

# 5105

93A/5W, 12W  
A Geochemical Report

93A/5W &  
12W

on the

GT 25-60 Mineral Claims

Gavin Lake Area, Cariboo Mining Division

British Columbia

for

Zubex Resources Ltd.

(owner and operator)

by

R. D. Westervelt, M.Sc., P. Eng.

Westervelt Engineering Ltd.  
#904-1112 West Pender Street.  
Vancouver, B.C.

22 August 1974.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5105 MAP

CONTENTS

|                      |      |   |
|----------------------|------|---|
| INTRODUCTION         | Page | 3 |
| PROPERTY             | Page | 3 |
| FIELD PROGRAM        | Page | 4 |
| GEOCHEMICAL SURVEY   | Page | 4 |
| Sampling Methods     | Page | 4 |
| (a) Soils            | Page | 4 |
| (b) Stream Sediments | Page | 4 |
| Analytical Methods   | Page | 5 |
| Survey Results       | Page | 5 |
| (a) Molybdenum       | Page | 5 |
| (b) Copper           | Page | 5 |
| (c) Zinc             | Page | 6 |
| CONCLUSIONS          | Page | 6 |

MAPS

|                    |                   |   |
|--------------------|-------------------|---|
| #1 LOCATION MAP    | Following Page    | 3 |
| #2 CLAIM MAP       | Following Page    | 4 |
| #3 Mo SOIL GEOCHEM | Fig. 1 in pocket  |   |
| #4 Cu SOIL GEOCHEM | Fig. 2 in pocket  |   |
| #5 Zn SOIL GEOCHEM | Fig. 3. in pocket |   |

A Geochemical Report  
on the  
GT 25-60 Mineral Claims

INTRODUCTION:

The GT 25-60 Mineral Claims were staked in July 1973 to provide additional coverage westward along the trend of an anomalous molybdenum-copper zone outlined on the adjoining claim group to the east owned by Zubex Resources Ltd.

Although insufficient work has been completed to determine the significance of the zone on the eastern property, the earlier geochemical survey results on the eastern group had proven useful in establishing the trend and in broadly defining the areas warranting more interest.

No prior work had been reported on the GT 25-60 claim area. As similar field conditions (eg: moderate topography and extensive overburden) existed on both properties, a continuation of the geochemical survey westward was recommended to provide initial data on the GT 25-60 claim group.

PROPERTY:

The GT 25-60 mineral claims, owned by Zubex Resources Ltd., comprise a single block of 36 contiguous claims in the Cariboo Mining Division of British Columbia recorded as follows:

| <u>Claim Name</u>    | <u>Record Numbers</u>   | <u>Expiry Dates</u> |
|----------------------|-------------------------|---------------------|
| GT 25-60 (inclusive) | 69161-69196 (inclusive) | July 18, 1975       |

As shown on the accompanying claim and location maps, the GT 25-60 group adjoins immediately west of the GT 1-24 group and is situated northwest of Little Gavin Lake some 12 miles southwesterly from Likely and 30 miles northeast of Williams Lake.

