

GEOCHEMICAL AND GEOPHYSICAL

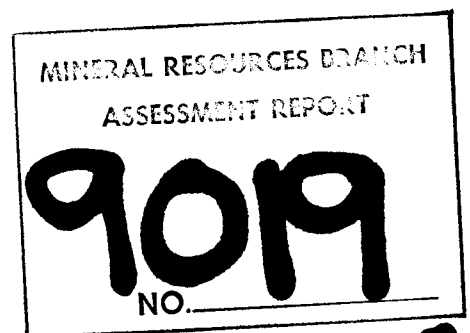
REPORT

- on the -

D L CLAIMS

Kamloops Mining Division  
British Columbia

- for -



SABLE RESOURCES LTD.,  
#1100-235 First Avenue,  
KAMLOOPS, B.C.  
V2C 3J4.

part 1  
92

Covering: DL #1 (20 units), DL #2 (20 units), and  
DL #3 (20 units).

Work Performed: September 15, 1980 to February 20, 1981.

Location: (1). 51°48'N; 120° 29'W.  
(2). NTS 92 P/16 W and 92 P/15E.  
(3). 33 km. WNW of Clearwater, B.C.

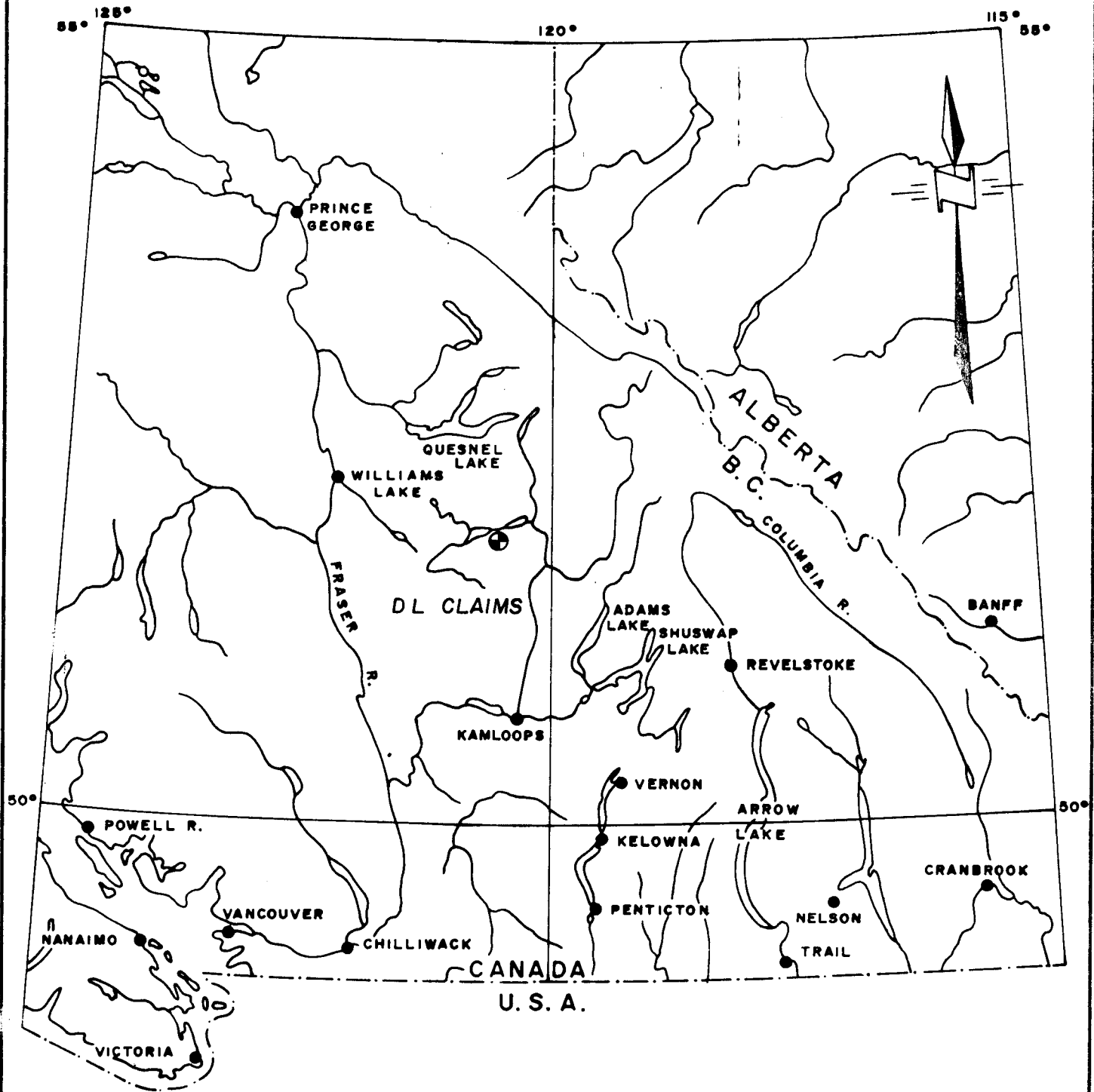
PREPARED BY:

