ARIS SUMMARY SHEET

District Geologist, Smithers   Off Confidential: 89.02.29

ASSESSMENT REPORT 17124   MINING DIVISION: Atlin

PROPERTY: Tatshensini River
LOCATION: LAT 59 54 47 LONG 136 45 26
UTM 08 6642825 401732
NTS 114P15E 114P15W
CLAIM(S): Marilyn 1,Monroe 1,Mansfield 1-2,Jane 1,Jean 1,Harlow 1,Diane 1
Dors 1
OPERATOR(S): NDU Res.
AUTHOR(S): McConnell, D.L.
REPORT YEAR: 1988, 96 Pages
GEOLOGICAL
SUMMARY: The property hosts a series of Lower Triassic ultramafic sills that intrude a suspected island arc assemblage consisting of Permian-Triassic mafic volcanic and volcaniclastic rocks. The package generally grades upward into clastic sedimentary rocks and limestones. Exploration targets consist of either primary segregated nickel-copper-platinum-palladium sulphides associated with the ultramafic sills or hydrothermal remobilized nickel-copper-platinum-palladium mineralization occurring in veins.
WORK
DONE: Geophysical
EMAB 529.0 km;HLEM
Map(s) - 4; Scale(s) - 1:20 000
MAGA 529.0 km
Map(s) - 4; Scale(s) - 1:20 000
MINFILE: 114P 031,114P 032

Report #1015

DIGHEM^{III} SURVEY

FOR

ARCHER, CATHRO AND ASSOCIATES

TATSHENSHINI RIVER AREA, B.C.

NTS 114P

DIGHEM SURVEYS & PROCESSING INC.
MISSISSAUGA, ONTARIO
February 10, 1988

D.L. McConnell
Geophysicist

E-DLM-14

DIGHEM III SURVEY
FOR
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
TATSENSHINI RIVER AREA, B.C.

Geophysical survey for Archer, Cathro & Associates (1981) Limited for assessment purposes

Marilyn 1, Monroe 1, Mansfield 1-2, Jane 1, Jean 1, Harlow 1, Diane 1, Dors 1

Atlin Mining District

NTS 114P/15
59 55'; 136 40'

Owners: W6 Joint Venture
Operator: NDU Resources Ltd.
Consultant: Archer, Cathro & Associates (1981) Limited

Authors: D.L. McConnel (Geophysicist)
D.C. Davis (Geologist)

February 10, 1988 (original)
November 15, 1988 (amended)

SUMMARY

A total of 529 line-km of survey was flown with a DIGHEM^{III} system in November, 1987, for Archer, Cathro and Associates (1981) Limited, over two survey blocks in the Tatshenshini River area, B.C.

The EM survey mapped numerous bedrock conductors. A few conductors appear to be magnetic, however most occur flanking magnetic anomalies. The EM 900 Hz data was used to produce resistivity maps which show the conductive properties of the survey areas. The total field and enhanced magnetic contour maps yield valuable information about the magnetic rock units and bedrock structures within the survey areas. An attempt has been made to identify EM responses due to cultural sources within the survey areas. However, caution is necessary in selecting targets for further investigation near known cultural features.

The survey areas exhibit potential as hosts for both conductive massive sulphide deposits and weakly conductive zones of disseminated mineralization. Some features appear to warrant further investigation using surface exploration techniques. A comparison of the various geophysical

parameters, compiled with geological and geochemical information, should be useful in selecting targets for follow-up work.

The use of Dighem's imaging workstation may provide additional useful information from the survey. Current processing techniques can yield structural details which may be important in further defining the geologic setting.

CONTENTS

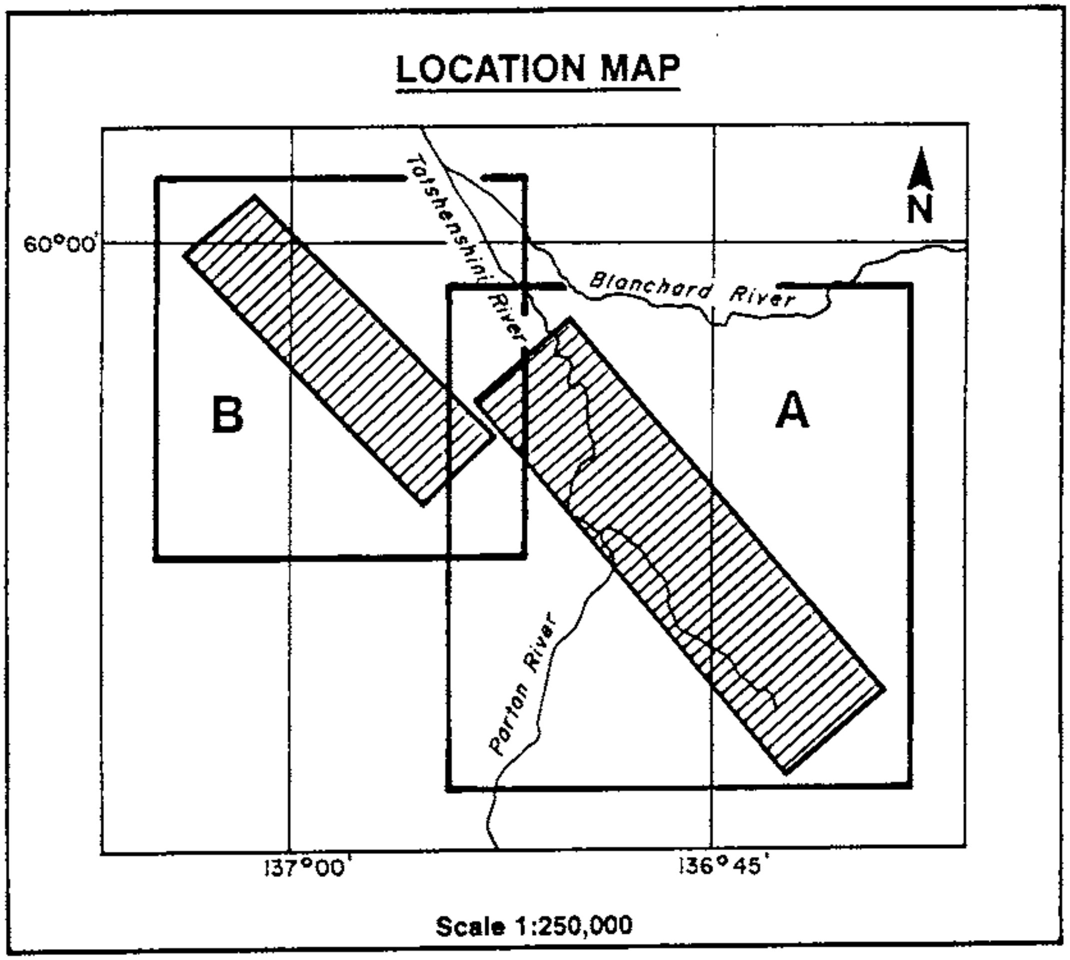


FIGURE 1

THE SURVEY AREA

INTRODUCTION

A DIGHEM^{III} electromagnetic/resistivity/magnetic survey was flown for Archer, Cathro and Associates (1981) Limited, from November 18 to 24, 1987, over two survey blocks in the Tatshenshini River area, B.C. (Figure 1). These blocks are located on NTS sheet 114P.

Survey coverage consisted of approximately 529 line-km over the blocks. Flight lines were flown with a line separation of 200 metres in an azimuthal direction of 048°/228° over Area A and 044°/224° over Area B. Tie lines were flown perpendicular to the survey line direction.

The survey employed the DIGHEM^{III} electromagnetic system. Ancillary equipment consisted of a magnetometer, radio altimeter, sequence camera and analog and digital recorders.

This report is divided into sections for convenience. Section 2 describes the geophysical results. Section 3 provides details on the equipment used in the survey and lists the recorded data and computed parameters. Section 4 reviews the data processing procedures, with further information on the various parameters provided in Section 5.

Not all of our products have been purchased as part of the survey contract. However, they can be acquired. Our review of these products in Sections 4 and 5 may help you determine if they should be purchased. Our suggestions in this regard are summarized in Table 2-1.

PROPERTY HISTORY

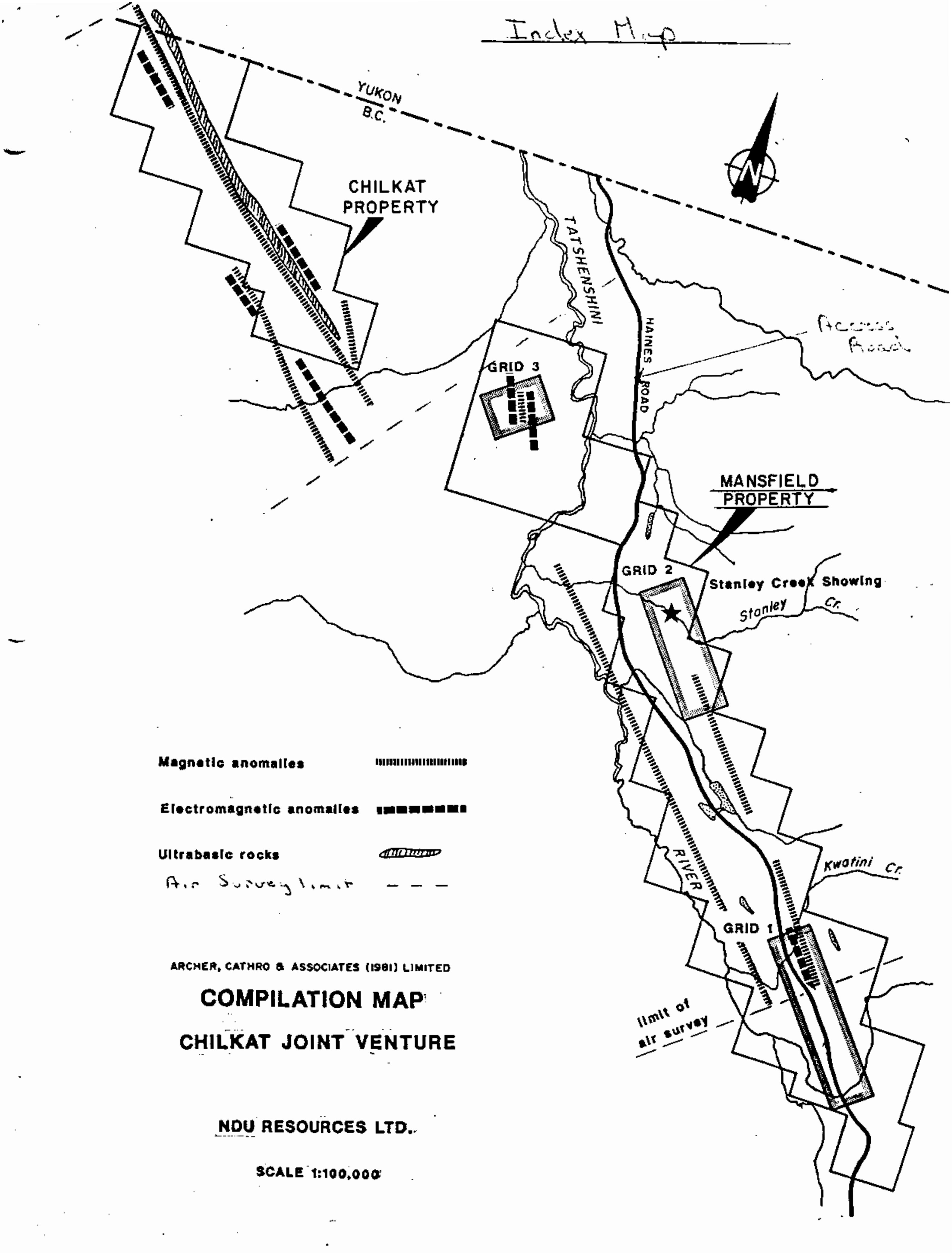
The Mansfield property consists of sixteen claims (205 units) staked along the eastern margin of the Tatshenshini River Valley. The property was staked in 1987 by Archer, Cathro & Associates (1981) Limited on behalf of W6 Joint Venture. The current operator is NDU Resources Ltd. The area was previously staked in 1962 by W.M. Erwin to cover three nickel-copper occurrences found in shear zones within quartz-carbonate altered ultrabasic rocks found in a cut bank on the south side of Stanley Creek. Assays of up to 4.6% nickel and 4% copper across 1.2 m were reported from trenches. A 1500 m long by 450 m wide geochemical anomaly, thought to be caused largely by zinc, was outlined to the southeast. A specimen of float found on the creek bank below the trenches assayed 600 ppb platinum and 750 ppb palladium. A specimen of similar material found in creek float about 500 m downstream returned 660 ppb platinum, 430 ppb palladium, 1.1% nickel and 0.23% cobalt.

PHYSIOGRAPHY AND ACCESS

Topography is subdued ranging from 850 to 1050 m above sea level. Vegetation consists of scattered scrub spruce and aspen groves along creek valleys, giving way to patches of buckbrush at lower elevations. Marsh areas prevail in proximity to the Tatshenshini River drainage system. The property is easily accessible by vehicle from the all-season Haines Highway system which links Haines Junction, Y.T. with Haines, Alaska.

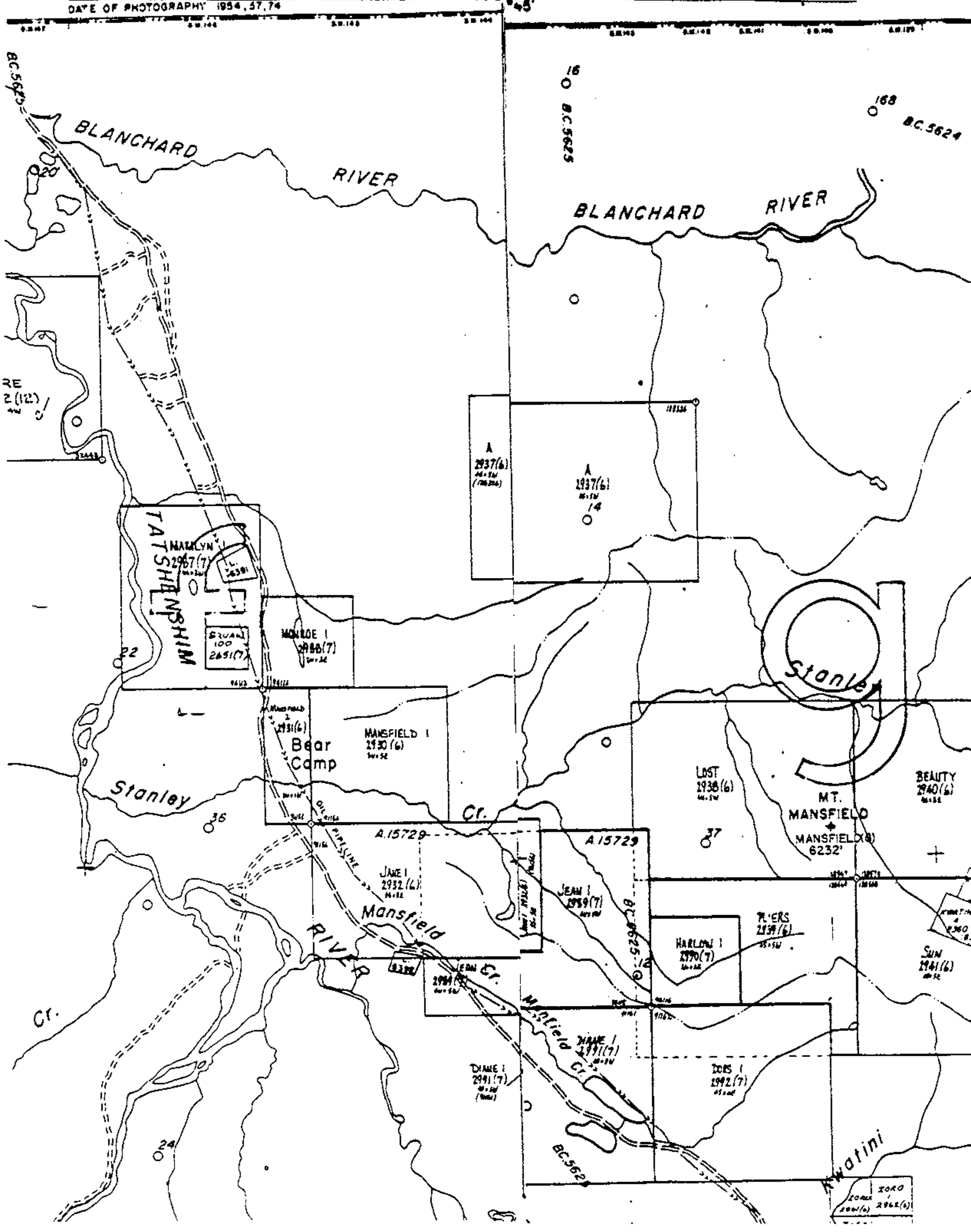
ECONOMIC ASSESSMENT

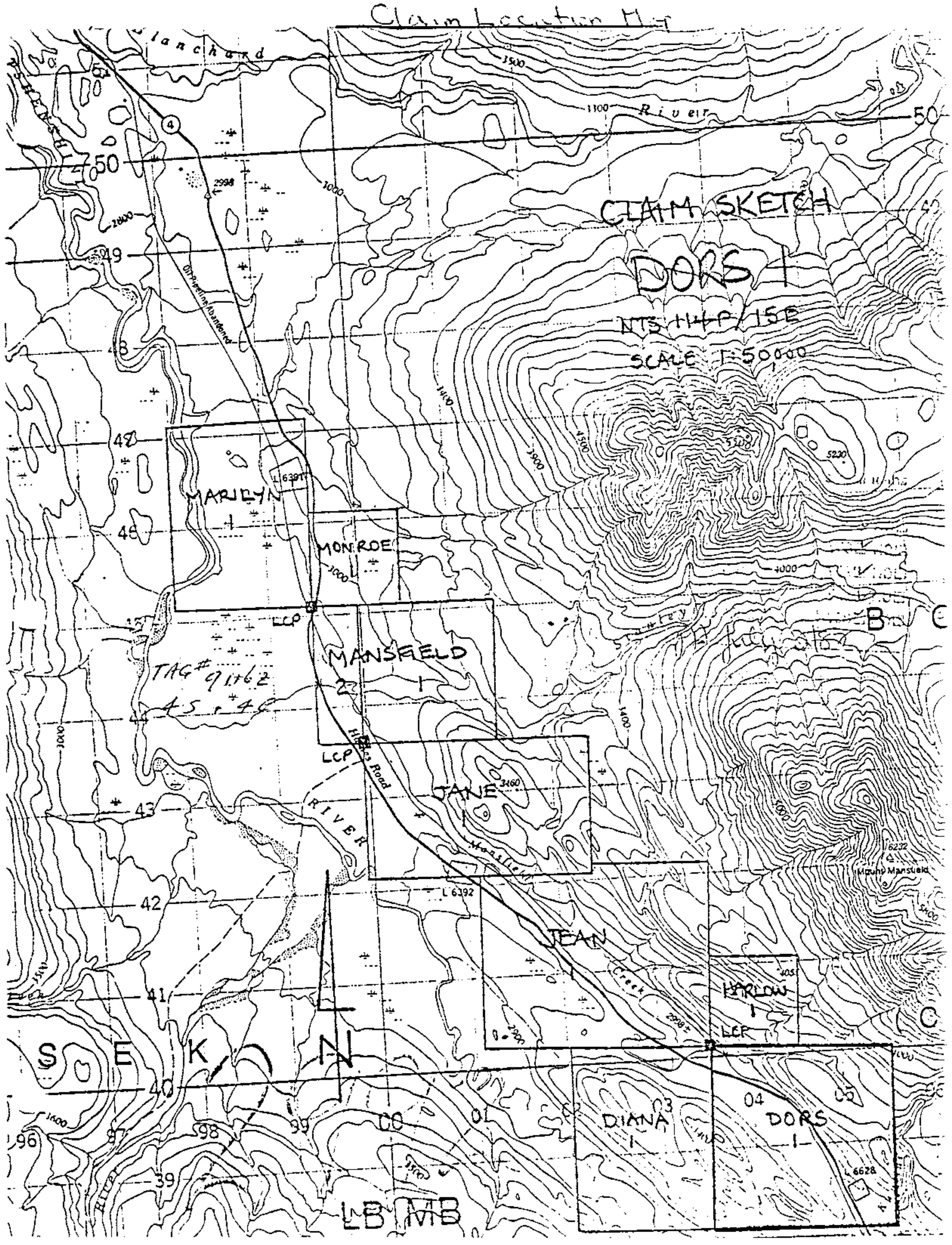
The property hosts a series of Lower Triassic ultramafic sills that intrude a suspected island arc assemblage consisting of Permian to Triassic basic volcanic and volcanoclastic rocks. The package generally grades upward into clastic sedimentary rocks and limestones. The rocks are located within the eastern margin of a fault-bounded segment of the Wrangellia Terrane, a similar setting to that at the Wellgreen deposit, located 220 km to the northwest. The ultramafic sills are narrow, probably no wider than 50 m, and exhibit quartz-carbonate alteration along their margins, probably due to shearing. A 500 m wide zone of intense quartz- carbonate altered rocks occurs along Stanley Creek and this alteration is probably localized by a regional fault which cross cuts the trend of the ultrabasic rocks. Exploration targets consist of either primary segregated nickel/copper/platinum/palladium sulphides associated with the ultrabasic sills or hydrothermal remobilized nickel/copper/platinum/palladium mineralization occurring in veins.


Index Map
YUKON
B.C.
CHILKAT PROPERTY
TATSHENSHINI
HAINES ROAD
Access Road
GRID 3
MANSFIELD PROPERTY
GRID 2
Stanley Creek Showing
Stanley Cr.
RIVER
Kwatini Cr.
GRID 1
limit of air survey
Magnetic anomalies
Electromagnetic anomalies
Ultrabasic rocks
Air Survey limit
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
COMPILATION MAP
CHILKAT JOINT VENTURE
NDU RESOURCES LTD.
SCALE 1:100,000

Claim Location Map

M 114 P/15E





Claim Location Map
CLAIM SKETCH
DORS 1
NTS 114P/15E
SCALE 1:50,000
MARILYN 1
MONROE 1
MANSFIELD 2
MANSFIELD 1
JANE 1
JEAN 1
HARLOW 1
DIANA 1
DORS 1
LCP
TAG# 91762
L 6391
L 6392
L 6628
Mount Mansfield
Oil Pipeline Abandoned
Haines Road
Mansfield Creek
RIVER
Blanchard River
SEKN
LBMB

SURVEY RESULTS

SURVEY PRODUCTS

Table 2-1 lists the products which can be obtained from your survey. Those which are part of the contract are indicated in this table by showing the presentation scale. These total 8 maps. Note particularly those products which are recommended for your survey area. The recommendations are based on the information content of products which would contribute to either reducing the cost of follow-up and/or increasing the likelihood of exploration success.

GENERAL DISCUSSION

The survey results are shown on two separate map sheets for each parameter. Tables 2-2 and 2-3 summarize the EM responses on the electromagnetic anomaly maps with respect to conductance grade and interpretation.

Due to the mountainous terrain and snow cover, some problems were encountered with flight path recovery. While ascending and descending steep slopes the attitude of the helicopter may cause the camera to point several hundred metres behind or ahead of the EM system. The position of the EM anomalies should therefore be verified by ground methods before drilling.