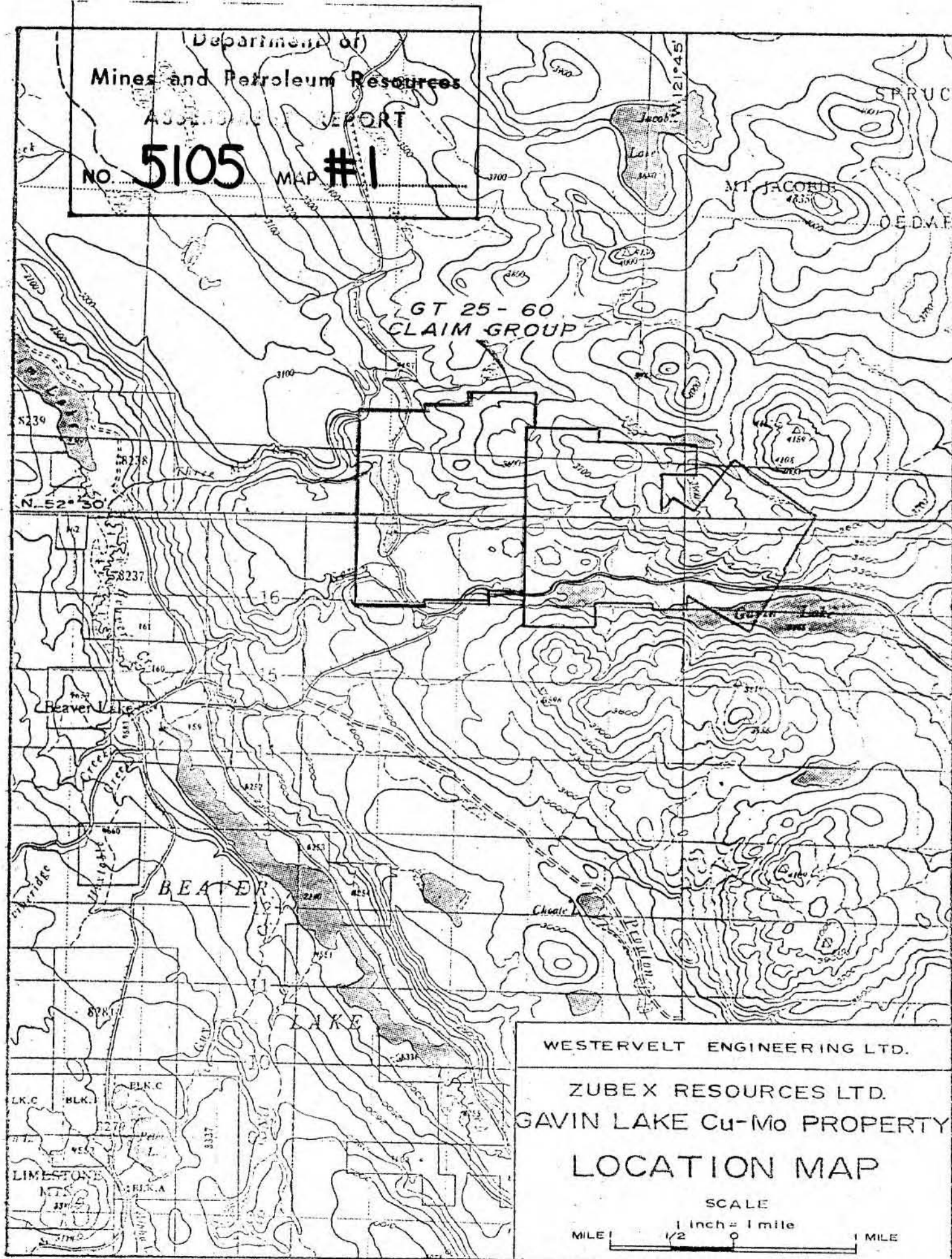
The property is readily accessible by good gravel roads from Williams Lake - the Likely road passes northward through the westernmost claims and the Gavin Lake road follows closely the southern property boundary.

Topography within the claim block is moderately undulating with maximum relief of 700'. Moderate to heavy timber cover is prevalent and rock exposures are rare. Overburden, consisting mainly of glacial boulder till and local clay, is extensive and variable in depth. The depth generally decreases with increasing elevation and generally tends to increase in a westerly direction.

Department of  
Mines and Petroleum Resources  
ASSessment REPORT

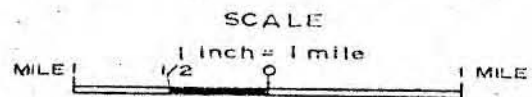
NO. **5105** MAP #1

GT 25-60  
CLAIM GROUP



WESTERVELT ENGINEERING LTD.

ZUBEX RESOURCES LTD.  
GAVIN LAKE Cu-Mo PROPERTY  
LOCATION MAP



FIELD PROGRAM:

Field work was carried out during the period May 27th-July 4th, 1974 by Zubex personnel supervised by B. Fenwick-Wilson under the direction of R. D. Westervelt, P. Eng.

For survey control, a line cut grid was established over most of the property. The new grid was tied in to the older grid on the eastern property by re-surveying the earlier line 40W for 4000' south. The new base-line commenced at this point and was surveyed for 7400' westerly parallel to the original base-line (bearing 300° true). The co-ordinate system originating on the eastern claim group was utilized throughout.

From the base-line, cross lines at 400' intervals were cut and picketed at 100' intervals along the lines. The completed grid totalled 12,000' of base lines and 19 1/2 miles of cross lines.

1016 geochem samples were collected from the property and analysed for copper, molybdenum, and zinc. 971 of these were soil samples taken at 100' intervals along the lines - the remainder were selected soil profile samples and scattered stream sediments.