KERR, DAWSON & ASSOCIATES LTD.,  
#1-219 Victoria Street,  
KAMLOOPS, B.C. V2C 2A1.

J. M. Dawson, P. Eng.,  
February 20, 1981.

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SABLE RESOURCES LTD.

LOCATION MAP

D L CLAIM GROUP

KAMLOOPS MINING DIVISION, B.C.

Date: Jan. 1981.

Scale: 1" = 64 Miles

Dwn by: W. G.

Dwg no. 230-1

## INTRODUCTION

This report describes an exploration programme carried out on the DL claims, Kamloops Mining Division, British Columbia.

The DL claims were staked to cover known molybdenum mineralization occurring in a porphyry type setting in the Raft Batholith.

Detailed soil sampling and magnetometer surveys were performed and the results are outlined on a series of maps accompanying this report.

SUMMARY AND CONCLUSIONS

- (1). The DL property comprises 3 contiguous metric claims totalling 60 units, located in moderate terrain about 125 km. north of Kamloops, B. C. and is road accessible.
  
- (2). The present claim cover two showings worked on respectively by Anaconda in 1966 - 1969 and Kennco in 1971. The Anaconda work (on DL #1 claim area) consisted of limited soil sampling and I. P. surveys as well as 3 shallow diamond drill holes. The Kennco work (on the DL #3 claim area) consisted of reconnaissance geological mapping, soil geochemistry and induced polarization surveys. The property was acquired by Sable Resources Ltd. in 1979; however, no work was carried out until September - October, 1980.
  
- (3). The property is underlain by granitic rocks of the Raft batholith of which several phases have been recognized. The property is heavily overburden covered and outcrop is rare.

- (4). On the DL #1 claim molybdenum is reported to occur in quartz veins and on fracture surfaces. On the DL #3 claim occurrences of disseminated pyrrhotite, pyrite, chalcopyrite and molybdenite are reported.
- (5). Soil geochemistry outlines a number of areas which are weakly anomalous in molybdenum; however, the thick overburden, swamps and glacial till may mask significant bedrock response.
- (6). Magnetic response is relatively flat except for some local relief believed to be due to more basic border phases of the Raft batholith.

PROPERTY

The property consists of three contiguous metric claims totalling 60 units as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Expiry Date</u>
DL #1	1763 (3)	45448	March 27/81
DL #2	2607 (5)	61526	May 27/81
DL #3	2608 (5)	61527	May 27/81

The registered owner of these claims is Sable Resources Ltd., FMC #190500.

LOCATION AND ACCESS

The property is located in south central British Columbia, approximately 33 km. west-northwest of the town of Clearwater, B. C. Approximate geographic center of the claims is at 51°48' north latitude and 120°29' west longitude.