Table 2-1 Plots Available from your Survey

MAP	NO. OF SHEETS	ANOMALY MAP	PROFILES ON MAP	CONTOURS INK	CONTOURS COLOR	SHADOW MAP
Electromagnetic Anomalies	2	20,000	N/A	N/A	N/A	N/A
Probable Bedrock Conductors	-	*	N/A	N/A	N/A	N/A
Resistivity (900 Hz)	2	N/A	-	20,000	-	-
Resistivity (7,200 Hz)	-	N/A	-	-	-	-
EM Magnetite	-	N/A	-	*	-	-
Total Field Magnetics	2	N/A	-	20,000	**	*
Enhanced Magnetics	2	N/A	-	20,000	*	*
Vertical Gradient Magnetics	-	N/A	-	*	*	*
2nd Vertical Derivative Magnetics	-	N/A	-	-	-	-
Magnetic Susceptibility	-	N/A	-	-	-	-
Apparent Depth (900 Hz)	-	N/A	-	-	-	-
Apparent Depth (7,200 Hz)	-	N/A	-	-	-	-
Overburden Thickness	-	N/A	-	-	-	-
Digital Profiles		Worksheet profiles				10,000
		Interpreted profiles				-

N/A Not available
*** Highly recommended due to its overall information content
** Recommended
* Qualified recommendation, as it may be useful in local areas
- Not recommended
10,000 Scale of delivered map, i.e,, 1:10,000

TABLE 2-2

EM ANOMALY STATISTICS FOR THE TATSHENSHINI RIVER, AREA A

CONDUCTOR GRADE	CONDUCTANCE RANGE SEIMENS (MHOS)	NUMBER OF RESPONSES
6	> 100	0
5	50 - 100	0
4	20 - 50	16
3	10 - 20	44
2	5 - 10	89
1	< 5	334
X	INDETERMINATE	93
TOTAL		576

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
D	DISCRETE BEDROCK CONDUCTOR	31
B	DISCRETE BEDROCK CONDUCTOR	118
S	CONDUCTIVE COVER	226
H	ROCK UNIT OR THICK COVER	101
E	EDGE OF WIDE CONDUCTOR	26
L	CULTURE	74
TOTAL		576

(SEE EM MAP LEGEND FOR EXPLANATIONS)

TABLE 2-3

EM ANOMALY STATISTICS FOR THE TATSHENSHINI RIVER, AREA B

CONDUCTOR GRADE	CONDUCTANCE RANGE SEIMENS (MHOS)	NUMBER OF RESPONSES
6	> 100	0
5	50 - 100	0
4	20 - 50	5
3	10 - 20	12
2	5 - 10	66
1	< 5	73
X	INDETERMINATE	61
TOTAL		217

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
D	DISCRETE BEDROCK CONDUCTOR	64
B	DISCRETE BEDROCK CONDUCTOR	101
S	CONDUCTIVE COVER	45
H	ROCK UNIT OR THICK COVER	4
E	EDGE OF WIDE CONDUCTOR	3
TOTAL		217

(SEE EM MAP LEGEND FOR EXPLANATIONS)

Severe stresses are placed on the EM bird during sudden elevation changes. This results in higher than normal noise levels, particularly on the inphase EM channels. Most of the noise related responses were eliminated from the EM anomaly maps. However, in some cases noise may have distorted the resistivity contours. Furthermore, lines 20170 to 20250 were not flown as the pilot judged this area to be too hazardous for survey flying.

The electromagnetic anomaly maps show the anomaly locations with the interpreted conductor type, dip, conductance and depth being indicated by symbols. Direct magnetic correlation is also shown if it exists. Bedrock conductors are indicated by the interpretive symbols "D" (for thin dikes) or "B" (for other conductor geometries). Surficial conductors are identified by the interpretive symbol "S". The symbol "H" is used to represent a buried half-space response. Such a response could result from conductive overburden beneath a resistive frozen layer, or a flat-lying, conductive, bedrock unit beneath a relatively resistive cover. Responses denoted by the symbol "E" reflect the edge of a wide conductor.

EM "anomalies" by definition should reflect discrete conductors. Wide bedrock conductors or flat-lying conductive units, whether from surficial or bedrock sources, give rise to broad anomalous responses on the EM profiles. These may not appear on the electromagnetic anomaly maps if they have a regional character rather than a locally anomalous character. These broad conductors, which more closely approximate a half space model, are maximum coupled to the horizontal (coplanar) coil-pair and are clearly evident on the resistivity parameter.

Apparent resistivity maps were prepared from the 900 Hz coplanar data. The map for Area A shows a broad conductive unit, apparently at depth, which corresponds to anomalies 10200A to 10410A. Resistivities for this unit range from 25 ohm-m to 100 ohm-m. Bedrock conductors produce linear low resistivity trends from anomaly 10300E to 10130A and 10710D to 10800I.

Several zones, which consist of resistivites below 100 ohm-m, appear to correspond to bedrock conductors on the resistivity contour map for Area B.

Magnetic maps were produced, and provide interesting information. Some of the possible bedrock conductors correlate with, or occur on the flanks of, magnetic units.

There is ample evidence on the magnetic maps which suggests the areas have been subjected to moderate deformation and/or alteration. These structural complexities are evident on the contour maps as variations in magnetic intensity, irregular patterns, and as offsets or changes in strike direction.

If a specific magnetic intensity can be assigned to the rock type which is believed to host the target mineralization, it may be possible to select areas of higher priority on the basis of the total field magnetic maps. This is based on the assumption that the magnetite content of the host rocks will give rise to a limited range of contour values which will permit differentiation of various lithological units. The magnetic results, in conjunction with the other geophysical parameters, should provide valuable information which can be used to effectively map the geology and structure in the survey area. Coloured maps of the total magnetic field should be very helpful in defining the lithology of the property.

Conductor Descriptions

Area A

Conductor 10030A-10060xA

This weak, narrow, possible bedrock conductor flanks a northwest/southeast trending magnetic high. It may be due to non-magnetic material associated with a contact.

Conductors 10040B, 10040C-10060A

These conductors appear to be associated with the same northwest/southeast trending magnetic high flanked by conductor 10030A-10060xA. Conductors 10040B and 10040C-10060A are weakly conductive, narrow, and may dip to the southwest.

Conductors 10030D, 10030E-10090B, 10040D-10050B, 10050D-10170C, 10060B, 10070C-10130B, 10082xA-10090A

This appears to be a group of thin, non-magnetic, closely-spaced conductors. They may be associated with a contact between a magnetically active unit to the southwest of these conductors and a magnetically quiet unit to the northeast. The conductors correlate with a linear low resistivity trend of about 40 ohm-m. This low is on strike with a low resistivity trend which correlates with anomalies 10180B-10410A.

Conductor 10180B-10410A

These anomalies are attributed to a buried half-space. They may be the result of a flat-lying unit of conductive bedrock overlain by relatively resistive cover, or thick overburden covered by a frozen layer. The conductive unit appears to be at a depth of about 25 m, and correlates with a low resistivity trend of about 25 ohm-m to 100 ohm-m. Much of the central part of the survey area, from line 10100 to line 10470, appears to be underlain by a conductive unit at depths between 5 and 25 metres. These depths are calculated using a conductive earth model and are profiled as the depth channel on the 1:10,000 scale profiles.

Conductors 10140xB-10391xB, 10440I-10490E, 10510G-10551J

These anomalies are weakly conductive. Some appear surficial on the profiles. Others resemble bedrock anomalies or appear to be the result of the edge of a wide conductor. These anomalies may be the result of conductive material, such as clay, graphite or sulphides, associated with a contact or fault. The magnetic contours parallel these conductors and appear to reflect a fault or contact.

Conductors 10391C-10410C, 10470C-10480C, 10530D

These appear to be weakly conductive, narrow, non-magnetic conductors. They parallel a linear, northwest/southeast trending magnetic high, but occur within a relatively non-magnetic rock unit.

Conductors 10391B-10480B, 10420C-10460B, 10470xA-10480xA, 10500B-10510C, 10500C, 10500D, 10510D-10571C, 10540C, 10660D-10700C, 10730D-10750C

These weak, narrow conductors flank a northwest/ southeast trending magnetic high. They may be indicative of conductive material associated with a contact. Conductor 10540D is an isolated, discrete bedrock conductor.

Conductors 10410xA-10480E, 10520F-10530F

These conductors appear to be indicative of narrow, non-magnetic, bedrock sources. They strike northwest/southeast and parallel the magnetic contours in this area. These conductors however, are adjacent to a buried pipeline and the responses may in part be due to cultural sources.

Conductors 10520C-10530B, 10590B, 10590C-10601C

These conductors appear to be directly associated with a northwest/southeast trending magnetic feature. Anomalies 10590B and 10590C-10601C have well-defined profile shapes. These conductors may be indicative of narrow, magnetic bedrock sources. Their conductivities may be understated as magnetite has suppressed the inphase component of the EM responses.

Conductor 10601A-10630A

This may reflect a weak, narrow, non-magnetic bedrock conductor. It parallels the magnetic strikes in the area and terminates near an isolated magnetic high, centered on fiducial 1053 on line 10640.

Conductors 10610B, 10610C

These appear to be due to isolated, narrow bedrock sources. Conductor 10610C occurs on the flanks of an isolated magnetite response. The magnetic contours may be indicative of a northeast/southwest trending structural break in this area.

Conductors 10710D-10800I, 10790E-10800G, 10790F-10800H, 10680xB

Conductor 10710D-10800I suggests a thin, magnetic bedrock source. Conductance values and resistivities may not be accurate due to the direct correlation of this conductor to a magnetite response. Northwest of line 10700 the source of conductor 10710D-10800I is not detected. The magnetic response weakens, but continues towards the northwest. Conductor 10680xB may be indicative of a change in composition in this magnetic trend, and it correlates with an increase in the magnetic response.

Conductors 10790E-10800G and 10790F-10800H reflect narrow, non-magnetic conductors which flank the magnetic high associated with conductor 10710D-10800I.

These conductors may continue southeast of the survey boundary.

Conductors 10730A-10800A, 10780A-10790xA, 10800B

These conductors are indicative of narrow, weakly-conductive, non-magnetic bedrock sources. Conductor 10730A-10800A appears to dip to the northeast. It may continue southeast of the survey area.

There are numerous weak, questionable bedrock responses which may warrant further attention. These include 10010B, 10020B, 10030C, 19020A, 19020xA, 10170xA-10180xA, 10170B-10180xB, 10200F, 10431E, 10440G, 10440H, 10450xB, 10450H, 10450xC, 10580xA, 10620xB, 10630xD, 10750A and 10760I. Appendix D, the anomaly list, should be used to ensure that no bedrock anomalies are overlooked. Some of the "S", "S?", "E" and "H" anomalies may be upgraded based on geological evidence.

Area B

Conductors 20010A-20020A, 20010xA, 20010B-20030B, 20010C-20020C, 29020A, 29020B, 29020C, 20020xA, 20030A, 20040A-20050A, 20040B-20050B, 20060xA-20080A, 20070A, 20070B, 20070xB

These conductors are indicative of narrow, non-magnetic bedrock sources. They occur in a relatively non-magnetic unit between two southeast/northwest trending magnetic highs. The conductors on lines 20010 to 20030 correlate with a resistivity low of about 60 ohm-m.

Conductor 20010D-20030C

This appears to reflect a narrow, southwest-dipping, magnetic bedrock source.

Conductors 20050C-20060xB, 20050xA-20160A, 20160B, 29020D-20150B, 20150C

These appear to be non-magnetic conductors which flank a strongly magnetic northwest/southeast trending unit. Conductor 29020D-20150B correlates with a low resistivity trend of about 40 ohm-m.

Conductors 20120C-20160C, 20120D, 20120xB, 20140xA-20150F

These conductors may be indicative of weak conductivity associated with magnetite.

Conductors 20260A-20270C, 20270B-20360A, 20260xB, 20260B-20340B, 20260C-20270xE, 20270xC, 20270xD, 20330xA-20340xB, 20380A

These conductors are loosely associated with a strong, arcuate shaped, magnetic feature. Conductor 20260B-20340B generally flanks, but in places directly correlates with a magnetite-rich source. It appears to dip to the southwest in the vicinity of anomaly 20290B. Conductors 20260C-20270E and 20380A appear to be associated with magnetite. Conductors 20260A to 20360A and 20330xA-20340xB are due to a non-magnetic bedrock source on the flank of the strong magnetic feature.

Conductors 20270xA-20300B, 20300A

These conductors may be indicative of weak conductivity loosely associated with a magnetic high.

Conductors 20391A-20420A, 20391B-20440A, 20440B, 20440C, 20490A-20530A

These conductors parallel a northwest/southeast trending magnetic high located near the southwest boundary of the survey area. These features may continue southeast of the survey area. Dips in the vicinity of anomalies 20410B and 20500A appear to be northeast.

Conductors 20410C-20530D, 20420E-20440E, 20430E-20490xA, 20430F-20460C, 20440xA-20450C, 20440H, 20450xA-20530F, 20480E-20530E, 20500C-20530C

This group of conductors reflects multiple, closely-spaced, thin, non-magnetic bedrock sources. They generally strike northwest/southeast and parallel the magnetic features in the area.

Due to the fact that the conductors are closely spaced, dip determinations are unreliable. Dips appear to be southwest in the vicinity of anomalies 20530F, 20520E, 20520D and 20480D. However, dips appear to be northeast for anomalies 20450A, 20460A, 20490B and 20510D.

These conductors correlate with a resistivity low in the range of 40 ohm-m to 150 ohm-m.

Conductor 20450E

This is indicative of a narrow, isolated bedrock source located in a magnetic low.

Conductor 20490xB-20500G

This conductor suggests a zone of weak conductivity associated with magnetite.

Conductor 20490E

This is apparently a moderately strong, bedrock conductor which flanks a strong isolated magnetic peak.

Conductor 20520G-20530H

This conductor may be indicative of weak conductivity associated with a magnetic high.

Several other weak, questionable bedrock responses were identified in this area. They include 20040xA, 20110xB, 20270xB, 20270A, 20470G, 20480xA and 20530B. The anomaly lists in appendix D should be consulted to ensure that no bedrock anomalies are overlooked. Some of the "S?" and S anomalies such as 20340A, 20350xB and 20360B may warrant further investigation depending on their geological settings.

SURVEY EQUIPMENT AND FLIGHT RECORDS

The geophysical instruments and aircraft employed in the survey were as follows:

Electromagnetic System

Type:	DIGHEM^{III} System
Coil orientations/frequencies:	coaxial / 900 Hz coplanar/ 900 Hz coplanar/ 7,200 Hz
Channels recorded:	3 inphase channels 3 quadrature channels
Sensitivity:	0.2 ppm at 900 Hz 0.4 ppm at 7,200 Hz
Sample rate:	10 per second

The electromagnetic system utilizes a multi-coil coaxial/coplanar technique to energize conductors in different directions. The coaxial transmitter coil is vertical with its axis in the flight direction. The coplanar coils are horizontal. The secondary fields are sensed simultaneously by means of receiver coils which are maximum coupled to their respective transmitter coils. The system yields an inphase and a quadrature channel from each transmitter-receiver coil-pair. The transmitter-receiver coil separation is 8 metres. The electromagnetic sensors are housed in a bird which is towed 30 m below the helicopter. Terraine clearance is 60 metres.

Excellent resolution and discrimination of conductors is ensured by the fast sample rate. When a common frequency is used on two orthogonal coil-pairs (coaxial and coplanar), inphase and quadrature "difference channel" parameters are obtained. These parameters are useful in discriminating between bedrock and surficial conductors, even though such conductors may exhibit similar conductance values.

<u>Magnetometer</u>

Type: Geometrics G803, Proton
Sensitivity: 1.0 nT
Sample rate: 1 per second

The magnetometer sensor was towed in a bird 15 m below the helicopter.

Magnetic Base Station

Type: Geometrics 826A digital recording proton precession

Sensitivity: 0.50 nT

Sample rate: once per 5 seconds

The base station magnetometer records the diurnal variations of the earth's magnetic field. The clock of the base station is synchronized with that of the airborne system to permit subsequent removal of diurnal drift.

Radar Altimeter

Type: Sperry AA 220

Sensitivity: 1 ft

Analog Recorder

Type: RMS GR33 dot-matrix graphics recorder

The analog profiles were recorded on chart paper in the aircraft during the survey. Table 3-1 lists the geophysical data channels.

Digital Data Acquisition

Type: Scintrex CDI6

Tape Deck: RMS TCR12, 6400 bpi, tape cartridge recorder

The digital data were used to generate a number of computed parameters. Both measured and computed parameters were plotted as "digital profiles" during data processing, as shown in Table 3-2.

In Table 3-2, the log resistivity scale of 0.06 decade/mm means that the resistivity changes by an order of magnitude in 16.5 mm. The resistivities at 0, 33 and 67 mm up from the bottom of the digital profile are respectively 1, 100 and 10,000 ohm-m.

Tracking Camera

Type: Geocam 75SF, 35 mm film

The camera was operated in frame mode and fiducial numbers were imprinted on the margin of each frame. This procedure ensures accurate correlation of analog and digital data with respect to visible features on the ground.

Table 3-1. The Analog Profiles

Channel Number	Parameter	Sensitivity per mm	Designation on digital profile
CXI	coaxial inphase (900 Hz)	2.5 ppm	CXI (900 Hz)
CXQ	coaxial quad (900 Hz)	2.5 ppm	CXQ (900 Hz)
CP1I	coplanar inphase (900 Hz)	2.5 ppm	CPI (900 Hz)
CP1Q	coplanar quad (900 Hz)	2.5 ppm	CPQ (900 Hz)
CP2I	coplanar inphase (7200 Hz)	5 ppm	CPI (7200 Hz)
CP2Q	coplanar quad (7200 Hz)	5 ppm	CPQ (7200 Hz)
ALT	altimeter	3 m	ALT
PMGC	magnetics, coarse	10 nT	MAG
PMGF	magnetics, fine	2 nT	

Table 3-2. The Digital Profiles

Channel Name (Freq)	Observed parameters	Scale units/mm
MAG	magnetics	10 nT
ALT	bird height	6 m
CXI (900 Hz)	vertical coaxial coil-pair inphase	2 ppm
CXQ (900 Hz)	vertical coaxial coil-pair quadrature	2 ppm
CPI (900 Hz)	horizontal coplanar coil-pair inphase	2 ppm
CPQ (900 Hz)	horizontal coplanar coil-pair quadrature	2 ppm
CPI (7200 Hz)	horizontal coplanar coil-pair inphase	4 ppm
CPQ (7200 Hz)	horizontal coplanar coil-pair quadrature	4 ppm
	Computed Parameters	
DIFI (900 Hz)	difference function inphase from CXI and CPI	2 ppm
DIFQ (900 Hz)	difference function quadrature from CXQ and CPQ	2 ppm
CDT	conductance	1 grade
RES (900 Hz)	log resistivity	.06 decade
RES (7200 Hz)	log resistivity	.06 decade
DP (900 Hz)	apparent depth	6 m
DP (7200 Hz)	apparent depth	6 m

Recognizable topographic or cultural features are used to plot fiducials on the base maps to locate the track of the aircraft. Unusual speed changes are detected during computer processing. Such speed changes may be indicative of errors in flight path recovery. The resulting flight path locations therefore reflect a more stringent checking than is normally provided by manual flight path recovery techniques.

Aircraft

Company: Frontier Helicopters Limited

Type: Aerospatial AS350B

Registration C-GOLV

The helicopter flew at an average airspeed of 110 km/h at a height of 60 m.

DATA PROCESSING PROCEDURES

The following products are available from your survey data. Those which are not part of the survey contract may be acquired later. Refer to Table 2-1 for a summary of these products.

Base Map

The base map of the survey area was prepared from a 1:50,000 topographic map. The base map supplemented by a photo mosaic, was used during the course of the survey for visual reference and for subsequent flight path recovery. The geophysical data are presented on duplicate copies of the same topographic base map.

Electromagnetic Anomalies

Anomalous electromagnetic responses are selected and analysed by computer to provide a preliminary electromagnetic anomaly map. This preliminary EM map is used, by the geophysicist, in conjunction with the digital profiles (described below), to produce the final EM anomaly map showing interpreted conductors. These include bedrock, surficial and cultural conductors. A map containing only bedrock conductors can be generated, if desired.

Resistivity

The apparent resistivity in ohm-m may be generated from the inphase and quadrature EM components for any of the frequencies, using a pseudo-layer halfspace model. A resistivity map portrays all the EM information for that frequency over the entire survey area. This contrasts with the electromagnetic anomaly map which provides information only over interpreted conductors. The large dynamic range makes the resistivity parameter an excellent mapping tool.

EM Magnetite

The apparent percent magnetite by weight is computed wherever magnetite produces a negative inphase EM response.

Total Field Magnetics

The aeromagnetic data are corrected for diurnal variation using the magnetic base station data. The regional IGRF field is removed from the data if required under the terms of the contract.

Enhanced Magnetics

The total field magnetic data are subjected to a processing algorithm. This algorithm enhances the response of magnetic bodies in the upper 500 m and attenuates the response of deeper bodies. The resulting enhanced magnetic map provides a better definition and resolution of near-surface magnetic units. It also identifies weak magnetic features which may not be evident on the total field magnetic map. However, regional magnetic variations, and magnetic lows caused by remanence, are better defined on the total field magnetic map. The technique is described in more detail in Section 5.

Magnetic Derivatives

The total field magnetic data may be subjected to a variety of filtering techniques to yield:

vertical gradient
second vertical derivative
magnetic susceptibility with reduction to the pole
upward/downward continuations

All these filtering techniques improve the recognition of near-surface magnetic bodies with the exception of upward continuation. Any of the above parameters can be produced at your request. Dighem's proprietary enhanced magnetic technique (described immediately above) is designed to provide you with a general "all-purpose" map, combining the more useful features of the above parameters.

Digital Profiles

Distance-based profiles of the digitally recorded geophysical data are generated and plotted by computer. These profiles also contain the calculated parameters which are used in the interpretation process. These can be produced both as a worksheet prior to interpretation, and also in the final corrected form after interpretation. The corrected profiles display electromagnetic anomalies with their respective interpretive symbols. The differences between the worksheets and the final corrected form occur only with respect to the calculated parameters. The measured geophysical data are the same for both the worksheet and corrected profiles.

Contour, Colour and Shadow Map Displays

The geophysical data are interpolated onto a regular grid at a 2.5 mm interval using a cubic spline technique. The resulting grid is suitable for generating a contour map of excellent quality.

Solid color maps are produced by interpolating the grid down to the pixel size. The parameter is then color coded based on amplitude to provide a solid color "contour" map.

Dighem software provides several shadowing techniques. Both monochromatic (commonly green) or polychromatic (full color) maps may be produced. Monochromatic shadow maps are often preferred over polychromatic maps for reasons of clarity.

Spot Sun

The spot sun technique tends to mimic nature. The sun occupies a spot in the sky at a defined azimuth and inclination. The surface of the data grid casts shadows. This is the standard technique used by industry to produce monochromatic shadow maps.

A characteristic of the spot sun technique is that shadows are cast in proportion to how well the sunlight intersects the feature. Features which are almost parallel to the sun's azimuth may cast no shadow at all. To avoid this problem, Dighem's hemispheric sun technique may be employed.

Hemispheric Sun

The hemispheric sun technique was developed by Dighem. The method involves lighting up a hemisphere. If, for example, a north hemispheric sun is selected, features of all strikes will have their north side in sun and their south side in shadow. The hemispheric sun lights up all features, without a bias caused by strike. The method yields sharply defined monochromatic shadows.

