GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

PRO 1-40 MINERAL CLAIMS

of

CONSOLIDATED NICHOLSON MINES LTD

SUMMIT LAKE, 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 $ 10,507.00

D. R. Craig
Resident Geologist or ~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act

Commissioner of Yukon Territory

October 24, 1973
Vancouver, B.C.

D.P. Taylor

AGILIS ENGINEERING LTD.
CONSULTING ENGINEERS & GEOLOGISTS
107 - 325 HOWE STREET, VANCOUVER 1, B.C.

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ON THE

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of

CONSOLIDATED NICHOLSON MINES LTD

SUMMIT LAKE, YUKON TERRITORY

INTRODUCTION

The Pro 1-40 claims were staked in February 1973 in the Summit Lake area, Yukon Territory, following the announcement in late 1972 by Canex-Placer of the discovery of a major lead-zinc deposit in Howard Pass.

The claims were acquired from A. Harman, the locator by Consolidated Nicholson Mines Ltd. In the late summer of 1973 geochemical and geological surveys were conducted on the claim group by personnel of Agilis Engineering Ltd. under the direction of the author of this report.

Geological mapping was performed by A. M. De Quadros, geologist and confirmed by the writer.

LOCATION AND ACCESS

The Pro group lies three miles southwest of Summit Lake, Yukon Territory, which is 158 miles north of Watson Lake, Y.T.

The property is located:-

62^{o} 19' N; 129^{o} 28' W

Access to the property is by fixed wing aircraft from Watson Lake or Ross River to Summit Lake. From Summit Lake access is by helicopter or possibly across country on foot.

PROPERTY

Forty claims were acquired by Consolidated Nicholson Mines Ltd. from A. Harman who staked the Pro 1-40 claims in February 1973. The property is comprised of:

Claim Name	Record Number
Pro 1-40	Y72598-Y72637

All claims are recorded in the Watson Lake Mining District of the Yukon Territory. Claim tags were affixed to the appropriate claim posts in late August, 1973.

PHYSIOGRAPHY AND CLIMATE

The Pro group lies on a mountainside with elevations on the property ranging from about 4,000 to 6,000 feet. Structurally controlled northwest and southeast trending creeks drain the area and cut very deep, steep valleys on the property. There is considerable talus and many outcrop bluffs on the valley sides.

Most of the property is covered by caribou moss and talus but at lower elevations, below tree line at 4,800 feet, dense buck brush and stunted spruce are found.

REGIONAL GEOLOGY

The basement in the claim region is composed of grey and green shale and phyllite with maroon phyllite and minor limestone of Cambrian and earlier age.

This sequence is overlain by Upper Cambrian and (?) Ordovician limestone, dolomitic siltstone, silty dolomite, sandy dolomite and quartzite.

Uppermost in the general stratigraphy is Devonian and (?) Mississippian black shale and argillite with minor sandstone and siltstone; and banded chert and chert pebble conglomerate.

There is a reported unconformity between the (?) Ordovician and the Devonian with occasional deposits of Upper Ordovician and Silurian graptolitic shale, argillaceous limestone and minor black chert, cherty argillite and dolomite in the unconformity.

Regional folding in this area is northwesterly striking with sub-parallel to parallel cleavage.

PROPERTY GEOLOGY

The PRO group is underlain predominantly by black shale and argillite with calc-shale and limestone along the north-east flank of the property.

The lithology on the property is consistently southwesterly dipping, generally with moderate dips. The stratigraphic bottom of the property consists of Upper Cambrian fine-grained grey to occasionally black banded limestone, which forms the predominent ridge on the property and lies under the northeast flank of the claims.

Above this a conformable Cambrian and (?) Ordovician calc-shale sequence is found. This rock is generally fine-grained, dove grey and thin bedded. Stratigraphic thickness of this sequence is generally around 200 feet.

