

part 1 of 3

REPORT ON A
HELICOPTER E.M. AND MAGNETOMETER SURVEY
ON THREE PROJECTS IN THE
QUESNEL RIVER AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA
FOR

DOMEX EXPLORATION (CANADA) LIMITED
1 First Canadian Place
Toronto, Ontario
M5X 1H1

QUESNEL RIVER
PROJECT:

LATITUDE $52^{\circ} 40'$ LONGITUDE $121^{\circ} 47'$
NTS: 93A/12
CLAIM: QR 1-8

MAUD LAKE
PROJECT:

LATITUDE $52^{\circ} 44'$ LONGITUDE $121^{\circ} 55'$
NTS: 93A12W
CLAIM: MAUD 1-4

CANTIN CREEK
PROJECT:

LATITUDE $52^{\circ} 55'$ LONGITUDE $122^{\circ} 12'$
NTS: 93B/16
CLAIM: CAN 1

SURVEY DATES: February 26-28, 1981

May 25, 1981
Vancouver, B.C.

Apex Airborne Surveys Ltd.
Ronald F. Sheldrake, B.Sc.

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QR 1-8

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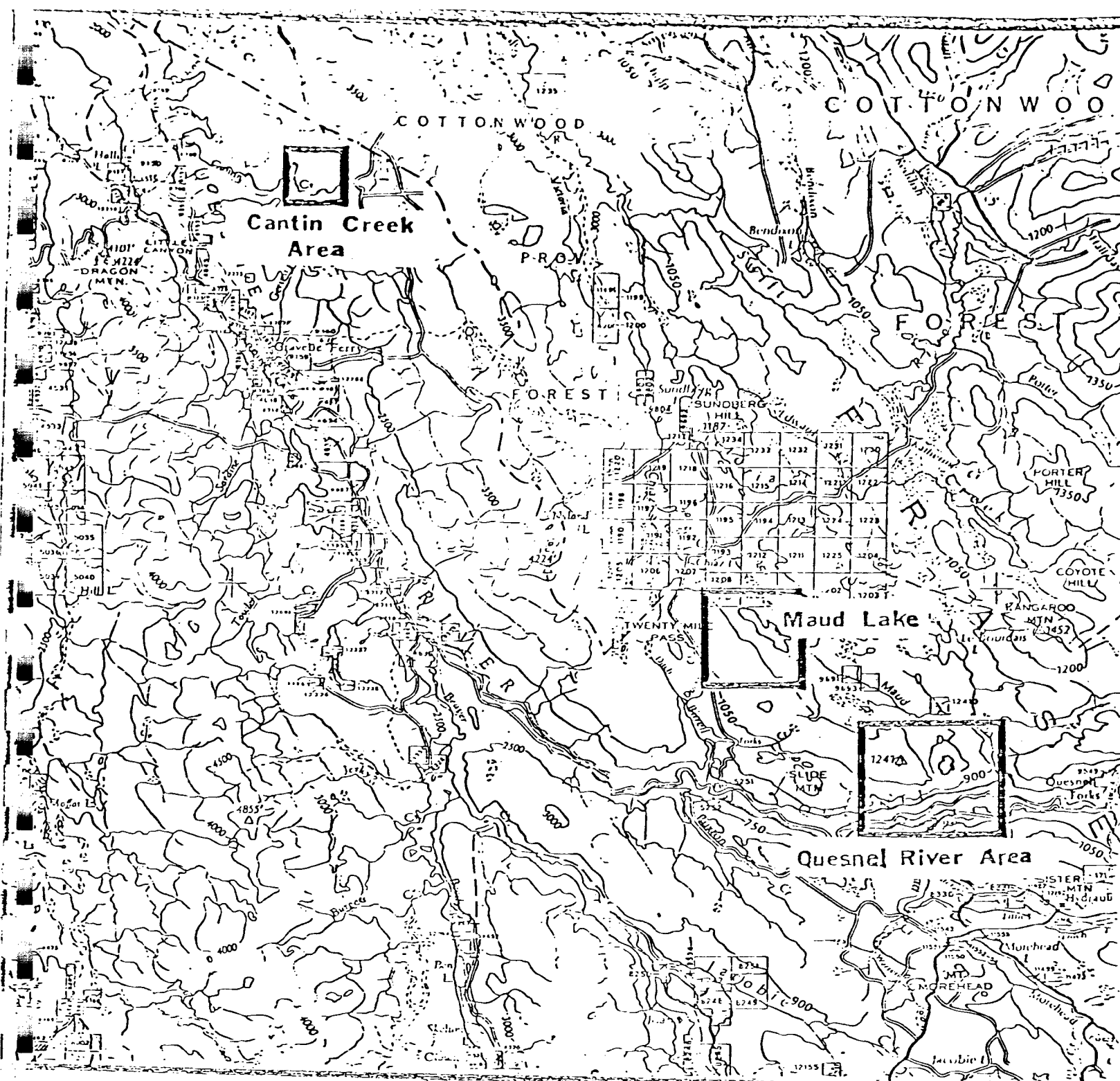
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CERTIFICATION

STATEMENT OF COSTS



SURVEY LOCATION MAP

QUESNEL RIVER AREA PROJECT

CARIBOO MINING DIVISION

BRITISH COLUMBIA

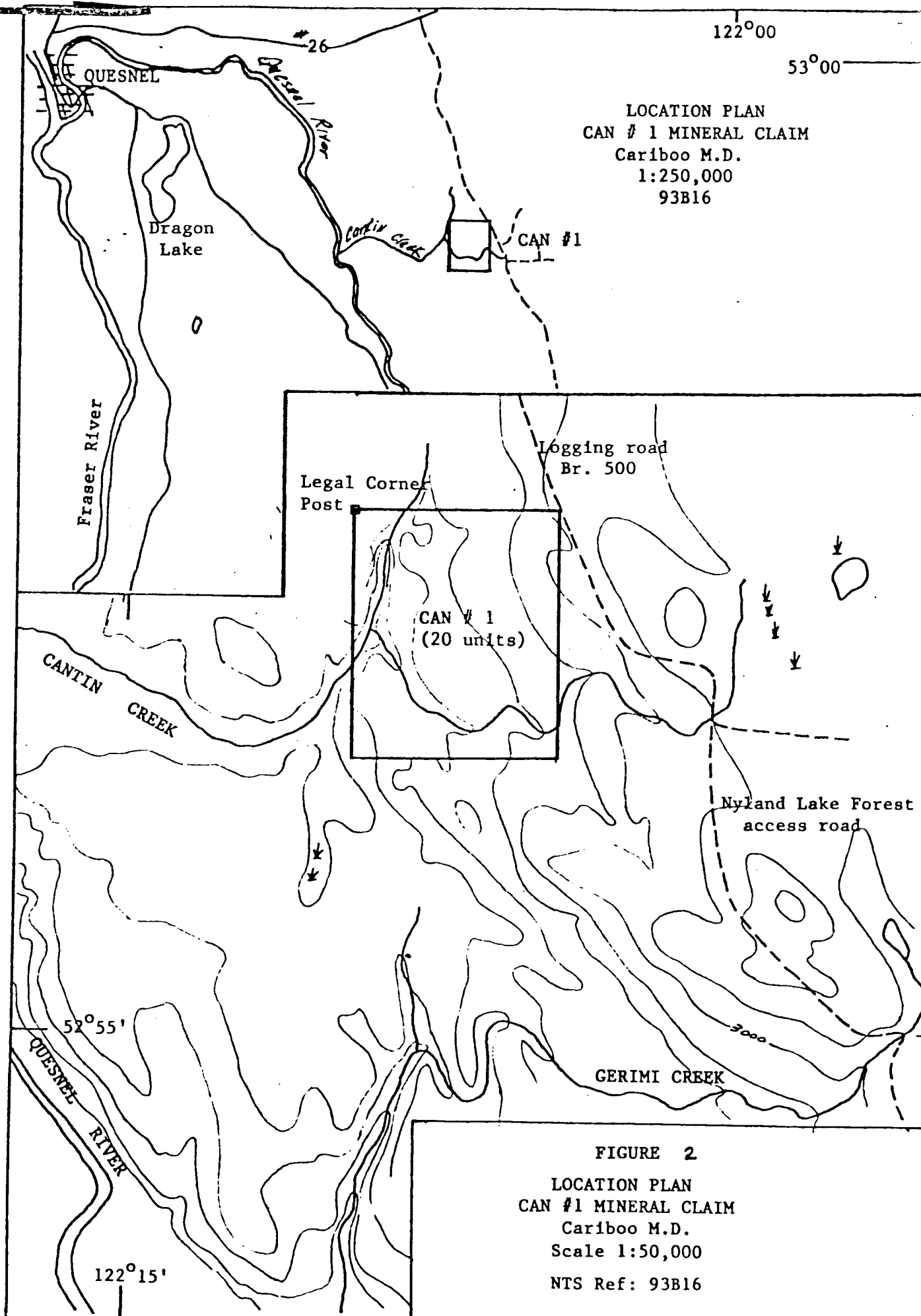
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DOMEX EXPLORATION (CANADA) LTD.

APEX AIRBORNE
SURVEYS LTD.

DATE: May 1981

N.T.S. 93A/B



1. SUMMARY

The geophysical survey has identified a response in the Maud Lake area that warrants investigation. Recommendations for follow-up have been made.

2. INTRODUCTION

This report describes the results of a helicopter-borne electromagnetic and magnetic survey flown for Dome Exploration of Canada Ltd.