The hemispheric sun technique always improves shadow casting, particularly where folding and cross-cutting structures occur. Nevertheless, it is important to center the hemisphere perpendicular to the regional strike. Features which strike parallel to the center of the hemisphere result in ambiguity. This is because the two sides of the feature may yield alternating patterns of sun and shadow. If this proves to be a problem in your survey area, Dighem's omni sun technique may be employed.

Omni Sun

The omni sun technique was also developed by Dighem. The survey area is centered within a ring of sunlight. This lights up all features without any strike bias. The result is brightly defined monochromatic features with diffuse shadows.

Multi Sun

Two or three spot suns, with different azimuths, may be combined in a single presentation. The shadows are displayed on one map by the use of different colors, e.g., by using a green sun and a red sun. Some users find the interplay of colors reduces the clarity of the shadowed product.

Polychromatic Maps

Any of the above monochromatic shadow maps can be combined with the standard contour-type solid color map. The result is a polychromatic shadow map. Such maps are esthetically pleasing, and are preferred by some users. A disadvantage is that ambiguity exists between changes in amplitude and changes in shadow.

Fig. 4-1 Shadow Mapping

Monochromatic shadow maps are generated by employing an artificial sun to cast shadows on a surface defined by the geophysical grid. There are many variations in the shadowing technique, as shown in Figure 4-1. The various shadow techniques may be applied to total field or enhanced magnetic data, magnetic derivatives, VLF, resistivity, etc. Of the various magnetic products, the shadow of the enhanced magnetic parameter is particularly suited for defining geological structures with crisper images and improved resolution.

BACKGROUND INFORMATION

This section provides background information on parameters which are available from your survey data. Those which are not obtained as part of the survey contract may be generated later from raw data which is available on your digital archive tape.

ELECTROMAGNETICS

DIGHEM electromagnetic responses fall into two general classes, discrete and broad. The discrete class consists of sharp, well-defined anomalies from discrete conductors such as sulfide lenses and steeply dipping sheets of graphite and sulfides. The broad class consists of wide anomalies from conductors having a large horizontal surface such as flatly dipping graphite or sulfide sheets, saline water-saturated sedimentary formations, conductive overburden and rock, and geothermal zones. A vertical conductive slab with a width of 200 m would straddle these two classes.

The vertical sheet (half plane) is the most common model used for the analysis of discrete conductors. All anomalies plotted on the electromagnetic map are analyzed according to this model. The following section entitled

Discrete Conductor Analysis describes this model in detail, including the effect of using it on anomalies caused by broad conductors such as conductive overburden.

The conductive earth (half space) model is suitable for broad conductors. Resistivity contour maps result from the use of this model. A later section entitled Resistivity Mapping describes the method further, including the effect of using it on anomalies caused by discrete conductors such as sulfide bodies.

Geometric interpretation

The geophysical interpreter attempts to determine the geometric shape and dip of the conductor. Figure 5-1 shows typical DIGHEM anomaly shapes which are used to guide the geometric interpretation.

Discrete conductor analysis

The EM anomalies appearing on the electromagnetic map are analyzed by computer to give the conductance (i.e., conductivity-thickness product) in mhos of a vertical sheet model. This is done regardless of the interpreted geometric shape of the conductor. This is not an unreasonable

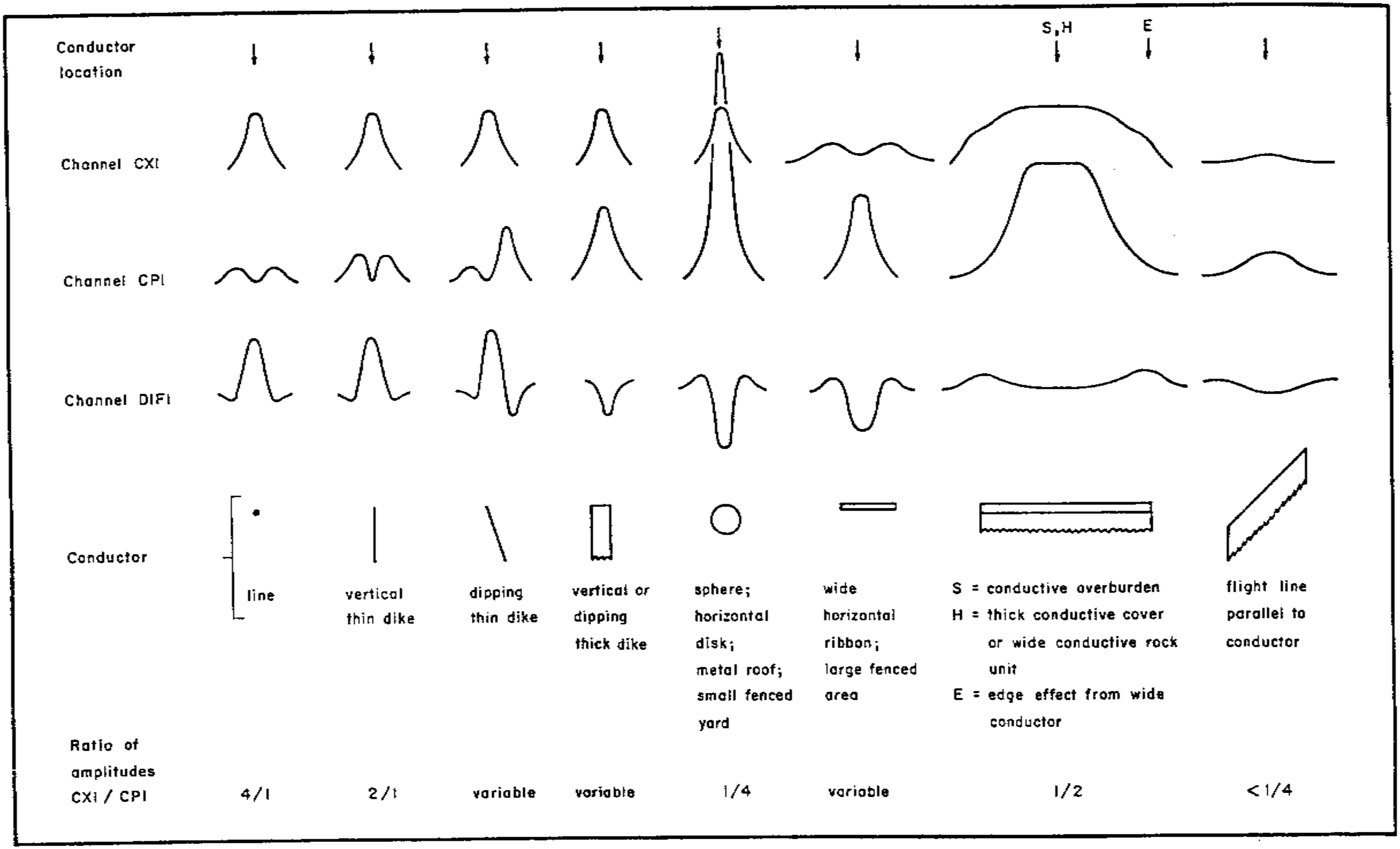


Fig. 5-1 Typical DIGHEM anomaly shapes

procedure, because the computed conductance increases as the electrical quality of the conductor increases, regardless of its true shape. DIGHEM anomalies are divided into six grades of conductance, as shown in Table 5-1 below. The conductance in mhos is the reciprocal of resistance in ohms.

Table 5-1. EM Anomaly Grades

Anomaly Grade	Mho Range
6	> 99
5	50 - 99
4	20 - 49
3	10 - 19
2	5 - 9
1	< 5

The conductance value is a geological parameter because it is a characteristic of the conductor alone. It generally is independent of frequency, flying height or depth of burial, apart from the averaging over a greater portion of the conductor as height increases.[1] Small anomalies from deeply buried strong conductors are not confused with small anomalies from shallow weak conductors because the former will have larger conductance values.

Conductive overburden generally produces broad EM responses which may not be shown as anomalies on the EM

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[1] This statement is an approximation. DIGHEM, with its short coil separation, tends to yield larger and more accurate conductance values than airborne systems having a larger coil separation.

maps. However, patchy conductive overburden in otherwise resistive areas can yield discrete anomalies with a conductance grade (cf. Table 5-1) of 1, or even of 2 for conducting clays which have resistivities as low as 50 ohm-m. In areas where ground resistivities can be below 10 ohm-m, anomalies caused by weathering variations and similar causes can have any conductance grade. The anomaly shapes from the multiple coils often allow such conductors to be recognized, and these are indicated by the letters S, H, and sometimes E on the map (see legend on the EM map).

For bedrock conductors, the higher anomaly grades indicate increasingly higher conductances. Examples: DIGHEM's New Insco copper discovery (Noranda, Canada) yielded a grade 4 anomaly, as did the neighbouring copper-zinc Magusi River ore body; Mattabi (copper-zinc, Sturgeon Lake, Canada) and Whistle (nickel, Sudbury, Canada) gave grade 5; and DIGHEM's Montcalm nickel-copper discovery (Timmins, Canada) yielded a grade 6 anomaly. Graphite and sulfides can span all grades but, in any particular survey area, field work may show that the different grades indicate different types of conductors.

Strong conductors (i.e., grades 5 and 6) are characteristic of massive sulfides or graphite. Moderate conductors (grades 3 and 4) typically reflect graphite or sulfides of a less massive character, while weak bedrock conductors (grades 1 and 2) can signify poorly connected graphite or heavily disseminated sulfides. Grade 1 conductors may not respond to ground EM equipment using frequencies less than 2000 Hz.

The presence of sphalerite or gangue can result in ore deposits having weak to moderate conductances. As an example, the three million ton lead-zinc deposit of Restigouche Mining Corporation near Bathurst, Canada, yielded a well defined grade 1 conductor. The 10 percent by volume of sphalerite occurs as a coating around the fine grained massive pyrite, thereby inhibiting electrical conduction.

Faults, fractures and shear zones may produce anomalies which typically have low conductances (e.g., grades 1 and 2). Conductive rock formations can yield anomalies of any conductance grade. The conductive materials in such rock formations can be salt water, weathered products such as clays, original depositional clays, and carbonaceous material.

On the interpreted electromagnetic map, a letter identifier and an interpretive symbol are plotted beside the

EM grade symbol. The horizontal rows of dots, under the interpretive symbol, indicate the anomaly amplitude on the flight record. The vertical column of dots, under the anomaly letter, gives the estimated depth. In areas where anomalies are crowded, the letter identifiers, interpretive symbols and dots may be obliterated. The EM grade symbols, however, will always be discernible, and the obliterated information can be obtained from the anomaly listing appended to this report.

The purpose of indicating the anomaly amplitude by dots is to provide an estimate of the reliability of the conductance calculation. Thus, a conductance value obtained from a large ppm anomaly (3 or 4 dots) will tend to be accurate whereas one obtained from a small ppm anomaly (no dots) could be quite inaccurate. The absence of amplitude dots indicates that the anomaly from the coaxial coil-pair is 5 ppm or less on both the inphase and quadrature channels. Such small anomalies could reflect a weak conductor at the surface or a stronger conductor at depth. The conductance grade and depth estimate illustrates which of these possibilities fits the recorded data best.

Flight line deviations occasionally yield cases where two anomalies, having similar conductance values but dramatically different depth estimates, occur close together on the same conductor. Such examples illustrate the reliability of the conductance measurement while showing that the depth estimate can be unreliable. There are a number of factors which can produce an error in the depth estimate, including the averaging of topographic variations by the altimeter, overlying conductive overburden, and the location and attitude of the conductor relative to the flight line. Conductor location and attitude can provide an erroneous depth estimate because the stronger part of the conductor may be deeper or to one side of the flight line, or because it has a shallow dip. A heavy tree cover can also produce errors in depth estimates. This is because the depth estimate is computed as the distance of bird from conductor, minus the altimeter reading. The altimeter can lock onto the top of a dense forest canopy. This situation yields an erroneously large depth estimate but does not affect the conductance estimate.

Dip symbols are used to indicate the direction of dip of conductors. These symbols are used only when the anomaly shapes are unambiguous, which usually requires a fairly resistive environment.

A further interpretation is presented on the EM map by means of the line-to-line correlation of anomalies, which is based on a comparison of anomaly shapes on adjacent lines. This provides conductor axes which may define the geological structure over portions of the survey area. The absence of conductor axes in an area implies that anomalies could not be correlated from line to line with reasonable confidence.

DIGHEM electromagnetic maps are designed to provide a correct impression of conductor quality by means of the conductance grade symbols. The symbols can stand alone with geology when planning a follow-up program. The actual conductance values are printed in the attached anomaly list for those who wish quantitative data. The anomaly ppm and depth are indicated by inconspicuous dots which should not distract from the conductor patterns, while being helpful to those who wish this information. The map provides an interpretation of conductors in terms of length, strike and dip, geometric shape, conductance, depth, and thickness (see below). The accuracy is comparable to an interpretation from a high quality ground EM survey having the same line spacing.

The attached EM anomaly list provides a tabulation of anomalies in ppm, conductance, and depth for the vertical sheet model. The EM anomaly list also shows the conductance and depth for a thin horizontal sheet (whole plane) model, but only the vertical sheet parameters appear on the EM map. The horizontal sheet model is suitable for a flatly dipping thin bedrock conductor such as a sulfide sheet having a thickness less than 10 m. The list also shows the resistivity and depth for a conductive earth (half space) model, which is suitable for thicker slabs such as thick conductive overburden. In the EM anomaly list, a depth value of zero for the conductive earth model, in an area of thick cover, warns that the anomaly may be caused by conductive overburden.

Since discrete bodies normally are the targets of EM surveys, local base (or zero) levels are used to compute local anomaly amplitudes. This contrasts with the use of true zero levels which are used to compute true EM amplitudes. Local anomaly amplitudes are shown in the EM anomaly list and these are used to compute the vertical sheet parameters of conductance and depth. Not shown in the EM anomaly list are the true amplitudes which are used to compute the horizontal sheet and conductive earth parameters.

X-type electromagnetic responses

DIGHEM maps contain x-type EM responses in addition to EM anomalies. An x-type response is below the noise threshold of 3 ppm, and reflects one of the following: a weak conductor near the surface, a strong conductor at depth (e.g., 100 to 120 m below surface) or to one side of the flight line, or aerodynamic noise. Those responses that have the appearance of valid bedrock anomalies on the flight profiles are indicated by appropriate interpretive symbols (see EM map legend). The others probably do not warrant further investigation unless their locations are of considerable geological interest.

The thickness parameter

DIGHEM can provide an indication of the thickness of a steeply dipping conductor. The amplitude of the coplanar anomaly (e.g., CPI channel on the digital profile) increases relative to the coaxial anomaly (e.g., CXI) as the apparent thickness increases, i.e., the thickness in the horizontal plane. (The thickness is equal to the conductor width if the conductor dips at 90 degrees and strikes at right angles to the flight line.) This report refers to a conductor as thin when the thickness is likely to be less than 3 m, and thick when in excess of 10 m. Thick conductors are indicated on the EM map by (crescents). For base metal exploration in steeply dipping geology, thick conductors can be high priority targets because many massive sulfide ore bodies are thick, whereas non-economic bedrock conductors are often thin. The system cannot sense the thickness when the strike of the conductor is subparallel to the flight line, when the conductor has a shallow dip, when the anomaly amplitudes are small, or when the resistivity of the environment is below 100 ohm-m.

Resistivity mapping

Areas of widespread conductivity are commonly encountered during surveys. In such areas, anomalies can be generated by decreases of only 5 m in survey altitude as well as by increases in conductivity. The typical flight record in conductive areas is characterized by inphase and quadrature channels which are continuously active. Local EM peaks reflect either increases in conductivity of the earth or decreases in survey altitude. For such conductive areas, apparent resistivity profiles and contour maps are necessary for the correct interpretation of the airborne data. The advantage of the resistivity parameter is that anomalies caused by altitude changes are virtually eliminated, so the resistivity data reflect only those anomalies caused by conductivity changes. The resistivity analysis also helps the interpreter to differentiate between conductive trends in the bedrock and those patterns typical of conductive overburden. For example, discrete conductors will generally appear as narrow lows on the contour map and broad conductors (e.g., overburden) will appear as wide lows.

The resistivity profile (see table in Appendix A) and the resistivity contour map present the apparent resistivity using the so-called pseudo-layer (or buried) half space model defined by Fraser (1978)[2]. This model consists of a resistive layer overlying a conductive half space. The depth channel (see Appendix A) gives the apparent depth below surface of the conductive material. The apparent depth is simply the apparent thickness of the overlying resistive layer. The apparent depth (or thickness) parameter will be positive when the upper layer is more resistive than the underlying material, in which case the apparent depth may be quite close to the true depth.

The apparent depth will be negative when the upper layer is more conductive than the underlying material, and will be zero when a homogeneous half space exists. The apparent depth parameter must be interpreted cautiously

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[2] Resistivity mapping with an airborne multicoil electromagnetic system: Geophysics, v. 43, p. 144-172.

because it will contain any errors which may exist in the measured altitude of the EM bird (e.g., as caused by a dense tree cover). The inputs to the resistivity algorithm are the inphase and quadrature components of the coplanar coil-pair. The outputs are the apparent resistivity of the conductive half space (the source) and the sensor-source distance. The flying height is not an input variable, and the output resistivity and sensor-source distance are independent of the flying height. The apparent depth, discussed above, is simply the sensor-source distance minus the measured altitude or flying height. Consequently, errors in the measured altitude will affect the apparent depth parameter but not the apparent resistivity parameter.

The apparent depth parameter is a useful indicator of simple layering in areas lacking a heavy tree cover. The DIGHEM system has been flown for purposes of permafrost mapping, where positive apparent depths were used as a measure of permafrost thickness. However, little quantitative use has been made of negative apparent depths because the absolute value of the negative depth is not a measure of the thickness of the conductive upper layer and, therefore, is not meaningful physically. Qualitatively, a negative apparent depth estimate usually shows that the EM anomaly is caused by conductive overburden. Consequently, the apparent depth channel can be of significant help in distinguishing between overburden and bedrock conductors.

The resistivity map often yields more useful information on conductivity distributions than the EM map. In comparing the EM and resistivity maps, keep in mind the following:

(a) The resistivity map portrays the absolute value of the earth's resistivity, where resistivity = 1/conductivity.

(b) The EM map portrays anomalies in the earth's resistivity. An anomaly by definition is a change from the norm and so the EM map displays anomalies, (i) over narrow, conductive bodies and (ii) over the boundary zone between two wide formations of differing conductivity.

The resistivity map might be likened to a total field map and the EM map to a horizontal gradient in the direction of flight[3]. Because gradient maps are usually

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[3] The gradient analogy is only valid with regard to the identification of anomalous locations.

more sensitive than total field maps, the EM map therefore is to be preferred in resistive areas. However, in conductive areas, the absolute character of the resistivity map usually causes it to be more useful than the EM map.

Interpretation in conductive environments

Environments having background resistivities below 30 ohm-m cause all airborne EM systems to yield very large responses from the conductive ground. This usually prohibits the recognition of discrete bedrock conductors. The processing of DIGHEM data, however, produces six channels which contribute significantly to the recognition of bedrock conductors. These are the inphase and quadrature difference channels (DIFI and DIFQ), and the resistivity and depth channels (RES and DP) for each coplanar frequency; see table in Appendix A.

The EM difference channels (DIFI and DIFQ) eliminate up to 99% of the response of conductive ground, leaving responses from bedrock conductors, cultural features (e.g., telephone lines, fences, etc.) and edge effects. An edge effect arises when the conductivity of the ground suddenly changes, and this is a source of geologic noise. While edge effects yield anomalies on the EM difference channels, they do not produce resistivity anomalies. Consequently, the resistivity channel aids in eliminating anomalies due to edge effects. On the other hand, resistivity anomalies will coincide with the most highly conductive sections of conductive ground, and this is another source of geologic noise. The recognition of a bedrock conductor in a conductive environment therefore is based on the anomalous responses of the two difference channels (DIFI and DIFQ) and the two resistivity channels (RES). The most favourable situation is where anomalies coincide on all four channels.

The DP channels, which give the apparent depth to the conductive material, also help to determine whether a conductive response arises from surficial material or from a conductive zone in the bedrock. When these channels ride above the zero level on the digital profiles (i.e., depth is negative), it implies that the EM and resistivity profiles are responding primarily to a conductive upper layer, i.e., conductive overburden. If both DP channels are below the zero level, it indicates that a resistive upper layer exists, and this usually implies the existence of a bedrock conductor. If the low frequency DP channel is below the zero level and the high frequency DP is above, this suggests that a bedrock conductor occurs beneath conductive cover.

The conductance channel CDT identifies discrete conductors which have been selected by computer for appraisal by the geophysicist. Some of these automatically selected anomalies on channel CDT are discarded by the geophysicist. The automatic selection algorithm is intentionally oversensitive to assure that no meaningful responses are missed. The interpreter then classifies the anomalies according to their source and eliminates those that are not substantiated by the data, such as those arising from geologic or aerodynamic noise.

Reduction of geologic noise

Geologic noise refers to unwanted geophysical responses. For purposes of airborne EM surveying, geologic noise refers to EM responses caused by conductive overburden and magnetic permeability. It was mentioned above that the EM difference channels (i.e., channel DIFI for inphase and DIFQ for quadrature) tend to eliminate the response of conductive overburden. This marked a unique development in airborne EM technology, as DIGHEM is the only EM system which yields channels having an exceptionally high degree of immunity to conductive overburden.

Magnetite produces a form of geological noise on the inphase channels of all EM systems. Rocks containing less than 1% magnetite can yield negative inphase anomalies caused by magnetic permeability. When magnetite is widely distributed throughout a survey area, the inphase EM channels may continuously rise and fall reflecting variations in the magnetite percentage, flying height, and overburden thickness. This can lead to difficulties in recognizing deeply buried bedrock conductors, particularly if conductive overburden also exists. However, the response of broadly distributed magnetite generally vanishes on the inphase difference channel DIFI. This feature can be a significant aid in the recognition of conductors which occur in rocks containing accessory magnetite.

EM magnetite mapping

The information content of DIGHEM data consists of a combination of conductive eddy current response and magnetic permeability response. The secondary field resulting from conductive eddy current flow is frequency-dependent and consists of both inphase and quadrature components, which are positive in sign. On the other hand, the secondary field resulting from magnetic permeability is independent of frequency and consists of only an inphase component which is negative in sign. When magnetic permeability manifests itself by decreasing the measured amount of positive inphase, its presence may be difficult to recognize. However, when it manifests itself by yielding a negative inphase anomaly (e.g., in the absence of eddy current flow), its presence is assured. In this latter case, the negative component can be used to estimate the percent magnetite content.

A magnetite mapping technique was developed for the coplanar coil-pair of DIGHEM. The technique yields a channel (designated FEO) which displays apparent weight percent magnetite according to a homogeneous half space model.[4] The method can be complementary to magnetometer mapping in certain cases. Compared to magnetometry, it is far less sensitive but is more able to resolve closely spaced magnetite zones, as well as providing an estimate of the amount of magnetite in the rock. The method is sensitive to 1/4% magnetite by weight when the EM sensor is at a height of 30 m above a magnetitic half space. It can individually resolve steeply dipping narrow magnetite-rich bands which are separated by 60 m. Unlike magnetometry, the EM magnetite method is unaffected by remanent magnetism or magnetic latitude.

