

GEOCHEMICAL SOIL SURVEY

C Soo Claims number 1 to 16, 31 to 44,
63 to 72.

Rayfield River Area, B. C., 20 miles east
of 70 Mile House.

Lat. 51° Long. ~~120°~~ ~~S.W.~~ quadrant.

BY

121 S.E.

92 P/7W

Rae G. Jury, P. Eng.

for Monarch Metal Mines Ltd.

Field Survey from May 21st, 1966 to

June 15th, 1966

872

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MONARCH METAL MINES LTD.

GEOCHEMICAL SOIL SURVEY

OF C SOO CLAIMS

RAYFIELD RIVER AREA, B.C.

September 1st, 1966

TO PROTECT OUR CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS AND EXTRACTS FROM OUR REPORTS MUST RECEIVE OUR WRITTEN APPROVAL.

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(IN Pocket)

LOCATION MAP: Scale 1 inch = 8 miles # 1

CLAIMS AND TOPOGRAPHY, 2 sheets, scale 1 inch = 250 feet # 2, # 3

SAMPLE LOCATIONS AND GRADES, 2 sheets, scale 1 inch = 250 feet. # 3

4

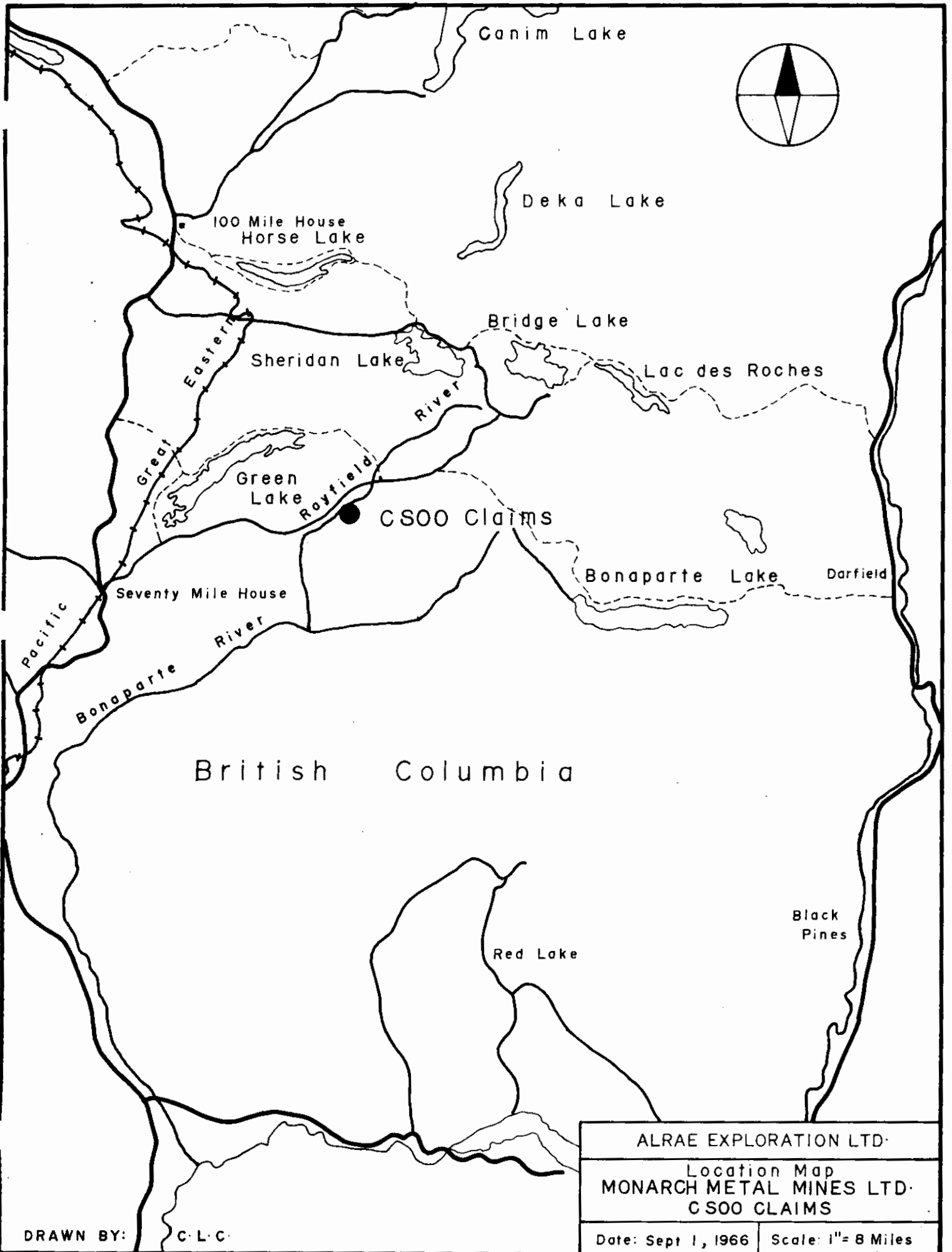
INTRODUCTION

Monarch Metal Mines Ltd. acquired 40 claims in the Rayfield River Area, B. C. in the spring of 1966. This area is known to be underlain by granitic intrusive rocks similar to those in which a low grade copper mineralized zone has been discovered by Consolidated Mining and Smelting Company Limited on claims approximately four miles to the west of the Monarch Metal Mines Ltd. C. Soo claims. A geochemical soil testing program of exploration was conducted over these claims during May and June, 1966. This survey was conducted over the entire claim area on flagged and marked compass lines 500 feet apart and soil samples were taken each 100 feet along the lines. Samples were tested for copper content using the rubenic acid method of analysis. Relative grades were assigned to each sample test by using numbers 1 to 10, 10 representing the test of pure malachite.

Claim boundaries and topographic features are presented on separate maps and the soil testing results are on an overlay sheets at the same scale. All four maps are in the pocket binder at the end of the report.

LOCATION AND ACCESS

