GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT ON THE MJK 1-32 CLAIMS, FREEGOLD MTN. AREA, WHITEHORSE MINING DISTRICT, 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 $ ~~13,159.60~~

Resident Geologist ~~or~~
~~Resident Mining Engineer~~

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

Commissioner of Yukon Territory

Vancouver, B.C.
October 25, 1974

J. R. Deighton
Geologist.

AGILIS ENGINEERING LTD.
CONSULTING ENGINEERS & GEOLOGISTS
107-325 HOWE STREET, VANCOUVER, B.C. V6C 1Z7

TABLE OF CONTENTS

MAPS AND ILLUSTRATIONS

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT ON THE MJK 1-32 CLAIMS FREEGOLD MTN. AREA, WHITEHORSE MINING DISTRICT, FOR WESTERN MINES LTD. (NPL), CREAM SILVER MINES LTD. (NPL) BELMORAL MINES LTD. (NPL).

SUMMARY

A program of Geological mapping, line cutting, geochemical soil sampling and magnetometer survey were conducted over the MJK 1-32 mineral claims during the summer of 1974. The work was done for Western Mines Ltd., Cream Silver Mines Ltd. (NPL), and Belmoral Mines Ltd. (NPL).

CONCLUSIONS

The claims are underlain by Intrusives ranging in age from Triassic to Tertiary.

Syenite and quartz monzonite form the main rock units. Dykes of quartz-feldspar porphyry and andesite intrude the main mass. These dykes generally have a northwest strike.

The black siltstone unit carrying gold values in quartz veinlets on the adjoining property was not found to outcrops on these claims.

The magnetic survey showed no great relief, and did not help in solving the underlying stratigraphy, although some magnetic trends are indicated.

AGILIS ENGINEERING LTD.
CONSULTING ENGINEERS & GEOLOGISTS
107-325 HOWE STREET, VANCOUVER, B.C. V6C 1Z7

The geochemical survey did not outline any anomalies in Copper, Antimony or Gold.

RECOMMENDATIONS

This property should not be retained.

INTRODUCTION

The MJK 1-32 mineral claims are located in the Whitehorse Mining District, Yukon Territory. They are situated 32 miles west of Carmacks at co-ordinates 62° 15' North Latitude, 137° 10' West Longitude.

The claims are held under option by Western Mines Ltd., Cream Silver Mines Ltd. (NPL) and Belmoral Mines Ltd. (NPL).

A program of geological mapping, line cutting, geochemical soil sampling and magnetometer survey were conducted over the property during the summer of 1974.

This report is based on the above work carried out by crews of Agilis Engineering Co. Ltd. under the direction of G. House

OWNERSHIP AND TITLE

The MJK 1-32 mineral claims were acquired by option, by Western Mines Ltd., Cream Silver Mines Ltd. (NPL) and Belmoral Mines Ltd. (NPL). The property consists of 33 contiguous mineral claims located in the Whitehorse Mining District, Yukon Territory.

The property consists of the following mineral claims;

Claim Name	Record Number	Date Recorded
MJK 1-32	Y78884-78915	May 27, 1974.

LOCATION AND ACCESS

The property is located on the northern facing slope of Seymour Creek, opposite Freegold Mountain, approximately 32 miles west of Carmacks, Yukon Territory.

Co-ordinates of the property are 62° 15' North Latitude, 137° 10' West Longitude

Access to the mineral claims is by gravel road from Whitehorse to Carmacks, a distance of 111 miles. Thence by dirt road to the property a distance of approximately 37 miles.

PHYSIOGRAPHY AND CLIMATE

The mineral claim group lies within the central Yukon. Temperatures are extremely cold during the winter with snow cover from October to June. Summers are mild with moderate precipitation.

Topography in the area is generally of moderate relief.

Vegetation consists of spruce and balsam in lower elevations but gives way to open grasslands and tundra at higher elevations.

HISTORY

In 1946-47, considerable prospecting for hardrock gold was carried out in the general Mount Nansen - Mount Victoria area, about 30 miles west of Carmacks. This area had previously revealed interesting Placer deposits in the upper raches of Nansen and Victoria Creeks, mostly during the period 1910-14. The original discovery of gold was made in 1899.

In the Freegold Mountain area, gold occurrences were discovered in 1930, also as a result of the previous Placer-Gold discoveries on Seymour Creek.

