

GEOLOGICAL AND GEOPHYSICAL REPORT
ON THE
CWT MINERAL CLAIM GROUP
OF
BELMORAL MINES LTD. (NPL)
HOWARD PASS AREA, NORTHWEST TERRITORIES

080307

November 19, 1973
Vancouver, B.C.

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ILLUSTRATIONS

Property Location Map	1" = 80 mi.; 4 mi.; 4,000 ft.
Frequency Distribution Graphs (Lead and Zinc)	
Geology	1" = 400 feet
Geochemical Survey	1" = 400 feet
Lead (ppm); values only	
Zinc (ppm); values only	

GEOLOGICAL AND GEOCHEMICAL SURVEY REPORT
ON THE CWT MINERAL CLAIM GROUP
OF BELMORAL MINES LTD (NPL)
HOWARD PASS AREA, NORTHWEST TERRITORIES

INTRODUCTION

Belmoral Mines Ltd (NPL) acquired 30 of the CWT mineral claims, adjoining the property of Canex-Placer at Howard Pass, from the locator. The claims were staked in late 1972 following the announcement by Canex-Placer of the discovery of a major lead-zinc deposit in Howard Pass, on the Northwest Territories - Yukon Territory border.

During the early summer of 1973 reconnaissance geological and geochemical soil and rock surveys were conducted on Belmoral Mines property by personnel of Agilis Engineering Ltd. The work was done under the supervision of, and the mapping done by, the author of this report.

LOCATION AND ACCESS

The CWT property is located in the Northwest Territories, immediately north of and adjacent to the Howard Pass property of Canex-Placer, and 2 miles north-northeast of the lead-zinc deposit. The property is 12 miles northeast of Summit Lake Y.T., which is 158 miles north of Watson Lake, Y.T.

Coordinates of the property centre are:-

62° 29' N; 129° 08' W.

Access to the property is by fixed-wing aircraft from Watson Lake or Ross River, wheel or ski equipped to the Canex-Placer airstrip at Howard Pass, or float or ski equipped to Summit Lake. Local access is by helicopter.

A winter tote-road comes to Howard Pass from the Cantung Road, rumours of a more permanent road are not yet confirmed.

PHYSIOGRAPHY AND CLIMATE

Most of the property lies on a major ridge, flanked to the north and south by steep creek valleys. The southerly creek turns north at the west end of the property and cuts through the property. Sheer cliffs are found along the south side of the northern creek in the central claim area.

Elevations on the property range from 4,400 feet to 6,200 feet A.S.L. Ridge tops are fairly open and rolling creek valley slopes are steep to precipitous.

Tree line is at about 4,800 feet and forest cover consists of generally dense stunted spruce and buckbrush. Above tree line caribou moss and grass comprise cover.

The climate in this area is one of very cold winters and short, mild summers. There is generally 6-8 feet of snow in the winter and the snow-free working period lasts from mid-June to late September.

PROPERTY

The CWT mineral claim group of Belmoral Mines Ltd (NPL) consists of 30 claims staked and recorded in the Nahanni Mining Division of the Northwest Territories. The claims were staked by A. Harman in late 1972 and subsequently acquired by the company.

The property consists of:-

<u>CLAIMS</u>	<u>RECORD NUMBERS</u>
CWT 1 - 7	A49701 - A49707
CWT 12 - 18	A49712 - A49718
CWT 23 - 30	A49723 - A49730
CWT 34 - 41	A49734 - A49741

The claims are generally staked short of full size.

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.

South of the CWT group Canex-Placer's lead-zinc deposit lies on the northward dipping limb of a major syncline whose south dipping limb emerges in the area of the southern boundary of the CWT claims.

PROPERTY GEOLOGY

The CWT group of Belmoral Mines Ltd (NPL) lies on a major northwesterly trending anticlinal structure. Stratigraphy exposed on the property is uniformly of Upper Cambrian and (?) Ordovician age.

The anticline is a fairly open structure with limbs dipping at 50 - 70°. The fold axis is vertical and strikes 280° and apparently plunges northwest at 10 - 15°.

