

GEOLOGICAL AND GEOCHEMICAL REPORT

ON LEA 1-15 MINERAL CLAIMS OF

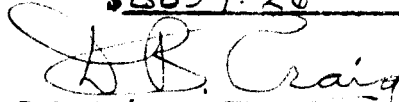
MAKAOO DEVELOPMENT CO. LTD. (NPL),

SUMMIT LAKE AREA,

YUKON TERRITORY.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$8897.26



Resident Geologist or
Resident Mining Engineer

October 16, 1973. Considered as representation work under Section 53 (4) Yukon Quartz Mining Act. Vancouver, B.C.



Commissioner of Yukon Territory

Received Dec 18/73
J.H. Laine

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MAPS:

PROPERTY LOCATION MAP	1" = 80 miles
GEOLOGY	1" = 1000 feet
GEOCHEMICAL SURVEY	
ZINC (ppm): Values (1) Contours (1)	1" = 1000 feet
LEAD (ppm): Values (1)	1" = 1000 feet

GEOLOGICAL AND GEOCHEMICAL REPORT
ON LEA 1-15 MINERAL CLAIMS OF MAKAOO DEVELOPMENT
CO. LTD. (NPL), SUMMIT LAKE AREA, YUKON TERRITORY.

INTRODUCTION

The LEA group of Makao Development Co. Ltd. (NPL) is located in the Yukon Territory, 12 miles due north of Summit Lake and 7 miles northeast, along regional strike, of Canex-Placer's recently discovered lead-zinc deposit in Howard Pass.

The LEA claims were staked in the early winter of 1972-73 and acquired from the locator by Makao.

In the summer of 1972 personnel of Torwest Resources Ltd. (NPL) conducted geochemical and prospecting surveys of the claims under the direction of W. Petrie, prospector. The property was mapped by D.P. Taylor, Geologist of Agilis Engineering Ltd.

LOCATION AND ACCESS

The LEA claims are situated in the Yukon Territory 12 miles due north of Summit Lake, Y.T. and lie immediately south of and adjacent to the Yukon - Northwest Territories border. The claims are 170 miles north of Watson Lake Y.T. and seven miles northwest of Canex-Placer's lead-zinc deposit in Howard Pass.

Access to the claims is by ski or float equipped fixed-wing aircraft to Summit Lake from Ross River or Watson Lake, or possibly by ski or wheel equipped aircraft from Watson Lake to the airstrip of Canex-Placer, at Howard Pass. From Summit Lake

or Howard Pass access is at present by helicopter. Reports of a road to be built to Howard Pass are not yet confirmed.

PHYSIOGRAPHY AND CLIMATE

The property lies on a small mountain at the confluence of two glacial valleys. Elevations range from 4500 feet to 6117 feet above sea level. The mountain has two small, fairly flat valleys on top and drops relatively moderately to the major eastern valley. Southern facing slopes to the creek south of the property are very steep. The property is orientated parallel to the northwesterly geographic trend.

The climate in this area is one of long very cold winters with 4-6 feet of snow and short warm summers. The snow free working season in this area is limited to the period of mid-July to the end of September.

PROPERTY

The LEA 1-15 claims were staked in late 1972 and although short, generally around 1000 feet by 1000 feet, appear to be staked in accordance with the Territorial Mineral Act. The claim tags were placed on the posts during the summer of 1973.

The property comprises;-

Claims

LEA 1-15

Record Numbers

Y71124 - Y71138

The claims are located and recorded in the Watson Lake Mining Division of the Yukon Territory.

REGIONAL GEOLOGY

This area has been mapped by the Geological Survey of Canada on a scale of 1 inch = 4 miles and is covered by Map 8-1967 Nahanni.

Three major rock units are found in the Howard Pass area, only two of which are pertinent to the property area.

Upper Cambrian and (?) Ordovician limestone, dolomite, siltstone, and silty dolomite, with minor basal sandy dolomite and quartzite are unconformably overlain by Devonian and (?) Mississippian black shale and argillite, sandstone and siltstone, banded chert, and chert pebble conglomerate. In some areas the unconformity between these two units contains Upper Ordovician and Silurian graptolitic shale, and black limestone, with minor black chert, cherty argillite and dolomite.

These beds are exposed in a series of northeasterly trending folds in the property area.