The survey was flown over three separate areas called the Quesnel River Project, Maud Lake Project and the Cantin Creek Project.

The survey totalled 395 linear kilometres of traverse in, for the most part, moderate terrain.

Aircraft positioning was controlled from a 1:20,000 photomosaic map. A mean terrain clearance of 30 to 40 metres (for the E.M. sensor) was maintained where possible.

The Geonics 33-1 Electromagnetometer is a solid state system especially designed for helicopter transport.

It consists of two coaxial coils, one serving as a transmitter and the other as a receiver, which are mounted 6 metres apart, in a rigid "bird" with their axes horizontal and in the direction of flight. The bird is towed 30 metres below the helicopter by means of a suitable cable which also carried the electrical signals and power to and from the bird.

The system operates at 918 hertz. Changes in the alternating magnetic field at the receiver coil, caused by eddy currents in the subsurface rock, are recorded. These changes are expressed in ratios of the normal undistorted primary field. They are so small as to be expressed in parts per million or p.p.m.

The magnetometer used on this survey was a Geometrics 803. It is a total field nuclear precession instrument which measures the magnetic field strength with a sensitivity of one gamma. The sensor is toroidal and is positioned half way between the helicopter and the E.M. 33-1 bird.

Appendix I gives details of the geophysical equipment used for this survey. Appendix II describes the flight record and flight path recovery process.

CLAIMS

CANTIN CREEK

<u>CLAIM NAME</u>	<u>RECORD NUMBER</u>
CAN 1	187 (20)

QUESNEL RIVER

<u>CLAIM NAME</u>	<u>RECORD NUMBER</u>
QR 1	504 (20)
QR 2	505 (20)
QR 3	506 (20)
QR 4	507 (20)
QR 5	508 (10)
QR 6	509 (10)
QR 7	1830 (30)
QR 8	1831 (30)

MAUD LAKE

<u>CLAIM NAME</u>	<u>RECORD NUMBER</u>
MAUD1	1785 (16)
MAUD2	1786 (20)
MAUD3	1787 (20)
MAUD4	1788 (16)

LOCATION AND ACCESS

CAN #1

Access is by two wheel drive vehicle via logging road Branch 500 from Highway 26 (Barkerville Highway). The main access road leaves Highway 26 three kilometres east of Quesnel and the property is approximately 2.5 kilometres to the south via Branch 500.

QR #1-8

Access is by a 40 km forestry road which leads off Highway 26 approximately 19 km east of Quesnel to Nyland Lake. From there, a rough 4-wheel drive road, useable only in dry weather, leads south-southeast some 25 km to the property. In wet weather, access is by helicopter from Williams Lake.

MAUD #1-4

Access is by a 40 km forestry road which leads off Highway 26 approximately 19 km east of Quesnel to Nyland Lake. The Nyland Lake forestry road, a rough 4-wheel drive road, leads southeasterly into the property.

3. DATA PRESENTATION

3.1 Electromagnetics (Plate I)

The Electromagnetic Survey Profiles Map shows the profiles of inphase and quadrature E.M. responses along the flight lines. The E.M. profiles are transcribed and plotted from the digital chart recorded in flight, after assigning a suitable base level value.

3.2 Magnetics (Plate II)

The Total Field Magnetic Map shows contours of the total magnetic field uncorrected for regional variation. The maps are plotted from the digital chart recorded in flight, and contoured at an interval of 25 gammas. The 100 gamma contours are "weighted" for clarity.

3.3 Interpretation Map (Plate III)

The Interpretation Map provides a summary of the interpreted information. Formational responses, rock types, contact zones and photo-lineaments are displayed as well as target conductors that may be suitable for massive sulphide exploration.

4. INTERPRETATION

Both Magnetic and Electromagnetic Maps can be interpreted to reveal areas underlain by different rock types and lineaments which could indicate contact or fault zones. Magnetic Maps can reveal the location of orebodies which contain higher percentages of magnetite or pyrrhotite than the surrounding rocks.

Conductivity thickness is the "parameter-pair" measured with the electromagnetometer. Materials which conduct electronically, metallic sulphides and graphite, have higher conductivity-thickness values than electrolytic conductors such as clays (in overburden) and ion-rich sloughs or creeks, however, there is considerable overlap.

In general, the electromagnetic responses encountered by an electromagnetic survey are of four main types.

1. Bedrock conductors: including formational graphitic responses and massive sulphide targets.
2. Surficial conductors: overburden and lake responses.

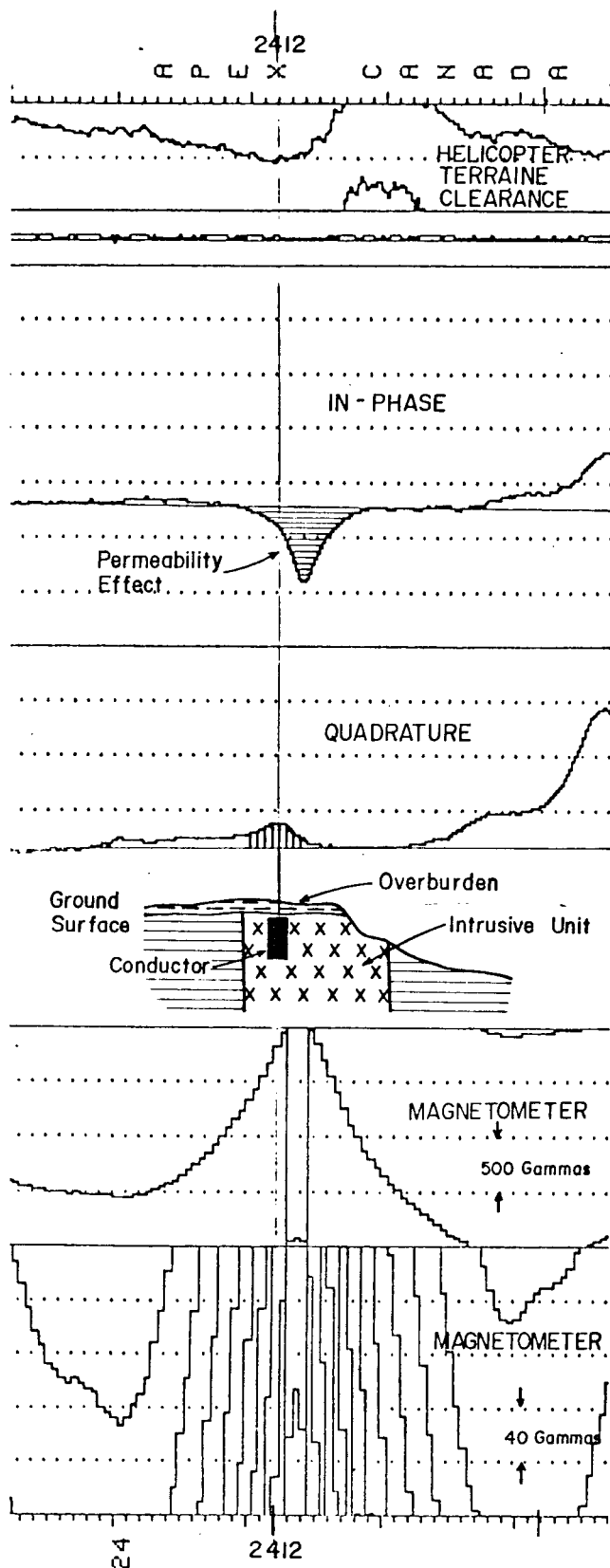
3. A combination of 1 and 2: when a conductive material overlays a bedrock conductor the response due to the bedrock is superimposed on the response of the overburden or lake response. Depending upon the conductivity contrasts, and the thickness of the overburden, some bedrock conductors can be recognized through the surficial layer.
4. "Negative" magnetic effects: When conductors are also magnetic, the electromagnetic responses can become distorted. The distortion tends to decrease the inphase response, often reversing the sign of the E.M. anomaly. Apparent depths and conductivity-thickness products, in this case, are generally not representative.

5. DISCUSSION OF RESULTS

The geophysical data have provided a useful overview of the conductivity and magnetic susceptibility responses over the Quesnel River, Maud Lake and Cantin Creek areas. See PLATE III and PLATE IIIA for the interpretation of the geophysical data.

No strong conductive response was recorded over the area of known mineralization in the Quesnel River area, however, a weak response was recorded nearby on L19. See FIGURE 2 for an interpretation of the record L19. (A schematic diagram has been provided with each Figure. They are meant to show the relative location and attitudes of the anomalies and will not reflect the complexity of the true geological situation.)

The response on L19 represents a very weak conductor and is within the geological noise level of the area (i.e. response could be due to overburden).

