

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL

REPORT

- on the -

FOGGY #11 CLAIM
Kamloops Mining Division
British Columbia

- for -

BARRIER REEF RESOURCES LTD.,
#904-675 West Hastings Street,
VANCOUVER, B.C. V6B 1N2.

COVERING: Foggy #11 (20 units).

WORK PERFORMED: August 23, 1979 to April 15, 1980.

LOCATED: (1). 51°32'N; 119°53'W.
(2). NTS Map 82M/12W.
(3). 7.5 km. south of Birch Island, B.C.

PREPARED BY:

KERR, DAWSON & ASSOCIATES LTD.,
#1 - 219 Victoria Street,
KAMLOOPS, B. C.

J. M. Dawson, P. Eng.,
April 15, 1980.

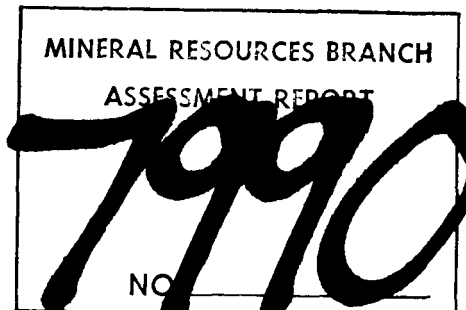


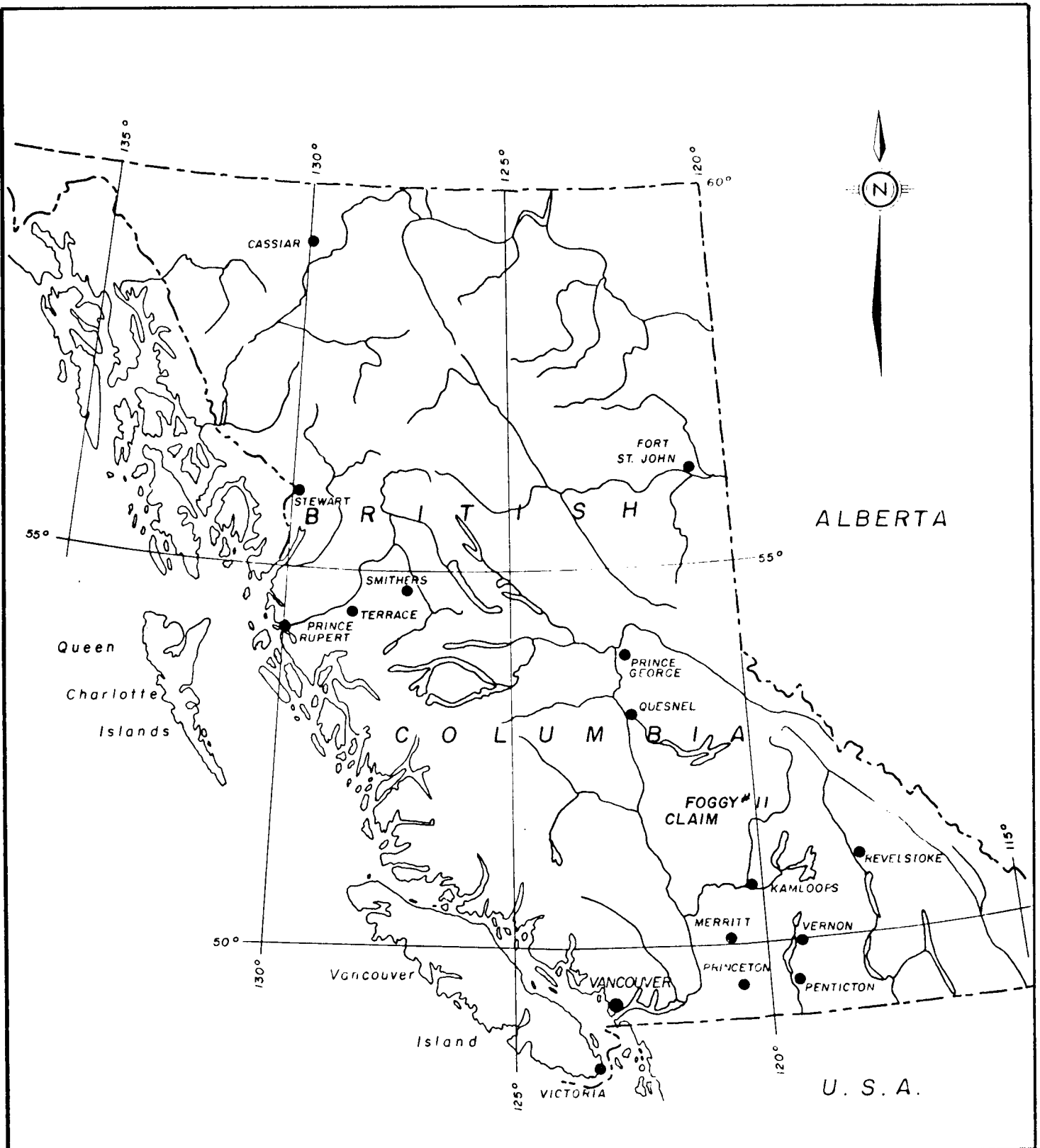
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BARRIER REEF RESOURCES LTD.	
LOCATION MAP	
FOGGY #II CLAIM	
KAMLOOPS MINING DIVISION, B.C.	
Technical Work by Kerr, Dawson & Assoc. Ltd.	Date : Mar 1980
Scale : 1cm. = 87 km.	Dwg No. 193-1

INTRODUCTION

The subject claim was originally staked as Foggy #7 in January, 1979. It was abandoned and restaked as Foggy #11 when discovery of a zone of massive sulphides warranted a more definitive delineation of various property boundaries.

A geochemical survey and reconnaissance geological and geophysical surveys were performed on Foggy #11 claim during the 1979 field season. Maps showing the results of these surveys are appended to this report.

