

# 3415

GEOCHEMICAL REPORT

PARADISE LAKE PROSPECT

for

DEKALB MINING CORPORATION

on the

LINE, LINK and PINE CLAIMS

and

ASSOCIATED FRACTIONAL CLAIMS

Lat.  $50^{\circ} 00'$

Long.  $120^{\circ} 20'$

94H/16

Approximately 22 Miles S.E. of Merritt, B. C.

on Quilchena Creek

Nicola Mining Division, B.C.

September 1971

R.A. Buckley, P.Eng.

# I N D E X

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I L L U S T R A T I O N S

X 1 Figure 1 Claim Index Map

2 Figure 2 Claim Location Map

3 Contour Map for Copper, Parts per Million (In Pocket)

4 Base Map Showing Topographical Features

4 and Location of Claims (In Pocket)

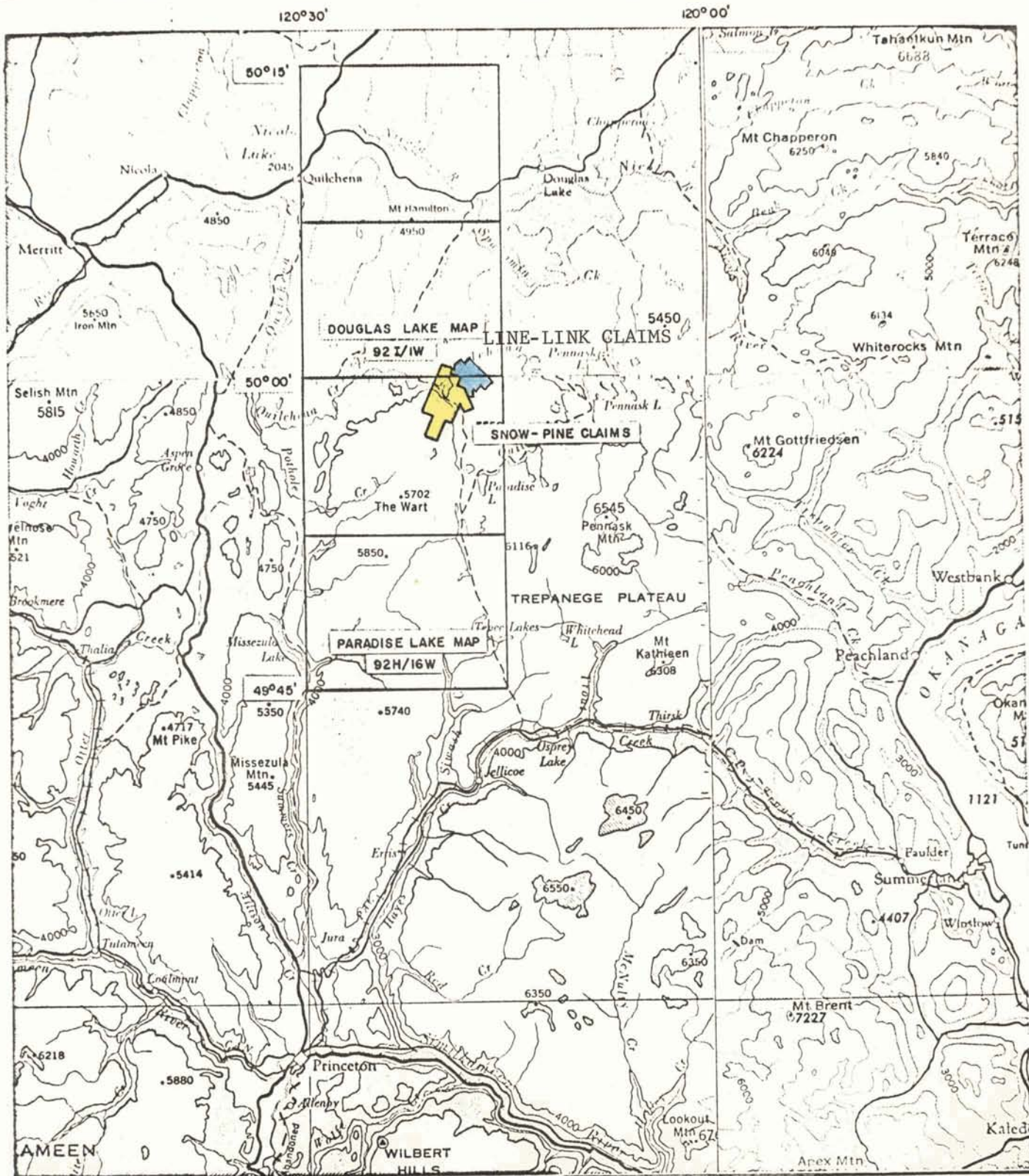
## I N T R O D U C T I O N

The claim group consists of 22 Line claims (Line 1-16, 4 Line 17 to 22 inclusive), 2 Link fractions (4 Link 1 fraction, 4 Link 2 fraction), and 1 Pine claim (6 Pine 33).

Work began on the claim group on May 18, 1971 with line cutting, soil sampling collection and mapping of claim boundaries. Completion of the program was July 20, 1971.

The purpose of the exploration was to evaluate the area surrounding a copper showing. The showing consisted of a 24-foot x-ray core section that assayed 0.6% copper. The diamond drill hole from which this core was taken was located on Quilchena Creek where the power line crosses the creek. The survey was also to evaluate an area that was being explored by diamond drilling by the DeKalb Group to the South-west (Pine-Snow group).





Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3415 MAP #1

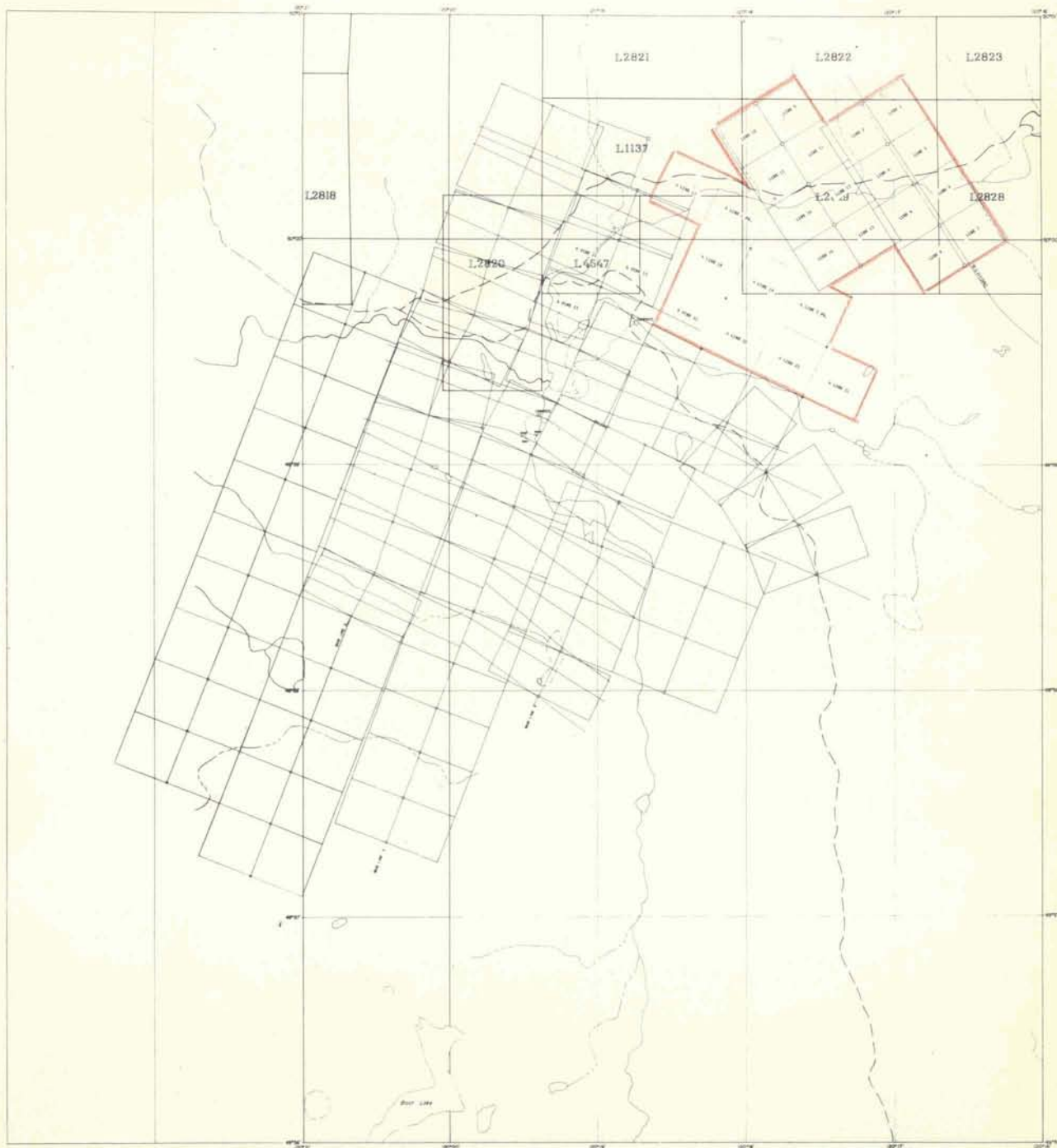
DEKALB MINING CORPORATION

PARADISE LAKE CLAIMS INDEX  
BRITISH COLUMBIA

FIGURE 1

SCALE: 1" = 8 MILES      DATE: AUG. 1970





Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3415 MAP #2

DEKALB MINING CORPORATION  
 CALGARY, ALBERTA, CANADA  
 PARADISE LAKE  
 BRITISH COLUMBIA  
 FIGURE 2  
 LEGEND  
 SCALE 1" = 100'  
 DATE 1977

## C O N C L U S I O N S

Geochemical soil sampling has mapped areas where there is an increase in the copper and molybdenum content of the soil. These anomalous areas are considered to have too low a metal content to justify additional exploration at this time.

## R E C O M M E N D A T I O N S

No additional work is recommended on these claims.

## P R O P E R T Y   L O C A T I O N   A N D   A C C E S S

Access to the prospect is by the Pennask Lake road, leaving Highway 5 one-half mile east of the Quilchena store. The western boundary of the property is one mile east of the junction of the Pennask Lake road and the Paradise Lake road, approximately 29 miles from the paved Highway #5. The road into the property is rough and dusty, but can be negotiated by an ordinary car if care is used.

