



REPORT ON GEOLOGICAL, GEOCHEMICAL,
AND CLAIM SURVEY
CONDUCTED ON
TYE 1-20
FOR
BELMORAL MINES LTD. (NPL).

This report has been examined by the
Geological Evaluation Unit and is recom-
mended to the Commissioner to be consider-
ed as representation work in the amount of

\$ 4,000.00

4000

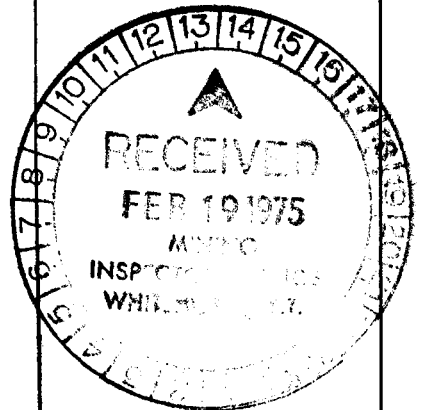
[Signature]

Geological Engineer

Considered as representation work under
Section 55 of the Quartz Mining Act.

[Signature]

Commissioner of Yukon Territory



October 17, 1974,
Vancouver, B.C.

F. Holcapek, P. Eng.

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INTRODUCTION

The Tye 1-20 Mineral Claims are located approximately 5.5 miles east of a major zinc discovery made by Barrier Reef Resources Ltd. during the summer of 1973, in the Bonnet Plume River area, Northwest Yukon.

This report is based on field work conducted by Agilis Engineering Ltd. on behalf of Belmoral Mines Ltd. (NPL).

Work consisted of claim survey, geological mapping, gridding, 800 foot lines and 200 foot stations, and soil sampling. The geological mapping was completed by J.R. Deighton, Geologist. The program was supervised by the writer.

GEOGRAPHY

Location and Access

The Tye mineral claims are located approximately 125 miles northeast of Mayo, Y.T. on Duo Creek, a tributary of the Bonnet Plume River.

Coordinates of the property are $64^{\circ} 24'$ N. Latitude and $132^{\circ} 26'$ W Longitude.

The property lies within map sheet 106C of the National Topographic Series.

Access to the property from Vancouver is either by motor vehicle to Mayo, Y.T. and from there by helicopter to the property, or by Canadian Pacific Airlines to Whithorse, via North Air to Mayo and hence via helicopter to the property.

A small lake, Porters Puddle, on Duo Creek is accessible by fixed wing planes. Barrier Reef Resources Ltd. is constructing a winter airstrip on Goz Creek and a winter tote road is planned from Mayo.

TOPOGRAPHY

The Tye 1-20 Mineral Claims occupy the south slope of a steep mountain just north of Duo Creek. Topography is rugged and limestone cliffs traverse the property easterly. Outcrops are plentiful comprising nearly 60% of the area of the northern part of the claims.

The southern portion lies partially within the valley of Duo Creek and hence is mainly overburden covered.

PROPERTY

The Tye mineral claims were acquired by Belmoral Mines Ltd., from Mr. A. Harman, prospector and consists of the following contiguous mineral claims;

Claim Name	Record Number	Record Date
Tye 1-20	Y69892-911	August 21, 1973.

HISTORY

The area was mapped by Dr. J.O. Wheeler, Geological Survey of Canada, in 1952 and the information was published as Preliminary Map 53-7, at a scale of 1" = 4 miles. The area was remapped

in more details by S.L. Blusson, Geological Survey of Canada.

The first lead-zinc discoveries associated with brecciated dolomites were made in the early 1950's by the K.J. Springer interests. These showings were followed up in recent years by Gordon Dickson, Prospector.

Further exploration along the belt of Palaeozoic sedimentary units lead to the discovery of the Tom deposit of Hudson Bay Mining and Smelting at McMillan Pass, the Stratiform lead-zinc deposits of the Vangorda Area, of which the Anvil Mine with 60 million tons grading 10% lead-zinc combined is producing at a rate of 7,500 tons per day.

From 1965 to 1972 exploration in the area, because of low metal prices and high exploration costs, was discontinued.

In 1972, the discovery of the Summit Lake deposit by Canex Placer Ltd., along a 25 mile long belt of Ordovician graptolitic shales resulted in renewed exploration.

During 1972 important base metal discoveries were made in the Godlin Lake area in the Northwest Territories, 100 miles north of Summit Lake. The mineralization occurs within a belt of open-folded and faulted Lower Palaeozoic carbonate rocks, of the MacKenzie fold belt.

Exploration concentrated along this fold belt resulted in the discovery of the Bonnet Plume discoveries of Barrier Reef Resources Ltd. and the discoveries by Cypress Resources Ltd., 10 miles to the west of the first.

The Tye mineral claims lie approximately 5 miles east of the main Barrier Reef discovery and approximately 2 miles east of a zinc discovery along the eastern boundary of Barrier Reef

Resources Ltd. property.

GEOLOGY

The Tye mineral claims are underlain by members of the Lower Cambrian Backbone Range Formation. The unit consists of interbedded shales, siltstones, grits, quartzites and a minor grey weathering limestone band in the central and southern part of the grid.

The northern portion is underlain by a thick sequence of buff weathering grey limestone and dolomites.