GEOCHEMICAL SURVEY:

Sampling Methods: (a) Soils: Throughout the grid area, glacial till is extensive and no good soil development is present. Sampling of B horizon material was carried out by digging holes with a mattock through the humus and through the immediately underlying leached horizon. In most cases, the humus and leached zones were thin and satisfactory B horizon material was obtained from depths varying from 8-18".

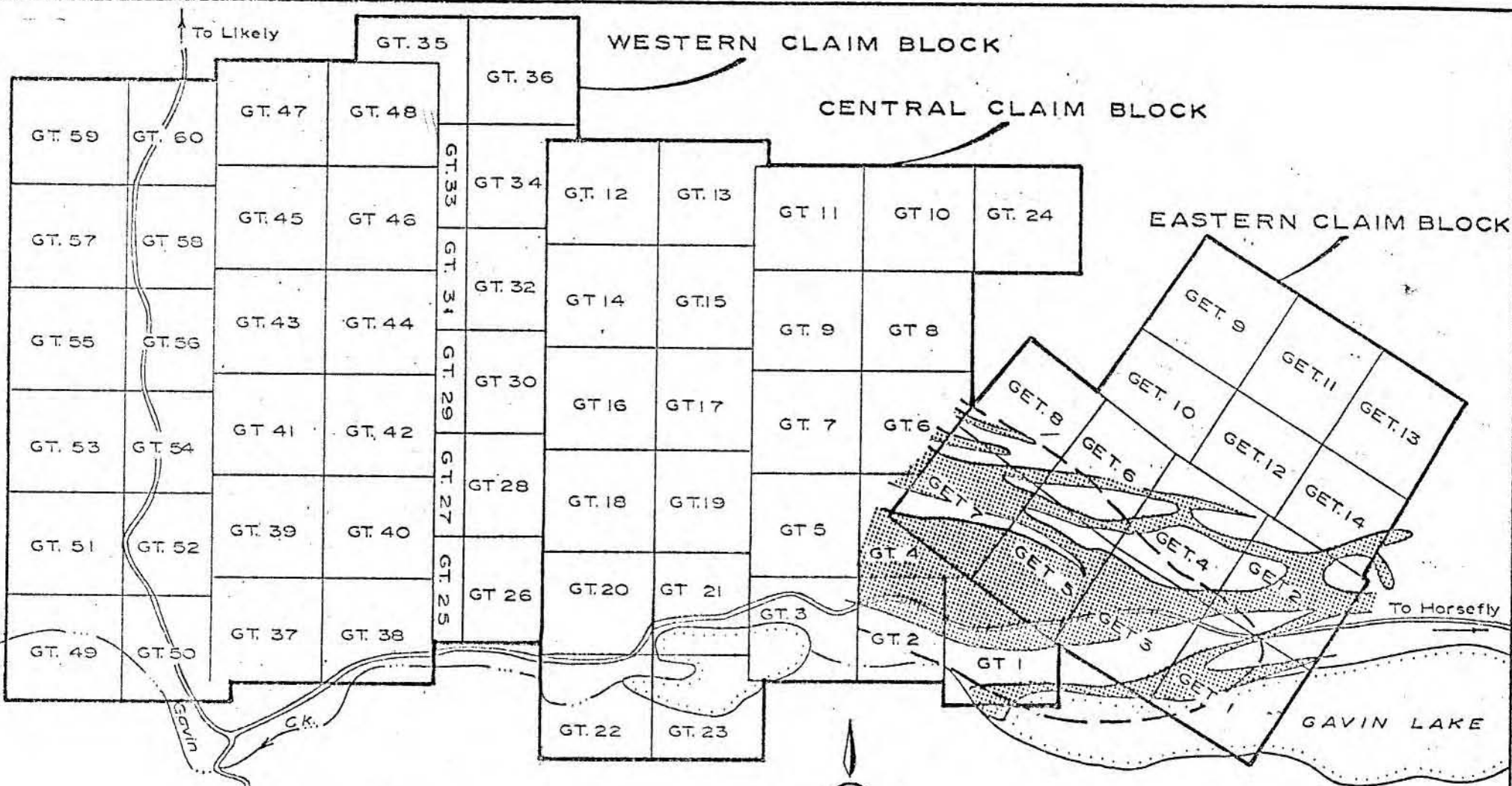
The sample material was collected in a stainless steel spoon and placed in a standard Kraft geochem envelope with the co-ordinate location being marked in pencil on the exterior.

Soil samples were collected at regular 100' intervals along the grid lines and a few selected soil profiles to 3' depths were taken to test for variations with depth.