## T O P O G R A P H Y

The claim group is in an area of rolling topography. Vegetation consists of jack pine with scattered groves of tamarack. Aspen groves are found near streams and swampy areas. The area has been burned over a number of times, giving rise to a dense second growth of small jack pine. "Dead fall" after the fire has created difficulty in travel and access. Large open fields of grass and sage occur which provides a source of feed for the large cattle herds.



## S O I L   S A M P L I N G

Soil samples were collected at 200 foot intervals along previously located blazed and flagged lines. The soil profile consists of the normal "A" horizon with a thickness of 6 to 10 inches of dark brown sandy to silty soil.

The "B" horizon is a light grey, low density, very dusty silt and sandy silt. It was difficult to distinguish the difference between the "B" and "C" horizons as either the "B" is very thick (more than 100 feet) or the "C" is absent. This silt becomes extremely dusty on the roadways during the long, hot summer. To sample the soil, it was therefore necessary to penetrate the "A" horizon and collect a sample of the "B" at a depth of 1 to 1½ feet. Field data, such as sample location, topography, slope and direction of slope, vegetation and abrupt changes in vegetation, location of streams, roads, etc., were recorded in permanent field books.

Samples were recovered with an auger this field season, as the soil contained a greater content of moisture than previous years due to a greater than normal rainfall.

The soil samples were bagged in regular kraft paper envelopes, labeled, dried and shipped to Chemanal Laboratories in Calgary for analysis. In total, 1,198 samples were collected and analysed for copper and molybdenum content, a total of 2,396 determinations.

## G E O C H E M I C A L   S O I L   A N A L Y S I S

The soil analysis was done by Chemanal Laboratories by C. Narasimhan. The samples were sieved through a 100 mesh. One-half gram is then weighted out and digested in a solution of 2 mls of nitric acid and 2 mls of perchloric acid until the solution is a whitish yellow. The solution is diluted with distilled water to a volume of 25 mls, and read for copper with a Tectron Atomic Absorption spectrometer. Ten milliliters of the solution is then put in a 10 ml aliquot and the molybdenum concentration read colormetrically.

The sensitivity of the Atomic Absorption instrument is 1 part per million for copper while for molybdenum, the sensitivity using the colormetric instrument is .7 part per million.

## D I S C U S S I O N O F R E S U L T S

The Laboratory data was plotted on base maps and contoured. Several anomalous zones were thus mapped.

### AREA "A"

This anomalous zone displays the highest and largest copper readings of the whole map. Anomalous values of molybdenum are also mapped in area "A". This anomaly adjoins a similar anomaly mapped during the 1970 field season on Lines 46 N, 39 N, 35 N and 32 N (Buckley 1971). An attempt was made to drill on Line 46 N at 6 + 00 W but the hole (hole Par 71-8) was terminated, still in overburden at a depth of 501'.

### AREA "B"

Anomaly "B" is similar to the one mapped at "A", and was also mapped to the south during the 1970 field season on Lines 39 N, BL 3, 32 N, and confirmed on the 1971 survey on Line 35 N. There is good correlation between the copper and molybdenum content with anomalous amounts of molybdenum inside the copper contours. Any geophysics or drilling in this area would be contingent on encouraging data on area "A".

AREA "C"

Area "C" is on the bank of Quilchena Creek near where core from a diamond drill hole returned copper values of up to 0.6%. Although the copper content of the soil is high (75 and 131 ppm), the soil anomaly itself is small. This may be explained in part since the creek bank is the only area where the granite is exposed. In conclusion, this area although anomalous is rated as being a third-order anomaly, of less interest than either "A" or "B".

AREA "D"

This anomaly is a broad widespread 4th order anomaly that is a continuation of an anomaly mapped during the 1970 field season (Buckley 1971, see Line 8, Line 4). Metal content in the soil is not exceptionally high, but the area also has associated with it a molybdenum anomaly.

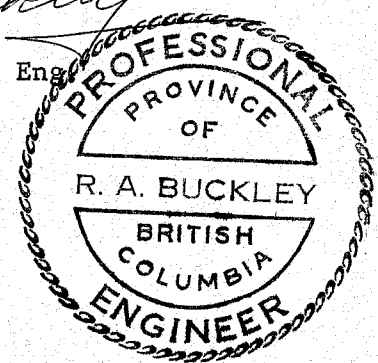
Line 20 N and Line 70 N shows exceptionally high molybdenum readings that have a completely different background from the rest of the map. Upon enquiring at the Laboratory, it was discovered that the assaying method was changed from Atomic Absorption determination for these two early lines to the more reliable colorimetric method. The values for these two lines have not been honoured during the contouring of these maps.



Respectfully Submitted,



R.A. Buckley, P. Eng



Expiry Date: March 25, 1972

A P P E N D I X

## REFERENCES

- Buckley, R.A., 1971. Private Report. Geochemical Report on the Pine and Snow Claims, 22 miles S.E. of Merritt, B.C. Lat. 50° 00'N Long. 120° 20'W.
- Cockfield, W.E., 1961. Geology and Mineral Deposits of Nicola Map Area, B.C. G.S.C. Mem. 249.
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- Jones, A.G., 1959. Vernon Map Area, B.C. G.S.C. Mem. 296.
- Little, H.W., 1960. Nelson Map Area, West Half, British Columbia. G.S.C. Mem. 308.
- Map 5208 G, N.T.S. 92 I 1, Aeromagnetic Series Douglas Lake Sheet. Jointly published by Province of British Columbia; Dept. of Mines and Petroleum Resources and Dept. Energy, Mines and Resources G.S.C.
- Rice, H.M.A., 1960. Geology and Mineral Deposits of the Princeton Map Area, B.C. G.S.C. Mem. 243.

