

6422

ASSESSMENT REPORT ON TANZILLA PROPERTY

(TAN AND ZILLA MINERAL CLAIMS)

LIARD M. D.

LAT. $58^{\circ}18'$ N, LONG. $130^{\circ}23'$ W

Geophysical Surveys - I.P. & Magnetometer

Period : June 6 to August 30, 1977

OPERATOR : Falconbridge Nickel Mines Limited

N.T.S. 104-J-8-W

MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

NO. _____

Vancouver, B. C.

September 27, 1977

J. Wilson

J. J. McDougall

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Explorations Limited

MAPS

Figure 1	Location map)	
Figure 2	Magnetometer Survey)	In Back
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TANZILLA PROPERTY

INTRODUCTION

The Tanzilla property consists of 2 mineral claims - the Tan and Zilla. Each claim is composed of 12 units. The present assessment report covers geophysical work carried out during June 6 to 14, 1977.

Mertens MacNeil Geophysical Ground Surveys conducted the Induced Polarization (I.P.) work from June 6 to 8, 1977.

Presunka Geophysical Explorations Limited carried out the Magnetometer Survey during June 12 to 14, 1977.

J. Wilson, as project geologist, supervised the program from June 2 to Aug. 30, 1977. J. J. McDougall provided senior supervision on the property.

Appendix A itemizes work distribution and costs.

LOCATION AND ACCESS Fig. 1

The Tanzilla property is located at Lat. $58^{\circ}18' N$, Long. $130^{\circ}23' W$. It is approximately 3 miles south of the junction of the Tanzilla River and Irsillitu Creek. The N.T.S. reference is 104-J-8.

The property is reached by an 18 mile helicopter flight from Dease Lake airport.

RELIEF

The property occupies a plateau area with elevations ranging from 3500 to 4500 feet. Steep escarpments northwest from the property plunge into the Tanzilla River valley (2200 feet elevation).

GENERAL GEOLOGY

The property is underlain by fine to coarse grained Triassic tuffs of mainly andesitic composition.

In places, the tuffs appear dacitic. Small Diorite and quartz diorite outcrops (fine to medium grained) occur irregularly throughout the area. Pyrite and magnetite are distributed unevenly. Disseminated magnetite occurs in both volcanics and intrusives from minor amounts to 5%. Up to 5% disseminated pyrite occurs in tuffs. Minor chalcopyrite occurs in carbonate shears in the tuffs.

SCOPE AND METHOD OF PRESENT INVESTIGATION

The object of the present study was to test a region where magnetic and geochemical anomalies were known but outcrop distribution was poor.

A grid base line was started by compass and was continued by picket alignment. Cross lines at 600 foot intervals were then established along the base line. In this manner 2400 feet of base line and 24,000 feet of cross line was established.

METHODS OF GEOPHYSICAL SURVEYS

MAGNETOMETER SURVEY

Scintrex MF, Magnetometer.

This is a fluxgate magnetometer with I.C. circuitry and temperature compensation of less than one gamma / °C over the range -40°C to + 40°C. It has a full terrestrial range of 0 - 100,000 gammas and an orientation independent internal sensor and an accuracy of ±0.5%. Base stations were established along the base line for diurnal control and readings were taken at 50 foot intervals along the cross lines and base line.

INDUCED POLARIZATION SURVEY - the following explanation is from the manual accompanying the instrument.

(McPhar P. 660 - PV₁) (Array Dipole - Dipole Unit)

Principle of operation - Induced Polarization (I.P.) refers to the blocking action or polarization of metallic or electronic conductors in a medium of ionic solution conduction.

This electro - chemical phenomenon occurs whenever electrical current is passed through an area which contains metallic minerals. The induced polarization effect takes place at those interfaces where the mode of conduction changes from ionic in the solutions filling the interstices of the rock to electronic in the metallic minerals present in the rock.

The blocking action or induced polarization, which depends upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic surface, increases with the time that a d.c. current is allowed to flow through the rock. Eventually there is enough polarization in the form of excess ions at the interfaces, to appreciably reduce the amount of current flow through the metallic particle.