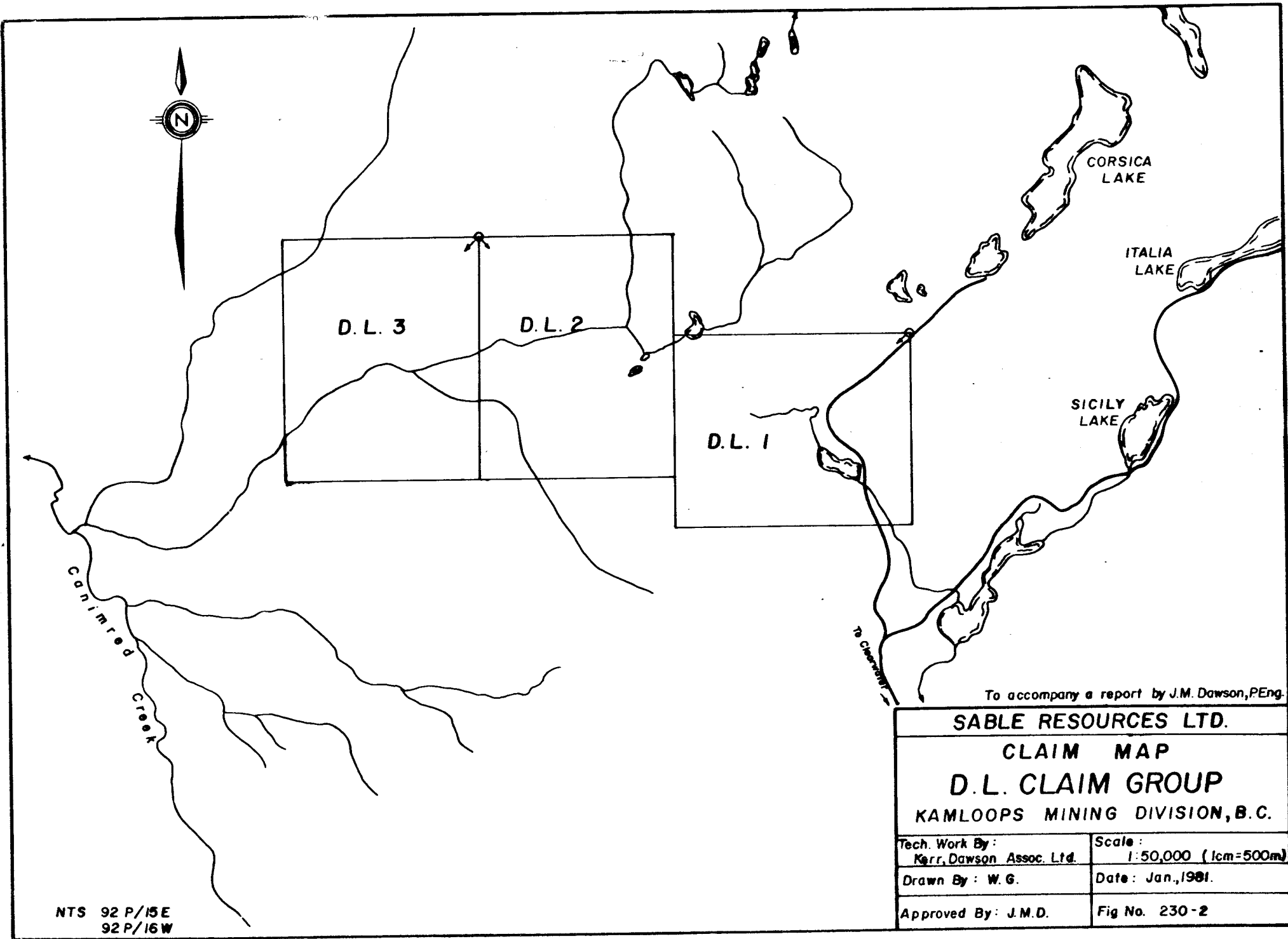
Access to the property is via Clearwater Timber road #2 which leaves the old North Thompson Highway at Clearwater River bridge. This road is followed north-westerly for about 48 km. to the eastern end of the claim block. Old logging roads cut through the center of the claims but they are presently impassible to vehicles.



PHYSIOGRAPHY AND VEGETATION

The claim block covers an east-west trending depression from the headwaters of a tributary of Canimred Creek easterly to the headwaters of the Sicily Lake drainage system. This valley floor rises from an average 4,200 feet a.s.l. to about 4,700 feet on the southerly ridge and about 5,000 feet a.s.l. along the northerly ridge.

The bottom of this valley is a fairly broad swampy area with dense thickets of spruce and fir. Higher up on the slopes, dense stands of mature spruce, fir and pine are only marred by occasional logging slashes.



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

<b>SABLE RESOURCES LTD.</b>	
<b>CLAIM MAP</b>	
<b>D.L. CLAIM GROUP</b>	
<b>KAMLOOPS MINING DIVISION, B.C.</b>	
Tech. Work By: Kerr, Dawson Assoc. Ltd.	Scale: 1:50,000 (1cm=500m)
Drawn By: W.G.	Date: Jan., 1981.
Approved By: J.M.D.	Fig No. 230-2

NTS 92 P/15E  
92 P/16W

PREVIOUS WORK

The area covered by the DL #1 claim was held by Anaconda Corporation in 1966 - 69. This company carried out geochemical, magnetometer and induced polarization surveys as well as drilling three diamond drill holes totalling 306 feet. This drilling tested a coincident molybdenum geochemical anomaly and an I. P. anomaly in the northwest corner of DL #1.

