Report #1088

DIGHEM^{III} SURVEY

FOR

KRL RESOURCES CORP.

STEWART, B.C.

NTS 103P/14, 104A/3, 4

DIGHEM SURVEYS & PROCESSING INC.
MISSISSAUGA, ONTARIO
July 25, 1990

Ruth A. Pritchard
Geophysicist

A1088JUL.91R

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

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
AIRBORNE GEOPHYSICAL SURVEY	$76,000.00

AUTHOR(S) Dighem Surveys SIGNATURE(S)

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED July 23, Oct. 5, 1990 YEAR OF WORK 1990

PROPERTY NAME(S) MM, RUFUS, BIG MED, LITTLE MED

COMMODITIES PRESENT Gold, Silver, Lead, Zinc

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 57, 64, 153, 154, 156, 157, 180

MINING DIVISION Skeena NTS 104A/4W,4E,3W

LATITUDE 56°00' to 56°10' LONGITUDE 129°20' to 129°55'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

** LISTED ON ACCOMPANYING PAGE **

OWNER(S)

(1) KRL RESOURCES CORP. (2) DOLLIE JOHNSON

MAILING ADDRESS

1022 - 470 Granville Street
Vancouver, B.C. V6C 1V5

P. O. Box 806
Stewart, B.C. VOT 1WO

OPERATOR(S) (that is, Company paying for the work)

(1) KRL RESOURCES CORP. (2)

MAILING ADDRESS

1022 - 470 Granville Street
Vancouver, B.C. V6C 1V5

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

The properties are underlain by north trending moderate to shallow west dipping volcanic and sedimentary rocks of the Hazelton Group and Bowser Group. The MM property is intruded by bodies of granodiorite and monzonite and disrupted by north trending faults.

REFERENCES TO PREVIOUS WORK Assess. Repts. Nos. 11422, 17660, 18096
BCDM Annual Repts, 1909, 1916, 1917, 1919, 1920, 1922, 1924, 1925, 1926, 1927, 1928
GSC Mem. Nos. 159, 175

(over)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground			
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			$76,000.00
GEOCHEMICAL (number of samples analysed for ....)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)			
Road, local access (kilometres)			
Trench (metres)			
Underground (metres)			
		TOTAL COST	$76,000.00

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted .... Date	Rept. No.			Information Class

KRL RESOURCES CORP. PROPERTIES

1. **MM Property**

MM 100	1594	18
MM 2	3311	1
MM 3	3312	1
MM 5	3313	1
MM 1 Fraction	3314	1
MM 4 Fraction	3315	1
MM 6 Fraction	3316	1
Lake 16	3139	1
Lake 17	3140	1
Buck 709	3138	3
Buck	8034	12
Dunwell 4 Fraction	5871	1

2. **Rufus Property**

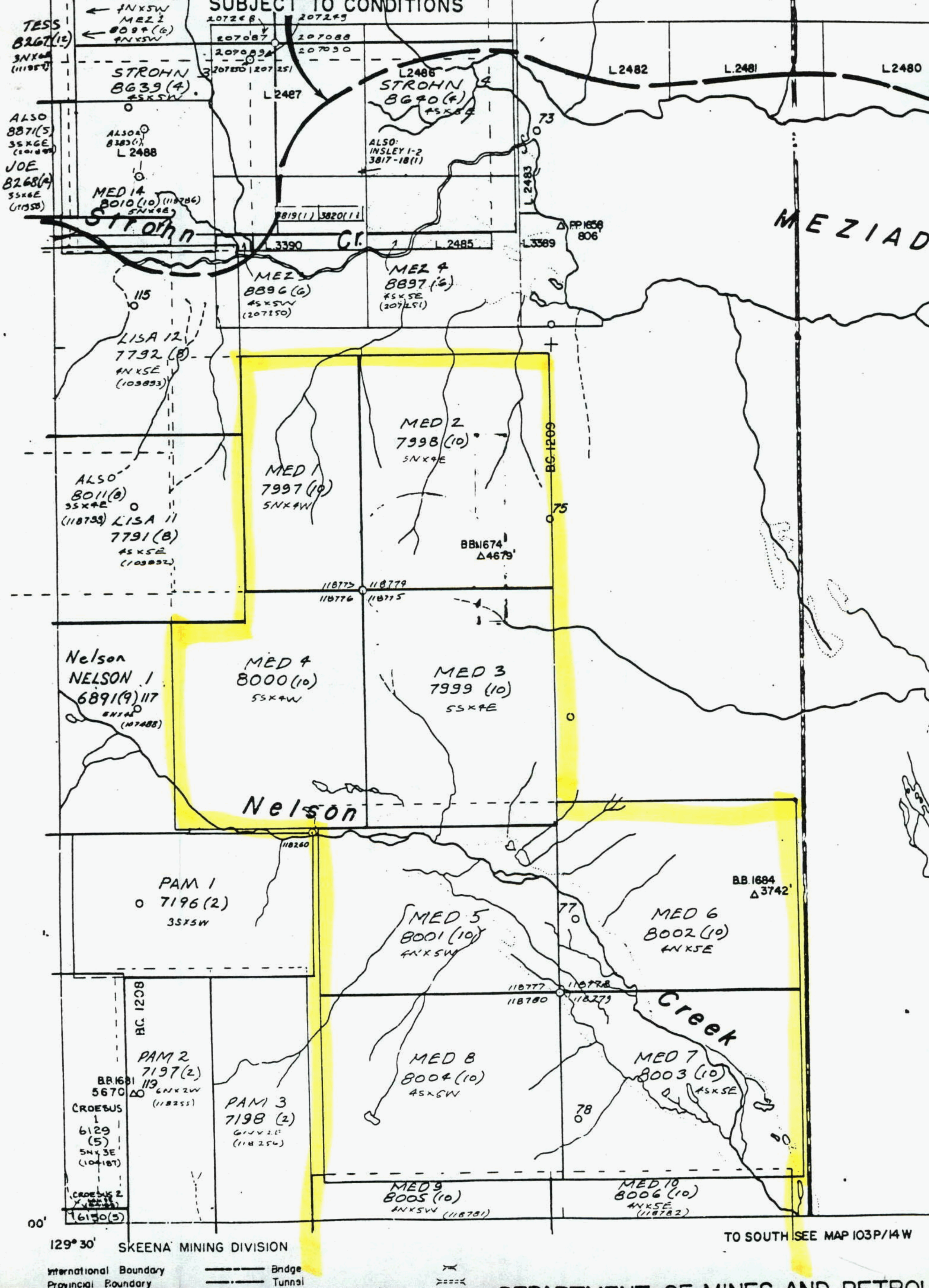
Rufus	2140	1
Rufus 1	525	1
Rufus 2	526	1
Rufus 3	2141	1
Rufus 4	527	1
Rufus 6	528	1
Baby Rufus Fraction	529	1
Wide Fraction	530	1
Silver Fraction	531	1
Long Fraction	532	1
Argyle Fraction	520	1
Argyle 1	534	1
Argyle 2	535	1
Argyle 3	536	1
Argyle 4	537	1
Argyle 5	538	1
Argyle 6	539	1
Duke Fraction	540	1
Comet 4	522	1
Veteran	523	1
Veteran 3	524	1

3. **Med Big Property**

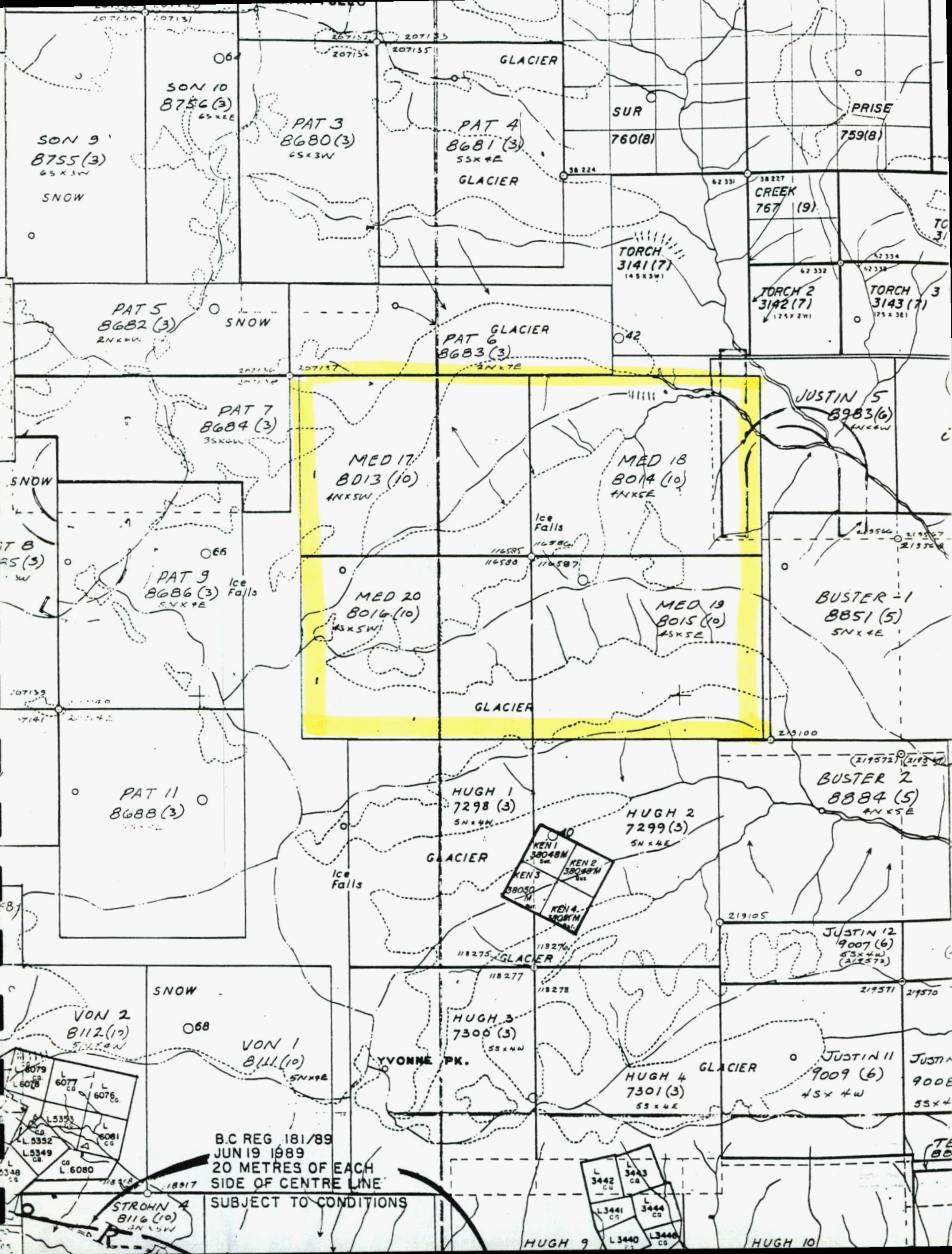
Med 1	7997	20
Med 2	7998	20
Med 3	7999	20
Med 4	8000	20
Med 5	8001	20
Med 6	8002	20
Med 7	8003	20
Med 8	8004	20
Med 9	8005	20
Med 10	8006	20
Med 11	8007	20
Med 12	8008	20