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[4] Refer to Fraser, 1981, Magnetite mapping with a multi-coil airborne electromagnetic system: Geophysics, v. 46, p. 1579-1594.

The EM magnetite mapping technique provides estimates of magnetite content which are usually correct within a factor of 2 when the magnetite is fairly uniformly distributed. EM magnetite maps can be generated when magnetic permeability is evident as indicated by anomalies in the magnetite channel FEO.

Like magnetometry, the EM magnetite method maps only bedrock features, provided that the overburden is characterized by a general lack of magnetite. This contrasts with resistivity mapping which portrays the combined effect of bedrock and overburden.

Recognition of culture

Cultural responses include all EM anomalies caused by man-made metallic objects. Such anomalies may be caused by inductive coupling or current gathering. The concern of the interpreter is to recognize when an EM response is due to culture. Points of consideration used by the interpreter, when coaxial and coplanar coil-pairs are operated at a common frequency, are as follows:

1. Channels CXS and CPS (see Appendix A) measure 50 and 60 Hz radiation. An anomaly on these channels shows

that the conductor is radiating cultural power. Such an indication is normally a guarantee that the conductor is cultural. However, care must be taken to ensure that the conductor is not a geologic body which strikes across a power line, carrying leakage currents.

2. A flight which crosses a "line" (e.g., fence, telephone line, etc.) yields a center-peaked coaxial anomaly and an m-shaped coplanar anomaly.[5] When the flight crosses the cultural line at a high angle of intersection, the amplitude ratio of coaxial/coplanar (e.g., CXI/CPI) is 4. Such an EM anomaly can only be caused by a line. The geologic body which yields anomalies most closely resembling a line is the vertically dipping thin dike. Such a body, however, yields an amplitude ratio of 2 rather than 4. Consequently, an m-shaped coplanar anomaly with a CXI/CPI amplitude ratio of 4 is virtually a guarantee that the source is a cultural line.

3. A flight which crosses a sphere or horizontal disk yields center-peaked coaxial and coplanar anomalies

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5 See Figure 5-1 presented earlier.

with a CXI/CPI amplitude ratio (i.e., coaxial/coplanar) of 1/4. In the absence of geologic bodies of this geometry, the most likely conductor is a metal roof or small fenced yard.[6] Anomalies of this type are virtually certain to be cultural if they occur in an area of culture.

4. A flight which crosses a horizontal rectangular body or wide ribbon yields an m-shaped coaxial anomaly and a center-peaked coplanar anomaly. In the absence of geologic bodies of this geometry, the most likely conductor is a large fenced area.[6] Anomalies of this type are virtually certain to be cultural if they occur in an area of culture.

5. EM anomalies which coincide with culture, as seen on the camera film, are usually caused by culture. However, care is taken with such coincidences because a geologic conductor could occur beneath a fence, for example. In this example, the fence would be expected to yield an m-shaped coplanar anomaly as in case #2

[6] It is a characteristic of EM that geometrically similar anomalies are obtained from: (1) a planar conductor, and (2) a wire which forms a loop having dimensions identical to the perimeter of the equivalent planar conductor.

above. If, instead, a center-peaked coplanar anomaly occurred, there would be concern that a thick geologic conductor coincided with the cultural line.

6. The above description of anomaly shapes is valid when the culture is not conductively coupled to the environment. In this case, the anomalies arise from inductive coupling to the EM transmitter. However, when the environment is quite conductive (e.g., less than 100 ohm-m at 900 Hz), the cultural conductor may be conductively coupled to the environment. In this latter case, the anomaly shapes tend to be governed by current gathering. Current gathering can completely distort the anomaly shapes, thereby complicating the identification of cultural anomalies. In such circumstances, the interpreter can only rely on the radiation channels CXS and CPS, and on the camera film.

MAGNETICS

The existence of a magnetic correlation with an EM anomaly is indicated directly on the EM map. In some geological environments, an EM anomaly with magnetic correlation has a greater likelihood of being produced by sulfides than one that is non-magnetic. However, sulfide ore bodies may be non-magnetic (e.g., the Kidd Creek deposit near Timmins, Canada) as well as magnetic (e.g., the Mattabi deposit near Sturgeon Lake, Canada).

The magnetometer data are digitally recorded in the aircraft to an accuracy of one nT (i.e., one gamma) for proton magnetometers, and 0.01 nT for cesium magnetometers. The digital tape is processed by computer to yield a total field magnetic contour map. When warranted, the magnetic data also may be treated mathematically to enhance the magnetic response of the near-surface geology, and an enhanced magnetic contour map is then produced. The response of the enhancement operator in the frequency domain is illustrated in Figure 5-2. This figure shows that the passband components of the airborne data are amplified 20 times by the enhancement operator. This means, for example, that a 100 nT anomaly on the enhanced map reflects a 5 nT anomaly for the passband components of the airborne data.

The enhanced map, which bears a resemblance to a downward continuation map, is produced by the digital bandpass filtering of the total field data. The enhancement is equivalent to continuing the field downward to a level

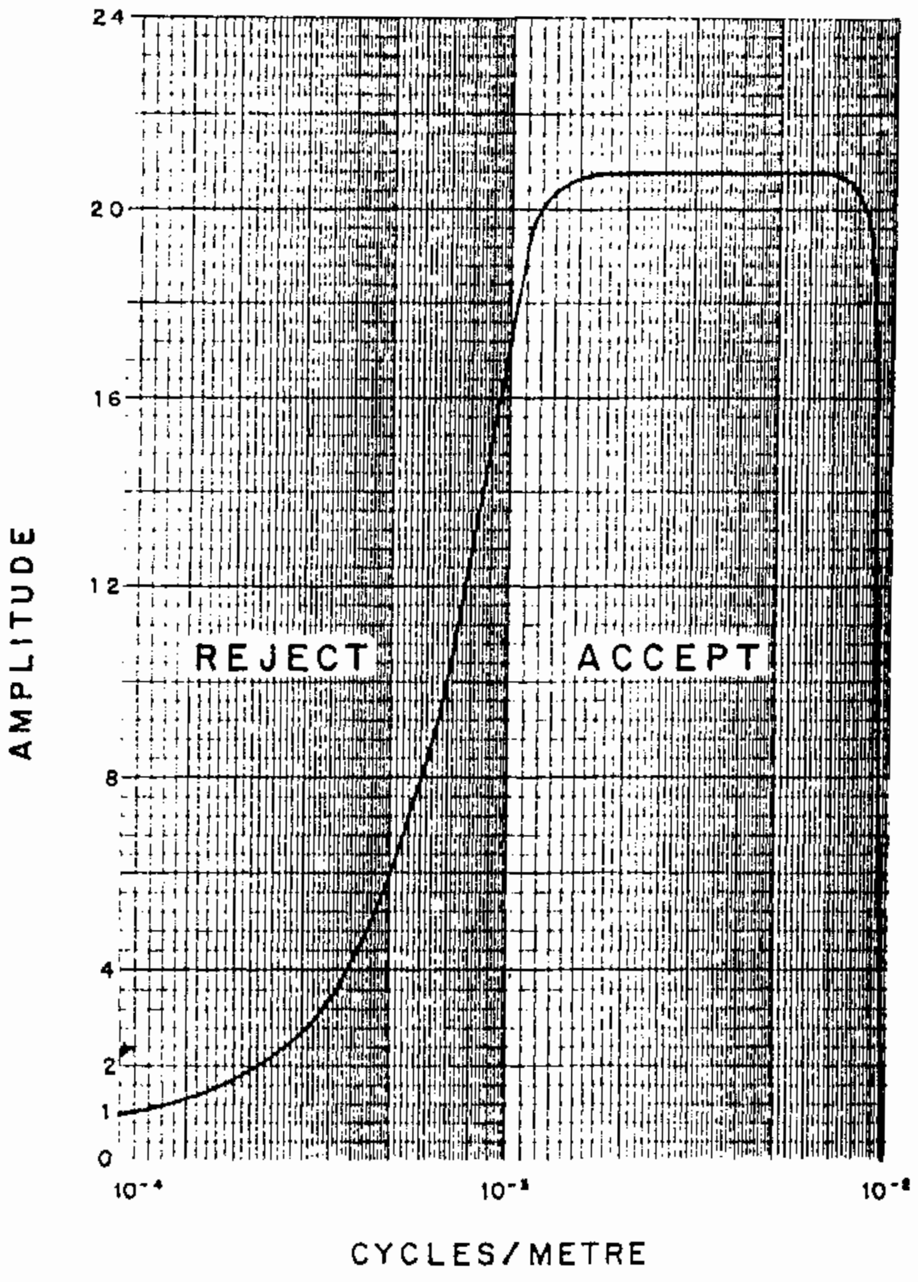

Fig. 5-2 Frequency response of magnetic enhancement operator for a sample interval of 50 m.

(above the source) which is 1/20th of the actual sensor-source distance.

Because the enhanced magnetic map bears a resemblance to a ground magnetic map, it simplifies the recognition of trends in the rock strata and the interpretation of geological structure. It defines the near-surface local geology while de-emphasizing deep-seated regional features. It primarily has application when the magnetic rock units are steeply dipping and the earth's field dips in excess of 60 degrees.

Any of a number of filter operators may be applied to the magnetic data, to yield vertical derivatives, continuations, magnetic susceptibility, etc. These may be displayed in contour, color or shadow.

Respectfully submitted,
DIGHEM SURVEYS & PROCESSING INC.

Doug McConnell

D.L. McConnell
Geophysicist

APPENDIX A

LIST OF PERSONNEL

The following personnel were involved in the acquisition, processing, interpretation and presentation of data, relating to a DIGHEM^{III} airborne geophysical survey carried out for Archer, Cathro and Associates (1981), Limited, over a property in the Tatshenshini River area, B.C.

Bill Cooke	Survey Operations Supervisor
Maurie Bergstrom	Senior Geophysical Operator
G. Pourier	Pilot (Frontier Helicopters Ltd.)
Dave Pritchard	Computer Processor
Paul A. Smith	Interpretation Supervisor
Douglas McConnell	Geophysicist
Gary Hohs	Draftsman
Angela Secker	Word Processing Operator

The survey consisted of 529 km of coverage, flown from November 18 to November 24, 1987. Geophysical data were compiled utilizing a VAX 11-780 computer.

All personnel are employees of Dighem Surveys & Processing Inc., except for the pilot who is an employee of Frontier Helicopters Ltd.

DIGHEM SURVEYS & PROCESSING INC.

Doug McConnell

D. L. McConnell
Geophysicist

Ref: Report #1015

E-DLM-14

APPENDIX B

STATEMENT OF QUALIFICATIONS

I, Douglas L. McConnell of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysicist, residing at 740 Winderemere Avenue, Toronto, Ontario M6S 3M3.

2. I am a graduate of Queens University, Kingston, Ontario, with a B.Sc. Engineering, Geophysics (1984).

3. I have been actively engaged in geophysical exploration since 1986.

4. I was personally responsible for the interpretation of the geophysical data described in this report.

Doug McConnell

D.L. McConnell
Geophysicist

APPENDIX C

STATEMENT OF COST

Date: February 10, 1988

IN ACCOUNT WITH
DIGHEM SURVEYS & PROCESSING INC.

To: Dighem flying of Agreement dated October 1, 1987, pertaining to an Airborne Geophysical Survey in the Tatshenshini River area, B.C.

Survey Charges

529 km of flying @ $129.00/line km	$68,241.00

Allocation of Costs

- Data Acquisition	(60%)
- Data Processing	(20%)
- Interpretation, Report and Maps	(20%)

DIGHEM SURVEYS & PROCESSING INC.

D.L. McConnell
Geophysicist

E-DLM-14

A P P E N D I X   D

EM ANOMALY LIST

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10010 (FLIGHT 1)												
A 175 S	0	3	3	8	22	32	1	14	1	85	85	47
B 163 B?	0	9	4	17	19	79	1	9	1	50	418	10
C 125 H	7	15	7	30	91	4	3	0	1	32	65	4
D 107 L	10	15	15	37	58	5	6	4	1	32	500	0
LINE 10020 (FLIGHT 1)												
A 214 S	0	3	3	8	16	20	1	0	1	82	107	41
B 223 B?	0	7	7	15	41	29	2	5	1	59	90	24
C 254 H	5	10	9	46	121	128	2	0	1	32	48	8
D 264 S?	0	11	7	26	45	58	1	0	1	28	158	0
E 268 L	13	20	11	14	42	18	11	3	1	10	526	0
LINE 10030 (FLIGHT 1)												
A 385 S	0	2	1	4	19	38	1	0	1	43	76	24
B 370 S	3	5	5	10	42	52	4	24	1	48	135	12
C 362 B?	5	6	8	12	39	26	6	16	2	60	35	32
D 353 B	9	3	19	35	99	81	9	17	2	48	37	23
E 351 B	6	15	19	35	99	81	4	8	2	49	31	25
F 326 H	0	10	15	24	36	34	2	0	2	48	28	24
G 305 L	0	7	13	17	38	35	9	7	3	112	19	83
H 302 E	0	5	6	9	34	41	1	0	5	170	10	144
LINE 10040 (FLIGHT 1)												
A 408 B?	0	7	2	10	16	72	1	8	1	42	264	6
B 415 B?	2	11	8	21	114	50	2	2	1	42	93	11
C 416 B	1	14	8	21	114	50	2	2	1	49	134	14
D 430 B	8	12	18	3	14	69	12	26	2	60	35	33
E 437 D	18	42	33	81	257	177	5	0	2	26	29	7
F 459 H	2	15	12	28	60	100	2	7	2	44	38	20
G 468 L	30	14	14	21	67	91	21	12	1	40	89	9
H 473 E	5	11	6	25	70	32	3	7	1	39	177	5
LINE 10050 (FLIGHT 1)												
A 580 B	0	14	4	21	99	62	1	0	1	20	276	0
B 562 B	0	16	12	36	103	47	1	0	1	26	161	0
C 554 D	19	35	33	76	238	159	6	3	1	28	44	7
D 554 D	19	35	33	76	238	159	6	1	2	25	37	4
E 518 L	33	15	19	10	39	32	32	17	1	36	147	4
F 510 E	0	12	3	26	85	40	1	0	1	11	437	0
LINE 10060 (FLIGHT 1)												
A 659 D	5	18	0	25	100	80	1	0	1	8	429	0

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10060	(FLIGHT 1)											
B 680 D	10	6	26	40	92	67	10	17	1	30	104	2
C 683 B	24	38	30	69	204	185	7	0	1	23	46	1
D 705 H	6	16	6	34	45	102	2	0	1	33	70	6
E 712 L	31	17	16	19	65	18	21	4	1	20	213	0
F 718 S	3	10	0	22	42	40	1	0	1	8	433	0
LINE 10070	(FLIGHT 1)											
A 800 D	6	13	18	39	88	48	4	5	1	44	67	15
B 798 D	16	17	22	19	67	38	12	13	2	38	46	13
C 795 D	11	5	22	16	65	57	20	21	1	37	54	10
D 764 H	10	10	9	22	51	54	6	11	1	43	67	14
E 752 L	30	18	17	25	73	76	17	8	1	28	172	0
F 741 S	0	11	1	25	60	65	1	1	1	15	491	0
LINE 10082	(FLIGHT 1)											
A 1056 B	16	17	20	47	131	20	7	9	1	38	55	12
B 1076 H	6	20	8	51	120	238	2	1	1	30	87	5
C 1088 L	38	24	19	23	69	90	19	7	1	31	137	0
LINE 10090	(FLIGHT 1)											
A 1222 D	7	18	21	54	162	116	4	0	1	37	66	9
B 1220 D	18	10	15	15	57	113	16	19	2	36	46	11
C 1217 D	14	25	15	47	135	113	5	7	1	36	60	11
D 1204 H	0	6	8	13	40	84	2	14	1	44	76	15
E 1196 H	3	13	5	27	47	114	2	2	1	42	61	15
F 1182 L	21	18	11	15	35	78	12	16	1	50	112	16
LINE 10100	(FLIGHT 1)											
A 1287 S?	2	3	0	4	3	24	2	37	1	130	1035	0
B 1299 S?	2	1	0	4	1	17	5	70	1	142	1035	0
C 1309 S	4	9	3	16	25	62	2	13	1	40	375	3
D 1346 L	20	8	6	4	14	18	28	26	1	47	217	8
LINE 10110	(FLIGHT 1)											
A 1424 S	4	4	3	8	9	27	4	29	1	52	358	7
B 1415 B	9	9	23	10	10	13	17	22	2	44	41	19
C 1388 S	4	13	6	28	74	35	2	8	1	50	86	20
D 1379 L	13	5	5	4	12	17	25	27	1	73	155	29
E 1371 S	4	7	3	16	26	79	3	19	1	22	506	0
LINE 10120	(FLIGHT 2)											
A 362 B	8	6	12	23	19	51	7	21	2	46	48	20

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10120	(FLIGHT	2)										
B 360 B	7	10	12	19	21	43	6	11	2	39	35	14
C 347 S	1	13	4	29	72	159	1	0	1	29	115	1
D 334 H	0	2	4	18	47	19	1	6	1	43	111	9
E 326 L	16	10	12	7	23	50	18	24	1	59	207	17
LINE 10130	(FLIGHT	2)										
A 455 D	7	11	21	18	41	28	9	14	2	41	41	15
B 456 B	10	10	21	19	48	57	11	17	2	42	29	19
C 476 H	4	8	5	25	48	114	3	10	1	37	106	7
D 484 L	22	14	11	17	41	71	15	13	1	49	158	12
E 493 E	1	3	1	6	14	30	1	0	1	61	768	0
LINE 10140	(FLIGHT	2)										
A 584 S	1	13	2	25	49	153	1	0	1	34	105	5
B 569 L	9	4	9	8	11	42	18	24	1	62	122	23
LINE 10150	(FLIGHT	2)										
A 689 S?	0	4	2	9	11	58	1	10	1	53	365	9
B 712 H	2	7	3	17	45	84	1	0	1	40	77	10
C 727 L	17	11	5	4	17	29	15	19	1	50	148	12
D 731 S	4	10	2	15	54	44	2	5	1	33	226	0
LINE 10160	(FLIGHT	2)										
A 799 H	4	7	1	13	51	15	2	13	1	39	101	9
B 795 B	14	14	19	33	76	70	8	17	2	39	41	15
C 782 H	2	17	5	38	86	227	1	0	1	33	83	7
D 766 L	17	7	6	4	14	68	28	23	1	63	134	23
E 761 B?	6	15	2	25	59	134	2	4	1	39	229	4
LINE 10170	(FLIGHT	2)										
A 849 B?	20	25	57	26	33	181	19	6	2	28	37	5
B 867 B?	0	10	3	20	28	95	1	0	1	25	563	0
C 886 B	8	7	15	18	44	16	9	22	2	42	47	16
D 890 H	2	15	14	44	38	41	2	6	2	35	41	12
E 913 L	17	8	4	4	14	32	21	21	1	55	168	14
F 918 E	2	6	2	13	36	67	1	3	1	31	255	0
LINE 10180	(FLIGHT	2)										
A 991 E	8	1	8	31	80	76	6	17	1	46	122	11
B 982 H	10	40	32	89	236	362	4	1	2	29	33	9
C 969 S	2	14	4	29	76	150	1	0	1	37	82	9

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10180	(FLIGHT	2)										
D 956 L	30	15	14	13	30	58	24	20	1	72	99	35
E 946 B?	4	8	2	11	16	55	3	14	1	43	310	3
LINE 10190	(FLIGHT	2)										
A 1062 E	4	8	4	14	33	95	3	14	1	63	243	19
B 1074 S?	5	14	10	28	56	182	3	12	1	33	90	7
C 1081 H	8	23	25	42	140	140	5	5	2	37	28	15
D 1091 H	1	10	5	19	50	103	1	3	1	48	66	19
E 1103 L	15	4	4	5	15	19	32	20	1	92	148	44
LINE 10200	(FLIGHT	2)										
A 1259 H	1	7	9	23	47	108	2	8	1	37	66	11
B 1249 H	3	6	7	18	44	65	3	13	1	43	52	15
C 1240 H	5	14	12	46	134	191	3	5	1	33	60	8
D 1235 H	2	24	10	52	125	238	1	0	1	33	71	8
E 1229 L	19	12	11	12	31	54	16	18	1	58	108	22
F 1225 B?	5	5	4	7	7	46	6	37	1	48	356	7
G 1218 E	4	5	2	12	32	37	3	7	1	54	155	14
LINE 10210	(FLIGHT	2)										
A 1322 H	2	4	17	40	99	187	4	9	2	50	29	26
B 1338 H	8	19	17	41	147	87	4	0	1	27	47	3
C 1347 L	13	18	7	12	29	38	6	7	1	51	102	16
D 1358 S?	2	6	2	10	26	58	2	11	1	51	237	10
LINE 10220	(FLIGHT	2)										
A 1419 H	8	4	26	41	4	24	9	21	2	46	28	23
B 1398 H	13	43	28	103	301	412	3	0	2	26	40	6
C 1392 L	13	18	13	17	47	30	7	9	1	54	71	22
D 1381 S?	5	5	2	18	28	93	3	22	1	42	218	7
LINE 10231	(FLIGHT	2)										
A 1561 H	12	6	9	13	34	35	13	21	2	48	24	25
B 1541 H	11	35	21	70	113	221	4	4	1	29	43	8
C 1539 H	6	20	1	15	53	77	2	1	2	33	38	10
D 1534 L	8	12	14	9	29	78	8	22	1	50	70	20
E 1522 S?	1	9	7	20	32	102	2	3	1	42	226	5
LINE 10240	(FLIGHT	2)										
A 1592 H	13	12	8	25	29	33	7	14	2	49	25	26
B 1614 H	6	9	5	18	11	6	4	5	2	36	39	11

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10240	(FLIGHT	2)										
C 1618 L	7	3	13	23	34	21	8	8	1	36	80	4
D 1632 S?	2	8	3	16	37	64	1	0	1	37	227	0
LINE 10250	(FLIGHT	2)										
A 1697 H	11	11	20	24	44	32	9	11	3	45	18	24
B 1683 H	2	2	3	23	80	120	2	11	1	32	94	4
C 1673 H	9	15	13	60	95	98	3	4	2	37	34	15
D 1654 S?	0	4	2	16	44	22	1	0	1	40	263	2
E 1646 S	0	4	3	7	20	35	2	3	1	57	498	0
LINE 10260	(FLIGHT	2)										
A 1761 H	10	3	23	27	64	69	15	25	3	47	20	26
B 1775 H	6	4	6	49	116	97	3	9	1	26	87	1
C 1784 H	5	3	6	17	46	47	5	24	2	62	32	36
D 1786 L	9	8	6	25	77	88	5	13	1	40	59	13
E 1806 S?	0	6	2	11	36	49	1	0	1	44	261	2
LINE 10271	(FLIGHT	2)										
A 1927 H	7	11	22	65	79	83	4	5	3	38	20	18
B 1913 H	1	2	1	18	81	40	1	5	1	36	102	6
C 1901 H	9	15	9	31	83	118	4	17	2	66	39	39
D 1900 L	9	15	1	31	83	118	3	13	1	50	87	20
E 1880 E	0	8	7	14	34	64	4	14	1	45	336	2
LINE 10280	(FLIGHT	2)										
A 1950 H	11	2	26	36	8	57	13	19	3	39	21	19
B 1962 S	3	7	7	54	140	198	2	8	1	27	101	3
C 1980 H	4	3	4	6	22	25	7	33	1	42	178	4
D 1996 S?	2	6	0	10	38	36	1	0	1	33	710	0
LINE 10290	(FLIGHT	2)										
A 2066 H	9	11	18	24	7	42	7	15	2	38	25	17
B 2050 H?	1	10	4	5	78	122	1	8	1	40	99	10
C 2041 H	7	4	9	9	28	32	12	37	2	73	36	45
D 2019 S?	0	9	2	14	42	82	2	4	1	28	623	0
LINE 10300	(FLIGHT	4)										
A 267 H	7	8	17	16	37	55	9	25	2	53	25	30
B 259 H?	3	16	4	33	48	138	1	9	1	35	111	10
C 246 L	6	15	10	7	16	62	5	19	1	59	55	29
D 227 E	5	10	5	17	36	102	3	16	1	33	451	0