The two rock units are separated by a strong westerly trending, 120 - 140° fault zone. Brecciation and rehealing of the limestone has been observed. Cement of the breccia consists of sphalerite, smithsonite, quartz and calcite.

The rock units have in general a northwesterly trend. In the southern part along, the baseline, a westerly to northwesterly trending synclinal fold is indicated. The axis plunges gently, at 20° easterly.

In the central part, the top of is ridge is formed by the crestal region of an overturned anticline.

Faulting is abundant as indicated from the distribution of the rock units, but the major portion of the brecciated limestone is overburden covered. Mineralization found on the adjoining claims to the east, although minor, is associated with breccia zones, the same holds for the major zinc mineralization of Barrier Reef to the west of the Tye claims.

GEOCHEMISTRYField Method

The Tye mineral claims were soil sampled on a grid system. The grid consisted of North-South compass lines, 400 feet apart with sample stations every 200 feet along the lines marked by flagging. East-West tie lines were established for control.

Samples were collected by auger from the "B" horizon where ever possible. Soils were packed in kraft paper envelopes and shipped to Chemex Labs., 212 Brooksbank Ave., North Vancouver, for preparation and analysis for total lead and zinc.

Lab Technique

All samples were analysed by Chemex Labs Ltd.

A minus 80 mesh fraction was taken from each sample, digested for 2 1/2 hours in hot nitric acid. A second minus 80 mesh fraction was digested for 4 hours in hot perchloric-nitric acid.

Quantitative analysis for lead and zinc content was performed by atomic absorption methods.

RESULTS

Results were obtained for a total of 242 samples.

Statistical analysis is based on a total of 984 samples collected on the Tye claims and from the surrounding properties.

The results were grouped, percent frequency and accumulated percent were calculated and plotted on arithmetic probability paper.

	<u>Range ppm</u>	<u># of sample</u>	<u>Background ppm</u>	<u>%</u>	<u>Anomalous ppm</u>	<u>%</u>
Zinc	10 to <4000	984	140	73.99	280	9.23
Lead	10 to <700	984	40	70.81	140	3.56

INTERPRETATION

The geochemical survey did not outline any areas definitely anomalous in lead or zinc. Several spot highs have been located, but this can be due to minor lead and zinc sulfides disseminated along fault or breccia zone.

Geologically the rock unit underlying the Tye mineral claims overlies stratigraphically the favourable limestone-dolomite unit.

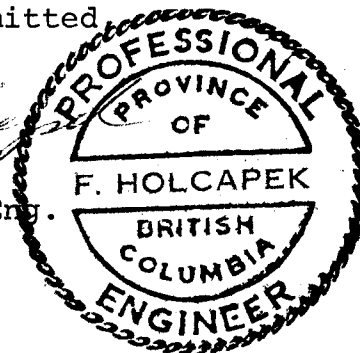
RECOMMENDATIONS

No further work is recommended on this claim group.

Respectfully submitted

F. Holcapek

F. Holcapek, P. Eng.



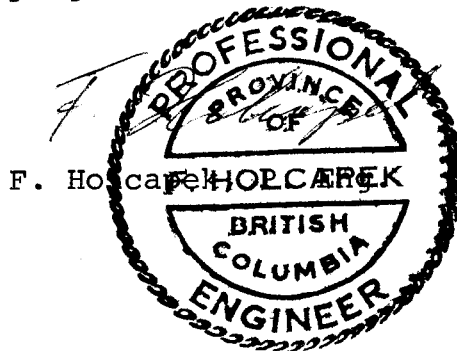
October 17, 1974.
Vancouver, B.C.

CERTIFICATION

I, FERDINAND HOLCAPEK of 92 - 10842 152nd Street, Surrey, British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia, with a Bachelor of Science Degree in Geology, 1969.
2. Since graduation I have been engaged in mining exploration in British Columbia, Yukon Territory, Northwest Territories, Quebec, Nevada, Arizona, Mexico and Australia.
3. I am a registered member, in good standing, of the Association of Professional Engineers of British Columbia, the Geological Association of Canada and the Society of Exploration Geophysists.
4. I am a consulting geologist.
5. This report is based on field work conducted under my supervision, during the period of June 10 to June 25, 1974.
6. That the cost statement attached outlines expenditures incurred to complete the work program.

Vancouver, B.C.
October 17, 1974.