4. **Med Little Property**

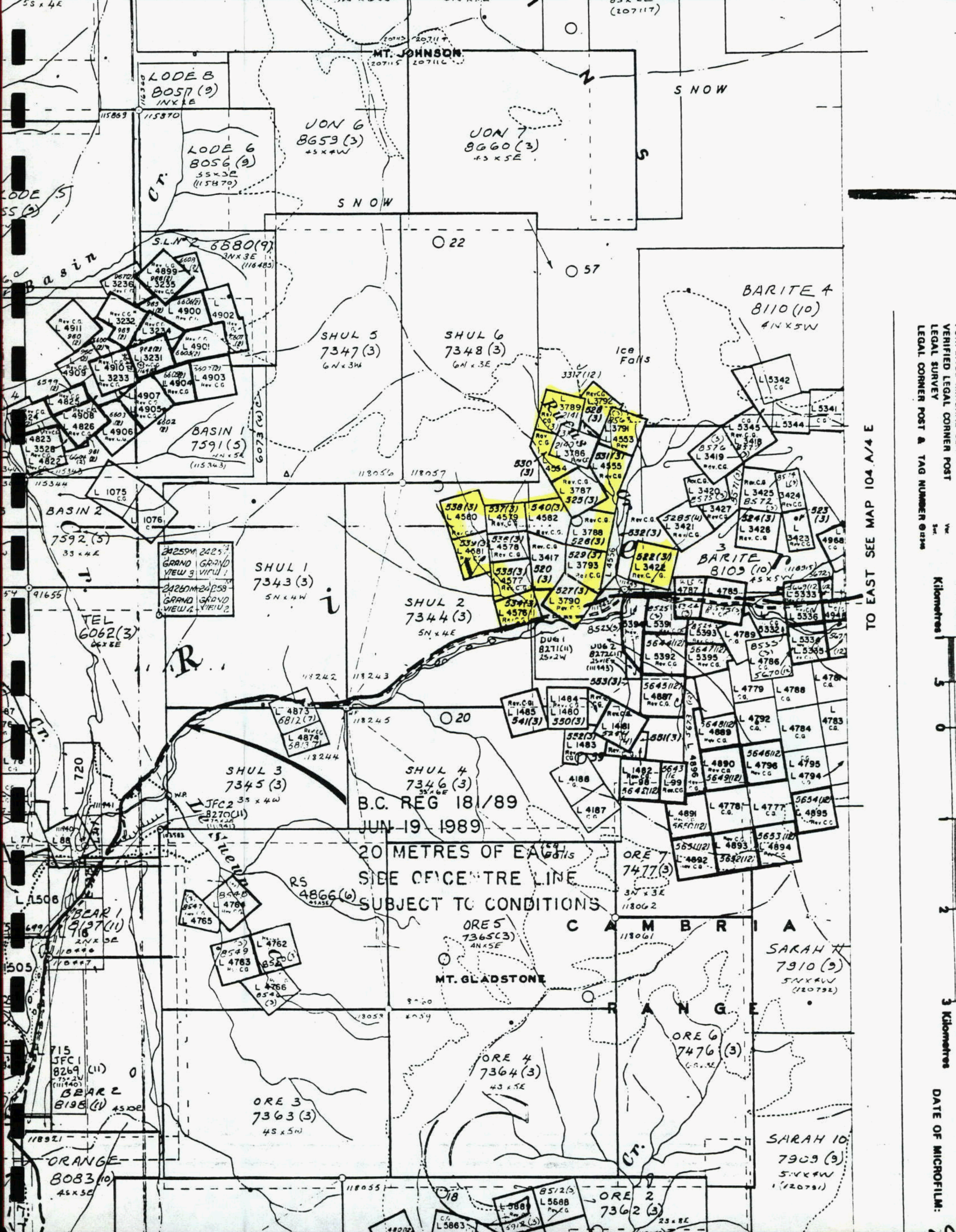
Med 17	8013	20
Med 18	8014	20
Med 19	8015	20
Med 20	8016	20



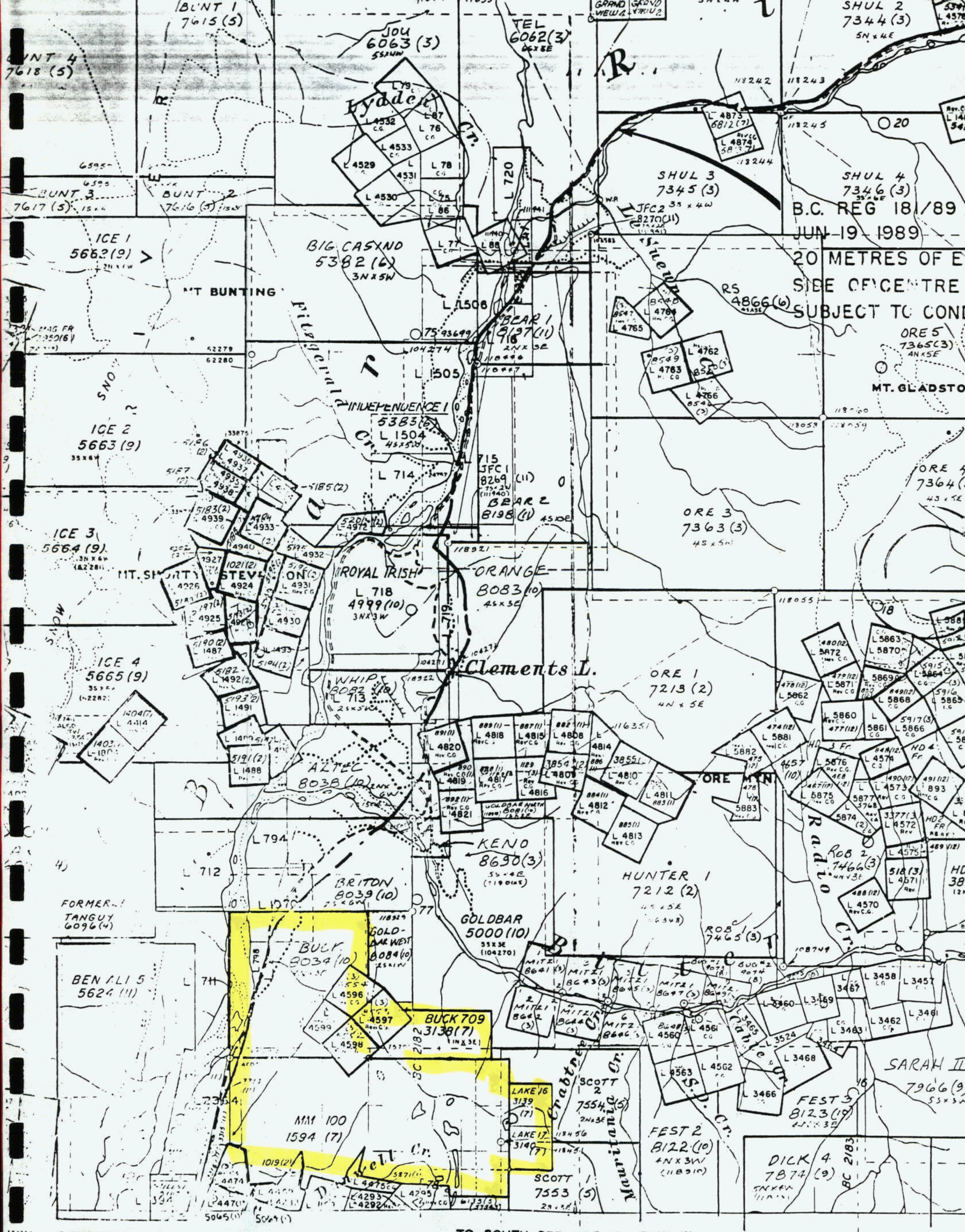
SUBJECT TO CONDITIONS
TESS 8267(12)
STROHN 3 8639(4) 4SX5W
STROHN 4 8640(4)
L 2487
L 2486
L 2482
L.2481
L 2480
ALSO 8871(5)
JOE 8268(4)
L 2488
ALSO: INSLEY 1-2 3817-18(1)
L.2483
MED 14 8010(10)
Strohn Cr.
L.3390
L.2485
L.3389
PP.1658 806
MEZIAD
MEZ 3 8896(6) 4SX5W (207150)
MEZ 4 8897(6) 4SX5E (207251)
LISA 12 7792(8) 4NX5E (103893)
MED 2 7998(10) 5NX4E
MED 1 7997(10) 5NX4W
B.C. 1209
75
73
115
ALSO 8011(8) 3SX4E (118739)
LISA 11 7791(8) 4SX5E (103892)
BB1674 4679'
118773 118779
118776 118775
Nelson NELSON 1 6891(9) 117 (107488)
MED 4 8000(10) 5SX4W
MED 3 7999 (10) 5SX4E
Nelson
118260
PAM 1 7196(2) 3SX5W
MED 5 8001(10) 4NX5W
77
B.B.1684 3742'
MED 6 8002(10) 4NX5E
118777 118778
118780 118779
Creek
B.C. 1208
PAM 2 7197(2) 119 6NX2W (118255)
B.B.1681 5670
CROESUS 1 6129 (5) 5NX3E (104187)
PAM 3 7198 (2)
MED 8 8004(10) 4SX6W
78
MED 7 8003 (10) 4SX5E
CROESUS 2
6150(5)
MED 9 8005 (10) 4NX5W (118781)
MED 10 8006 (10) 4NX5E (118782)
129° 30'
SKEENA MINING DIVISION
TO SOUTH SEE MAP 103P/14W
International Boundary
Provincial Boundary
Bridge
Tunnel
DEPARTMENT OF MINES AND PETRO



SON 10
8756 (3)
SON 9
8755 (3)
SNOW
PAT 3
8680 (3)
PAT 4
8681 (3)
GLACIER
SUR
760 (8)
PRISE
759 (8)
CREEK
767 (9)
TORCH
3141 (7)
TORCH 2
3142 (7)
TORCH 3
3143 (7)
PAT 5
8682 (3)
PAT 6
8683 (3)
PAT 7
8684 (3)
MED 17
8013 (10)
MED 18
8014 (10)
JUSTIN 5
8983 (6)
Ice Falls
PAT 9
8686 (3)
MED 20
8016 (10)
MED 19
8015 (10)
BUSTER 1
8851 (5)
PAT 11
8688 (3)
HUGH 1
7298 (3)
HUGH 2
7299 (3)
BUSTER 2
8884 (5)
KEN 1
KEN 2
KEN 3
KEN 4
JUSTIN 12
9007 (6)
VON 2
8112 (10)
HUGH 3
7300 (3)
VON 1
8111 (10)
YVONNE PK.
HUGH 4
7301 (3)
JUSTIN 11
9009 (6)
B.C REG 181/89
JUN 19 1989
20 METRES OF EACH
SIDE OF CENTRE LINE
SUBJECT TO CONDITIONS
STROHN 4
8116 (10)
HUGH 9
HUGH 10



MT. JOHNSON
SNOW
JON 6 8659 (3)
JON 7 8660 (3)
LODE 8 8057 (9)
LODE 6 8056 (9)
S.L.No2 6880(9)
BASIN 1 7591 (5)
BASIN 2 7592 (3)
SHUL 5 7347 (3)
SHUL 6 7348 (3)
SHUL 1 7343 (3)
SHUL 2 7344 (3)
SHUL 3 7345 (3)
SHUL 4 7346 (3)
TEL 6062(3)
Ice Falls
BARITE 4 8110 (10)
BARITE 3 8109 (10)
GRAND VIEW 3
GRAND VIEW 1
GRAND VIEW 4
GRAND VIEW 2
DUG 1 8271(11)
DUG 2 8272(11)
B.C. REG 181/89
JUN 19 1989
20 METRES OF EACH SIDE OF CENTRE LINE SUBJECT TO CONDITIONS
RS 4866(6)
ORE 7 7477(3)
ORE 5 7365(3)
ORE 6 7476 (3)
ORE 4 7364 (3)
ORE 3 7363 (3)
ORE 2 7362 (3)
MT. GLADSTONE
CAMBRIA
RANGE
SARAH 11 7910 (9)
SARAH 10 7909 (9)
BEAR 1 8197 (11)
BEAR 2 8198 (11)
JFC 1 8269 (11)
JFC 2 8270 (11)
ORANGE 8083 (10)
Basin
Cr.
TO EAST SEE MAP 104 A/4 E
Kilometres
DATE OF MICROFILM:
VERIFIED LEGAL CORNER POST
LEGAL SURVEY
LEGAL CORNER POST & TAG NUMBER



DIVISIO
TO SOUTH SEE MAP 103 P/13 W

SUMMARY

This report describes the logistics and results of a DIGHEM^{III} airborne geophysical survey carried out for KRL Resources Corp., over four properties in the Stewart area, B.C.

The purpose of the survey was to detect zones of conductive mineralization and to provide information that could be used to map the geology and structure of the survey areas. This was accomplished by using a DIGHEM^{III} multi-coil, multi-frequency electromagnetic system, supplemented by a high sensitivity Cesium magnetometer and a two-channel VLF receiver. The information from these sensors was processed to produce maps which display the magnetic and conductive properties of the survey areas. An electronic navigation system, operating in the UHF band, ensured accurate positioning of the geophysical data with respect to the base maps.

The EM survey detected several anomalies of possible bedrock origin. Most of the inferred bedrock conductors appear to warrant further investigation using appropriate surface exploration techniques. Areas of interest may be assigned priorities on the basis of supporting geophysical, geochemical and/or geological information. After initial investigations have been carried out, it may be necessary to

re-evaluate the remaining anomalies based on information acquired from the follow-up program.

