

# 4770

92I/15E  
GEOCHEMICAL REPORT

92I/15E  
4770

on a  
SOIL GEOCHEMISTRY SURVEY  
on the  
Cat, ZEKE CLAIM GROUP  
ANDRUS LAKE AREA, KAMLOOPS M.D., B.C.  
August, 1973

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ZEKE CLAIM GROUP : 19 miles NW of Kamloops  
50° 120° NW  
NTS - 92 I/15E

Report by : David G. Mark  
Geophysicist  
Geotronics Surveys Ltd.  
514-602 W. Hastings Street  
Vancouver, B.C.

for : T & C Management Ltd.  
520 - 602 West Hastings St.  
Vancouver, B.C.

December 8, 1973

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. **4770** MAP

**Geotronics Surveys Ltd.**

Vancouver, Canada

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GEOCHEMICAL REPORT  
on a  
SOIL GEOCHEMISTRY SURVEY  
on the  
ZEKE CLAIM GROUP  
ANDRUS LAKE AREA, KAMLOOPS M.D., B.C.

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INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of results, and the interpretation of a soil geochemistry survey for copper carried out over the Zeke Claim Group during the latter part of August, 1973.

The field work was carried out by Bernard Moraal under the supervision of the writer. The number of line miles completed was about 10 and the number of samples picked up was 502.

The survey covered the same area as that of the previous magnetometer and VLF-EM survey.

The object of the survey was to locate potential areas of copper - gold mineralization, particularly similar to the old Allies showing occurring to the immediate south of the property, where the mineralization is copper, gold, and lead. A soil geochemistry survey was carried out over the Allies property (now held by Bon-Val Mines Ltd.) and the samples tested for gold and copper. The gold anomalies correlated with the copper anomalies. Therefore, it was felt to be adequate to test the

samples taken on the Zeke Group only for copper.

This report is a supplement to one on the property written previously by the writer on a magnetometer and VLF-EM survey. In that report the location, access, ownership, claim description, history of previous work, physiography, and geology are given.

#### SURVEY PROCEDURE

The samples were taken at 100-foot intervals on the survey lines previously established for the magnetometer and VLF-EM survey. The samples were dug out with a mattock at an 8-inch depth and placed in brown, wet-strength paper bags with grid co-ordinates marked thereon.

#### TESTING PROCEDURE

All samples were tested by Acme Analytical Laboratories Ltd. of Burnaby, B.C. The sample is first thoroughly dried and then sifted through an -80 mesh screen. A measured amount of the sifted material is then put into a test tube with subsequent measured additions of a solution of perchloric and nitric acid. This mixture is next heated for a certain length of time. The parts per million (ppm) copper is then measured by atomic absorption.

#### TREATMENT OF DATA

The values in ppm copper were first grouped into a logarithmic interval of 0.05. The cumulative frequency

for each interval was then calculated and then plotted against the correlating interval to obtain the logarithmic cumulative frequency graph as shown on Figure 5.

The coefficient of deviation, indicative of the range or spread of values was calculated to be 0.09, a low figure. Therefore, the spread of values is very narrow.

The graph shows the mean background value to be about 17 ppm taken at the 50% level. The sub-anomalous threshold value ( a term used by the writer to denote the minimum value that is not considered anomalous but still important as an indicator of mineralization) is taken at one standard deviation from the mean background which is at the 17% level and is in this case 21 ppm. The anomalous threshold value is two standard deviations away at the 2½% level and is on this property 26 ppm.

The data was plotted on Sheet no. 1 at a scale of 1" to 400 feet. The data was then contoured at 20 ppm and 25 ppm. The 20 ppm sub-anomalous threshold contour was dashed in whereas the 25 ppm anomalous contour was drawn in solid.

#### DISCUSSION OF RESULTS

As can be seen on sheet 3, the results are quite low with a very narrow spread. The lowest value is 7 ppm and the highest, 35 ppm.