PROPERTY GEOLOGY

The LEA group is predominately underlain by Cambrian wavy-banded and massive gray limestone. These rocks are exposed on a major overturned anticline which forms two ridges across the top of the mountain. The limestone unit strike varies from east-west on the eastern end of the property to northwesterly on the west end of the property. Dips on the overturned isoclinal fold vary from 55° to 70° southerly.

The ridges are composed of wavy-banded limestone with underlying gray limestone exposed in the centre of the property.

Siliceous shale of Devonian age is exposed along the north-eastern boundary of the claim group. Attitudes in this unit are erratic due to local disharmonic folding. This unit is also isoclinally folded in a syncline whose axis is just off the property to the northeast.

An area of apparently sedimentary gossan conglomerate was noted on the shale limestone contact, a rock sample from this outcrop sent to Vancouver assayed 2.5% zinc.

Apart from minor pyrite and some areas of graphite, both in the shale unit, no mineralisation was noted during prospecting and field mapping.

GEOCHEMICAL SURVEY

Procedure

A total of 119 soil samples were collected by Torwest Personnel for lead-zinc analysis.

Samples were taken at 200 foot intervals on lines spaced 800 feet apart.

Samples were taken with mattocks from 6-10 inches depth. Attempts were made to obtain "B" horizon material in all cases although the soil profile is poorly developed. Samples were placed in kraft paper bags provided by the laboratory.

ANALYSIS

All samples were shipped to the laboratory of Barringer Research in Whitehorse Y.T. for quantitative analysis for lead-zinc content.

The samples were dried and a minus 80 mesh fraction (250 mgm) was taken from each sample. Extraction was performed using hot perchloric acid for 4 hours. Quantitative analysis was conducted using atomic absorption methods. Lead results were corrected for matrix effect interference and are called by the laboratory "background corrected".

RESULTS

Parts per million results have been obtained for 119 samples. Zinc values range up to 3050 ppm. Using cumulative frequency plots of results on arithmetic probability paper a background of 57 ppm was established and anomalous samples are those greater than 233 ppm.

The same graphic method was attempted on lead result statistics. Lead values range up to 34 ppm. No distinct graph points could be obtained from these very low results.

INTERPRETATION

The bulk of the claims underlain by limestone have the favourable horizon stripped from them by erosion.

Soil anomalies for zinc are directly relatable to the

limestone shale contact area. This is the stratigraphic position of the Canex-Placer lead-zinc deposit 7 miles southeast of the LEA group. The zinc anomaly in this area is unsupported by any anomalous lead values. It is believed to be caused by fixing of migrant zinc in the calcium and ferrous minerals partly comprising lenses of gossan on the unconformity as exposed in the sampled outcrop that yielded the 2.5% zinc assay.

CONCLUSION

The LEA property is underlain by stratigraphy directly cor-
relatable to that containing the Canex-Placer deposit in the
Howard Pass.

The favourable stratigraphy is believed to be limited to
calcareous gossanous conglomerates on the LEA group which contain
accessory transported zinc mineralisation. This material was
noted on the property and yielded 2.5% zinc on assay.

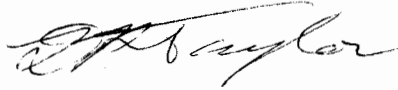
RECOMMENDATIONS

Although the LEA group lies in an area of complete staking
coverage and intense exploration activity, the potential of an
economically important relationship developing between this
property and any neighboring property is remote.

The soil anomalies have been reliably related to an
economically unfavorable situation exposed on the property and
are judged economically unimportant.

No further resources should be expended on this property.

Respectfully submitted,



D. P. Taylor, M. Sc.,

Geologist.