SUMMARY AND CONCLUSIONS

- (1). This report covers the Foggy #11 claim which consists of 20 metric units, the northern half of which covers ground in good standing owned by Consolidated Rexpsar Minerals and Chemicals Ltd. The property is located in moderate terrain in southern British Columbia and is road accessible.
- (2). The subject ground has been staked several times in previous years; however, the massive sulphide horizon was only exposed by a very recent logging road. Attention was first drawn here when an airborne Dighem II survey outlined an area of low resistivity within which the massive sulphide outcrop was later located.
- (3). The area is underlain by typical phyllites and quartz-sericite schists of the Eagle Bay succession. These rocks host a conformable, massive pyrite

horizon which strikes northeast and dips gently? northwest. This horizon is at least 3 to 4 meters thick and extends an unknown distance to the NE and SW along strike. Minor copper, lead zinc and silver values are present in the massive sulphide outcrop.

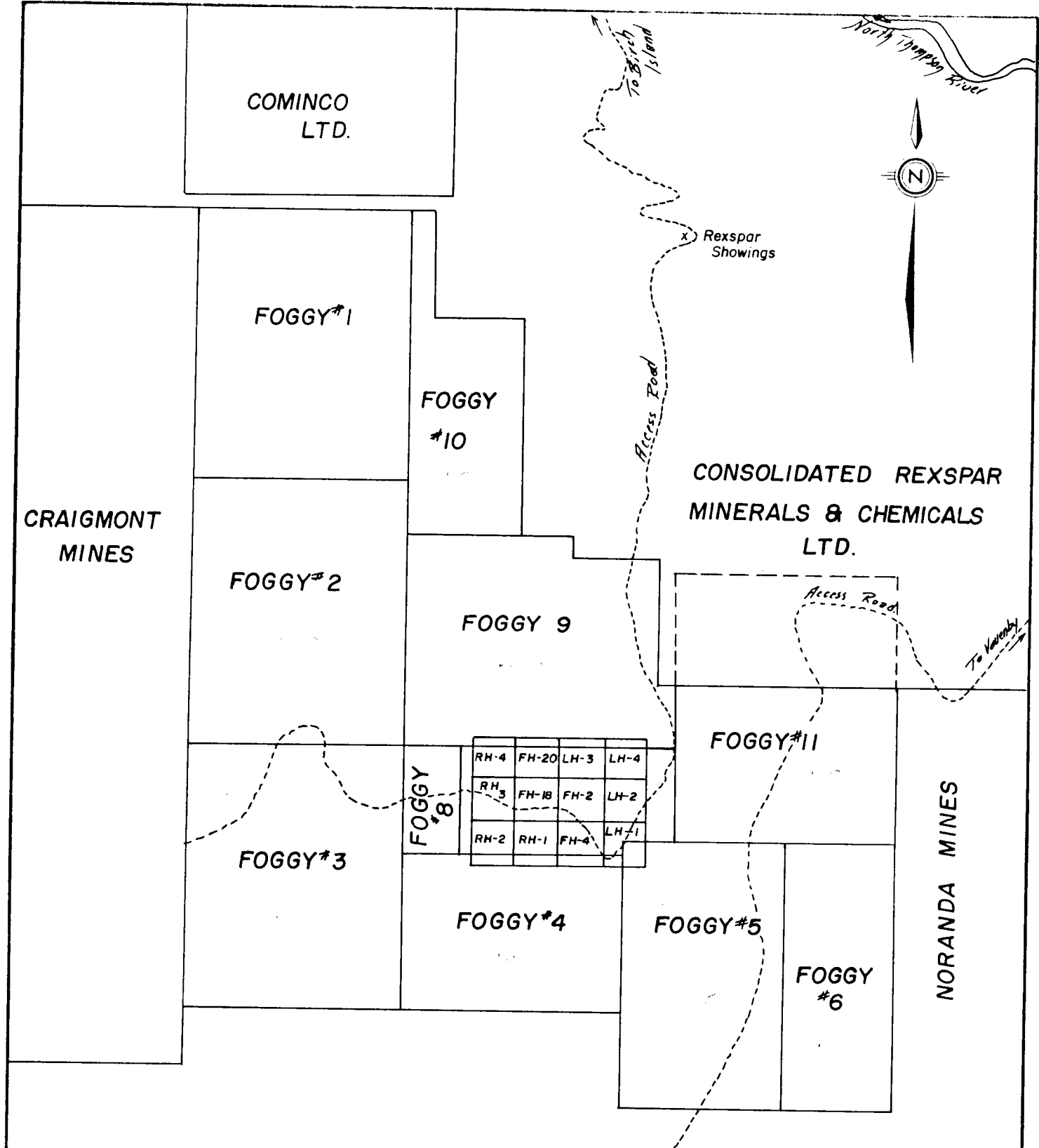
- (4). Soil geochemistry and mineralized float indicate that the massive sulphide horizon could extend at least 700 meters to the southwest and possibly further to the northeast. However, much of the northeast extension would be on ground owned by Rexspar-Dennison. It is also possible that other parallel sulphide horizon(s) may be present.
- (5). This mineral occurrence has been examined only in a preliminary way and much detailed work remains to be done. Although the occurrence contains only low copper, lead, zinc, and silver values in its one known outcrop, these percentages could change over relatively short distances along strike and down dip.

PROPERTY

The property consists of one 20 unit metric claim as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Expiry Date</u>
Foggy #11	2023	47793	Aug. 23/80

Approximately half this claim overlies old two post claims of Consolidated Rexspar Minerals and Chemicals Ltd. (See figure 193-10).



RH-4	FH-20	LH-3	LH-4
RH-3	FH-18	FH-2	LH-2
RH-2	RH-1	FH-4	LH-1

To accompany a report by J.M. Dawson, P.Eng.