Q U A L I F I C A T I O N S

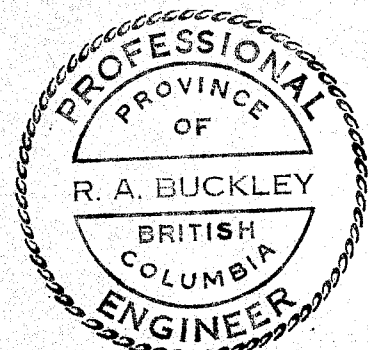
R. A. BUCKLEY

- A. I, Ronald A. Buckley, am by profession a Geologist, residing in the City of Calgary, in the Province of Alberta.
- B. I graduated in the year 1957 from Acadia University, Wolfville, Nova Scotia, with a Bachelor of Science Degree in Geology, with a minor in Chemistry and Physics.
- C. I graduated in the year 1959 from McGill University, Montreal, in the Province of Quebec, with a Master of Science Degree in Geology.
- D. Since graduation, I have been employed by a Mining Company, a Provincial Department of Mines, and three Oil Companies in the search for oil, gas and metallic minerals.
- E. I am a member:

The Alberta Association of Petroleum Geologists  
Mineralogical Association of Canada  
Society of Economic Geologists  
Society of The Sigma XI  
Canadian Institute of Mining and Metallurgy  
Association of Professional Engineers of Alberta  
Professional Engineers of British Columbia



R.A. Buckley, B.Sc., M.Sc., P.Geol, P.Eng.



Expiry Date: March 25, 1972



F I E L D   P E R S O N N E L

All work on this property was done by a  
subcontractor, Boettger All-Core Ltd.,  
supervised by DeKalb's Geological  
Engineer, Walter Unis, P. Eng. (Alberta).

Line Cutting -

Boettger All-Core Ltd.

Soil Sampling -

Boettger All-Core Ltd.

Surveying -

R.A. Buckley, P. Eng.

Walter Unis, P. Eng.

PARADISE LAKE PROJECT

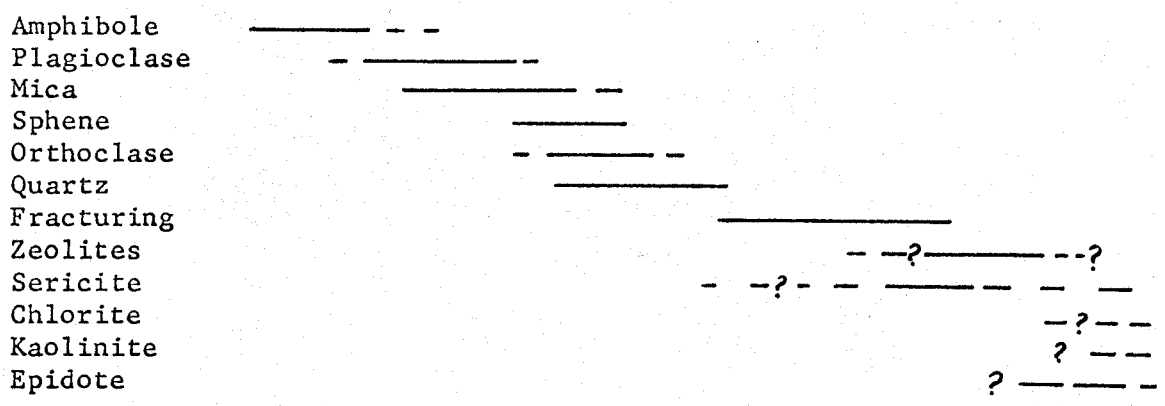
SUMMARY OF EXPENSES

ABSTRACTED FROM ACCOUNTING SUMMARY

To August 31, 1971.

<u>Code</u>	<u>Description</u>	<u>Cost</u>
501	Claim Acquisition Costs	\$ 3,500
503	Claim Staking Costs	1,863
504	Annual Work Recording Fee	19
509	Contract Line Cutting	455
518	Geochemical charges	4,102
520	Processing and Interpretation	595
523	Company Personnel and Travel	315
541	Overhead	536
550	Miscellaneous	520
578	Camp Maintenance and Supplies	524
		<hr/>
		\$12,429
		<hr/>

Paragenesis



Polished Section 32: DeKalb DDH 1, depth 92'

This section was cut obliquely across a zeolite filled vein with moderate orange pink colour (5 YR 8/4) and similar alteration adjacent.

Very fine magnetite and a sulphide which is either chalcocite or bornite occur in zeolites at the edges of the vein and in the quartz adjacent to it. The maximum size is 0.14 mm but most is less than 0.04 mm. The mineral which may be a copper sulphide occurs only in trace amounts and is very fine.

Polished Section 33: DeKalb DDH 1. Made from sludge.

Preliminary Binocular examination. Includes fragments of feldspar, quartz, mica, hornblende and abundant magnetite. No sulphides visible. Microscopic examination with reflected light.

Silicates are abundant as above. Magnetite occurs but has been partly plucked. No sulphides are in evidence.