The chert and argillite unit at the top of the sequence is believed to be gradational from Upper Ordovician and Silurian shales intercalated with minor graphtolitic shale to massive Devonian shale and argillite.

The whole property lies on the southern limb of a major anticline whose (?) vertical axis lies in the valley immediately northeast of the property. Strikes on the property are 320° with moderate southwesterly minor folding of very irregular nature being found in the black chert units, these minor folds are frequently disrupted at the axial crests. Milky quartz is also found in this unit as irregular patches, often gradational into wallrocks.

No metalliferous mineralization was noted during field mapping, although stratigraphy on the shale-calc-shale contact is correlatable to that containing Canex-Placer's deposit at Howard Pass.

GEOCHEMICAL SURVEY

A geochemical survey was conducted over stratigraphically favourable sections of the property. Sample lines were placed in grid pattern across the stratigraphy on lines 800 feet apart, samples were taken at stations every 200 feet along these lines.

Procedure:

Samples were taken using mattocks. Soil profile development on the property is generally very poor, but attempts were made to obtain "B" horizon material, or some correlative thereof at 6-10 inches depth, in all cases. Samples were placed in grid referenced kraft paper bags provided by the laboratory.

Analysis:

The samples were shipped to Core Laboratories Ltd., at 325 Howe Street, Vancouver, British Columbia for quantitative lead and zinc analysis.

A minus 80 mesh fraction from each sample was digested in hot nitric acid for 2½ hours. Quantitative analysis was performed for lead and zinc ppm content by atomic absorption methods.

RESULTS

Zinc:

Soil sample results for zinc were obtained for 280 samples; results ranged up to >3000 ppm. Statistical analysis of cumulative percentage of values, plotted on arithmetic probability paper, show background on the group to be 180 ppm and the anomalous samples to be those greater than 320 ppm.

Lead:

Results for lead range up to 200 ppm on the 280 sample results obtained. Statistical analysis shows a background of 38 ppm and anomalous values to be those greater than 95 ppm.

INTERPRETATION

Five small anomalies have developed on the property with coincidental lead and zinc anomalous values. The anomalies all lie in the Upper Ordovician and Silurian, and the Devonian sequences.

The most prominent lead anomaly lies on lines 32E and 40E around station 30S. A zinc anomaly centered around a greater than 3000 ppm result is coincident to this lead anomaly. The zinc anomaly trends along geological strike for more than 800 feet and has spot highs scattered around it at stations 24E, 24S;24E, 38S; and 16E, 30S; the last two of these spot highs are in creeks and may possibly be spurious.

A second anomaly has developed in the area of line 80E around stations 16S and 18S where zinc results of 1140 and 1320 ppm are found.

The second highest zinc result on the property, 2050 ppm at station 40E, 16S is the focus of a spot anomaly which develops weakly to the east.

The anomalies located are generally small and discontinuous. They are believed to represent small, thin sections in the stratigraphy with higher than average accumulations of lead and zinc of probably insignificant economic importance.

The first mentined and largest anomaly is on the dip slope, a fact which would increase its width, and probably represents mineralization as proposed for the other anomalies.

CONCLUSIONS

Scattered and fairly isolated geochemical lead-zinc anomalies have been located in Upper Ordovician and Silurian and Devonian chert and siliceous shale sequences on the Pro group.

The anomalies tend to parallel the northwesterly strike on these southwesterly dipping structures.

The anomalies occur in sequence roughly correlatable to the Canex-Placer deposit-bearing stratigraphy in Howard Pass.

The anomalies are believed to represent isolated and probably thin-bedded accumulations of lead and zinc in the chert-shale sequence.

RECOMMENDATIONS

Detailed mapping of the chert shale sequence on the property should be conducted in order to define, and possibly extend, strata yielding the anomalous values obtained in the reconnaissance geochemical survey.

The anomalies occur in areas of good outcrop exposure or talus. Detailed geochemical sampling should be conducted around the present anomalies, with rock samples for assay being taken where possible to determine the potential of the mineralization. The probably deep (6-12 feet) surface weathering in this area should be considered on assay returns.