The exposed anticlinal core which covers most of the property is of medium grained, blocky, gray limestone. This sequence is massive and very thick (at least 2,000 feet).

The gray limestone is overlain by a sequence of wavy banded limestone. This sequence consists of intercalated fine grained limestone with discontinuous calcareous mudstone (up to 1½ inches thick) and is up to 300 feet thick. The wavy banded limestone is exposed just north of the property where it is overlain by an undetermined thickness of gray limestone, and along the southern boundary of the claims.

Upper Ordovician and Silurian or possibly Devonian black siliceous shale outcrops on the extreme northwest and southwest corners of the claims. It is in the region of these strata that the Howard Pass deposit occurs. No evidence of mineralization in these areas was noted during field mapping.

Cleavage on the property is generally close to east-west striking with vertical to steep northerly dips.

No significant mineralization was noted during field mapping.

GEOCHEMICAL SURVEY

A survey grid was established on the property. East-west flagged lines were established at 400 foot intervals with sample stations every 200 feet along the lines.

FIELD PROCEDURE

Depending on the nature of the ground at each sample station, a soil or rock sample was collected. Samples were taken using mattocks and soil samples were taken from as close to 10 inches depth as possible. "B" horizon material was available only at lower elevations. Samples were placed in kraft paper bags provided by the laboratory.

ANALYSIS

All soil samples were shipped to Core Laboratories Ltd., 325 Howe Street, Vancouver, B.C.

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

Rock samples were shipped to Agilis Engineering Ltd., base-camp at Summit Lake where they were dried and crushed. A minus 80 mesh fraction was taken from each sample and analysed on an Echo Portable Mineral Analyser M8524 X-ray refraction machine. Two readings for each element, lead and zinc, were recorded on each sample.

RESULTS

A total of 334 soil samples from the CWT group were submitted for analysis. Statistical analysis of the soil results, plotting cumulative percent frequency on arithmetic probability paper, yielded the following parameters:-

	<u>Range ppm</u>	<u>Background ppm</u>	<u>Anomalous ppm</u>
Pb	1 - 310	27	46
Zn	6 - 760	76	143

The lead results fall very well into the regional geochemical ranges, but the high of 310 and the fact that only 3 samples are over 100 ppm leaves the anomalous samples of relatively minor interest.

Zinc results have yielded relatively low background and anomalous values. Generally speaking background in the Howard Pass area is well over 100 ppm and anomalous values start at 2 - 300 ppm. There are 30 zinc values > 300 ppm, but the high of 760 ppm is of marginal interest when considered in a regional context.

A total of 89 rock samples were analysed for percent lead and zinc content. The reliable detectable limit for both elements (on the XRF machine) was 0.10%. A total of five samples, ranging up to 0.37 - 0.39%, yielded zinc results, and 43 samples, ranging up to 0.23 - 0.27%, yielded reliably detectable lead results.

INTERPRETATION

Generally the outcrop on the Belmoral Mines Ltd CWT group appears to be too low in the stratigraphic sequence to be of interest in terms of the strata-bound deposit of Canex-Placer in Howard Pass.

Anomalous values for lead are concentrated in two areas, on the extreme east end of line 52N and in the middle of line 24N, on the south central boundary of the property.

The anomaly on line 52N is unsupported by any significant zinc results, the highest being 190 ppm at station 14W. The anomaly on the southern boundary is, however, supported by anomalous zinc samples. The zinc anomaly in this area extends at least 800 feet northward, and although not very high by regional standards, should be more thoroughly investigated.

The headwater drainage area of the southern creek has several widely dispersed anomalous soil and rock samples in it. The anomalies continuity needs to be checked by more detailed sampling before any reliable interpretation can be made of them, due to a tendency to follow drainage patterns in the present distribution.

CONCLUSIONS

Favourable strata for mineralization such as is found in Howard Pass exist on the northwest and southwest corners of the Belmoral Mines Ltd (NPL) CWT property. Calcareous sequences immediately below the siliceous shale sequences are found in these areas.