Hand Specimens: Specimen BL 2, 14,300 S.

Line Claims, DDH #1. Depth 69 1/2'

Rock: Medium grained granite  
 Quartz, clear, 20%  
 Feldspar, orthoclase and plagioclase, 60%  
 Mafics; hornblende, magnetite, mica, 20%  
 Accessories; sphene, 1%.

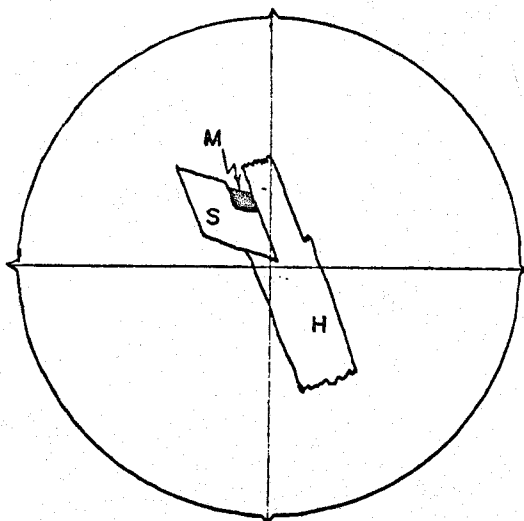
Alteration products, slight to moderate chlorite after mica. Mild to extensive chlorite after hornblende.

Black mineral with metallic appearance is magnetite.

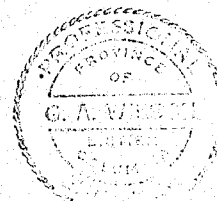
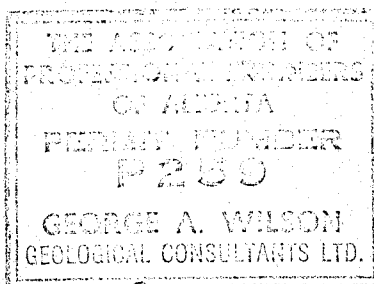
Line Claims, DDH #1. Depth 71 1/4'

Rock: Medium grained granite  
 Quartz, clear, 30%  
 Feldspar, orthoclase and plagioclase, 50%  
 Mafics; hornblende, biotite, 16%  
 Oxides; magnetite, 3%  
 Accessories; sphene, 1%

Alteration products, moderate chlorite alteration of hornblende, slight chlorite alteration of mica.



Magnetite (M) intergrown with sphene (S) which is intergrown with hornblende (H).



*George A. Wilson*  
 George A. Wilson, P. Geol., Eng.  
 George A. Wilson Geological  
 Consultants Ltd.



7060 - E Farrell Rd. S. E.

Calgary 27 255 - 6464

DeKalb Mining Corp

Date Sept 2, 1971

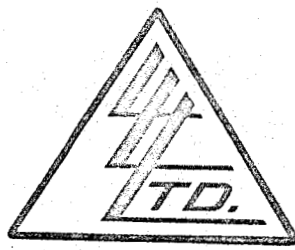
Sample Location	Cu (%)	Ag oz/ton	Au oz/ton	MoS <sub>2</sub> (%) <sup>2</sup>
SNO 71-615 411'-417'	.0008			.0006
SNO 71-613	.0014	<del>0.13</del>	W	.0017
PAR 71-6 363'5"-368'	.0020	0.13	T	.0026
SNO 71-608 374'-378'	.0012			.0018
PAR 71-6 368'-374'	.0029			T
Grab Samples				
L675 530E	.0063			
L675 540E	.0031			
L725 507E	.012			
L725 530E	.0031			
L725 535E	.010			
L750 515E	.0074			
L685 525E	.0049			

ANALYST M. J. Richard

1258 5107

To: DEKALB MINING CORPORATION  
635 - 6th Ave. S.W.  
CALGARY 1, Alberta.  
Mr. R. A. Buckley

File No. 3826  
Date February 24th 1971  
Samples Pulps



Certificate of  
ASSAY of  
LORING LABORATORIES LTD.

277-6797

SAMPLE No.	Cu %	MoS2 %
<u>D.D.H. #1</u>		
80°-84.5°	.04	.007
72°-75°	.01	.006
90°-92°	.01	.004
62°-64°	.01	.005
<i>sample reground</i>		
<p><b>I</b> <b>Hereby Certify</b> THAT THE ABOVE RESULTS ARE THOSE  ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .</p>		

Rejects Retained one month.  
Pulps Retained one month  
unless specific arrangements  
made in advance.

*C. L. McFarlane*  
Licensed Assayer of British Columbia

CORE LABORATORIES-CANADA LTD.