The C Soo claims are located approximately 1 mile south of Pressy Lake and 20 miles east of 70 Mile House, B. C. A well maintained gravel road from Highway 97 at 70 Mile House leads easterly to the claims. The total distance from Vancouver to the claim group by road is approximately 295 miles.



DRAWN BY: C.L.C.

ALRAE EXPLORATION LTD.	
Location Map MONARCH METAL MINES LTD. CS00 CLAIMS	
Date: Sept 1, 1966	Scale: 1" = 8 Miles

CLAIMS

There are 40 claims in the C Soo group owned by Monarch Metal Mines Ltd. which have record numbers as follows:

<u>Claim Numbers</u>	<u>Record Numbers</u>
C Soo 1 - 14	11347 - 11360 respectively
C Soo 15 and 16	11301 and 11302
C Soo 31 - 40	11361 - 11370
41 - 44	11317 - 11320
C Soo 63 to 72	11371 - 11380

All claims are within the Clinton Mining Division and were located in March, 1966.

SAMPLING AND TESTING METHODS

Soil samples were taken on grid lines located by chain and compass work from cut base lines. These lines run in a easterly direction and are 500 feet apart, samples were taken each 100 feet along the lines. At each sampling station a test hole was dug and the sample collected from the layer within the soil immediately below the leached layer. This varied in depth from 7 to 12 inches throughout most of the claim group. A description of forest cover, depth of sampling, slope of surface and type of soil was made of each sample. Care was taken not to include any humus material in the samples excepting of course sample taken in the swampy wet areas.

The samples were analyzed using a standard cold acetic acid extraction and rubenic test papers. This method gives an indication of the relative copper content in the soils. Arbitrary values on a numbered scale from one to ten were assigned to each sample test. A

value of 10 was taken for a pure malachite test.

Samples were collected during the period May 21st, 1966 to June 15th, 1966; many of the samples were tested in Vancouver during July, 1966.

GENERAL GEOLOGY

Although there is very little bed rock exposure on the claims it is known that the claims are underlain by intrusive coarse grained quartz monzonite low in mafic mineral content. One exposure of Tertiary basalt overlying the Jurassic intrusive was noted on the northeastern corner of the claim group.