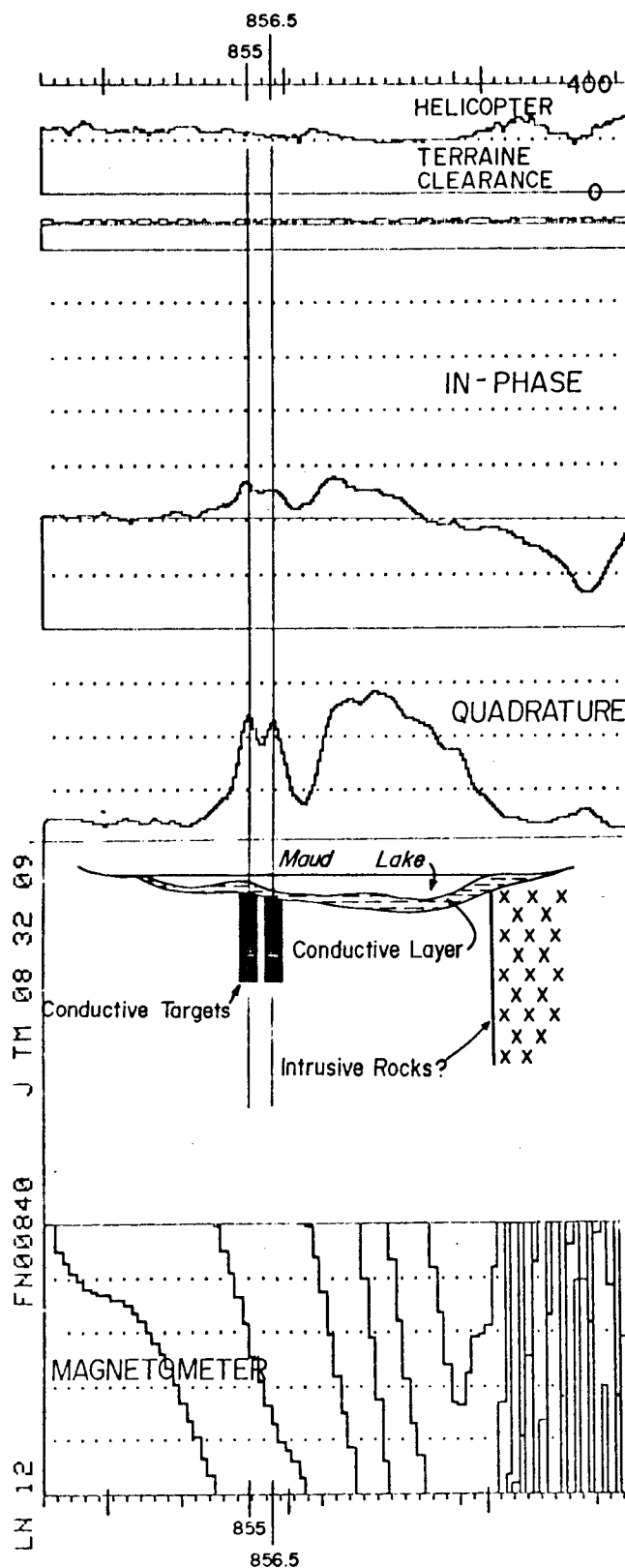


ANOMALY 2412
 CONDUCTANCE LOW
 DEPTH 2-5 meters

FIGURE 4
 DETAIL ANOMALY
 LINE 19-QUESNEL RIVER

A response recorded over the Maude Lake project has been interpreted as anomalous. The causative source lies underwater and is apparently a steeply dipping target. Although it is of low conductance, its peaked nature indicates a bedrock source. The depth to the top of the conductor is shallow, possibly coming to the bedrock-water interface.

No electromagnetic responses were recorded over the Cantin Creek project that were considered anomalous. See PLATE IIIA for an interpretation of the geophysical data.



TARGET 1

ANOMALY 855

CONDUCTANCE LOW

DEPTH 3-10 meters

ANOMALY 856.5

CONDUCTANCE LOW

DEPTH 3-10 meters

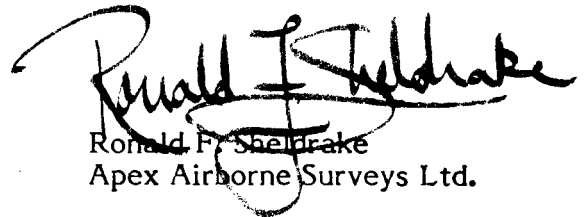
FIGURE 5

DETAIL ANOMALY
LINE 12 - MAUD LAKE

6. CONCLUSIONS AND RECOMMENDATIONS

The geophysical data have indicated an anomalous response in the Maud Lake Area that warrants investigation. Although the response lies underwater, the target should be further assessed with horizontal loop E.M. traverses. A drill target ought to be identifiable from that data.

Respectfully submitted



Ronald F. Shelldrake
Apex Airborne Surveys Ltd.

BIBLIOGRAPHY

Geonics Limited (Toronto) - Technical Note TN-4 - "Interpretation Aids for E.M.
33 Helicopter Electromagnetic System".

APPENDIX I

APPENDIX I

INSTRUMENTATION

Electromagnetic Instrument

Type: Helicopter mounted in-phase - quadrature instrument manufactured by Geonics Limited, Toronto, Ontario.

Coils: The transmitting and receiving coils are co-axial 6 metres apart in a towed bird 30 metres below the helicopter. The coil axis is in the direction of travel.

Frequency: 918 Hz

Noise Level: Approximately 1/4 ppm (0.6 second time constant).

Magnetometer

Type: Proton precession model G803 manufactured by Geometrics Corporation, Toronto.

Cycling Time: 1.0 second.

Sending Head Design: 5 inch diameter Toroid.

APPENDIX I (cont'd)

Ancillary Equipment:

UDAS Digital Acquisition System with recorder.

Geocam 35 mm Flight Path Camera

Bonzer Radio Altimeter

Geometrics G806 Magnetic Base Station and recorder.

Helicopter:

Gazelle Helicopter supplied by Highwood Airservices Ltd.
Calgary, Alberta.

APPENDIX II

APPENDIX II

THE "ANALOGUE" CHART AND FLIGHT PATH RECOVERY

The flight tape is a roll of chart paper which moves through the digital printer at a speed of 5.48 cm per minute.

The digital printer chart facilitates the use of a full alpha-numeric system. All "header" sensitivity and fiducial information is printed automatically.

The chart is 520 dots wide as follows:

DOTS:

0 - 100	magnetometer fine - 2 gammas per dot.
100 - 180	magnetometer coarse - 25 gammas per dot.
180 - 320	quadrature 0.6 sec T.C. 1/4 ppm per dot.
320 - 460	in phase 0.6 sec T.C. 1/4 ppm per dot.
460 - 470	powerline monitor
460 - 470	spherics monitor
480 - 520	altimeter 10 feet per dot (0 - 400 feet).

The helicopter flight path is recovered from 35 mm film, which is exposed at 2.0 second intervals during the flight traverses. After processing and anotating, recognizable fiducials are pin-pointed on the photomosaic map.

APPENDIX III

FLIGHT LOG

Project Dome Exploration

Flight No. 7

Area Quesnel River

Date February 26, 1981

LN	Start FID	End FID	TIME	PRODUCTION		COMMENTS
				End FID	Start FID	
CAL	0	45	11:22			
20	46	48				Scrub
20	49	168				
21	169	271				
22	272	397				
23	398	517				
24	518	670	11:50			
25	671	795				
26	796	939				
27	940	1069				
28	1070	1214				
29	1215	1355				
30	1356	1501				labelled 09
31	1502	1631				
32	1632	1765				labelled 332
33	1766	1902				
34	1903	2023				
35	2024	2153				
36	2154	2283	12:48			
35	2284	2336				Scrub?
19	2337	2474				
18	2475	2614				
17	2620	2744				
16	2745	2887				
15	2887	3016				
14	3017	3156				
13	3157	3271				
CAL	3272	3296	13:27			
CAL	3297	3381				test over pit

FLIGHT LOG

Project _____

Flight No. 8

Area Quesnel River

Date February 26, 1981

[illegible]

FLIGHT LOG

Project _____

Flight No. 9

Area Maude Lake

Date February 27, 1981

LN	Start FID	End FID	TIME	PRODUCTION		COMMENTS
				End FID	Start FID	
CAL	0	18	07:53			Calibrate
1	19	58	07:56			
1	59	125				
2	126	193				
3	194	266				
4	267	329				
5	330	402				
6	403	467				
7	468	533				
8	534	607				
9	608	680	08:23			
10	681	756				
11	757	839				
12	840	928				
13	929	1004				
14	1005	1087				
15	1088	1161				
15	1162	1162				Scrub
16	1163	1238				
17	1239	1313				
18	1314	1384	08:49			
19	1390	1433				
19	1434	1438				Scrub
19	1439	1517				
20	1518	1616				
21	1617	1697				
22	1698	1791				
23	1792	1808				
23	1809	1891				
24	1892	1978				
25	1979	2072				
25	2073	2073				Scrub
TIE	2074	2166	9:23			
TIE/2	2167	2267				

FLIGHT LOG

Project _____

Flight No. 9 (Cont.)

Area Maude Lake

Date February 27, 1981

[illegible]

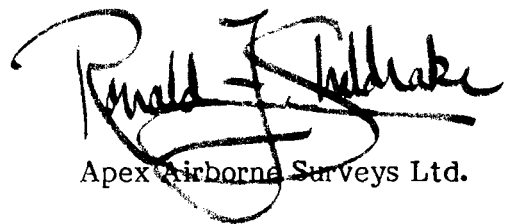
CERTIFICATION

I, RONALD F. SHELDRAKE, of the City of Vancouver, Province of British Columbia, hereby certify as follows:

1. I am President of **Apex Airborne Surveys Ltd.** a company incorporated under the laws of the Province of British Columbia.
2. The Vancouver Office of **Apex Airborne Surveys Ltd.** is located at Suite 512 -625 Howe Street, Vancouver, British Columbia.
3. I received my B.Sc., in Geophysics from the University of British Columbia in May 1974.
4. I have practised my profession since that date.
5. I did not examine the claims area, but I am not aware of any claim conflict and believe that the data presented herein is reliable.
6. I have no interest, direct or indirect, in DOME EXPLORATION LTD. or its affiliates, nor do I expect to receive any.
7. I consent to the use of this report in or in connection with a Prospectus or in a Statement of Material Facts.

