaly shown on the resistivity map is the north-south oriented narrow low situated in the central part of the area. The low, which occurs along the proposed contact, is associated with a series of prominent EM anomalies reflecting west dipping bedrock conductors.

Because some of the low resistivity zones are obviously caused by features of little exploration interest, such as conductive sediments, structural analysis of the resistivity patterns is a difficult task. The most intriguing and possibly most important contribution of the resistivity data relates to the delineation of the contact between presumably the Triassic and Palaeozoic volcanosedimentary units. The high/low resistivity boundary in the northwest extends in a straight line toward the southeast corner of the area where it swings to the east. In the central portion of the map, this is contrasted by results of the magnetic interpretation which suggest "bulging" of the contact in a southwesterly direction. In the case of both the magnetic and resistivity data, there is sufficient room to move the contact. Should the contact follow the eastern outline, the central conductive zone containing bedrock conductors may then represent a fault like feature.

#### 5.5 Electromagnetics

The electromagnetic data was checked by a line-to-line examination of the records. Record quality was good with only minor noise due to the spheric activity. This was readily removed by digital filtering without any loss of EM sensitivity. The electromagnetic anomalies were selected by the writer from the profiles according to the "vertical thin sheet" model. Other EM anomalies which do not conform to this model (e.g., wide conductive units which are best portrayed by the resistivity map) were not included in the selection. The anomaly axes were assigned wherever possible, based on the similarity of the EM response on adjacent lines and taking into account the general magnetic trends. The individual anomalies were grouped according to their apparent, or possible, association with inferred structural units.

Those conductors which occur at the margins of wide conductive zones are usually due to "edge effects". They may reflect abrupt resistivity change at the contacts (edges) of zones of different conductivity. However, they cannot be discarded because the contact zone may be mineralized. Consequently, these anomalies should be regarded as potential targets.

Group I. - The EM anomalies and conductors of this grouping occur along the river shore and are associated with the proposed contact. They appear to be edge type anomalies with a possible dip to the east. The group consists of two conductors broken on line 20150 along a possible northeast oriented feature. The north conductor is nonmagnetic, the south one is more closely associated with the flank of a magnetic anomaly. Ground follow-up is recommended.

Group II. - This group contains the most attractive conductors intersected in the survey area. These bedrock conductors, which occur along a north-south running gully separating two hills, are well defined and of definite west dip. The group appears to be broken between lines 20270 and 20280, possibly by a northwest oriented fault. Ground follow-up is recommended.

Group III. - These EM anomalies reflect a weak conductor of bedrock origin and possible west dip. There is a possibility that the conductor constitutes an extension of

Group IV. - Conductors of this grouping occur along the west edge of a broad conductive zone extending to the south. They may be reflect mineralization associated with the contact of the zone. Ground follow-up should be considered.

Group V. - This group contains two weak and poorly defined conductors within the old river bed. Their origin is not known. No ground follow-up is recommended at this time.

Group VI. - The EM anomalies and conductors of this grouping are of possible bedrock origin. They are confined to the west edge of a large, oval shaped magnetic anomaly. Their follow-up is recommended.

Group VII and anomaly 20110C. - The group consists of EM anomalies and conductors which are associated with a narrow resistive feature crossing the northeastern conductive zone. Both the zone and the conductors strike across the magnetic trend which makes them somewhat suspect. Anomaly 20110C, which is quite attractive and occurs to the east of the group, may reflect continuation of the 20200A-20160A conductive horizon. Selective ground follow-up should be undertaken.

The scattered EM anomalies and conductors situated in the southeast corner of the area occur mostly south of the series of secondary magnetic anomalies. They are confined to a curved conductive zone and to its edges. They are believed to be of bedrock and possible bedrock origin. The geologic environment in the area of these conductors should be evaluated and if there is an exploration potential, ground follow-up should be undertaken.

### 6. CONCLUSIONS AND RECOMMENDATIONS

Results of the present airborne geophysical survey indicate that the area may contain a contact extending from the northwest corner through the central part being located in a gully between two hills, and further in an S-shaped fashion to the southeast. Alternatively, the resistivity data would place the contact in the central part of the area further east, in a straight line extension from the northwest corner. An intrusive may occur in the northeast. Magnetic data indicate that north-south, northwest-southeast, WNW-ESE, and northeasterly oriented trends may occur.

A broad northwest-southeasterly oriented VLF-EM zone transects the area correlating in the northwest with one of the main magnetic highs. In its central portion it is broken by the north-south oriented contact or fault. Away from the main anomaly, the VLF-EM data is only weakly to moderately active showing poor correlation with electromagnetics.

The resistivity data indicates close correlation with topography: High ground is mostly resistive, low ground conductive. The Iskut River valley and the Craig River valley are both shown as broad conductive zones. The Craig River valley is associated with very weak magnetic anomalies. The Iskut River conductive zone is in its eastern portion broken by an NNE-SSW trend of higher resistivity, a unique feature without any obvious explanation at this time. An attractive zone of low resistivity associated with the central north-south oriented gully occurs along the proposed contact. It is associated with prominent EM anomalies reflecting west dipping bedrock conductors.

Structural evaluation of the present geophysical data was not completely successful because of a small size of the area. It is recommended to combine the obtained data with the data from the adjacent areas in order to extract more information. Further processing and anomaly enhancement by means of shadow and apparent susceptibility mapping is recommended. The survey results should be compiled on a common base containing all types of other information, including geology, geochemistry, and other geophysics. Target areas should be selected based on the mutual correlation of all the data and evaluation of the entire body of information, and correlation of the present results with a workable geologic model.

Respectfully submitted

Zbynek Dvorak Consulting Geophysicist for AERODAT LIMITED

## APPENDIX I

### PERSONNEL

### FIELD

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Flown	April/May, 1991
Pilot	Pamicon - Bronson
Operator	Steve Arstad

OFFICE

Processing Ed Hamilton George McDonald

Report

Zbynek Dvorak

# APPENDIX II

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## ANOMALY LISTINGS

#### J9116 ADRIAN RESOURCES LTD.

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE				BIRD HEIGHT MTRS
2 2	20020 20020	A B	1 1	9.3 10.5	6.6 7.2	1.5 1.7	23 5	
2	20030	A	1	16.3	13.7	1.5	0	47
2	20040	A	2	6.5	3.3	2.1	4	71
2	20060	A	1	8.9	7.0	1.3	8	52
3 3	20071 20071	A B	0 2	5.2 9.1	4.4 5.1	0.9 2.1	11 7	60 58
3	20081	A	1	7.4	6.5	1.0	13	48
3	20090	A	2	8.1	3.3	3.2	14	58
3	20100	A	1	12.1	8.0	1.9	15	42
3 3 3	20110 20110 20110	A B C	1 4 1	15.9 8.6 11.3	13.1 1.8 7.4	8.2		33 36 26
3	20120	A	2	17.8	8.9	3.1	15	38
3 3 3	20130 20130 20130	A B C	1 3 2	9.9 19.5 11.4		1.3 6.4 2.8	12 15 20	45 40 42
3 3 3	20140 20140 20140	A B C	2 2 1	18.9	4.2 8.8 11.1	3.7 3.5 1.1	21 19 11	44 33 39
3 3 3	20150 20150 20150	A B C	0 2 1	8.4 14.0 19.4	9.4 6.9 17.2	2.9	13 20 19	
3 3 3 3	20160 20160 20160 20160	A B C D	0 1 1 0	13.0 18.7 18.7 8.9	$14.3 \\ 13.5$	1.8	21	28 25 25 36
3 3 3	20170 20170 20170	A B C	0 1 3	6.1 17.2 25.4	7.2 12.7 10.1	0.6 1.8 4.8	11 22 21	46 26 27