BARRIER REEF RESOURCES LTD.

CLAIM MAP

FOGGY II CLAIM

KAMLOOPS MINING DIVISION, B.C.

Tech. Work By: Kerr, Dawson & Assoc. Ltd.	Scale: 1:50,000
Drawn By: W.G.	Date: Mar. 1980.
Approved By: J.M.D.	Fig No. 193-2

N.T.S. NO.

LOCATION AND ACCESS

The property is located in south-central British Columbia about 100 km. NNE of the city of Kamloops. The property lies 7 miles south of the village of Birch Island and immediately south of the Rexspar uranium - fluorite property. Approximate geographic center of the property is at $51^{\circ}32'$ north latitude and $119^{\circ}54'$ west longitude.

Access to the property is gained by driving east from Birch Island along the south side of the North Thompson River for about 16 km. Here the Jones Creek logging road leads south and west across Baker Creek and Lute Creek to the subject claims. This road distance is about 20 km.

PHYSIOGRAPHY AND VEGETATION

The claim covers part of a northerly trending ridge lying between Foghorn Creek and Lute Creek. Most of the topography is gently sloping to the north and northeast except for that part covering the steep east slope of Foghorn Creek valley. Elevations vary between 4,800 and 6,000 feet a.s.l. However, most of the area of interest is at approximately 5,500 feet a.s.l.

Most of the property is covered by a dense growth of mature spruce, cedar, and fir. A number of very recent logging slashes are the only open areas.

Roads and creeks provide the only opportunity for bedrock to outcrop in this gentle terrain.

PREVIOUS WORK

This district has seen a number of bursts of activity. First in the early 1950's during the original work on the Rexspar showings (about 4 km. NNW) and then in the late 1960's and early 1970's with the discovery of the Harper Creek copper property (about 4 km. east). A number of old roads and grid cut-lines appear to date from the earliest Rexspar activity. The Jam claims which cover part of the area of interest were staked in 1968 and later acquired by Rexspar-Dennison. There is no previous mention of work done on the mineral occurrences described in this report.

In the spring of 1979 a Dighem II airborne geophysical survey was flown over the area of the Foggy 11 claim. One area of lower resistivity was outlined on the claim. Ground investigation of this area revealed one outcrop of a conformable body of massive sulphides.

GEOLOGY

The property is underlain by typical, buff-coloured phyllite and quartz-sericite schist of the Eagle Bay succession. Outcrops are scarce but the overall attitude of the foliation-bedding(?) appears to be northeast with a gentle to moderate dip to the northwest.

MINERALIZATION

Minor pyrite is commonly found as scattered, disseminated grains in Eagle Bay phyllite. It seldom makes up more than 5% of the rock volume.

Minor chalcopyrite and traces of galena were observed in two outcrops in creeks on Jam #9 and Jam #11 claims (see figure 193-10). This mineralization occurs as fracture plane coatings in buff-coloured phyllites which contain frequent patches of bright, orange-brown limonite. Disseminated pyrite is common.

At 5+25S, 1+15E (see grid) a new logging road exposes an outcrop of massive pyrite with occasional thin layers of sphalerite and minor chalcopyrite and galena. This outcrop is not well exposed but seems to be part of a conformable sulphide layer at least 3 to 4 meters thick. Its attitude appears to be similar to the prevailing bedding-foliation of the enclosing phyllites - quartz sericite schists. Some of this sulphide outcrop was used as road material and numerous boulders of massive pyrite are strewn along the road for about 150 meters west.

Four samples of the mineralized material were assayed and reported as follows:

	<u>Au (oz./t)</u>	<u>Ag (oz./t)</u>	<u>Cu (%)</u>	<u>Pb (%)</u>	<u>Zn (%)</u>
Semi-massive pyrite in siliceous rock	Tr.	Tr.	0.11	Tr.	0.018
Siliceous, chlorite-sericite schist with 10-20% disseminated pyrite.	Tr.	Tr.	0.04	0.02	0.05
Selected pieces of massive pyrite-no other visible sulphides; 10-15% quartz eyes.	Tr.	Tr.	0.19	0.035	0.05
Siliceous, quartz-sericite schist with layers of semi-massive pyrite and minor fine grained galena and sphalerite in places.	Tr.	1.48	0.19	0.26	0.33

No other outcrops of this sulphide layer were found; however, the surrounding area is virtually flat and uniformly overburden-covered.

About 600 meters southwest of this outcrop, on strike with it, and also with the trend of the Dighem II anomaly, a number of mineralized boulders are exposed along another logging road. About 15 such boulders were found and are roughly half of the massive pyrite type and half of silicified phyllite and quartz-sericite schist. They contain minor chalcopyrite and

occasional traces of galena and sphalerite - mostly
as fracture coatings. There are no outcrops in
this vicinity.

GEOCHEMISTRY

Soil samples were collected at 50 meter intervals on grid lines spaced 100 meters apart. The grid measured 1,000 meters by 1,000 meters and was positioned to cover most of the area of the Dighem II anomaly as well as possible extensions to the southwest (see figures 193-10, 193-11, and 193-12).

Samples were collected from the "B" horizon where possible (approximately 15 to 45 cm. deep). Sample stations were marked with flagging and the appropriate grid co-ordinates. After collection, samples were stored and shipped in waterproof kraft envelopes.

A total of 238 soil samples were collected and analysed for copper and zinc. Analysis was performed by Bondar, Clegg and Company Ltd. at their Vancouver laboratories. Samples were dried and sieved and an aliquot of the -80 mesh fraction obtained. Extraction was attained by using hot aqua regia with analysis by atomic absorption spectrophotometry.