In 1971 Kennco acquired the Hood property which is basically now covered by the DL #3 claim. Geological mapping and limited geochemical and induced polarization surveys were carried out on an occurrence of disseminated chalcopyrite and molybdenite in a dioritic border phase of the Raft batholith.

There is no record of any additional work having been done since 1971.

CURRENT PROGRAMME

Work carried out during 1980 consisted of laying out approximately 35 km. of chain sawed grid. Lines were run north-south at roughly 500 meter intervals with stations every 50 meters. Soil samples were collected over the entire grid and analysed for molybdenum. A magnetometer survey was carried out over the grid area with readings being taken at 50 meter intervals on all lines.

An induced polarization survey was performed over the entire grid area by Phoenix Geophysics Ltd. The results of this survey are outlined in a separate report which will be submitted shortly by Phoenix.

GEOLOGY AND MINERALIZATION

According to G.S.C. map #1278A (Campbell and Tipper, 1971) the area of the subject claims is underlain completely by various phases of the Raft batholith. Outcrop on the property is rare but according to Daughtry (1979) the predominant lithologies encountered on the DL #1 claim are quartz monzonite, granodiorite and granite. Molybdenite is reported to occur in quartz veins and on fracture surfaces.

On the DL #3 claim Kennco reported outcrops of a dioritic border phase of the Raft batholith. Occurrences of disseminated pyrrhotite, pyrite, chalcopyrite and molybdenite are found in some of these outcrops.

GEOCHEMISTRY

On the DL property, soil samples were collected at 50 meter intervals on cross lines spaced 500 meters apart (see figure #230-3).

Samples were collected from the "B" horizon where possible (approximately 15 to 45 cm. deep). There are large areas of swamp in the central part of the block where it was impossible to get a soil sample. 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 585 samples were collected and analysed for molybdenum by Acme Analytical Laboratories of Vancouver. Samples were dried and sieved and an aliquot of the -80 mesh fraction obtained. Extraction was attained using hot aqua regia with analysis by atomic absorption spectrophotometry.

From the determined values, the mean and standard deviation was computed and the data were 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 a 1:10,000 scale base map of the property and definitely anomalous, probably anomalous and possibly anomalous areas or values were outlined.

The main concentration of anomalous molybdenum values is found in a northwest-trending zone which passes through the center of DL #1 claim. This zone bends southerly as it enters DL #2 claim so that its orientation is roughly east-west. This feature can be traced for about 4,000 meters and is up to 500 meters wide. Several other weak, linear, anomalous zones are outlined north and south of the central east-west trending depression on DL #2 and #3 claims. (See figure #230-3). However, these are usually separated by background values.

MAGNETIC SURVEY

A magnetic survey was carried out over the entire grid area on the DL property. Readings were taken with a digital Geometrics Proton Magnetometer (Model G-836). This type of magnetometer measures the total intensity of the earth's magnetic field which in this area of Canada is in the range of 58,000 to 59,000 gammas. The accuracy of this type of magnetometer is  $\pm 10$  gammas.

Readings were taken at 50 meter intervals along all cross lines and loop corrections made after each traverse. Individual loop traverses were tied to a base station traverse made along the east-west base line. The corrected readings were plotted on a 1:10,000 scale base map.

Readings varied from 57,340  $\gamma$  to 61,620  $\gamma$  ; however, the vast majority are in the area of 58,200  $\gamma$  to 58,400  $\gamma$  . Readings were split into five arbitrary divisions to indicate areas of relative "high" and "low" magnetic relief (see figure #230-4).

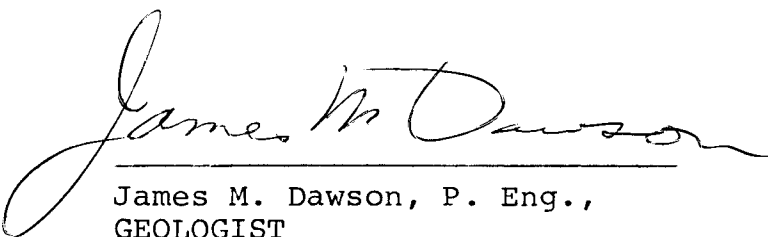


Upon first inspection of the data there would appear to be no definite magnetic pattern suggestive of a "porphyry type" alteration halo - i.e. magnetic "low". There are several small isolated magnetic "lows" associated with local sharp "highs" in the northwest and southwest corners of the claim block. These areas of relatively strong relief are believed to be associated with more basic, border phases of the Raft batholith.