#### J9116 ADRIAN RESOURCES LTD.

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FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDI INPHASE	E (PPM) QUAD.			BIRD HEIGHT MTRS
3 3	20170 20170	D E	1 1	13.5 14.9	13.5 15.2	1.1 1.1		30 29
3 3 3 3 3 3	20180 20180 20180 20180 20180 20180	A B C D E	1 0 3 2 0	20.4 16.3 25.1 17.9 8.8	22.7 23.0 11.2 10.7 13.6	0.7 4.1 2.5	16 19 19	20 21 29 32 34
3 3 3	20190 20190 20190	A B C	1 2 1	19.7 30.1 21.0	18.4 20.0 20.9	1.4 2.5 1.3	19 21 19	23 20 21
3 3 3 3 3	20200 20200 20200 20200	A B C D	0 1 0 2	11.3 20.3 10.6 16.2	21.4 21.8 12.2 9.4	0.4 1.2 0.8 2.5	15 14 19 0	20 25 29 61
3 3 3 3 3 3	20210 20210 20210 20210 20210 20210	A B C D E	1 0 0 0 1	3.2 9.5 13.0 13.0 19.4	1.7 10.8 19.7 20.8 14.6	0.6	12 13	62 35 26 24 26
3 3 3 3	20220 20220 20220 20220	A B C D	1 0 0 3	25.7 10.9 12.6 13.1	26.6 25.0 17.1 4.8	0.3	11 13	19 21 28 41
3 3 3 3	20230 20230 20230 20230	A B C D	2 0 0 0	7.3	3.0 6.9 13.3 17.4	3.3 0.9 0.5 0.9	8 9	52 35
3 3	20240 20240	A B	0 2	10.6 9.0	26.2 4.4	0.3	6 30	24 37
3 3	20250 20250	A B	1 0		2.7 17.7	1.6 0.2	25 1	57 34
3	20260	A	2	6.1	2.2	3.4	27	53
3 3	20270 20270	A B	2 0	4.0 4.8	1.2 8.6		26 0	69 60
3	20280	A	2	4.8	1.6	3.5	12	76

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#### J9116 ADRIAN RESOURCES LTD.

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUD INPHASE				BIRD HEIGHT MTRS
3	20290	A	2	5.1	2.3	2.3	25	58
3	20300	A	2	8.1	3.9	2.5	15	55
3 3	20310 20310	A B	2 0	5.6 5.1	2.8 7.2		22 0	57 57
. 3	20320	А	0	2.5	2.9	0.4	44	35
3	20330	A	0	3.7	8.6	0.1	10	36
3	20340	А	0	6.5	15.3	0.2	12	25
3	20350	А	0	4.4	7.4	0.3	21	32
3 3 3	20360 20360 20360	в	0 0 0	9.2 4.1 1.5	16.5 10.9 2.3	0.4 0.1 0.2	7 16 27	33 25 55
3 3 3	20371 20371 20371	A B C	1 0 1	4.2 7.0 13.7	2.8 9.0 10.0	1.2 0.6 1.7		
3 3 3	20381 20381 20381	A B C	2 1 0	22.4 12.8 6.8	16.1 12.4 6.6			32 34 44
3 3 3 3	20391 20391 20391 20391 20391	A B C D	1 0 0 0	4.6 5.2 10.2 7.7	2.3 5.2 12.6 10.0	1.9 0.7 0.7 0.6	0	51 91 40 44
4 4 4 4	20401 20401 20401 20401	B C	0 0 2 1	4.6 6.0 13.7 8.8	7.3 11.5 6.2 5.9	0.3	0	29 22 68 38
4 4 4	20412 20412 20412	В	1 2 2	10.1 15.7 13.0	7.5 8.9 7.1	1.5 2.5 2.5		69 59 34
4	20421	A	0	5.5	4.9	0.9	0	80
4	20431	A	2	15.5	7.9	2.9	0	58

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#### J9116 ADRIAN RESOURCES LTD.

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDI INPHASE	E (PPM) QUAD.	CONE CTP MHOS	DUCTOR DEPTH MTRS	BIRD HEIGHT MTRS
4	20431	в	1	7.1	5.8	1.1	37	27
4	20441	A	0	5.5	4.9	0.9	0	77
4	20451	A	2	6.9	3.7	2.0	0	76
4 4	20461 20461	A B	0 0	8.6 8.1	12.0 8.7	0.6 0.8	2 0	44 66
4 4 4 4	20471 20471 20471 20471	A B C D	0 0 1 1	-1.1 3.8 7.4 6.1	4.4 4.5 5.1 4.3	0.0 0.5 1.5 1.3	0 0 9 12	39 86 57 59
4 4	20480 20480	A B	2 1	3.3 7.3	1.0	3.5 1.5	5 14	96 53

#### APPENDIX III

#### **CERTIFICATE OF QUALIFICATIONS**

I, Zbynek Dvorak, certify that:

- 1. I hold a PhD in Geophysics from Charles University, Czechoslovakia having graduated in 1967.
- 2. I reside at 146 Three Valleys Drive, in the town of Don Mills, Ontario.
- 3. I have been continuously engaged in both professional and managerial roles in the minerals industry in Canada and abroad for the past 19 years.
- 4. I have been an active member of the Society of Exploration Geophysicists since 1978 and a member of KEGS since 1978.
- 5. The accompanying report was prepared from information published by government agencies, materials supplied by Adrian Resources Ltd. and from a review of the proprietary airborne geophysical survey flown by Aerodat Limited for Adrian Resources Ltd. I have not personally visited the property.
- 6. I have no interest, direct or indirect, in the property described nor do I hold securities in Adrian Resources Ltd.

Signed

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Zbynek Dvorak Consulting Geophysicist

August 9, 1991

APPENDIX IV

**EXPENDITURES** 

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3883 NASHUA DRIVE • MISSISSAUGA • ONTARIO • CANADA • L4V 1R3 Telephone: (416) 671-2446 Telex: 06-968872 Fax: (416) 671-8160

> Invoice No: 22-9116-0095 Date: March 28, 1991

Adrian Resources Ltd. 11th Floor, Box 10 808 West Hastings Street Vancouver, British Columbia V6C 2X4

Attn: Mr. Jim Foster Exploration Manager Prime Equities Inc.

In Account With:

Aerodat Limited 3883 Nashua Drive Mississauga, Ontario L4V 1R3

Re: Airborne Geophysical Survey - Phiz Project, Iskut West Area, Northwestern British Columbia

Pursuant to paragraph 10 a (on signing of Agreement) of Agreement between Adrian Resources Ltd. and Aerodat Limited dated March 25, 1991.

Amount Due

\$3,900.00

273.00

<u>\$4,173.00</u>

7% GST (R100067024)

TOTAL AMOUNT DUE



3883 NASHUA DRIVE • MISSISSAUGA • ONTARIO • CANADA • L4V 1R3 Telephone: (416) 671-2446 Telex: 06-968872 Fax: (416) 671-8160

> Invoice No: 22-9116-0134 Date: April 30, 1991

Adrian Resources Ltd. 11th Floor, Box 10 808 West Hastings Street Vancouver, British Columbia V6C 2X4

Attn: Mr. Jim Foster Exploration Manager Prime Equities Inc.

In Account With:

Aerodat Limited 3883 Nashua Drive Mississauga, Ontario L4V 1R3

Re: Airborne Geophysical Survey - Phiz Project, Iskut West Area, Northwestern British Columbia

Pursuant to paragraph 10 (b) (on completion of flying) of Agreement between Adrian Resources Ltd. and Aerodat Limited dated March 25, 1991.

Amount Due

\$7,800.00

546.00

7% GST (R100067024)

TOTAL AMOUNT DUE

\$8,346.00



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3883 NASHUA DRIVE • MISSISSAUGA • ONTARIO • CANADA • L4V 1R3 Telephone: (416) 671-2446 Telex: 06-968872 Fax: (416) 671-8160

> Invoice No: 22-9116-0293 Date: August 21, 1991

Adrian Resources Ltd. 11th Floor, Box 10 808 West Hastings Street Vancouver, British Columbia V6C 2X4

Attn: Mr. Jim Foster Exploration Manager Prime Equities Inc.