The mean and standard deviation for both metals was computed and the data classified into the following categories:

Negative	0	-	Mean
Possibly Anomalous	Mean	-	(Mean + 1 Std. Dev.)
Probably Anomalous	(Mean + 1 Std. Dev.)	-	(Mean + 2 Std. Dev.)
Definitely Anomalous	>		(Mean + 2 Std. Dev.)

The values were plotted on 1:2,500 scale base maps of the property and definitely anomalous, probably anomalous and possibly anomalous areas were outlined (see figures 193-11 and 193-12).

Anomalous copper values grossly follow the trend suggested by the Dighem II anomaly, the apparent strike of the massive sulphide lense and enclosing rocks and the areas of known mineral occurrences in outcrop and float. There are some scattered, sporadic highs and some smearing of the main anomaly to the northwest and southeast. This may be due to sampling of different soil horizons as there is considerable disturbance of top soil in logged areas. In addition, glacial action may have transported mineralized material to the northwest or southeast. It is also possible that additional parallel mineralized zones may be present.

The pattern for anomalous zinc values is essentially similar to that for copper. There are not as many isolated highs, perhaps reflecting zinc's greater mobility in being more equally dispersed.

GEOPHYSICS

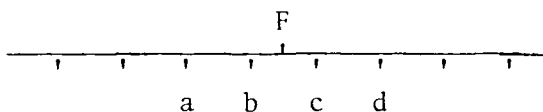
The Dighem II survey outlined a large area of low resistivity, oriented parallel to the regional strike of rocks underlying the Foggy #11 claim (see figure 193-10). Investigation of this anomaly revealed one outcrop of massive sulphides as well as several minor occurrences of copper.

A VLF-EM survey was carried out over a grid oriented north-south and covering the known massive sulphide outcrop and a portion of the Dighem II anomaly. Two grid lines were surveyed with a Sabre Electronics VLF-EM unit - Model #27. Readings were taken at 25 meter intervals. Since the direction of grid lines was north-south, Annapolis Md. frequency (21.4 Khz.) was used as a transmitting base.

The Sabre Electronics VLF-EM unit and method of reading is similar to other VLF-EM equipment. The method of reading is to locate the orientation of the transmitting station (Annapolis) from the null of field strength. From orientation at right angles to the transmitting station, the maximum field strength (100%) is adjusted by a gain control knob. The unit is then held

vertical, with the coil at right angles to the transmitting station, and rotated to locate the field strength null point. The angle of rotation is therefore recorded either to the right (+) or left (-).

Data were recorded in field notes as if all lines had been surveyed from north to south (the same orientation was used at each station irrespective of whether the traverse was run NS or SN. This was done to utilize and simplify the Fraser Filter Method of displaying anomalies. The following calculation illustrates this method:



a,b,c,d - station readings

F - filtered value

$$F = (a+b) - (c+d)$$

The Fraser Filter Method serves three useful purposes in the display and interpretation of results:

- (1). Crossovers (normal anomaly interpretation) are displayed as high positive numbers, which may be

contoured to correlate the varying strength of the conductor along its axis, and to enhance interpretation and display of the better conductors.

- (2). Topography has a major effect in the reading of ground EM equipment. Steep hills will influence either the positive or negative orientation while rotating the EM unit, depending upon the orientation of the hill. Consequently ridges will be displayed as apparent crossovers. The Fraser Filter Method smooths out some of this topographic effect, consequently resulting apparent anomalies are not as significantly displayed as if they had been shown as profiles of the raw data.
- (3). For the same topographic reasons, strong anomalies may not produce an actual cross-over in steep terrain. The Fraser Filter Method enhances these anomalies to their proper perspective.

For the present survey, all readings were plotted on a 1:2,500 scale base map (see figure 193-13).

Filtered values are displayed below station readings and are plotted midway between reading stations. Contours are drawn at $+10^\circ$, $+20^\circ$, and $+40^\circ$ to illustrate anomalies.

This survey was limited to only two lines because of the lateness of the season and to illustrate that the massive sulphide horizon(s) could be traced by this method. The data outline two subparallel weakly conductive zones which have the same approximate trend as the regional strike and the Dighem II anomaly. Further EM data should help narrow down the areas of interest from the much broader geochemical targets.

EXPLORATION POTENTIAL

A massive sulphide horizon is exposed in one outcrop on the subject claims. Soil geochemistry and some boulders of mineralized float suggest that this horizon could extend at least 700 meters southwest along strike. Presumably this horizon continues to the northeast inside the much larger Dighem II anomaly. The boundary between the Barrier Reef and Rexspar properties is located about 350 meters northeast of the massive sulphide outcrop.

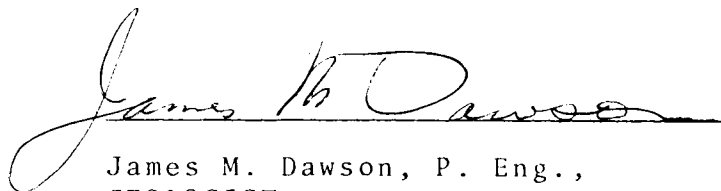
The geochemistry and geophysics also suggest that there could be at least one other sulphide horizon parallel with and south of the known massive sulphide layer (see figures 193-11, 193-12, and 193-13).

In summary, preliminary work suggests that the sulphide layer could have great lateral continuity. Although this layer consists primarily of massive pyrite where exposed, the base metal contents could increase substantially along strike and down dip as has been

demonstrated repeatedly in many of the more well known, volcanogenic, massive sulphide deposits.

Respectfully Submitted:

KERR, DAWSON AND ASSOCIATES LTD.,

A handwritten signature in cursive script that reads "James M. Dawson". The signature is written in dark ink and is positioned above the typed name and title.

James M. Dawson, P. Eng.,
GEOLOGIST

Kamloops, B. C.,
April 15, 1980.