The Nansen-Freegold Mountain area has three deposits developed by under-ground methods with reported reserves as follows;

	Tons	oz/ton Au	oz/ton Ag
Laforma (Discovery mines	80,000	0.70	-
Brown-McDade Mines 1968	45,670	0.50	6.0
Brown-McDade Mines 1969	35,000	0.37	5.9

	Tons	oz/ton Au	oz/ton Ag
Mount Nansen Mines 1968	200,000	0.33	13.0

The Laforma operated in 1965-66 and Mount Nansen in 1968-69. The former suffered from poor ground conditions and an inadequate mill, while the latter suffered from excessive expenditures, overestimated reserves and too large and expensive a mill.

REGIONAL GEOLOGY

The area is characterized by a great variety of intrusives now believed to range in age from Triassic to Tertiary, intruding a core of Yukon schists.

The main intrusive is a coarse grained porphyritic syenite to quartz monzonite. It extends in length some 40 miles from Victoria Mountain to eight miles northwest of Prospector Mountain. It is thought to be of Triassic age.

Another unique characteristic of the area, is a more or less westerly facing crescent shaped belt of tertiary quartz-feldspar porphyries, forming dykes and masses of considerable size, the belt extends from southwest of Mt. Nansen to southeast of Prospector Mountain.

Further northwest and on the flanks of the area of interest the syenite-quartz monzonite is replaced by a granodiorite.

Gold deposits are seen to be associated where quartz-feldspar porphyries and syenite occur together. Veins high in silver and lower in gold seem to prefer the granodiorite.

PROPERTY GEOLOGY

The MJK 1-32 claim block is underlain by Triassic hornblende syenite with intrusives of monzonite and granitic dykes as well as feldspar porphyry andesitic dykes and pinkish quartz prophyry dykes of Tertiary age.

The scarcity of outcrop on valley sides, and the resistant weathering of the syenite outcrops on the ridges, with gaps where the less resistant dykes and intrusions have been eroded, makes the mapping of the contacts and trend directions very difficult.

The northwest trending syenitic intrusives are structurally inter-tongued with later granitic to monzonitic dykes. This feature is indicative of a batholith-intrusive margin.

The main intrusive is cut by feldspar porphyry and quartz porphyry "aplitic" dykes that have a northeast trending strike on the east side of the claim group.

No outcrop or float of the black-sedimentary siltstone carrying gold values in quartz veins was found on the MJK 1-32 mineral claims.

GEOCHEMISTRY

During the course of the summer six properties in the area of Freegold Mountain were soil sampled on a reconnaissance basis. Ground control was obtained by chaining and flagging a base line and establishing cross lines at 400 to 800 foot intervals along these lines. A total of 1372 soil samples were collected and submitted for analysis. All samples were analyzed for Copper while some were also analyzed for Gold and Arsenic and antimony.

Of all samples analyzed, copper was found to give the best

and widest range. All samples analyzed for gold retured values below the detectable limits of the assay method (30 ppb). Early arsenic and antimony values showed no great range and the assay procedure was omitted from the later portion of the sampling program.

Chemex Lab Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. did the sample preparation and analysis.

A frequency distribution plot was made of the entire population to determine background and anomalous ranges for copper and antimony. For this the accumulated percent was plotted against the range of values in parts per million on arithmetic probability paper.

	No. of Samples	Range ppm	Background	%	Anomalous	%
Cu	1372	3-995	33	92	70	4.27
Sb	691	1-19	13	96.5	Not detected	

A total of 262 samples were collected from the MJK 1-32 mineral claims.

There are no anomalous soil on these claims. Eight low threshold values in copper were obtained and these seem to overlie areas of syenite and granodiorite. One threshold value obtained at station 12 E 8 S is fairly close to an outcrop of granodiorite in which small amounts of chalcopyrite were seen. The mineralization noted in outcrop was of no economic value. The threshold copper values are probably a reflection of this low grade mineralization.

One threshold value in antimony was obtained in the soil sampling program. This sample was taken at station 0 line 10 N. The sample station appears to be underlain by syenite.

The scattered nature of the few threshold values in both copper and antimony and the extremely low values in gold (less than 30 ppb) indicate that there is probably no economic mineralization underlying these claims.

MAGNETIC SURVEY

A magnetic survey using a Sharp model MF-1 fluxgate magnetometer, was conducted over the property. Control for the survey was established by using the chained and flagged grid described in the section of Geochemistry.