Should any significant mineralized structures be defined provision for trenching and possible follow-up drilling should be considered.

Respectfully submitted,

D. P. Taylor, M.Sc., D.I.C.
Geologist

Endorsed by: F. Holcapek, P.Eng.,
Geologist

October 24, 1973
Vancouver, B.C.

CERTIFICATE

I, David Pelham Taylor, of Vancouver, British Columbia, do hereby certify that:

1. I am an exploration geologist, residing at 2097 West 6th Avenue, Vancouver, British Columbia.

2. I am a graduate of the Royal School of Mines London University (M.Sc. D.I.C. 1971).

3. I have practised as an exploration geologist in British Columbia for five years.

4. The work subject of this report was conducted by myself and a crew under my supervision.

D. P. Taylor, M.Sc., D.I.C.

Vancouver, B.C.
October 24, 1973

STATEMENT OF EXPLORATION EXPENDITURES ON THE PRO 1-40 MINERAL CLAIMS OF CONSOLIDATED NICHOLSON MINES LIMITED SITUATED IN THE SUMMIT LAKE AREA YUKON TERRITORY

Consultants fees	$ 1,434.00
Field supervision	2,432.00
Ground transportation	1,336.00
Mapping and prospecting	740.00
Geological survey	1,270.00
Geochemical survey	645.00
Sampling and assays	708.00
Camp and supplies	478.00
Air transportation	1,138.00
Administration	326.00
Total	$10,507.00

Names and addresses of persons employed in performing this work.

H.H. Waller -	Richmond, B.C.
W.F. Petrie -	Merritt, B.C.
H. Hatchard -	Merritt, B.C.
R. Grabowski -	Merritt, B.C.
K. Folstrom -	Vancouver, B.C.
F. Holcapek -	Vancouver, B.C.
D. Taylor -	Vancouver, B.C.
B. Talbot -	Vancouver, B.C.
M. de Quadros -	Vancouver, B.C.
B. Muirhead -	Vancouver, B.C.
R. Hillard -	Vancouver, B.C.
J. La Ponce -	Vancouver, B.C.
W. Carlick -	Vancouver, B.C.

William F. Petrie

YUKON TERRITORY

TECK CORPORATION LTD.

CONSOLIDATED NICHOLSON PROPERTY

PRO CLAIM GROUP

WATSON LAKE MINING DISTRICT

PROPERTY LOCATION MAP

SCALE IN MILES

50 0 50 100 150

AGILIS ENGINEERING LTD. OCTOBER, 1973

140°00' 136°00' 132°00' 128°00' 124°00' 120°00'

68°00' 64°00' 60°00'

MACKENZIE BAY

FRANKLIN BAY

Inuvik

Arctic Red River

MACKENZIE R.

N.W.T. / Y.T.

ALASKA U.S.A. YUKON

PEEL R.

Norman Wells

Fort Norman

Dawson

Keno Hill

Mayo

Stewart River

YUKON R.

Snag

PELLY R.

Ross River

Carmacks

S. NAHANNI R.

Fort Simpson

Fort Liard N.W.T.

Kluane

Whitehorse

Carcross

Teslin

BRITISH COLUMBIA

129°30' 129°15'

62°30' 62°15'

Y.T. / N.W.T.