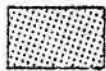
(b) Stream sediments: No comprehensive sampling program was undertaken - the few samples obtained were taken where satisfactory material was available when grid lines crossed the few drainages.

Samples were taken by collecting the finest transported material present - preferably silt from the center of the creek away from the banks. The sample material was collected in a stainless steel spoon and placed in a standard Kraft geochem envelope with the co-ordinate location being marked in pencil on the exterior.

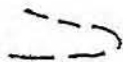




**LEGEND**



Quartz monzonite dyke swarm as defined by earlier mapping.



Limit of area of quartz and K feldspar veining.

To Williams Lake

To Horsefly



|                                                       |  |                                                                |  |
|-------------------------------------------------------|--|----------------------------------------------------------------|--|
| Department of<br><b>Mines and Petroleum Resources</b> |  | WESTERVELT ENGINEERING LTD.                                    |  |
| <b>ASSESSMENT REPORT</b>                              |  | <b>ZUBEX RESOURCES LTD</b><br><b>GAVIN LAKE Cu-Mo PROPERTY</b> |  |
| <b>NO. 5105</b>                                       |  | <b>MAP #2</b>                                                  |  |
| SCALE<br>1 Inch = 2000 ft.                            |  |                                                                |  |

### Analytical Methods:

All the samples were analysed geochemically for total copper, molybdenum, and zinc in the Laboratory of Noranda Exploration Company located at 1050 Davie Street, Vancouver, B.C. Analyst was Bob Mower.

All the samples - both soil and sediment, were treated similarly. The samples were first placed in a drying cabinet for a period of 24 to 48 hours. The samples were then screened and sifted to obtain a minus 80 mesh fraction for analysis.

The determination procedure for total copper, zinc and molybdenum was then carried out as follows:

- (a) 0.2 grams of the -80 mesh material was digested in 2 ml. of  $\text{HClO}_4$  and 0.5 ml. of  $\text{HNO}_3$  for approximately four hours.
- (b) Following digestion, each sample was diluted to 5 ml. with demineralized  $\text{H}_2\text{O}$ .
- (c) A Varian Techtron Model AA-5 Atomic Absorption Spectrophotometer was used to determine the total copper, zinc and molybdenum content in part per million in each sample.

### Survey Results:

The geochemical results are presented in Figures 1, 2 and 3 of this report. These are plan maps on a scale of 1" - 400' showing molybdenum (Fig. 1), copper (Fig. 2), and zinc (Fig. 3) contents in parts per million. Frequency distribution diagrams were prepared for each element to determine the anomalous values and these are shown on the respective plans.

(a) Molybdenum: The frequency curve indicates a definite threshold at 2 ppm which is lower than the threshold established on the eastern property (4 ppm). This very probably reflects the gradual increase in overburden depth westward. Although lower values have correspondingly been used in contouring the molybdenum results, it is noticeable that little change in the contours would occur if the higher levels determined on the eastern property had been utilized.

The molybdenum results indicate a broad, diffuse anomalous zone lying north of the base line trending northwesterly through the grid area. In view of the variable overburden depths, the continuity of this zone is surprising - many of the strongly anomalous areas (in excess of 5x background) are consistent over appreciable distances.

(b) Copper: The frequency curve and copper results are comparable with those previously found on the eastern property.

Anomalous values are limited to a scatter of sharp individual peaks and no significant distribution pattern is present. A weak correlation of anomalous copper values co-incident with higher molyb-

denum is apparent in the southeast corner of the property. Elsewhere, the individual copper "highs" have a weak tendency to co-incide with higher molybdenum samples within the anomalous molybdenum zone.

- (c) Zinc: No zinc data is available on the eastern property for comparative purposes.

In general, the zinc results are similar to those for copper - no significant distribution pattern is present and anomalous values are restricted to a scatter of sharp individual peaks. A weak correlation of higher zinc with higher molybdenum values is apparent within the anomalous molybdenum area.

The soil profile samples are too limited to give any firm pattern. No increase with depth is apparent in either molybdenum or zinc but the available data suggests some increase in copper with depth.

CONCLUSIONS:

1. No significant copper or zinc anomalies have been detected by the geochemical survey.
2. The molybdenum results have defined an anomalous area of interest lying along the extension of the zone previously indicated on the adjacent property to the east.
3. Bearing in mind the local drainage and overburden pattern, the anomalous molybdenum area requires careful prospecting attention to determine the possible source and probable cause of the anomalous results.
4. A ground examination of the area south of the base line should be completed to determine whether the absence of geochemical anomalies is due to excessive overburden or lack of potential mineralization. If overburden is not excessive, the lack of any geochemical expression may eliminate these southern claims from further interest.