*Petroleum Reservoir Engineering*

P.O. BOX 5670, POSTAL STATION "A"  
CALGARY 9, ALBERTA  
TELEPHONE: 253-3391

Company: Mr. A. Boettger  
Rock Sample

Page: 1 of 1  
File: 931-19  
Date: Jan. 14/71

Analysis

<u>Sample</u>	<u>#Line H-1-74-98</u>
Gold	-0.01 oz/ton
Silver	0.09 oz/ton
Copper	0.54%
Molybdenum	-0.002%

Remarks: - equals less than

**CORE LABORATORIES - CANADA LTD.**  
*Petroleum Reservoir Engineering*

P.O. BOX 5670, POSTAL STATION "A"  
 CALGARY 9, ALBERTA  
 TELEPHONE: 253-3391

Company: Dekalb Petroleum Corporation  
 Rock Samples

Page: 1 of 1  
 File: CAL-2-3321  
 Date: Dec. 29/70

Analysis

<u>Sample</u>	<u>% Copper</u>	<u>% Molybdenum</u>
Sample 1	0.007	0.003
Sample 2 (R.A.B. Snow 32)	0.001	0.005
Drill Sludge Hole 1 Line Claims 60'-80'	0.010	0.002
Drill Sludge Hole 1 Line Claims 80'-98'	0.009	0.005
Line Claims D.D.H. No. 1 60'-62'	0.001	0.007
Line Claims D.D.H. No. 1 62'-64'	0.003	0.007
Line Claims D.D.H. No. 1 64'-66'	0.001	0.005
Line Claims D.D.H. No. 1 66'-68'	0.001	0.007
Line Claims D.D.H. No. 1 68'-70'	0.001	0.008
Line Claims D.D.H. No. 1 70'-72'	0.001	0.007
Line Claims D.D.H. No. 1 72'-75'	0.001	0.005
Line Claims D.D.H. No. 1 75'-77'	0.001	0.007
Line Claims D.D.H. No. 1 77'-79'	0.001	0.006
Line Claims D.D.H. No. 1 79'-80'	0.001	0.003
Line Claims D.D.H. No. 1 80'-84.5'	0.001	0.007
Line Claims D.D.H. No. 1 84.5'-85.5'	0.001	0.002
Line Claims D.D.H. No. 1 85.5'-86.0'	0.002	0.003
Line Claims D.D.H. No. 1 86'-88'	0.001	0.005
Line Claims D.D.H. No. 1 88'-90'	0.001	0.003
Line Claims D.D.H. No. 1 90'-92'	0.001	0.004
Line Claims D.D.H. No. 1 92'-94'	0.001	0.003
Line Claims D.D.H. No. 1 94'-96'	0.001	0.002
Line Claims D.D.H. No. 1 96'-98'	0.002	0.003

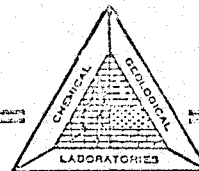
100  
 19  
 67



4605-12 St NE Calgary.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

14240 - 115 AVENUE, EDMONTON 42, ALBERTA



Date Reported: Oct. 22, 1970

Laboratory Report Number: E70-2822

Bill Bayler

MR. A. BOETTGEN

Kind of Sample: Ore

Date Received: Oct. 14, 1970

Identification: Sample #H-1 Line 74-98 - C & G Tag #201

ASSAY

GOLD	0.013	Ozs./ton
SILVER	0.09	Ozs./ton
MOLYBDENUM	< 0.01	% (weight)
COPPER	0.30	% (weight)

## Microscopic Character

### Primary Minerals:

Quartz; 20% to 2 mm, cloudy, strained, fractured. Fills spaces and is last mineral to crystallize.

Feldspar;

Orthoclase - microcline; 10%, irregular anhedral grains to 1.5 mm. Fresh with sparse dusty inclusions. Includes anhedral plagioclase and hornblende.

Plagioclase - An<sub>32</sub> An<sub>19</sub>; 30%; mostly euhedral to subhedral, partly anhedral, twinning moderate, gradational zoning. Euhedral to orthoclase and quartz but anhedral to hornblende. Composition determined by slightly off centre bisectrix figure  $\perp$  x.

### Mafic Minerals:

Hornblende; 10%; acicular, euhedral grains to 2 mm, lamellar twinning common.  $ZAc = 22^\circ$

Pleochroic formula  $X^1 =$  yellowish green  
 $Y^1 =$  pale green  
 $Z^1 =$  green

Mica; 10%; subhedral flakes 0.5 to 2.5 mm across. Includes subhedral grains of feldspar and opaque minerals  $x \perp c$ , X = pale yellow; Y = Z = dark brown. Most grains strained, some grains partly altered to chlorite and epidote.

Sphene; 1%; anhedral grains to 2 mm.

Oxide; Magnetite; subhedral grains to 0.5 mm; occurs in clusters associated with biotite.

### Depositional Minerals:

Occur in vein .5 to 1 mm wide,  $15^\circ$  to core axis.  
 Zeolite, probably analcite or chabazite.

### Secondary Minerals:

Sericite; 1%, minute flakes in plagioclase, most abundant in vicinity of veinlets.

Kaolinite; 2%; occurs to some extent in almost all plagioclase but is very abundant on some.

Chlorite; 1%, minor on some biotite, traces in hornblende.

Epidote; 1%, minor alteration to some hornblende.

REPORT RE: 1 THIN SECTION  
2 POLISHED SECTIONS  
3 HAND SPECIMENS  
LINE CLAIMS

Prepared for  
DeKalb Mining Corporation  
635 Sixth Avenue S.W.  
Calgary, Alberta

by

George A. Wilson Geological Consultants Ltd.  
212, 634 Sixth Avenue S.W.  
Calgary, Alberta

## INTRODUCTION

This report is for work done on one thin section, two polished sections, and three hand specimens at various times at the request of Mr. R. Buckley of DeKalb Mining Corporation.

The specimens are labelled as follows: DDH 1, depth 92', 69 1/2', 71 1/4', and BL 2 14,300 S.