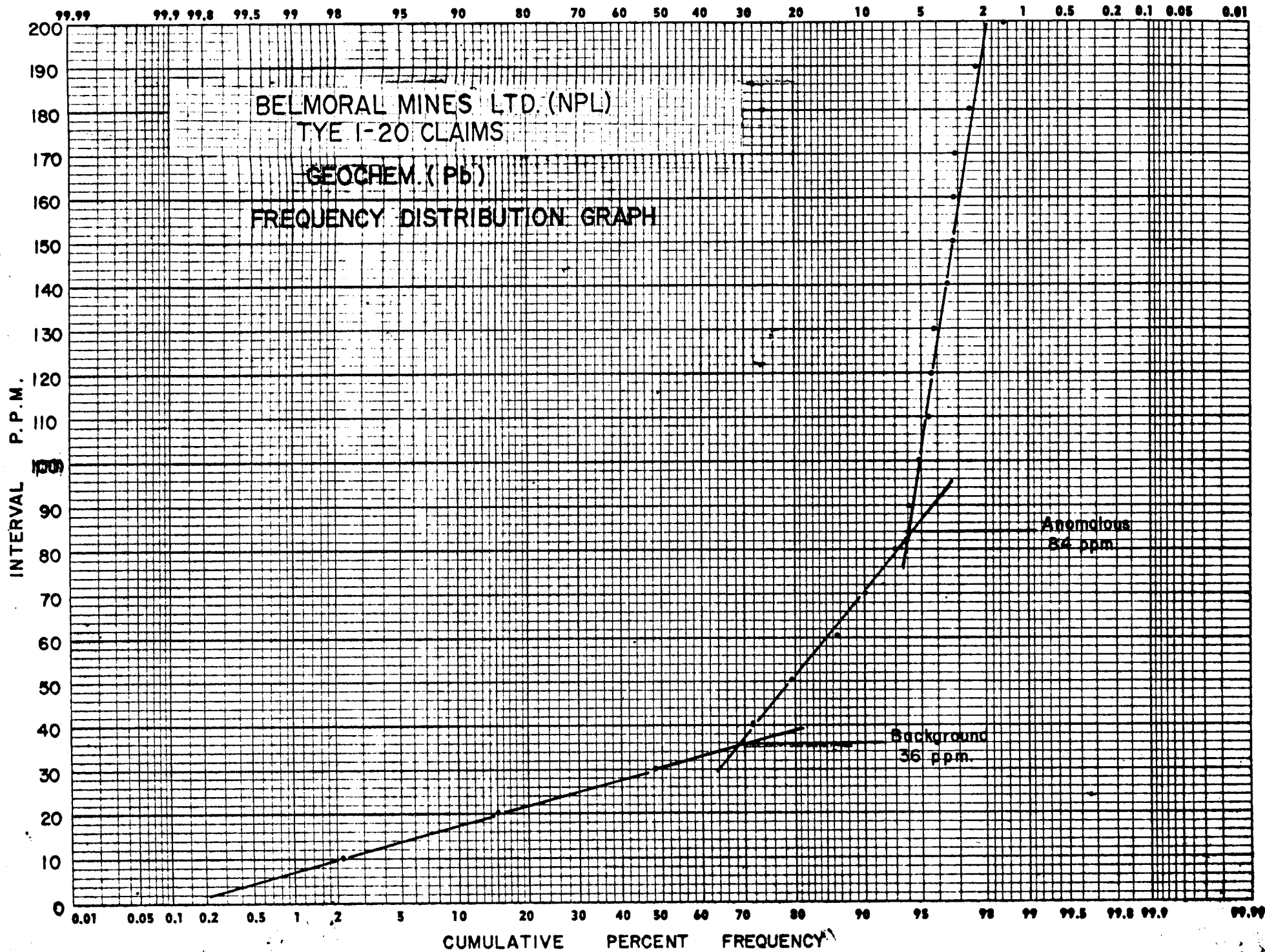


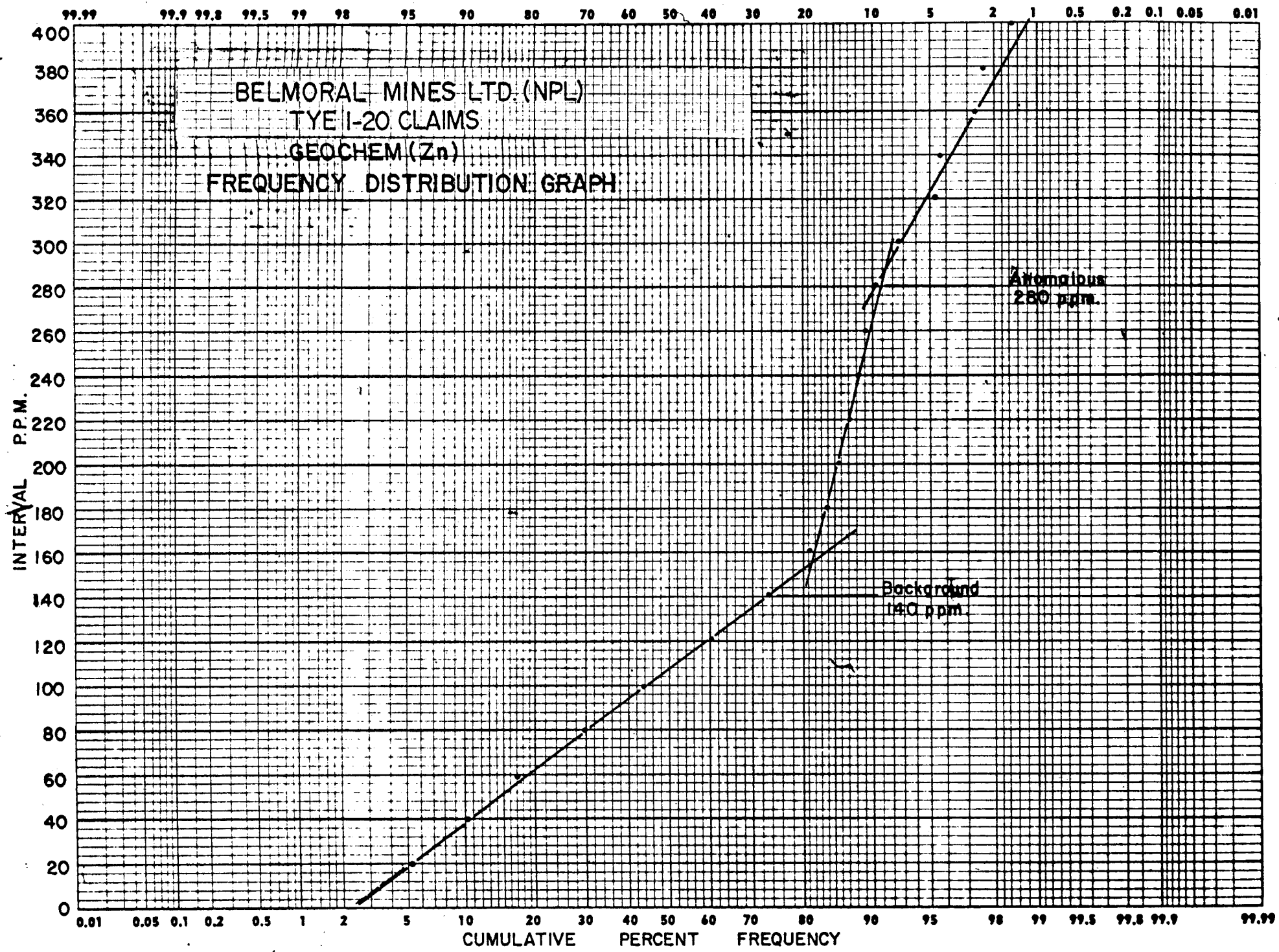
ZINC - ppm

<u>Interval</u>	<u>No. of samples</u>	<u>%</u>	<u>Accumulative %</u>
0-20	51	5.18	5.18
21-40	49	4.98	10.16
41-60	68	6.91	17.07
61-80	134	13.62	30.69
81-100	134	13.62	44.31
101-120	176	17.89	62.20
121-140	116	11.79	73.99
160	69	6.01	80.00
180	31	3.15	83.15
200	24	2.44	85.59
220	13	1.32	86.91
240	12	1.22	88.13
260	12	1.22	89.35
280	14	1.42	90.77
300	20	2.03	92.80
320	22	2.23	95.03
340	6	.60	95.63
360	15	1.59	96.92
380	3	.30	97.22
400	9	.91	98.13
420	3	.30	98.43
440	0		
460	1	.11	98.54
480	1	.11	98.55
500+	11	1.12	99.67

LEAD - ppm

<u>Interval</u>	<u>No. of samples</u>	<u>%</u>	<u>Accumulative %</u>
0-10	21	2.13	2.13
11-20	131	13.31	15.44
21-30	330	33.54	48.97
31-40	215	21.84	70.81
41-50	80	8.13	78.94
51-60	85	8.63	86.57
61-70	35	3.55	90.12
71-80	29	2.94	93.06
81-90	9	.91	93.97
91-100	10	1.01	94.98
101-110	6	.6	95.59
111-120	5	.5	95.64
121-130	2	.2	95.84
131-140	6	.6	96.44
141-150	4	.4	96.84
151-160	0		
161-170	1	.1	96.94
171-180	4	.4	97.34
181-190	0		
191=200	2	.2	97.54
200+	9	.9	98.44

