

2350

I, the undersigned, do hereby certify that the following is a true and correct copy of the original as shown to me by the applicant.

He was a student of the University of Carlton in 1962 with a B.Sc. in geology and of Durham University, England in 1968 with a Ph.D. in geology.

He has been practising my profession for the last seven years.

He is a member of the Association of Professional Engineers of Ontario and Chartered Engineer of the United Kingdom.



Peter M.D. Bradshaw, Ph.D., P.Eng.

GEOCHEMICAL SURVEY OF AREA "J"
BOSS MOUNTAIN, BRITISH COLUMBIA

PREPARED FOR:
CYPRUS EXPLORATION CORPORATION LIMITED
510 WEST HASTINGS STREET
VANCOUVER, B.C.

PREPARED BY:
BARRINGER RESEARCH LIMITED
304 CARLINGVIEW DRIVE
REXDALE, ONTARIO

SEPTEMBER 1969

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **2350** MAP.....

INTRODUCTION

A geochemical stream sediment survey was carried out over approximately 11 sq. mi. of ground held by Cyprus Exploration near Boss Mountain. Sample collection at an interval of one per quarter mile along all drainages was completed over the whole claim area. In addition, a number of reconnaissance stream sediment samples were collected from the immediately adjoining area in order to complete the regional interpretation of the geochemical results.

In the western part of the area which joins onto Noranda's Boss Mountain property, the topography is moderate to steep with much of the region having a more or less uniform slope to the northeast. The remainder of the property is fairly flat with relief seldom exceeding 100-200 feet. The ground is generally wet with considerable areas of poor drainage, verging in places on semi-swamp conditions. The vegetation is almost exclusively pine and spruce with generally thick undergrowth.

Outcrop is moderate in the region of Boss Mountain but is generally poor in other parts of the property. The exposed rocks are generally white hornblende granite with some disseminated pyrite but boulders of metasediment were also observed. The soils are largely podzoles of generally thin to moderate thickness. The soils generally show a poor A horizon, sometimes in excess of a foot thick in areas of impeded drainage, grading into a generally well defined B horizon except under swamplike conditions where the B horizon is almost completely lacking. The C horizon is generally light brown, containing angular rock fragments largely of local derivation.

The streams are moderate to fast flowing and generally suitably well sorted material could be sampled. In seepage areas and on some of the boulders and pebbles in the larger streams considerable quantities of iron oxide were observed.

The geology is being mapped by W. P. McGill Associates and as their geological map was not available at the time of writing of this report and therefore geological

observations contained here are purely preliminary.

RESULTS

From an examination of the results the following threshold and anomalous values are calculated for this area.

	<u>Cu ppm</u>	<u>Mo ppm</u>
Background	0 - 40	0 - 8
Threshold	40	8
3rd Order Anomaly	41 - 80	9 - 16
2nd Order Anomaly	81 - 120	17 - 32
1st Order Anomaly	>120	>32

Within the claim area there are two very strong molybdenum anomalies and three weaker anomalies, all of which require further follow up. There are no well developed copper anomalies and those anomalies which do exist generally coincide with areas of molybdenum high.

The most extensive molybdenum anomaly is in the north-east corner of the property where samples J29 to J37 were taken from a stream whose headwaters lie near the Boss Mountain Mine access road. Coincident with the molybdenum anomaly are also a series of copper 2nd and 3rd anomalous values. While this molybdenum anomaly is extremely strong there is a reasonable possibility of contamination from the mine road material or movement of material downslope from known mineralization. However, samples J38 and J40 to 42 are on streams which also have their origin near the same road and these samples show background to low values. Furthermore, a single sample (J48) taken in a south flowing stream whose headwaters are virtually the same as those for stream J29-37, is background for both molybdenum and copper. Therefore, although there is a possibility of contamination from the mine access road or from down slope creep etc. the present information is by no means conclusive and the cause of this anomaly should be investigated further.

In addition to the anomaly just described samples J57 and J58 were taken from a stream to the east but draining the same general area and both these samples are 2nd order anomalous. The interfluvial area between these samples and the anomalous samples J29 to 34 is quite considerable and this represents an area which also warrants further investigation.