The contoured results do not show any pattern that helps in solving the underlying stratigraphy. There seems to be a correlation of magnetic trends with the dyke swarms of quartz-feldspar porphyry, particularly in the southwest quadrant of the grid.

The magnetometer survey showed a very flat magnetic relief, with a maximum amptitude of 3000 gammas. The few high magnetic readings obtained do not show any pattern and are probably the result of normal magnetic variations within the syenitic mass.

J.R. Deighton,
GEOLOGIST.

Vancouver, B.C.
October 25, 1974.

CERTIFICATION

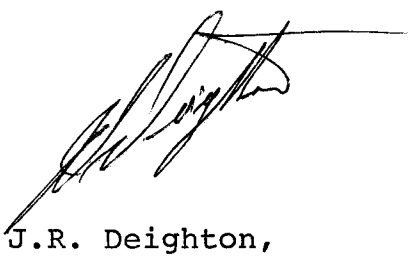
I, JOHN RAYMOND DEIGHTON, of 3250 West 33rd Avenue, Vancouver, British Columbia, do hereby certify that:

I am a graduate of the University of British Columbia, with a Bachelor of Science Degree in Geology, 1965.

Since graduation I have been engaged in Mineral Exploration in British Columbia, Yukon, Northwest Territories, Washington, Arizona and California.

I am a Fellow of the Geologial Association of Canada and of theCanadian Institute of Mining and Metallurgy.

I am a Geologist.



Vancouver, B.C.
October 25, 1974

J.R. Deighton,
Geologist.

YUKON TERRITORY

WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)

FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIMS
Whitehorse Mining District, Y.T.

PROPERTY LOCATION MAP

SCALE IN MILES
50 0 50 100 150

AGILIS ENGINEERING LTD. OCTOBER, 1974.

140°00' 136°00' 132°00' 68°00' 64°00' 60°00' 124°00' 128°00' 120°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
RIVER
Dawson
Keno Hill
Mayo
Stewart River
YUKON R.
PELLY R.
Ross River
S. NAHANNI R.
Fort Simpson
Snag
Carmacks
Kluane
Whitehorse
Teslin
Carcross
Fort Liard
N.W.T.
BRITISH COLUMBIA

137° 08'