Minor lead anomalies have developed on the east end of line 52N and also in the middle of line 24N on the southern boundary of the property.

The southern lead anomaly is supported by a zinc anomaly which extends at least 800 feet northward.

Dispersed anomalous values are found in the headwater drainage area of the southerly creek on the western end of the property.

RECOMMENDATIONS

The CWT claim group of Belmoral Mines Ltd (NPL) lies immediately north of and adjacent to the Howard Pass property of Canex-Placer, site of a recently discovered lead-zinc deposit.

The property is in a location of possible logistic value should a major mine development occur on the Howard Pass property.

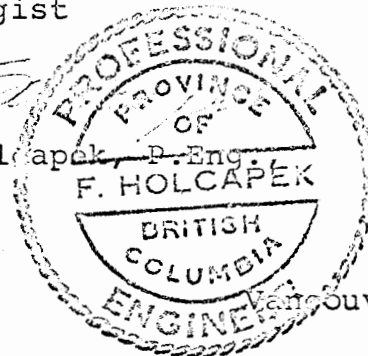
The lead-zinc anomalies on the western end of Belmoral's claims should be subject to detailed geochemical sampling in order to better define them and assess their importance particularly as the strongest anomaly is immediately adjacent to the Canex-Placer property. It is very doubtful if any significant lead or zinc mineralization exists on the property, however the ground should be held in good standing pending developments in the Howard Pass area.

Respectfully submitted,

D.P. Taylor

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

Endorsed by F. Holcapek, P.Eng.

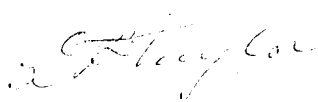


November 19, 1973

CERTIFICATION

I, DAVID PELHAM TAYLOR, of Vancouver, B.C. do hereby certify that:

1. I am an exploration geologist, residing at 2097 West 6th Avenue, Vancouver, B.C.
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 B.C. for five years.
4. I am registered as an Engineer-in-training with The Association of Professional Engineers of the Province of British Columbia.
5. The work subject of this report was conducted by myself and a crew under my supervision.



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

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Vancouver, B.C.

YUKON TERRITORY

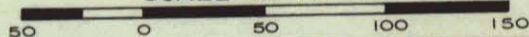
BELMORAL MINES LTD. (NPL.)

CWT CLAIMS
HOWARD PASS AREA

NAHANNI MINING DISTRICT N.W.T.

PROPERTY LOCATION MAP

SCALE IN MILES



AGILIS ENGINEERING LTD.