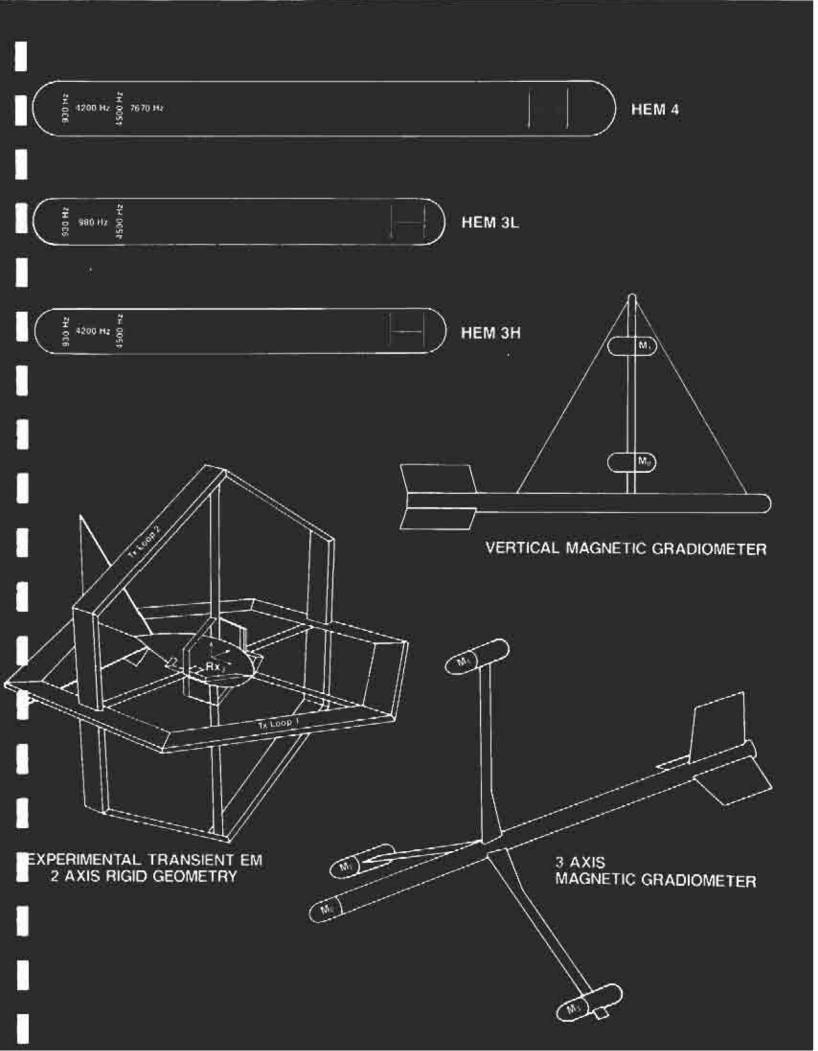
In Account With:

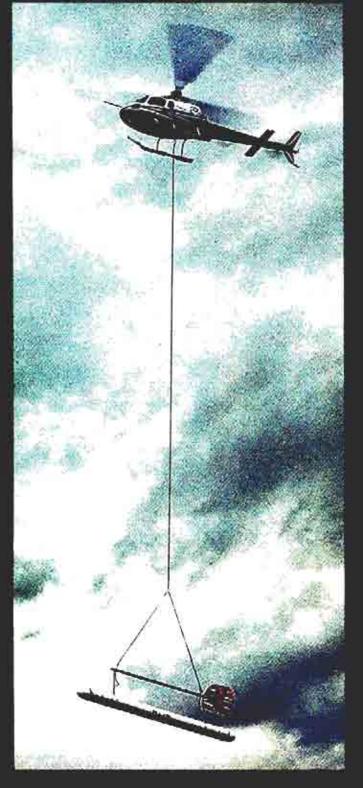
Aerodat Limited 3883 Nashua Drive Mississauga, Ontario L4V 1R3

Re: Airborne Geophysical Survey -	Phiz Project, Iskut	West Area,	Northwestern British
· · · ·	Columbia		

Pursuant to paragraph 10 (c) (on delivery of final maps and report) of Agreement between Adrian Resources Ltd. and Aerodat Limited dated March 25, 1991.

Mobilization/Demobilization (Prorate) Line Km Charge 105 km @ \$120.00 Orthophotomosaic (Prorate) Radar Altimetre Fuel/Camp (Prorate)	\$ 322.50 12,600.00 688.00 1,575.00 <u>697.06</u>
Total Survey Cost	15,882.56
Less Invoice 22-9116-0095 Less Invoice 22-9116-0134	3,900.00 <u>7,800.00</u>
Amount Due	\$ 4,182.56
7% GST (R100067024)	292.77
TOTAL AMOUNT DUE	\$ 4,475.33





AERODAT began operating in 1968 to provide a specialized service in the field of helicopterborne geophysical surveys. Since that time several hundred thousand kilometers of electromagnetic, magnetic and radiometric data have been flown. AERODAT offers its clients the most advanced multi-frequency, multiorientation electromagnetic systems, magnetometers, gamma spectrometers and radar positioning systems, backed by Aerodat's proven operational skill and experience.

### SERVICES

### ELECTROMAGNETIC HEM and VLF:

Specially designed and configured systems for mineral exploration programs—base metals, gold and kimberlites.

Analysis software may be applied to the results to interpret strata resistivity and thickness for geologic mapping, including geotechnical, ground water and placer applications.

### MAGNETIC TOTAL FIELD and GRADIENT:

A primary method for geologic and structural mapping. The magnetic gradient method provides maximum resolution of subtle magnetic anomalies and complex geological structures.

### GAMMA RAY SPECTROMETRY:

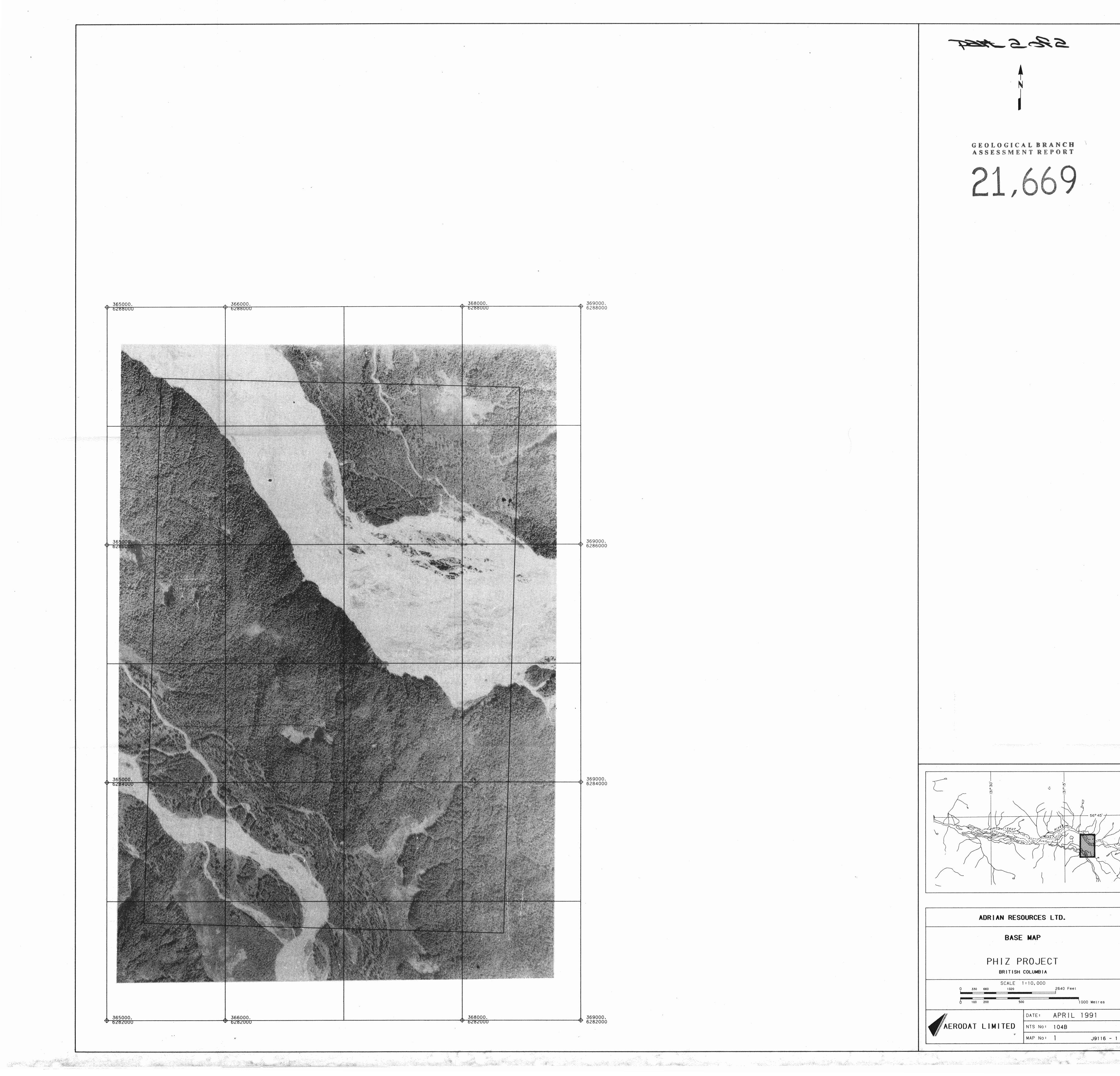
A geophysical method that can aid geological mapping as well as direct uranium exploration programs.