May 25, 1981

Ronald F. Sheldrake



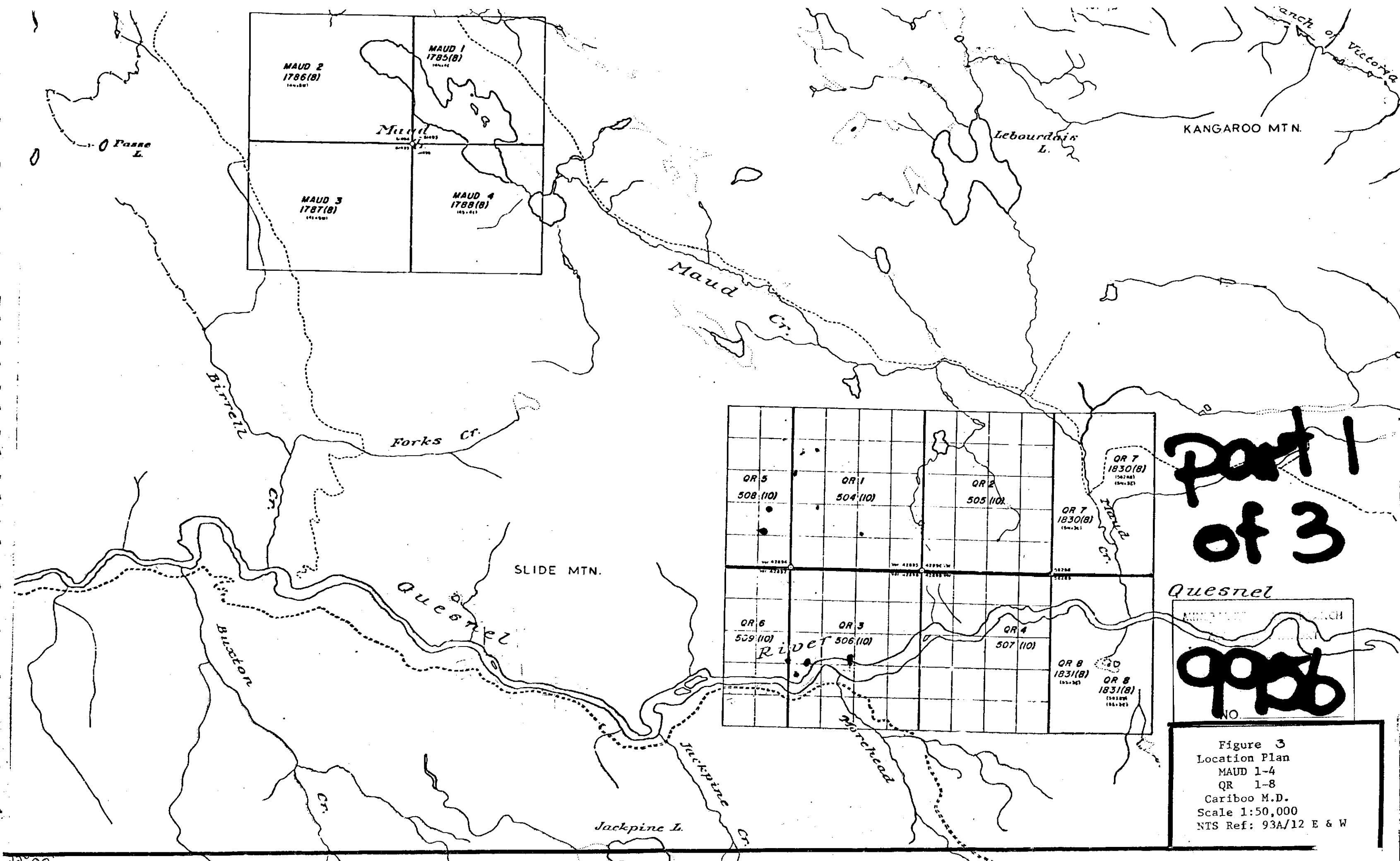
Apex Airborne Surveys Ltd.

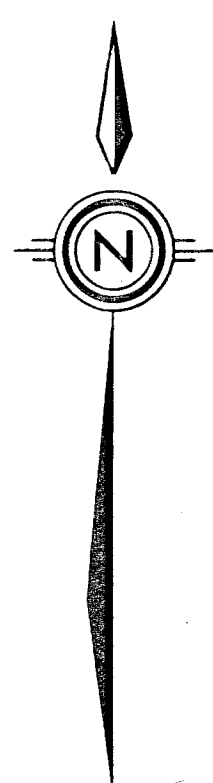
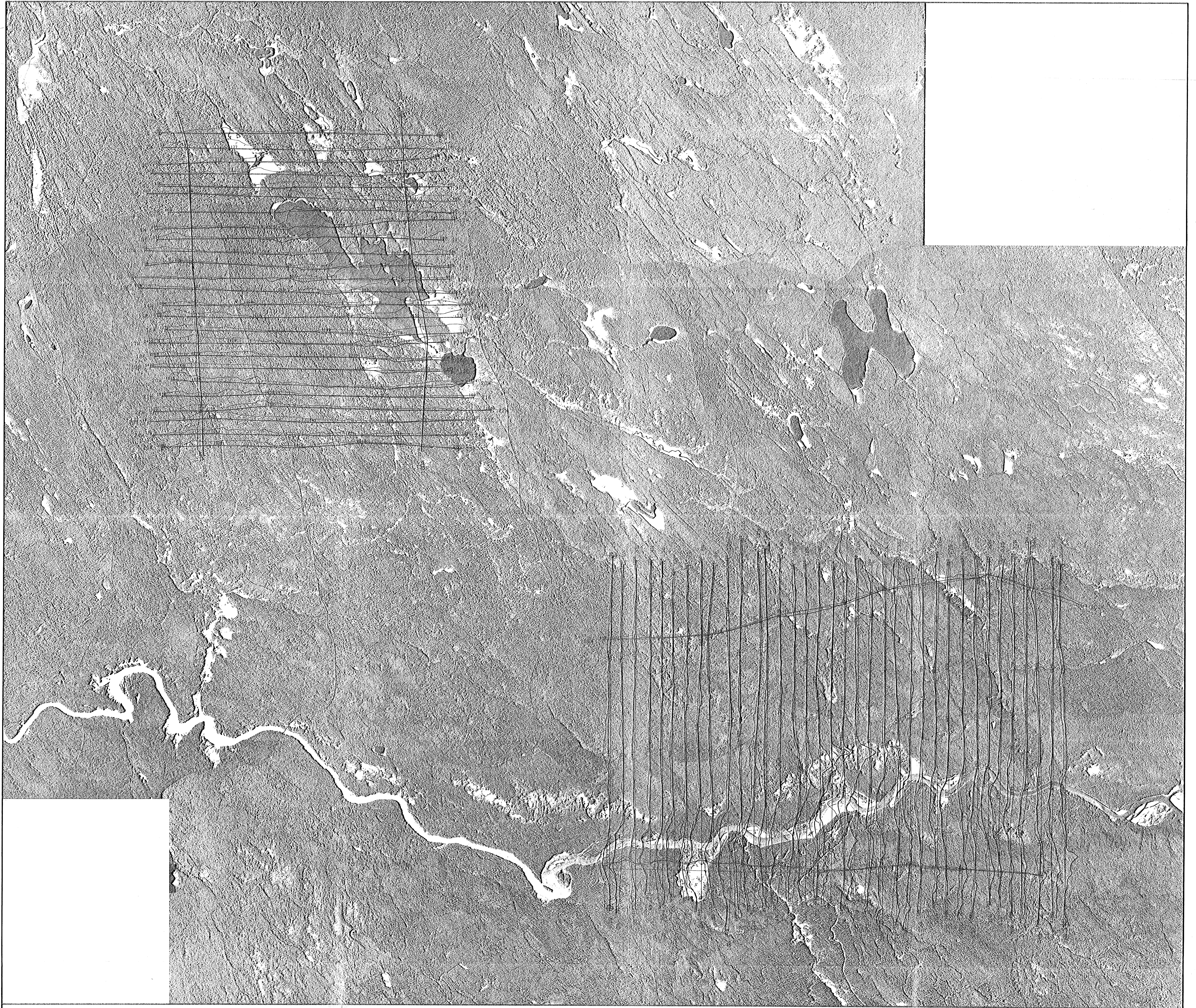
May 25, 1981

STATEMENT OF COSTS

Type of Survey:	Helicopter Electromagnetic and Magnetic
Date(s) of Fieldwork:	February 26-28, 1981 - 3 days
Survey Kilometres:	395 kilometres
Cost per linear Kilometre:	\$60
Additional Charges:	
Total cost of Survey:	$(395 \text{ km} \times 60) = \$23,700$

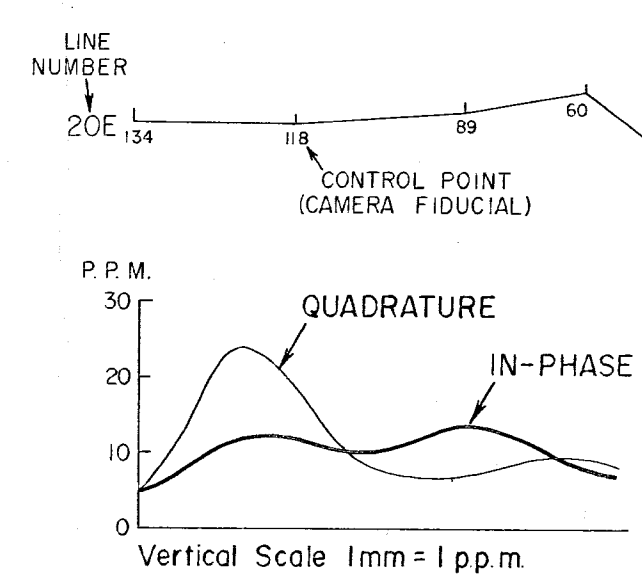
From statement,
Mand Lake portion is \$7680.00