When the d.c. voltage used to create this d.c. current flow is cut off, the Coulomb forces between the charged ions forming the polarization cause them to return to their normal position. This movement of charge creates a small current flow which can be measured on the surface of the ground as a decaying potential difference.

The I.P. measurement is basically obtained by measuring the difference in potential or voltage obtained at two operating frequencies. The voltage is the product of the current through the ground and the apparent resistivity of the ground.

In the field, current is applied to the ground at two points distance (x) apart. The potentials are measured at two other points (x) feet apart. At the tanzilla property, measurements were made along the cross lines using a 300 foot spread and frequencies of 0.3 and 5.0 Hz.

RESULTS OF GEOPHYSICAL SURVEYS

The magnetometer survey (Fig. 2) reveals an overall alignment that coincides with bedding, schistosity, and gross topographic trends.

The most impressive feature is a strong magnetic peak on the southern part of Line 6-E. This was found to be caused by a small peridotite body.

The I.P. Survey (Fig. 3) located a continuous moderate anomaly that extended across the grid :

Line 0	9 - 12N
Line 6E	9 - 12N
Line 12E	7 - 10N
Line 18E	6 - 12N
Line 24E	6 - 9N

The anomalous band coincided with a swampy depression and the nature of the mineralization was not discovered.

Two less extensive anomalous areas were discovered :

Line 6E	0 - 3N
Line 24E	15 - 18S

The reason for these anomalies also was not determined.

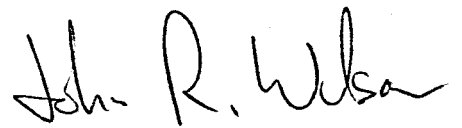
CONCLUSIONS

The magnetometer survey confirmed the east - west trend of the underlying stratigraphy. In addition, it led to the discovery of a highly magnetic peridotite body.

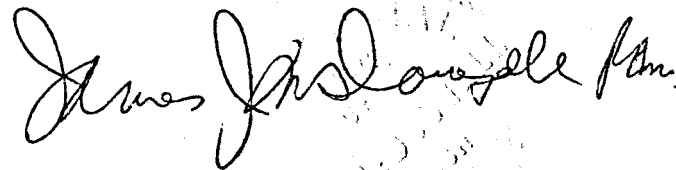
The I.P. survey produced only one extensive anomaly

but it coincided with a swampy depression and no explanation for the anomaly could be found. However, the anomaly may be caused by disseminated pyrite and/or magnetite as patches of such mineralization to 5% are found nearby. The weak magnetic response here suggests that non-magnetic minerals are causing the anomaly.

J.R. Wilson



J.J. McDougall



Vancouver, B.C.

September 29, 1977

APPENDICES

APPENDIX A

Statement of Expenditures

Tanzilla group

I. P. Survey June 6 - 8, 1977

26,400 Ft. of line

3 days J. MacNeil and Helper 3 X \$190 570

Geophysical Operators

3 days board - 2 men 6 X \$12.50 75

5.2 hrs. Hc. @ \$260 5.2 X \$260 1352

1997

Magnetometer Survey June 12 - 14, 1977

26,400 ft. of line - readings every
50 feet

3 days S. Presunka 3 X \$150 450.00

Geophysical Operator

3 days board - 1 man 3 X \$12.50 37.50

4.8 Hrs. Hc @ \$260 4.8 X \$260 1248.00

1735.50

Total Expenditures I. P. and Mag. Surveys 3732.50

need 2 X 12 X 100 2400.00



FALCONBRIDGE NICKEL MINES LIMITED

1112 West Pender Street, Vancouver, B.C. Canada
V6E 2S1
Telephone (604) 682-6242

Suite 700
Telex 04-53245

September 29, 1977

The Mining Recorder,
Liard Mining Division,
Victoria, B.C.

Dear Sirs,

This is to certify that the Induced Polarization (I.P.) geophysical work claimed in this assessment report was completed by J. MacNeill of Toronto, a partner in the private firm of Mertens MacNeil, recognized geophysical operators.