The second very strong molybdenum anomaly is located at the outlet of Buster Lake in the southern corner of the property. Samples J6 to J9 are all greater than 200 ppm molybdenum and also coincide with the strongest copper anomaly in the claim area. Sample J6 is from the outlet of Buster Lake and samples J7-9 drain an area on the southern side of the lake. Although the surrounding samples are all below threshold for both copper and molybdenum these samples represent a considerable area of potentially mineralized ground.

The other two 2nd order anomalous molybdenum samples are RJ-75 and RJ-77 both on the northeastern boundary of the claim area. In both cases the drainages have been sampled upstream and are below background for molybdenum, but further sampling is required downstream.

There are a number of 3rd order anomalous copper samples within the claim area. These however never show a compact anomaly or have a good cut-off, and therefore are thought to represent minor geological changes or changes in the secondary environment rather than mineralization of any significance.

CONCLUSIONS AND RECOMMENDATIONS

Two strong and three weak molybdenum anomalies have been observed within the claim area and all warrant further follow-up. Geological correlation is not possible at this time as the geological map is not available, but these samples represent a considerable area of potential interest.

Detailed stream sediment sampling should be undertaken around the anomaly at the outlet of Buster Lake, collecting stream sediments every 500' up all drainages

within the anomalous area. In addition, all seepages, springs or small streams draining either shore of Buster Lake should also be sampled. In this way it should be possible to close off the anomaly considerably before soil sampling is undertaken.

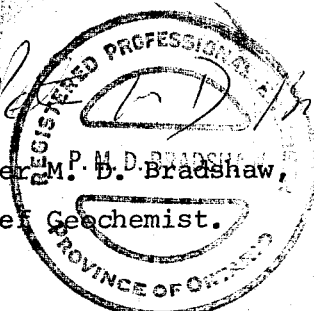
The anomaly shown by samples J29-J37 should be carefully examined near the source of this stream to determine if there has been significant contamination from the Boss Mountain Mine access road. If there is any doubt about the extent or significance of any contamination, 5 or 10 spot samples of the suspected contaminating material should be collected and submitted for analysis and in addition samples along the stream bank throughout the length of the anomaly should also be collected. The samples should provide sufficient information concerning the extent of any contamination and will provide more positive information than can be obtained by a visual examination. Bank samples should consist of soil rather than stream sediment in order to avoid any stream transported contamination.

In addition to these two major anomalies, detail stream sediment samples should be collected at 500 ft. intervals upstream from sample J57 and also any other streams draining the ground inbetween that sample and samples J30-36. The drainages downstream from samples RJ-75 and RJ-77 should be sampled using the regular reconnaissance method for approximately 2 to 3 miles in order to assess the magnitude of those anomalies.

Following the detailed stream sediment delineation of the anomalies geochemical sampling on grid pattern should be considered depending on the extent of the anomaly and the results of the geology and geophysics investigation. The location of the soil grid and the sampling interval to be used can only be determined after the results of the stream sediment follow-up geochemistry are available.

BARRINGER RESEARCH LIMITED

PMDB:lh


Peter M. D. Bradshaw,
Chief Geochemist.

APPENDIX 1

GEOCHEMICAL SURVEY OF AREA "J" BOSS MOUNTAIN, BRITISH COLUMBIA

Samples of active stream sediment were collected at a regular interval of 1200 feet along all drainages. Approximately 50 to 70 grams of sediment was placed in a high wet strength metal-free Kraft envelope and shipped to Vancouver for analysis.

The samples were analysed by Barringer Research Limited in Vancouver. The material was dried overnight at 100°C and sieved to minus 80 mesh using nylon bolting cloth. Copper from this fine fraction was extracted using 0.5 NCL and the content determined on an atomic absorption spectrometer using standard techniques. Molybdenum was determined by colorimetry following bisulphate fusion, Miss Y. Hazeldene was in charge of the laboratory.