NOTES:

- INSTRUMENTATION: GEONICS 33-1
- COIL SEPARATION: 6 METRES-COAXIAL
- FREQUENCY: 98 HRTZ
- NOISE LEVEL: LESS THAN 1/2 PPM
- SENSOR TERRAINE CLEARANCE: 35 METRES
- HORIZONTAL CONTROL: 35 M.M. FILM, FLIGHT PATH RECOVERY FROM PHOTO MOSAICS
- VERTICAL CONTROL: RADAR ALTIMETER



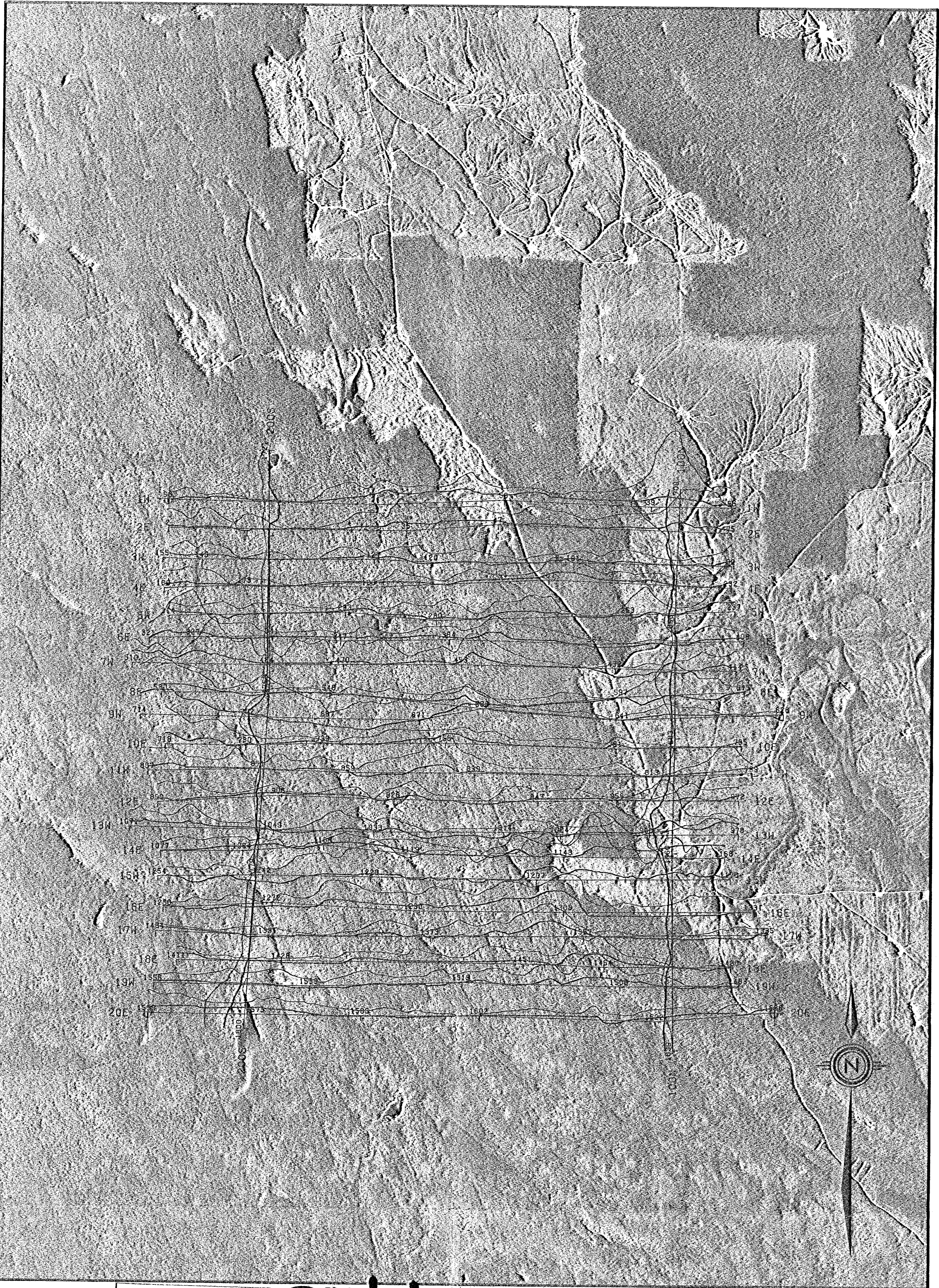
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9956
NO.

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PLATE I
ELECTROMAGNETIC PROFILES MAP
QUESNEL RIVER & MAUD LAKE AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA
DOMEX EXPLORATION (CANADA) LTD.

Scale 1:20,000
Metres 400 200 0 400 800 1200 1600 2000 Metres
N.T.S. 93A/12 HYDRAULIC

To accompany a report by Ronald F. Sheldrake dated May 25, 1981



NOTES

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9956
NO.

**part 1
of 3**

- INSTRUMENTATION: GEONICS 33-1
- COIL SEPARATION: 6 METRES-COAXIAL
- FREQUENCY: 918 HRTZ
- NOISE LEVEL: LESS THAN 1/2 P.P.M.
- SENSOR TERRAINE CLEARANCE: 35 METRES
- HORIZONTAL CONTROL: 35 M.M. FILM,
FLIGHT PATH RECOVERY FROM PHOTO MOSAICS
- VERTICAL CONTROL: RADAR ALTIMETER

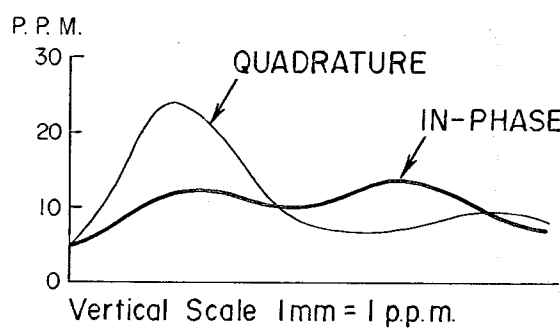
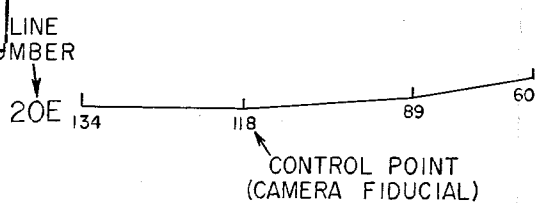
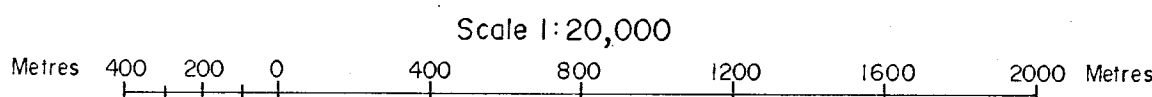