APPENDIX A

PERSONNEL

PERSONNEL

J. M. Dawson, P. Eng. Geologist - August 17, September 30,
November 12, April 7, 8.

- 5 days

L. P. Duquette Prospector - August 17 - 21

- 5 days

APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

(1). LABOUR:

J. M. Dawson, P. Eng., 5 days @ \$175.00/day	\$ 875.00	
L. P. Duquette, 5 days @ \$100.00/day	<u>500.00</u>	\$1,375.00

(2). EXPENSES AND DISBURSEMENTS:

(a). Truck Rental: 5 days @ \$30.00/day \$150.00 560 miles @ 30¢/mile <u>168.00</u>	318.00	
(b). Assays and Geochemical Analyses:	824.40	
(c). Preparation of base maps: . .	110.00	
(d). Instrument Rental:	25.00	
(e). Drafting:	180.00	
(f). Room and Board:	246.50	
(g). Xerox, blueprints, telephone, freight, secretarial, binding, etc.:	<u>183.45</u>	<u>1,887.35</u>

TOTAL HEREIN \$3,262.35

APPENDIX C

WRITER'S CERTIFICATE

JAMES M. DAWSON, P. ENG.
GEOLOGIST

SUITE 1 - 219 VICTORIA STREET
KAMLOOPS, B.C.

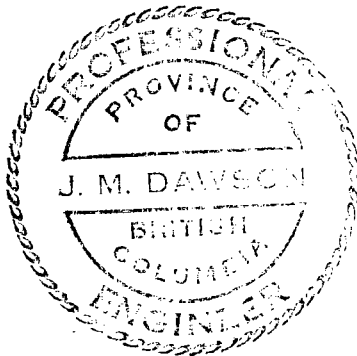
PHONE (604) 374-6427

CERTIFICATE

I, JAMES M. DAWSON, OF KAMLOOPS, BRITISH COLUMBIA, DO HEREBY
CERTIFY THAT:

- (1). I am a geologist employed by Kerr, Dawson & Associates Ltd. of Suite #1, 219 Victoria Street, Kamloops, B. C.
- (2). I am a graduate of the Memorial University of Newfoundland - B. Sc. (1960), M. Sc. (1963), a fellow of the Geological Association of Canada and a member of the Association of Professional Engineers of British Columbia. I have practised my profession for 16 years.
- (3). I am the author of this report which is based on an exploration programme carried out on the subject property under my direct supervision.

KERR, DAWSON AND ASSOCIATES LTD.,



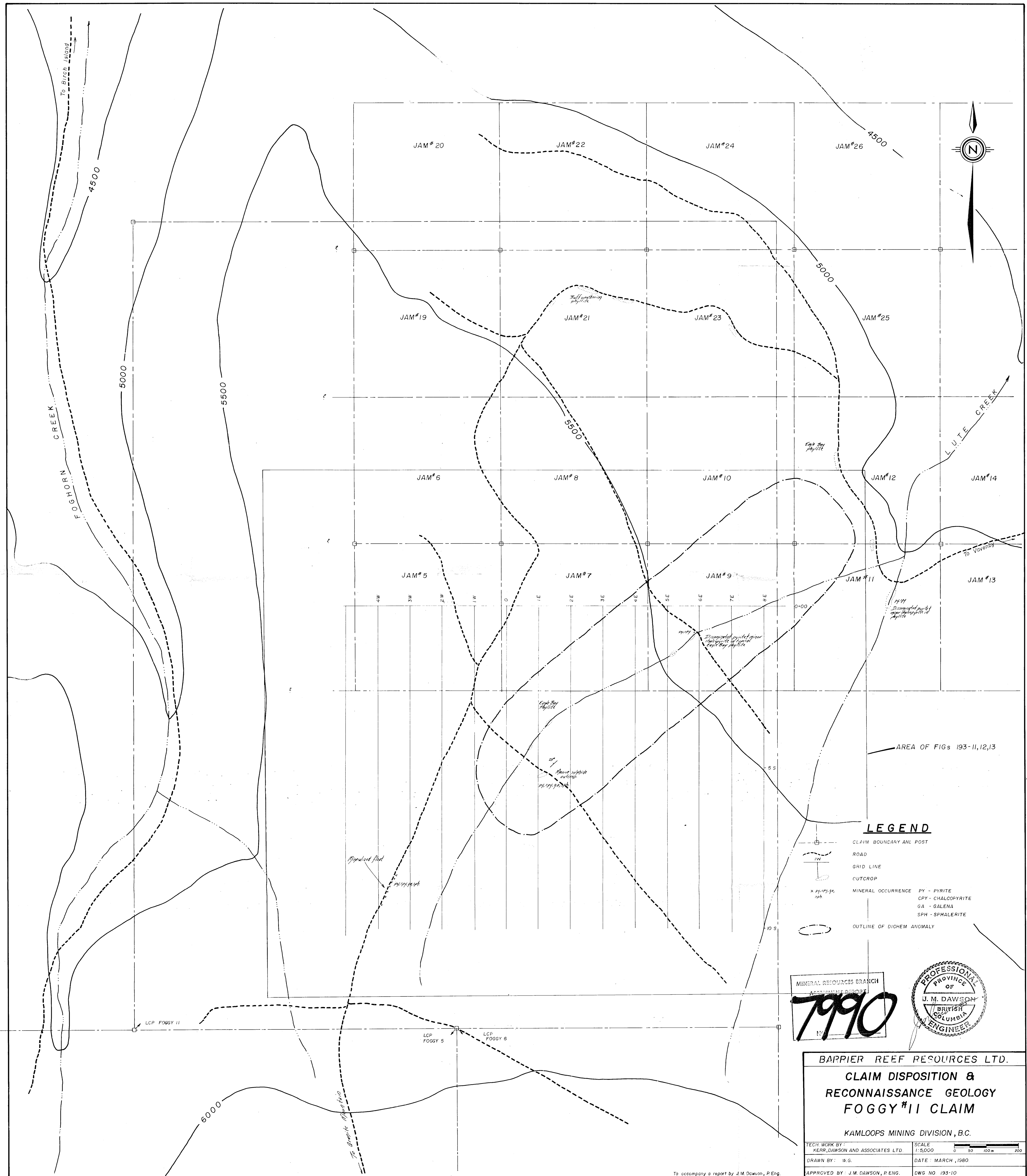
April 15, 1980,
KAMLOOPS, B. C.