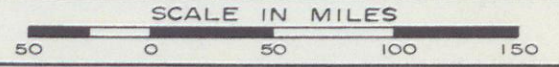




YUKON TERRITORY

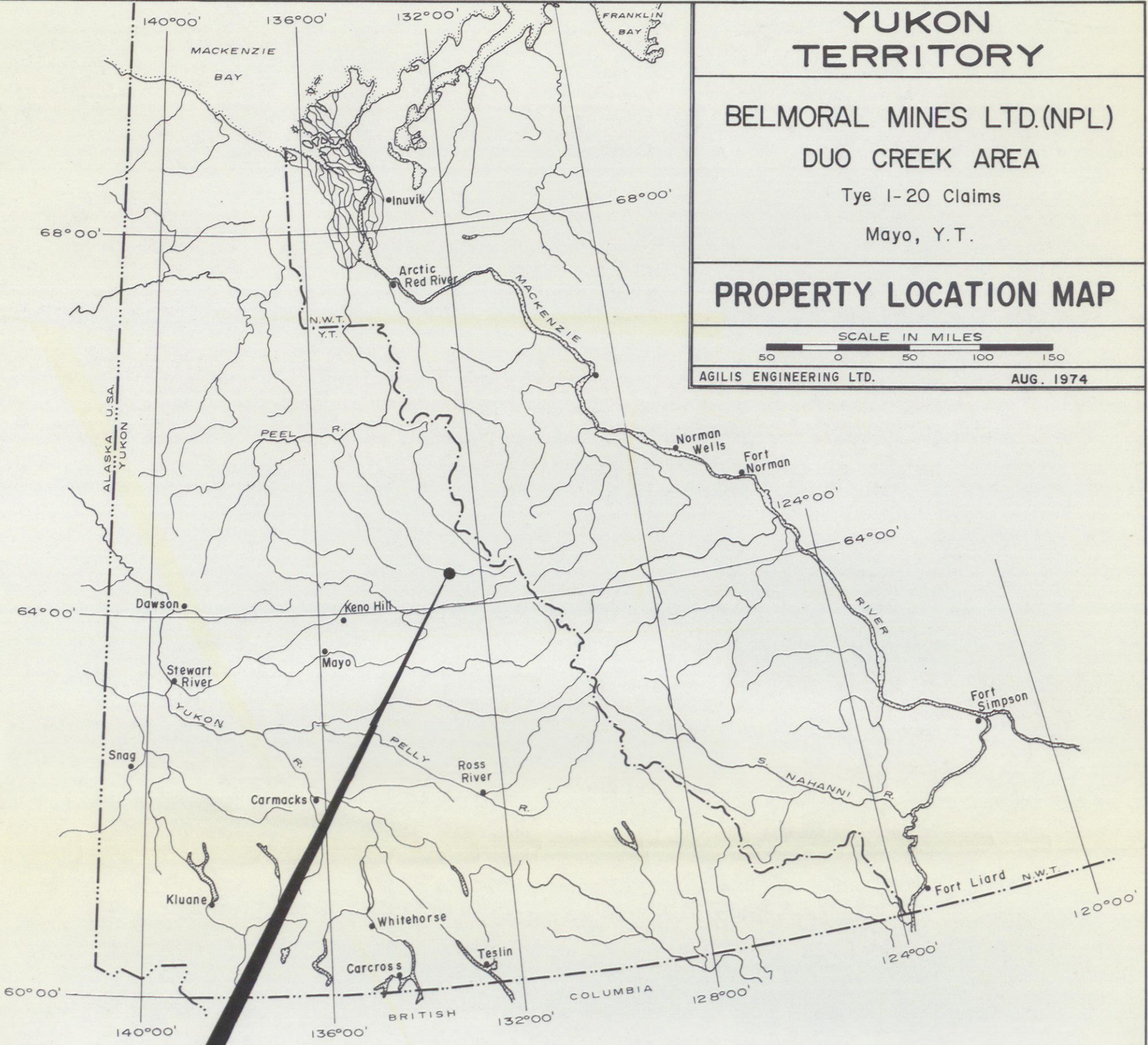
BELMORAL MINES LTD. (NPL)
DUO CREEK AREA
Tye 1-20 Claims
Mayo, Y.T.

PROPERTY LOCATION MAP



AGILIS ENGINEERING LTD.

AUG. 1974

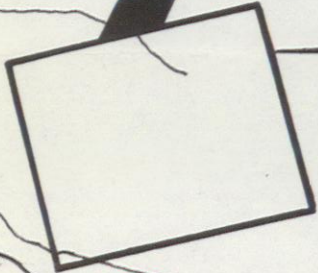


SCALE: 1" = 5000'

SCALE: 1" = 2640'



Tye 1	Tye 3	Tye 5	Tye 7	Tye 9
Tye 2	Tye 4	Tye 6	Tye 8	Tye 10
Tye 11	Tye 13	Tye 15	Tye 17	Tye 19
Tye 12	Tye 14	Tye 16	Tye 18	Tye 20