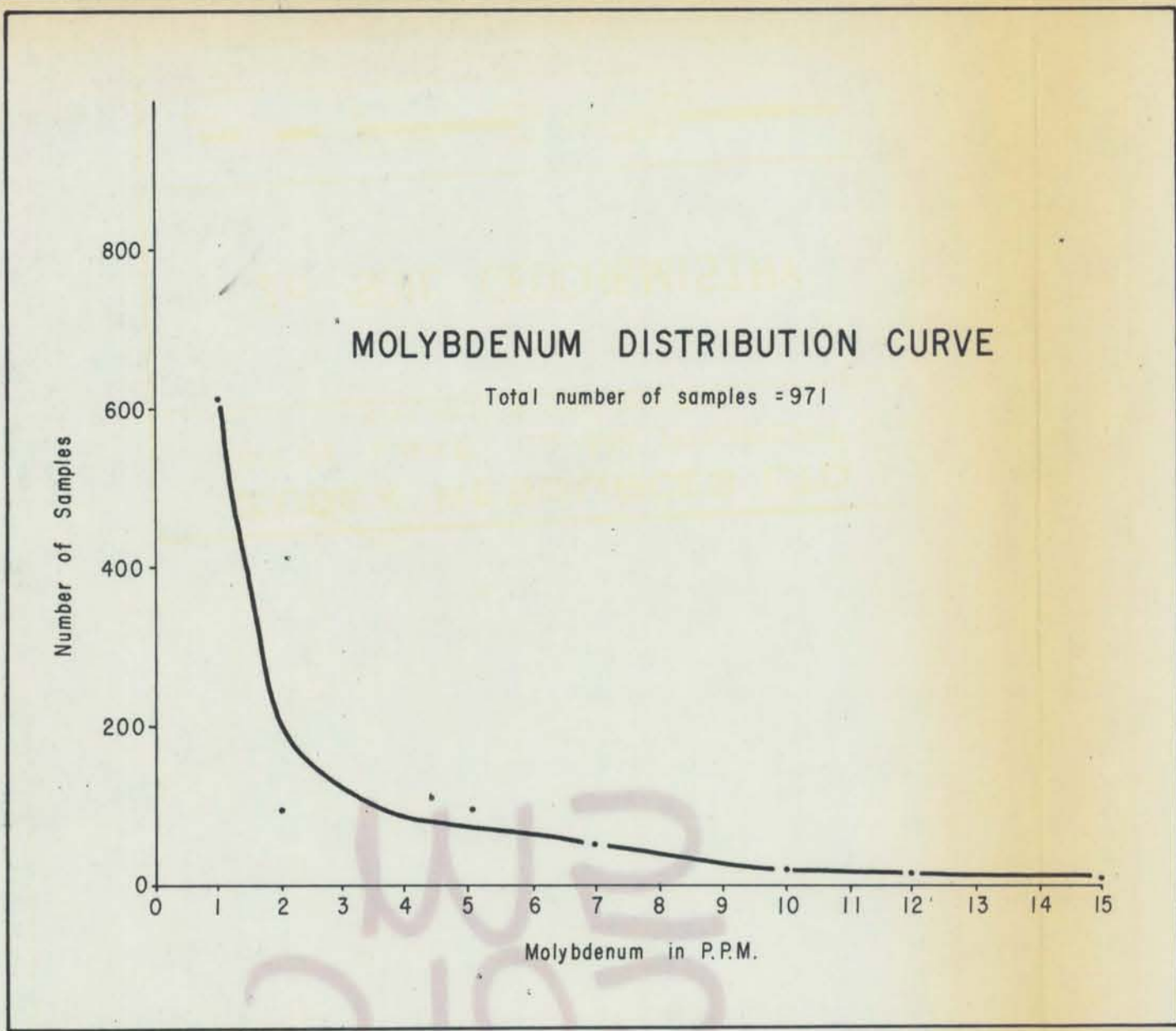
Respectfully submitted,

WESTERVELT ENGINEERING LTD.