Mineralization which has been under evaluation by the Consolidated Mining and Smelting Company Limited some four miles to the west of the Monarch Metal Mines claims, is within a similar quartz monzonite type of rock and is described as finely disseminated chalcopryrite within this rock.

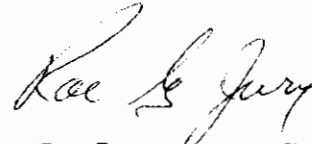
CONCLUSIONS AND RECOMMENDATIONS

As may be seen on the accompanying pairs of maps, anomalous copper content was discovered in many of the samples tested. Some of the individual high readings must be discounted due to the occurrence of humus material in the samples or the possibility of the sample being taken near a copper bearing boulder. The accompanying overlaying map sheet #1 shows three anomalous copper bearing areas were found on the northern portion of the claims. The most westerly anomaly is the most significant of the three.

To further evaluate these claims and to test for the cause

of the anomalies it is recommended that induced polarization survey test lines be run across the strongest portion of the soil sampling anomalies. Should this method indicate the presence of electrically conducting particles in the underlying rock the survey should be continued to fully outline these anomalies.

Respectfully submitted,



Rae G. Jury, P. Eng.

C E R T I F I C A T E

I, Rae G. Jury of the City of Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geological engineer.
2. I am a graduate of Queen's University in Kingston (B. Sc. in Geological Sciences 1957)
3. I am a registered Professional Engineer of the Provinces of British Columbia and Ontario and also a junior member of the Canadian Institute of Mining and Metallurgy.
4. I have practised my profession since 1957 with Labrador Mining and Exploration Company, Quemont Mining Corporation, Canadian Johns Manville Co. Ltd., and Alrae Exploration Ltd.
5. I have personally supervised the geochemical soil sampling and testing on the C Soo claims during the period May to August, 1966.
6. I have not received nor do I expect to receive, any interest either directly or indirectly, in the properties or securities of Monarch Metal Mines Ltd.

DATED AT VANCOUVER THIS 1ST DAY OF SEPTEMBER, 1966



Rae G. Jury, P. Eng.

DO NOT file

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of Services performed for
Monarch Metal Mines Limited

I, Rae G. Jury

2721E 171⁰²

of Vancouver

in the Province of British Columbia, do solemnly declare that

the following list comprises full details of the amount of gross wages expended while conducting a geochemical soil survey of the C-Soo 1 to 14, 31 to 40 and 63 to 72 Group of Mineral Claims located in the Clinton Mining Division for Monarch Metal Mines Ltd.

<u>Personnel Record</u>			<u>December 8, 1966</u>
<u>NAME</u>	<u>OCCUPATION</u>	<u>DATES EMPLOYED</u>	<u>GROSS WAGES</u>
D. Bragg	Sampler	May 16 - June 9	\$ 677.00
M. McCrory	Sampler	May 16 - 19	91.64
Paul Clarke	Sampler	May 19 - June 15	
Dick Zandee	Sampler	May 19 - June 15	524.89
Paul Saxton	Sampler	May 24 - June 15	488.66
Jim Patterson	Sampler	May 31 - June 15	326.61
Gordon House	Geologist	May 28 - June 15	514.52
John Deighton	Geologist	May 19 - 30	314.96
			<u>\$ 3,463.17</u>