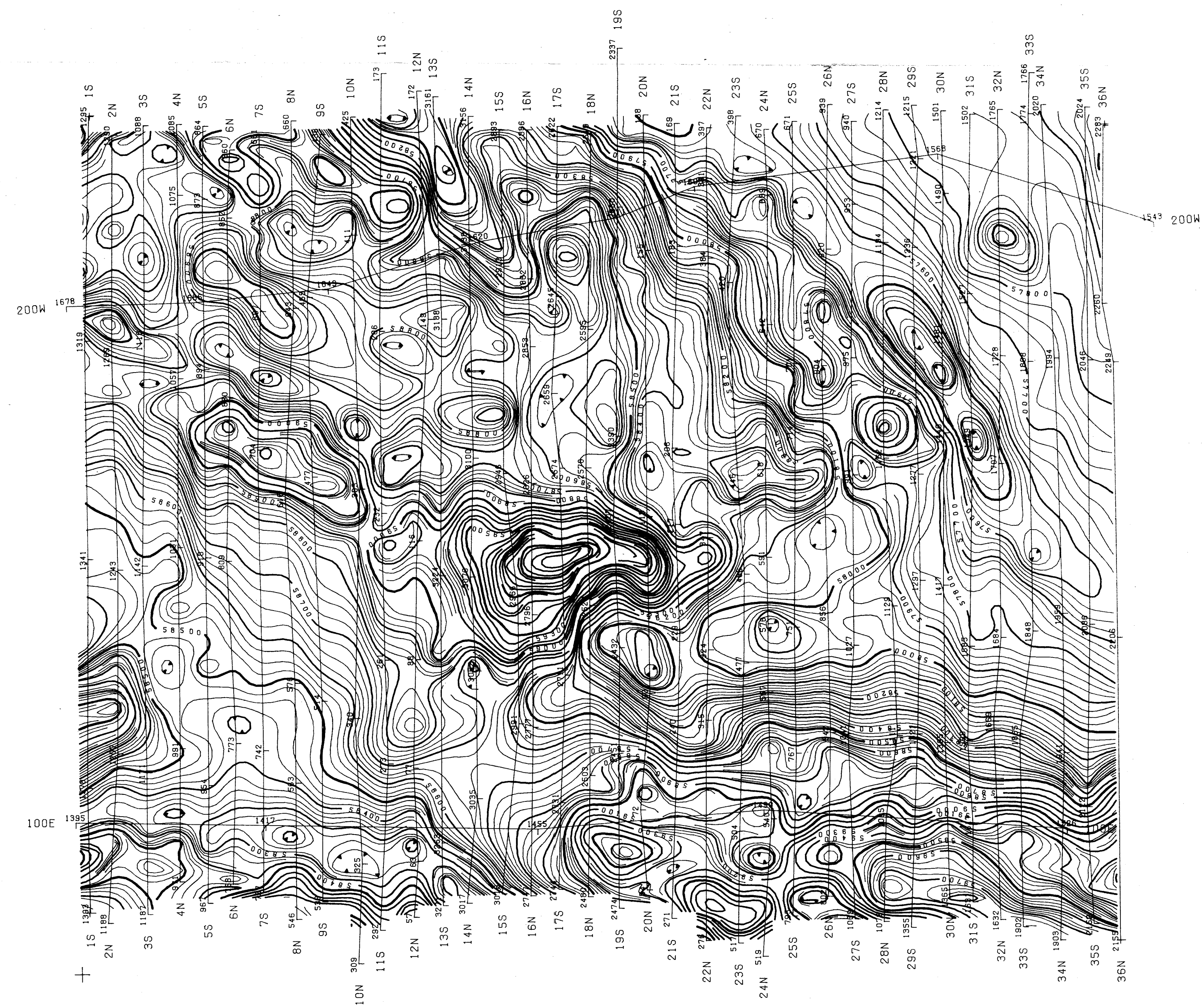
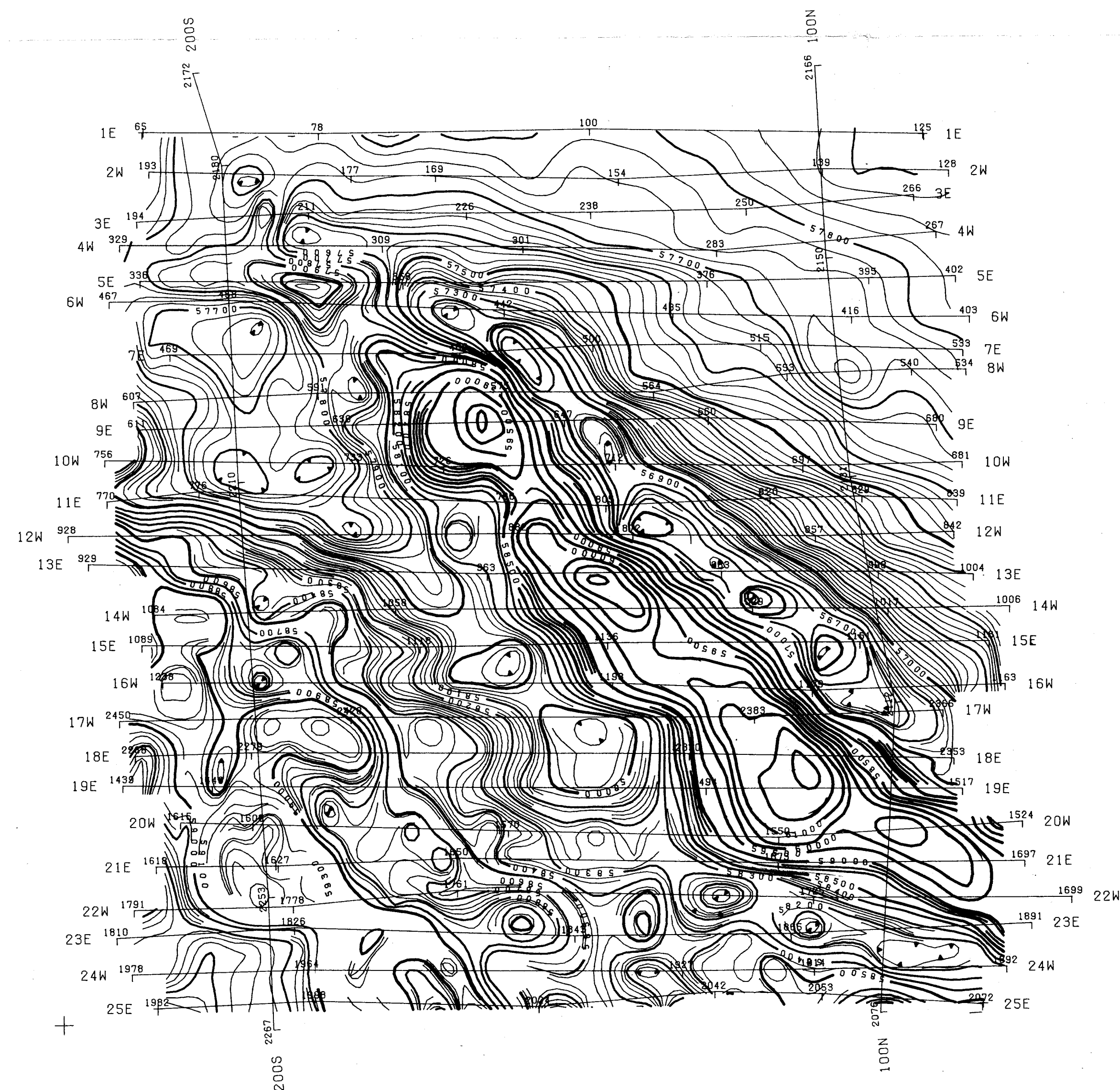
PLATE I-A

ELECTROMAGNETIC PROFILES MAP

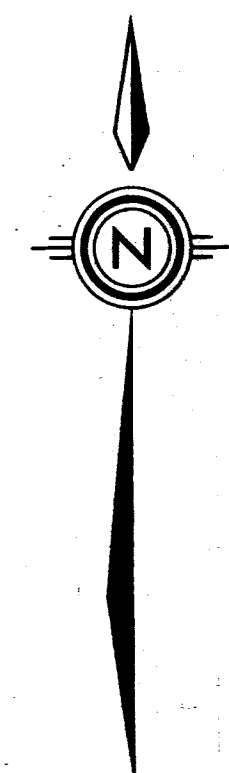
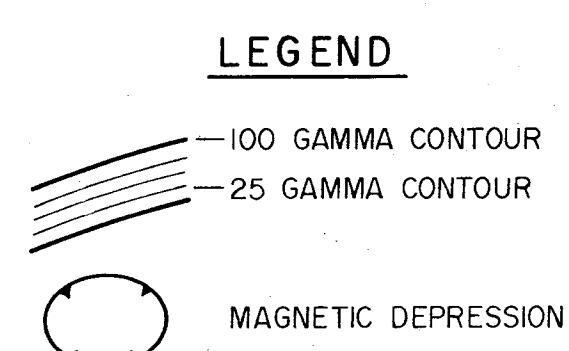
CANTIN CREEK AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA

DOMEXPLORATION (CANADA) LTD.





- NOTES:
- VERTICAL CONTROL - RADAR ALTIMETER (MEAN SENSOR HEIGHT 50 METRES)
 - HORIZONTAL CONTROL - 35 M.M. FILM, RECOVERY ON PHOTO MOSAICS.
 - REGIONAL TOTAL FIELD VALUE: 58,000 GAMMAS
 - MAGNETIC DECLINATION: 23° E.
 - MAGNETIC INCLINATION: 72°
 - CONTOURS UNCORRECTED FOR REGIONAL GRADIENT.
 - MAGNETOMETER: GEOMETRICS G-803



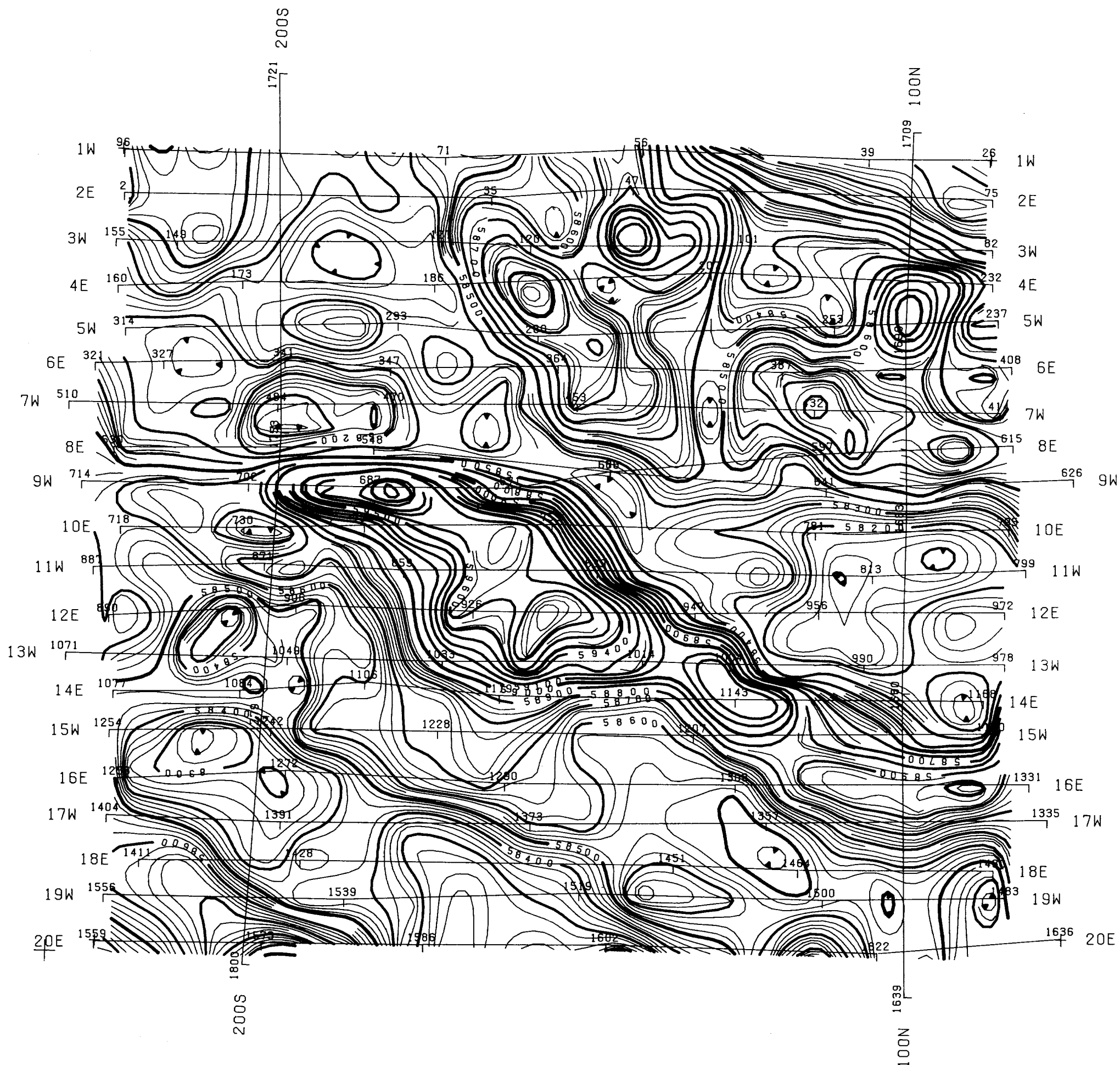
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9956