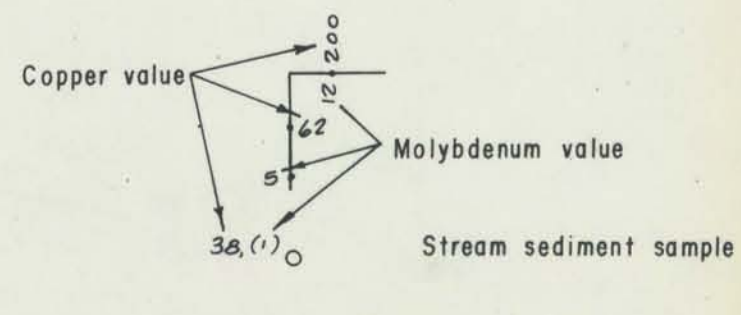
*R. D. Westervelt, P. Eng.*  
R. D. Westervelt, P. Eng.,

Vancouver, B.C.  
22 August 1974.





- LEGEND:**
- 0-2 PPM. - Background
  - 2-5 PPM. - Moderately Anomalous
  - 5-10 P.P.M. - Anomalous
  - 10 P.P.M. and greater - Highly Anomalous

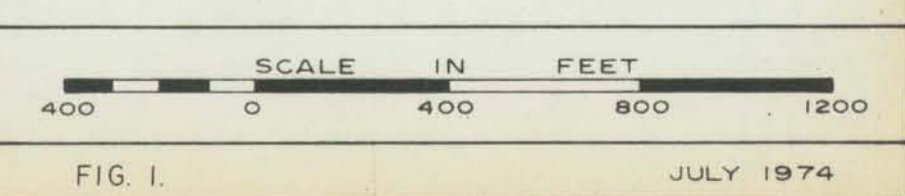


**5105**  
**M3**

Department of  
Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
NO. 5105 MAP #3