BARRINGER RESEARCH

BARRINGER RESEARCH LIMITED
304 CARLINGVIEW DRIVE
REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

October 24th, 1969

Cyprus Exploration Corporation Limited
822-510 West Hastings Street
Vancouver, B.C.

Gentlemen:

Re: Area J. Claim Group, Boss Mountain, B.C.


The following personnel were employed on the geochemical sampling programme on the above claims during the period:-

D. Ridley	Party Chief	June 29 - July 9, 1969
K. Ford	Sample Collector	June 29 - July 9, 1969
M. Wood	Sample Collector	June 29 - July 9, 1969

Yours sincerely,

BARRINGER RESEARCH LIMITED

PMDB:lh


P. M. D. Bradshaw
Chief Geochemist



DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of

Area J. Claim Group
Boss Mountain, B.C.

I, Peter M. D. Bradshaw

of Barringer Research Limited, 1198 West Pender Street, Vancouver.

in the Province of British Columbia, do solemnly declare that

- I am a geochemist and that I did supervise the geochemical sampling on the Area J Claim Group in the Mining Division from on or about the 29th June, 1969 to on or about July 9, 1969.
- The aforesaid work consisted of the following:

Sample Analysis - 75 at \$2.70 per sample	\$202.50
Sample Collection - 16 man days at \$70.00 per day	1120.00
Supervision Reporting and Draughting	<u>575.00</u>
	\$1897.50
- All the aforesaid work was done for Cyprus Exploration Corporation, 822-510 West Hastings Street, Vancouver.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the
VANCOUVER, B. C.
of _____, in the
Province of British Columbia, this _____
day of _____, A.D.

Peter M D Bradshaw


[Signature]

[Signature]
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

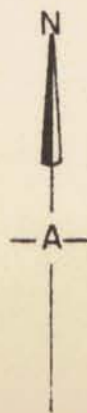


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NO. **2350** MAP **#1**

LEGEND

 Sample location & number

2350



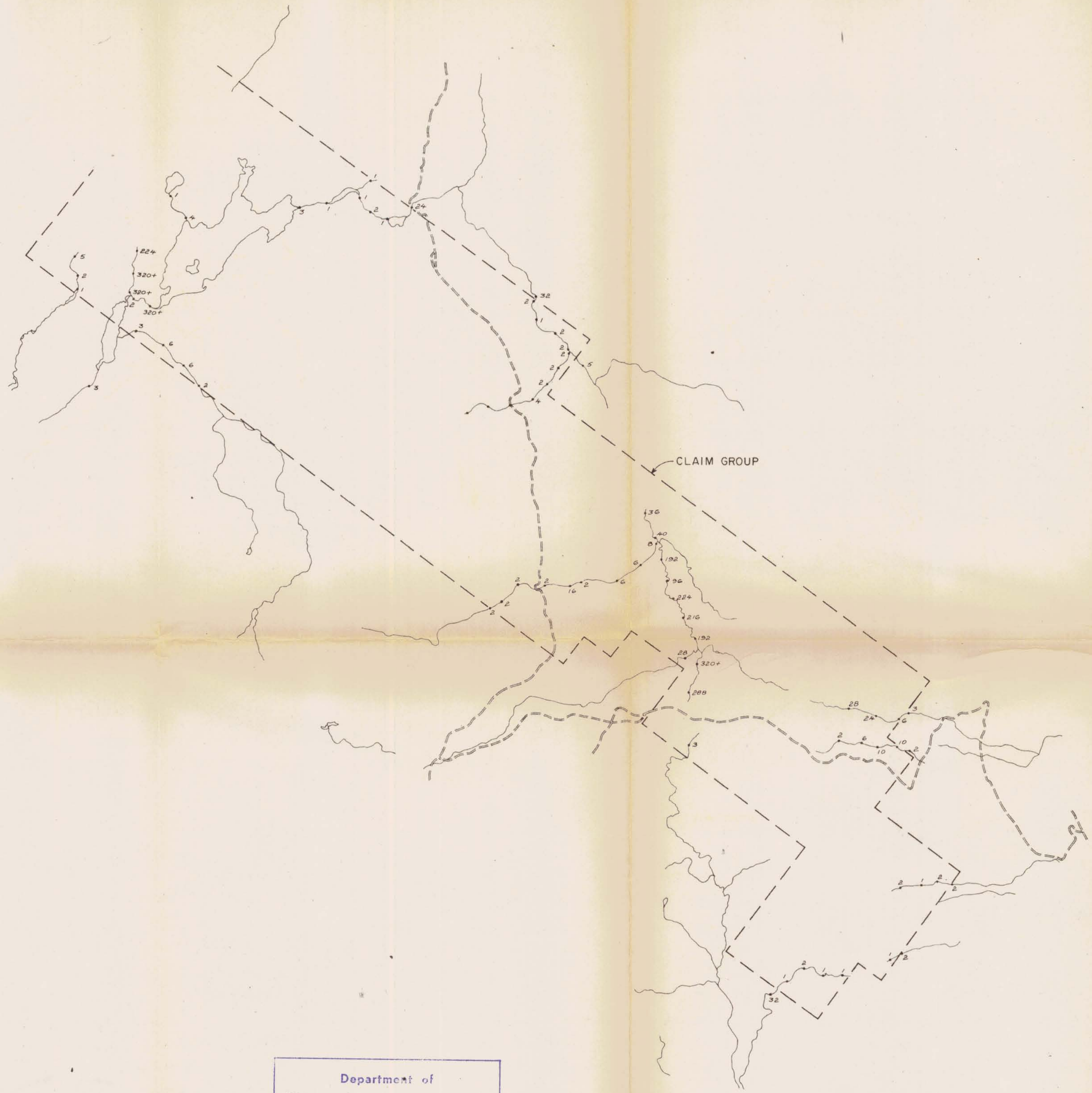
Work undertaken by
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CYPRUS EXPLORATION CORPORATION LTD.