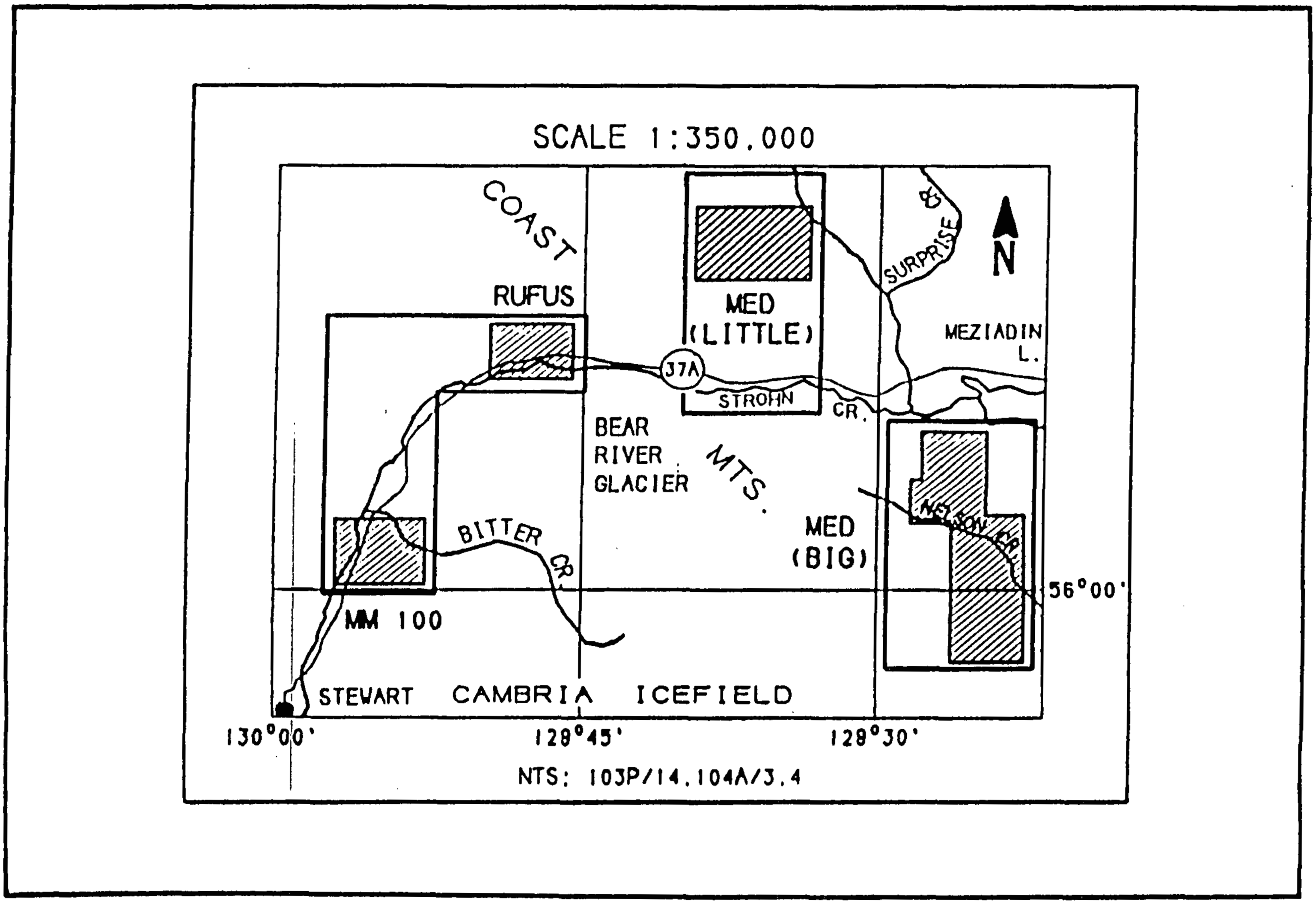


FIGURE 1

THE SURVEY AREAS

CONTENTS

INTRODUCTION

A DIGHEM^{III} electromagnetic/resistivity/magnetic/VLF survey was flown for KRL Resources Corp. from May 17 to May 26, 1990, over four survey blocks in the Stewart area, B.C. They are located on NTS map sheets 103P/14 and 104A/3, 4. (See Figure 1).

Survey coverage consisted of approximately 115 line-km in the MM100 area, 88 line-km in the Rufus area, 146 line-km in the Med (Little) area, and 376 line-km in the Med (Big) area. Traverse lines were flown in an azimuthal direction of 90°/270° for all areas. All survey blocks were flown with a line separation of 200 m. Tie lines were flown for all areas perpendicular to the traverse line direction.

The survey employed the DIGHEM^{III} electromagnetic system. Ancillary equipment consisted of a magnetometer, radar altimeter, video camera, analog and digital recorders, a VLF receiver and an electronic navigation system. Details on the survey equipment are given in Section 2.

The instrumentation was installed in an Aerospatiale AS350B turbine helicopter which was provided by Canadian Helicopters Corporation. The helicopter flew at an average airspeed of 64 km/hr with an EM bird height of approximately 30 m.

Section 2 also provides details on the data channels, their respective sensitivities, and the navigation/flight path recovery procedure. Noise levels of less than 2 ppm are generally maintained for wind speeds up to 35 km/h. Higher winds may cause the system to be grounded because excessive bird swinging produces difficulties in flying the helicopter. The swinging results from the 5 m^2 of area which is presented by the bird to broadside gusts.

SURVEY EQUIPMENT

This section provides a brief description of the geophysical instruments used to acquire the survey data:

Electromagnetic System

Model:	DIGHEM^{III}
Type:	Towed bird, symmetric dipole configuration operated at a nominal survey altitude of 30 metres. Coil separation is 8 metres for the 900 Hz and 7200 Hz coil pairs.
Coil orientations/frequencies:	coaxial / 900 Hz coplanar/ 900 Hz coplanar/7200 Hz
Channels recorded:	3 inphase channels 3 quadrature channels 1 monitor channel
Sensitivity:	0.2 ppm at 900 Hz 0.4 ppm at 7200 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.

Magnetometer

Model: Picodas PMAG 3340
Type: Optically pumped Cesium vapour
Sensitivity: 0.01 nT
Sample rate: 10 per second

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

Base Station Magnetometer

Model: Geometrics G826A
Type: Digital recording proton precession
Sensitivity: 0.5 nT
Sample rate: 0.2 per second

Both digital and analog recorders are operated in conjunction with the base station magnetometer to record 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.

VLF System

Manufacturer:	Herz Industries Ltd.	
Type:	Totem-2A	
Sensitivity:	0.1%	
Stations:	Seattle, Washington;	NLK, 24.8 kHz
	Cutler, Maine;	NAA, 24.0 kHz
	Annapolis, Maryland;	NSS, 21.4 kHz
	Lualualei, Hawaii;	NPM, 23.4 kHz

The VLF receiver measures the total field and vertical quadrature components of the secondary VLF field. Signals from two separate transmitters can be measured simultaneously. The VLF sensor is towed in a bird 10 m below the helicopter.

Radar Altimeter

Manufacturer:	Honeywell/Sperry
Type:	AA 220
Sensitivity:	1 ft

The radar altimeter measures the vertical distance between the helicopter and the ground. This information is used in the processing algorithm which determines conductor depth.

Digital Data Acquisition System/Analog Recorder

Manufacturer: RMS Instruments

Type: DGR33

Tape Deck: RMS TCR-12, 6400 bpi, tape cartridge recorder

The analog profiles were recorded on chart paper in the aircraft during the survey. Table 2-1 lists the geophysical data channels and the vertical scale of each profile.

The digital data were used to generate several computed parameters. Both measured and computed parameters were plotted as "digital profiles" during data processing. These parameters are shown in Table 2-2.

In Table 2-2, 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.

Table 2-1. The Analog Profiles

Channel Name	Parameter	Scale units/mm	Designation on digital profile
1X9I	coaxial inphase (900 Hz)	2.5 ppm	CXI (900 Hz)
1X9Q	coaxial quad (900 Hz)	2.5 ppm	CXQ (900 Hz)
2P9I	coplanar inphase (900 Hz)	2.5 ppm	CPI (900 Hz)
2P9Q	coplanar quad (900 Hz)	2.5 ppm	CPQ (900 Hz)
3P7I	coplanar inphase (7200 Hz)	5 ppm	CPI (7200 Hz)
3P7Q	coplanar quad (7200 Hz)	5 ppm	CPQ (7200 Hz)
ALTR	altimeter	3 m	ALT
VF1T	VLF-total: primary stn.	5%	
VF1Q	VLF-quad: primary stn.	5%	
VF2T	VLF-total: secondary stn.	5%	
VF2Q	VLF-quad: secondary stn.	5%	
CMGC	magnetics, coarse	20 nT	MAG
CMGF	magnetics, fine	2.0 nT	
CXSP	coaxial spherics monitor		CXS

Table 2-2. 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
CXS	ambient noise monitor (coaxial receiver)	
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	
DFI (900 Hz)	difference function inphase from CXI and CPI	2 ppm
DFQ (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

Tracking Camera

Type: Panasonic Video

Model: AG 2400

Fiducial numbers are recorded continuously and are displayed on the margin of each image. This procedure ensures accurate correlation of analog and digital data with respect to visible features on the ground.

Navigation System

Model: Del Norte 547

Type: UHF electronic positioning system

Sensitivity: 1 m

Sample rate: 0.5 per second

The navigation system uses ground based transponder stations which transmit distance information back to the helicopter. The ground stations are set up away from the survey area and are positioned such that the signals cross the survey block at an angle between 30° and 150°. After site selection, a traverse line is flown at right angles to a base line drawn through the transmitter sites to establish an arbitrary coordinate system for the survey area. The onboard Central Processing Unit takes any two transponder distances and determines the helicopter position relative to these two ground stations in cartesian coordinates.

The cartesian coordinates are transformed to UTM coordinates during data processing. This is accomplished by correlating a number of prominent topographical locations with the navigational data points. The use of numerous visual tie points serves two purposes: to accurately relate the navigation data to the map sheet and to minimize location errors which might result from distortions in uncontrolled photomosaic base maps.

PRODUCTS AND PROCESSING TECHNIQUES

The following products are available from the survey data. Those which are not part of the survey contract may be acquired later. Refer to Table 3-1 for a summary of the maps which accompany this report, some of which may be sent under separate cover. Most parameters can be displayed as contours, profiles, or in colour.

Base Maps

Base maps of the survey areas have been prepared from published topographic maps although photomosaics can also be used. Topographic maps provide an accurate, distortion-free base which facilitates correlation of the navigation data to the UTM grid. Photomosaics are useful for visual reference and for subsequent flight path recovery, but usually contain scale distortions. Orthophotos are ideal, but their cost and the time required to produce them, usually precludes their use as base maps.

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

Table 3-1 Products Available from the Survey

MAP	NO. OF SHEETS	ANOMALY MAP	PROFILES ON MAP	CONTOURS INK	CONTOURS COLOUR	SHADOW MAP
Electromagnetic Anomalies	3	20,000	N/A	N/A	N/A	N/A
Probable Bedrock Conductors	-	-	N/A	N/A	N/A	N/A
Resistivity (900 Hz)	-	N/A	-	-	-	-
Resistivity (7200 Hz)	3	N/A	-	20,000	20,000	-
EM Magnetite	-	N/A	-	-	-	-
Total Field Magnetics	3	N/A	-	20,000	20,000	-
Enhanced Magnetics	-	N/A	-	-	-	-
Vertical Gradient Magnetics	3	N/A	-	20,000	20,000	-
2nd Vertical Derivative Magnetics	-	N/A	-	-	-	-
Magnetic Susceptibility	-	N/A	-	-	-	-
Filtered Total Field VLF	3	N/A	-	20,000	20,000	-
EM Profiles (900 Hz)	-	N/A	-	N/A	N/A	N/A
EM Profiles (7200 Hz)	-	N/A	-	N/A	N/A	N/A
Overburden Thickness	-	N/A	-	-	-	N/A
Digital Profiles		Worksheet profiles				-
		Interpreted profiles				20,000

N/A Not available
*** Highly recommended due to its overall information content
** Recommended
* Qualified recommendation, as it may be useful in local areas
- No recommendation
20,000 Scale of delivered map, i.e, 1:20,000

geophysicist, in conjunction with the computer-generated digital profiles, to produce the final interpreted EM anomaly map. This map includes 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 gradient 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 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 maps of the following:

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

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

VLF

The VLF data are digitally filtered to remove long wavelengths such as those caused by variations in the transmitted field strength.

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 are produced as worksheets prior to interpretation, and can also be presented in the final corrected form after interpretation. The 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 EM anomaly identifier.

Contour, Colour and Shadow Map Displays

The geophysical data are interpolated onto a regular grid using a cubic spline technique. The resulting grid is suitable for generating contour maps of excellent quality.

Colour maps are produced by interpolating the grid down to the pixel size. The parameter is then incremented with respect to specific amplitude ranges to provide colour "contour" maps.

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 which 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.

SURVEY RESULTS

GENERAL DISCUSSION

The survey results are presented on separate map sheets for each parameter at a scale of 1:20,000. Tables 4-1, 4-2, 4-3 and 4-4 summarize the EM responses in the survey areas, with respect to conductance grade and interpretation.

The anomalies shown on the electromagnetic anomaly maps are based on a near-vertical, half plane model. This model best reflects "discrete" bedrock conductors. Wide bedrock conductors or flat-lying conductive units, whether from surficial or bedrock sources, may give rise to very 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, will be maximum coupled to the horizontal (coplanar) coil-pair and should be more evident on the resistivity parameter. Resistivity maps, therefore, may be more valuable than the electromagnetic anomaly maps, in areas where broad or flat-lying conductors are considered to be of importance. Contoured resistivity maps, based on the 7200 Hz coplanar data, are included with this report.