N

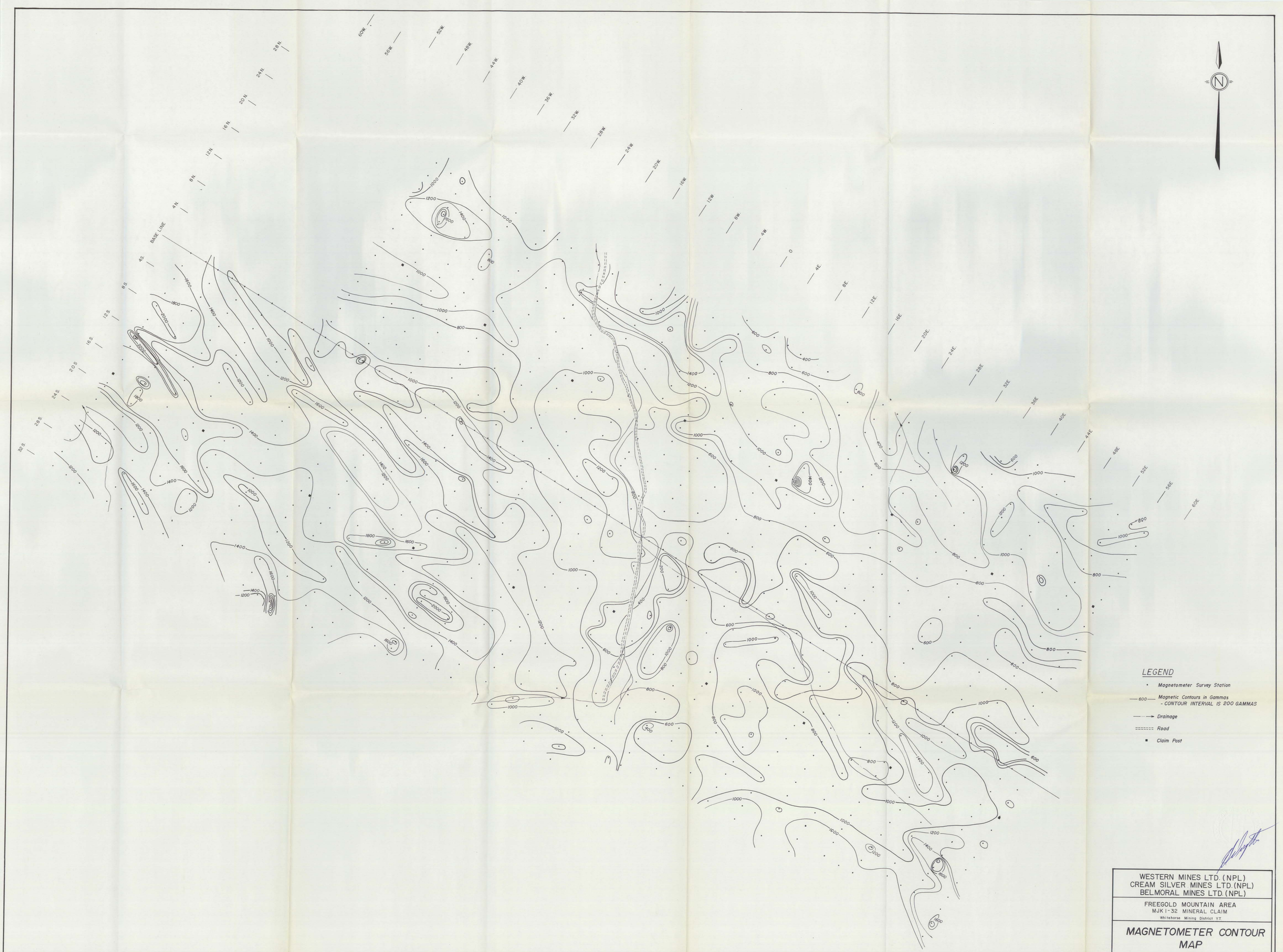
SCALE: 1" = 1 MILE

BOW CREEK
ROAD
SEYMOUR CREEK
62° 16'

31	32	29	30	27	28	25	26	23	24	21
										22
										19
										20
										17
										18
										15
										16
										13
										14
										11
										12
										9
										10
										7