part 1 of 3

PLATE II
TOTAL FIELD MAGNETIC MAP
QUESNEL RIVER & MAUD LAKE AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA
DOME EXPLORATION (CANADA) LTD.

Scale 1:20,000
Metres 400 200 0 400 800 1200 1600 2000 Metres
N.T.S. 93A/12 HYDRAULIC

To accompany a report by Ronald F. Sheldrake dated May 25, 1981



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ASSESSMENT
9956
NO.

NOTES:

- VERTICAL CONTROL — RADAR ALTIMETER
(MEAN SENSOR HEIGHT 50 METRES)
- HORIZONTAL CONTROL — 35 M.M. FILM,
RECOVERY ON PHOTO MOSAICS.
- REGIONAL TOTAL FIELD VALUE:
58,000 GAMMAS.
- MAGNETIC DECLINATION: 23° E.
- MAGNETIC INCLINATION: 72°
- CONTOURS UNCORRECTED FOR
REGIONAL GRADIENT.
- MAGNETOMETER: GEOMETRICS G-803

LEGEND

- 100 GAMMA CONTOUR
- 25 GAMMA CONTOUR
- MAGNETIC DEPRESSION

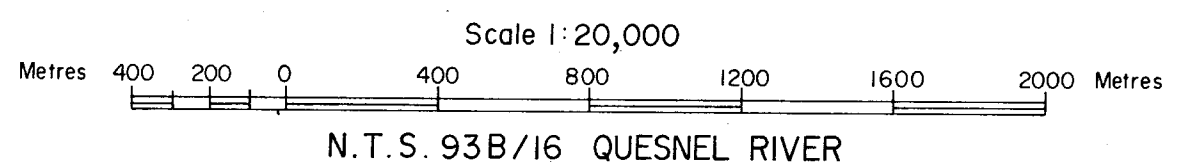
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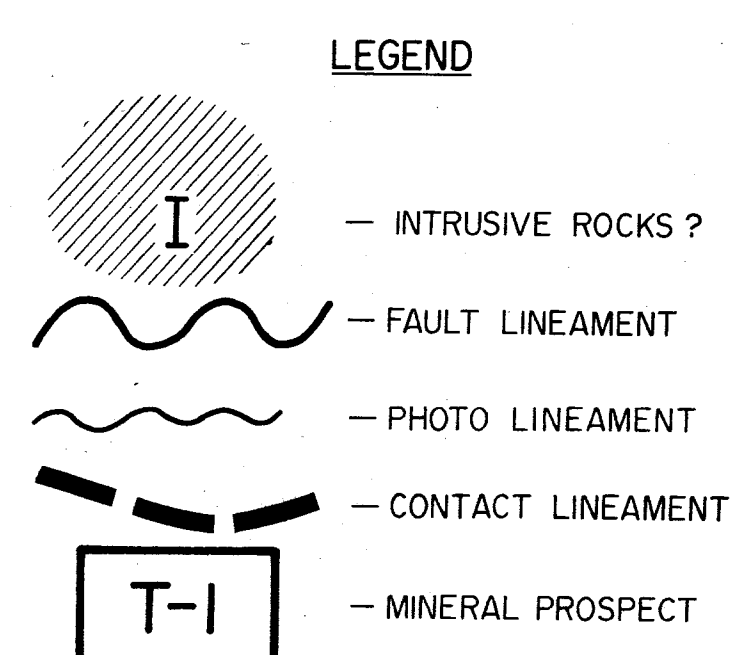
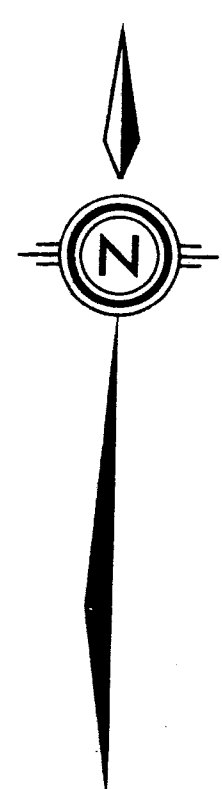
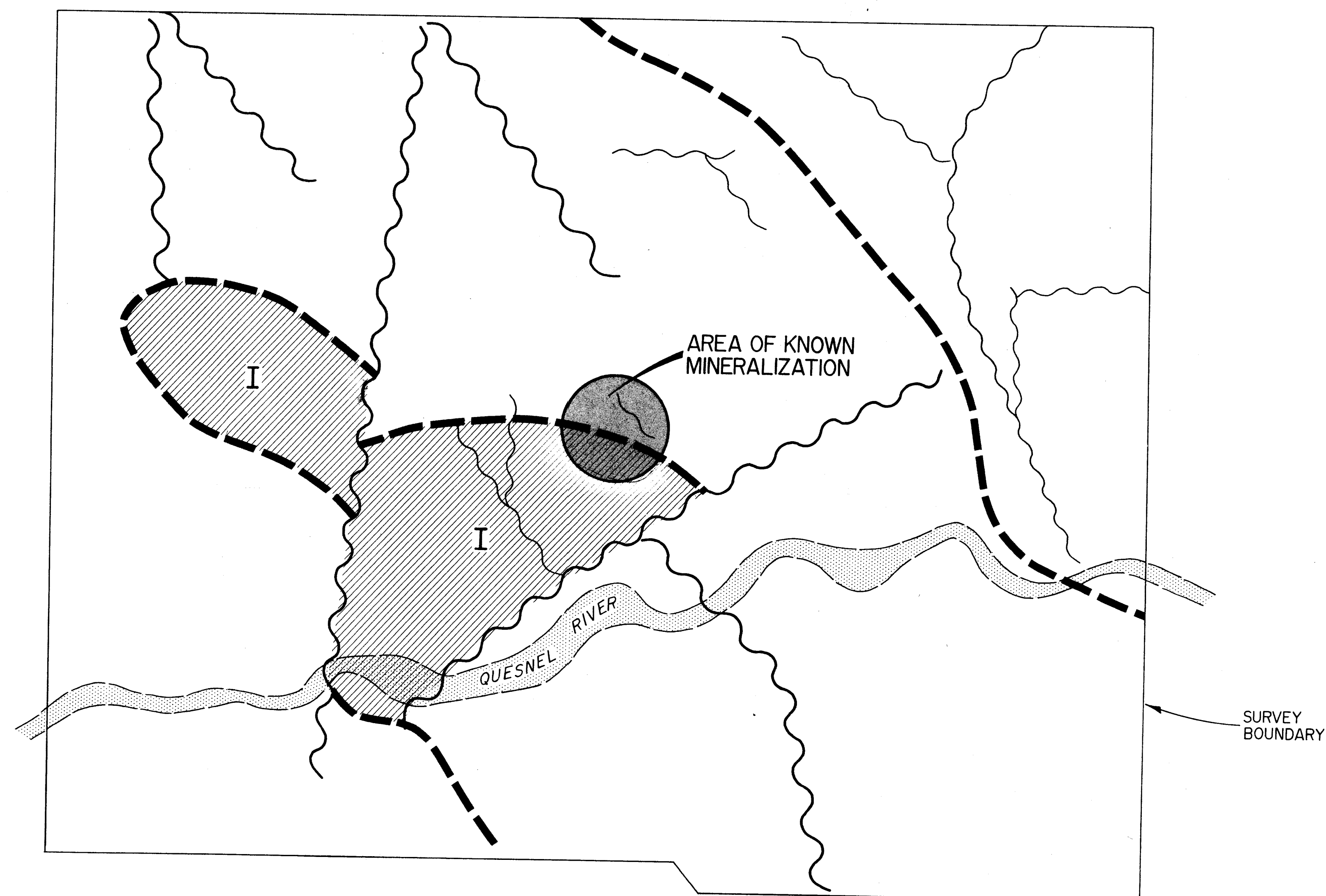
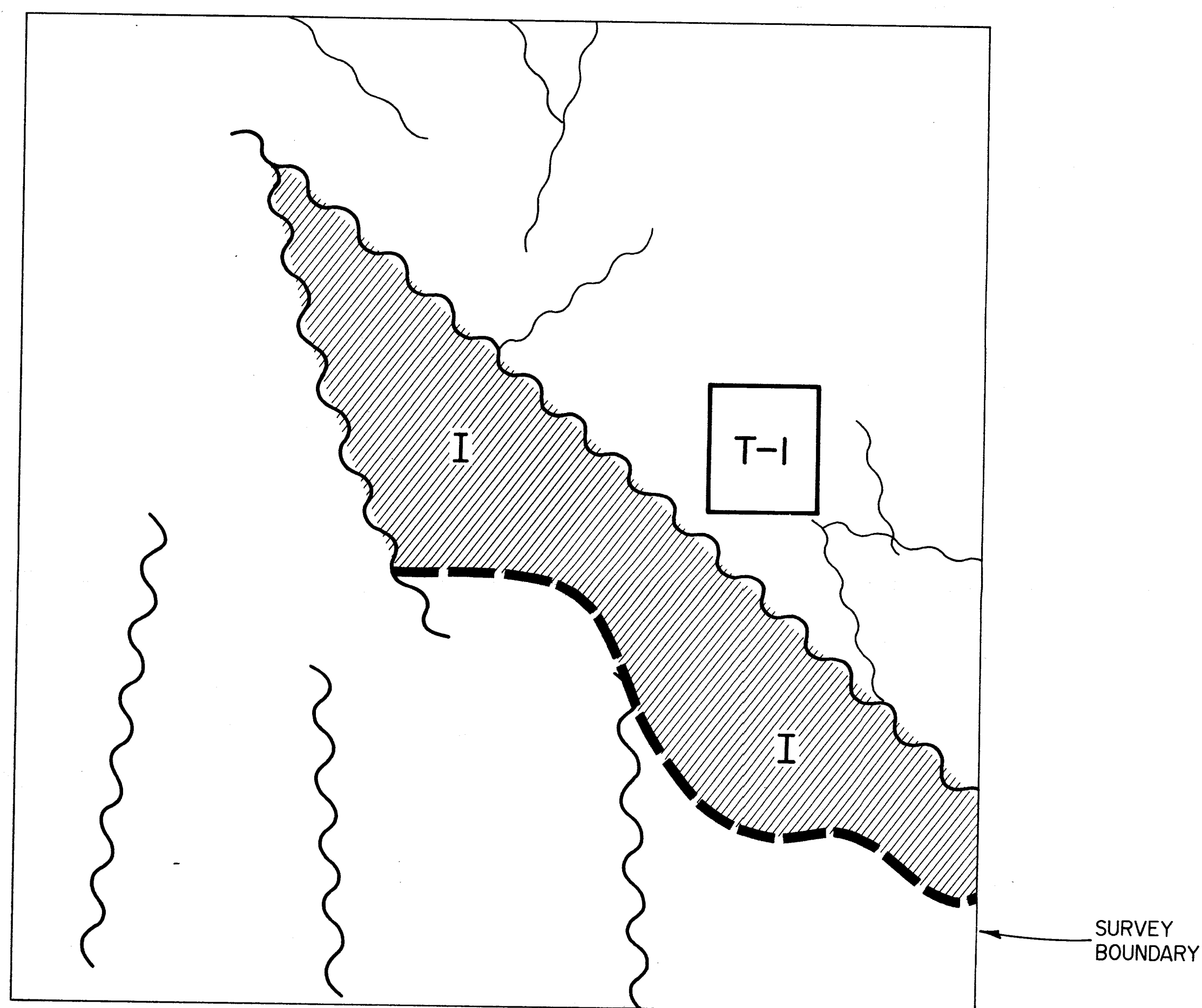
PLATE II-A