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10311	(FLIGHT	4)										
A 357 H	9	6	21	14	7	13	18	35	2	55	23	33
B 379 L	12	11	6	15	37	36	7	19	2	59	49	30
C 393 S	0	7	3	13	41	58	1	3	1	30	269	0
D 404 S	0	7	2	6	25	39	1	0	1	25	501	0
LINE 10320	(FLIGHT	4)										
A 464 H	5	4	7	19	22	42	5	22	2	50	37	24
B 453 H	3	2	4	6	19	17	7	46	1	68	70	34
C 445 L	30	23	13	20	51	46	14	18	2	59	45	32
D 425 S	0	5	3	13	38	53	1	0	1	20	410	0
LINE 10330	(FLIGHT	4)										
A 490 H	8	15	13	33	86	146	4	12	2	43	43	19
B 499 L	15	7	52	21	61	19	37	17	4	61	11	41
C 510 L	21	14	13	16	38	19	15	15	2	57	48	28
LINE 10340	(FLIGHT	4)										
A 597 H	5	8	9	23	41	39	4	15	2	53	40	27
B 579 L	42	36	25	46	128	116	13	12	1	43	54	17
C 573 S	11	5	0	5	14	23	13	34	1	28	612	0
D 558 S	4	9	3	23	60	28	2	7	1	24	339	0
LINE 10350	(FLIGHT	4)										
A 672 H	4	2	9	29	93	83	4	16	2	50	38	25
B 689 L	16	8	13	11	39	19	19	10	1	43	75	11
C 713 S	5	8	3	14	39	82	3	10	1	22	339	0
LINE 10360	(FLIGHT	4)										
A 776 H	10	7	13	4	98	144	18	37	2	43	43	18
B 760 L	36	28	23	33	118	86	15	13	1	34	94	7
C 736 S	3	12	8	25	65	117	2	12	1	36	159	6
LINE 10370	(FLIGHT	4)										
A 835 H	5	5	11	13	40	48	9	28	2	54	36	28
B 852 L	14	9	6	9	26	38	13	5	1	41	262	0
C 861 S	0	7	1	14	28	77	1	4	1	26	461	0
D 877 S	0	4	4	12	24	75	1	8	1	40	300	5
E 885 S	2	10	4	23	65	100	1	0	1	21	301	0
LINE 10380	(FLIGHT	4)										
A 951 H	11	13	25	46	25	71	7	14	2	44	32	21

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	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 10380	(FLIGHT		4)									
B 934 L	21	19	17	23	72	82	11	5	1	46	107	12
C 929 S	0	8	5	13	24	78	3	14	1	40	267	3
D 907 S	1	11	5	21	54	92	1	0	1	24	269	0
LINE 10391	(FLIGHT		4)									
A 1031 H	13	11	15	31	62	105	8	17	2	44	43	19
B 1037 S?	4	13	3	26	87	110	2	1	1	31	103	3
C 1041 B?	3	10	3	15	35	34	2	8	1	40	195	6
D 1049 L	22	15	10	15	51	20	14	1	1	33	234	0
E 1057 S	0	8	2	13	34	80	1	0	1	25	550	0
LINE 10400	(FLIGHT		4)									
A 1138 H	10	10	15	17	42	44	9	19	2	43	43	17
B 1133 S?	5	9	4	16	51	67	3	14	1	36	122	6
C 1122 L	7	8	7	7	22	7	7	0	1	66	66	29
D 1115 S	0	7	3	8	22	45	1	0	1	27	484	0
E 1107 S	4	9	5	18	28	71	3	10	1	34	251	0
F 1102 S	6	3	8	17	32	90	6	28	1	28	290	0
LINE 10410	(FLIGHT		4)									
A 1206 H	8	11	16	27	71	40	6	6	2	37	45	11
B 1211 S?	2	5	5	10	31	38	3	15	1	39	130	5
C 1218 B?	6	10	6	20	68	45	3	9	1	32	184	0
D 1223 L	17	11	13	18	62	63	13	10	1	59	120	21
E 1233 S?	7	7	4	15	44	76	5	20	1	29	270	0
F 1246 S	7	14	7	31	81	98	3	7	1	26	181	0
LINE 10420	(FLIGHT		4)									
A 1306 H?	7	11	7	21	70	98	4	18	1	35	128	5
B 1303 S?	7	17	7	33	113	142	3	6	1	31	147	2
C 1298 B?	6	13	6	20	77	116	3	14	1	28	384	0
D 1291 L	16	9	8	5	29	38	21	26	1	76	73	41
E 1290 B	16	9	8	5	29	11	1	0	1	38	99	20
F 1281 S	4	7	0	16	36	32	2	6	1	18	435	0
G 1265 S	6	9	6	20	34	50	4	0	1	26	241	0
LINE 10431	(FLIGHT		4)									
A 1369 S?	7	14	7	59	64	275	2	0	1	36	71	10
B 1374 S	4	8	6	16	49	76	3	4	1	36	93	5
C 1378 S	6	13	9	22	87	83	4	6	1	37	126	5
D 1386 H?	6	14	4	23	77	69	3	6	1	33	162	2

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10431	(FLIGHT	4)										
E 1391 L	11	4	6	4	14	53	27	16	1	68	97	28
F 1400 B?	8	6	5	7	26	48	9	33	1	62	167	22
LINE 10440	(FLIGHT	4)										
A 1478 E	7	5	16	46	8	20	5	14	1	39	75	12
B 1470 E	7	4	11	42	139	49	4	19	1	34	125	6
C 1461 H	5	15	6	26	80	111	2	4	1	43	106	12
D 1458 L	14	6	8	4	19	46	26	29	2	96	54	61
E 1457 B?	14	6	8	4	19	1	1	0	1	50	96	31
F 1454 S	8	20	11	38	88	232	3	8	1	30	161	2
G 1444 B?	5	10	3	17	44	83	3	10	1	37	221	2
H 1441 B?	4	20	8	35	108	166	2	0	1	27	130	0
I 1434 B?	6	4	5	16	37	75	6	12	1	24	360	0
J 1433 S	6	13	5	16	37	75	3	8	1	44	144	10
LINE 10450	(FLIGHT	4)										
A 1499 E	7	20	9	38	94	56	3	9	1	49	118	17
B 1506 E	6	12	9	19	44	21	4	11	1	37	122	6
C 1516 H	8	18	8	36	112	156	3	8	1	35	118	7
D 1519 L	26	8	7	26	83	117	18	13	1	71	136	30
E 1520 B	8	14	12	28	84	127	5	11	1	63	105	27
F 1526 S?	1	10	5	16	28	85	1	0	1	43	197	5
G 1534 S	4	11	6	16	42	42	3	12	1	54	163	17
H 1539 B?	11	28	17	55	169	271	4	3	1	29	89	4
LINE 10460	(FLIGHT	4)										
A 1597 B?	4	9	7	11	36	46	4	23	1	47	152	13
B 1592 B?	0	6	2	14	31	97	1	4	1	17	487	0
C 1587 S	7	8	8	17	74	63	6	12	1	33	133	0
D 1584 L	15	4	7	50	145	194	6	6	1	79	65	44
E 1583 B	10	20	16	50	145	212	4	0	1	31	99	0
F 1576 S	2	5	6	7	21	60	4	32	1	64	150	25
G 1567 S?	5	18	5	28	75	137	2	0	1	36	153	4
H 1559 S	3	7	6	14	36	54	3	8	1	40	164	3
I 1551 S	8	8	2	13	38	56	4	2	1	13	504	0
J 1548 S	9	10	8	24	66	131	5	17	1	39	149	6
LINE 10470	(FLIGHT	4)										
A 1673 B	6	23	12	44	138	130	3	0	1	30	143	0
B 1681 B	6	10	7	15	41	69	4	17	1	50	160	13
C 1692 B	10	20	6	40	126	183	3	4	1	31	167	1

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	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 10470 (FLIGHT 4)												
D 1695 L	15	6	6	40	126	183	7	0	1	57	103	19
E 1703 S	0	9	6	21	48	126	1	6	1	38	244	5
F 1707 S	6	6	6	13	35	75	6	34	1	47	272	10
G 1713 S	8	17	9	36	92	138	4	1	1	26	165	0
H 1724 B	6	15	1	27	31	100	2	2	1	28	401	0
LINE 10480 (FLIGHT 4)												
A 1786 B	8	12	9	31	114	65	4	0	1	20	156	0
B 1779 B?	5	8	3	13	30	69	3	13	1	31	299	0
C 1769 B	12	23	14	38	75	143	4	12	1	35	158	6
D 1767 L	25	19	22	13	40	143	19	17	1	68	58	36
E 1766 B	11	15	22	19	75	65	9	8	1	36	76	7
F 1761 D	6	10	10	23	64	106	4	17	1	32	468	0
G 1751 S?	1	10	5	18	52	72	1	0	1	38	156	0
H 1742 E	4	9	5	14	37	79	3	0	1	22	317	0
I 1738 B?	3	14	1	20	51	117	1	0	1	31	253	0
LINE 10490 (FLIGHT 4)												
A 1810 S?	5	18	10	32	106	112	3	1	1	34	151	3
B 1811 H?	5	18	10	32	106	114	3	1	1	43	100	12
C 1829 S	1	5	4	14	50	101	2	18	1	33	285	0
D 1833 L	28	15	17	18	54	60	20	1	1	42	80	10
E 1846 S	3	9	3	16	36	101	2	10	1	39	335	2
F 1857 S	5	6	2	10	26	49	3	8	1	34	303	0
LINE 10500 (FLIGHT 5)												
A 407 S?	1	22	11	44	149	156	1	0	1	20	131	0
B 396 S	1	5	6	12	68	51	3	17	1	29	206	0
C 394 B?	0	6	0	8	35	46	3	31	1	27	528	0
D 391 B?	0	5	1	14	23	96	1	5	1	25	533	0
E 382 L	66	79	51	91	235	325	12	2	2	35	37	13
F 376 S	0	6	6	9	21	49	2	7	1	74	126	33
LINE 10510 (FLIGHT 5)												
A 434 S?	0	30	10	58	155	264	1	0	1	24	188	0
B 436 S?	4	12	10	24	44	72	3	12	1	18	403	0
C 445 B?	5	14	4	26	57	144	2	8	1	19	426	0
D 451 S?	0	4	3	9	13	54	1	12	1	35	415	0
E 458 L	26	17	16	17	51	49	18	9	1	45	84	13
F 463 S	0	10	5	17	23	69	1	0	1	34	197	0
G 486 S?	0	5	1	7	19	37	1	0	1	28	566	0

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10520 (FLIGHT 5)												
A 543 E	7	29	6	60	134	300	2	0	1	20	301	0
B 540 S?	6	29	5	60	134	300	1	6	1	12	290	0
C 534 B?	4	14	7	4	60	13	3	11	1	16	339	0
D 522 S?	2	21	19	34	95	167	3	6	1	32	150	3
E 521 L	44	18	18	47	144	193	19	16	1	51	65	23
F 520 B?	44	25	18	47	144	193	16	9	1	35	56	10
LINE 10530 (FLIGHT 5)												
A 568 H?	1	14	8	31	72	102	1	0	1	35	145	3
B 578 B?	2	15	6	33	102	138	2	6	1	9	365	0
C 583 S	0	8	1	17	35	108	1	0	1	19	492	0
D 589 B?	4	9	14	18	56	48	5	14	1	31	279	0
E 591 L	24	14	16	24	77	71	16	9	1	46	88	14
F 592 B?	24	14	16	24	77	71	15	15	1	47	61	19
G 597 S	2	9	2	17	47	44	1	1	1	24	506	0
H 604 S	1	7	0	13	14	99	2	24	1	46	694	1
LINE 10540 (FLIGHT 5)												
A 675 B	3	15	12	59	146	289	2	0	1	19	235	0
B 673 H	2	16	13	59	147	289	2	1	1	36	100	8
C 668 D	6	7	6	8	16	37	8	15	1	28	531	0
D 657 S	4	11	3	20	52	117	2	6	1	17	425	0
E 651 S	5	69	21	134	336	748	1	0	1	18	97	0
F 649 L	14	2	21	123	323	617	4	0	1	73	184	24
G 646 S	0	7	7	8	18	68	1	7	1	95	99	55
H 635 S	2	12	2	20	31	142	2	16	1	45	417	9
I 632 B	2	20	5	31	36	185	1	0	1	17	459	0
LINE 10551 (FLIGHT 5)												
A 757 S?	0	7	4	9	4	58	2	24	1	53	584	3
B 761 S?	4	8	12	6	127	16	7	13	1	50	273	5
C 763 S	0	18	12	56	128	239	1	0	1	30	123	4
D 766 S	0	13	5	22	59	125	1	0	1	32	199	0
E 774 S?	2	13	3	19	6	96	1	6	1	28	461	0
F 782 B?	0	31	6	52	133	301	1	7	1	26	233	2
G 787 S?	9	13	14	32	117	78	5	0	1	22	66	0
H 788 L?	9	13	14	32	117	78	5	0	1	47	112	10
I 796 S	0	8	3	15	51	68	1	0	1	29	334	0
J 814 S	0	8	1	12	1	33	1	0	1	33	626	0
LINE 10560 (FLIGHT 6)												
A 328 S	2	7	7	9	35	47	3	14	1	44	132	9

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10560	(FLIGHT		6)									
B 329 S	4	6	7	15	33	57	4	17	1	39	177	4
C 340 S	3	8	1	13	34	70	2	9	1	30	608	0
D 350 S?	5	38	9	76	226	374	1	0	1	16	171	0
E 353 S?	11	19	13	34	115	134	5	4	1	11	365	0
F 355 L?	12	15	13	34	115	134	6	2	1	46	175	8
G 366 S	3	5	0	8	33	24	2	8	1	22	678	0
LINE 10571	(FLIGHT		6)									
A 459 S	0	8	5	14	35	96	1	0	1	50	178	11
B 463 S	4	12	10	26	74	129	3	7	1	42	104	11
C 485 S	4	52	17	120	383	503	1	0	1	16	97	0
D 489 S	18	26	18	34	105	185	7	0	1	24	70	0
E 490 L?	18	26	18	34	105	185	7	0	1	36	108	4
F 499 S	3	9	4	14	35	107	2	11	1	36	279	0
LINE 10580	(FLIGHT		6)									
A 577 S	9	10	3	11	36	62	6	24	1	32	354	0
B 574 S	9	10	9	18	42	102	6	17	1	32	162	0
C 551 E	7	17	11	78	86	398	2	0	1	7	359	0
D 548 S	15	42	17	125	290	666	3	4	1	19	117	0
E 546 L	15	25	17	125	290	666	3	0	1	40	153	7
LINE 10590	(FLIGHT		6)									
A 589 S	0	12	3	23	49	129	1	4	1	28	354	0
B 605 D	3	22	2	25	49	156	1	5	1	26	502	0
C 605 D	3	22	2	25	49	156	2	5	1	11	365	0
D 617 S?	0	38	13	71	233	329	1	0	1	20	128	0
E 633 S	0	10	3	18	34	51	2	2	1	14	518	0
LINE 10601	(FLIGHT		6)									
A 775 S?	4	5	5	21	40	117	3	19	1	34	387	0
B 768 E	8	8	4	15	18	64	5	23	1	16	466	0
C 760 D	0	22	1	31	41	174	1	1	1	24	484	0
D 737 S	7	10	4	25	60	99	3	1	1	24	304	0
E 727 S	1	8	1	8	26	40	1	0	1	57	799	0
LINE 10610	(FLIGHT		6)									
A 801 S	5	14	5	19	45	82	2	2	1	47	141	12
B 811 D	11	15	6	25	82	173	4	15	1	35	214	3
C 824 B	8	15	0	27	10	182	4	27	1	59	712	10
D 829 H?	24	57	44	131	407	300	5	0	2	25	39	5

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10610	(FLIGHT		6)									
E 843 S	7	7	3	13	40	32	5	12	1	30	580	0
F 855 S	1	3	1	5	16	34	1	10	1	61	755	0
LINE 10620	(FLIGHT		6)									
A 912 B	4	13	6	17	46	86	2	9	1	32	223	0
B 908 S	12	22	14	48	137	170	4	4	1	34	97	6
C 899 S	0	7	4	12	47	45	1	0	1	44	208	0
D 884 H?	29	94	56	204	607	419	5	0	1	21	40	3
E 881 L	11	7	52	156	469	359	6	0	1	114	1035	0
F 874 S	6	6	1	12	34	46	3	1	1	38	790	0
LINE 10630	(FLIGHT		6)									
A 943 B	1	11	9	11	35	62	2	0	1	42	122	6
B 946 S	8	24	13	54	161	207	3	4	1	30	106	4
C 956 S?	5	13	5	19	16	88	3	7	1	33	240	0
D 971 H	15	46	53	100	310	294	6	2	1	22	101	0
E 974 L	46	28	57	19	72	216	36	0	1	28	70	0
F 985 S	0	9	0	19	21	148	2	11	1	30	584	0
G 995 S	0	3	0	4	10	30	1	0	1	42	317	17
LINE 10640	(FLIGHT		6)									
A 1058 S	2	5	0	11	32	20	1	3	1	46	749	0
B 1046 S	0	6	7	12	40	34	2	0	1	49	135	10
C 1026 H?	12	34	37	73	240	149	5	0	1	25	72	0
D 1024 L	31	31	37	73	240	149	10	0	1	44	78	13
E 1016 S	4	6	2	13	17	49	3	0	1	25	698	0
F 1009 S?	4	13	3	20	32	79	2	11	1	34	614	0
LINE 10650	(FLIGHT		6)									
A 1158 H?	12	35	4	79	235	192	2	0	1	25	106	1
B 1160 L	32	29	26	79	235	192	9	0	1	22	140	0
C 1172 S	6	9	0	21	48	106	2	12	1	18	465	0
LINE 10660	(FLIGHT		6)									
A 1238 S	1	4	0	6	18	27	1	5	1	39	749	0
B 1228 S	8	16	7	36	88	188	3	7	1	20	196	0
C 1225 S	12	4	5	12	39	55	14	15	1	29	203	0
D 1220 S	2	9	3	13	46	62	2	6	1	30	382	0
E 1206 S?	11	8	11	46	151	100	5	9	1	28	122	0
F 1205 L	6	8	11	46	151	100	3	0	1	27	359	0
G 1197 S	4	9	2	10	49	49	2	2	1	11	496	0

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LINE 10660	(FLIGHT		6)									
H 1190 S	9	10	0	22	61	112	3	10	1	17	517	0
LINE 10670	(FLIGHT		6)									
A 1256 S	8	11	6	20	62	86	4	10	1	33	199	0
B 1278 S?	13	16	1	33	103	143	4	12	1	14	416	0
C 1279 L	13	9	0	33	103	143	4	6	1	18	564	0
D 1295 S	6	8	1	16	37	41	3	10	1	19	572	0
LINE 10680	(FLIGHT		6)									
A 1352 S	8	14	8	30	89	137	4	3	1	27	174	0
B 1345 S?	3	12	6	16	43	74	2	0	1	35	238	0
C 1331 H?	9	17	4	27	80	119	4	20	1	28	468	1
D 1316 S	5	1	5	19	30	15	5	0	1	14	232	0
LINE 10690	(FLIGHT		6)									
A 1381 H?	5	15	8	32	83	165	2	7	1	34	170	4
B 1388 S?	8	16	3	27	72	134	3	6	1	25	332	0
C 1406 S?	11	10	4	20	68	84	6	19	1	25	579	0
D 1425 S	4	8	4	27	46	96	2	6	1	25	277	0
LINE 10700	(FLIGHT		6)									
A 1481 S	3	3	3	10	25	36	4	29	1	31	246	0
B 1477 S?	5	7	4	13	42	66	3	14	1	45	146	9
C 1471 H?	3	12	7	20	35	72	2	4	1	52	143	15
D 1457 H	0	10	6	13	55	50	1	0	1	63	158	22
E 1446 S	7	19	7	35	81	172	2	3	1	32	183	1
F 1442 S	5	21	4	37	87	191	1	4	1	15	385	0
LINE 10710	(FLIGHT		6)									
A 1510 H	7	2	7	23	70	82	6	23	1	35	141	3
B 1527 L	0	11	0	8	59	37	1	10	1	61	783	0
C 1529 S?	2	9	3	8	59	37	2	14	1	29	577	0
D 1531 B	2	5	3	8	59	36	4	27	1	31	691	0
E 1545 S	9	11	5	20	46	115	4	22	1	32	233	1
LINE 10720	(FLIGHT		6)									
A 1605 S	4	7	1	14	36	82	2	7	1	37	576	0
B 1602 S	0	7	4	15	36	90	1	2	1	49	235	10
C 1592 S?	5	44	9	109	247	597	1	1	1	20	138	0
D 1578 L	0	13	1	14	50	65	1	0	1	55	809	0
E 1573 D	5	14	7	13	36	62	3	10	1	57	215	15

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10720	(FLIGHT		6)									
F 1564 S	2	8	6	15	39	65	2	3	1	40	157	4
G 1559 S	0	16	4	24	60	131	1	0	1	32	337	0
LINE 10730	(FLIGHT		6)									
A 1677 B?	0	3	4	8	8	19	1	12	1	63	218	19
B 1689 E	8	19	11	39	119	152	3	4	1	36	129	6
C 1693 H	5	10	6	14	27	36	3	15	1	35	189	2
D 1694 B?	5	10	6	12	23	26	4	5	1	17	540	0
E 1706 L	0	19	0	12	34	94	3	14	1	59	758	1
F 1709 S?	3	10	6	16	38	109	4	26	1	18	425	0
G 1711 B	3	10	6	16	38	109	3	12	1	47	178	11
LINE 10740	(FLIGHT		6)									
A 1790 B?	3	5	0	10	6	52	2	16	1	48	747	0
B 1784 E	5	4	2	8	24	37	5	8	1	111	1035	0
C 1773 H?	5	1	4	33	76	151	3	21	1	24	355	0
D 1772 B	5	7	0	33	75	155	2	4	1	32	581	0
E 1762 L	1	19	0	10	25	96	2	0	1	49	777	0
F 1759 S?	0	12	7	18	56	96	1	2	1	29	368	0
G 1757 B	2	8	7	9	22	32	3	0	1	25	733	0
H 1746 S	7	8	7	17	29	72	5	26	1	35	328	1
LINE 10750	(FLIGHT		6)									
A 1810 B?	0	5	3	5	8	13	1	0	1	43	241	17
B 1819 H	4	27	5	57	148	265	1	2	1	23	244	0
C 1825 B	3	7	3	12	38	36	3	4	1	33	287	0
D 1836 L	2	6	0	10	22	44	1	6	1	82	903	0
E 1841 D	7	18	6	14	45	35	4	7	1	13	512	0
F 1855 S	2	10	4	22	41	103	1	9	1	23	470	0
LINE 10760	(FLIGHT		6)									
A 1919 S	0	5	1	10	24	74	1	4	1	58	552	5
B 1911 D	3	6	0	10	5	42	2	13	1	53	761	0
C 1898 H	5	14	7	29	93	96	3	2	1	34	169	2
D 1894 H	4	10	3	21	55	84	2	10	1	33	338	0
E 1885 L	4	21	3	8	45	67	4	0	1	46	706	0
F 1882 D	4	7	4	11	12	67	4	0	1	25	746	0
G 1872 S	0	7	3	14	37	64	1	0	1	27	324	0
H 1869 S	4	10	4	16	31	77	2	13	1	19	493	0
I 1867 B	1	8	0	19	11	98	1	6	1	27	564	0
LINE 10770	(FLIGHT		6)									
A 1932 B?	1	4	4	5	18	24	1	0	1	20	244	0