A handwritten signature in cursive script that reads "James M. Dawson".

James M. Dawson, M. Sc., P. Eng.,
GEOLOGIST

APPENDIX D

MAPS

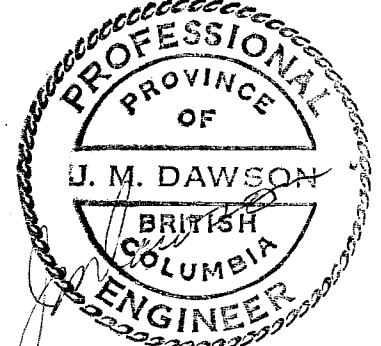


AREA OF FIGS 193-11,12,13

LEGEND

- CLAIM BOUNDARY AND POST
- ROAD
- GRID LINE
- OUTCROP
- MINERAL OCCURRENCE
 - PY - PYRITE
 - CPY - CHALCOPYRITE
 - GA - GALENA
 - SPH - SPHALERITE
- OUTLINE OF DICHEM ANOMALY

MINERAL RESOURCES BRANCH
 ASSURANCE REPORT
7990



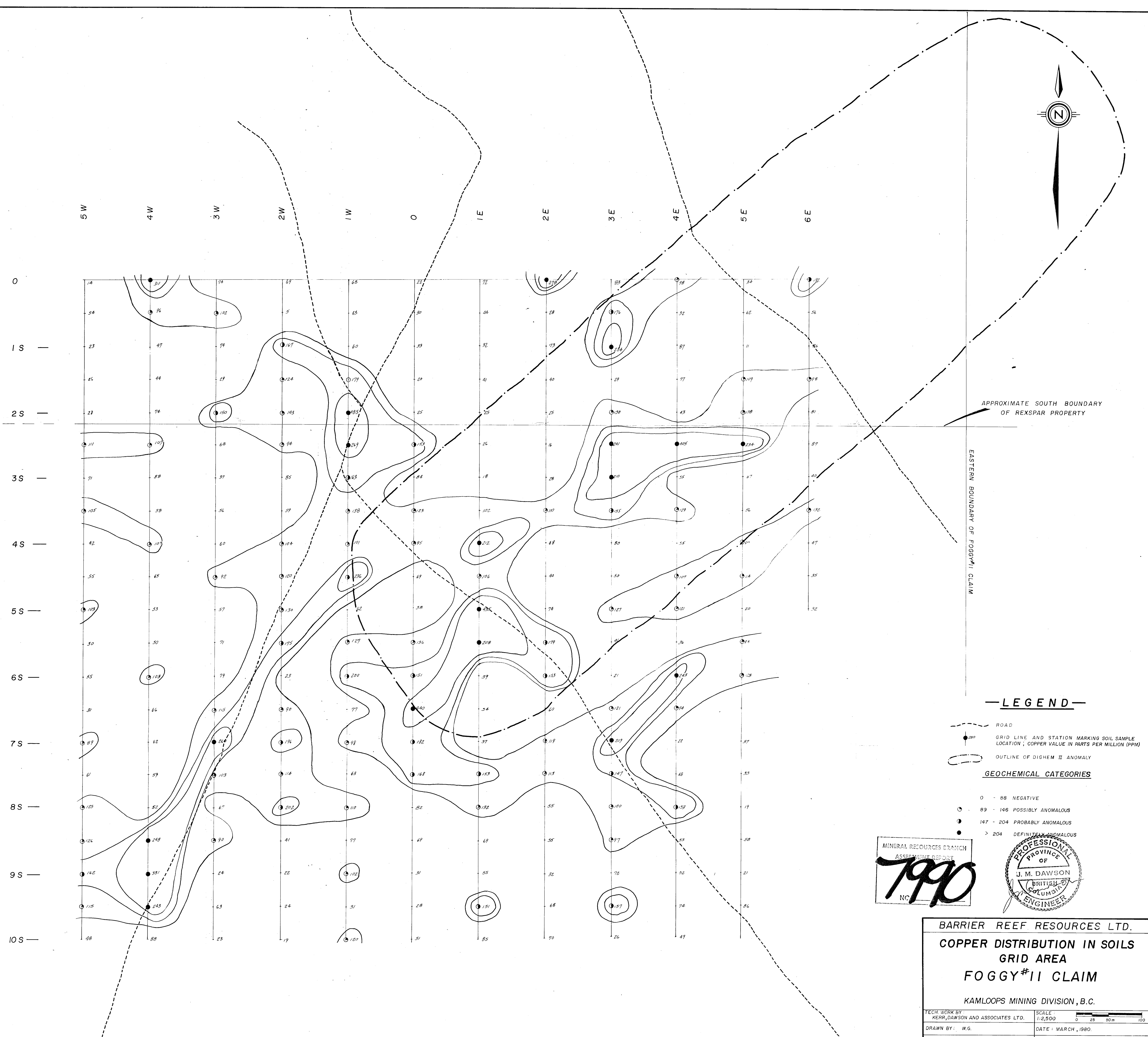
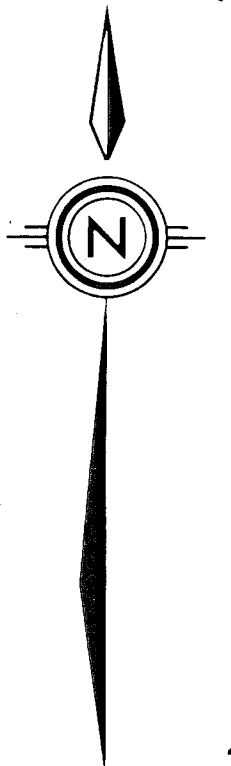
BARRIER REEF RESOURCES LTD.