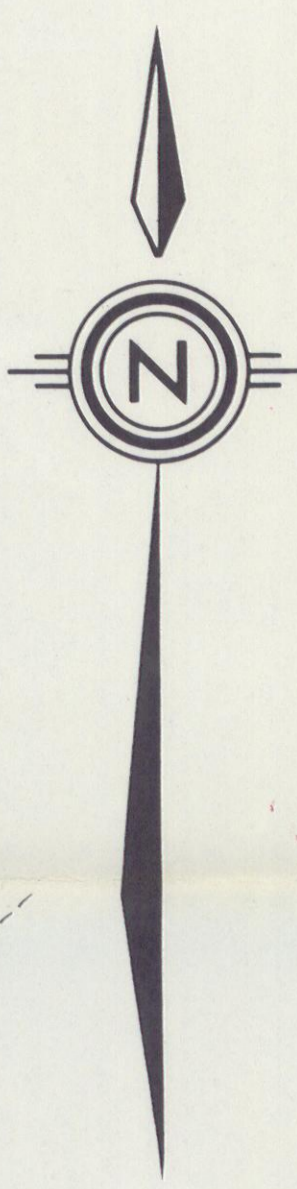
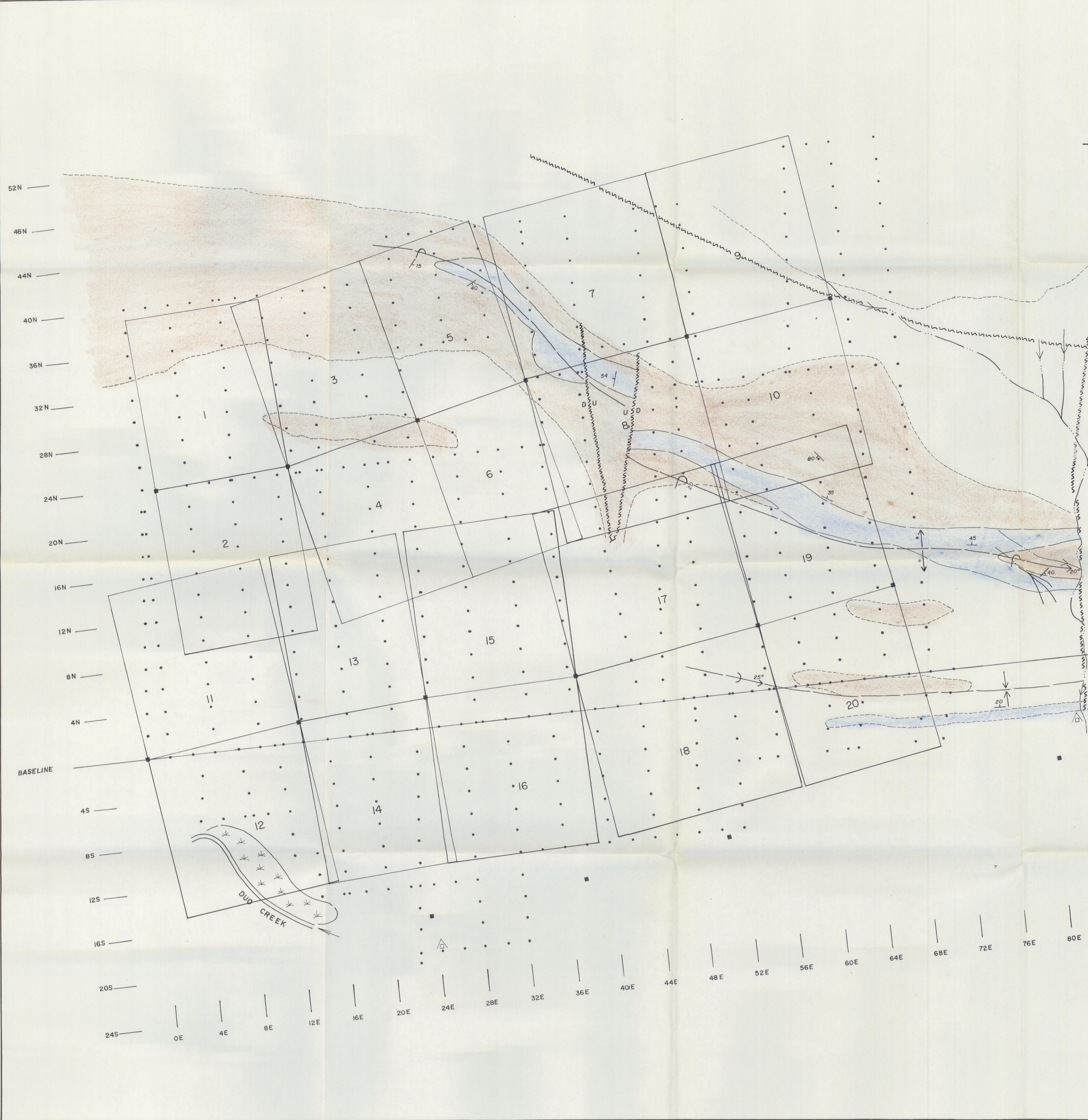


DUO CREEK



132°28'

132°28'