										8
										5
										6
										3
										4
										1
										2

MJK 1-32 MINERAL CLAIMS

137° 08'



WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)

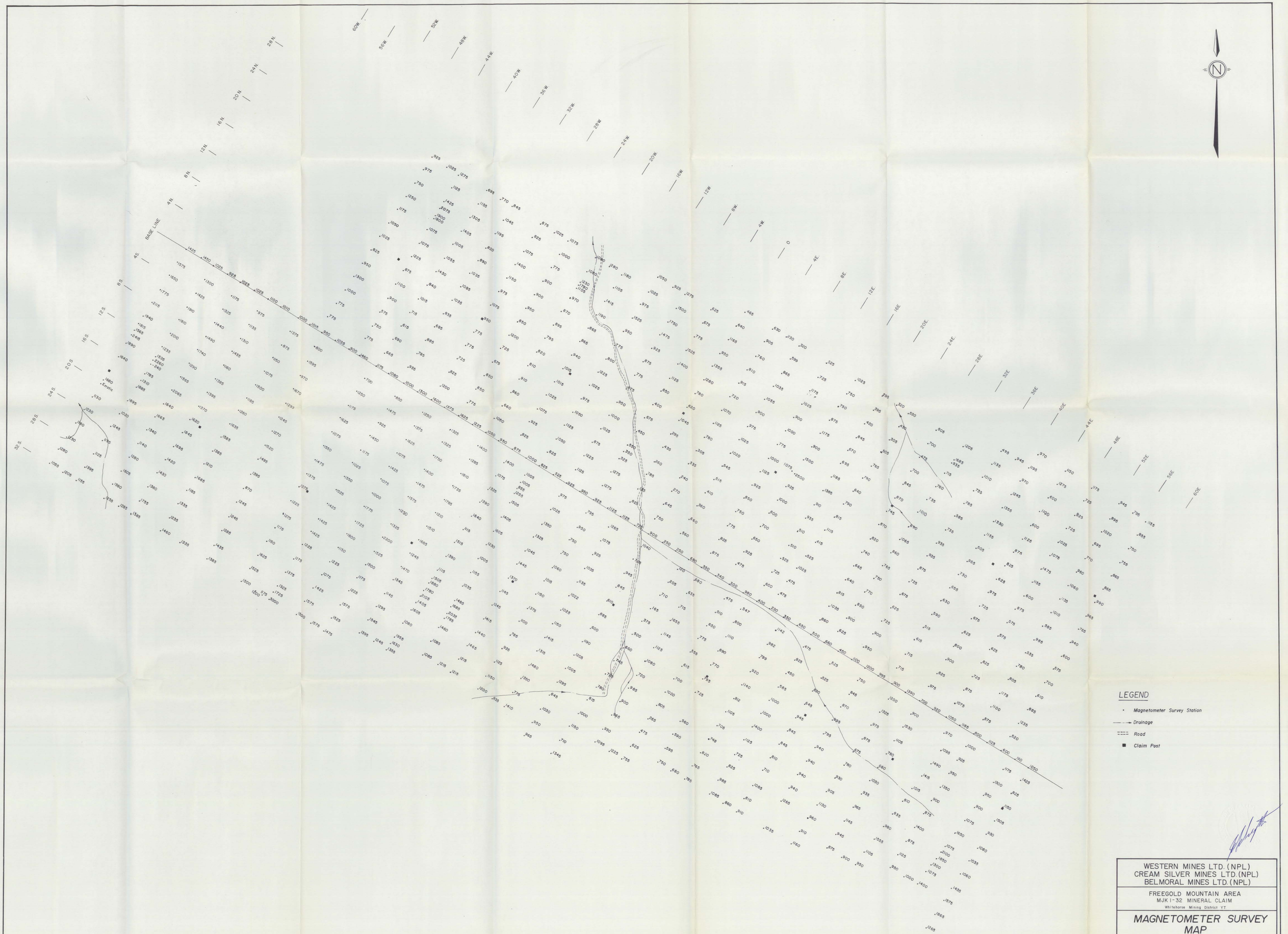
FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIM
Whitehorse Mining District Y.T.