**CLAIM DISPOSITION &
 RECONNAISSANCE GEOLOGY
 FOGGY #11 CLAIM**

KAMLOOPS MINING DIVISION, B.C.

TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD.	SCALE 1:5,000
DRAWN BY: W.G.	DATE: MARCH, 1980
APPROVED BY: J.M. DAWSON, P. ENG.	DWG NO. 193-10

To accompany a report by J.M. Dawson, P. Eng.



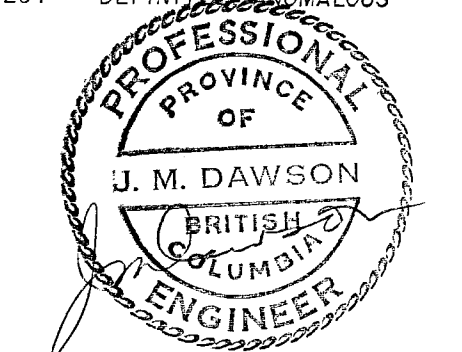
APPROXIMATE SOUTH BOUNDARY OF REXSPAR PROPERTY

EASTERN BOUNDARY OF FOGGY#11 CLAIM

—LEGEND—

- ROAD
 - GRID LINE AND STATION MARKING SOIL SAMPLE LOCATION; COPPER VALUE IN PARTS PER MILLION (PPM)
 - OUTLINE OF DIGHEM II ANOMALY
- GEOCHEMICAL CATEGORIES**
- 0 - 88 NEGATIVE
 - 89 - 146 POSSIBLY ANOMALOUS
 - 147 - 204 PROBABLY ANOMALOUS
 - > 204 DEFINITELY ANOMALOUS

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7990
N.C.



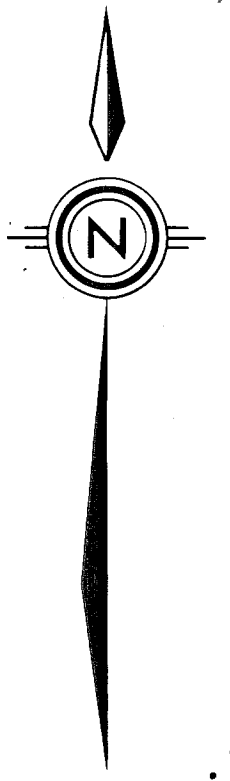
BARRIER REEF RESOURCES LTD.
COPPER DISTRIBUTION IN SOILS
GRID AREA
FOGGY#11 CLAIM
 KAMLOOPS MINING DIVISION, B.C.

TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD.	SCALE: 1:2,500	
DRAWN BY: W.G.	DATE: MARCH, 1980.	
APPROVED BY: J.M. DAWSON, P.ENG.	DWS NO 193-11	

To accompany a report by J.M. Dawson, P.Eng.

5 W 4 W 3 W 2 W 1 W 0 1 E 2 E 3 E 4 E 5 E 6 E

0
1 S
2 S
3 S
4 S
5 S
6 S
7 S
8 S
9 S
10 S

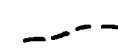


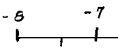


APPROXIMATE SOUTH BOUNDARY OF REXSPAR PROPERTY

EASTERN BOUNDARY OF FOGGY#11 CLAIM

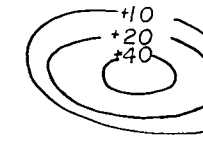
Mount sulphide outcrop

— LEGEND —

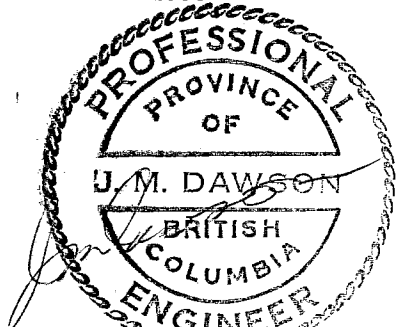
-  ROAD
-  GRID LINE AND STATION
-  OUTLINE OF DIGHEM II ANOMALY
-  GRID LINE STATION READINGS AT 25m INTERVALS FILTERED READINGS (FRASER METHOD)

INTERPRETATION OF FILTERED DATA

- 0 - +10° BACKGROUND
- +10° - +20° POSSIBLY ANOMALOUS
- +20° - +40° PROBABLY ANOMALOUS
- > +40° DEFINITELY ANOMALOUS



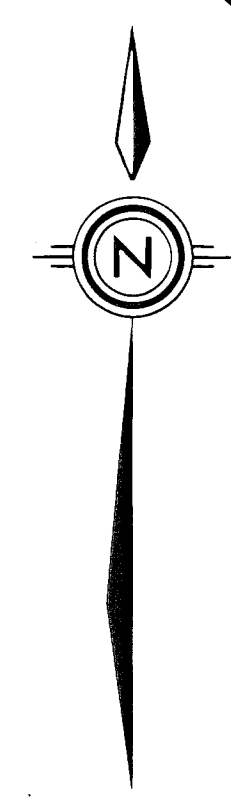
MINERAL RESOURCES BRANCH
ASSOCIATES REPORT
7990
NO.