The magnetometer survey was carried out by S. Presunka of Presunka Geophysical Explorations Limited of Vancouver, a geophysical operator well known to the Falconbridge organization for over twenty years.

The field work reported in this assessment report was supervised by Mr. John R. Wilson, B.Sc. (Geol.) a graduate of the University of British Columbia, Vancouver.

I, J.J. McDougall P. Eng., am a graduate of the University of British Columbia and a member in good standing of the Association of Professional Engineers of B.C.

Yours truly,

J.J. McDougall, P.Eng.

[Faint, illegible handwritten notes or stamps in the bottom right corner]

BRITISH COLUMBIA MINING RECEIPT

Mining Division Lisad

Issued at Vancouver B.C.

No 116512 E

Date Sept 7, 19 27

RECEIVED from Halcombe Nickel Mines Limited

the sum of Two Hundred & fifty ⁰⁰/₁₀₀ Dollars,

in payment of recording Tonzill Group (3 claims)
plus 1 yr work to apply to each of
Ton, Zilla claims (total 24 units)

(Credit: Ton \$700, Zilla \$600)

\$ 250⁰⁰

Signature A. J. ...

Office Sub-mining Recorder

JUN 20 1977

Mertens MacNeill

Geophysical Ground Surveys

23 MEADOW CRESCENT,

GUELPH, ONTARIO.

PH. 519-821-9177

PH. 902-622-2930

JUNE 6, 1977

MR. PAUL A. SMITH,
FALCON BRIDGE NECKEL,
P.O. Box 10, COMMERCE W.,
TORONTO CANADA, M5L 1B4

WE ARE SUBMITTING THE FOLLOWING INVOICE FOR SURVEY
NOW IN PROGRESS BY TWO GEOPHYSICAL TECHNICIANS IN THE DEASE LAKE
ARE OF BRITISH COLUMBIA. THIS COVERS THE PERIOD FROM MAY 26 TO AND
INCLUDING JUNE 9, 1977.

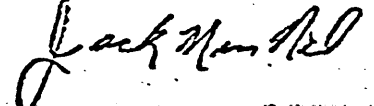
CHARGES:

OPERATING	13 DAYS @ 170 PER DAY	\$ 2470
TRAVEL	2 DAYS @ 175 PER DAY	350
	TOTAL	\$ 2820

THANK YOU,

YOURS TRULY,

JACK MAC NEEL



STATEMENT

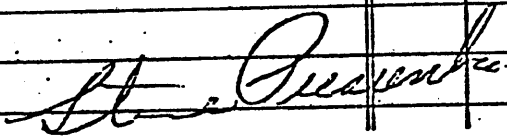
July 12

1977

At Presunla Geophysical Explorations Ltd,
232 Pambina St.
New Westminster B.C.

In Account With Westrob Minas LTD.
700 - 1112 West Pender St.
Vancouver B.C.

TERMS:

		Geophysical exploration of		
		Letaia creek area - B.C.		
		Magnometers, E.M-66 and Horizontal		
		loop survey.		
		22 days @ \$250 ⁰⁰	\$	5500. ⁰⁰
				



DEPARTMENT OF MINES AND PETROLEUM RESOURCES

FORM B (Section 51) MINERAL ACT

Sept 29/77
SUB-MINING RECORDER RECEIVED
SEP 7 1977
M.R.# \$
VANCOUVER, B.C.

Affidavit on Application to Record Work

1. I, D.H. BROWN
700-1112 West Pender St.,
Vancouver, B.C. V6E 2S1
Free Miner's Certificate No. 153302
Date issued December 29, 1976

Agent for Falconbridge Nickel Mines Limited
700-1112 West Pender St.,
Vancouver, B.C. V6E 2S1
Free Miner's Certificate No. 155515
Date issued December 9, 1976

MAKE OATH AND SAY:

2. I have done, or caused to be done, work on the TAN, ZILLA Mineral Claim(s)

Record No.(s) 201(9), 202(9)
Situate at 58°18'N., 130°23'W. in the Liard Mining Division,
to the value of at least 3732 dollars. Work was done from the 6th day
of June 19 77 to the 14th day of June 19 77

3. The following is a detailed statement of such work done in the 12 months in which such work is required to be done.

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, BELOW)

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by regulations)

Table with columns for details and COST. Includes a TOTAL row at the bottom.