Endorsed by,

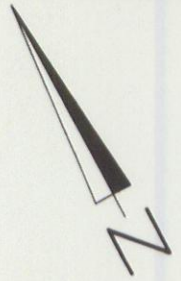
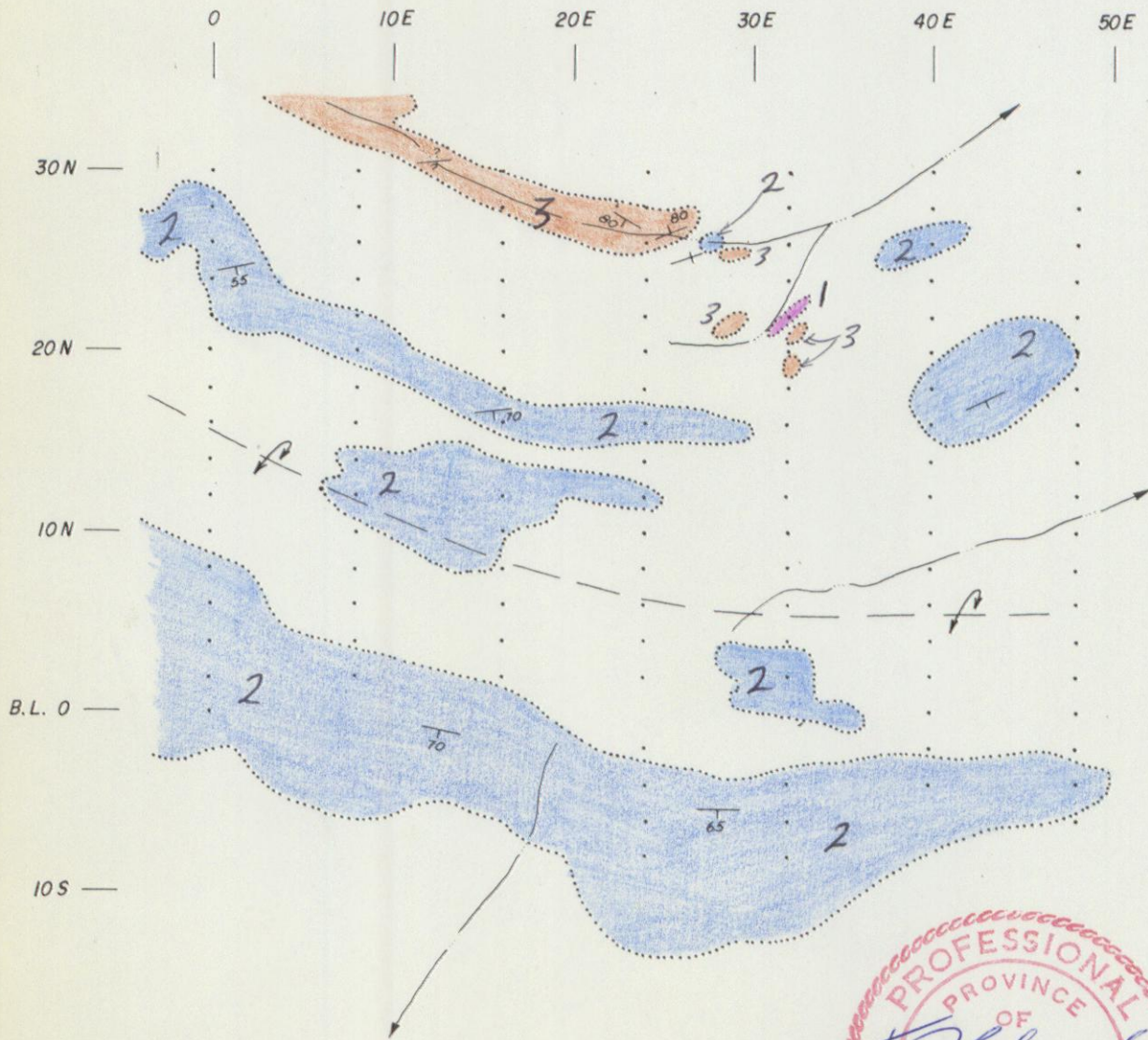


F. Holcapek,







P. Eng.

October 16, 1973.

Vancouver, B.C.