CONSOLIDATED NICHOLSON PROPERTY

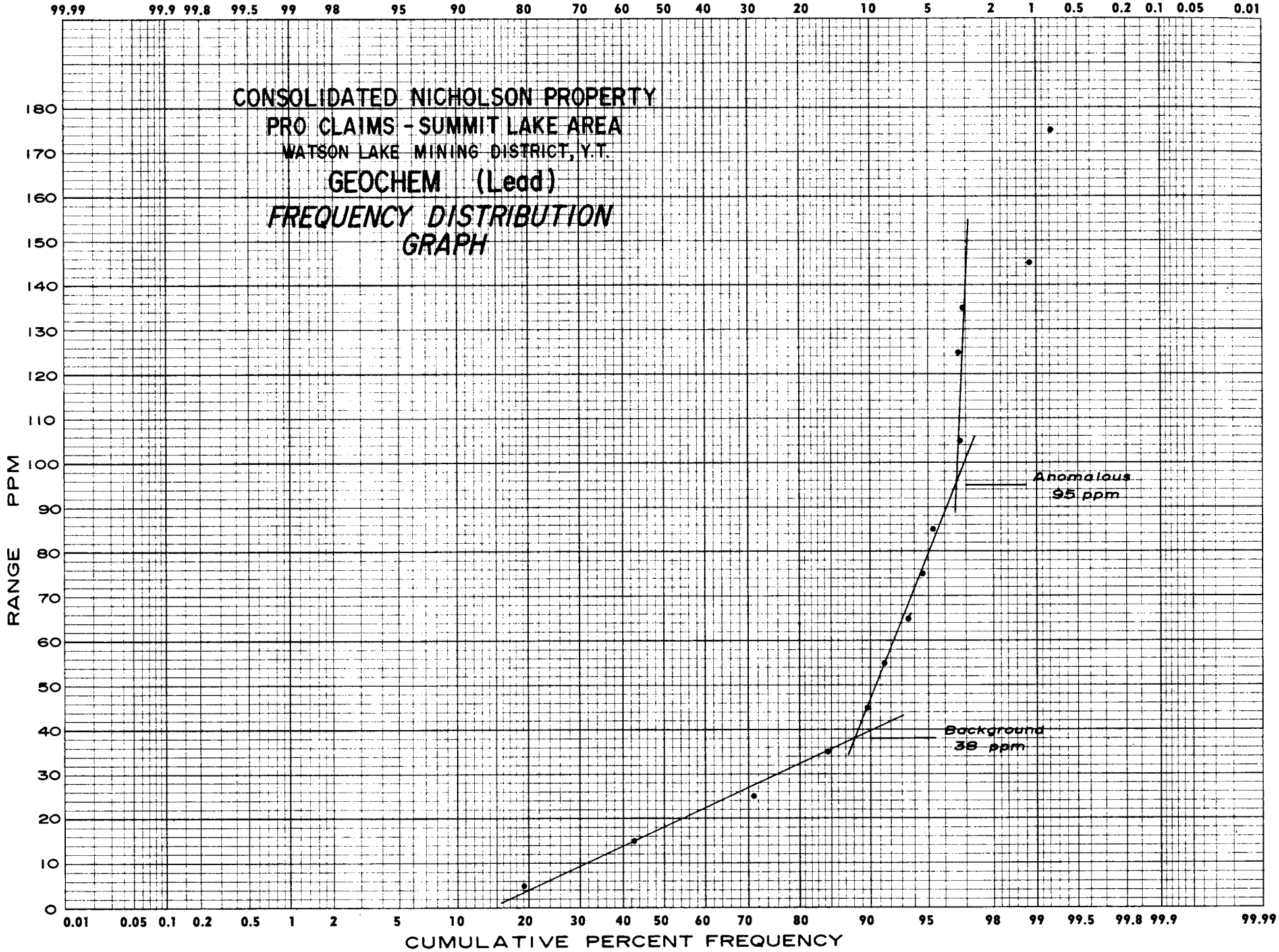
SUMMIT LAKE

SCALE: 1" = 4 MI.

N

PRO 23	PRO 24		PRO 39	PRO 40					
	PRO 22		PRO 37	PRO 38		PRO 9	PRO 10		
PRO 21		PRO 20			PRO 36			PRO 8	
PRO 19		PRO 18	PRO 35			PRO 7		PRO 6	
	PRO 17			PRO 33	PRO 34		PRO 5		PRO 4
PRO 15		PRO 16				PRO 32		PRO 3	
	PRO 13		PRO 14	PRO 31			PRO 30		PRO 1
		PRO 11		PRO 12	PRO 29		PRO 28		PRO 2
						PRO 27			
							PRO 25	PRO 26	

SCALE: 1" = 4000 FT.