TABLE 4-1

EM ANOMALY STATISTICS

MM100 AREA

CONDUCTOR GRADE	CONDUCTANCE RANGE SIEMENS (MHOS)	NUMBER OF RESPONSES
7	> 100	0
6	50 - 100	0
5	20 - 50	0
4	10 - 20	4
3	5 - 10	5
2	1 - 5	11
1	< 1	4
*	INDETERMINATE	13
TOTAL		37

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
D	DISCRETE BEDROCK CONDUCTOR	2
B	DISCRETE BEDROCK CONDUCTOR	9
S	CONDUCTIVE COVER	17
H	ROCK UNIT OR THICK COVER	4
L	CULTURE	5
TOTAL		37

(SEE EM MAP LEGEND FOR EXPLANATIONS)

TABLE 4-2

EM ANOMALY STATISTICS

RUFUS AREA

CONDUCTOR GRADE	CONDUCTANCE RANGE SIEMENS (MHOS)	NUMBER OF RESPONSES
7	> 100	0
6	50 - 100	0
5	20 - 50	0
4	10 - 20	0
3	5 - 10	0
2	1 - 5	1
1	< 1	2
*	INDETERMINATE	3
TOTAL		6

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
B	DISCRETE BEDROCK CONDUCTOR	2
S	CONDUCTIVE COVER	4
TOTAL		6

(SEE EM MAP LEGEND FOR EXPLANATIONS)

TABLE 4-3

EM ANOMALY STATISTICS

MED (LITTLE) AREA

CONDUCTOR GRADE	CONDUCTANCE RANGE SIEMENS (MHOS)	NUMBER OF RESPONSES
7	> 100	0
6	50 - 100	0
5	20 - 50	0
4	10 - 20	5
3	5 - 10	16
2	1 - 5	29
1	< 1	3
*	INDETERMINATE	20
TOTAL		73

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
D	DISCRETE BEDROCK CONDUCTOR	16
B	DISCRETE BEDROCK CONDUCTOR	46
S	CONDUCTIVE COVER	5
H	ROCK UNIT OR THICK COVER	5
E	EDGE OF WIDE CONDUCTOR	1
TOTAL		73

(SEE EM MAP LEGEND FOR EXPLANATIONS)

TABLE 4-4

EM ANOMALY STATISTICS

MED (BIG) AREA

CONDUCTOR GRADE	CONDUCTANCE RANGE SIEMENS (MHOS)	NUMBER OF RESPONSES
7	> 100	0
6	50 - 100	0
5	20 - 50	0
4	10 - 20	4
3	5 - 10	3
2	1 - 5	46
1	< 1	42
*	INDETERMINATE	79
TOTAL		174

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
D	DISCRETE BEDROCK CONDUCTOR	10
B	DISCRETE BEDROCK CONDUCTOR	23
S	CONDUCTIVE COVER	134
H	ROCK UNIT OR THICK COVER	6
E	EDGE OF WIDE CONDUCTOR	1
TOTAL		174

(SEE EM MAP LEGEND FOR EXPLANATIONS)

Excellent resolution and discrimination of conductors was accomplished by using a fast sampling rate of 0.1 sec and by employing a common frequency (900 Hz) on two orthogonal coil-pairs (coaxial and coplanar). The resulting "difference channel" parameters often permit differentiation of bedrock and surficial conductors, even though they may exhibit similar conductance values.

Anomalies which occur near the ends of the survey lines (i.e., outside the survey areas), should be viewed with caution. Some of the weaker anomalies could be due to aerodynamic noise, i.e., bird bending, which is created by abnormal stresses to which the bird is subjected during the climb and turn of the aircraft between lines. Such aerodynamic noise is usually manifested by an anomaly on the coaxial inphase channel only, although severe stresses can affect the coplanar inphase channels as well.

The EM anomalies resulting from this survey appear to fall within three general categories.

The first type consists of discrete, well-defined anomalies which yield marked inflections on the difference channels. These anomalies are usually attributed to conductive sulphides or graphite and are generally given a

"B", "T" or "D" interpretive symbol, denoting a bedrock source.

The second class consists of moderately well-defined quadrature responses which coincide with low amplitude or poorly defined inphase responses. In these areas, where EM responses are evident primarily on the quadrature components, zones of poor conductivity are indicated. Where these responses are coincident with magnetic anomalies, it is possible that the inphase component amplitudes have been suppressed by the effects of magnetite. In areas where magnetite causes the inphase components to become negative, the apparent conductance and depth of EM anomalies may be unreliable.

Depending on the strength and definition of the quadrature responses, anomalies in this category may be given interpretive symbols varying from "B?" to "S?".

The third class of anomalies comprises broad responses which exhibit the characteristics of a half space and do not yield well-defined inflections on the difference channels. Anomalies in this category are usually given an "S" or "H" interpretive symbol. The lack of a difference channel response usually implies a broad or flat-lying conductive source such as overburden.

The effects of conductive overburden are evident over parts of the survey areas. Although the difference channels (DIFI and DIFQ) are extremely valuable in detecting bedrock conductors which are partially masked by conductive overburden, sharp undulations in the bedrock/overburden interface can yield anomalies in the difference channels which may be interpreted as possible bedrock conductors. Such anomalies usually fall into the "S?" or "B?" classification but may also be given an "E" interpretive symbol, denoting a resistivity contrast at the edge of a conductive unit.

It is recommended that an attempt be made to compile a suite of geophysical "signatures" over areas of interest. Anomaly characteristics are clearly defined on the computer-processed geophysical data profiles which are supplied as one of the survey products.

Even weak conductors may be of economic significance in the survey areas. A complete assessment and evaluation of the survey data should be carried out by one or more qualified professionals who have access to, and can provide a meaningful compilation of, all available geophysical, geological and geochemical data.

A Geometrics G826A proton precession magnetometer was operated at the survey base to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to permit subsequent removal of diurnal drift.

The background magnetic levels have been adjusted to the mean IGRF value for the survey areas. However, the IGRF gradient across the survey blocks has not been removed.

The total field magnetic data have been presented as contours on the base maps using a contour interval of 10 nT where gradients permit. The maps show the magnetic properties of the rock units underlying the survey areas.

MM100 AREA

Magnetics

The magnetic data suggest that this area is structurally complex. These structural complexities are evident on the contour map as variations in magnetic intensity, irregular patterns, and as offsets or changes in strike direction.

There is evidence on the magnetic contour map that suggests that the area has been subjected to moderately strong deformation and/or alteration.

The highest magnetic values are situated within a complex magnetic high which extends from fiducial 1528 on line 10090 to fiducial 1400 on line 10160.

The magnetic results, in conjunction with the other geophysical parameters, should provide valuable information which can be used to map the geology and structure of the survey area.

Resistivity

A resistivity map, which displays the conductive properties of the survey area, was produced from the 7200 Hz coplanar data.

In general, the resistivity patterns show limited agreement with magnetic trends.

A resistivity low, which trends north-northeast from the southwest corner of the survey block to fiducial 870 on line 10200, is coincident with the Bear River. Other resistivity lows also seem to be related to topographic features, although there are several resistivity features which seem to be associated with bedrock conductors.

VLF

The VLF method is quite sensitive to the angle of coupling between the conductor and the propogated EM field. Consequently, conductors which strike towards the VLF station will usually yield a stronger response than conductors which are nearly orthogonal to it.

The VLF parameter does not normally provide the same degree of resolution available from the EM data. Closely-spaced conductors, conductors of short strike length or conductors which are poorly coupled to the VLF field, may escape detection with this method. Erratic signals from the VLF transmitters can also give rise to strong, isolated anomalies which should be viewed with caution. The filtered total field VLF contours are presented on the base maps with a contour interval of one percent.

VLF results were obtained from the transmitting stations at Seattle, Washington (NLK - 24.8 kHz) and Lualaulei, Hawaii

(NPM - 23.4 kHz). The VLF map shows the contoured results of the filtered total field from Seattle for all survey lines.

In general, the VLF trends over this survey area are moderately strong and well defined. Most anomalies exhibit a general north/south strike.

CONDUCTORS IN THE MM100 AREA

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. The strike direction and length of the conductors are indicated when anomalies can be correlated from line to line. When studying the map sheets, consult the anomaly listings appended to this report.

Most of the interpreted anomalies in Block A are probably indicative of conductive surficial sources, although there are several moderately strong anomalies which may be possible bedrock responses.

Anomalies 10040A, 10040B, 10060A, 10071B and 10071C

These anomalies reflect moderately strong, possible bedrock sources. All are situated within a resistivity low. Anomalies 10040B, 10060A and 10071B show very weak magnetic correlation. These anomalies are all associated with a north-northeast/south-southwest trending VLF anomaly.

Anomalies 10060B, 10060C and 10071D

These anomalous responses are indicative of moderately weak, possible bedrock sources. They are situated within a resistivity low which is approximately outlined by the 100 ohm-metre contour. These anomalous responses exhibit no direct magnetic or VLF correlation.

RUFUS AREA

Magnetics

The magnetic contour patterns suggest that this area is structurally complex. Truncations, and offsets in the magnetic contour patterns give many features a complex, segmented appearance.

The digital profiles show that several of the more magnetic units in this survey block contain magnetite.

Resistivity

A resistivity map, which displays the conductive properties of the survey area, has been produced from the 7200 Hz coplanar data. This survey block is generally resistive, exhibiting resistivity values of greater than 5000 ohm-metres over most of the survey block. One area of moderate conductivity, which extends east/west over lines 20020 through 20040, is coincident with a river valley. There do not appear to be any bedrock conductors within this survey block.

VLF

VLF results were obtained from transmitting stations at Seattle, Washington (NLK - 24.8 kHz), Lualualei, Hawaii (NPM - 23.4 kHz), and Annapolis, Maryland (NSS - 21.4 kHz). The VLF map displays the contoured results of the filtered total field data from Seattle for all survey lines.

In general, the VLF trends in this survey area are moderately strong and well-defined. Most trends seem to strike approximately north-northwest/south-southeast.

CONDUCTORS IN THE RUFUS AREA

Few anomalies of either surficial or bedrock origin are located within this survey block.

Anomaly 20110A

This single-line anomaly reflects a weak, possible bedrock source, although the conductance value may be erroneous because of the presence of magnetite. This anomaly is situated on the west flank of a highly magnetic, magnetite-rich zone. It exhibits a moderately strong magnetic correlation, which suggests it is coincident with a local magnetic peak.

Anomaly 20120A

This single line anomaly also reflects a weak, possible bedrock source. It is situated on the east flank of a magnetite-rich feature. It is associated with a weak resistivity low, approximately defined by the 5000 ohm-metre contour.

MED (LITTLE) AREA

Magnetics

The magnetic data suggest that this area is structurally complex. These structural complexities can be seen as variations in magnetic intensity, or as offsets or changes in strike direction. Several apparent linear structural features, which trend northeast/southwest are evident as discontinuities in the magnetic contour patterns.

The highest magnetic values in this block are associated with a thin magnetic high which trends northeast from the west end of line 30070 to fiducial 1100 on line 30120. This magnetic trend seems to transect the local magnetic strike.

Most of the bedrock anomalies interpreted from the survey data within this block are situated in the eastern half of the area. They are associated with relatively non-magnetic features.

Resistivity

A resistivity map, which displays the conductive properties of the survey block, was produced from the 7200 Hz coplanar data. The resistivity patterns show little agreement with magnetic trends, although several structural features, inferred from the magnetic data, are evident as discontinuities in the resistivity contours.

A highly conductive zone is situated in the eastern half of the survey block. The limit of this zone is approximately defined by the 1000 ohm-metre contour. This zone displays resistivity values of lower than 50 ohm-metres. Most of the bedrock conductors interpreted from the electromagnetic data are situated within this conductive zone.

VLF

VLF results were obtained from the transmitting stations at Seattle, Washington (NLK - 24.8 kHz), Cutler, Maine (NAA-24.0 kHz) and Annapolis, Maryland (NSS - 21.4 kHz). The VLF map displays the contoured results of the filtered total field data from Seattle except for lines 30110 through 30210 which used Annapolis. In general, VLF trends in the survey area are moderately weak and poorly defined. Most trends appear to strike north-northwest/south-southeast to north/south. Most trends are of limited strike length and do not extend over more than 2 or 3 lines.

CONDUCTORS IN THE MED (LITTLE) AREA

Most of the bedrock conductors defined by the survey in this area are located in the eastern half of the block. They are located east of a resistivity contrast extending north from fiducial 692 on line 30010 to fiducial 2878 on line 30210. This contrast is approximately defined by the 1000 ohm-metre contour on the 7200 Hz resistivity map.

Within the zone located to the east of this resistivity contrast, several highly conductive zones contain numerous bedrock conductors.