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 10770	(FLIGHT		6)									
B 1943 H	5	13	7	44	123	130	2	8	1	26	240	0
C 1948 H	0	8	3	15	20	63	1	1	1	27	517	0
D 1958 L	18	25	2	13	52	123	8	14	1	45	725	0
E 1961 S?	5	13	0	22	52	123	3	10	1	21	511	0
F 1964 D	5	23	3	25	37	85	4	3	1	20	537	0
G 1979 S	6	9	3	14	43	62	4	16	1	24	506	0
LINE 10780	(FLIGHT		6)									
A 2036 D	7	14	4	17	48	78	3	12	1	34	418	0
B 2036 D	7	14	4	17	48	78	4	13	1	49	742	0
C 2024 H	6	1	9	36	114	101	5	17	1	36	134	5
D 2020 H	7	8	5	16	35	56	4	22	1	44	236	7
E 2010 L	7	12	4	31	70	110	4	0	1	67	595	0
F 2008 B	1	23	2	37	90	112	3	0	1	1	393	0
G 1991 S?	0	9	0	19	31	95	1	0	1	28	658	0
LINE 10790	(FLIGHT		6)									
A 2052 S	0	5	3	13	30	79	2	19	1	42	560	0
B 2064 D	8	25	11	35	119	150	3	2	1	29	243	0
C 2072 H	10	30	18	64	201	195	3	2	1	31	101	5
D 2088 L	17	11	0	16	75	102	10	18	1	103	992	4
E 2088 B?	17	17	3	34	96	102	5	12	1	48	732	0
F 2091 D	5	36	4	94	230	179	1	0	1	0	273	0
G 2093 D	1	40	4	94	230	179	1	0	1	0	237	0
H 2109 S?	5	27	3	50	121	283	1	0	1	5	304	0
LINE 10800	(FLIGHT		6)									
A 2174 B	3	6	3	2	4	25	4	26	1	40	674	0
B 2171 D	10	20	4	28	83	130	3	6	1	19	502	0
C 2160 E	12	26	25	61	176	113	5	0	1	24	90	0
D 2156 H	11	7	15	28	85	122	9	24	1	35	94	7
E 2152 E	11	16	4	2	113	41	1	0	1	35	141	17
F 2145 L	3	8	3	23	55	126	3	0	1	130	1035	0
G 2143 B	11	16	3	23	55	126	4	12	1	30	400	0
H 2142 D	11	15	33	66	151	62	6	0	1	32	61	5
I 2141 D	18	26	33	66	151	61	7	0	1	26	87	0
J 2129 S?	4	10	2	21	41	67	2	0	1	11	511	0
K 2113 S	2	7	0	12	25	73	1	2	1	22	589	0
LINE 19010	(FLIGHT		6)									
A 2343 S	0	12	0	24	45	113	1	0	1	204	1035	0

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 19010	(FLIGHT	6)										
B 2330 S	0	8	0	14	44	78	1	6	1	212	1035	0
C 2322 S	0	4	0	12	16	70	2	22	1	216	1035	0
D 2320 S	0	6	0	10	17	48	3	23	1	211	1035	0
E 2317 S?	0	6	0	13	29	69	1	3	1	213	1035	0
F 2303 S	0	9	0	20	35	140	1	11	1	75	804	9
G 2286 S	0	4	0	8	10	41	3	18	1	203	1035	0
LINE 19011	(FLIGHT	6)										
A 2525 H?	0	7	5	16	43	70	1	0	1	33	133	3
B 2513 L	0	1	13	16	47	38	8	23	1	24	697	0
C 2471 S?	0	5	0	9	23	54	1	4	1	88	922	1
D 2448 S?	0	9	0	19	47	121	1	0	1	42	729	0
E 2443 H?	0	14	0	31	73	185	1	1	1	22	520	0
F 2436 H?	0	16	0	37	91	161	1	6	1	22	514	0
LINE 19020	(FLIGHT	7)										
A 457 B	7	12	12	27	23	37	5	9	1	45	89	13
B 491 S?	1	5	2	10	24	44	1	4	1	39	398	0
C 502 S?	10	13	11	31	79	145	5	15	1	28	83	3
D 508 H	2	3	13	7	11	97	11	35	2	46	28	22
E 519 H	3	3	8	22	61	76	3	22	1	41	52	15
F 552 H	7	19	17	37	66	55	4	9	1	35	46	12
G 572 H?	3	21	8	46	147	181	1	0	1	19	126	0

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	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 20010	(FLIGHT	3)										
A 194 D	8	22	11	39	89	108	3	0	1	40	77	10
B 199 D	9	9	11	29	81	2	6	0	1	58	70	24
C 202 B?	0	6	11	11	37	27	4	2	1	53	136	13
D 210 D	2	7	1	9	23	33	3	11	1	42	754	0
LINE 20020	(FLIGHT	3)										
A 299 D	16	22	18	33	90	78	7	2	1	36	75	7
B 300 D	16	15	18	33	90	49	9	1	2	46	49	18
C 302 D	8	6	7	19	35	4	6	0	1	66	83	28
D 310 B	5	5	3	6	21	6	6	15	1	42	554	0
LINE 20030	(FLIGHT	3)										
A 407 D	19	22	19	37	73	86	8	6	1	46	54	18
B 408 D	19	21	19	37	73	86	8	3	1	57	62	26
C 416 D	2	6	2	8	19	18	2	0	1	61	177	15
LINE 20040	(FLIGHT	3)										
A 531 B?	13	42	9	73	219	378	3	0	1	8	236	0
B 532 B	14	42	9	73	219	378	3	0	1	25	158	0
LINE 20050	(FLIGHT	3)										
A 635 B	9	9	2	14	20	54	5	21	1	31	575	0
B 636 B	9	10	3	14	32	54	5	9	1	19	624	0
C 649 S?	4	4	0	7	18	6	2	12	1	39	754	0
LINE 20060	(FLIGHT	3)										
A 741 S?	4	5	2	10	38	34	3	13	1	28	704	0
LINE 20070	(FLIGHT	4)										
A 2245 D	13	49	11	84	241	409	2	2	1	20	129	0
B 2250 B	6	21	15	22	64	118	4	9	1	62	68	31
C 2257 B?	4	6	2	8	19	20	4	14	1	32	738	0
LINE 20080	(FLIGHT	4)										
A 2365 B?	5	11	4	24	52	127	2	5	1	47	133	13
B 2371 B	1	3	5	7	16	35	2	14	1	80	62	44
C 2376 S?	1	3	4	9	26	24	2	2	1	33	607	0
LINE 20090	(FLIGHT	4)										
A 2458 S?	4	6	7	7	23	15	5	0	1	71	76	32
LINE 20100	(FLIGHT	4)										
A 2530 S?	3	6	9	9	29	12	5	0	2	72	48	37

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	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 20110	(FLIGHT	4)										
A 2607 B	4	7	11	9	29	10	6	6	1	54	180	10
LINE 20120	(FLIGHT	4)										
A 2689 D	4	10	15	15	43	30	5	4	2	86	41	53
B 2691 B	2	6	15	15	43	30	5	0	2	89	28	57
C 2707 B?	0	1	0	9	0	54	3	41	1	154	1035	0
D 2716 B?	0	0	0	8	0	44	4	57	1	166	1035	0
LINE 20130	(FLIGHT	4)										
A 2799 D	4	7	11	12	35	12	6	0	1	49	87	9
B 2801 B	2	6	11	11	26	32	5	14	1	58	206	14
LINE 20140	(FLIGHT	4)										
A 2936 S	1	9	13	16	43	18	4	0	2	66	42	35
B 2962 B?	0	2	0	0	0	31	5	74	1	116	1014	13
LINE 20150	(FLIGHT	4)										
A 3079 S?	0	3	0	3	0	25	1	20	1	89	895	7
B 3085 D	11	16	10	11	28	39	7	6	1	73	77	37
C 3086 D	11	16	10	20	38	39	6	6	1	53	207	11
D 3087 D	11	16	6	20	38	39	5	3	1	41	154	4
E 3109 B?	0	1	1	3	2	22	1	0	1	16	3559	0
F 3117 B?	0	1	0	2	0	16	1	0	1	28	4543	0
LINE 20160	(FLIGHT	4)										
A 3183 D	5	7	4	12	24	16	4	4	1	66	159	22
B 3184 D	5	5	4	12	24	8	4	6	1	46	450	0
C 3211 B?	0	2	0	3	0	25	1	0	1	8	2680	0
LINE 20260	(FLIGHT	10)										
A 1213 B	3	8	8	8	19	36	4	24	1	98	81	58
B 1218 B	2	10	12	8	24	28	4	17	1	83	94	44
C 1221 B	0	8	6	6	20	22	1	4	1	122	87	78
LINE 20270	(FLIGHT	10)										
A 1129 B	5	9	2	11	22	41	3	18	1	58	283	15
B 1115 B	6	1	3	11	34	37	7	42	1	53	146	17
C 1113 B	6	5	1	20	62	77	3	10	1	51	194	11
D 1103 D	15	17	10	11	15	51	9	18	1	57	777	0
LINE 20280	(FLIGHT	10)										
A 1011 B	4	9	3	13	38	47	3	10	1	48	294	6

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LINE 20280	(FLIGHT	10)										
B 1029 B	3	6	7	10	26	19	4	9	1	68	60	34
C 1034 B	20	12	12	9	24	23	19	14	1	51	792	0
LINE 20290	(FLIGHT	10)										
A 926 B?	4	6	9	12	15	14	5	18	1	64	88	28
B 903 D	0	19	4	17	18	97	5	16	1	45	717	0
LINE 20300	(FLIGHT	10)										
A 756 B?	0	7	4	14	47	58	1	3	1	72	445	17
B 754 B	4	10	6	13	29	29	3	0	1	36	175	0
C 740 D	3	10	6	11	21	34	2	2	1	70	111	30
D 734 B?	4	4	0	6	6	37	3	33	1	83	895	0
LINE 20310	(FLIGHT	9)										
A 1569 B	0	5	0	8	0	54	8	38	1	48	725	0
LINE 20330	(FLIGHT	9)										
A 1171 B	8	2	9	15	48	67	11	43	1	77	98	41
B 1164 B	5	19	5	15	18	54	2	15	1	78	175	36
LINE 20331	(FLIGHT	9)										
A 1339 S	0	2	0	11	26	32	1	10	1	32	707	0
LINE 20340	(FLIGHT	9)										
A 1061 S?	5	4	0	7	23	33	4	35	1	36	687	0
B 1080 D	28	15	16	12	29	18	25	17	1	51	765	0
LINE 20350	(FLIGHT	9)										
A 967 B	13	8	9	9	15	1	14	10	1	56	259	9
LINE 20360	(FLIGHT	9)										
A 895 S?	3	4	1	5	6	12	3	0	1	98	92	51
B 900 S?	0	3	0	2	2	17	1	0	1	176	1035	0
LINE 20380	(FLIGHT	9)										
A 738 B?	6	2	0	4	2	32	1	0	1	47	4252	0
LINE 20391	(FLIGHT	9)										
A 657 D	9	6	7	25	17	12	6	0	2	44	25	19
B 654 D	8	12	15	25	80	52	6	6	1	50	59	20
LINE 20400	(FLIGHT	9)										
A 329 D	22	28	30	56	144	101	8	0	2	28	38	4

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	QUAD PPM	COPLANAR 900 HZ REAL PPM	QUAD PPM	COPLANAR 7200 HZ REAL PPM	QUAD PPM	VERTICAL DIKE COND MHOS	DEPTH* M	HORIZONTAL SHEET COND MHOS	DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	DEPTH M
LINE 20400	(FLIGHT	9)										
B 327 D	16	1	13	22	53	101	22	24	1	41	55	14
C 304 S	1	3	0	7	10	25	2	24	1	54	794	0
D 294 S?	5	6	5	5	11	5	1	0	1	54	169	26
LINE 20410	(FLIGHT	8)										
A 633 B	0	4	5	32	33	134	3	10	1	13	413	0
B 630 D	0	27	35	57	85	135	3	0	1	34	100	7
C 614 B	0	12	9	17	41	59	1	0	1	81	80	44
LINE 20420	(FLIGHT	8)										
A 469 B?	0	17	7	29	88	64	1	0	1	33	139	1
B 472 D	4	6	25	23	53	42	9	11	2	35	45	9
C 475 E	2	16	34	36	100	17	5	0	2	39	42	13
D 491 B?	0	8	12	21	51	33	3	0	1	43	296	0
E 494 B?	0	9	12	21	51	33	2	0	1	54	234	9
LINE 20430	(FLIGHT	7)										
A 1519 D	12	15	43	38	72	36	12	14	2	43	44	18
B 1517 E	10	26	43	38	145	70	8	1	1	38	52	11
C 1505 B	10	15	11	14	67	80	6	5	1	42	127	6
D 1504 B	10	8	11	14	67	80	10	4	1	54	68	20
E 1502 D	7	19	6	17	12	79	3	15	1	75	153	35
F 1493 S?	3	3	5	7	11	7	6	0	1	57	136	10
LINE 20440	(FLIGHT	7)										
A 1390 D	24	6	71	41	79	102	41	18	2	35	26	14
B 1391 D	41	62	71	41	79	59	15	4	2	29	21	11
C 1392 B	3	35	17	16	29	161	3	0	2	30	40	8
D 1405 D	26	29	11	33	101	90	8	0	1	35	103	3
E 1405 D	26	29	8	33	101	90	8	0	1	39	157	4
F 1409 B?	6	9	8	11	17	27	5	12	1	53	141	14
G 1415 B?	14	9	0	9	12	26	9	31	1	61	418	15
H 1416 B?	14	9	4	9	12	26	11	30	1	66	799	1
I 1437 S	0	2	2	4	16	26	1	0	1	32	417	5
LINE 20450	(FLIGHT	7)										
A 1366 D	18	25	21	33	98	80	8	0	1	29	170	0
B 1362 D	19	28	2	31	102	115	5	4	1	34	131	3
C 1359 D	4	7	9	5	17	31	7	30	1	79	151	36
D 1357 D	7	13	3	12	39	27	3	0	1	63	179	19
E 1341 D	1	11	2	7	24	46	2	13	1	77	800	1

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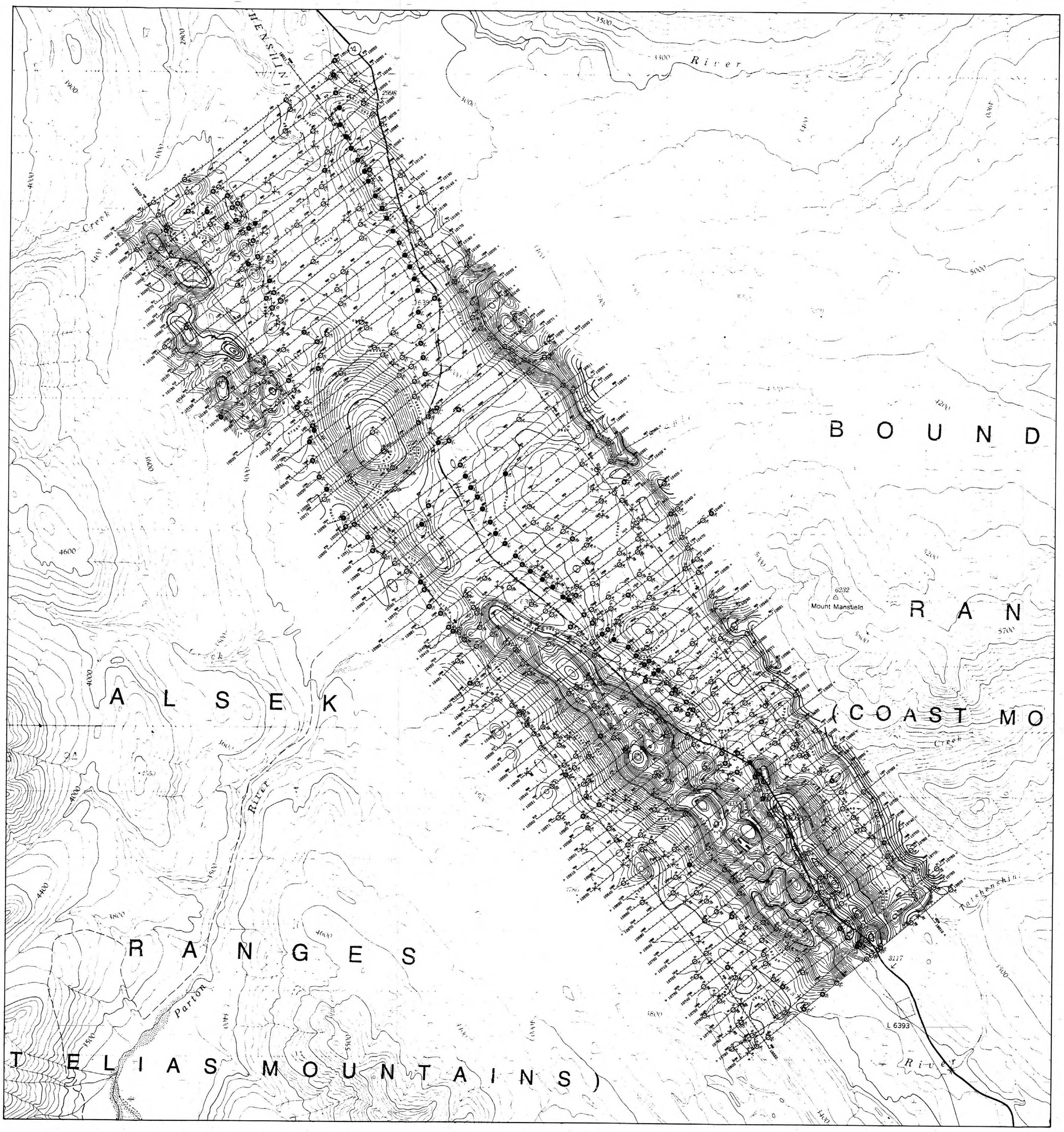
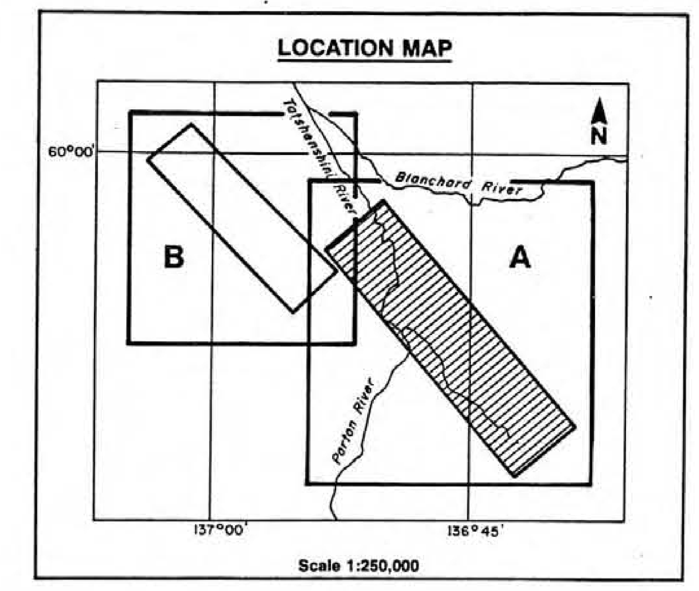
ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 7200 HZ REAL PPM	COPLANAR 7200 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 20450	(FLIGHT		7)									
F 1332 S	0	4	0	9	22	57	1	12	1	43	735	0
LINE 20460	(FLIGHT		7)									
A 1281 D	28	34	24	36	89	114	10	5	1	39	78	10
B 1285 D	25	22	12	9	50	26	14	12	1	52	66	21
C 1291 D	10	6	9	2	47	6	21	33	1	68	103	31
D 1306 S	1	5	4	30	57	141	1	7	1	30	319	0
LINE 20470	(FLIGHT		7)									
A 972 D	13	9	22	40	109	65	9	1	1	40	53	12
B 973 D	10	9	22	40	109	19	7	1	2	42	38	16
C 975 D	12	14	14	22	68	43	7	3	2	53	28	28
D 976 D	12	14	14	22	68	43	7	2	1	40	62	10
E 982 D	6	9	4	9	26	24	4	13	1	53	104	17
F 1001 S	0	20	8	46	139	181	1	0	1	22	169	0
G 1015 B?	0	10	13	21	64	61	2	1	1	42	182	6
LINE 20480	(FLIGHT		7)									
A 1074 D	32	33	43	66	107	75	11	0	2	37	37	13
B 1074 D	18	42	43	66	107	49	7	0	2	40	26	18
C 1071 D	9	12	33	21	60	72	13	14	1	48	97	15
D 1067 D	9	11	7	11	28	29	7	10	1	51	238	8
E 1045 B?	3	4	7	14	3	63	4	11	1	25	259	0
LINE 20490	(FLIGHT		7)									
A 1103 H	5	18	21	45	113	121	4	0	1	29	61	2
B 1119 D	7	13	18	23	64	33	6	0	1	54	133	14
C 1126 D	4	6	4	4	14	15	5	25	1	72	172	27
D 1130 B	3	7	5	15	26	25	2	0	1	56	121	16
E 1149 B?	19	35	27	66	193	121	6	0	2	31	31	10
LINE 20500	(FLIGHT		7)									
A 1239 D	12	24	21	47	137	181	5	7	1	31	148	2
B 1237 H	10	18	21	55	103	74	5	0	1	37	66	8
C 1219 D	11	13	23	41	73	78	7	0	1	36	92	4
D 1216 D	16	15	23	41	73	78	8	3	1	43	60	14
E 1212 D	8	14	8	14	37	46	5	6	1	46	257	4
F 1207 B	7	13	8	18	48	37	4	0	1	38	129	1
G 1190 B?	0	4	0	6	12	35	1	3	1	65	853	0
LINE 20510	(FLIGHT		8)									
A 286 B	16	28	25	54	169	158	6	0	1	20	140	0

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 20510 (FLIGHT 8)												
B 260 D	40	54	34	100	311	263	8	0	1	25	47	3
C 255 D	3	6	3	6	21	21	3	16	1	65	81	29
D 251 D	15	22	12	25	75	49	6	4	1	41	131	7
E 232 B?	5	10	14	24	35	22	4	0	1	36	65	7
LINE 20520 (FLIGHT 8)												
A 303 D	13	14	10	29	96	77	6	0	1	23	174	0
B 305 D	13	18	10	29	96	77	5	0	1	20	159	0
C 325 B	3	10	17	16	38	63	5	18	1	32	648	0
D 328 D	51	36	80	76	205	105	22	0	2	32	26	12
E 332 B	19	24	20	33	99	61	8	0	1	41	76	10
F 339 H?	5	12	9	45	71	196	2	1	1	26	158	0
G 349 B	4	10	1	14	52	49	2	8	1	20	528	0
LINE 20530 (FLIGHT 8)												
A 415 B	18	43	53	120	374	180	6	0	1	23	63	0
B 411 B?	0	2	0	5	9	31	1	0	1	18	4348	0
C 399 B	3	9	1	10	18	25	2	18	1	66	799	1
D 394 B	4	7	6	7	15	44	5	27	1	59	262	16
E 389 D	16	22	12	22	67	69	7	6	1	40	136	6
F 385 D	21	32	18	44	125	106	6	3	1	35	114	5
G 378 H?	2	12	3	22	74	95	1	0	1	14	383	0
H 367 B	7	15	2	35	116	96	2	1	1	12	434	0
LINE 29020 (FLIGHT 11)												
A 171 B	5	22	20	77	179	245	3	3	1	39	61	14
B 174 B	18	7	36	74	201	122	10	3	1	38	116	5
C 176 B	5	18	36	75	209	98	5	0	2	22	44	0
D 196 B?	2	9	16	38	96	86	3	0	1	37	69	8

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.