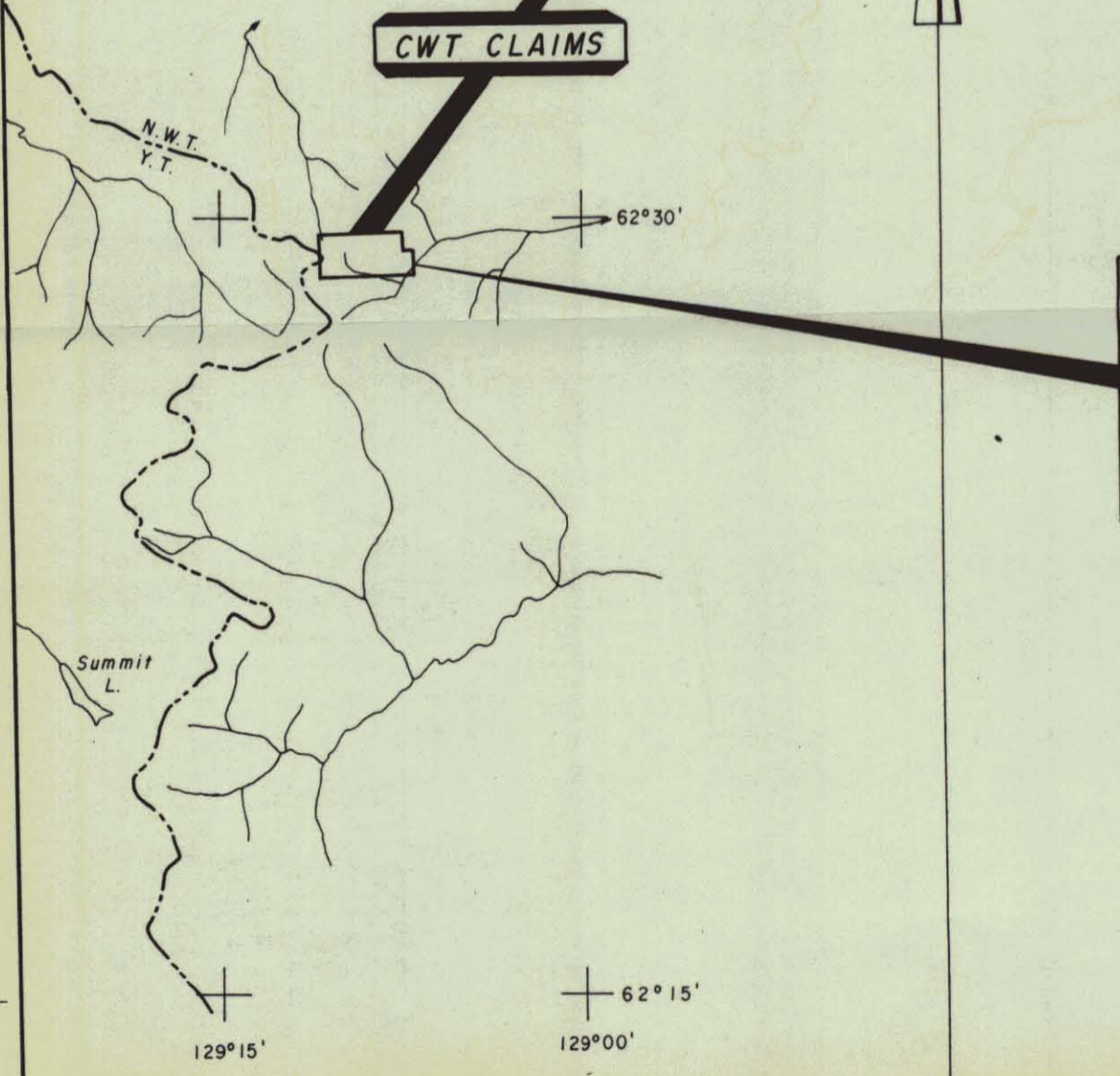
NOVEMBER, 1973



SCALE 1:250,000

SCALE 1" = 4000 Ft.