MAGNETOMETER CONTOUR MAP

IN GAMMAS

SCALE IN FEET
400 0 400 800 1200

AGILIS ENGINEERING LTD. AUG. 1974



N

LEGEND

- Magnetometer Survey Station
- Drainage
- Road
- Claim Post

WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)

FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIM
Whitehorse Mining District Y.T.

MAGNETOMETER SURVEY MAP

VALUES IN GAMMAS

SCALE IN FEET

400 0 400 800 1200

AGILIS ENGINEERING LTD. AUG. 1974

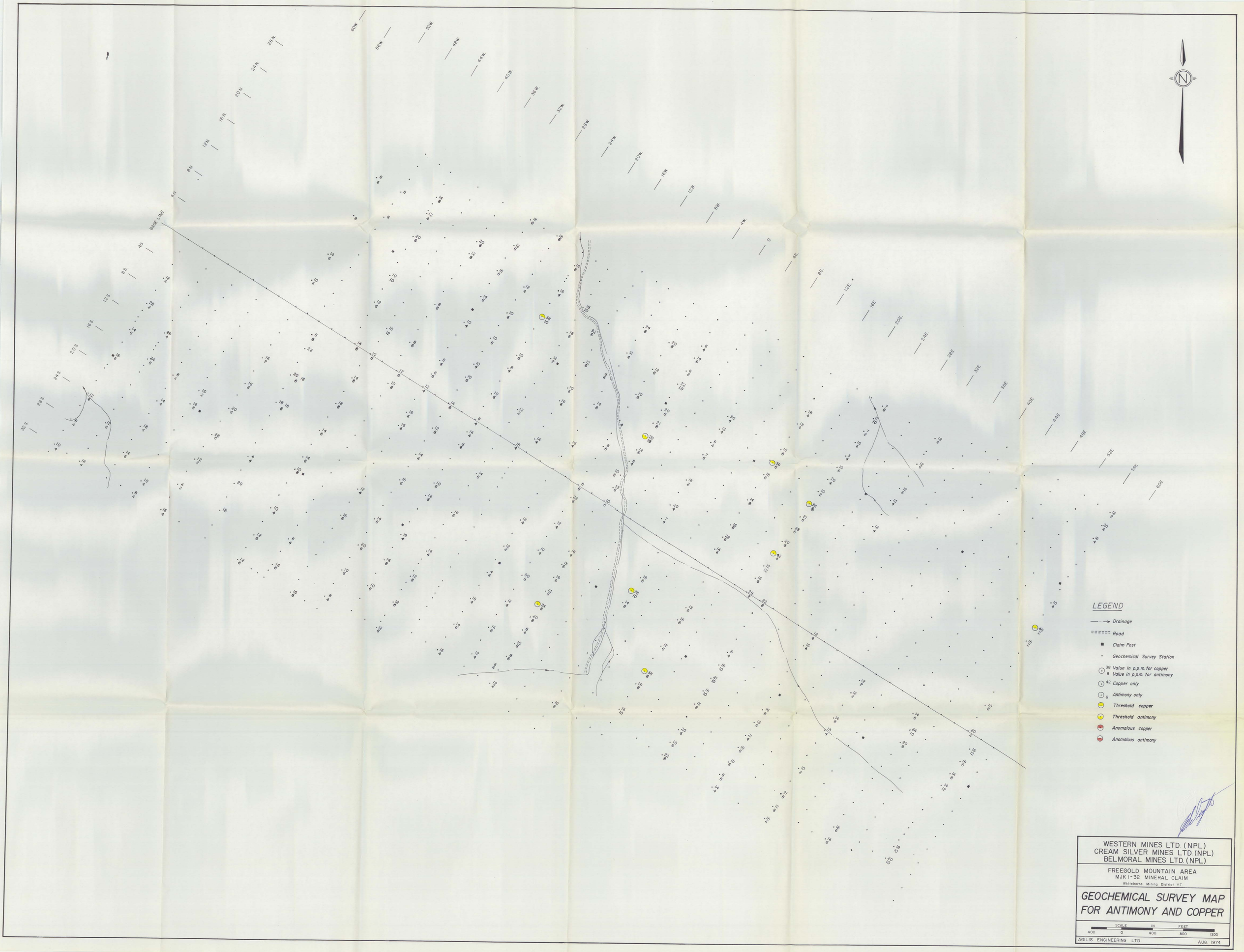
WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)

FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIM
Whitehorse Mining District YT.

GEOLOGY AND CLAIM MAP

SCALE IN FEET
400 0 400 800 1200

AGILIS ENGINEERING LTD. AUG 1974


60W
56W
52W
48W
44W
40W
36W
32W
28W
24W
20W
16W
12W
8W
4W
0
4E
8E
12E
16E
20E
24E
28E
32E
36E
40E
44E
48E
52E
56E
60E
28N
24N
20N
16N
12N
8N
4N
BASE LINE
4S
8S
12S
16S
20S
24S
28S
32S
N
LEGEND
Drainage
Road
Claim Post
Geochemical Survey Station
38 Value in p.p.m. for copper
8 Value in p.p.m. for antimony
42 Copper only
6 Antimony only
Threshold copper
Threshold antimony
Anomalous copper
Anomalous antimony
WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)
FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIM
Whitehorse Mining District Y.T.
GEOCHEMICAL SURVEY MAP
FOR ANTIMONY AND COPPER
SCALE IN FEET
400 0 400 800 1200
AGILIS ENGINEERING LTD.
AUG. 1974

SAMPLE ANALYSIS

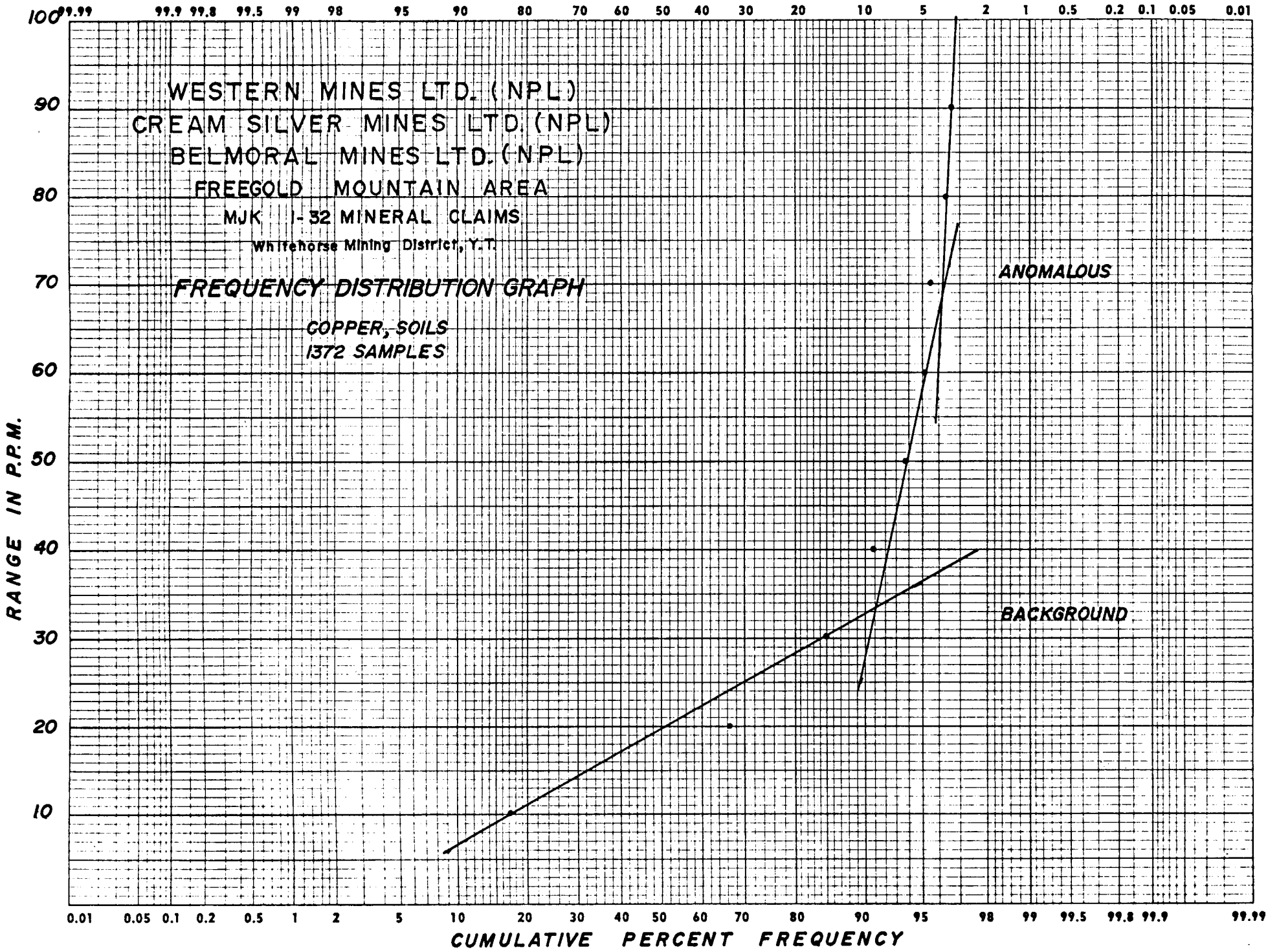
COPPER PPM

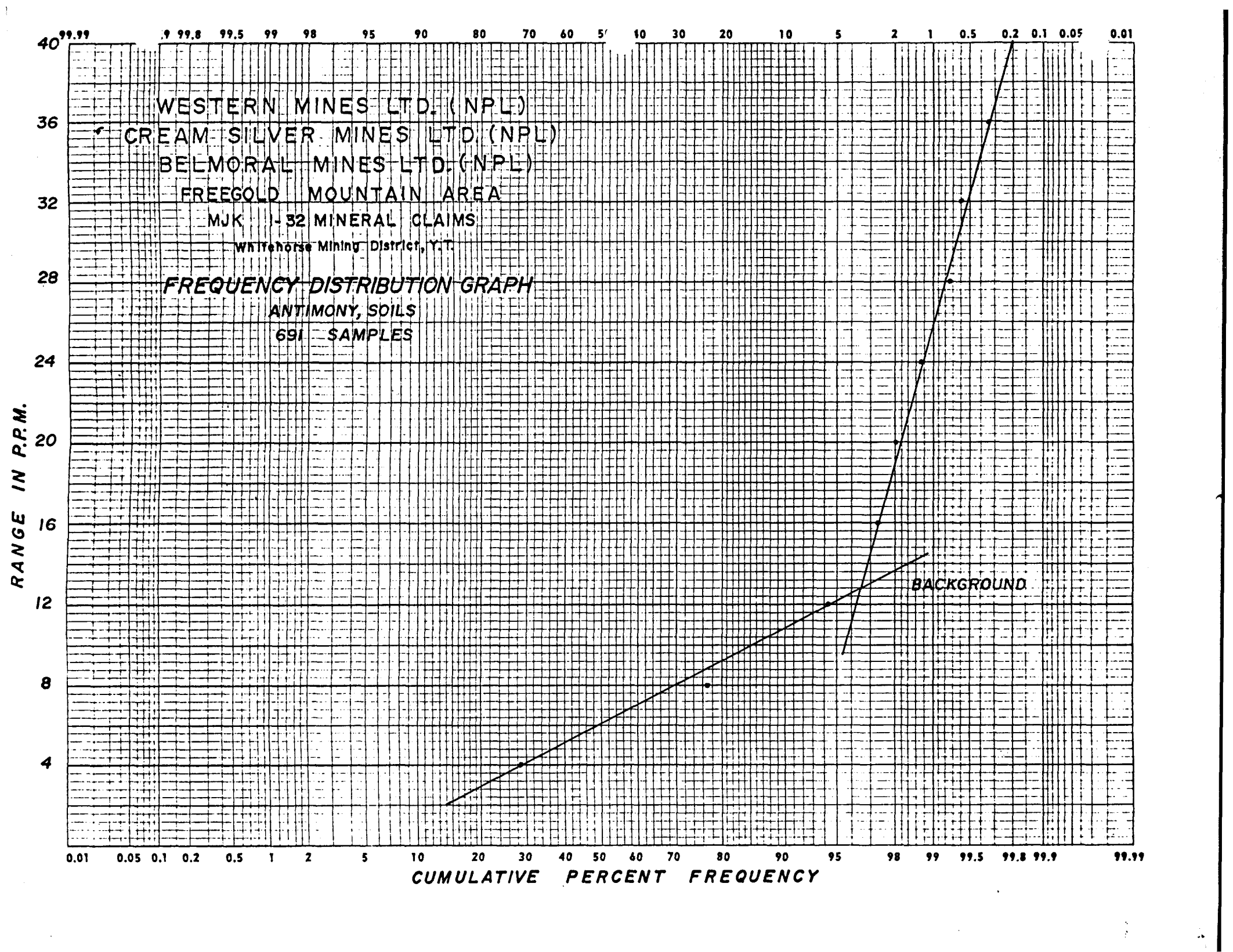
INTERVAL	NO. OF SAMPLES	%	CUMULATIVE %
0-10	240	17.49	17.49
11-20	679	49.48	66.97
21-30	249	18.14	85.11
31-40	81	5.90	91.01
41-50	42	3.06	94.07
51-60	17	1.23	95.30
61-70	6	.43	95.73
71-80	10	.72	96.45
81-90	4	.29	96.74
91-100	2	.14	96.88