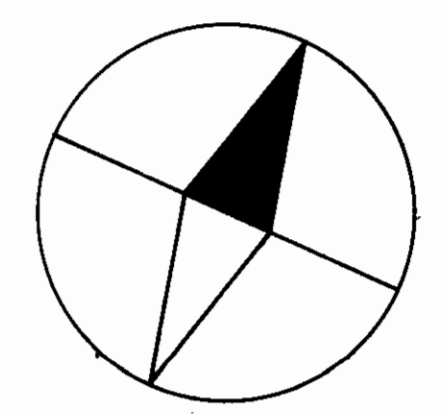
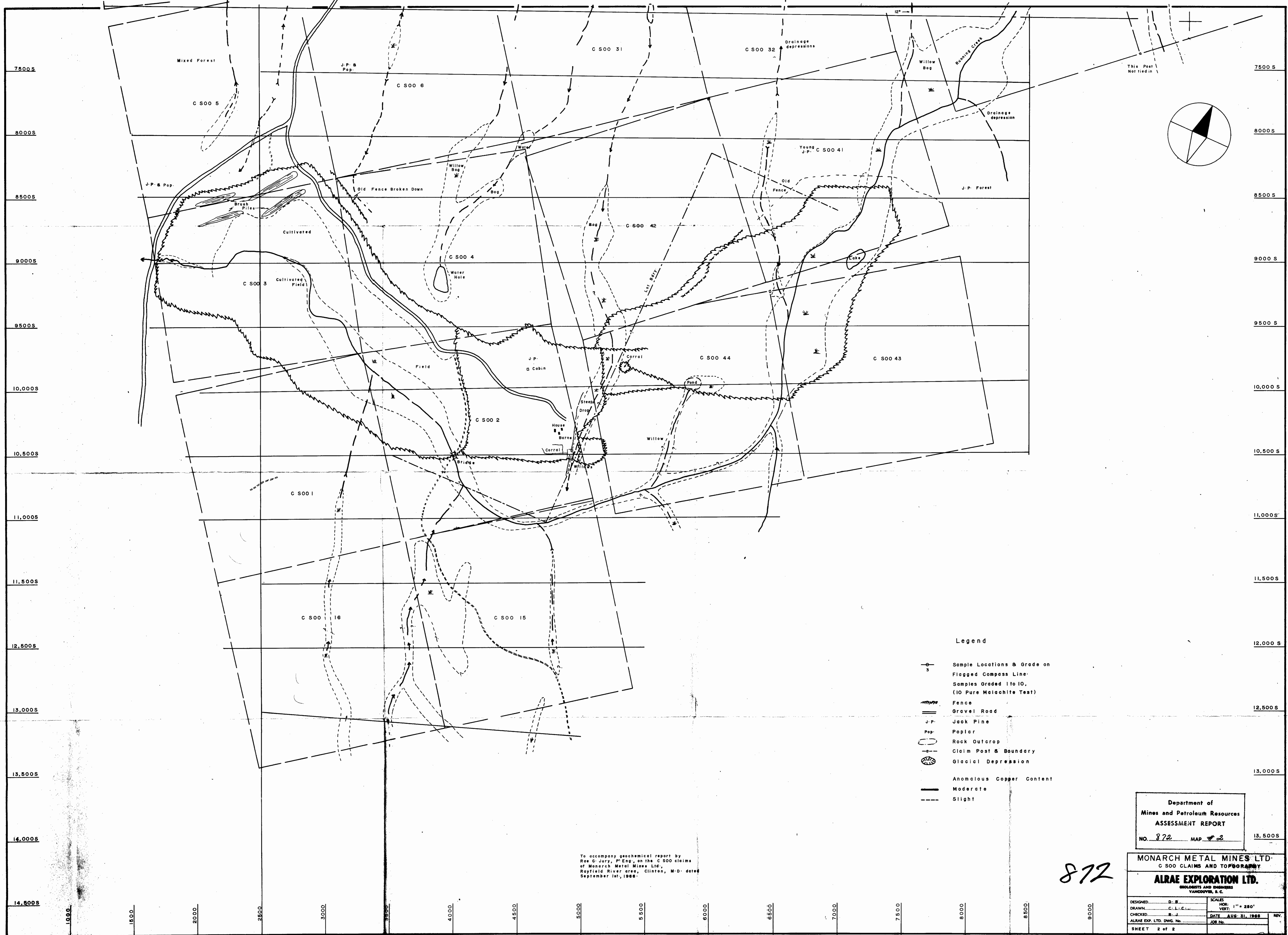
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 12
day of January 1967, A.D.