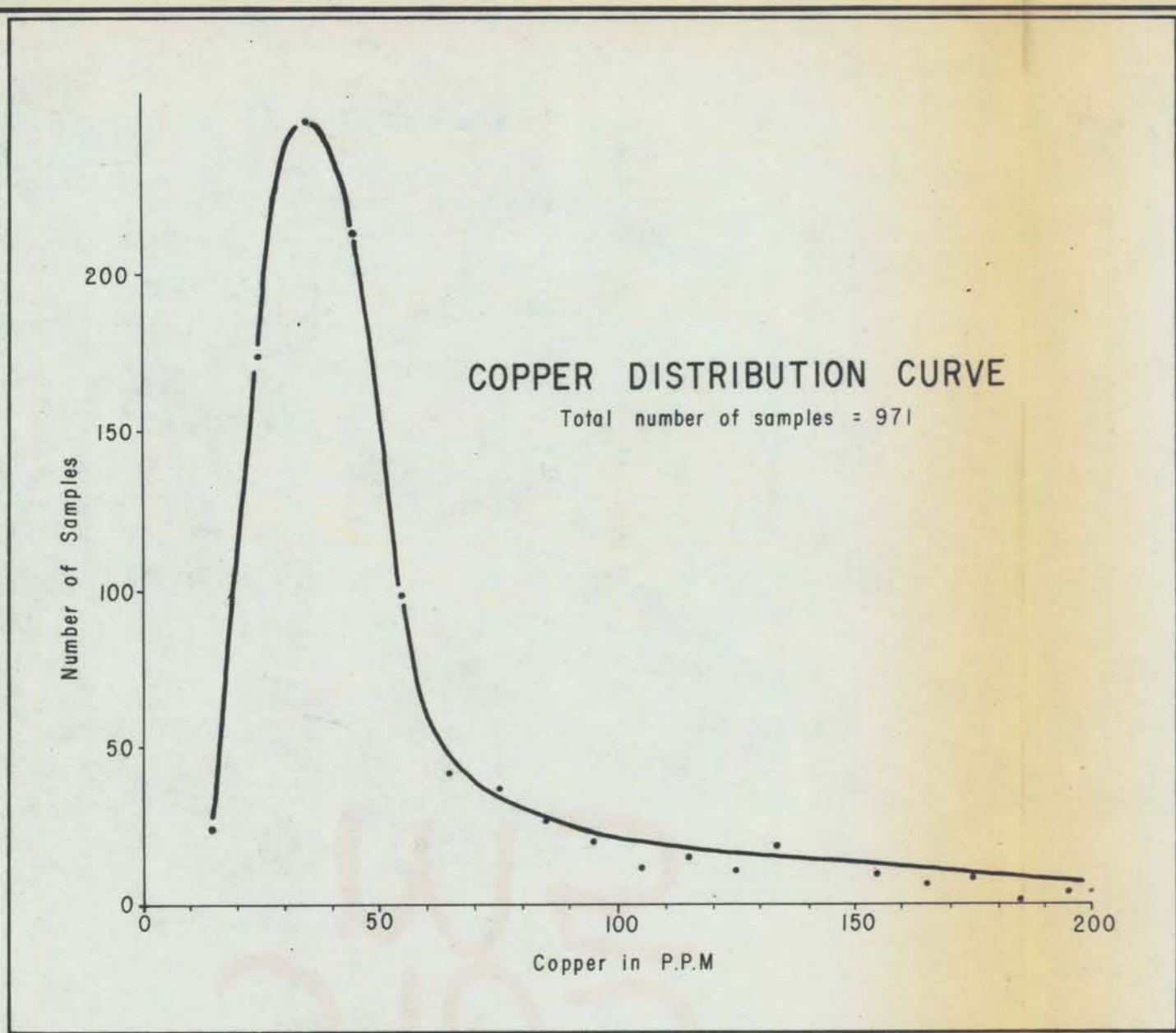
ZUBEX RESOURCES LTD.  
GAVIN LAKE Cu-Mo PROPERTY  
CARIBOO MINING DIVISION

**Mo SOIL GEOCHEMISTRY**



To accompany a Geochemical Report on the GT 25-60 mineral claims, Cariboo M.D., B.C. by R.D. Westervelt, P.Eng. Dated August 22, 1974.





Soil Profile

| Sample # | PPM Cu | PPM Mo |
|----------|--------|--------|
| 914      | 56     | 42     |
| 915      | 56     | 42     |
| 916      | 56     | 42     |
| 917      | 56     | 42     |

Soil Profile

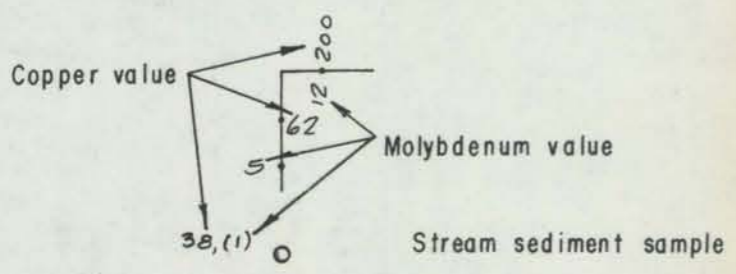
| Sample # | PPM Cu | PPM Mo |
|----------|--------|--------|
| 950      | 14     | 42     |
| 951      | 34     | 42     |
| 952      | 34     | 42     |
| 953      | 45     | 42     |

Soil Profile

| Sample # | PPM Cu | PPM Mo |
|----------|--------|--------|
| 963      | 46     | 42     |
| 964      | 74     | 42     |
| 965      | 94     | 42     |
| 966      | 120    | 42     |

**LEGEND**

- 0-100 P.P.M. — Background
- 100-200 P.P.M. — Moderately Anomalous
- 200-300 P.P.M. — Anomalous
- 300 P.P.M. and greater — Highly Anomalous