101-110	2	.14	97.02
111-120	2	.14	97.16
+120	38	2.76	99.92

SAMPLE ANALYSIS

ANTIMONY PPM

INTERVAL	NO. OF SAMPLES	%	CUMULATIVE %
0-4	196	28.36	28.36
5-8	335	48.48	76.48
9-12	119	17.22	94.06
13-16	22	3.18	97.24
17-20	5	.72	97.96
21-24	5	.72	98.68
25-28	4	.57	99.25
29-32	1	.14	99.39
33-36	2	.28	99.67
37-40			
41-44			
45-48			
49-52			
53-56	1	.14	99.81
110	1	.14	99.95


WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)
FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIMS
Whitehorse Mining District, Y.T.
FREQUENCY DISTRIBUTION GRAPH
COPPER, SOILS
1372 SAMPLES
ANOMALOUS
BACKGROUND
RANGE IN P.P.M.
100
90
80
70
60
50
40
30
20
10
99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99
CUMULATIVE PERCENT FREQUENCY


WESTERN MINES LTD. (NPL)
CREAM SILVER MINES LTD. (NPL)
BELMORAL MINES LTD. (NPL)
FREEGOLD MOUNTAIN AREA
MJK 1-32 MINERAL CLAIMS
Whitehorse Mining District, Y.T.
FREQUENCY DISTRIBUTION GRAPH
ANTIMONY, SOILS
691 SAMPLES
BACKGROUND
RANGE IN P.P.M.
CUMULATIVE PERCENT FREQUENCY
99.99 99.9 99.8 99.5 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
0.01 0.05 0.1 0.2 0.5 1 2 5 10 20 30 40 50 60 70 80 90 95 98 99 99.5 99.8 99.9 99.99
40 36 32 28 24 20 16 12 8 4