## CONCLUSIONS AND RECOMMENDATIONS

The host rock is a fresh hornblende granite. No economic concentrations of minerals were found in the host although questionable copper sulphide, probably bornite, was found as minute grains in trace amounts in association with a zeolite vein. A rock with one per cent of bornite would assay 0.66 per cent copper. One-half per cent bornite would be visible. Consequently it is recommended that specimens be studied to determine whether some form of contamination such as copper sulphate could have occurred.

The brown resinous to vitreous mineral visible in the hand specimens is sphene.

### Thin Section 102:

DeKalb DDH 1, depth 92'.

Macroscopic Character: Drill core specimen 7/8" x 4 1/2".

Colour: Speckled grey.

### Minerals

#### Sialic:

Feldspar; plagioclase to 5 mm. There appear to be 2 feldspars. One is coarse and anhedral, the other is fine to 3 mm, euhedral and in some places fully enclosed in the coarse variety.

#### Mafic:

Hornblende; to 3 mm, anhedral to subhedral, green.  
Mica; brown, subhedral to 2 mm.  
Oxides; magnetite 1/2 to 1 per cent, very fine.

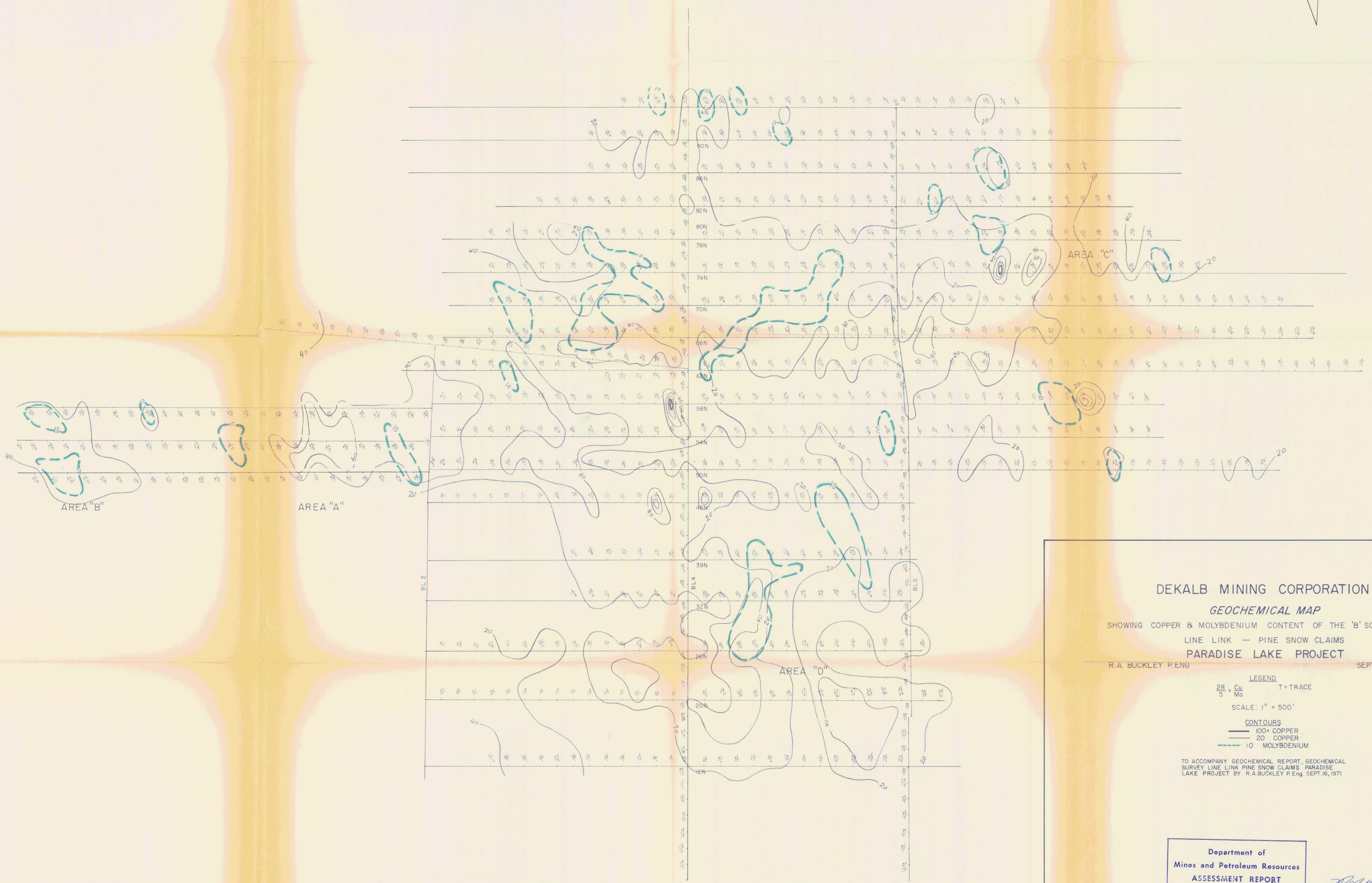
#### Depositional:

Quartz-carbonate with soft mineral on veins, accompanied by moderate orange pink (5 YR 8/4) alteration.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 3415 MAP \_\_\_\_\_