BUSTER LAKE, AREA "J"

GEOCHEMICAL STREAM SEDIMENT
SURVEY

OCTOBER 1969 Scale 1"=2640' DWG. 4-118-10



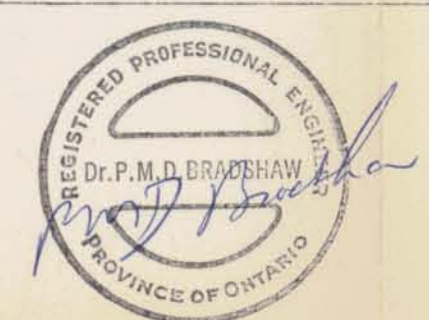
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NO. **2350** MAP **#3**

LEGEND

Molybdenum values in p.p.m.

Background	0 - 8
Threshold	8
3rd order Anomalous	9 - 16
2nd order Anomalous	17 - 32
1st order Anomalous	32 +



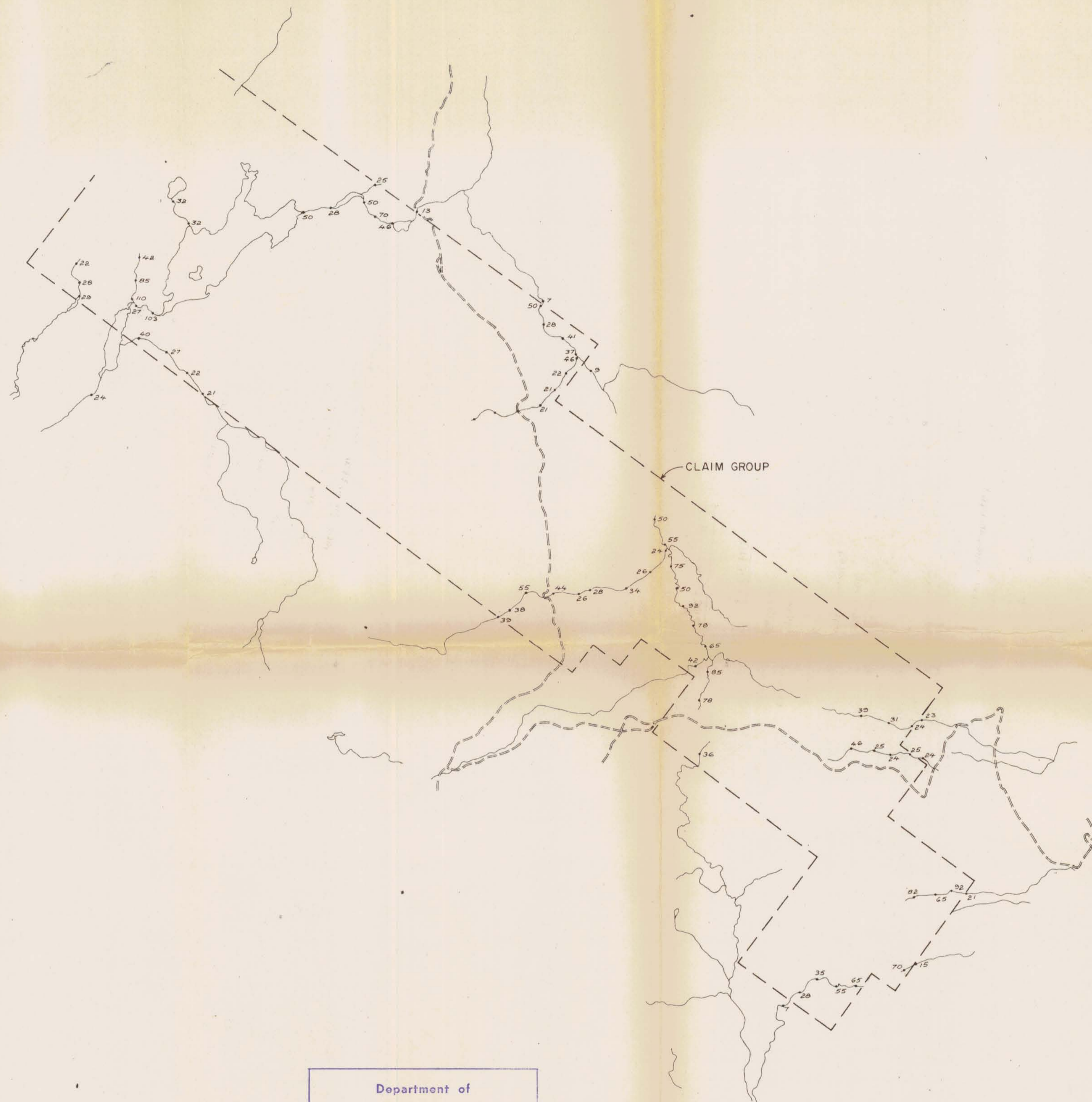
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BARRINGER RESEARCH LTD., Toronto, Canada.

CYPRUS EXPLORATION CORPORATION LTD.

BUSTER LAKE, AREA "J"

GEOCHEMICAL STREAM SEDIMENT
SURVEY
MOLYBDENUM

OCTOBER 1969 Scale 1" = 2640' DWG. 4-118-12

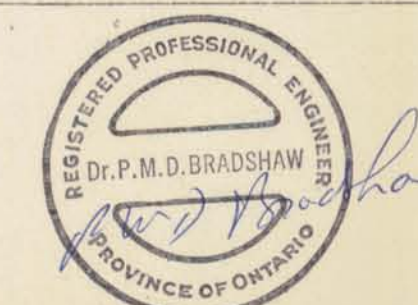
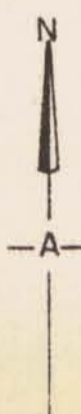


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LEGEND

Copper values in p.p.m.

Background	0 - 40
Threshold	40
3rd order Anomalous	41 - 80
2nd order Anomalous	81 - 120
1st order Anomalous	120 +



Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada.

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CYPRUS EXPLORATION CORPORATION LTD.

BUSTER LAKE, AREA "J"

GEOCHEMICAL STREAM SEDIMENT
SURVEY
COPPER

OCTOBER 1969 Scale 1" = 2640' DWG. 4-118-11