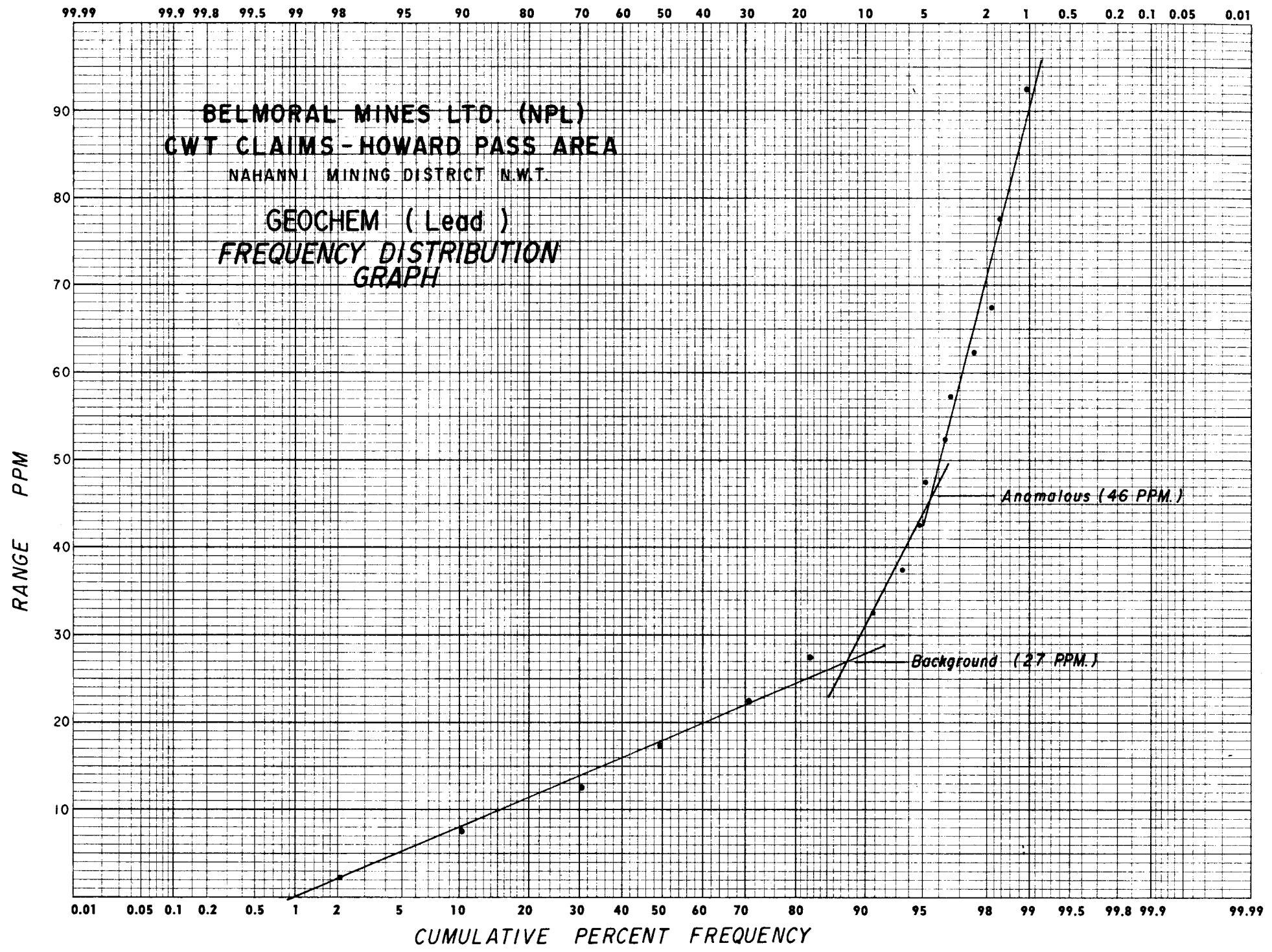
CWT CLAIMS

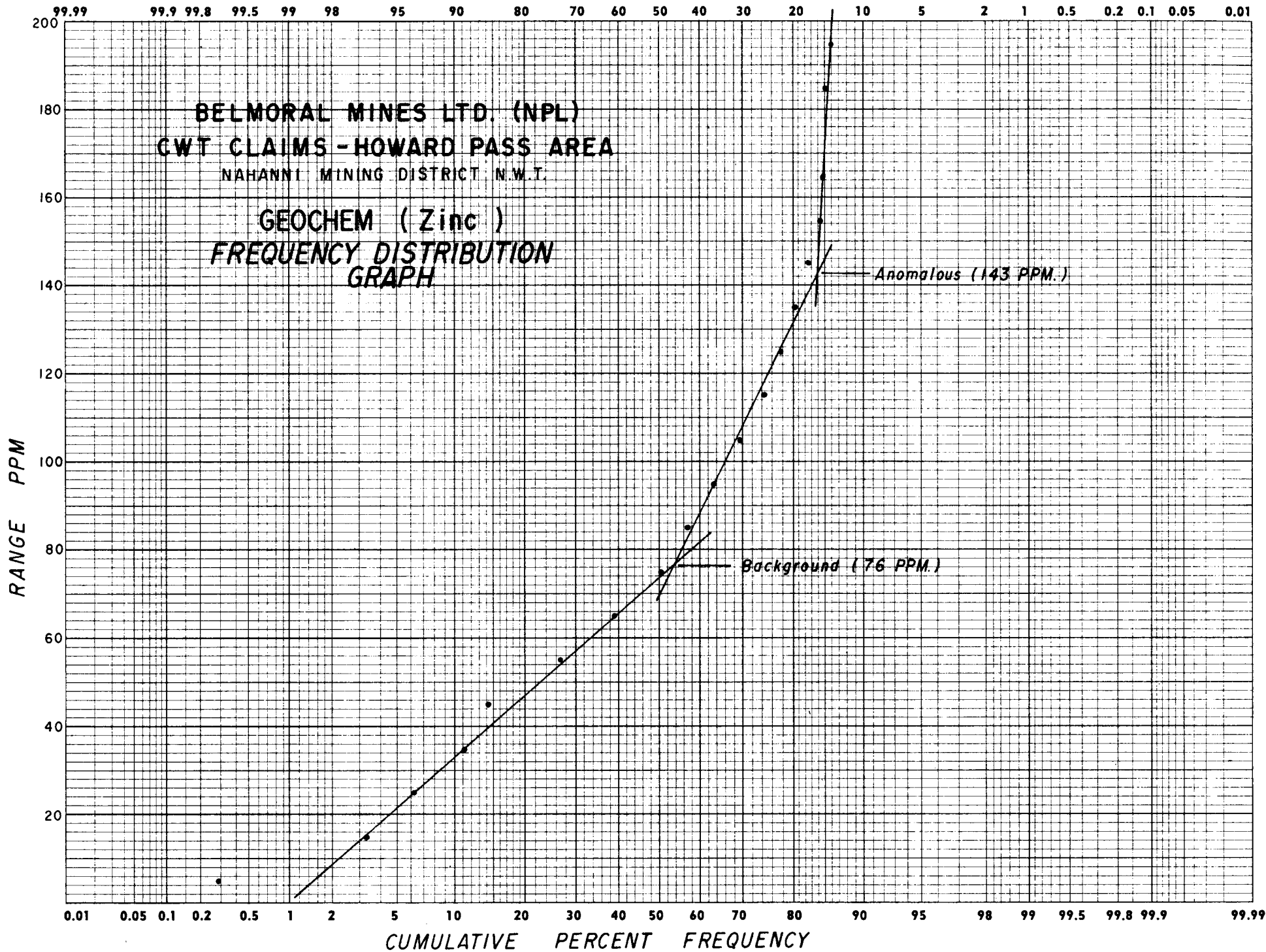


CWT 1	CWT 2	CWT 3	CWT 4	CWT 5	CWT 6	CWT 7	
CWT 12	CWT 13	CWT 14	CWT 15	CWT 16	CWT 17	CWT 18	
CWT 23	CWT 24	CWT 25	CWT 26	CWT 27	CWT 28	CWT 29	CWT 30
CWT 34	CWT 35	CWT 36	CWT 37	CWT 38	CWT 39	CWT 40	CWT 41

129°15'

62°15'
129°00'