Respectfully Submitted By:

KERR, DAWSON & ASSOCIATES LTD.,



  
James M. Dawson, P. Eng.,  
GEOLOGIST

KAMLOOPS, B. C.,  
February 20, 1981.

APPENDIX A

PERSONNEL

PERSONNEL

J. M. Dawson, P. Eng.	Geologist	September 14	-1	day
		September 21	-	1/2 day
		September 26	-	1/2 day
		October 6	-1	day
		February 16,18	-2	days
			-5	days
W. Gruenwald, B. Sc.	Geologist	November 20	-1	day
			-1	day
Mike Dawson	Field Supervisor	September 15-30-16		days
		October 1- 8- 8		days
		November 17-19- 3		days
		November 20		1/2 day
			-27	1/2 days
Rick Henderson	Prospector	September 15-30-16		days
		October 1- 7- 7		days
			-23	days
Brian Cross	Prospector	September 15-30-16		days
		October 1- 7- 7		days
			-23	days

APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

A. LABOUR:

J. M. Dawson, P. Eng., 5 days @ \$250.00/day . . . . .	\$1,250.00	
W. Gruenwald, B. Sc., 1 day @ \$150.00/day . . . . .	150.00	
M. Dawson, 27 1/2 days @ \$125.00/day . . . . .	3,437.50	
R. Henderson, 23 days @ \$115.00/day . . . . .	2,645.00	
B. Cross, 23 days @ \$115.00/day . . . . .	<u>2,645.00</u>	\$10,127.50

B. EXPENSES AND DISBURSEMENTS:

(a). Room and Board . . . . .	\$3,683.16	
(b). Truck Rental: 24 days @ \$30/day \$720.00 2,625 mi. @30¢/mi. <u>787.50</u>	1,507.50	
(c). Chain saw rental . . . . .	360.00	
(d). Geochemical Analysis . . . . .	1,067.40	
(e). Magnetometer Rental . . . . .	200.00	
(f). Base map preparation . . . . .	129.50	
(g). Field equipment and supplies . . . . .	433.15	
(h). Telephone, xerox, blue prints, secretarial, freight, maps, sepias, etc. . . . .	<u>278.40</u>	<u>7,659.11</u>
TOTAL COSTS . . . . .		<u><u>\$17,786.61</u></u>

APPENDIX C

WRITER'S CERTIFICATE

**JAMES M. DAWSON, P. ENG.**

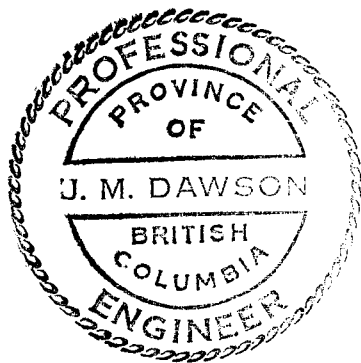
Geological Engineer

#1-219 VICTORIA STREET • KAMLOOPS, B.C. V2C 2A1 • TELEPHONE (604) 374-0544

CERTIFICATE

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

- (1). I am a geologist employed by Kerr, Dawson and Associates Ltd. of Suite #1-219 Victoria Street, Kamloops, B. C. V2C 2A1.
- (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 17 years.
- (3). I am the author of this report which is based on an exploration programme carried out on the DL claims under my supervision.



KERR, DAWSON AND ASSOCIATES LTD.,

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

February 20, 1981,  
Kamloops, B. C.