- LEGEND**
- Claim post and line
 - Geochemical survey station
 - X Helicopter pad
 - △ Camp
 - * Marsh
 - Creeks
 - ~~~~ Fault
 - Geological Contact
 - Outcrop
 - ↕ Plunging Fold Axis
 - ↷ Overturned Fold
 - ↘ Bedding; inclined

- GEOLOGY**
- LOWER CAMBRIAN**
BACKBONE RANGES FORMATION
- 945 Varied coloured quartzites (minor) siltstone and shale
 - 905 Grey massive limestone 20' to 60' thick

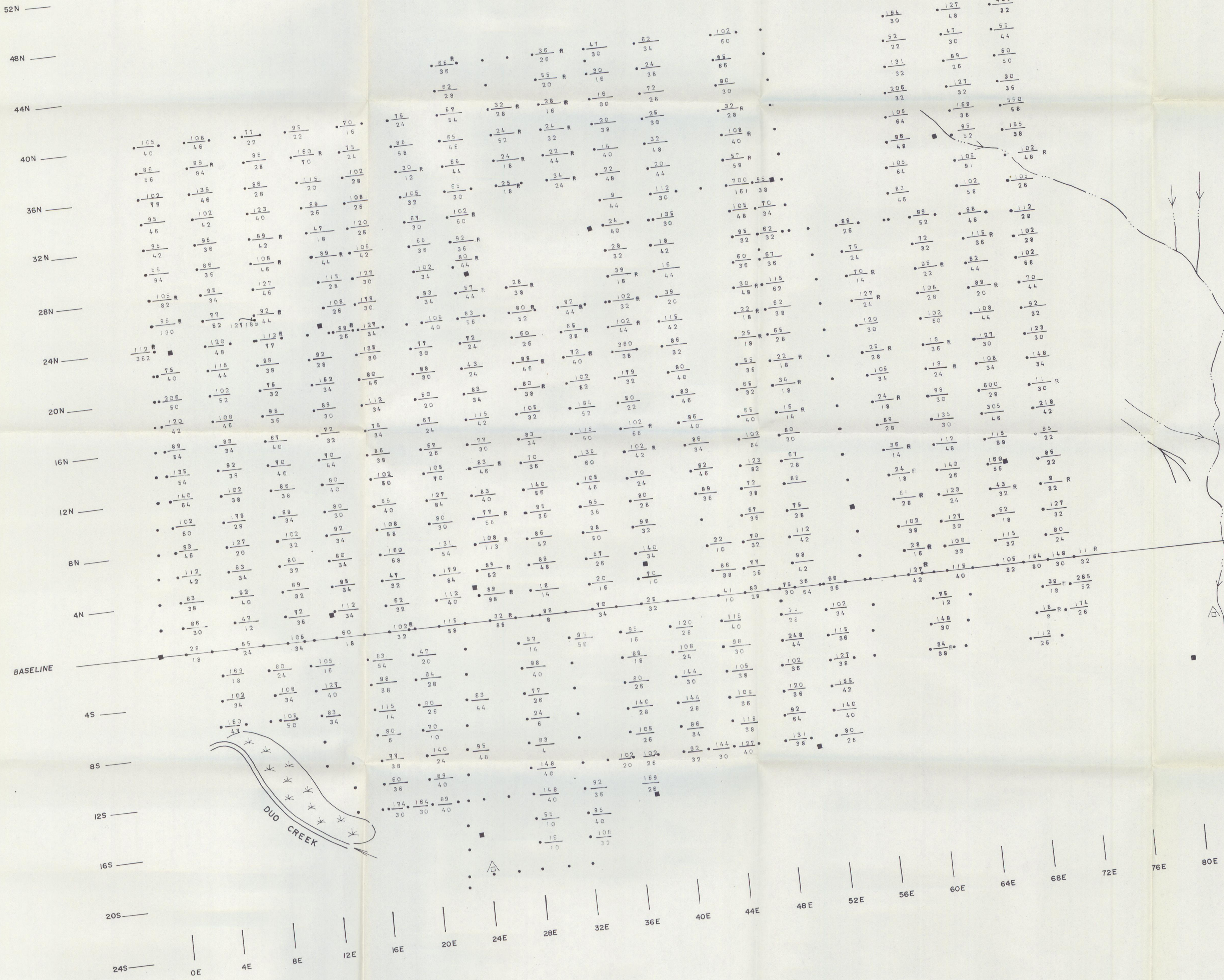
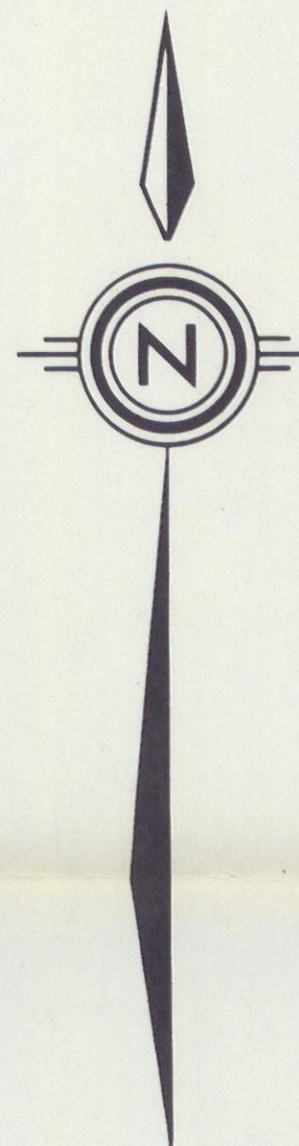


BELMORAL MINES LTD. (NPL)
 TYE 1-20 MINERAL CLAIMS
 MAYO MINING DISTRICT, Y.T.

**GEOLOGY &
 CLAIM MAP**

SCALE IN FEET
 400 0 400 800 1200

AGILIS ENGINEERING LTD. AUGUST, 1974



LEGEND

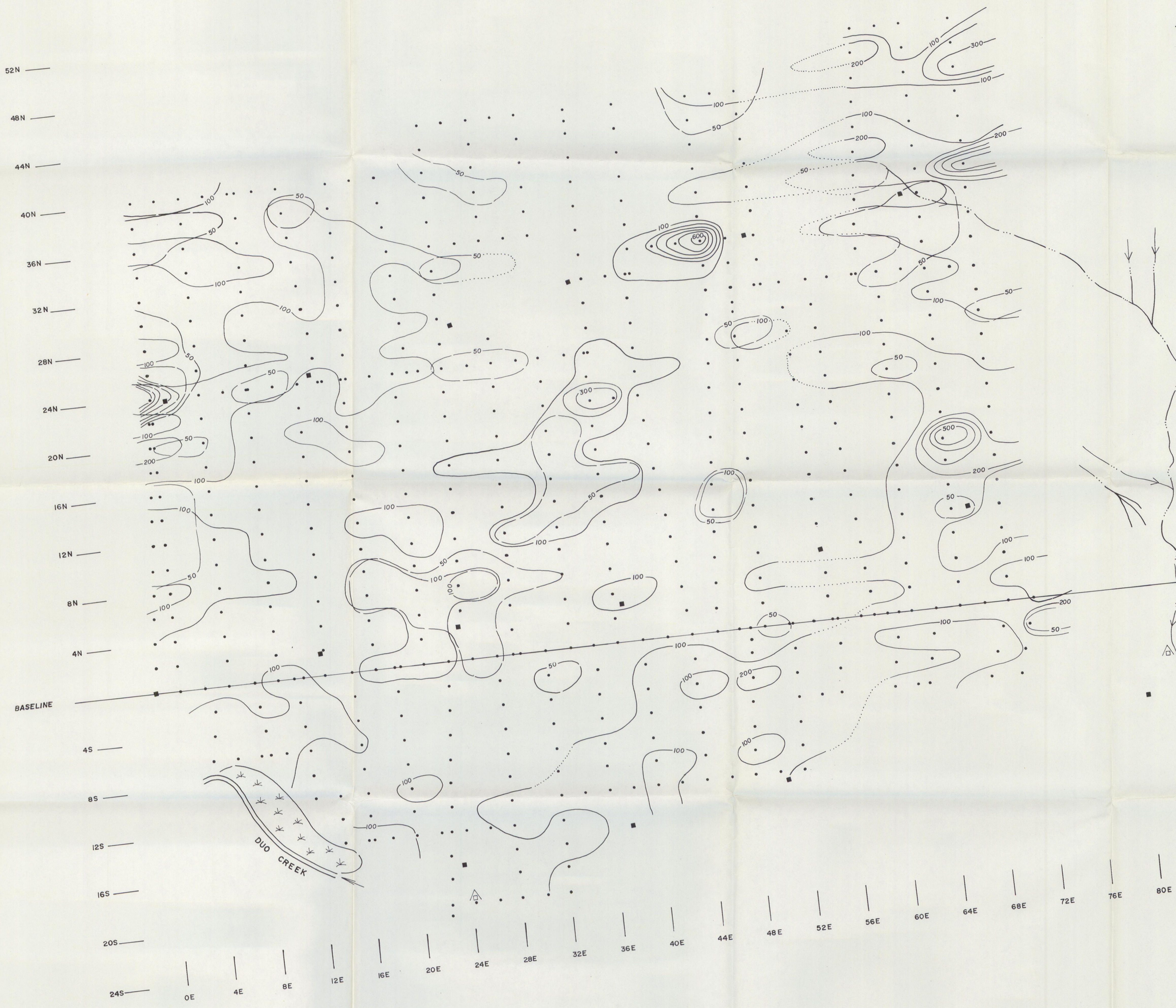
- Claim post
- Geochemical survey station
- Geochemical value for zinc
- Geochemical value for lead
- X Helicopter pad
- △ Camp
- * Marsh
- Creeks