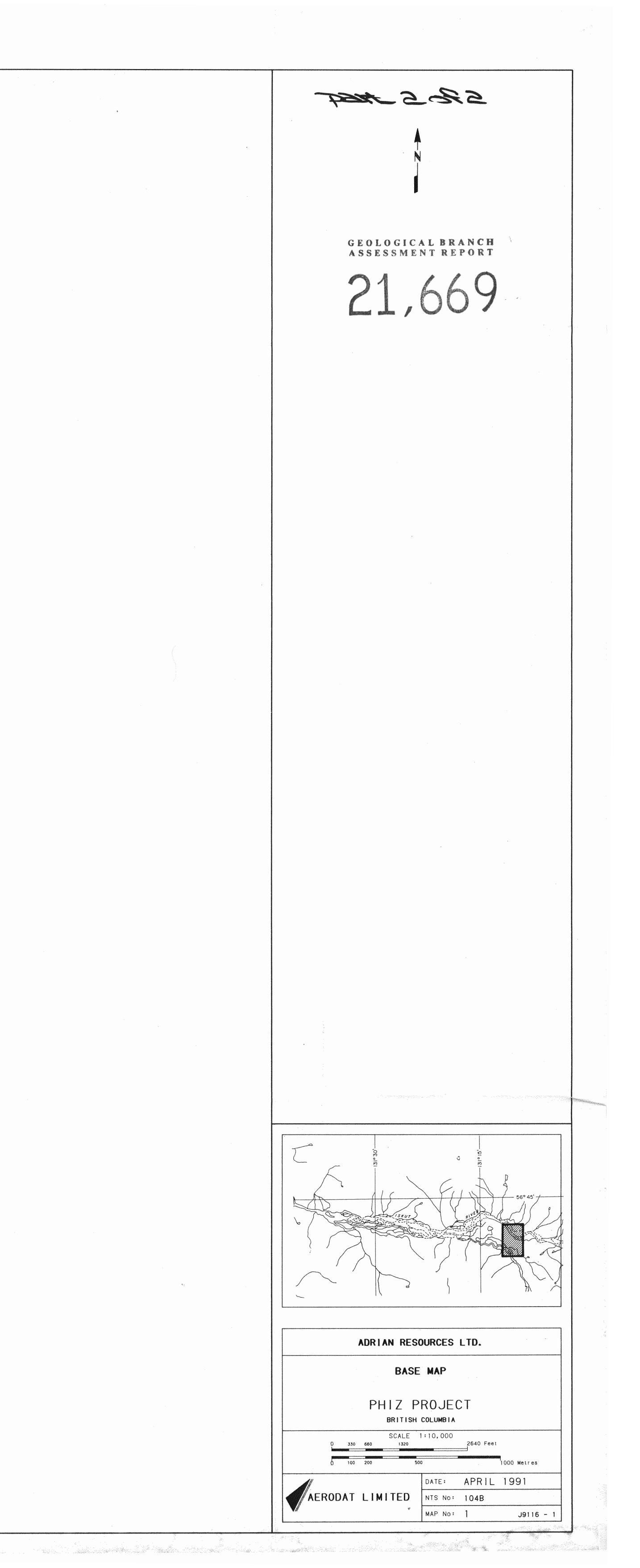
### ELECTRONIC NAVIGATION:

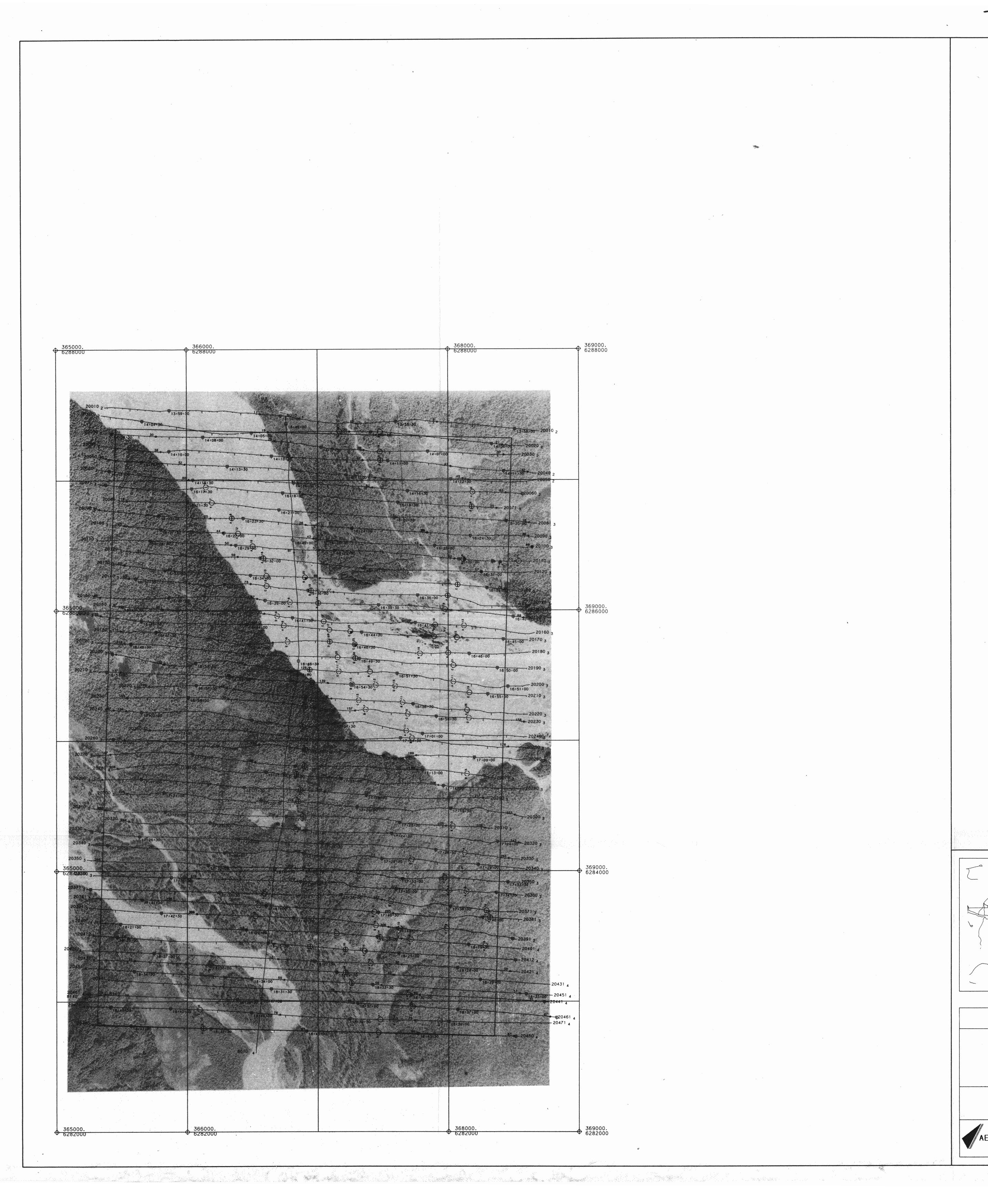
Facilitates the navigation and positioning of detailed surveys. Positional control is accurate to better than 10 meters providing a data resolution and accuracy comparable to ground surveys.