Zone A

This zone is situated near the eastern ends of lines 30150 through 30210. The approximate limit of this zone is defined by the 100 ohm-metre contour on the 7200 Hz resistivity map.

This zone contains several moderately weak conductors of limited strike length, and several single line anomalies. No direct magnetic correlation is exhibited by any of the anomalies in this zone. A possible structural linear feature trends northeast/southwest through this zone.

Conductors 30150A-30170A and 30150B-30160B

These conductors are situated west of Zone A. Both reflect moderately weak, possible bedrock sources of limited strike length. Conductor 30150A-30170A possibly reflects a thin source.

Both trends give rise to moderately well-defined resistivity lows. Neither trend exhibits magnetic correlation.

Zone B

The approximate limit of this zone is defined by the 250 ohm-metre contour. It contains several weak, probable bedrock conductors, and weak single line responses. There is no direct magnetic correlation with this zone, as it appears to be associated with an area of low gradient magnetics.

MED (BIG) AREA

Magnetics

The magnetic data for this area are characterized by broad, low gradient features.

A thin, moderately magnetic linear feature trends northwest from the east end of line 40210 to fiducial 4660 on line 40410. This trend displays magnetic values approximately 60 nT above background.

This magnetic feature is coincident with a resistivity low.

Resistivity

A resistivity map, which portrays the conductive properties of the survey area, was produced from the 7200 Hz coplanar data.

In general, the resistivity patterns show little agreement with the magnetic data. One resistivity low, however, extending northwest from the east end of line 40220 to fiducial 4344 on line 40400, is coincident with a thin magnetic high. This resistivity low may be adversely affected by conductive surficial material as it coincides with an area of low topography associated with Nelson Creek.

Other resistivity zones also seem to be associated with topographic features. Several resistivity highs are coincident with topographic peaks.

Several of the bedrock anomalies interpreted from the survey data give rise to moderately well-defined resistivity lows.

VLF

VLF results for this survey area were obtained from the transmitting stations at Seattle, Washington (NLK - 24.8 kHz) and Annapolis, Maryland (NSS - 21.4 kHz). The VLF map shows the contoured results of the filtered total field from Seattle for all survey lines.

In general, the VLF trends in the survey area are moderately strong and well-defined. Most trends strike approximately north/south to north-northwest/south-southeast.

A weak VLF trend extending northwest from the east end of line 40210 to fiducial 4346 on line 40400 is coincident with a resistivity low and a linear magnetic high. This trend may be due to a combination of surficial and bedrock sources, as it is coincident with a creek.

CONDUCTORS IN THE MED (BIG) AREA

Few bedrock conductors have been interpreted from the survey data for this area. All possible bedrock responses are situated at the western ends of line 40410 through 40500.

Conductors 40450A-40470B, 40460A-40490C, 40480A-40490A and 40490E-40500A

These conductors are all situated within a resistivity low whose approximate limit is defined by the 200 ohm-metre contour on the 7200 Hz resistivity map.

Conductor 40450A-40470B reflects a north/south trending, thin bedrock source. This trend is indicative of a moderately weak source. It is coincident with a weak VLF anomaly. There is no direct magnetic correlation with this trend.

Conductors 40460A-40490C, 40480A-40490A and 40490E-40500A all strike approximately northwest/southeast.

Conductor 40480A-40490A reflects a strong, thin bedrock source, whereas conductors 40460A-40490C and 40490E-40500A are indicative of weak bedrock sources.

No magnetic correlation is apparent for any of these conductors, although they appear to be related to a magnetic low.

Conductor 40420B-40440B, and Anomalies 40440C, 40470C and 40470D

These bedrock features are situated within a resistivity low whose limit is approximately defined by the 150 ohm-metre contour.

Conductor 40420B-40440B reflects a weak, thin, possible bedrock source of limited strike length. It trends northwest/southeast.

Anomalies 40440C and 40470C reflect weak, possible bedrock responses, whereas anomaly 40470D reflects a thin bedrock source which exhibits a possible dip to the east. These anomalies are also associated with a magnetic low.

BACKGROUND INFORMATION

This section provides background information on parameters which are available from the survey data. Those which have not been supplied as survey products may be generated later from raw data on the 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 siemens (mhos) of a vertical sheet model. This is done regardless of the interpreted geometric shape of the conductor. This is not an unreasonable procedure, because the computed conductance increases as the electrical quality of the conductor increases, regardless of its true shape. DIGHEM anomalies

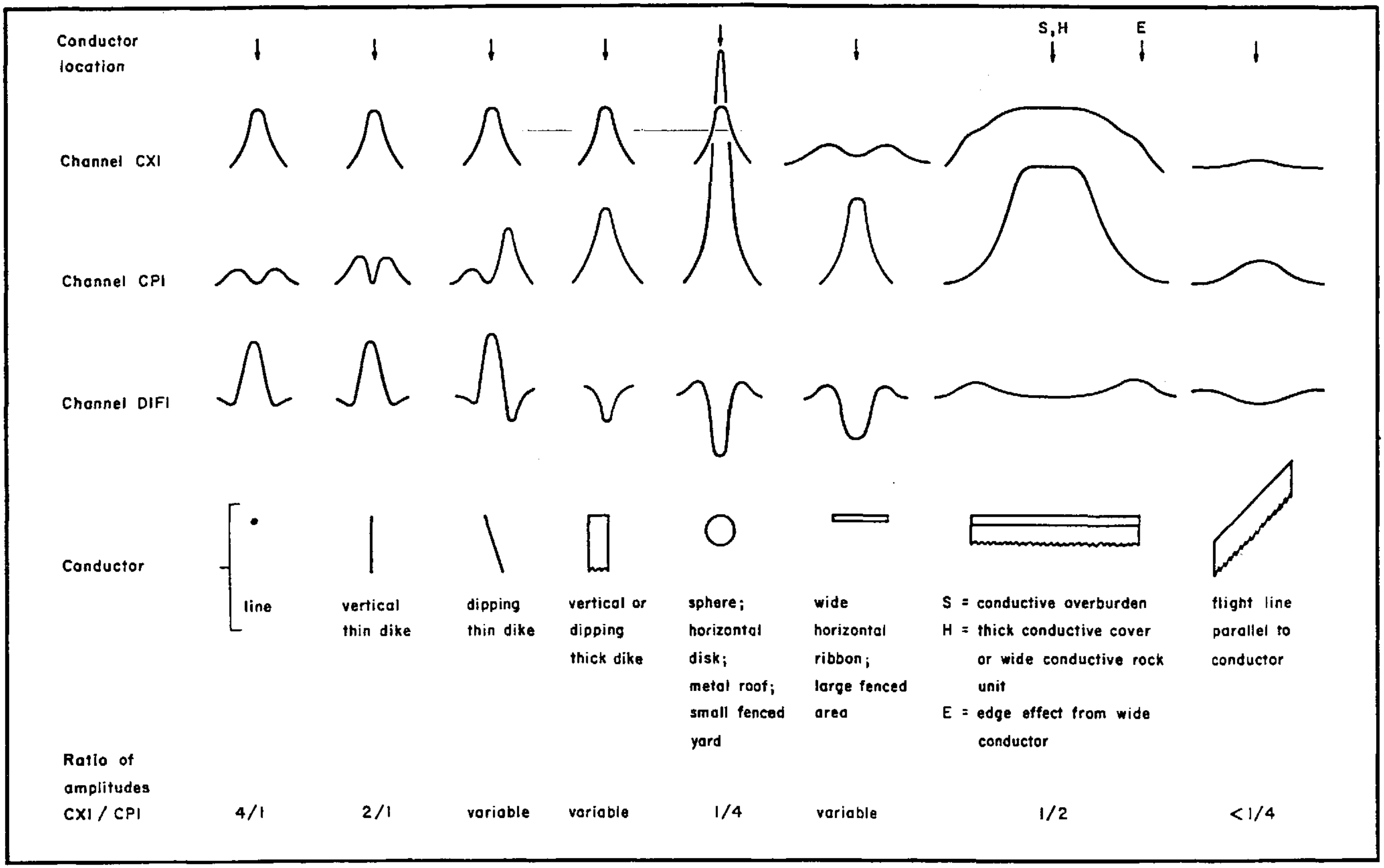


Fig. 5-1 Typical DIGHEM anomaly shapes

are divided into seven grades of conductance, as shown in Table 5-1 below. The conductance in siemens (mhos) is the reciprocal of resistance in ohms.

Table 5-1. EM Anomaly Grades

Anomaly Grade	siemens
7	> 100
6	50 - 100
5	20 - 50
4	10 - 20
3	5 - 10
2	1 - 5
1	< 1

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. 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 maps. However, patchy conductive overburden in otherwise resistive areas can yield discrete anomalies with a conductance grade (cf. Table 5-1) of 1, 2 or even 3 for conducting clays which have resistivities as low as 50 ohm-m. In areas where ground resistivities are 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 electromagnetic anomaly map (see EM map legend).

For bedrock conductors, the higher anomaly grades indicate increasingly higher conductances. Examples: DIGHEM's New Insco copper discovery (Noranda, Canada) yielded a grade 5 anomaly, as did the neighbouring copper-zinc Magusi River ore body; Mattabi (copper-zinc, Sturgeon Lake, Canada) and Whistle (nickel, Sudbury, Canada) gave grade 6; and DIGHEM's Montcalm nickel-copper discovery (Timmins, Canada) yielded a grade 7 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 6 and 7) are characteristic of massive sulfides or graphite. Moderate conductors (grades 4 and 5) typically reflect graphite or sulfides of a less massive character, while weak bedrock conductors (grades 1 to 3) can signify poorly connected graphite or heavily disseminated sulfides. Grades 1 and 2 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 2 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 to 3). 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. 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.

Questionable Anomalies

DIGHEM maps may contain EM responses which are displayed as asterisks (*). These responses denote weak anomalies of indeterminate conductance, which may reflect 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 parentheses "( )". 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 profiles and the resistivity contour maps present the apparent resistivity using the so-called pseudo-layer (or buried) half space model defined by Fraser (1978)[1]. This model consists of a resistive layer overlying

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

a conductive half space. The depth channels give 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 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[2]. Because gradient maps are usually 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. However, DIGHEM data processing techniques produce three parameters 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.

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2 The gradient analogy is only valid with regard to the identification of anomalous locations.

The EM difference channels (DIFI and DIFQ) eliminate most of the responses from conductive ground, leaving responses from bedrock conductors, cultural features (e.g., telephone lines, fences, etc.) and edge effects. Edge effects often occur near the perimeter of broad conductive zones. This can be 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 resistivity channels (RES). The most favourable situation is where anomalies coincide on all 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 the 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 previously 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 responses and magnetic permeability responses. 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.[3] 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 steep dipping narrow magnetite-rich bands which are

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

separated by 60 m. Unlike magnetometry, the EM magnetite method is unaffected by remanent magnetism or magnetic latitude.

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 negative inphase responses on the data profiles.

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. Channel CPS monitors 60 Hz radiation. An anomaly on this channel shows that the conductor is radiating 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.[4] When the flight crosses the cultural line at a high angle of intersection, the amplitude ratio of coaxial/coplanar response 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 with a CXI/CPI amplitude ratio (i.e., coaxial/coplanar) of

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[4] See Figure 5-1 presented earlier.

1/4. In the absence of geologic bodies of this geometry, the most likely conductor is a metal roof or small fenced yard.[5] 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.[5] 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 or video display, 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 above. If, instead, a center-peaked coplanar anomaly occurred, there would be concern that a thick

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[5] 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.

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 channel CPS and on the camera film or video records.