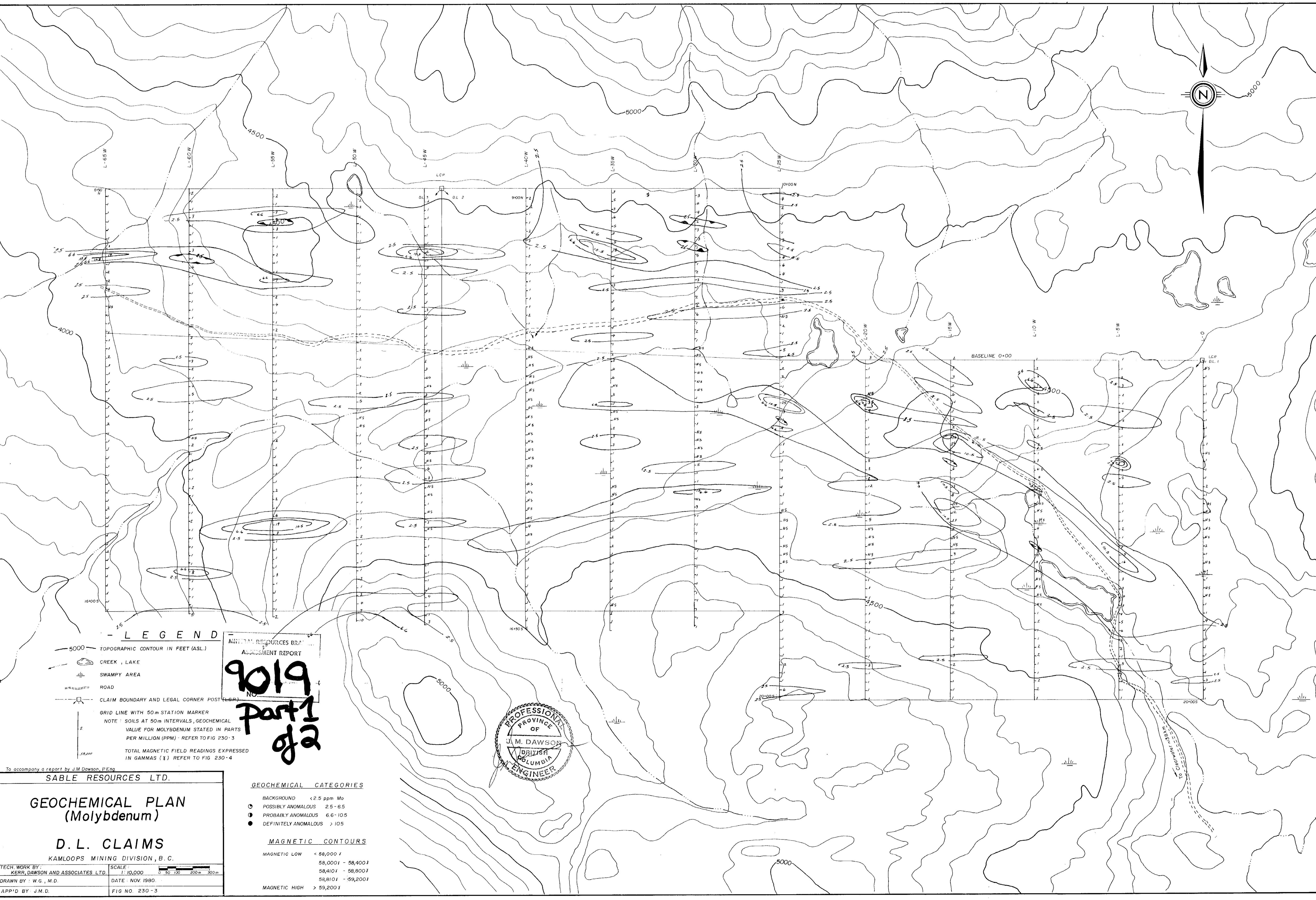
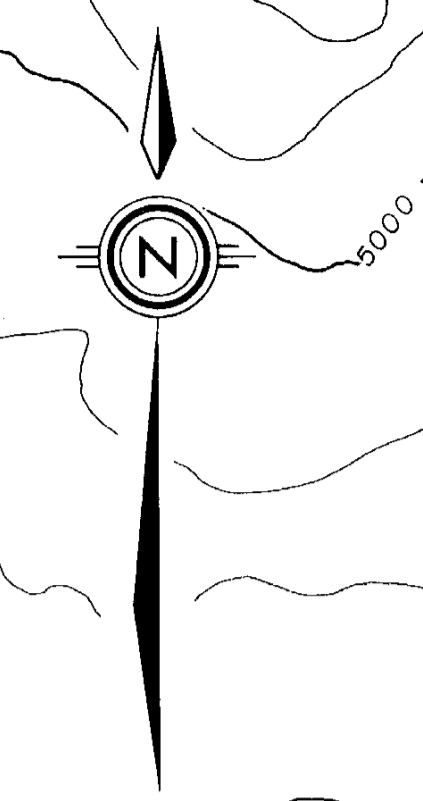
APPENDIX D

REFERENCES

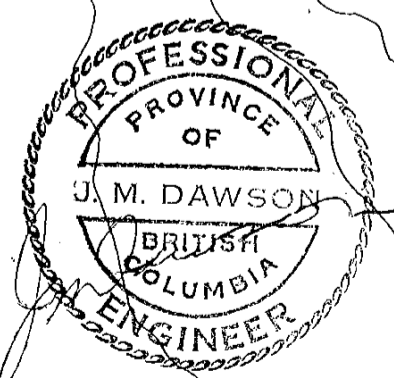


REFERENCES

- Daughtry, K. L. (1979): Report on the DL #1 Property, Kamloops Mining Division; Private Report to Sable Resources Ltd.
- Campbell, R.B. and  
Tipper, H.W. (1971): Geology of Bonaparte Lake Map Area; GSC Memoir #363.
- Cartwright, P.A. (1981): Report on Induced Polarization and Resistivity Survey on the DL Claim Group, Kamloops, Mining Division.
- Annual Reports of B. C. Minister of Mines 1967, 68, 69, 71.