### COMPUTER COMPILATION and INTERPRETATION:

Advanced in-house compilation hardware and software permit custom tailoring of presentations and analysis products to meet the survey objectives.

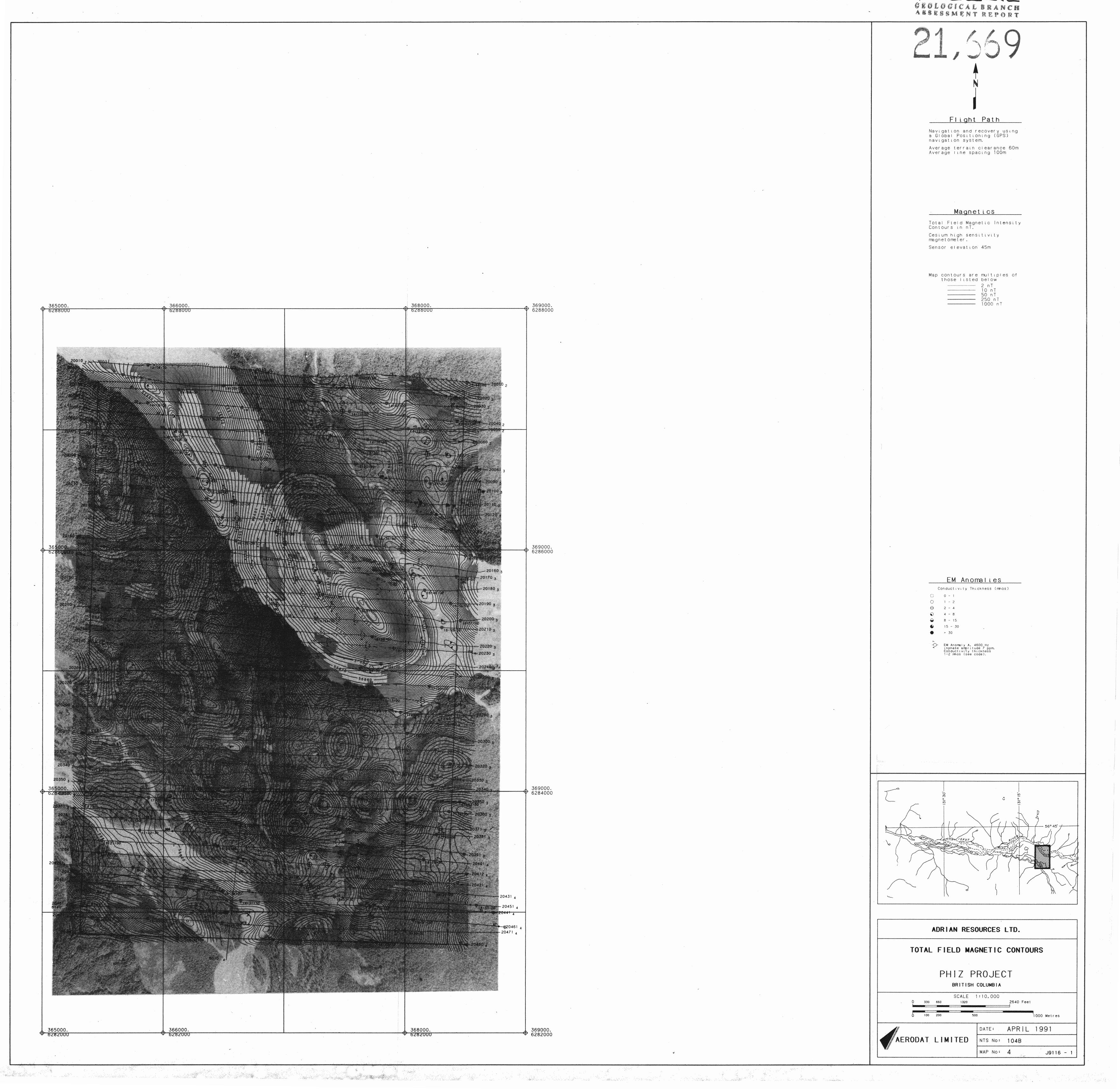






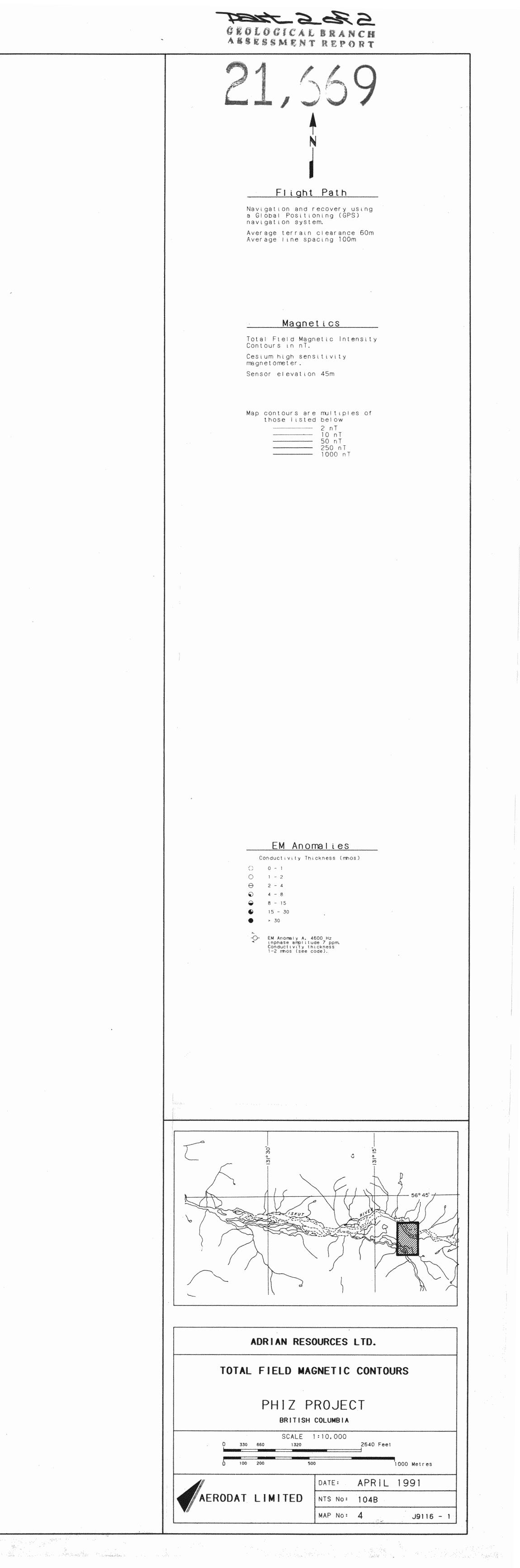
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5705 Fred GEOLOGICAL BRANCH ASSESSMENT REPORT 21,669 Flight Path Navigation and recovery using a Global Positioning (GPS) navigation system. Average terrain clearance 60m Average line spacing 100m . EM Anomalies Conductivity Thickness (mhos) O 10-11 0 1 - 2 ⊖ 2 - 4 4 - 8 8 - 15 6 15 - 30 > 30 ÷0 EM Anomaly A, 4600 Hz
inphase amplitude 7 ppm. Conductivity thickness
1-2 mhos (see code). ADRIAN RESOURCES LTD. FLIGHT PATH PHIZ PROJECT BRITISH COLUMBIA SCALE 1:10,000 2640 Feet DATE: APRIL 1991 AERODAT LIMITED NTS NO: 104B MAP No: 2 J9116 - 1 