I wish to apply \$ of this work to the claims listed below.
(State number of years to be applied to each claim and its month of record)

B. DRILLING

(Details as per report submitted)

COST

I wish to apply \$_____ of this work to the claims listed below.
 (State number of years to be applied to each claim and its month of record)

C. PROSPECTING

(Details as per report submitted)

COST

I wish to apply \$_____ of this work to the claims listed below.
 (State number of years to be applied to each claim and its month of record)

D. GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL (Includes line cutting)
 1977 (State type of work)

			COST
Jun. 6-8	J. McNeil & M. Lunn (Geophy. ops.)	3 da. @ \$190	570.00
	Board for above	2 x 3 " @ 12.50	75.00
	5.2 hrs. Helicopter support	5.2 x 260.00	1,352.00
Jun. 12-14	S. Presunka (Mag. Oper.)	3 da. @ \$150	450.00
	Board for above	3 da. @ \$12.50	37.50
	4.8 hrs. Helicopter support	4.8 x 260.00	1,248.00
TOTAL			\$3,732.50

I wish to apply \$ 2,400 of this work to the claims listed below.
 (State number of years to be applied to each claim and its month of record)

1 yr. each to 12 units	TAN 201(9)	1,200.00
1 yr. each to 12 units	ZILLA 202(9)	1,200.00
		<u>\$2,400.00</u>

We hereby claim credit for an additional \$1,300.00 to be applied to these claims in 1978 if needed. *(Credit TAN 700 Zilla 600 1300)*

Assessment report to be submitted within 3 weeks.

NOTE—Dollar value of work done under A, B, C, or D sections, totalling \$200, may be applied as one year's work.

Who paid for the above-described work?

Name Wesfrob Mines Limited

Address 700-1112 West Pender St.,

Vancouver, B.C. V6E 2S1

If you intend to claim a refund of cash in lieu under the provisions of the *Mineral Act*, you must make application on this affidavit under A, B, C, or D sections as applicable.