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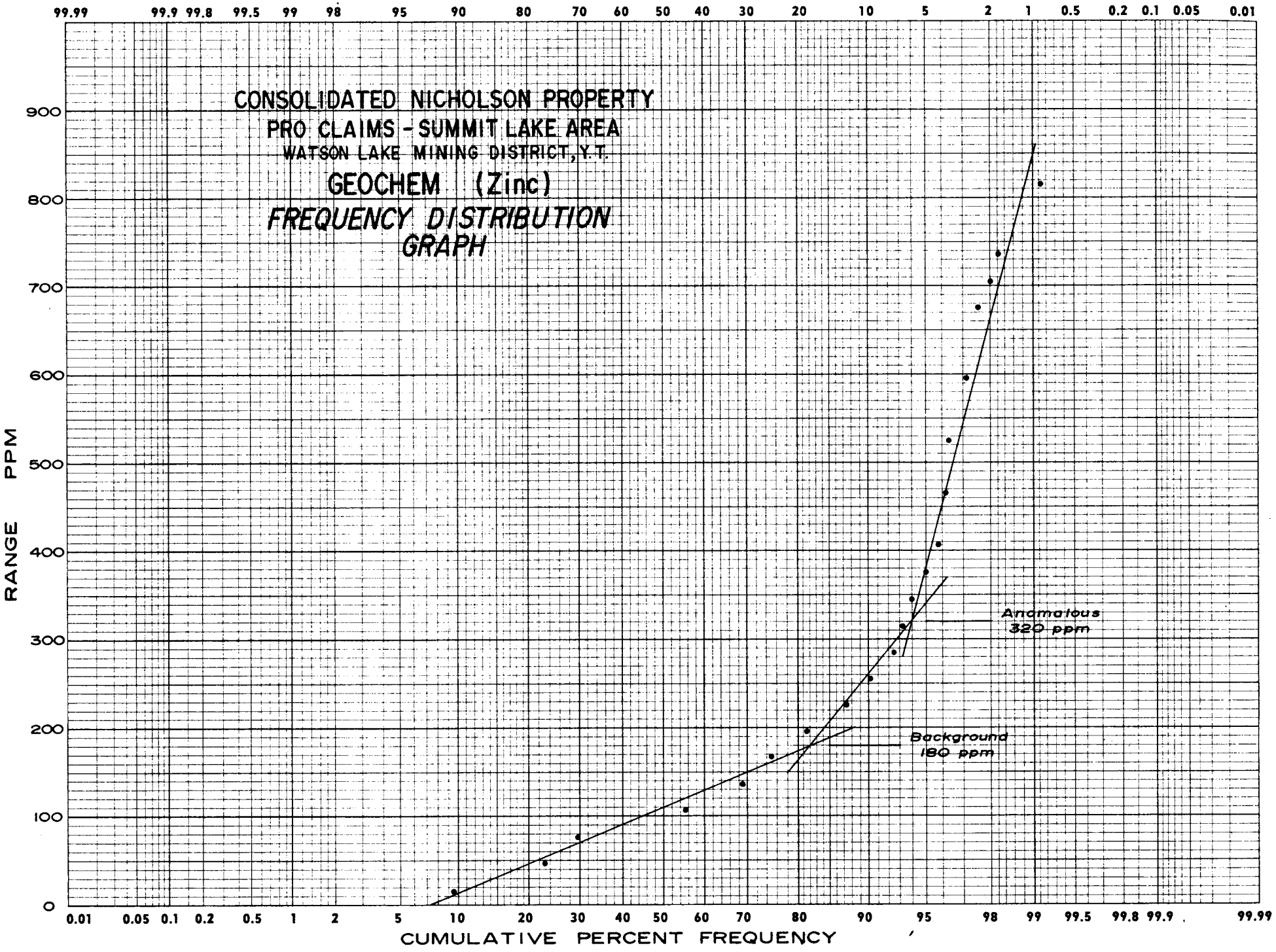