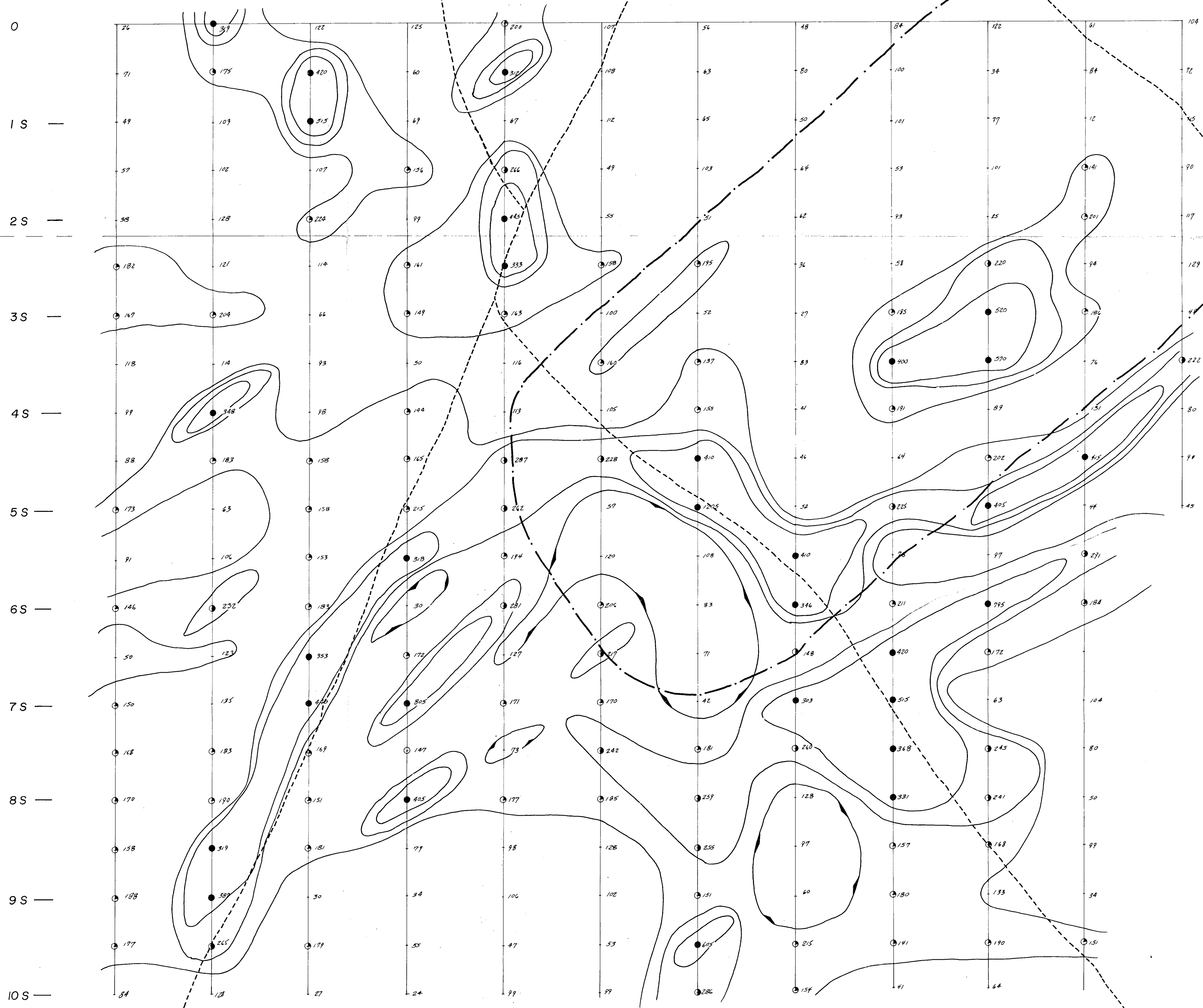
BARRIER REEF RESOURCES LTD.
VLF-EM SURVEY
GRID AREA
FOGGY#11 CLAIM
KAMLOOPS MINING DIVISION, B.C.

TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD.	SCALE: 1:2,500	DATE: MARCH, 1980.
DRAWN BY: W.G.	APPROVED BY: J.M. DAWSON, P.ENG.	DWG NO 193-13

To accompany a report by J.M. Dawson, P.Eng.



5 W 4 W 3 W 2 W 1 W 0 1 E 2 E 3 E 4 E 5 E 6 E



APPROXIMATE SOUTH BOUNDARY OF REXSPAR PROPERTY

EASTERN BOUNDARY OF FOGGY#11 CLAIM

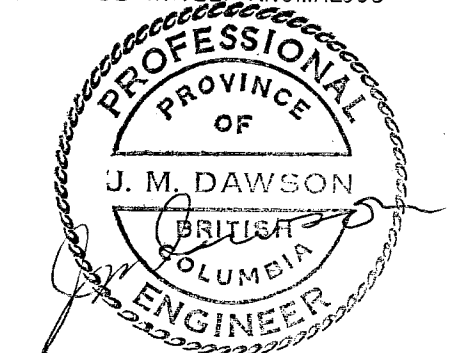
—LEGEND—

- ROAD
- GRID LINE AND STATION MARKING SOIL SAMPLE LOCATION, ZINC VALUE IN PARTS PER MILLION (PPM)
- OUTLINE OF DISSEM II ANOMALY

GEOCHEMICAL CATEGORIES

- - 136 NEGATIVE
- - 137 - 215 POSSIBLY ANOMALOUS
- - 216 - 294 PROBABLY ANOMALOUS
- - > 294 DEFINITELY ANOMALOUS

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7990
NO



BARRIER REEF RESOURCES LTD.

**ZINC DISTRIBUTION IN SOILS
GRID AREA
FOGGY#11 CLAIM**

KAMLOOPS MINING DIVISION, B.C.

TECH. WORK BY KERR, DAWSON AND ASSOCIATES LTD.	SCALE 1:2,500
DRAWN BY: W.G.	DATE: MARCH, 1980.
APPROVED BY: J.M. DAWSON, P.Eng.	DWG. NO. 193-12

To accompany a report by J.M. Dawson, P.Eng.