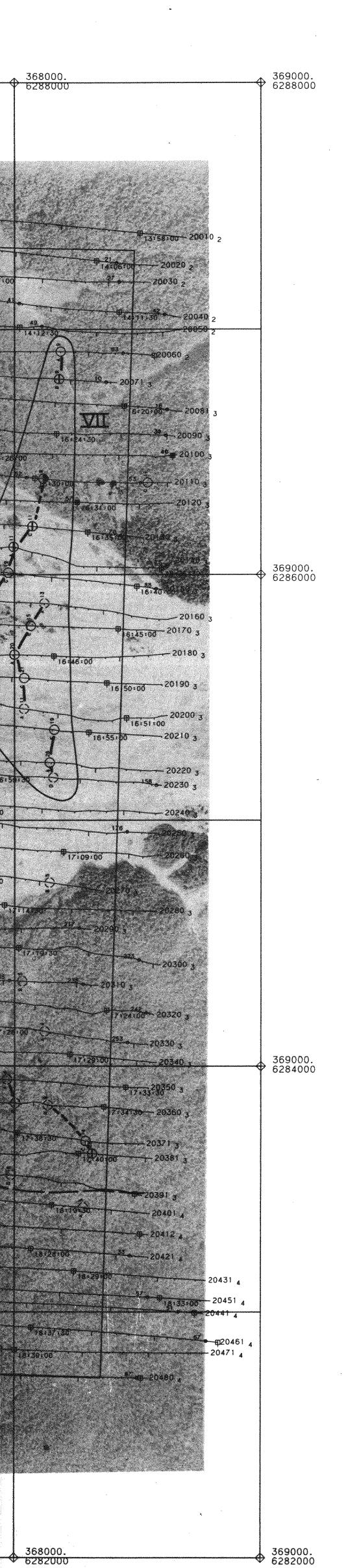
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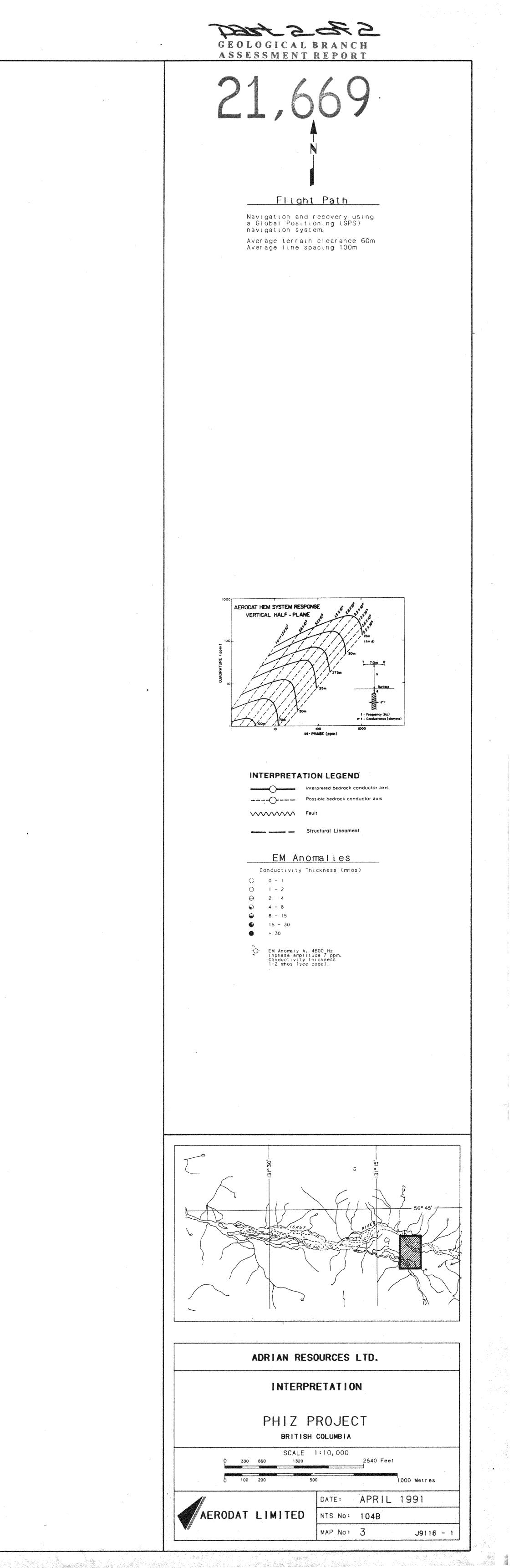
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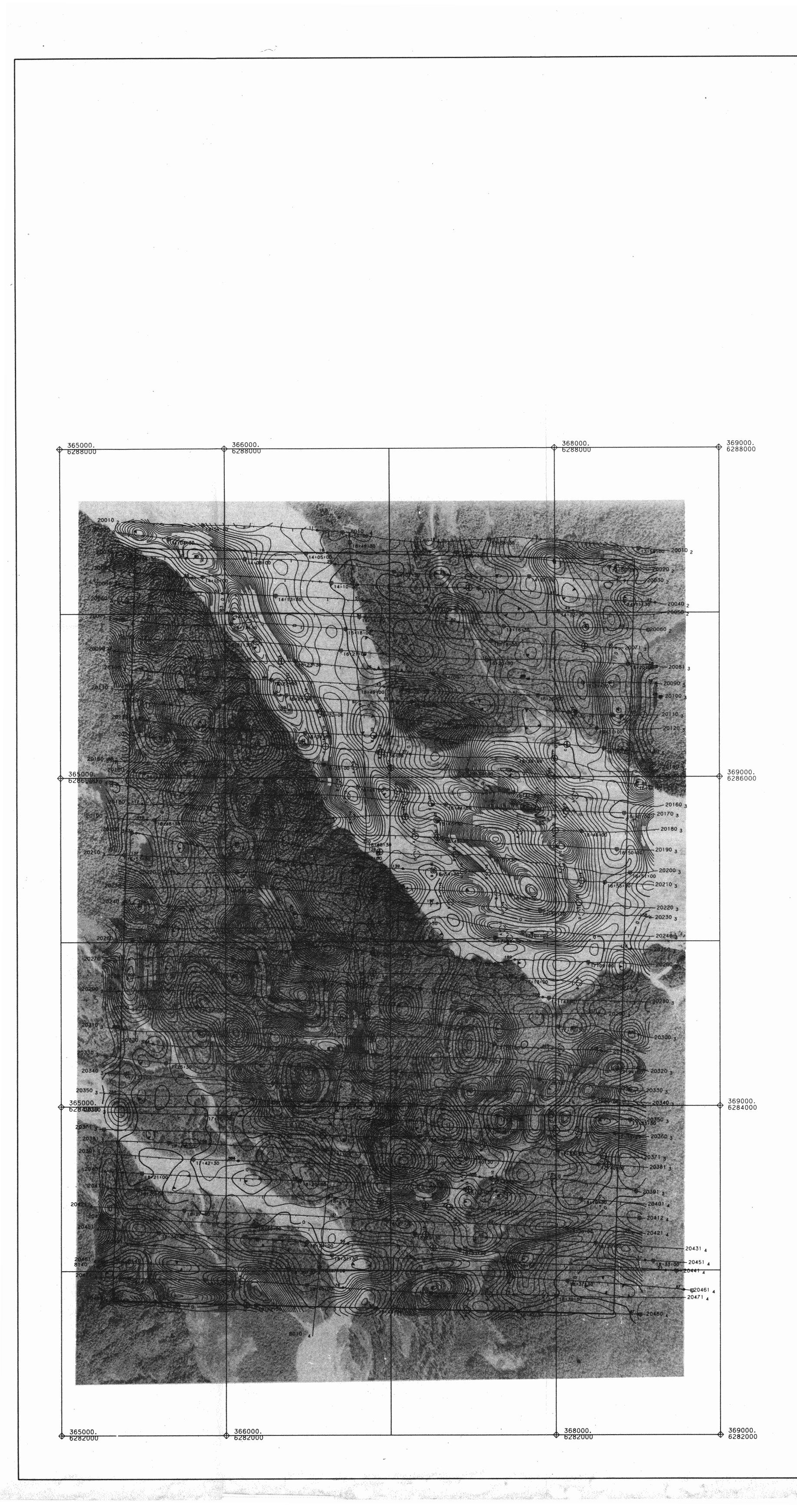