TOTAL FIELD MAGNETIC MAP

CANTIN CREEK AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA

DOMEX EXPLORATION (CANADA) LTD.





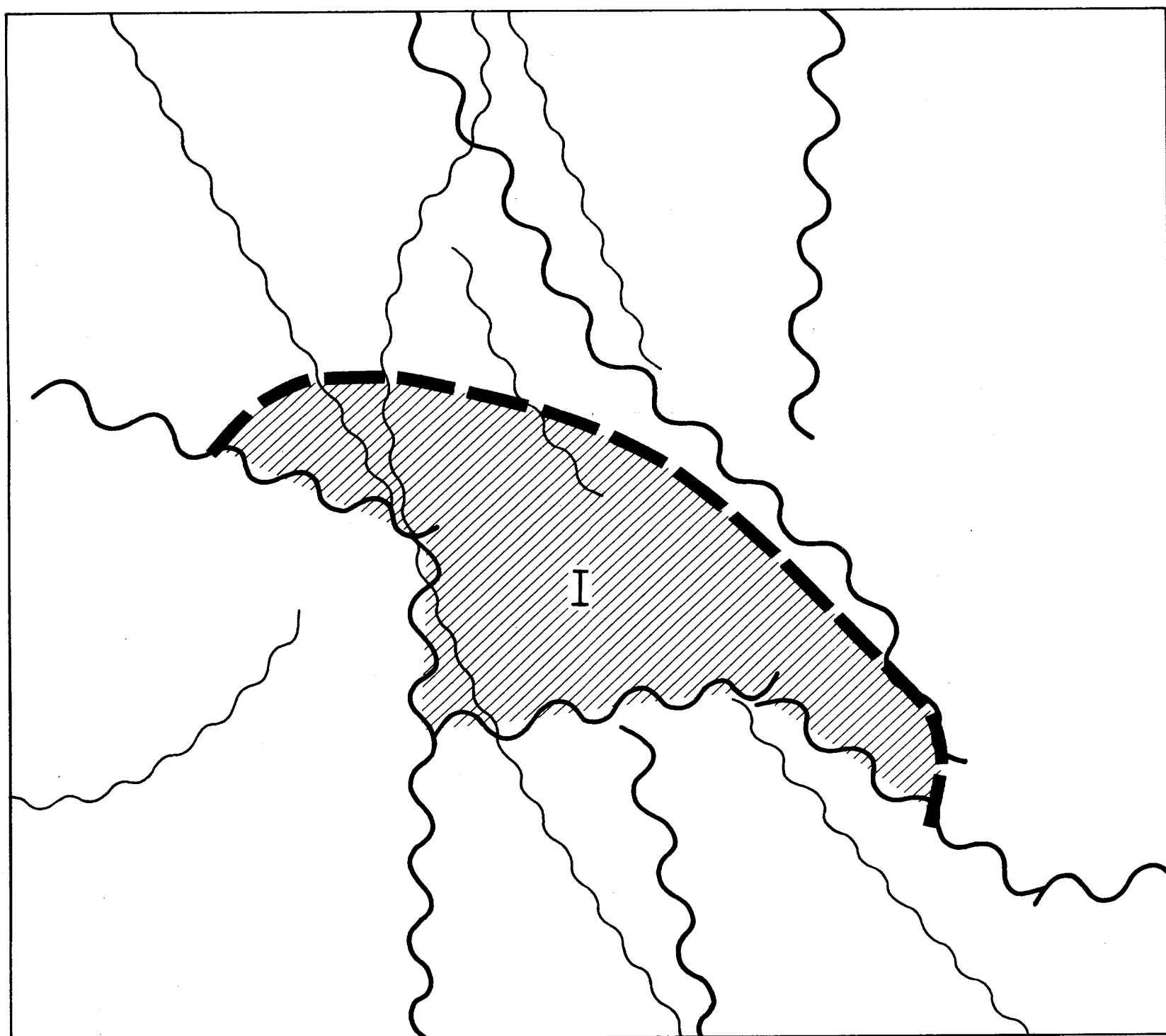
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
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PLATE III
INTERPRETATION MAP
QUESNEL RIVER & MAUD LAKE AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA
DOMEXPLORATION (CANADA) LTD.

Scale 1:20,000
Metres 400 200 0 400 800 1200 1600 2000 Metres
N.T.S. 93A/12 HYDRAULIC

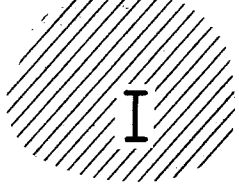



To accompany a report by Ronald F. Sheldrake dated May 25, 1981



SURVEY
BOUNDARY

part 1 of 3

LEGEND

-  — INTRUSIVE ROCKS ?
-  — FAULT LINEAMENT
-  — PHOTO LINEAMENT
-  — CONTACT LINEAMENT

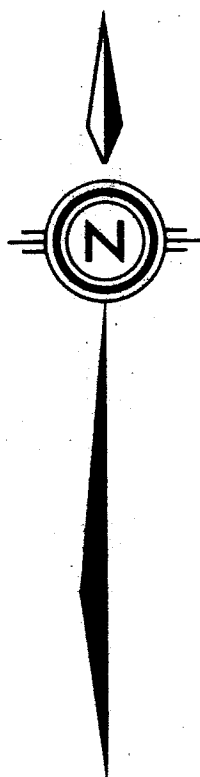


PLATE III-A
INTERPRETATION MAP
CANTIN CREEK AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA
DOME EXPLORATION (CANADA) LTD.

Scale 1:20,000
Metres 400 200 0 400 800 1200 1600 2000 Metres
N.T.S. 93B/16 QUESNEL RIVER

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