Rae G. Jury

W. H. ...

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



- Legend**
- Sample Locations & Grade on Flogged Compass Line - Samples Graded 1 to 10, (10 Pure Malachite Test)
 - Fence
 - Gravel Road
 - Jack Pine
 - Poplar
 - Rock Outcrop
 - Claim Post & Boundary
 - Glacial Depression
 - Anomalous Copper Content
 - Moderate
 - Slight

To accompany geochemical report by
 Roe G. Jury, P. Eng., on the C 500 claims
 of Monarch Metal Mines Ltd.,
 Rayfield River area, Clinton, M.D. dated
 September 1st, 1968.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 872 MAP # 2

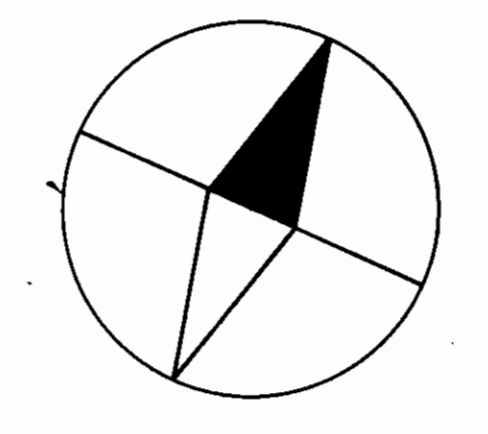
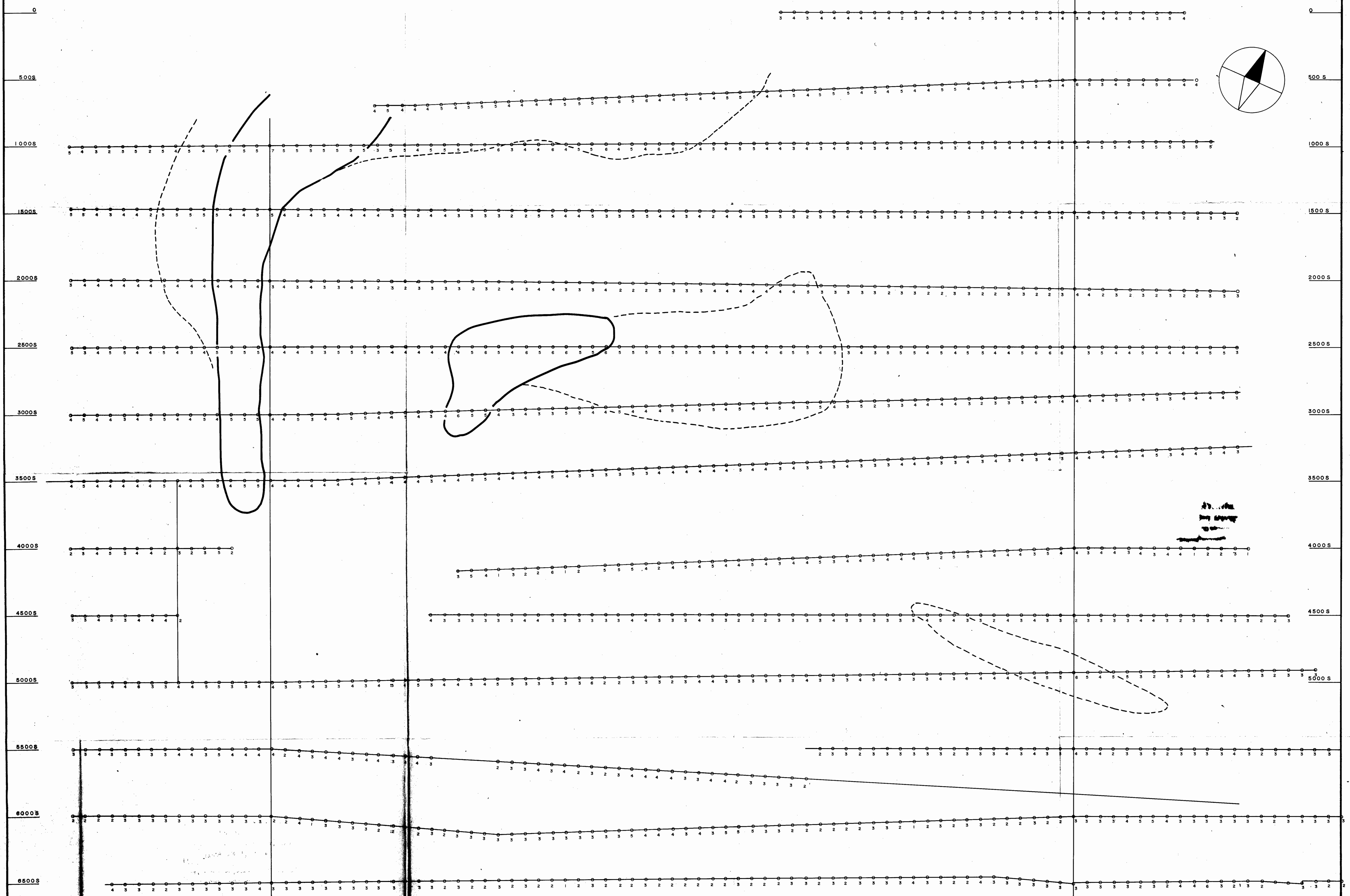
MONARCH METAL MINES LTD.
 C 500 CLAIMS AND TOPOGRAPHY
ALRAE EXPLORATION LTD.
 GEOLGISTS AND ENGINEERS
 VANCOUVER, B. C.