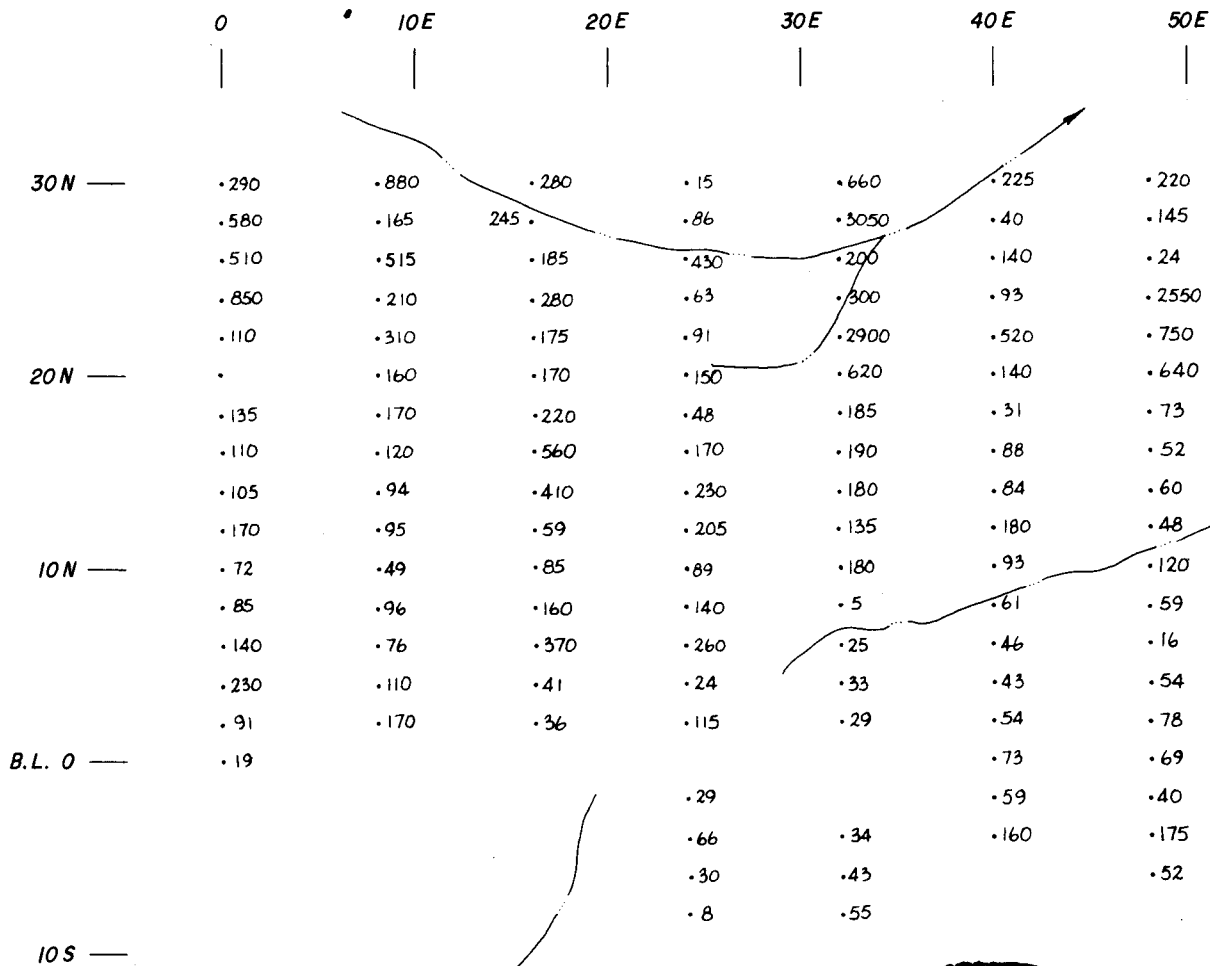


LEGEND

-  Outcrop
-  Strike and dip
-  Turned over fold
-  Shale
-  Limestone
-  Gossan



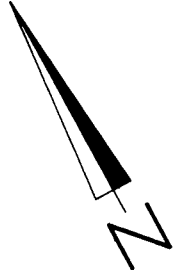
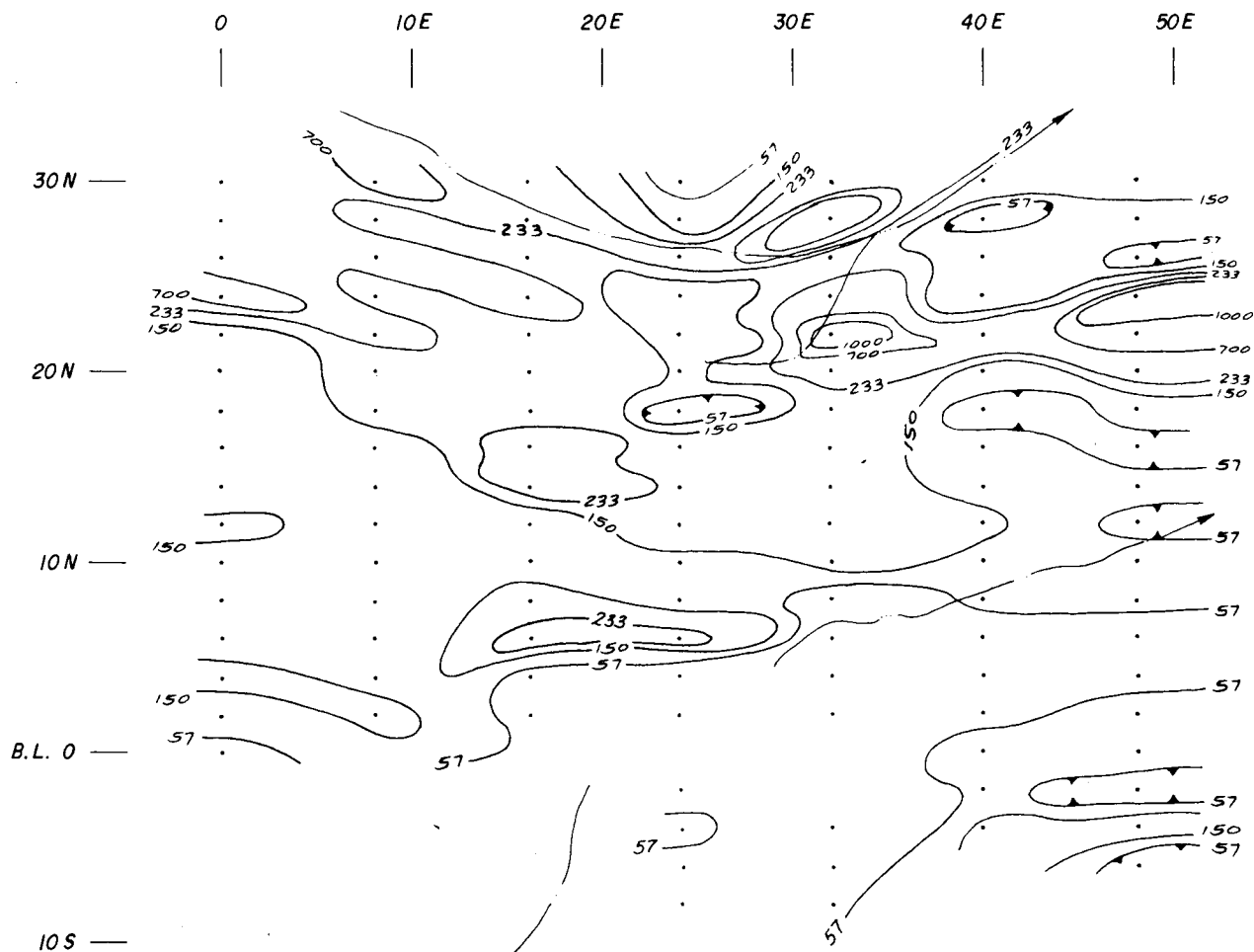
TECK CORPORATION LTD.	
MAKAOO PROPERTY LEA CLAIMS - SUMMIT LAKE AREA WATSON LAKE & NAHANNI MINING DISTRICTS	
<h1 style="margin: 0;">GEOLOGY</h1>	
SCALE: 1" = 1000 FT.	
AGILIS ENGINEERING LTD.	OCTOBER, 1973