**5105  
M4**

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5105 MAP #4

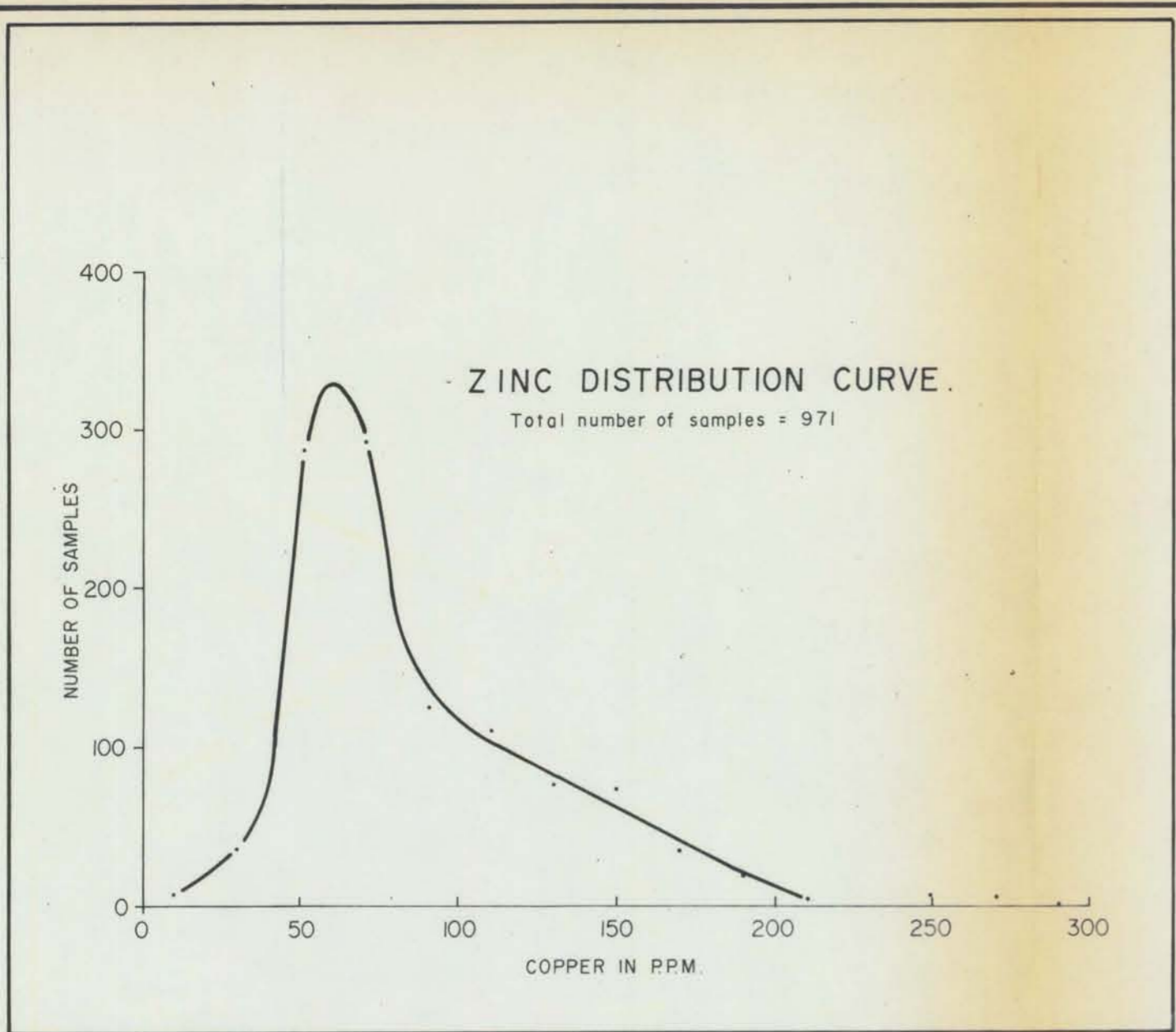
ZUBEX RESOURCES LTD.  
GAVIN LAKE Cu-Mo PROPERTY  
CARIBOO MINING DIVISION

**Cu SOIL GEOCHEMISTRY**

SCALE IN FEET  
0 400 800 1200  
FIG. 2 JULY 1974

To accompany a Geochemical Report on the GT 25-60 mineral claims, Cariboo M.D., B.C. by R.D. Westervelt, P. Eng. Dated August 22, 1974.





- LEGEND:
- 0-80 PPM - Background
  - 80-150 PPM - Threshold
  - 150-200 PPM - Moderately Anomalous
  - 200 PPM and greater - Anomalous

○ Stream sediment sample

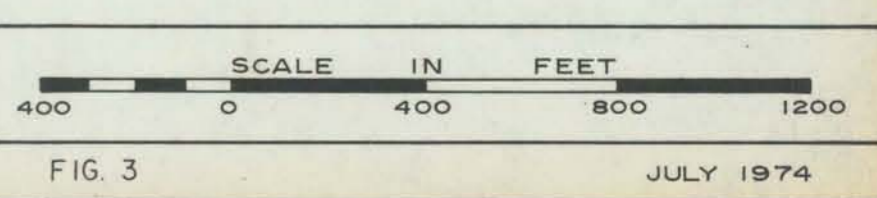


5105  
M5

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
No. 5105 MAP #5

ZUBEX RESOURCES LTD.  
GAVIN LAKE Cu-Mo PROPERTY  
CARIBOO MINING DIVISION

Zn SOIL GEOCHEMISTRY



To accompany a Geochemical Report on the GT. 25-60 mineral claims, Cariboo M.D., B.C. by R.D. Westervelt, P. Eng. Dated August 22, 1974.