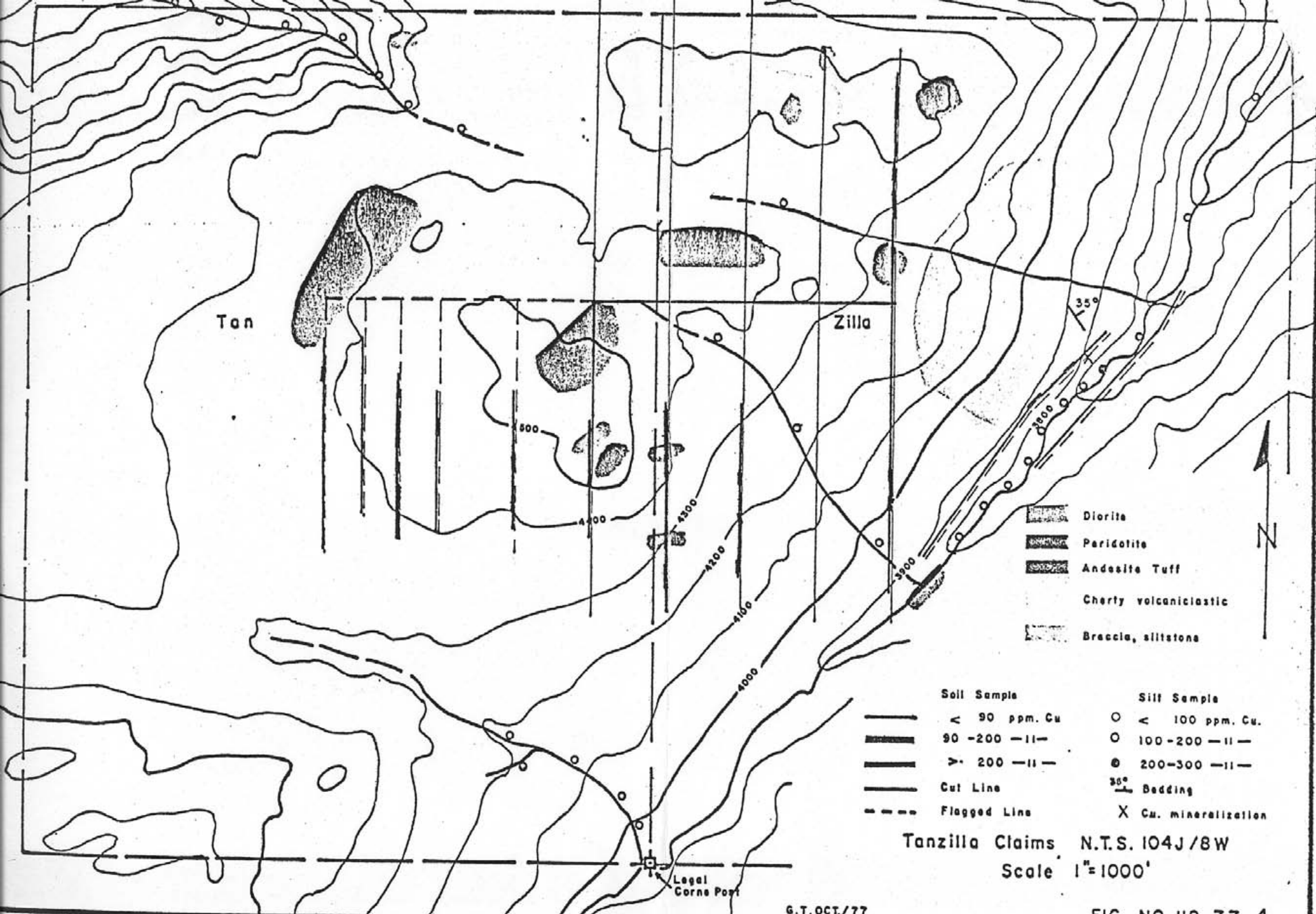
4. That I have not and will not use the work declared herein in any way for the purposes of obtaining tax exemption on a Crown-granted mineral claim under the terms of the *Mineral Land Tax Act*.