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 may also 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 (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

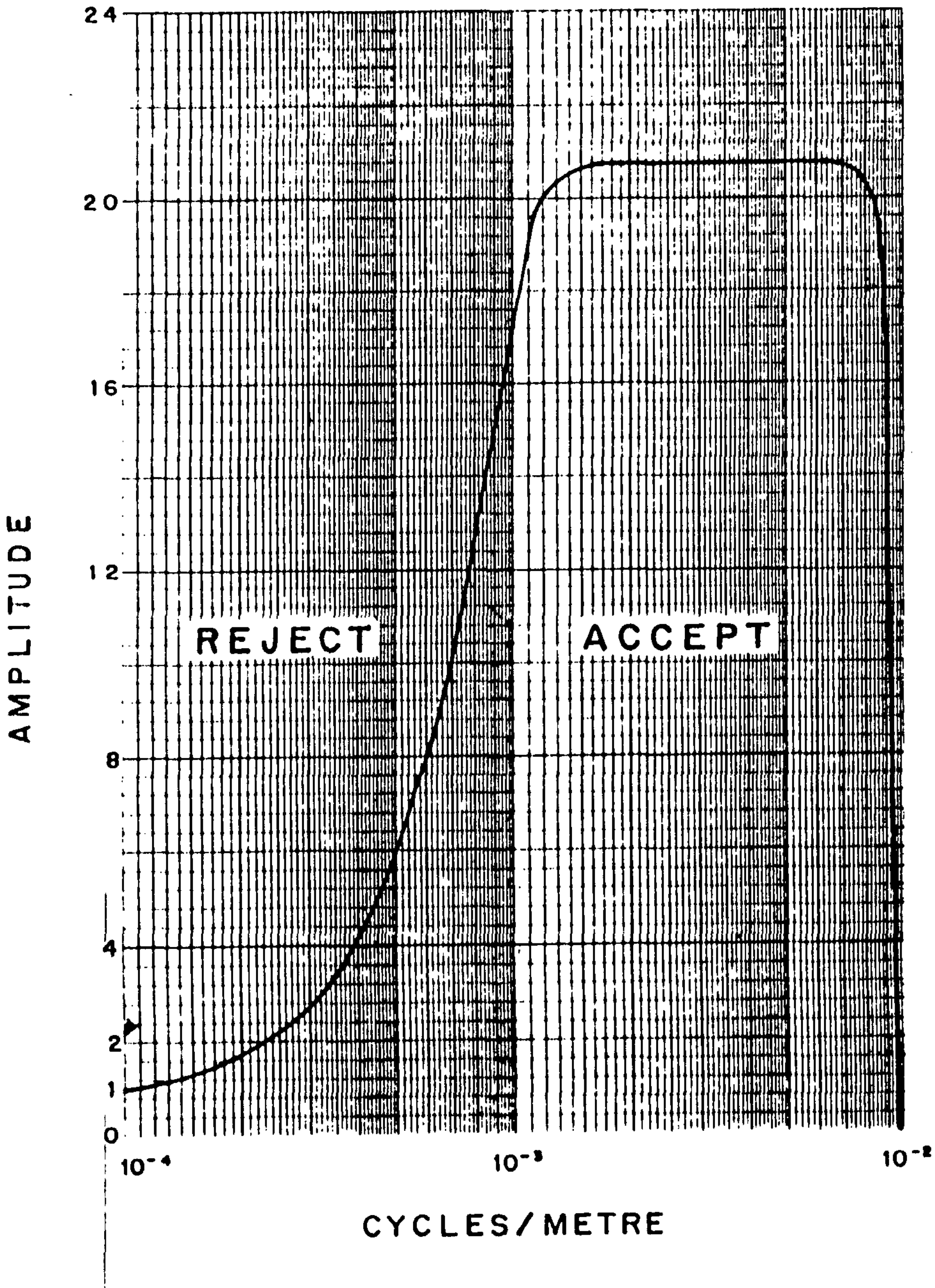

Fig. 5-2 Frequency response of magnetic enhancement operator for a sample interval of 50 m.

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, colour or shadow.

VLF

VLF transmitters produce high frequency uniform electromagnetic fields. However, VLF anomalies are not EM anomalies in the conventional sense. EM anomalies primarily reflect eddy currents flowing in conductors which have been energized inductively by the primary field. In contrast, VLF anomalies primarily reflect current gathering, which is a non-inductive phenomenon. The primary field sets up currents which flow weakly in rock and overburden, and these tend to collect in low resistivity zones. Such zones may be due to massive sulfides, shears, river valleys and even unconformities.

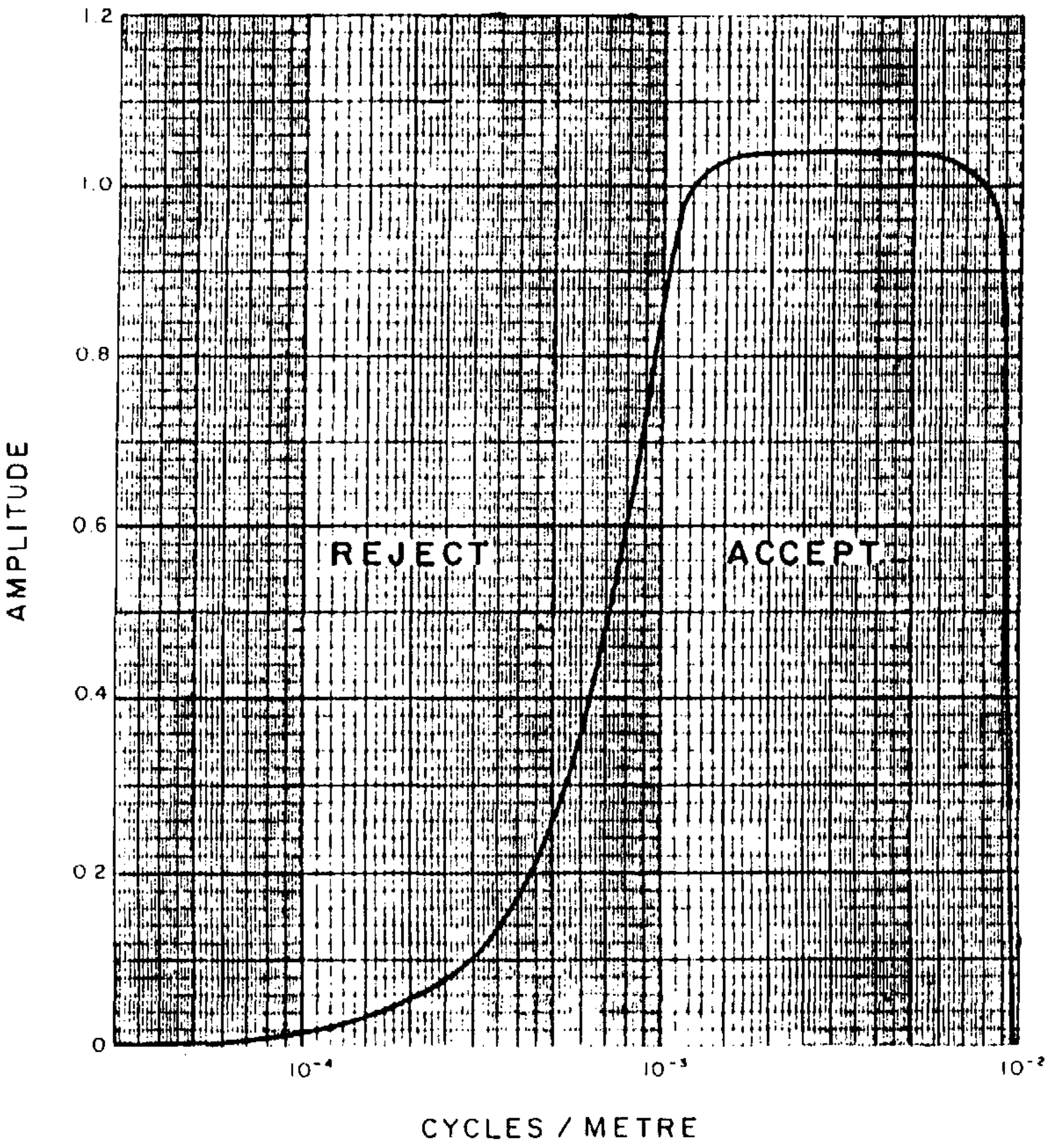

Fig. 5-3 Frequency response of VLF operator.

The VLF field is horizontal. Because of this, the method is quite sensitive to the angle of coupling between the conductor and the transmitted VLF field. Conductors which strike towards the VLF station will usually yield a stronger response than conductors which are nearly orthogonal to it.

The Herz Industries Ltd. Totem VLF-electromagnetometer measures the total field and vertical quadrature components. Both of these components are digitally recorded in the aircraft with a sensitivity of 0.1 percent. The total field yields peaks over VLF current concentrations whereas the quadrature component tends to yield crossovers. Both appear as traces on the profile records. The total field data are filtered digitally and displayed as contours to facilitate the recognition of trends in the rock strata and the interpretation of geologic structure.

The response of the VLF total field filter operator in the frequency domain (Figure 5-3) is basically similar to that used to produce the enhanced magnetic map (Figure 5-2). The two filters are identical along the abscissa but different along the ordinant. The VLF filter removes long wavelengths such as those which reflect regional and wave transmission variations. The filter sharpens short wavelength responses such as those which reflect local geological variations.

CONCLUSIONS AND RECOMMENDATIONS

This report provides a very brief description of the survey results and describes the equipment, procedures and logistics of the survey.

The various maps included with this report display the magnetic and conductive properties of the survey areas. It is recommended that the survey results be reviewed in detail, in conjunction with all available geophysical, geological and geochemical information. Particular reference should be made to the computer generated data profiles which clearly define the characteristics of the individual anomalies.

The anomalies defined by the survey should be subjected to further investigation, using appropriate surface exploration techniques. Anomalies which are currently considered to be of moderately low priority may require upgrading if follow-up results are favourable.

Colour maps have been prepared from the survey data. These maps result from additional processing of the geophysical data which was carried out in order to extract the maximum amount of information from the survey results. These maps provide valuable information on structure and lithology, which may not be clearly evident on the contour maps. Current processing techniques can yield images which define subtle, but significant, structural details.

Respectfully submitted,

DIGHEM SURVEYS & PROCESSING INC.

for Ruth A. Pritchard
Geophysicist

RAP/sdp

A1088JUL.91R

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 KRL Resources Corp., over four properties in the Stewart area, B.C.

Steve Kilty	Vice President, Operations
Robert Gordon	Geophysical Operator
Maurie Bergstrom	2nd Geophysical Operator
John Jess	Pilot (Canadian Helicopters Corporation)
Gordon Smith	Computer Processing Supervisor
David E. Pritchard	Computer Processor
Ruth A. Pritchard	Geophysicist/Interpreter
Reinhard Zimmermann	Draftsperson
Susan Pothiah	Word Processing Operator

The survey consisted of 725 km of coverage, flown from May 17 to May 26, 1990.

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

DIGHEM SURVEYS & PROCESSING INC.

Dave Pritchard

For Ruth A. Pritchard
Geophysicist

RAP/sdp

Ref: Report #1088

A1088JUL.91R

APPENDIX B

STATEMENT OF COST

Date: July 25, 1990

IN ACCOUNT WITH
DIGHEM SURVEYS & PROCESSING INC.

To: Dighem flying of Agreement dated April 2, 1990, pertaining to an Airborne Geophysical Survey in the Stewart area, B.C.

Survey Charges

Mobilization	$ 3,500.00
725 km of data	$ 72,500.00
	$ 76,000.00

Allocation of Costs

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

DIGHEM SURVEYS & PROCESSING INC.

for Ruth A. Pritchard
Geophysicist

RAP/sdp

A1088JUL.91R

APPENDIX C

STATEMENT OF QUALIFICATIONS

I, Ruth A. Pritchard of the City of Brampton, Province of Ontario, do hereby certify that:

1. I am a geophysicist, residing at 31 Barrington Crescent, Brampton, Ontario, L6Z 1N2.

2. I am a graduate of York University, Downsview, Ontario, with a Specialized Honours B.Sc. Earth Sciences - Geophysics (1986).