120,000 N

115,000 N

110,000 N

95,000 E

100,000 E

105,000 E

40W 30W 20W 10W 0 10E 20E 30E 40E 50E 60E 70E 80E 90E 100E 110E 40N 30N 20N 10N 0 B.L. 10S 20S 30S 40S

N

LEGEND

- Claim post
- Outcrop
- Geological contact (observed)
- Geological contact (inferred)
- 30 Bedding attitude
- Banded black chert, minor graptolitic shales
- Calcareous shale
- Wavy banded limestone

TECK CORPORATION LTD.

CONSOLIDATED NICHOLSON PROPERTY
PRO CLAIM GROUP-SUMMIT LAKE AREA
WATSON LAKE MINING DISTRICT, Y.T.

GEOLOGY

SCALE IN FEET
1000 0 1000 2000

AGILIS ENGINEERING LTD. OCTOBER, 1973

120,000 N

115,000 N

110,000 N

95,000 E

100,000 E

105,000 E

N

LEGEND

■ Claim post

TECK CORPORATION LTD.

CONSOLIDATED NICHOLSON PROPERTY
PRO CLAIM GROUP - SUMMIT LAKE AREA
WATSON LAKE MINING DISTRICT, Y.T.

GEOCHEMICAL SURVEY

LEAD (PPM)

SCALE IN FEET
1000 0 1000 2000

AGILIS ENGINEERING LTD. OCTOBER, 1973

120,000 N

115,000 N

110,000 N

95,000 E

100,000 E

105,000 E

40W 30W 20W 10W 0 10E 20E 30E 40E 50E 60E 70E 80E 90E 40N 30N 20N 10N 0 B.L. 10S 20S 30S 40S 100E 110E

38 66 95 150

N

LEGEND

■ Claim post

inches 0 1

0 1 2 centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

TECK CORPORATION LTD.

CONSOLIDATED NICHOLSON PROPERTY
PRO CLAIM GROUP - SUMMIT LAKE AREA
WATSON LAKE MINING DISTRICT, Y.T.

GEOCHEMICAL SURVEY

LEAD (PPM)

Contours at: 38, 66, 95 & 150 ppm

SCALE IN FEET

1000 0 1000 2000

AGILIS ENGINEERING LTD. OCTOBER, 1973

060908

120,000 N

115,000 N

110,000 N

95,000 E

100,000 E

105,000 E

N

LEGEND

■ Claim post

TECK CORPORATION LTD.

CONSOLIDATED NICHOLSON PROPERTY
PRO CLAIM GROUP - SUMMIT LAKE AREA
WATSON LAKE MINING DISTRICT, Y.T.

GEOCHEMICAL SURVEY

ZINC (PPM)

Contours at: 180, 250, 320, 500 & 1000 ppm

SCALE IN FEET
1000 0 1000 2000

AGILIS ENGINEERING LTD. OCTOBER, 1973

120,000 N

115,000 N

110,000 N

95,000 E

100,000 E

105,000 E

N

40W 30W 20W 10W 0 10E 20E 30E 40E 50E 60E 70E 80E 90E 40N 30N 100E 110E 20N 10N 40S 30S 20S 10S 0 B.L.

LEGEND

■ Claim post

TECK CORPORATION LTD.

CONSOLIDATED NICHOLSON PROPERTY
PRO CLAIM GROUP-SUMMIT LAKE AREA
WATSON LAKE MINING DISTRICT, Y.T.

GEOCHEMICAL SURVEY

ZINC (PPM)

SCALE IN FEET
1000 0 1000 2000

AGILIS ENGINEERING LTD. OCTOBER, 1973