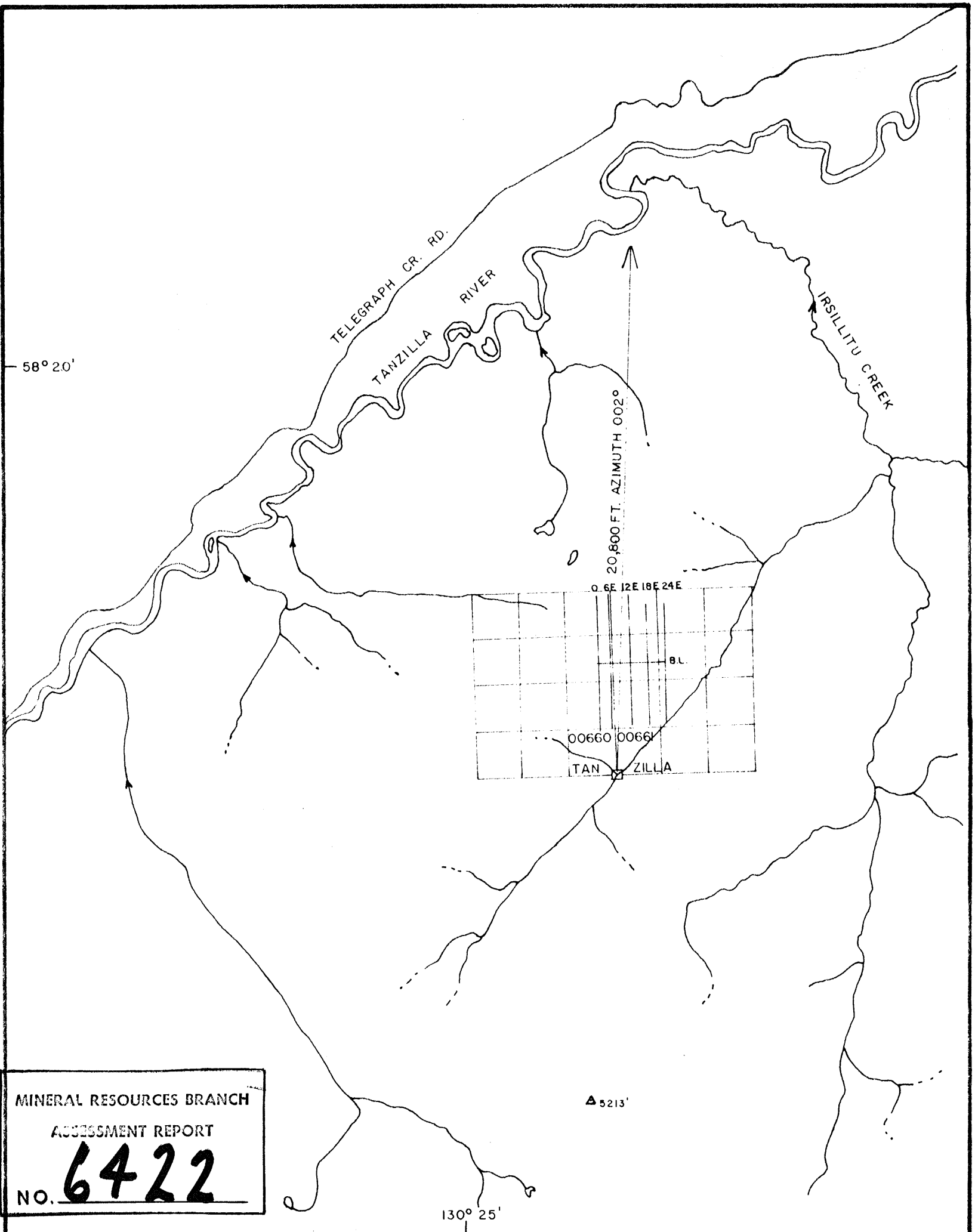
SWORN and subscribed to at _____

this _____ day of _____

19____, before me—

D.H. Brown



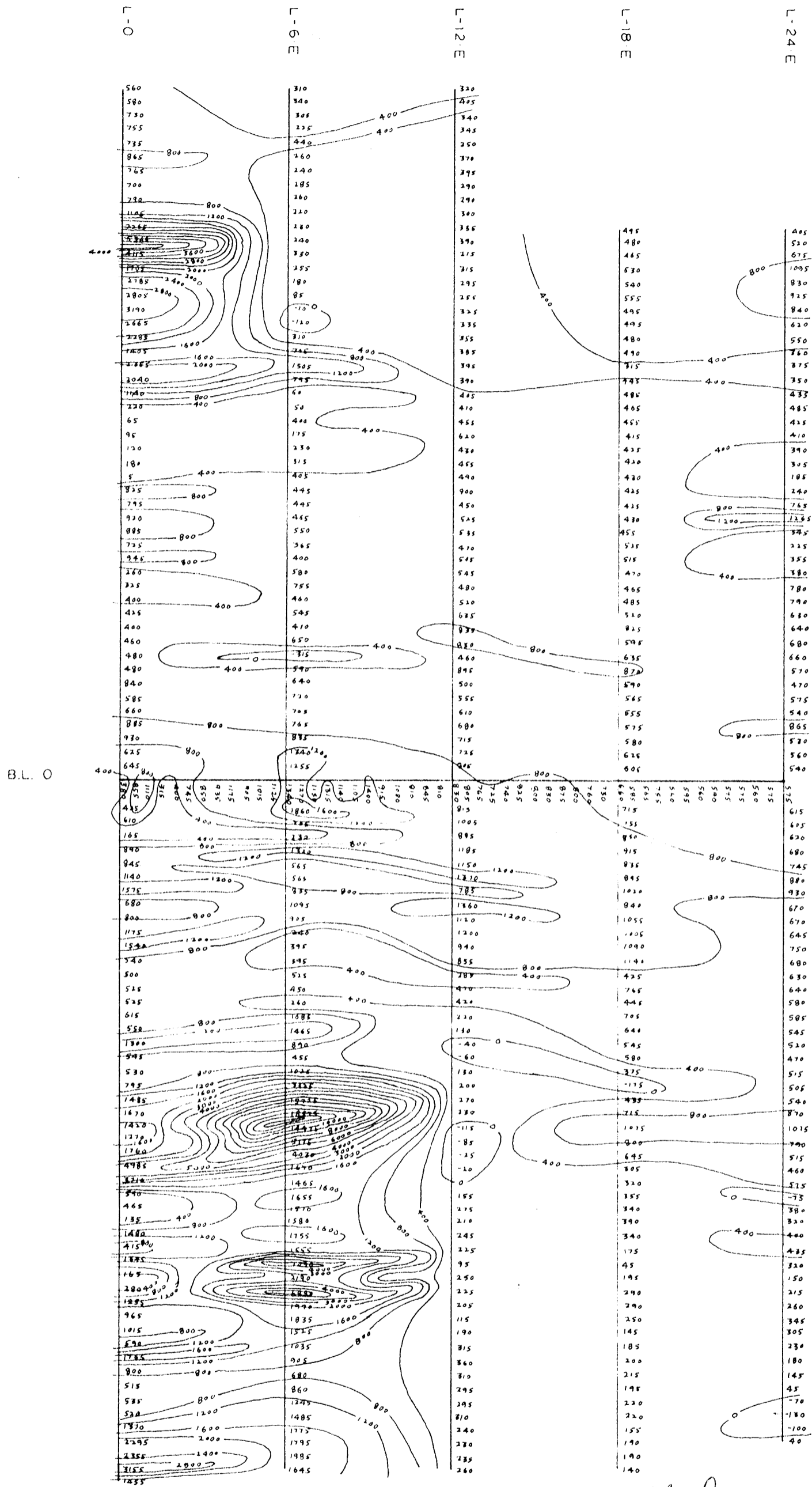


MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 No. **6422**

TAN 00660	ZILLA 00661
T. W. JANES	T. W. JANES
143461	143461
FALCONBRIDGE	FALCONBRIDGE
93229	93229
AUG. 31, 1976	AUG. 31, 1976
5:30 p.m.	9:00 A.m
SEPT. 1, 1976	AUG. 31, 1976
3:30 p.m.	5:30 p.m.
N. 4 - W. 3.	N. 4 - E. 3.

FALCONBRIDGE NICKEL MINES LIMITED	
PROPERTY:	TANZILLA CLAIM GROUP
LOCATION:	Tanzilla River Area Liard Mining Div. B.C.
DATE OF WORK:	Summer 1977
SCALE:	1:50,000
DATE: September 23, 1977	N.T.S. 104-J-8
	FIG. 1