**9019**  
**Part 1**  
**of 2**



- LEGEND**
- 5000 TOPOGRAPHIC CONTOUR IN FEET (ASL.)
  - CREEK, LAKE
  - SWAMPY AREA
  - ROAD
  - CLAIM BOUNDARY AND LEGAL CORNER POST (L.C.P.)
  - GRID LINE WITH 50m STATION MARKER
- NOTE: SOILS AT 50m INTERVALS, GEOCHEMICAL VALUE FOR MOLYBDENUM STATED IN PARTS PER MILLION (PPM) - REFER TO FIG 230-3
- TOTAL MAGNETIC FIELD READINGS EXPRESSED IN GAMMAS (γ) REFER TO FIG 230-4

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

**SABLE RESOURCES LTD.**

**GEOCHEMICAL PLAN**  
(Molybdenum)

**D.L. CLAIMS**  
KAMLOOPS MINING DIVISION, B.C.

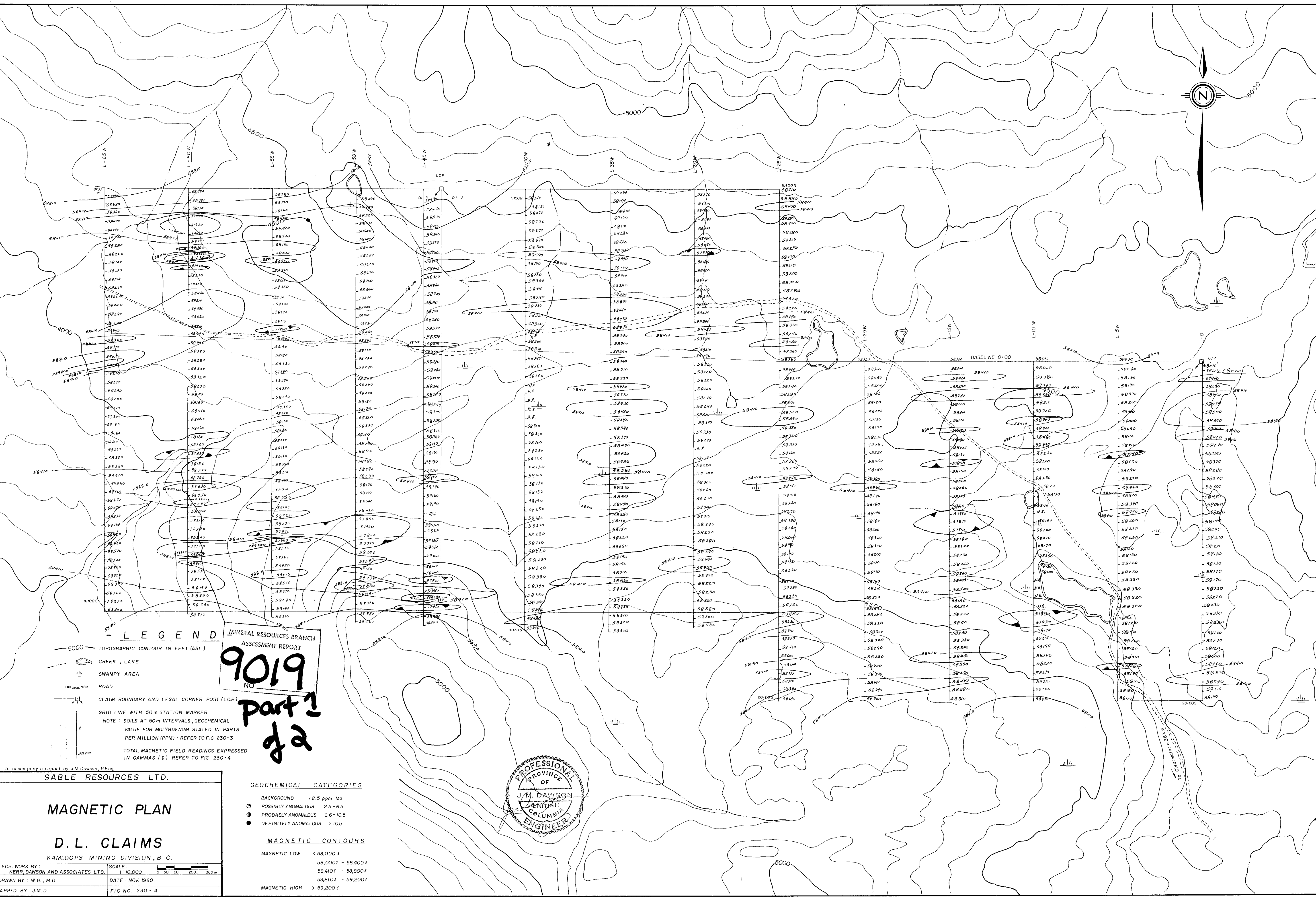
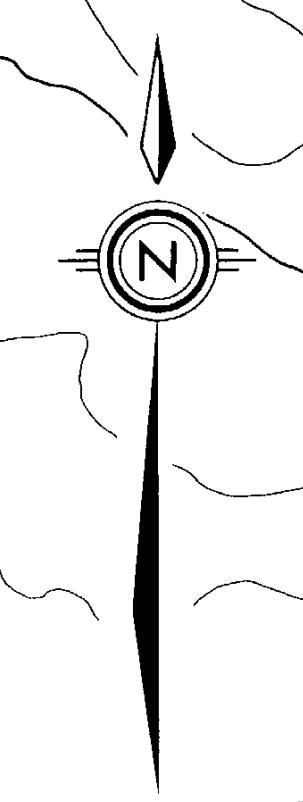
TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD.  
 SCALE: 1" = 10,000'  
 DRAWN BY: W.G., M.D.  
 DATE: NOV. 1990.  
 APP'D BY: J.M.D.  
 FIG NO. 230-3