DEKALB MINING CORPORATION  
**GEOCHEMICAL MAP**  
 SHOWING COPPER & MOLYBDENUM CONTENT OF THE 'B' SOIL HORIZON  
 LINE LINK - PINE SNOW CLAIMS  
 PARADISE LAKE PROJECT  
 R.A. BUCKLEY P.ENG SEPTEMBER 1971

LEGEND  
 25 = Cu T = TRACE  
 5 = Mo  
 SCALE: 1" = 500'  
 CONTOURS  
 — 100+ COPPER  
 — 20 COPPER  
 - - - 10 MOLYBDENUM

TO ACCOMPANY GEOCHEMICAL REPORT, GEOCHEMICAL SURVEY LINE LINK PINE SNOW CLAIMS PARADISE LAKE PROJECT BY R.A. BUCKLEY P.Eng. SEPT. 16, 1971

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3415 MAP #3



3415 M-3





DEKALB MINING CORPORATION  
 CALGARY, ALBERTA, CANADA  
**PARADISE LAKE**  
 BRITISH COLUMBIA

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3415 MAP #4

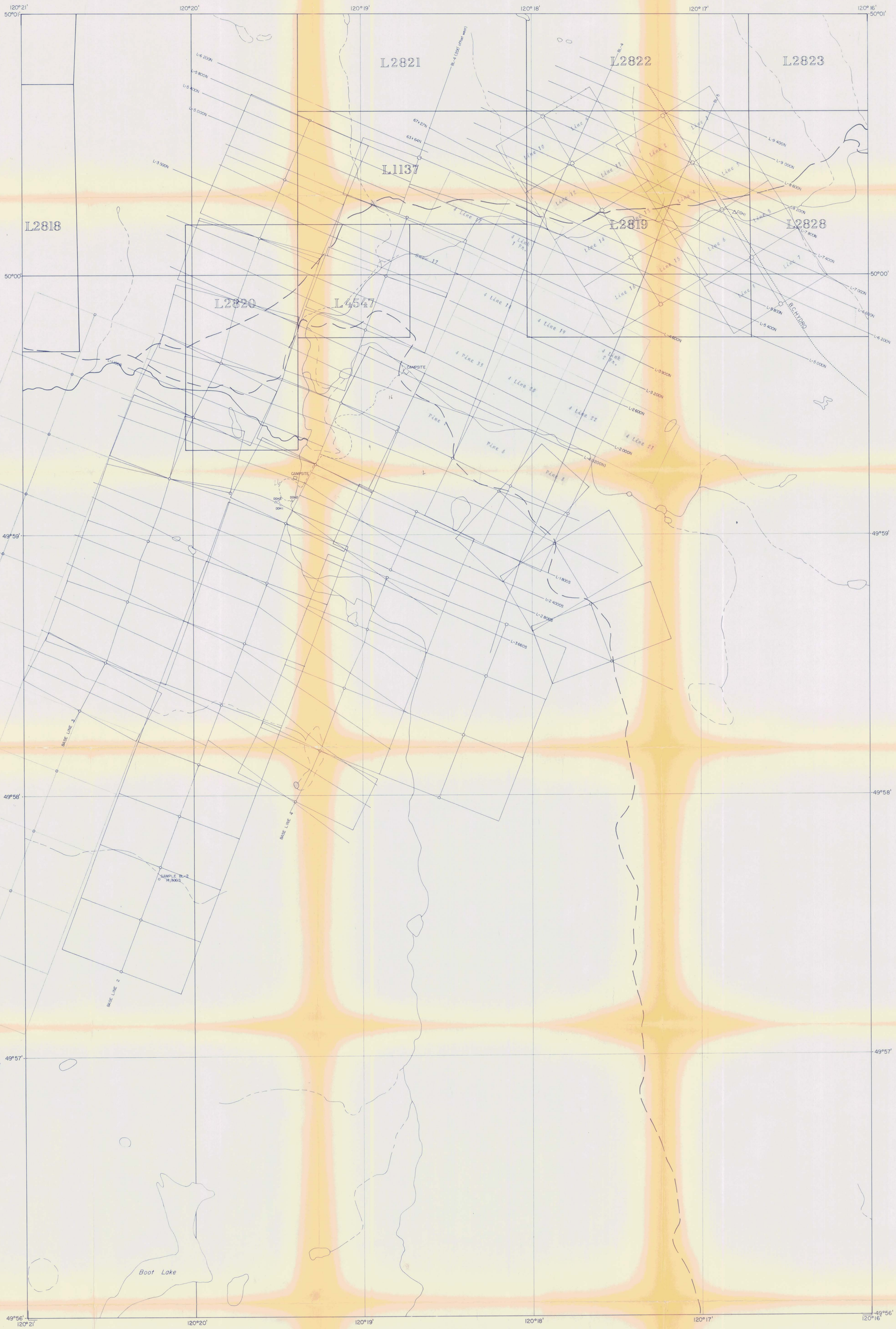
LEGEND

TRAIL      CLAIM BOUNDARY      CUT LINE      CLAIM POST

SCALE: 1" = 800'

DATE: ,197





Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3415 MAP #4B

Department of  
 Mineral Resources  
 ME 115 1972

LEGEND  
 --- TRAIL  
 --- CLAIM BOUNDARY  
 - - - OUT LINE  
 □ CLAIM POST

*B.A. [Signature]*  
 PROFESSIONAL  
 BRITISH COLUMBIA  
 ENGINEER