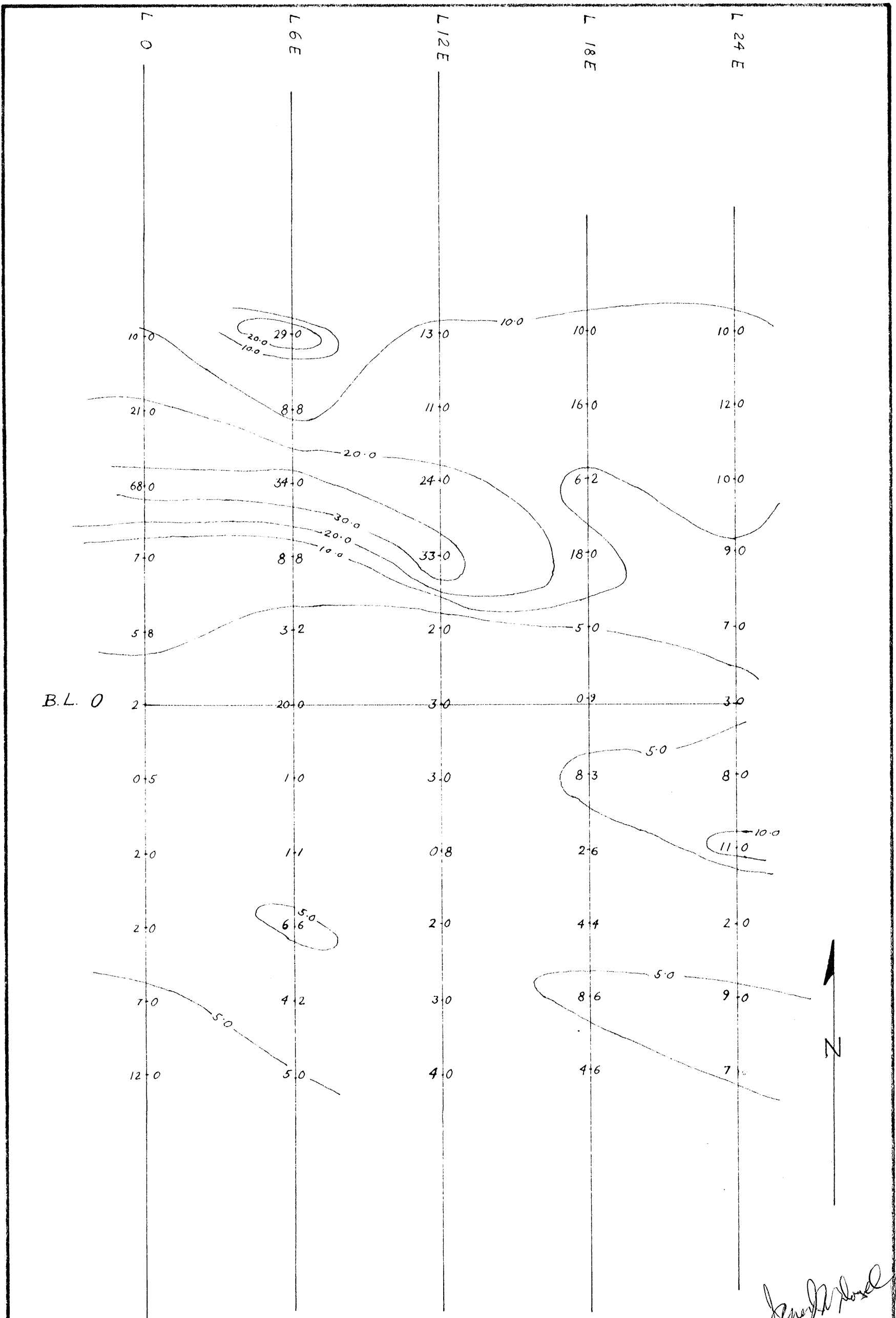
Jan M. Doyl



B.L. 0

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 NO. **6422**

J. M. Royal
 FALCONBRIDGE NICKEL MINES LTD.
 TANZILLA GROUP
 DEASE LAKE AREA B.C.
 MAGNETOMETER SURVEY
 INST. FLUXGATE MF-1
 MAGNETIC CONTOURS — 400 —
 CONTOUR INTERVAL 400 gammas
 SCALE: 1 in. = 400 ft. JULY 1977
 S. PRESUNKA



MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 NO. **6422**

FALCONBRIDGE NICKEL MINES LIMITED	
PROPERTY Tanzilla Group Dease Lake Area B.C.	
TYPE OF MAP I.P. Survey (Metal Factor Plot)	
Array Dipole - Dipole Unit P.660 - PV ₁	
Frequencies 0.3 + 5 HZ. Spread 91.44 m. Depth 91.44 m	
DATE July 6-8 1977	SCALE: 1" = 121.92 m
DATE Sept. 23-1977	N.T.S: 104J-8
	FIG. 3