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

4. The statements made in this report represent my best opinion and judgement.

for Ruth A. Pritchard
Geophysicist

A1088JUL.91R

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 10021	(FLIGHT	6)											
A 2846 H	5	3	14	7	20	7	18.5	25	2	84	32	54	0
B 2889 S	1	4	3	9	42	41	1.9	8	1	53	213	10	0
C 2973 H	1	1	1	2	2	4	-	-	-	-	-	-	0
LINE 10030	(FLIGHT	2)											
A 2380 S	1	1	1	8	31	19	1.4	6	1	65	131	23	0
B 2434 S	4	11	4	14	58	61	2.6	0	1	43	161	5	0
LINE 10040	(FLIGHT	2)											
A 2869 B	7	10	13	18	48	46	6.1	8	2	46	36	20	0
B 2858 B	8	17	13	30	108	90	4.1	14	1	61	166	23	5
C 2705 S	0	4	1	4	18	23	0.9	0	1	48	301	23	0
LINE 10050	(FLIGHT	2)											
A 3210 S	1	1	1	2	2	4	-	-	-	-	-	-	0
B 3269 H	1	2	1	2	2	4	-	-	-	-	-	-	80
C 3343 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 10060	(FLIGHT	2)											
A 3670 B?	7	4	7	8	29	29	11.1	28	1	63	128	23	4
B 3560 B?	6	7	10	12	36	8	6.9	0	1	47	99	7	0
C 3546 B?	6	7	11	13	38	12	6.6	17	1	62	185	19	0
LINE 10061	(FLIGHT	2)											
A 4216 L	6	3	1	8	6	6	6.0	8	1	14	598	0	0
LINE 10071	(FLIGHT	3)											
A 600 S?	5	11	12	32	112	69	3.7	24	2	64	46	38	0
B 624 D	30	32	56	53	165	40	14.7	0	3	28	17	8	6
C 633 D	15	12	26	23	70	39	13.7	0	1	43	71	11	0
D 721 B	5	10	6	17	68	65	3.2	0	1	59	227	13	0
LINE 10080	(FLIGHT	3)											
A 1221 L	1	2	1	2	2	4	-	-	-	-	-	-	0
B 999 B?	1	6	1	7	26	23	0.8	0	1	43	225	0	0
C 859 S	0	5	1	6	25	23	0.7	0	1	73	213	26	0
LINE 10090	(FLIGHT	3)											
A 1448 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 1563 S?	1	1	1	4	17	16	1.0	0	1	74	192	48	0
C 1616 S?	2	3	1	3	12	19	0.6	0	1	51	310	23	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	QUAD PPM	COPLANAR 900 HZ REAL PPM	QUAD PPM	COPLANAR 7200 HZ REAL PPM	QUAD PPM	VERTICAL DIKE COND SIEMEN	DEPTH* M	HORIZONTAL SHEET COND SIEMEN	DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	DEPTH M	MAG CORR NT
LINE 10090	(FLIGHT		3)										
D 1756 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 10100	(FLIGHT		3)										
A 2674 S	0	1	1	2	2	4	-	-	-	-	-	-	0
B 2583 S?	1	7	4	9	35	23	1.5	0	1	73	424	12	0
LINE 10110	(FLIGHT		3)										
A 3235 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 3239 B?	2	10	2	15	15	56	1.0	0	1	50	806	0	0
LINE 10120	(FLIGHT		4)										
A 385 L	1	2	1	2	2	4	-	-	-	-	-	-	640
B 667 S	0	2	0	2	2	4	-	-	-	-	-	-	0
LINE 10131	(FLIGHT		4)										
A 1358 S	3	7	1	17	27	32	1.4	0	1	31	513	0	0
LINE 10141	(FLIGHT		4)										
A 2224 L	1	2	1	2	2	4	-	-	-	-	-	-	10
LINE 10170	(FLIGHT		5)										
A 2258 L	4	3	1	3	1	2	6.2	17	1	47	617	0	0
LINE 10200	(FLIGHT		6)										
A 869 H	0	2	1	2	2	4	-	-	-	-	-	-	1710
LINE 19021	(FLIGHT		6)										
A 1673 S	1	3	2	4	13	9	1.0	0	1	49	103	27	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.

RUFUS

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 20010	(FLIGHT		9)										
A 2600 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 20110	(FLIGHT		8)										
A 1292 B?	0	2	0	2	0	4	-	-	-	-	-	-	130
LINE 20120	(FLIGHT		8)										
A 916 B?	0	2	0	3	0	10	0.5	14	1	159	1035	0	0
LINE 20131	(FLIGHT		7)										
A 3155 S?	0	0	0	1	0	10	0.1	0	1	111	8112	8	0
LINE 20150	(FLIGHT		7)										
A 1662 S?	0	1	0	2	0	15	1.7	59	1	157	1035	0	0
LINE 20161	(FLIGHT		7)										
A 1464 S?	0	1	0	0	0	4	-	-	-	-	-	-	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.

MED (LITTLE)

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
LINE 30010	(FLIGHT		13)										
A 714 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 729 B?	2	8	7	14	53	33	2.3	0	1	56	207	11	0
C 734 D	9	18	7	16	64	73	4.1	0	1	38	160	0	0
LINE 30020	(FLIGHT		13)										
A 110 B?	5	9	1	10	43	64	2.4	2	1	32	548	0	0
B 53 B?	4	9	4	12	37	14	3.0	0	1	33	161	0	0
C 49 B?	1	2	1	2	2	4	-	-	-	-	-	-	4
LINE 30040	(FLIGHT		12)										
A 2596 B?	5	7	1	6	22	22	3.7	7	1	70	757	0	0
B 2588 B?	2	5	6	6	22	4	4.3	20	1	92	78	52	7
C 2565 D	9	18	10	22	79	65	4.3	0	1	38	151	2	90
LINE 30050	(FLIGHT		12)										
A 2414 B	7	14	6	19	80	72	3.5	0	1	44	109	9	0
B 2422 D	8	9	10	12	27	18	7.2	3	1	52	105	14	0
C 2428 D	6	7	10	12	22	26	6.8	15	1	64	217	18	0
LINE 30060	(FLIGHT		12)										
A 1894 B?	2	3	3	7	37	34	2.8	6	1	59	122	17	0
B 1888 D	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 30070	(FLIGHT		12)										
A 1533 B?	2	7	2	9	28	38	1.8	4	1	48	531	0	0
B 1540 B?	4	7	3	5	23	23	4.0	6	1	64	161	19	0
C 1546 B?	3	7	3	8	32	24	2.6	9	1	53	151	13	0
D 1552 D	2	8	3	11	38	53	1.9	4	1	50	260	7	0
LINE 30080	(FLIGHT		12)										
A 771 B?	5	8	1	7	32	36	3.5	8	1	59	289	10	0
B 760 B?	6	8	2	9	37	52	3.4	5	1	58	151	16	13
LINE 30090	(FLIGHT		1)										
A 2080 D	1	2	1	2	2	4	-	-	-	-	-	-	0
B 2071 S?	3	6	1	8	28	27	1.8	0	1	98	154	43	0
C 2043 B?	2	3	2	4	14	13	1.0	0	1	58	179	33	0
LINE 30101	(FLIGHT		1)										
A 1602 B?	0	6	0	8	0	16	8.0	60	1	103	860	27	60
B 1589 B?	0	2	0	2	0	4	-	-	-	-	-	-	80

* 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.

MED (LITTLE)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 30101	(FLIGHT	1)											
C 1518 B	3	6	5	8	30	39	3.9	31	1	81	172	37	0
D 1452 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 30110	(FLIGHT	10)											
A 674 D	5	8	9	12	34	40	5.5	0	1	0	259	0	0
B 659 D	4	9	2	8	22	53	2.2	0	1	0	122	0	0
C 646 B?	4	6	5	9	26	14	3.8	0	1	0	75	0	0
LINE 30120	(FLIGHT	10)											
A 1365 B	3	6	6	8	25	16	4.2	55	2	138	46	103	0
LINE 30130	(FLIGHT	10)											
A 1676 B?	1	2	0	2	2	4	-	-	-	-	-	-	0
B 1641 B?	6	7	8	9	27	16	7.0	0	2	67	44	34	0
LINE 30150	(FLIGHT	10)											
A 2576 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 2554 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
C 2541 D	1	2	1	1	2	4	-	-	-	-	-	-	0
D 2530 D	1	2	1	2	2	4	-	-	-	-	-	-	0
E 2476 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 30160	(FLIGHT	10)											
A 3508 D	9	8	5	7	23	12	8.5	0	1	64	189	16	0
B 3522 B?	2	1	3	5	14	12	5.3	33	1	86	76	47	0
C 3534 B?	4	4	1	3	8	14	0.5	0	1	0	113	0	0
D 3557 B?	4	3	4	3	11	3	10.1	0	1	10	85	0	11
E 3572 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 30170	(FLIGHT	11)											
A 418 D	11	12	6	14	45	35	6.4	12	1	57	182	16	0
B 390 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
C 371 H	2	4	8	11	37	26	3.9	13	2	74	43	42	0
D 340 H?	1	3	5	11	32	20	2.5	11	1	58	139	18	0
LINE 30180	(FLIGHT	11)											
A 1342 B	32	49	25	56	174	134	7.5	1	2	42	39	18	0
B 1356 B?	7	12	5	12	35	34	3.8	4	2	76	51	43	0
C 1370 B?	10	7	8	9	30	24	10.9	1	2	69	26	41	0
LINE 30190	(FLIGHT	11)											
A 1665 D	25	21	16	21	75	50	12.8	2	1	43	128	7	0

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MED (LITTLE)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 30190	(FLIGHT	11)											
B 1660 B?	9	17	16	19	65	83	5.8	3	1	49	79	16	0
C 1658 B?	9	17	11	19	65	83	4.7	11	1	51	120	17	0
D 1647 B	10	8	6	12	42	16	8.1	0	1	40	77	6	0
E 1615 S	1	7	0	9	17	62	0.5	0	1	34	694	0	0
LINE 30200	(FLIGHT	11)											
A 2622 E	11	14	19	24	10	31	7.7	0	1	39	72	6	0
B 2631 B?	6	7	15	18	40	14	7.5	2	2	59	50	27	0
C 2637 B?	9	8	9	12	40	11	8.9	11	1	65	68	30	0
D 2638 B?	9	8	9	12	41	11	8.7	13	1	61	60	28	0
LINE 30210	(FLIGHT	11)											
A 3041 B?	0	2	0	0	0	16	0.5	28	1	238	1035	0	130
B 2872 B?	14	13	20	22	66	26	11.1	0	1	42	94	6	0
C 2870 D	14	13	21	22	53	26	11.4	0	2	46	35	18	0
D 2866 D	1	2	1	2	2	4	-	-	-	-	-	-	0
E 2838 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 39020	(FLIGHT	13)											
A 997 H	2	4	2	5	18	17	1.0	0	1	76	110	54	0
B 1045 H	1	3	2	10	38	60	1.1	9	1	43	165	7	0
C 1061 B?	3	3	1	13	40	74	2.0	14	1	96	239	44	0
D 1166 H	1	3	4	5	19	9	2.6	3	2	89	63	49	60
E 1218 B?	12	13	17	21	68	39	8.5	0	1	46	56	15	680
F 1230 B?	1	2	1	1	2	4	-	-	-	-	-	-	450
G 1245 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
H 1253 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
I 1264 S?	1	2	0	1	2	4	-	-	-	-	-	-	0

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MED (BIG)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 40010	(FLIGHT 14)												
A 666 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 641 S	1	2	0	2	2	4	-	-	-	-	-	-	0
LINE 40020	(FLIGHT 14)												
A 747 B	6	10	1	8	39	46	3.1	4	1	31	691	0	0
B 782 S	1	2	0	2	2	4	-	-	-	-	-	-	0
C 819 S	1	2	0	2	2	4	-	-	-	-	-	-	0
D 857 S	0	1	1	2	2	4	-	-	-	-	-	-	0
LINE 40030	(FLIGHT 14)												
A 1182 S?	3	4	0	5	24	26	1.0	0	1	30	220	5	0
LINE 40040	(FLIGHT 14)												
A 1265 S?	2	4	0	2	13	17	0.8	0	1	34	402	6	0
B 1287 S	1	2	1	2	2	4	-	-	-	-	-	-	0
C 1299 S	0	2	0	3	11	17	0.6	0	1	37	489	7	0
D 1330 S	1	1	0	2	2	4	-	-	-	-	-	-	0
E 1418 S	0	2	1	2	2	4	-	-	-	-	-	-	10700
F 1423 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
G 1438 S	1	2	0	2	2	4	-	-	-	-	-	-	0
LINE 40050	(FLIGHT 14)												
A 1774 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40060	(FLIGHT 14)												
A 1912 B?	2	8	2	8	34	41	1.2	2	1	53	677	0	0
B 2031 S	0	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40070	(FLIGHT 15)												
A 670 S	1	2	1	2	2	4	-	-	-	-	-	-	0
B 605 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40080	(FLIGHT 15)												
A 901 S	0	2	0	2	2	4	-	-	-	-	-	-	0
B 965 S	0	2	1	2	2	4	-	-	-	-	-	-	0
C 1007 S	0	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40090	(FLIGHT 15)												
A 1370 S?	0	2	0	2	2	4	-	-	-	-	-	-	0
B 1354 S	0	2	0	2	2	4	-	-	-	-	-	-	0
C 1323 S	0	2	0	2	2	4	-	-	-	-	-	-	0

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MED (BIG)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 40100	(FLIGHT	15)											
A 1490 S	0	1	1	2	2	4	-	-	-	-	-	-	0
B 1500 S	0	1	0	2	2	4	-	-	-	-	-	-	0
LINE 40110	(FLIGHT	15)											
A 2032 S	1	2	1	2	2	4	-	-	-	-	-	-	0
B 2014 S	1	6	1	7	25	53	0.5	0	1	39	580	0	0
LINE 40120	(FLIGHT	15)											
A 2121 S	0	3	1	7	21	34	0.5	0	1	47	552	0	0
B 2195 S?	0	2	1	1	2	4	-	-	-	-	-	-	0
LINE 40130	(FLIGHT	16)											
A 1114 S	0	2	0	2	2	4	-	-	-	-	-	-	0
B 1131 S	1	2	0	2	2	4	-	-	-	-	-	-	0
C 1146 S	1	2	1	2	2	4	-	-	-	-	-	-	5
D 1177 S	2	3	0	4	11	23	0.5	0	1	14	370	0	0
E 1190 S	1	2	0	2	2	4	-	-	-	-	-	-	0
F 1211 S	1	2	1	2	2	4	-	-	-	-	-	-	0
G 1230 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40140	(FLIGHT	16)											
A 1511 S	2	5	2	7	23	41	1.9	18	1	67	299	20	0
B 1492 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40150	(FLIGHT	16)											
A 1579 S	1	2	2	6	23	21	2.1	0	1	24	381	0	0
LINE 40160	(FLIGHT	16)											
A 1991 S	1	1	1	2	2	4	-	-	-	-	-	-	0
B 1945 S	0	2	1	4	14	18	0.8	0	1	47	272	22	0
C 1872 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40170	(FLIGHT	16)											
A 2079 H	3	6	3	8	30	29	2.5	2	1	47	163	7	0
B 2119 S	1	4	1	8	22	50	0.9	6	1	49	352	5	0
C 2127 S	1	8	0	11	20	88	0.6	11	1	50	545	6	0
D 2150 S	1	1	1	2	2	4	-	-	-	-	-	-	0
E 2168 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40180	(FLIGHT	16)											
A 2566 S	5	7	4	8	23	20	4.3	0	1	65	109	24	0