DESIGNED: D. S.	SCALE: 1" = 250'
DRAWN: C. L. C.	REV: 1
CHECKED: E. J.	DATE: AUG. 31, 1968
ALRAE EXP. LTD. DWG. No.	JOB No.
SHEET 2 of 2	

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Roe G. Jury

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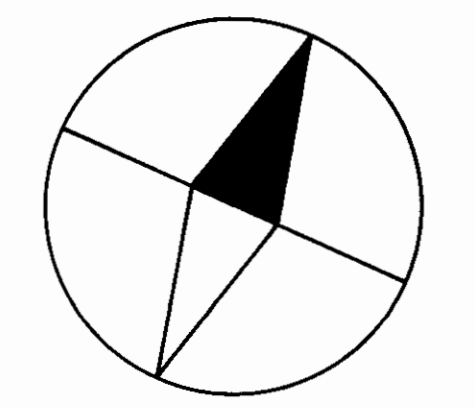
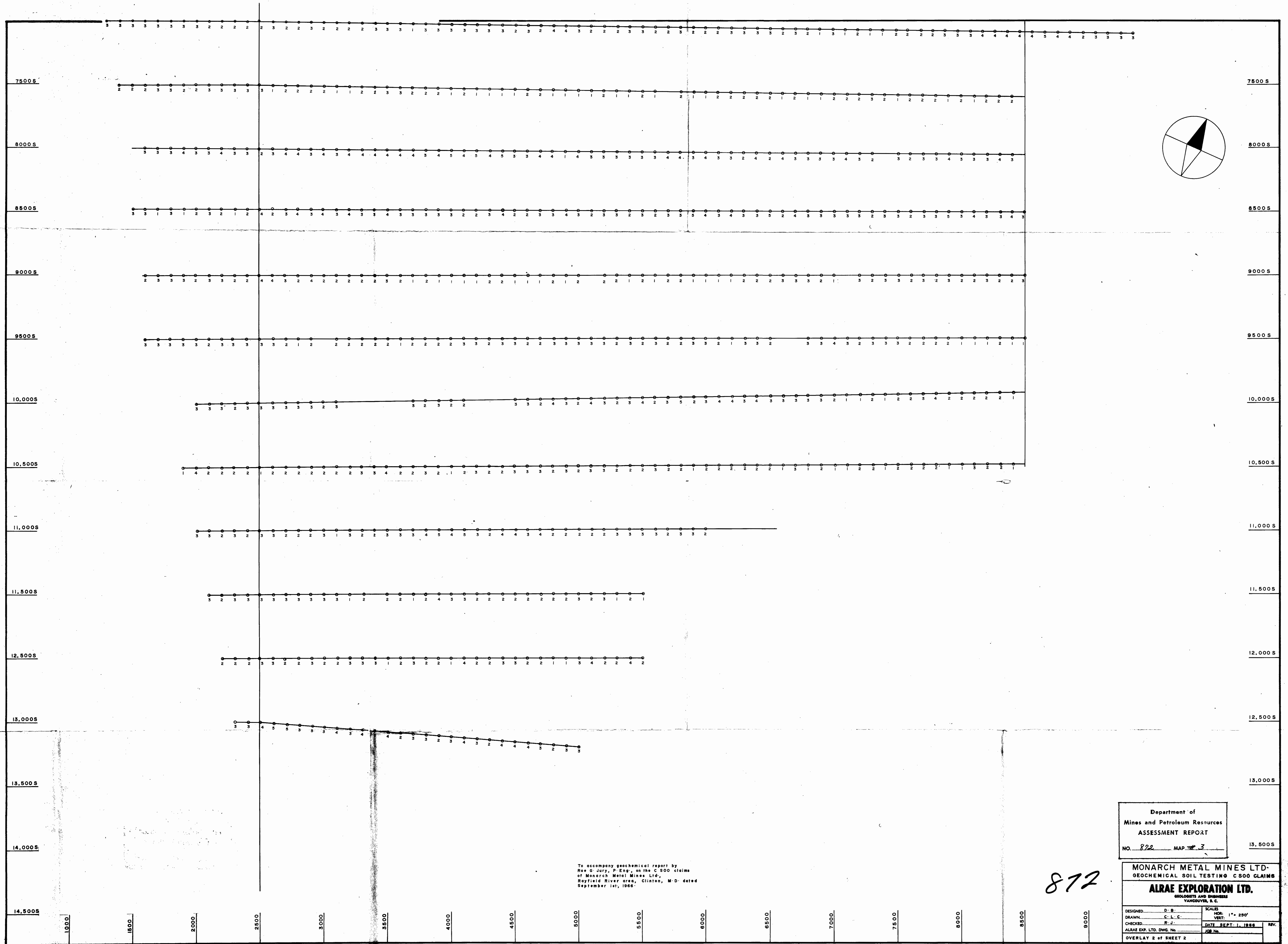


To accompany geochemical report by
 Rex G. Jury, P. Eng., on the C 500 claims
 of Monarch Metal Mines Ltd.,
 Rayfield River area, Clinton, M.D. dated
 September 1st, 1966.

872

MONARCH METAL MINES LTD. GEOCHEMICAL SOIL TESTING C 500 CLAIMS	
ALRAE EXPLORATION LTD. GEOLOGISTS AND ENGINEERS VANCOUVER, B.C.	
DESIGNED: R.B.	SCALE: HOR: 1" = 250'
DRAWN: C.L.C.	VERT: _____
CHECKED: R.H.	DATE: AUG 31, 1966
ALRAE EXP. LTD. DWS. No. _____	JOB No. _____
OVERLAY 1 of SHEET 1	

M. (?)



To accompany geochemical report by
 Rex G. Jury, P. Eng., on the C 500 claims
 of Monarch Metal Mines Ltd.,
 Rayfield River area, Clinton, M.D. dated
 September 1st, 1966.

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Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 872 MAP # 3

MONARCH METAL MINES LTD.
 GEOCHEMICAL SOIL TESTING C 500 CLAIMS
ALRAE EXPLORATION LTD.
 GEOLOGISTS AND ENGINEERS
 VANCOUVER, B. C.

DESIGNED: D. B.	SCALE: 1" = 250'
DRAWN: C. L. C.	VERT.
CHECKED: R. J.	DATE: SEPT. 1, 1966
ALRAE EXP. LTD. DWG. No.	JOB No.
OVERLAY 2 of SHEET 2	

Rex G. Jury