LEGEND

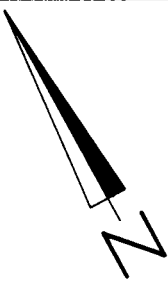
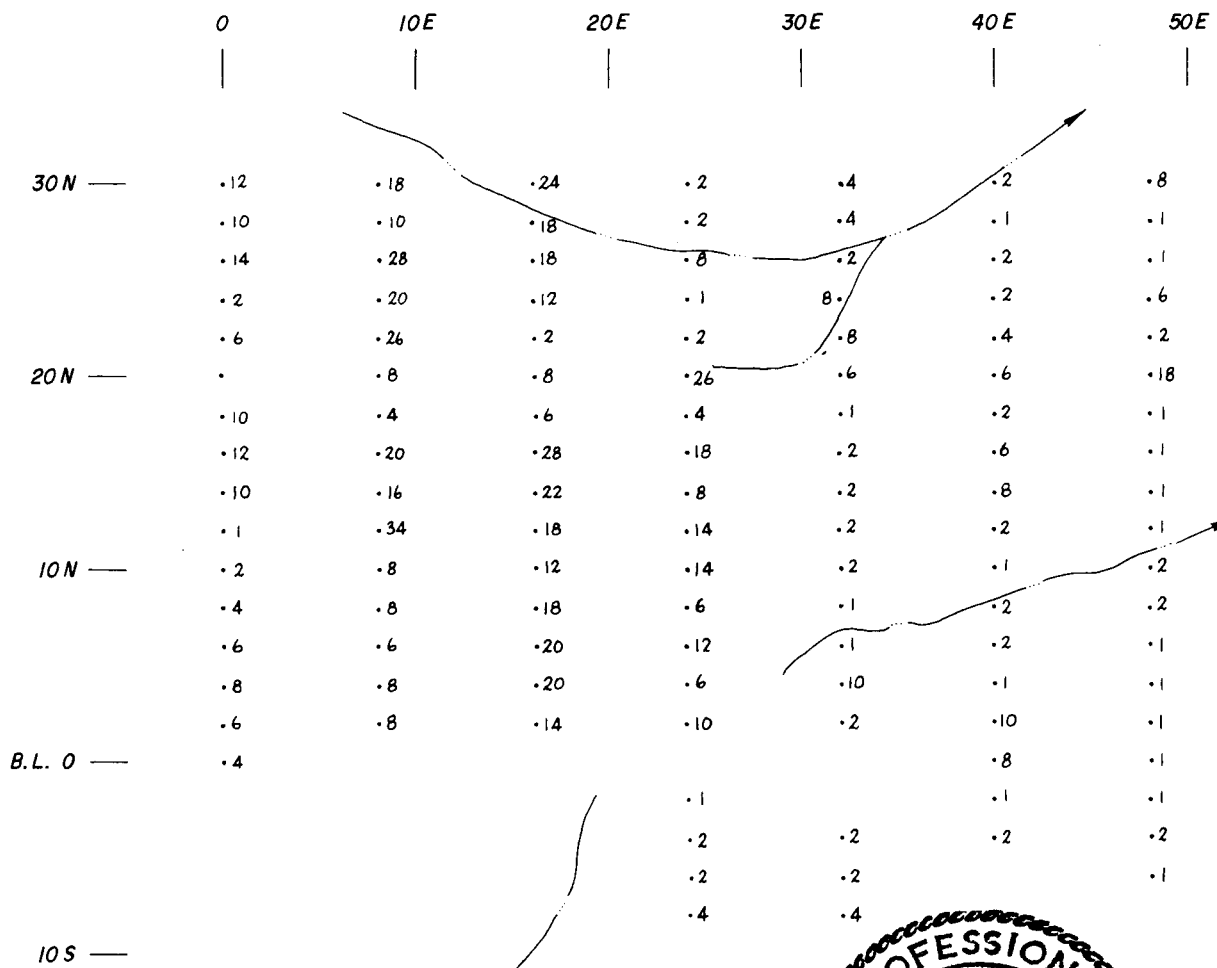


TECK CORPORATION LTD.
MAKAOO PROPERTY LEA CLAIMS - SUMMIT LAKE AREA WATSON LAKE & NAHANNI MINING DISTRICTS
GEOCHEMICAL SURVEY ZINC (PPM)
SCALE: 1" = 1000 FT.
AGILIS ENGINEERING LTD. OCTOBER, 1973



LEGEND

TECK CORPORATION LTD.	
MAKAOO PROPERTY LEA CLAIMS - SUMMIT LAKE AREA WATSON LAKE & NAHANNI MINING DISTRICTS	
GEOCHEMICAL SURVEY ZINC (PPM)	
Contours at: 57, 150, 233, 700 & 1000 ppm	
SCALE: 1" = 1000 FT.	
AGILIS ENGINEERING LTD.	OCTOBER, 1973



LEGEND



TECK CORPORATION LTD.
MAKAOO PROPERTY LEA CLAIMS - SUMMIT LAKE AREA WATSON LAKE & NAHANNI MINING DISTRICTS
GEOCHEMICAL SURVEY
LEAD (PPM)
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