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MED (BIG)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 40190	(FLIGHT	16)											
A 2728 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 2733 S	1	2	1	2	2	4	-	-	-	-	-	-	0
C 2788 S	1	4	0	6	11	48	0.6	12	1	66	619	8	0
LINE 40200	(FLIGHT	16)											
A 3136 D	4	10	1	10	35	56	2.1	23	1	73	363	27	0
LINE 40210	(FLIGHT	16)											
A 3300 S?	4	6	3	8	27	16	4.0	17	1	68	137	26	0
B 3362 S	1	2	1	2	2	4	-	-	-	-	-	-	0
C 3417 S	1	2	1	2	2	4	-	-	-	-	-	-	0
D 3487 S	2	10	2	17	69	105	0.9	0	1	11	495	0	14
LINE 40220	(FLIGHT	16)											
A 3722 S	1	3	1	5	19	36	0.6	0	1	46	313	21	0
B 3692 S	1	2	1	2	2	4	-	-	-	-	-	-	0
C 3640 S	1	2	1	2	2	4	-	-	-	-	-	-	0
D 3618 S	0	3	1	4	14	21	0.7	0	1	42	249	18	0
E 3564 S	0	3	1	5	16	32	0.5	0	1	46	732	0	0
F 3536 S	2	11	2	20	82	109	1.1	0	1	10	416	0	0
LINE 40230	(FLIGHT	16)											
A 3780 S	1	2	1	2	2	4	-	-	-	-	-	-	0
B 3889 S	1	2	1	2	2	4	-	-	-	-	-	-	0
C 3936 S	2	14	4	22	96	104	1.2	0	1	24	227	0	30
LINE 40240	(FLIGHT	16)											
A 4107 S	3	12	4	18	77	77	1.4	0	1	29	193	0	0
LINE 40250	(FLIGHT	16)											
A 4537 S	3	15	5	26	105	126	1.4	0	1	33	167	0	0
B 4539 E	1	2	1	2	2	4	-	-	-	-	-	-	6
LINE 40260	(FLIGHT	17)											
A 339 S	2	12	5	20	91	112	1.5	0	1	23	170	0	40
LINE 40270	(FLIGHT	17)											
A 586 S	1	2	0	2	2	4	-	-	-	-	-	-	0
B 652 S	3	26	6	44	148	206	1.0	0	1	25	126	0	0
C 665 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40280	(FLIGHT	17)											
A 926 S	1	4	0	4	13	33	0.4	0	1	40	341	13	0

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MED (BIG)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 40280 (FLIGHT 17)													
B 793 S	5	29	8	53	177	233	1.6	0	1	23	144	0	12
LINE 40290 (FLIGHT 17)													
A 1153 S	8	22	12	40	135	111	3.1	0	1	29	91	0	0
LINE 40300 (FLIGHT 17)													
A 1319 H	1	2	1	2	2	4	-	-	-	-	-	-	0
B 1307 S	2	7	3	12	44	46	1.3	0	1	11	457	0	5
LINE 40310 (FLIGHT 17)													
A 1478 S	1	4	1	6	18	36	0.5	0	1	63	677	0	0
B 1574 H	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40320 (FLIGHT 17)													
A 2064 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 1936 H	4	9	7	18	48	52	3.0	1	1	39	114	5	40
LINE 40330 (FLIGHT 17)													
A 2229 H	3	11	6	18	55	108	2.5	4	1	25	322	0	40
LINE 40340 (FLIGHT 17)													
A 2605 S	1	15	4	28	79	114	0.7	0	1	23	314	0	0
LINE 40350 (FLIGHT 17)													
A 2884 S	1	9	1	15	45	88	0.5	0	1	19	586	0	30
LINE 40360 (FLIGHT 17)													
A 3171 S	1	6	2	12	42	75	1.0	1	1	15	529	0	20
B 3151 S	2	8	2	14	45	63	1.2	0	1	12	505	0	0
LINE 40370 (FLIGHT 17)													
A 3408 S	1	2	1	2	2	4	-	-	-	-	-	-	0
B 3443 S	2	5	1	7	18	43	1.5	6	1	33	580	0	0
C 3455 S	1	1	1	2	2	4	-	-	-	-	-	-	0
D 3468 S	2	4	2	6	25	26	2.2	0	1	23	422	0	0
LINE 40380 (FLIGHT 17)													
A 3806 S	1	2	1	5	20	31	0.7	0	1	48	195	24	0
B 3743 S	2	8	3	14	38	67	1.2	0	1	18	474	0	0
LINE 40390 (FLIGHT 17)													
A 3875 S?	3	7	1	4	13	23	0.6	0	1	50	193	27	0

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MED (BIG)

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 7200 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
LINE 40390	(FLIGHT	17)											
B 3896 S?	3	5	4	8	26	16	3.2	0	1	42	134	1	0
C 3914 S	1	1	0	2	2	4	-	-	-	-	-	-	0
D 3938 S	2	7	1	11	40	60	1.5	0	1	24	386	0	30
LINE 40400	(FLIGHT	17)											
A 4349 S	1	9	4	16	48	124	1.0	2	1	16	490	0	11
LINE 40410	(FLIGHT	17)											
B 4559 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
C 4579 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
D 4589 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
E 4609 D	9	8	7	7	22	9	10.1	4	2	62	36	32	0
LINE 40420	(FLIGHT	17)											
A 5203 S	1	4	3	5	11	26	0.4	0	1	43	131	23	0
B 5148 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
C 5104 S	1	5	0	8	22	71	0.5	2	1	54	572	1	0
LINE 40430	(FLIGHT	17)											
A 5244 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 5258 B	12	14	17	21	66	34	8.9	0	2	49	30	23	0
C 5292 B?	4	6	4	8	32	29	4.3	11	1	48	149	9	0
D 5333 S	1	6	0	8	22	71	0.5	0	1	47	729	0	14000
LINE 40440	(FLIGHT	18)											
A 464 B	1	2	1	0	2	4	-	-	-	-	-	-	0
B 451 D	5	15	8	19	71	35	3.1	7	1	42	156	7	0
C 443 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40450	(FLIGHT	18)											
A 557 D	6	11	7	11	40	35	4.2	11	1	55	164	15	0
B 578 S	2	8	3	17	59	71	1.3	0	1	24	297	0	22800
LINE 40460	(FLIGHT	18)											
A 827 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
B 818 D	11	25	7	27	92	119	3.5	0	1	30	207	0	0
C 787 S	0	5	2	6	7	43	0.6	6	1	40	429	0	0
D 741 S	0	3	0	6	16	44	1.2	25	1	80	860	4	0
LINE 40470	(FLIGHT	18)											
A 953 B?	1	2	1	2	2	4	-	-	-	-	-	-	0

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MED (BIG)

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 SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 40470	(FLIGHT		18)										
B 975 B	4	9	0	6	20	38	2.2	1	1	40	420	0	0
C 993 B?	2	6	2	9	34	39	1.8	17	1	50	341	8	0
D 1002 D	3	10	5	15	58	45	2.4	0	1	28	207	0	0
E 1098 S	0	3	1	6	15	34	0.5	0	1	54	828	0	0
F 1110 S	0	4	1	6	14	45	0.5	1	1	65	649	2	0
LINE 40480	(FLIGHT		18)										
A 1358 B	12	10	8	8	24	12	10.4	0	2	66	43	34	0
B 1345 B?	1	2	1	2	2	4	-	-	-	-	-	-	0
C 1337 S?	1	8	1	7	21	45	0.9	0	1	46	438	0	0
D 1318 S?	1	2	0	2	2	4	-	-	-	-	-	-	0
E 1302 S	0	3	1	10	29	71	0.5	0	1	38	274	0	0
F 1292 S	0	5	2	10	29	55	0.7	4	1	46	269	6	0
G 1207 S	0	1	1	2	2	4	-	-	-	-	-	-	0
LINE 40490	(FLIGHT		18)										
A 1421 D	11	8	21	18	57	40	13.7	16	4	78	12	56	13
B 1426 B	10	17	19	26	81	57	6.7	10	3	57	15	36	0
C 1433 D	17	13	24	17	50	35	16.7	0	3	48	20	23	0
D 1441 B?	5	7	10	12	39	17	6.0	11	1	86	92	45	0
E 1453 D	2	6	5	6	18	6	3.0	10	1	79	189	31	0
F 1511 S?	2	13	1	13	37	116	0.6	4	1	43	681	0	0
G 1534 S	1	10	2	18	65	100	0.6	0	1	30	306	0	0
H 1621 S	0	6	0	9	19	73	0.5	4	1	58	773	0	0
I 1651 S	0	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40500	(FLIGHT		18)										
A 2045 D	5	8	1	7	20	42	3.4	2	1	77	202	27	0
B 2006 S?	1	4	1	5	20	39	1.1	4	1	84	804	0	0
C 1981 S	1	2	1	3	16	15	1.0	0	1	43	145	21	0
LINE 40510	(FLIGHT		18)										
A 2574 S	1	2	1	2	2	4	-	-	-	-	-	-	0
B 2500 S	0	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40520	(FLIGHT		18)										
A 2651 S	1	4	0	7	14	58	0.7	21	1	49	573	6	0
B 2667 S	1	2	0	2	2	4	-	-	-	-	-	-	0
LINE 40530	(FLIGHT		18)										
A 2940 H	0	2	1	2	2	4	-	-	-	-	-	-	0

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MED (BIG)

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 SIEMEN	DEPTH* M	HORIZONTAL SHEET COND SIEMEN	DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	DEPTH M	MAG CORR NT
LINE 40540	(FLIGHT		18)										
A 3115 S	0	4	0	6	18	45	0.5	3	1	77	741	5	21100
B 3184 S	0	7	0	12	13	107	0.5	18	1	69	761	11	0
LINE 40550	(FLIGHT		18)										
A 3370 S?	2	12	1	17	62	88	0.7	0	1	37	316	0	0
B 3305 S	1	2	1	5	18	17	1.0	0	1	35	210	11	0
C 3224 S	0	4	0	6	14	52	0.5	4	1	74	837	2	0
LINE 40560	(FLIGHT		18)										
A 3427 S	2	7	2	11	43	65	1.3	5	1	43	354	2	0
B 3502 S	1	9	1	17	43	132	0.6	0	1	0	550	0	0
C 3592 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40570	(FLIGHT		18)										
A 3906 S	1	2	1	4	14	22	0.7	0	1	56	276	31	0
LINE 40580	(FLIGHT		18)										
A 4042 S	0	5	2	8	26	46	0.7	0	1	53	702	0	11
B 4091 S	0	2	0	2	2	4	-	-	-	-	-	-	0
C 4135 S	0	2	0	2	2	4	-	-	-	-	-	-	0
LINE 40590	(FLIGHT		18)										
A 4413 S	1	2	0	2	2	4	-	-	-	-	-	-	0
LINE 40610	(FLIGHT		18)										
A 4972 S	1	5	1	5	17	32	0.7	0	1	53	630	0	0
B 4959 S	1	7	1	7	20	41	0.7	1	1	59	554	2	0
LINE 40620	(FLIGHT		18)										
A 5063 S?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40630	(FLIGHT		19)										
A 391 S	0	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40640	(FLIGHT		19)										
A 652 S	1	1	1	2	2	4	-	-	-	-	-	-	0
B 619 S	0	1	1	2	2	4	-	-	-	-	-	-	0
C 607 S	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 40660	(FLIGHT		19)										
A 954 S	0	3	1	5	13	21	0.6	0	1	34	229	9	0

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MED (BIG)

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 SIEMEN	DEPTH* M	HORIZONTAL SHEET COND SIEMEN	DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	DEPTH M	MAG CORR NT
LINE 49010	(FLIGHT	19)											
A 1823 B?	3	9	2	9	37	35	2.1	0	1	62	561	0	0
B 1811 B?	2	6	0	5	8	39	1.4	16	1	68	216	24	0
LINE 49020	(FLIGHT	19)											
A 2444 S	0	2	0	2	2	4	-	-	-	-	-	-	7
LINE 49030	(FLIGHT	19)											
A 2111 S	2	5	3	7	36	22	2.4	1	1	25	256	0	0

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