**GEOCHEMICAL CATEGORIES**

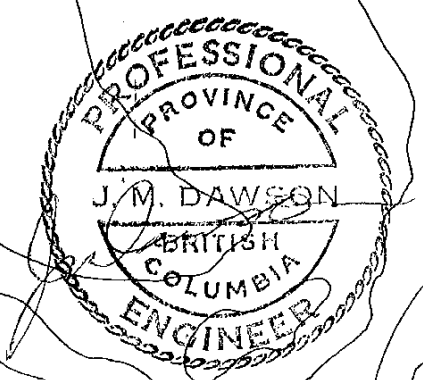
- BACKGROUND < 2.5 ppm Mo
- POSSIBLY ANOMALOUS 2.5 - 6.5
- PROBABLY ANOMALOUS 6.6 - 10.5
- DEFINITELY ANOMALOUS > 10.5

**MAGNETIC CONTOURS**

MAGNETIC LOW	< 58,000 γ
	58,000 γ - 58,400 γ
	58,401 γ - 58,800 γ
	58,801 γ - 59,200 γ
MAGNETIC HIGH	> 59,200 γ



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9019**  
NO.  
**part 1**  
**of 2**



- LEGEND**
- 5000 TOPOGRAPHIC CONTOUR IN FEET (ASL.)
  - CREEK, LAKE
  - SWAMPY AREA
  - ROAD
  - CLAIM BOUNDARY AND LEGAL CORNER POST (L.C.P.)
  - GRID LINE WITH 50m STATION MARKER
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  - TOTAL MAGNETIC FIELD READINGS EXPRESSED IN GAMMAS (γ) REFER TO FIG 230-4

**GEOCHEMICAL CATEGORIES**

- BACKGROUND < 2.5 ppm Mo
- POSSIBLY ANOMALOUS 2.5 - 6.5
- PROBABLY ANOMALOUS 6.6 - 10.5
- DEFINITELY ANOMALOUS > 10.5

**MAGNETIC CONTOURS**

MAGNETIC LOW	< 58,000 γ
	58,000γ - 58,400γ
	58,401 - 58,800γ
	58,801 - 59,200γ
MAGNETIC HIGH	> 59,200γ

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

**SABLE RESOURCES LTD.**

**MAGNETIC PLAN**

**D. L. CLAIMS**

KAMLOOPS MINING DIVISION, B. C.

TECH. WORK BY:	SCALE:
KERR, DAWSON AND ASSOCIATES LTD.	1" = 10,000'
DRAWN BY: W.G., M.D.	DATE: NOV. 1980.
APP'D BY: J.M.D.	FIG. NO. 230-4