4.

The anomalies are spotty and mainly consist of 1 or 2 values. Two anomalies located at (L-24SW, 6NW) and (L-4NE, 14SE) correlate with VLF-EM highs.

The largest anomaly centered at (L-4NE, 6NW) correlates with a magnetic low and a VLF-EM high. Therefore copper sulphides very possibly occur at this location. However, the low soil geochemistry values suggest that any occurrence is minor and the size of the anomaly limits any further interest.

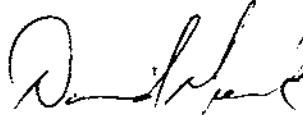
#### CONCLUSIONS AND RECOMMENDATIONS

The soil geochemistry survey failed to locate any areas of potential economic copper - gold mineralization.

Therefore, no further work is recommended.

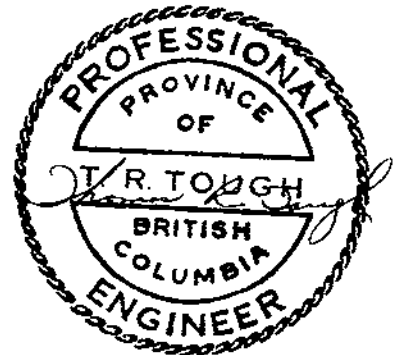
Respectfully submitted,

GEOTRONICS SURVEYS LTD.



David G. Mark  
Geophysicist

December 8, 1973



SELECTED BIBLIOGRAPHY

Aeromagnetic Map, Tranquille River, British Columbia,  
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Carr, J.M., Deposits Associated with the Eastern Part  
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Annual Report of the Minister of Mines of  
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Cockfield, W.E. Geology and Mineral Deposits of the  
Nicola Map-Area, British Columbia, Geol. Surv.  
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Mathews, W.H. Geology of the Iron Mask Batholith;  
unpublished thesis for the degree of Master of  
Science, University of British Columbia, about 1942.

Preto, V.A.G. Geology of the Eastern Part of the Iron  
Mask Batholith, Report of the Minister of Mines  
and Petroleum Resources, 1967.

RESUME OF EDUCATION AND FIELD EXPERIENCE OF  
BERNARD MORAAL

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Education:

- Graduated with equivalent of Grade 12 from Atenas Academy, Chillan, Chile.
- Post-Graduate courses in cabinet-making and tourism.

Experience:

1972 to Present - Crew chief for Geotronics Surveys Ltd. Experience includes staking, linecutting, soil sampling, magnetometer, VLF-EM, vertical loop EM, shootback EM, self-potential, and induced polarization surveys.

1970 - One month of navigating on aero-photographic surveys for Department of Transportation, Chile.



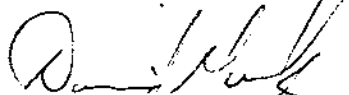
GEOPHYSICIST'S CERTIFICATE

I, David G. Mark, of the City of Vancouver,  
in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics  
Surveys Ltd., with offices at 514 - 602 West Hastings  
Street, Vancouver, B.C.

I further certify that:

1. I am a graduate of the University of British  
Columbia (1968) and hold a B.Sc. degree in  
Geophysics.
2. I have been practicing in my profession for the  
past five years and have been active in the mining  
industry for the past eight years.
3. I am an associate member of the Society of  
Exploration Geophysicists and a member of the  
European Association of Exploration Geo-  
physicists.
4. This report is compiled from data obtained from  
a soil geochemistry survey supervised by myself  
and carried out by Bernard Moraal, during  
August, 1973 on the Zeke Claim Group, and from  
pertinent data, published maps and reports as  
listed under Selected Bibliography.
5. I have no direct or indirect interest in the  
properties or securities of T & C Management Ltd.,  
Vancouver, B.C. nor do I expect to receive any  
interest therein.