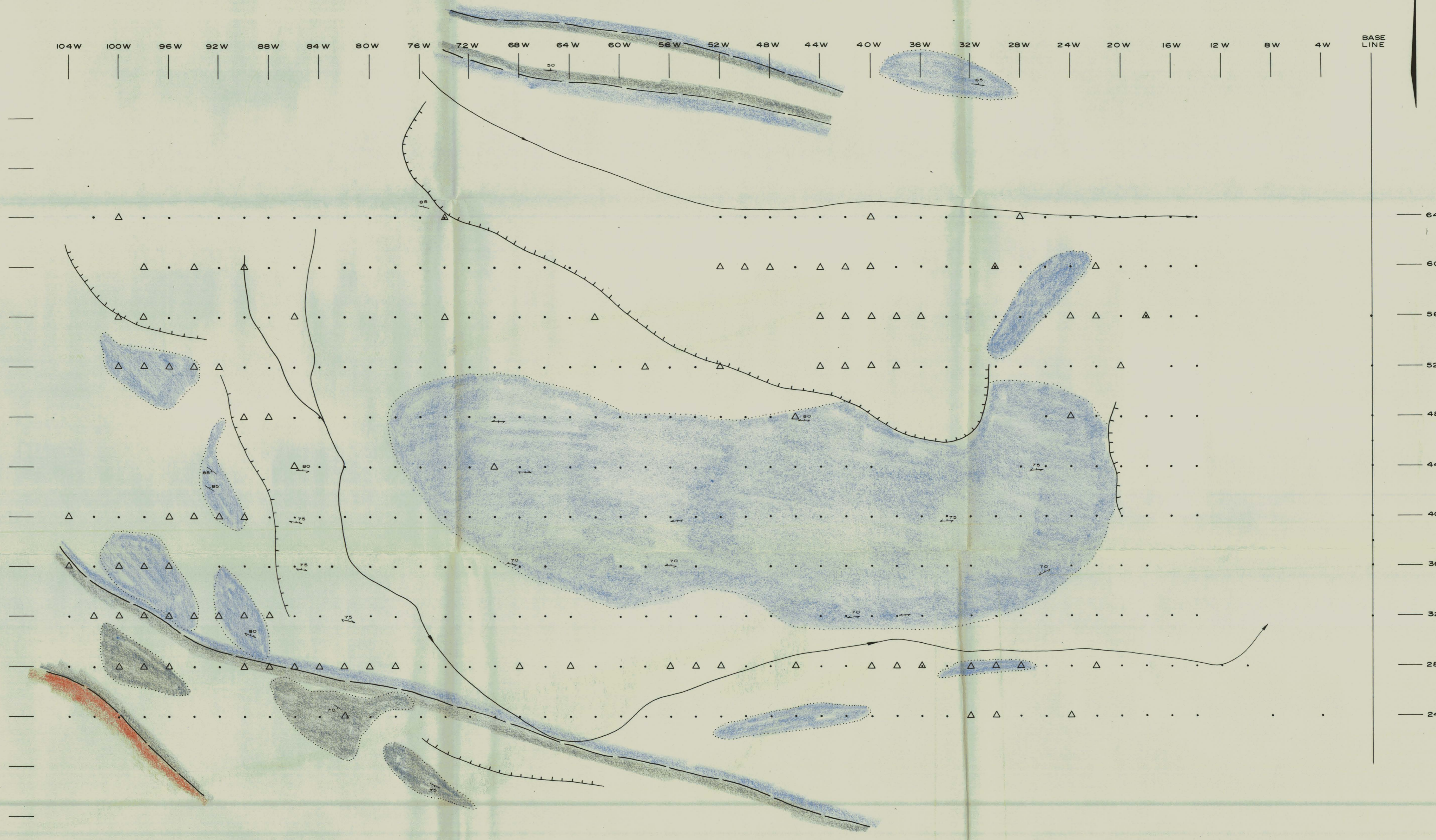






104W 100W 96W 92W 88W 84W 80W 76W 72W 68W 64W 60W 56W 52W 48W 44W 40W 36W 32W 28W 24W 20W 16W 12W 8W 4W BASE LINE

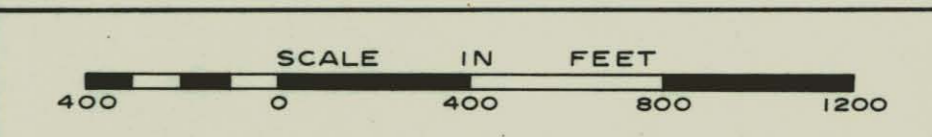
64N
60N
56N
52N
48N
44N
40N
36N
32N
28N
24N



- LEGEND:**
- UPPER CAMBRIAN and (?) ORDOVICIAN
 - Grey limestone
 - Wavy banded limestone
 - UPPER ORDOVICIAN & SILURIAN or DEVONIAN
 - Black shale
 - Outcrop
 - Contact
 - Strike & dip of bedding
 - Strike & dip of jointing

BELMORAL MINES LTD.(NPL)
CWT CLAIMS-HOWARD PASS AREA
NAHANNI MINING DISTRICT N.W.T.