FLIGHT LINES WITH EM ANOMALIES

13010 13020

- Flight direction
- Flight line number
- Fiducials identified on profiles
- Dip direction
- EM anomaly (see EM legend)
- Conductor axis (on EM maps only)
- Arcs indicate the conductor has a thickness > 10 m
- Magnetic correlation in nT (gammas)

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✹	50—99
4	●	20—49
3	◉	10—19
2	○	5—9
1	○	< 5.
—	✕	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.

anomaly "name" — interpretive symbol

Depth is greater than	
·	15 m
:	30 m
⁝	45 m
⁞	60 m

Inphase and Quadrature of Coaxial Coil is greater than	
.	5 ppm
..	10 ppm
...	15 ppm
....	20 ppm

Interpretive symbol	Conductor ("model")
B.	Bedrock conductor
D.	Narrow bedrock conductor ("thin dike")
S.	Conductive cover ("horizontal thin sheet")
H.	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E.	Edge of broad conductor ("edge of half space")
L.	Culture, e.g. power line, building, fence

LEGEND

Isomagnetic lines (total field)

- 500 .... 500nT
- 100 .... 100nT
- 20 .... 20nT
- 10nT
- .... magnetic depression

Magnetic inclination within the survey area: 76°

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TATSHENSHINI RIVER

TOTAL FIELD MAGNETICS

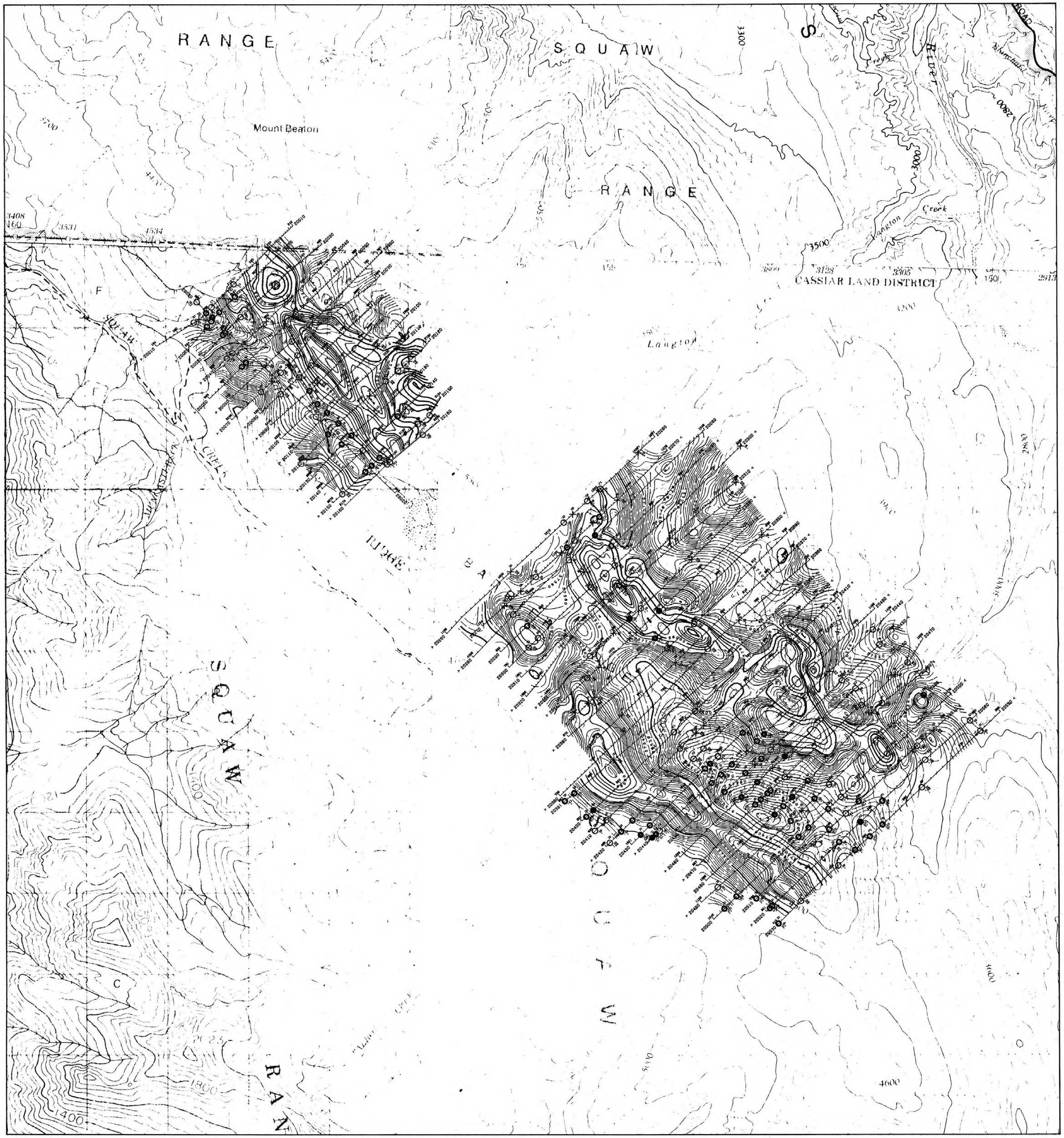
BY DIGHEM SURVEYS & PROCESSING INC.

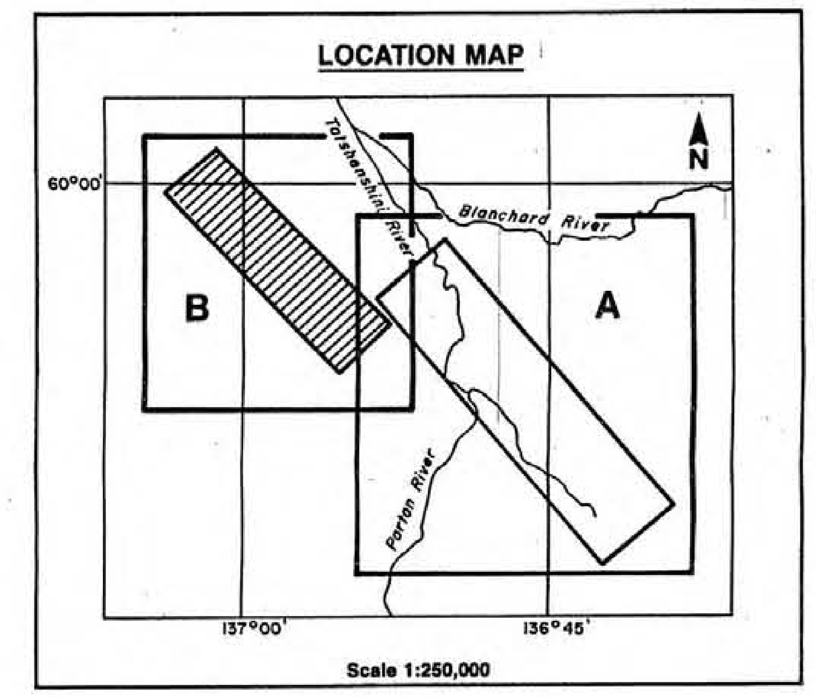
DIGHEM[III] SURVEY	GEOPHYSICIST: D.m.	DRAFTING By: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: A

Scale 1:20,000

0 — 2 Km

0 — 1 Mi





FLIGHT LINES WITH EM ANOMALIES

13010 13020

- Flight direction
- Flight line number
- Fiducials identified on profiles
- Dip direction
- EM anomaly (see EM legend)
- Conductor axis (on EM maps only)
- Arcs indicate the conductor has a thickness >10 m
- Magnetic correlation in nT (gammas)

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	◉	10—19
2	O	5— 9
1	○	< 5
—	X	indeterminate

DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.

anomaly "name" → C; H ← interpretive symbol

Depth is greater than	
·	15 m
ı	30 m
ǀ	45 m
ǀ	60 m

Inphase and Quadrature of Coaxial Coil is greater than	
·	5 ppm
··	10 ppm
···	15 ppm
····	20 ppm

Interpretive symbol	Conductor ("model")
B.	Bedrock conductor
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S.	Conductive cover ("horizontal thin sheet")
H.	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E.	Edge of broad conductor ("edge of half space")
L.	Culture, e.g. power line, building, fence

LEGEND

Isomagnetic lines (total field)

500	500nT
100	100nT
20	20nT
	10nT
	magnetic depression

Magnetic inclination within the survey area: 76°

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TATSHENSHINI RIVER

TOTAL FIELD MAGNETICS

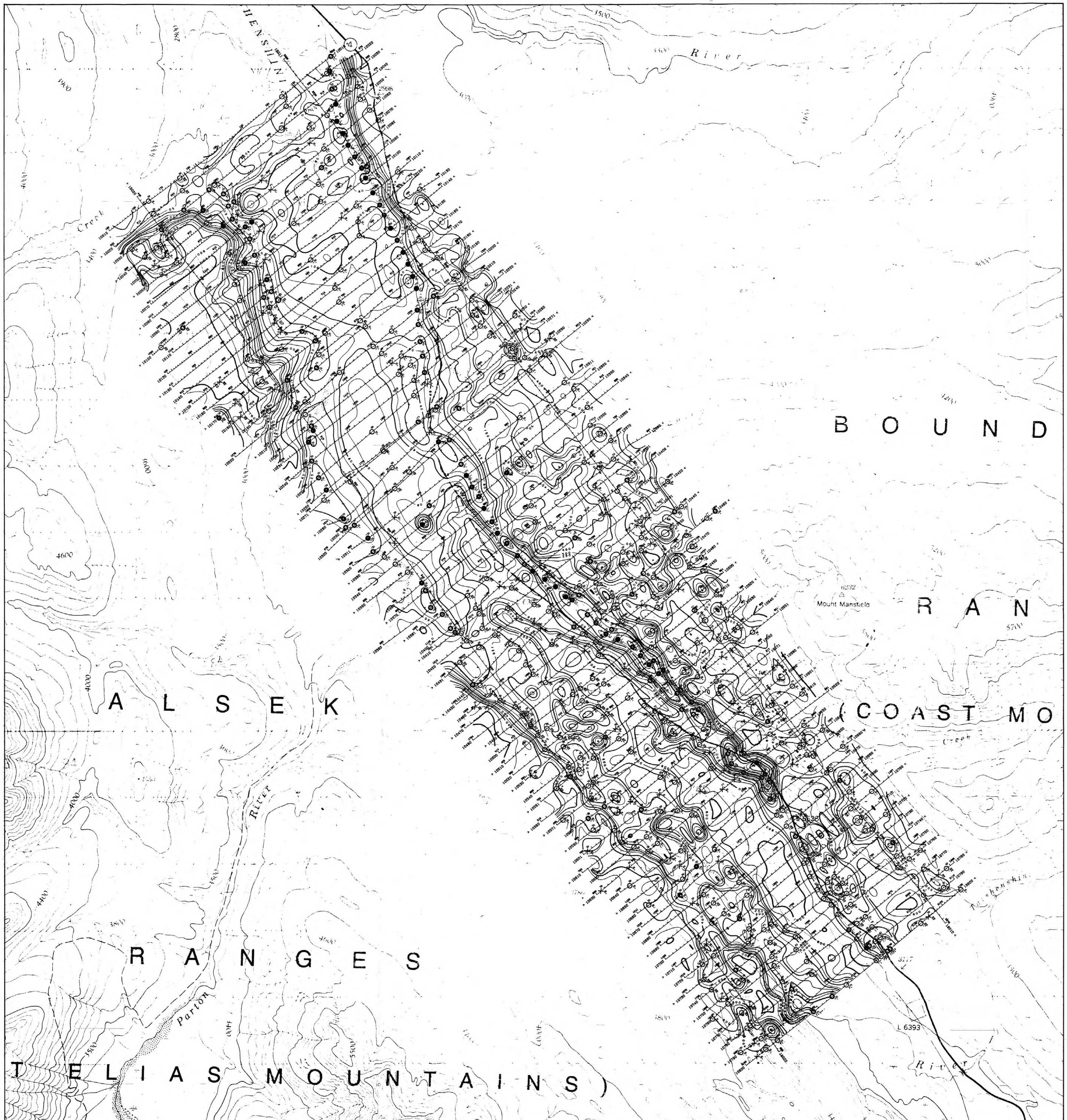
BY DIGHEM SURVEYS & PROCESSING INC.

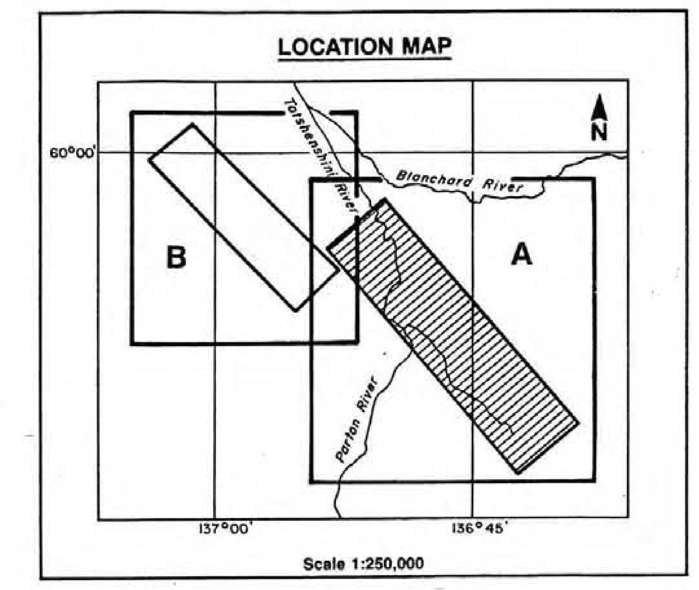
DIGHEM^III SURVEY	GEOPHYSICIST: D.m.	DRAFTING By: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: B

Scale 1:20,000

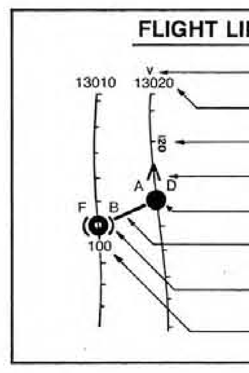
0 — 2 Km

0 — 1 Mi



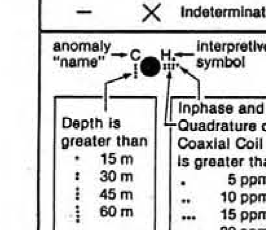


FLIGHT LINES WITH EM ANOMALIES



ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✹	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5.
—	X	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.

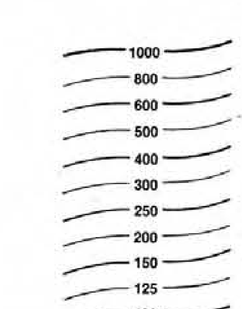


Depth is greater than	
·	15 m
:	30 m
⋮	45 m
⋮	60 m

Inphase and Quadrature of Coaxial Coil is greater than	
.	5 ppm
..	10 ppm
...	15 ppm
....	20 ppm

Interpretive symbol	Conductor ("model")
B.	Bedrock conductor
D.	Narrow bedrock conductor ("thin dike")
S.	Conductive cover ("horizontal thin sheet")
H.	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E.	Edge of broad conductor ("edge of half space")
L.	Culture, e.g. power line, building, fence

LEGEND



Contours in ohm-m at 10 intervals per decade

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TATSHENSHINI RIVER

RESISTIVITY (900 Hz)

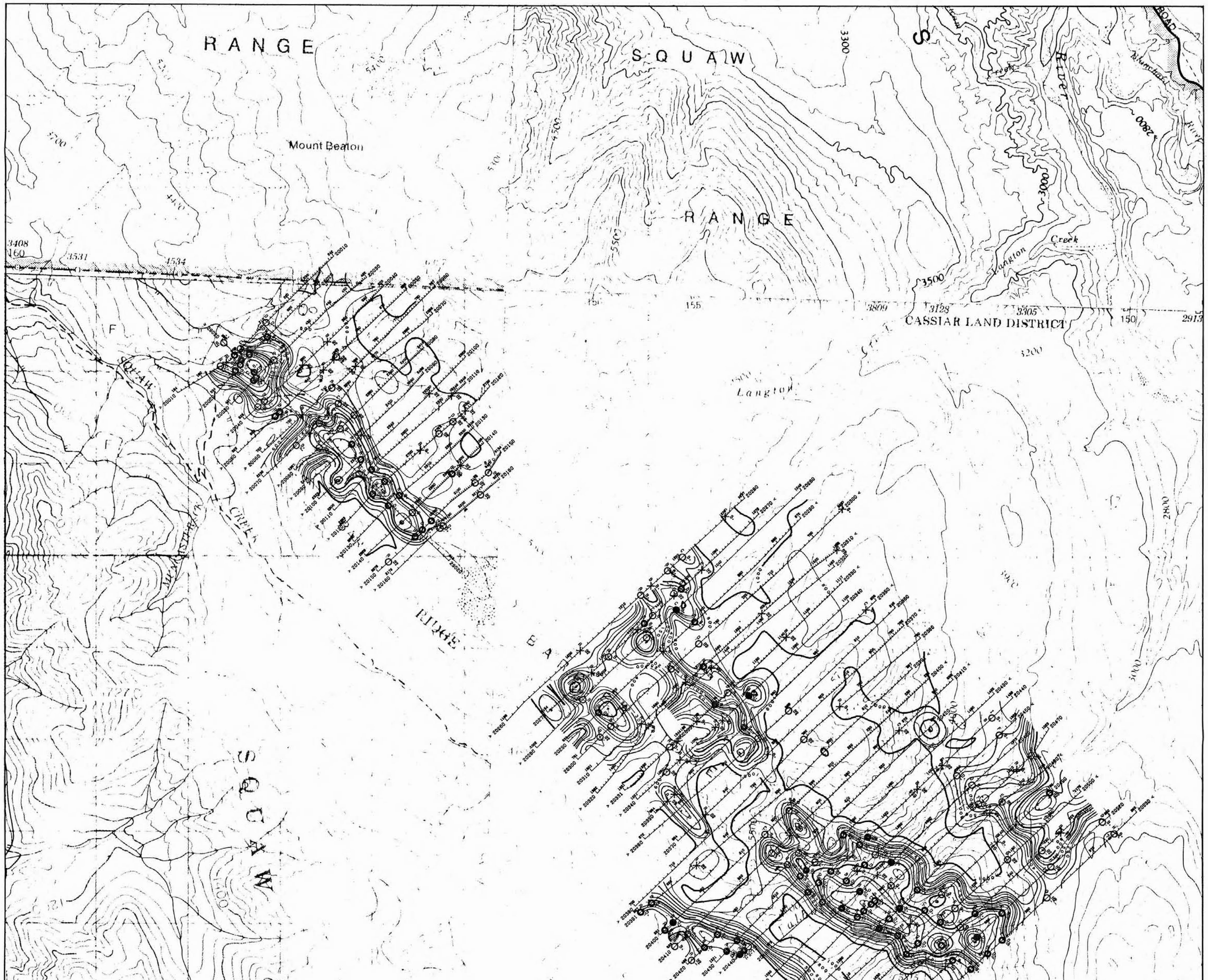
BY DIGHEM SURVEYS & PROCESSING INC.