David G. Mark  
Geophysicist

December 12, 1973

ENGINEER'S CERTIFICATE

I, Thomas R. Tough, of the City of Vancouver,  
in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and an associate  
with T.R. Tough & Associates Ltd., with offices at  
519 - 602 West Hastings Street, Vancouver, B.C.

I further certify that:

1. I am a graduate of the University of British  
Columbia (1965) and hold a B.Sc. degree in  
Geology.
2. I have been practicing in my profession for the  
past eight years and have been active in the  
mining industry for the past fifteen years.
3. I am registered with the Association of Pro-  
fessional Engineers of British Columbia.
4. I have studied the accompanying report dated  
December, 1973, on a soil geochemistry survey  
submitted by Geotronics Surveys Ltd., written by  
David G. Mark, Geophysicist, and concur with  
findings therein.
5. I have no direct or indirect interest whatsoever  
in the property described herein, nor the  
securities of T & C Management Ltd. and do not  
expect to receive any interest thereon.

*Thomas R. Tough*  
Thomas R. Tough, P. Eng.  
Consulting Geologist

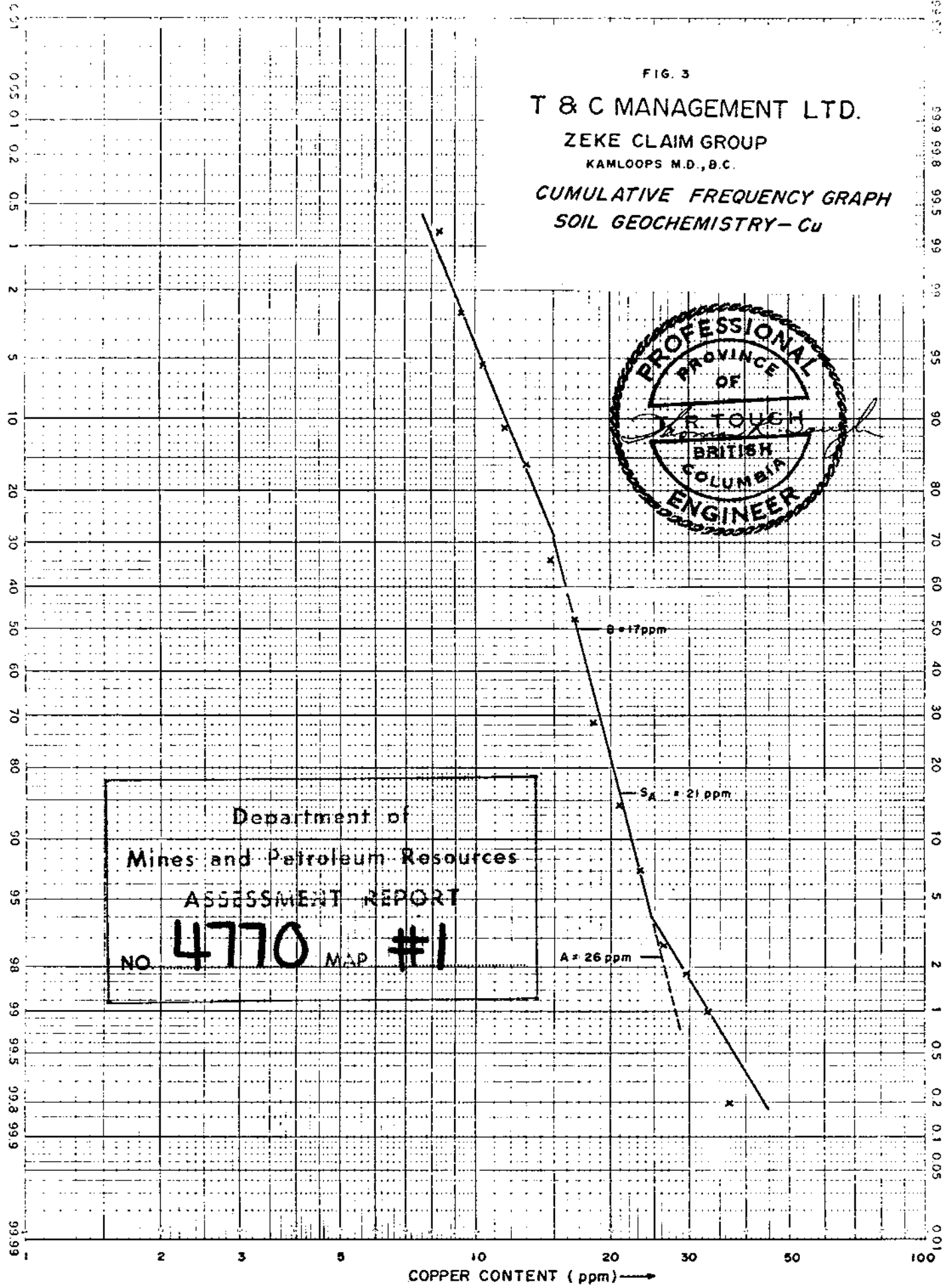
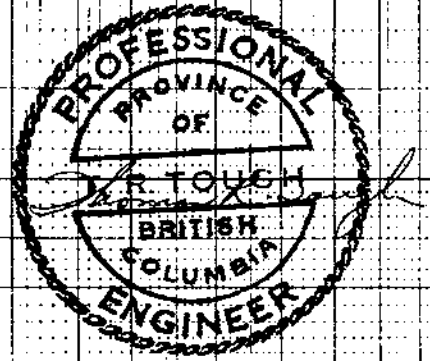