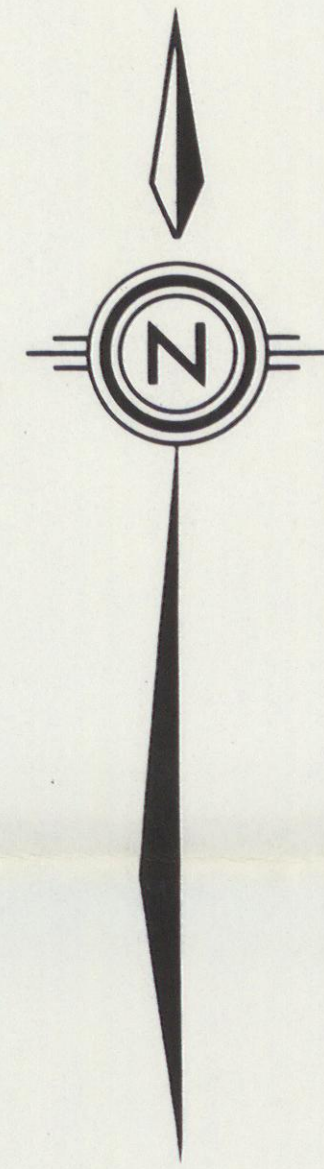
BELMORAL MINES LTD. (NPL)
TYE I-20 MINERAL CLAIMS
MAYO MINING DISTRICT, Y.T.

GEOCHEMICAL SURVEY MAP FOR
LEAD AND ZINC IN P.P.M.

SCALE IN FEET
400 0 400 800 1200
AGILIS ENGINEERING LTD. AUGUST, 1974

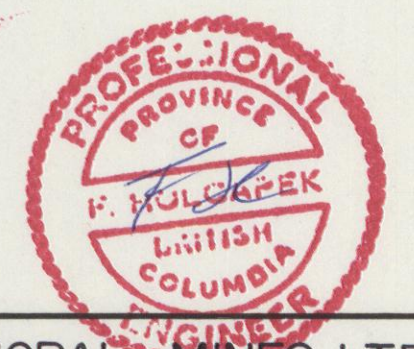


52N
48N
44N
40N
36N
32N
28N
24N
20N
16N
12N
8N
4N
BASELINE
4S
8S
12S
16S
20S
24S
0E
4E
8E
12E
16E
20E
24E
28E
32E
36E
40E
44E
48E
52E
56E
60E
64E
68E
72E
76E
80E



LEGEND

- Claim post
- Geochemical survey station
- X Helicopter pad
- △ Camp
- * Marsh
- Creeks
- 200— Zinc Contour : INTERVAL 100 P.P.M.
- Zinc Contour assumed
- 50— Lead Contour : INTERVAL 50 P.P.M.
- Lead Contour assumed



BELMORAL MINES LTD. (NPL)
TYE 1-20 MINERAL CLAIMS
MAYO MINING DISTRICT, Y.T.

GEOCHEMICAL CONTOUR MAP FOR
LEAD AND ZINC IN P.P.M.

SCALE IN FEET
400 0 400 800 1200

AGILIS ENGINEERING LTD. AUGUST, 1974