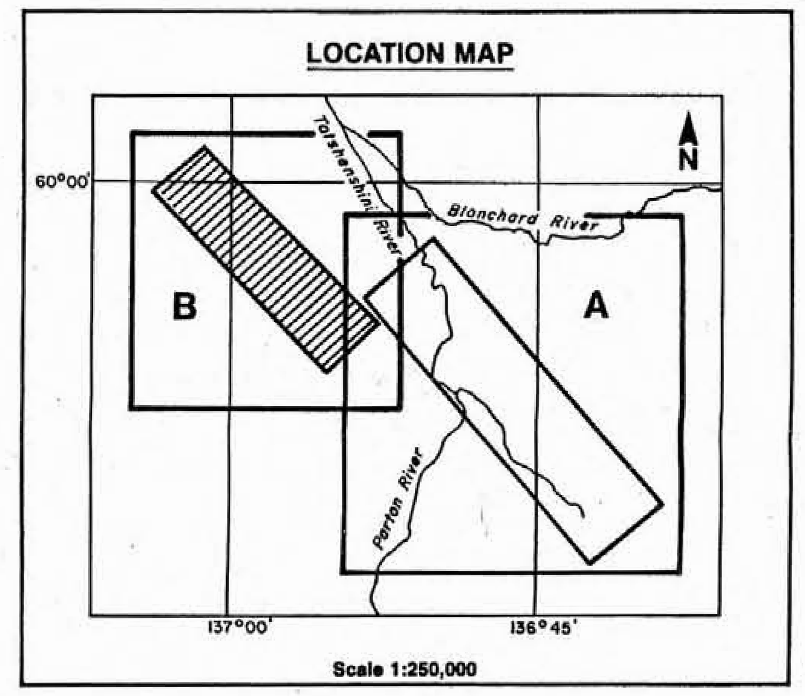
DIGHEM[III] SURVEY	GEOPHYSICIST: D.M.	DRAFTING By: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: A

Scale 1:20,000

0 — 2 Km

0 — 1 Mi





FLIGHT LINES WITH EM ANOMALIES

- 13010, 13020 — Flight line number
- Flight direction
- Fiducials identified on profiles
- Dip direction
- EM anomaly (see EM legend)
- Conductor axis (on EM maps only)
- Arcs indicate the conductor has a thickness >10 m
- Magnetic correlation in nT (gammas)

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✱	50—99
4	●	20—49
3	◉	10—19
2	O	5— 9
1	○	< 5
—	X	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.

anomaly "name" → C ● H. ← interpretive symbol

Depth is greater than
- · 15 m
- : 30 m
- ⋮ 45 m
- ⁞ 60 m

Inphase and Quadrature of Coaxial Coil is greater than
- · 5 ppm
- ·· 10 ppm
- ··· 15 ppm
- ···· 20 ppm

Interpretive symbol	Conductor ("model")
B.	Bedrock conductor
D.	Narrow bedrock conductor ("thin dike")
S.	Conductive cover ("horizontal thin sheet")
H.	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E.	Edge of broad conductor ("edge of half space")
L.	Culture, e.g. power line, building, fence

LEGEND

1000, 800, 600, 500, 400, 300, 250, 200, 150, 125, 100

Contours in ohm-m at 10 intervals per decade

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

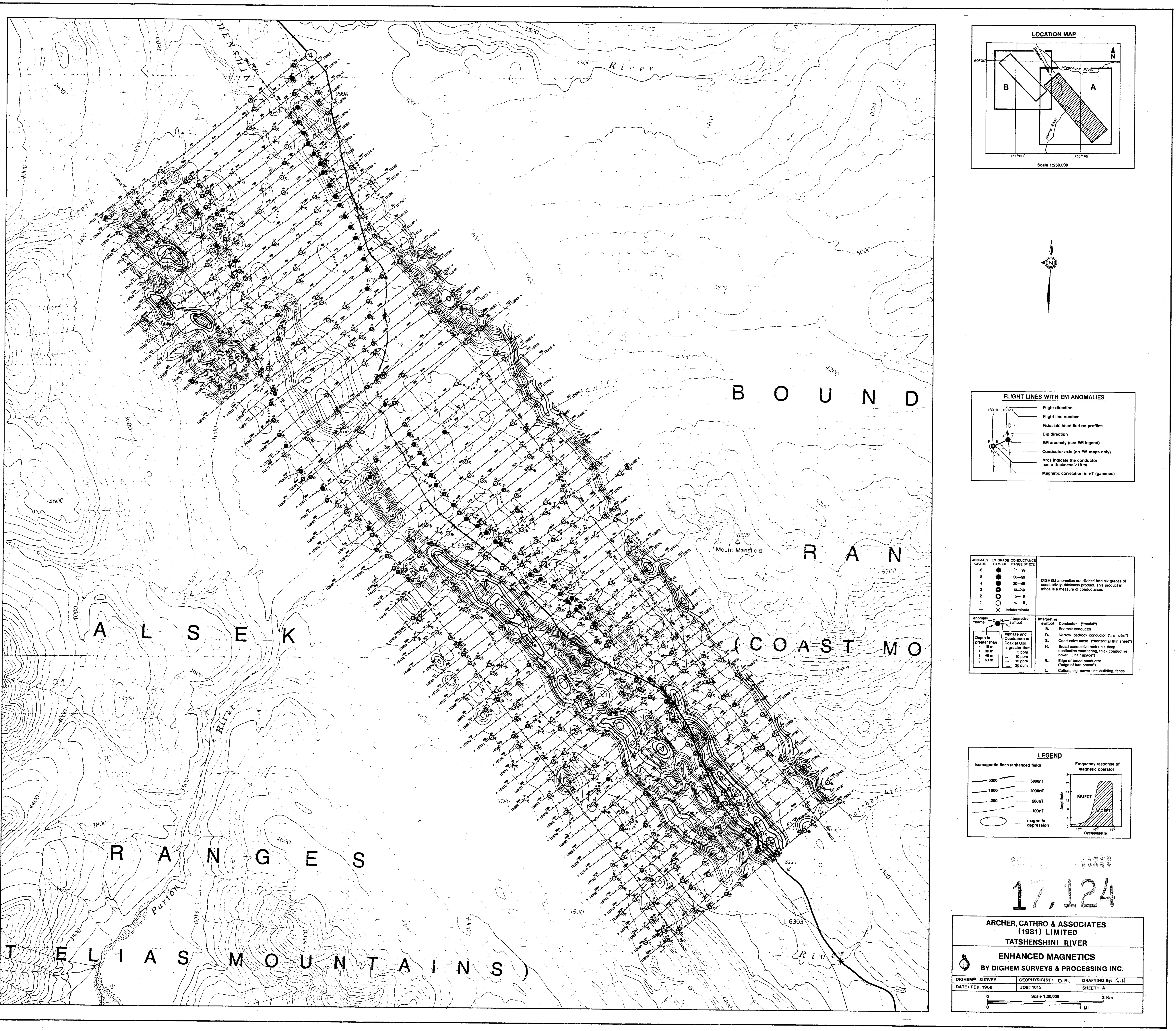
TATSHENSHINI RIVER

RESISTIVITY (900 Hz)

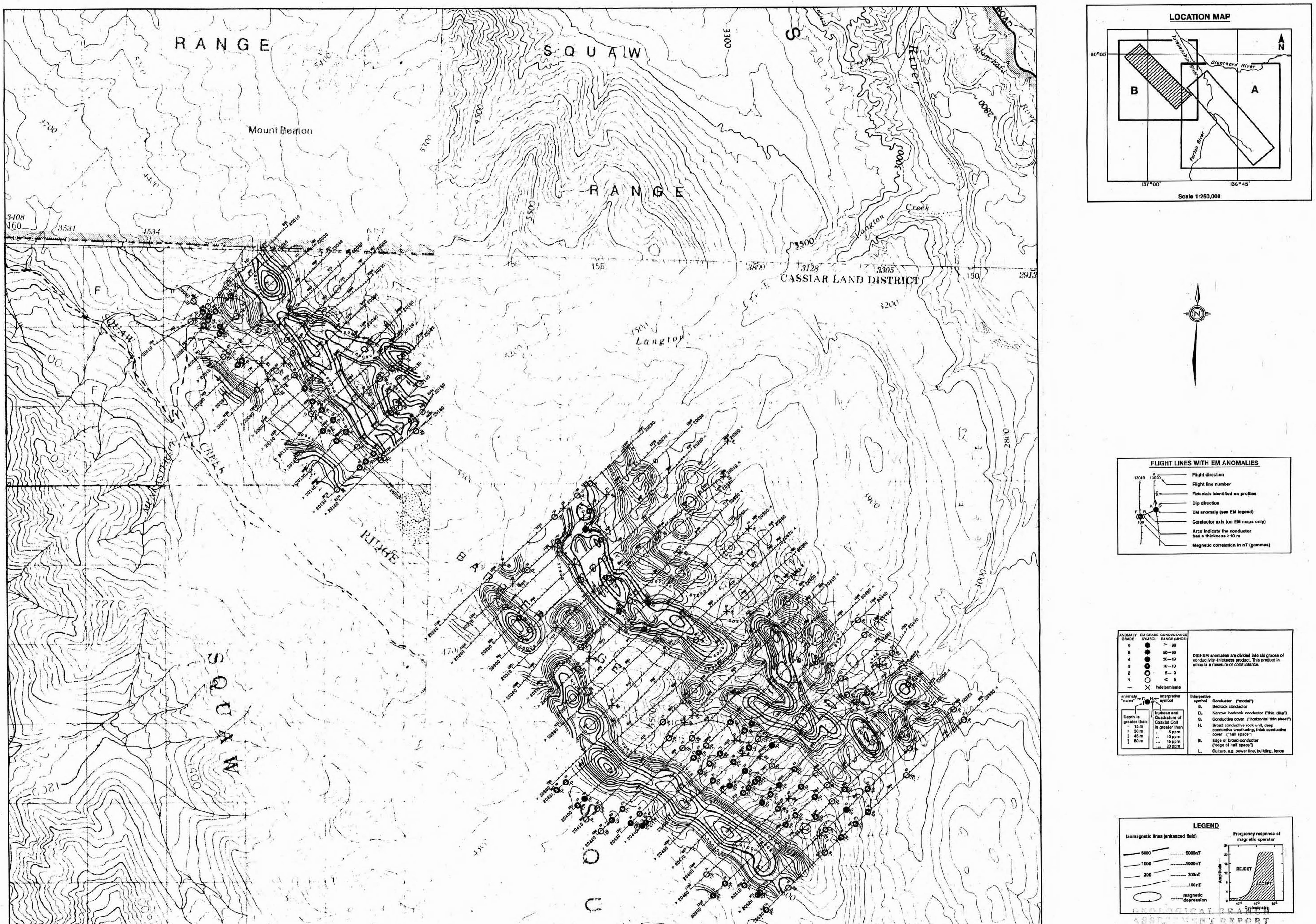
BY DIGHEM SURVEYS & PROCESSING INC.

DIGHEM[III] SURVEY	GEOPHYSICIST: D.M	DRAFTING BY: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: B

Scale 1:20,000 — 0 to 2 Km; 0 to 1 Mi



LOCATION MAP
60°00'
Tatshenshini River
Blanchard River
B
A
Parton River
137°00'
136°45'
Scale 1:250,000
N
BOUND
RAN
(COAST MO
ALSEK
RANGES
ELIAS MOUNTAINS)
River
Creek
Tatshenshini
Parton
Mount Mansfield
6232
3117
L 6393
FLIGHT LINES WITH EM ANOMALIES
13010
13020
Flight direction
Flight line number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness >10 m
Magnetic correlation in nT (gammas)
ANOMALY GRADE
EM GRADE SYMBOL
CONDUCTANCE RANGE (MHOS)
6 > 99
5 50—99
4 20—49
3 10—19
2 5—9
1 < 5
Indeterminate
DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.
anomaly "name"
Interpretive symbol
Depth is greater than
15 m
30 m
45 m
60 m
Inphase and Quadrature of Coaxial Coil is greater than
5 ppm
10 ppm
15 ppm
20 ppm
Interpretive symbol
Conductor ("model")
B. Bedrock conductor
D. Narrow bedrock conductor ("thin dike")
S. Conductive cover ("horizontal thin sheet")
H. Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E. Edge of broad conductor ("edge of half space")
L. Culture, e.g. power line, building, fence
LEGEND
Isomagnetic lines (enhanced field)
5000 5000nT
1000 1000nT
200 200nT
100nT
magnetic depression
Frequency response of magnetic operator
REJECT
ACCEPT
Amplitude
Cycles/metre
17,124
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
TATSHENSHINI RIVER
ENHANCED MAGNETICS
BY DIGHEM SURVEYS & PROCESSING INC.
DIGHEM III SURVEY
GEOPHYSICIST: D.P.
DRAFTING By: G.H.
DATE: FEB. 1988
JOB: 1015
SHEET: A
Scale 1:20,000
0
2 Km
1 Mi



ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TATSHENSHINI RIVER

ENHANCED MAGNETICS

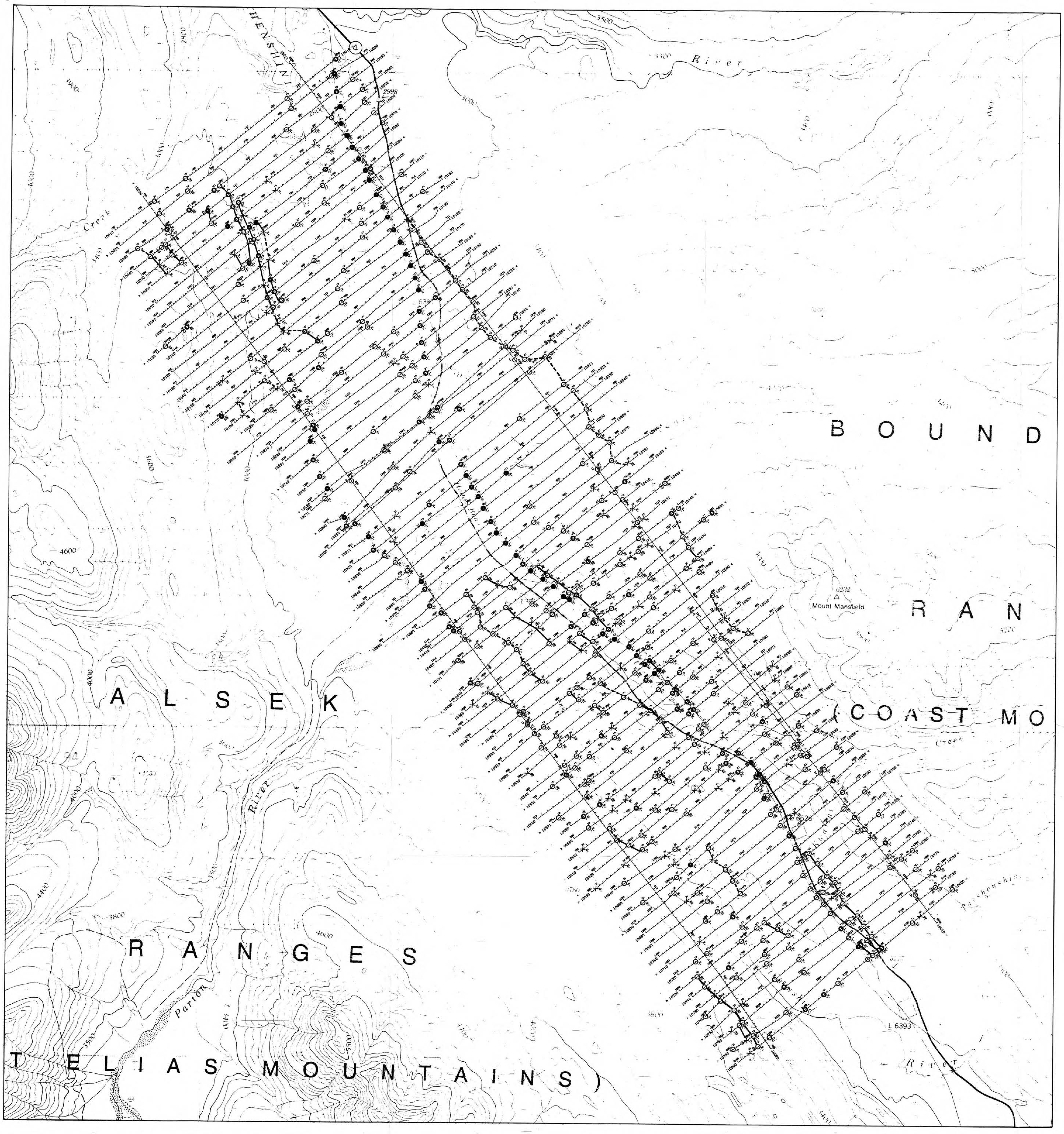
BY DIGHEM SURVEYS & PROCESSING INC.

DIGHEM III SURVEY	GEOPHYSICIST: D.M.	DRAFTING By: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: B

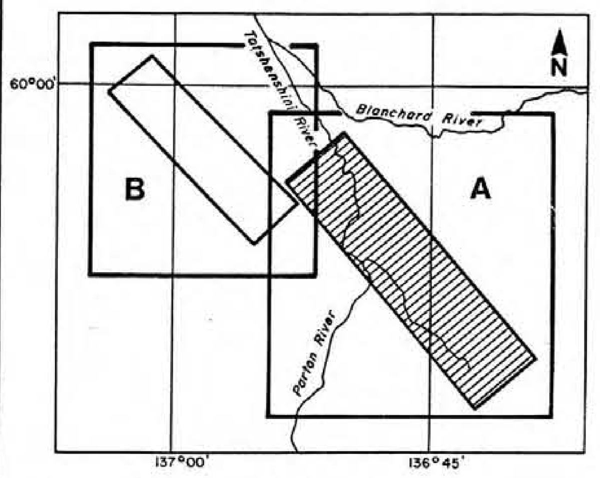
Scale 1:20,000

0 — 2 Km

0 — 1 Mi



LOCATION MAP



Scale 1:250,000

FLIGHT LINES WITH EM ANOMALIES

13010 13020

- Flight direction
- Flight line number
- Fiducials identified on profiles
- Dip direction
- EM anomaly (see EM legend)
- Conductor axis (on EM maps only)
- Arcs indicate the conductor has a thickness >10 m
- Magnetic correlation in nT (gammas)

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✸	50—99
4	●	20—49
3	◉	10—19
2	O	5— 9
1	○	< 5.
—	X	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.

anomaly "name" → C ● H ← interpretive symbol

Depth is greater than
- · 15 m
- : 30 m
- ⋮ 45 m
- ⁞ 60 m

Inphase and Quadrature of Coaxial Coil is greater than
- . 5 ppm
- .. 10 ppm
- ... 15 ppm
- .... 20 ppm

Interpretive symbol	Conductor ("model")
B.	Bedrock conductor
D.	Narrow bedrock conductor ("thin dike")
S.	Conductive cover ("horizontal thin sheet")
H.	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E.	Edge of broad conductor ("edge of half space")
L.	Culture, e.g. power line, building, fence

GEOLOGICAL BRANCH
ASSESSMENT REPORT

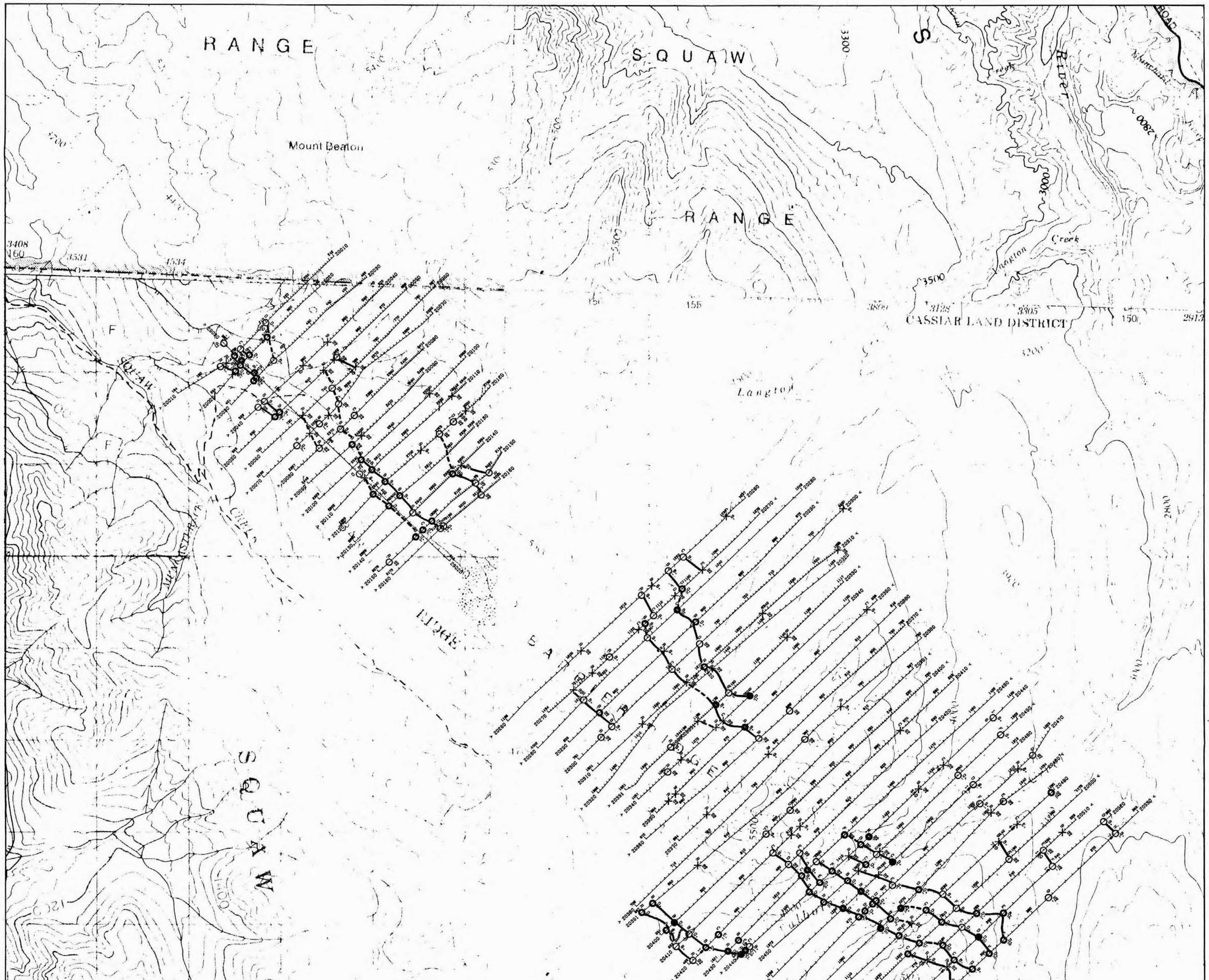
17,124

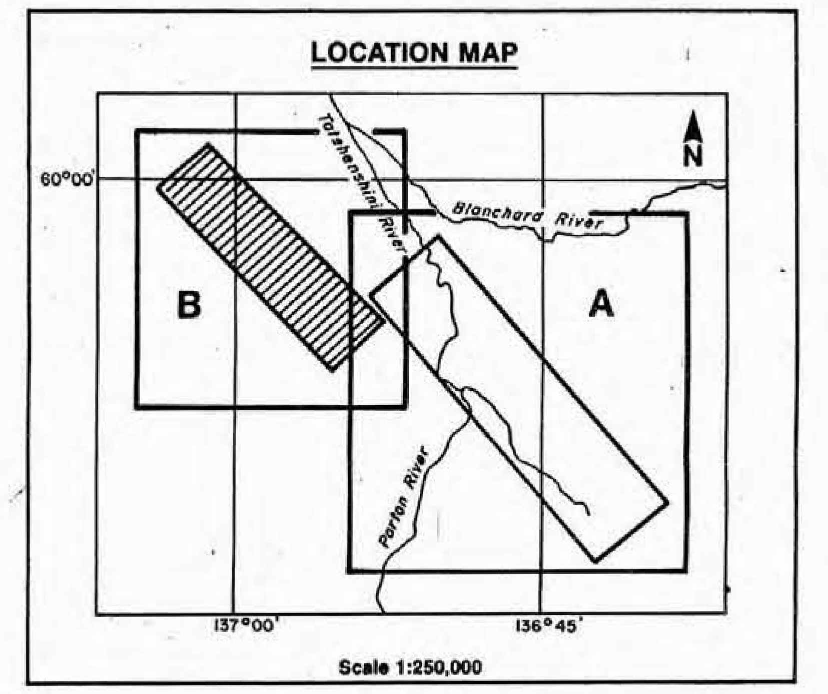
ARCHER, CATHRO & ASSOCIATES
(1981) LIMITED
TATSHENSHINI RIVER

ELECTROMAGNETIC ANOMALIES
BY DIGHEM SURVEYS & PROCESSING INC.

DIGHEM III SURVEY	GEOPHYSICIST: D.M.	DRAFTING By: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: A

Scale 1:20,000
0 — 2 Km
0 — 1 Mi





FLIGHT LINES WITH EM ANOMALIES

- Flight direction
- Flight line number
- Fiducials identified on profiles
- Dip direction
- EM anomaly (see EM legend)
- Conductor axis (on EM maps only)
- Arcs indicate the conductor has a thickness >10 m
- Magnetic correlation in nT (gammas)

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5
—	X	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity-thickness product. This product in mhos is a measure of conductance.

anomaly "name" — interpretive symbol

Depth is greater than: · 15 m; 30 m; 45 m; 60 m

Inphase and Quadrature of Coaxial Coil is greater than: . 5 ppm; .. 10 ppm; ... 15 ppm; .... 20 ppm

Interpretive symbol	Conductor ("model")
B.	Bedrock conductor
D.	Narrow bedrock conductor ("thin dike")
S.	Conductive cover ("horizontal thin sheet")
H.	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
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L.	Culture, e.g. power line, building, fence

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,124

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TATSHENSHINI RIVER

ELECTROMAGNETIC ANOMALIES

BY DIGHEM SURVEYS & PROCESSING INC.

DIGHEM III SURVEY	GEOPHYSICIST: D.M.	DRAFTING By: G.H.
DATE: FEB. 1988	JOB: 1015	SHEET: B

Scale 1:20,000

0 — 2 Km

0 — 1 MI