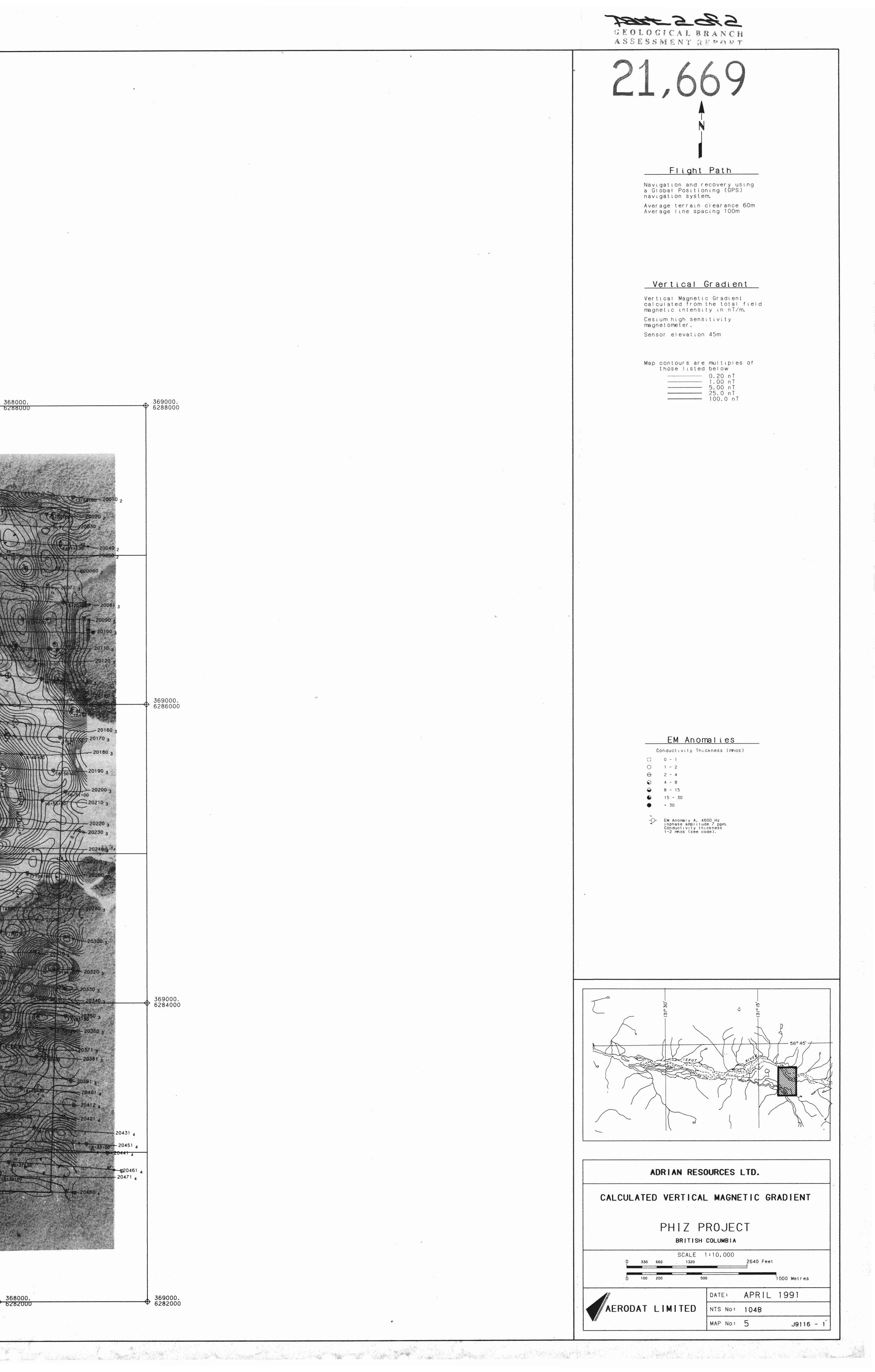
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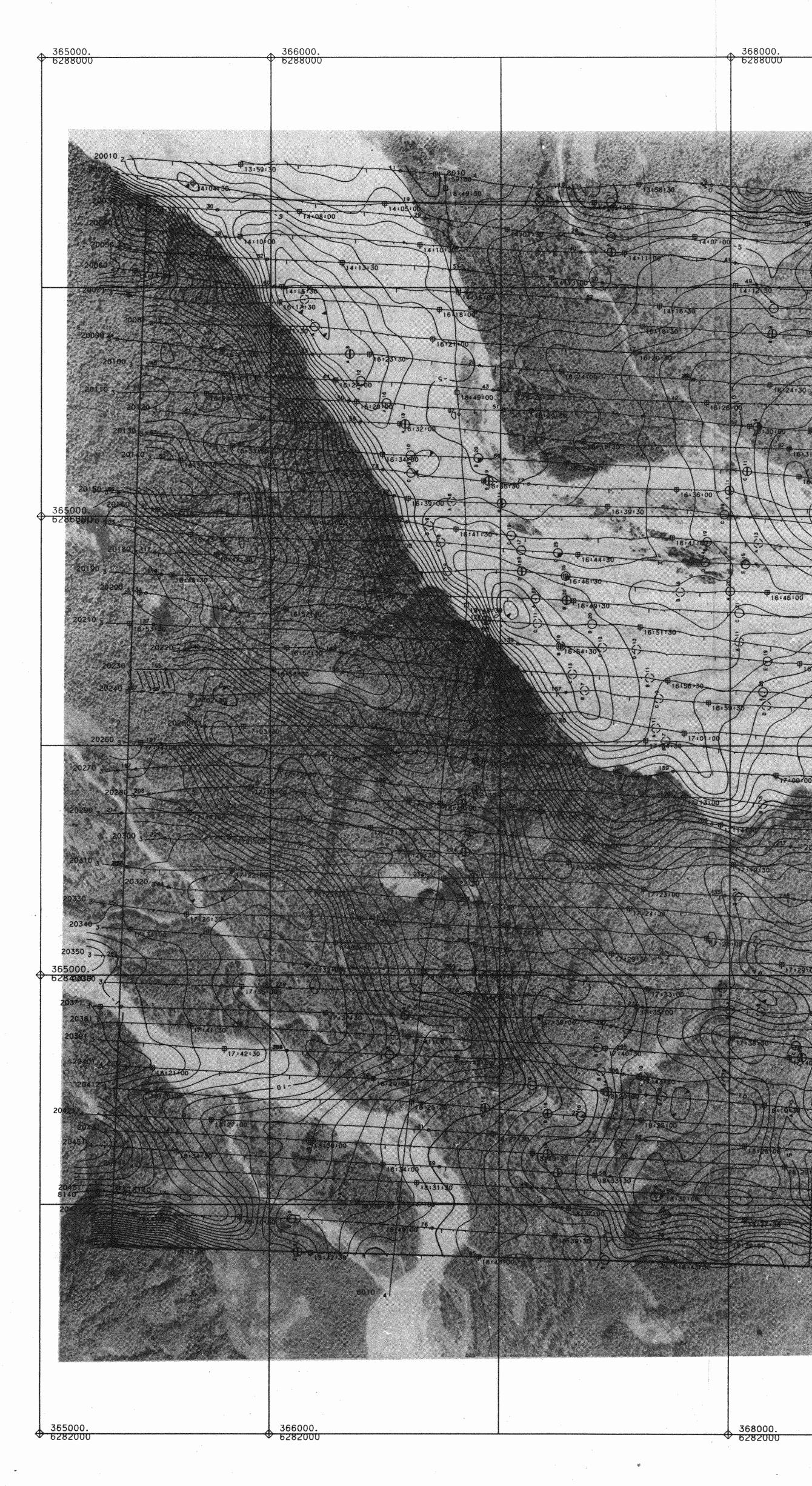
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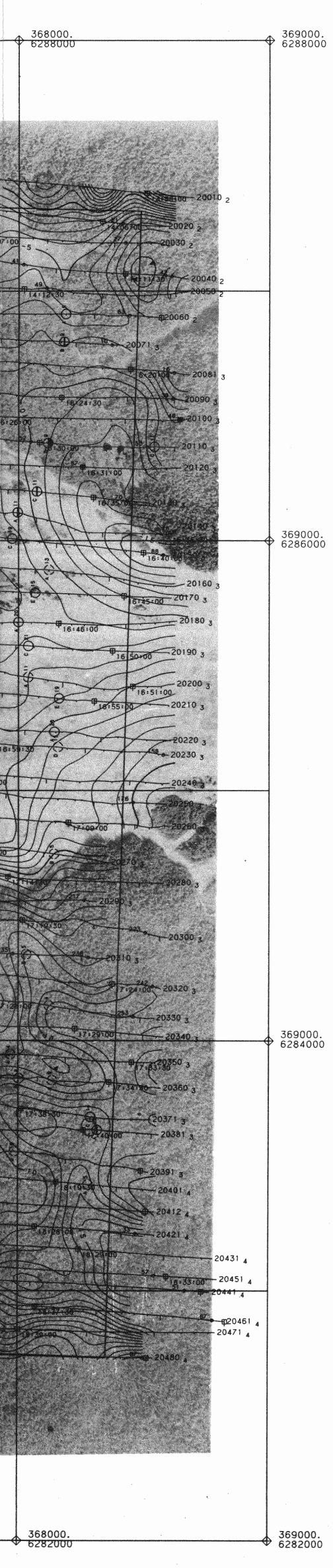
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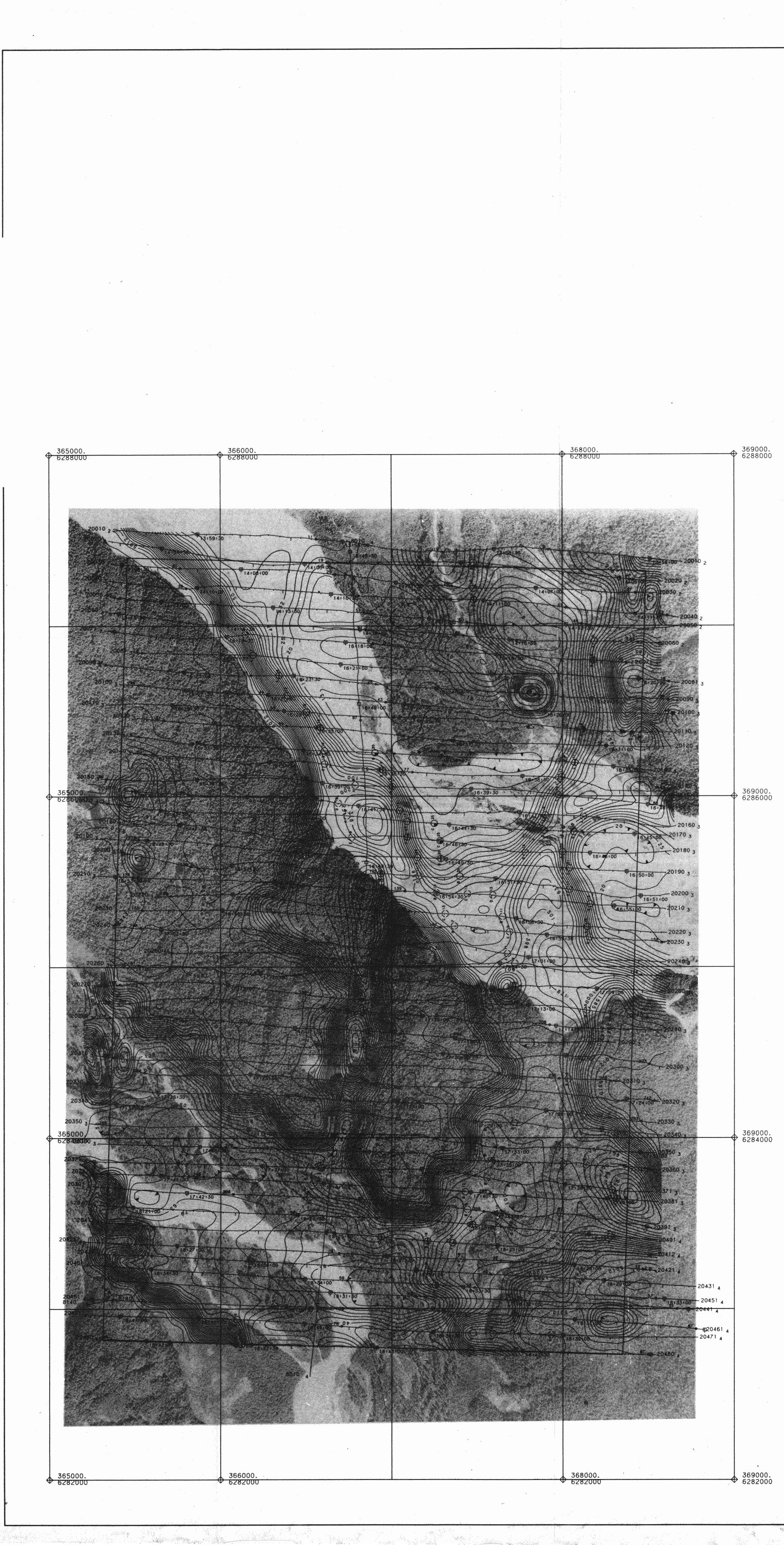
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GEOLOGICAL BRANCH ASSESSMENT REPORT -21,669 • Flight Path Navigation and recovery using a Global Positioning (GPS) navigation system. Average terrain clearance 60m Average line spacing 100m VLF-EM -------VLF-EM Total Field Intensity in percent. Station: NLK Jim Creek, Washingtom 24.8 kHz Sensor elevation 45m Map contours are multiples of those listed below ----- 1 **%** \_\_\_\_\_\_ 5 x \_\_\_\_\_\_ 25 x \_\_\_\_\_\_ 100 x EM Anomalies Conductivity Thickness (mhos) 0 - 1 O 1 - 2 ⊖ 2 - 4 6 4 - 8 8 - 15 6 15 - 30 • > 30 EM Anomaly A, 4600 Hz
inphase amplitude 7 ppm.
Conductivity thickness
1-2 mhos (see code). ADRIAN RESOURCES LTD. VLF-EM TOTAL FIELD CONTOURS ( LINE CHANNEL ) PHIZ PROJECT BRITISH COLUMBIA SCALE 1:10,000 2640 Feet 1000 Metres 500 DATE: APRIL 1991 AERODAT LIMITED NTS No: 104B MAP No: 6 J9116 - 1 



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