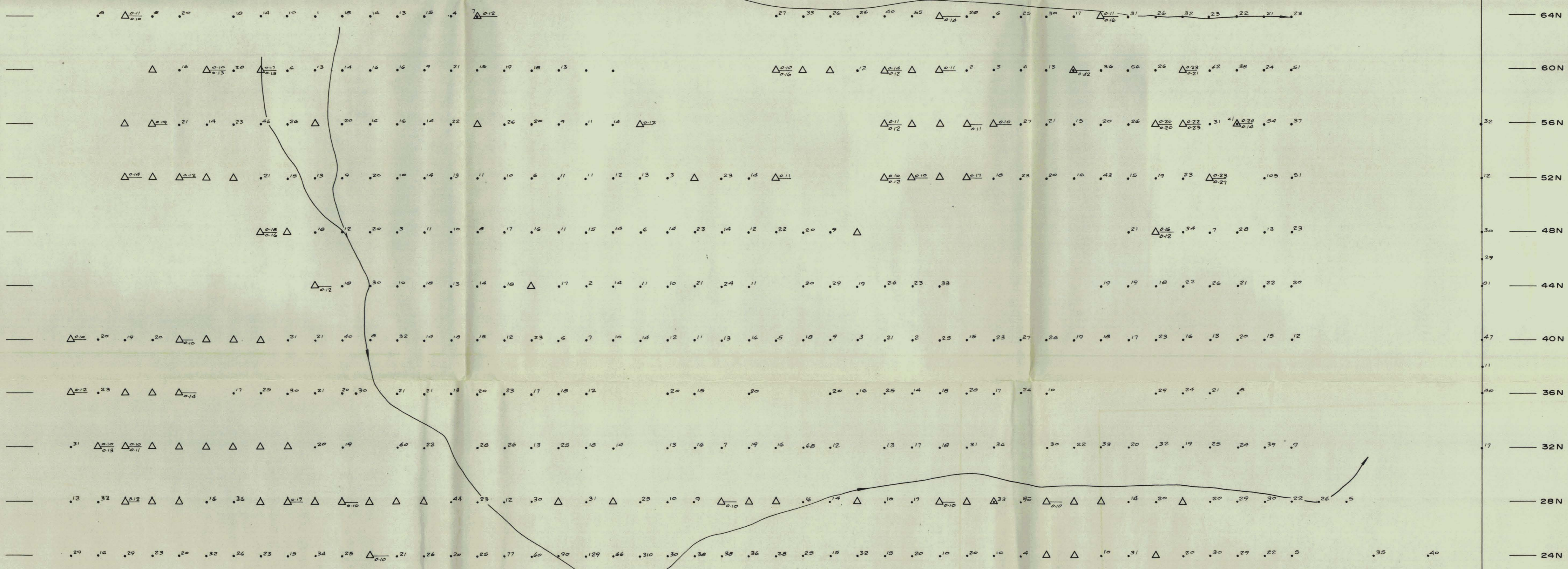
GEOLOGY MAP



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104W 100W 96W 92W 88W 84W 80W 76W 72W 68W 64W 60W 56W 52W 48W 44W 40W 36W 32W 28W 24W 20W 16W 12W 8W 4W BASE LINE



LEGEND:
•³⁶ Soil sample location (value in ppm.)
△⁶⁻¹⁰/₀₋₁₂ Rock sample location (value in % concentration)

BELMORAL MINES LTD.(NPL)
CWT CLAIMS-HOWARD PASS AREA
NAHANNI MINING DISTRICT N.W.T.

**GEOCHEMICAL
SURVEY**
LEAD (P.P.M.)

SCALE IN FEET
400 0 400 800 1200

AGILIS ENGINEERING LTD NOVEMBER 1973