December 12, 1973

FIG. 3

T & C MANAGEMENT LTD.  
ZEKE CLAIM GROUP  
KAMLOOPS M.D., B.C.

CUMULATIVE FREQUENCY GRAPH  
SOIL GEOCHEMISTRY - Cu



Department of  
Mines and Petroleum Resources  
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NO. **4770** MAP **#1**

COPPER CONTENT (ppm) →

COST BREAKDOWN  
SOIL GEOCHEMISTRY SURVEY  
ZEKE CLAIM GROUP  
ANDRUS LAKE AREA, KAMLOOPS M.D., B.C.

Field

Geochemical field technician, B. Moraal - 14 days @ \$85/day	\$1,190.00
4-wheel drive rental 14 days @ \$30/day	420.00
Survey supplies	200.00

Lab

502 samples for analysis @ \$1.50/sample	753.00
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Office

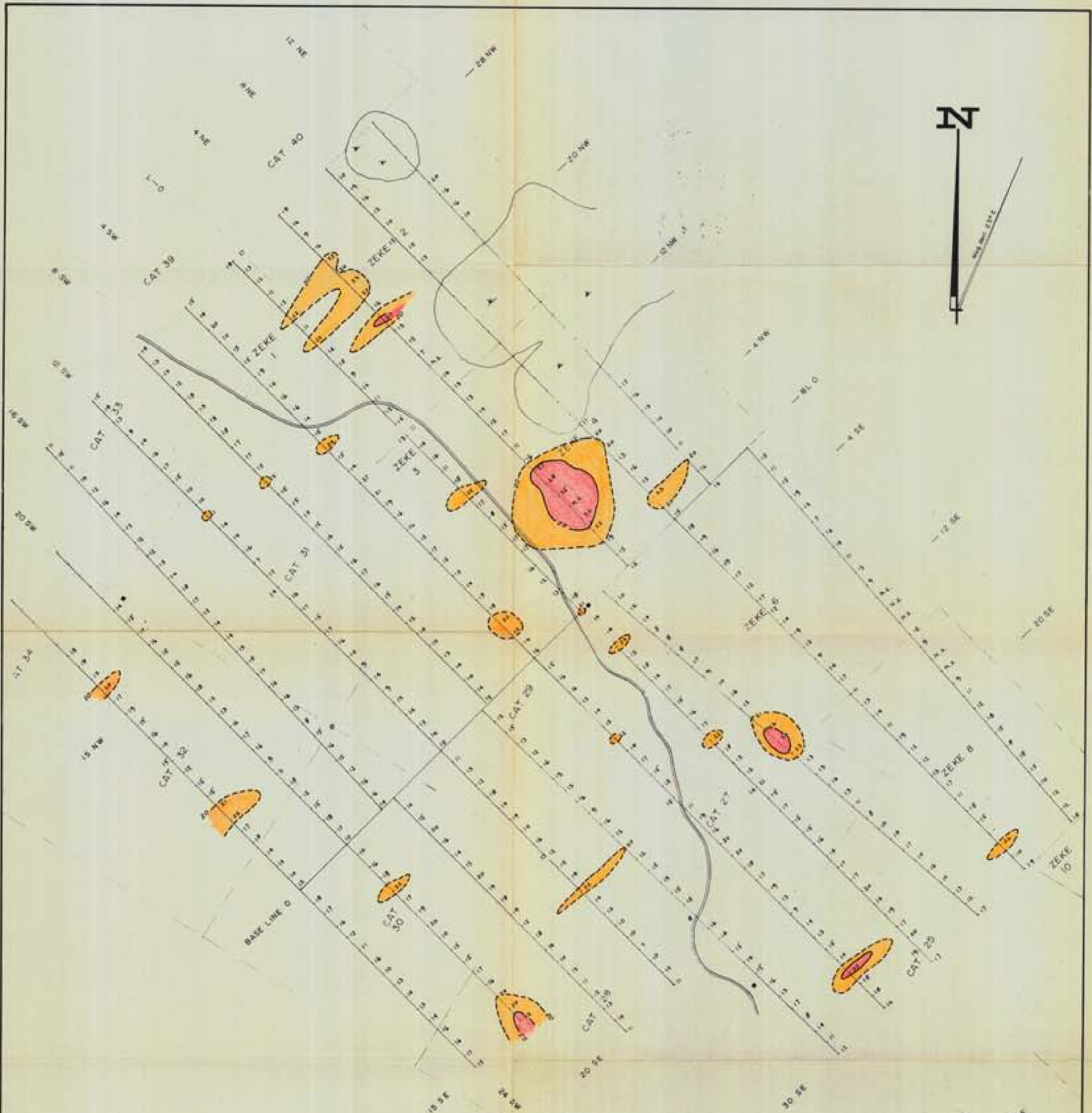
Compilation of data, mapping, report	400.00
Engineering fees	300.00

TOTAL	<u>\$3,263.00</u>
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Declared before me at the *City*  
of *Vancouver*, in the  
Province of British Columbia, this *14th*  
day of *December*, 1973, A.D.



*J. Mansfield* Sub-mining Recorder  
A Commissioner for taking Affidavits within British C  
A Notary Public in and for the Province of British C



**LEGEND**

- Survey line
- Claim line
- □ Claim post (located, assumed)
- Road
- Creeks
- ▲ Swamp

NOTE: ALL READINGS ARE IN ppm

**CONTOURS:**

- 20ppm (SUB-ANOMALOUS)
- 25ppm (ANOMALOUS)

**PARAMETERS:**

- NEAR BACKGROUND — 17 ppm
- SUB-ANOMALOUS THRESHOLD — 21 ppm
- ANOMALOUS THRESHOLD — 25 ppm



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO 4770 MAP #2

TO ACCOMPANY REPORT BY DAVID S. WARR, GEOPHYSICIST

GEOTRONICS SURVEYS LTD

T & C MANAGEMENT LTD.

"ZEKE CLAIM GROUP"  
KAMLOOPS M.D., B.C.

SOIL GEOCHEMISTRY - COPPER  
DATA & CONTOURS

PET DRAFTING SERVICES	SCALE 1" = 400'	DATE FEB '75	JOB NO TS-25	SHEET 3
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4770-M2