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Consulting Geological Engineer

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3464 MAP

GEOPHYSICAL AND GEOCHEMICAL REPORT

ON THE T GROUP OF CLAIMS

SITUATED

IN THE OMINECA MINING DIVISION

ON BEHALF OF

ARDO MINES LIMITED (N.P.L.)

BY

S. VENKATARAMANI, M.Sc., P.Eng.

JANUARY 1972

3464

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TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
PROPERTY	1
LOCATION	2
TOPOGRAPHY AND VEGETATION	2
GEOLOGY	2
WORK PERFORMED	3
MAGNETOMETER SURVEY	3
GEOCHEMICAL SURVEY	5
CONCLUSIONS AND RECOMMENDATIONS	6
CERTIFICATE	8
MAPS:	<u>Scale</u>
1 Claim Map (in text)	1 inch = 3000 feet
2 Magnetometer Map (in envelope)	1 inch = 400 feet
3 Geochemical Map (in envelope)	1 inch = 400 feet

INTRODUCTION

Ardo Mines Limited (N.P.L.) owns a substantial group of claims in the Omineca Mining Division in the vicinity of Terrace, British Columbia. A great deal of exploratory work has been carried out on this property for the past five years and the results to date are quite favourable.

The summer of 1971, detailed magnetometer and geochemical surveys have been carried out and the results are discussed in this report.

PROPERTY

The property consists of some 40 contiguously located mineral claims situated in the Omineca Mining Division, Province of British Columbia.

This group of claims consists of the following mineral claims:

<u>Claims</u>	<u>Record Numbers</u>
T 3 to 8 inclusive	45966 to 45971
T 13 to 20 inclusive	51163 to 51170
T 25	51191
T 27 to 33 inclusive	51193 to 51199
T 39 and 40	51205 and 51206
T 41 and 42	50965 and 50966
T 43	51207
Ex No. 1	59064
Dor 1 and 2	63526 and 63527

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LOCATION

This group occupies the area of the confluence of the Zymoetz and Clore Rivers. Access is available from Terrace by means of graded gravel road constructed and maintained by Columbia Cellulose Limited. The town of Terrace is serviced by C.P. Air and by Highway No. 16 making connections with the major centres of British Columbia. Various logging roads traverse the area so that vehicular traffic is practical to most parts of the property.

TOPOGRAPHY AND VEGETATION

The majority of the property lies between 1,000 to 2,500 feet above sea level in elevation. The ground surface presented is that of roughly rolling glaciated mountain topography. Locally slopes of 100 percent in grade are common with the average grade of the order of 60 percent. In general the area is heavily forested with commercial fir and cedar and with minor poplar on the lower ground. In the year of 1969 and 1970 a great deal of logging had been carried out on this property which presents frequent open areas.

GEOLOGY

The area of the claim group is entirely underlain by Mesozoic rocks of the Middle and possibly Lower Jurassic formation, in particular, the Hazelton Group. The observed rocks on the property consist primarily of volcanic lavas, i.e., andesites, basalts and rhyolites. These volcanic rocks are made up of sequential lava flows with intercalated beds of

. 3

sediments of volcanic derivations, that is, andesite lavas, autobreccias, tuffs and minor rhyolites. The lavas are predominantly red to purple in colour due to hematitic staining resulting from late stage fumarolic action. The rocks are frequently vesicular with fillings of epidote, calcite and quartz.

Two main directions of jointing are prevalent on the property, the main set of joints strike east-northeast with steep southerly dip of 70 to 80 degrees. The second set of joints strike northwest-southeast with a westerly dip of 50 to degrees. In general the lava flows strike north-northeast with easterly dips of 30 to 40 degrees.

WORK PERFORMED

In the year 1970 and 1971, Ardo Mines Limited (N.P.L.) carried out exploration work on this property which mainly consists of bulldozer trenching, magnetometer and geochemical surveys.

In the summer of 1971 about 16 miles of lines were cut on this property and geochemical and magnetometer surveys were conducted on the grid lines.

MAGNETOMETER SURVEY

A magnetometer survey using a fluxgate MF-1 magnetometer was carried out on this property. The results obtained by the survey are plotted on the accompanying map, contoured and submitted to Mr. Peter Fominoff, geophysicist of Seigel Associates Limited for interpretation and his comments are as follows:

"Vertical component magnetic field intensities were recorded at

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100 foot intervals along a grid consisting of 13 lines ranging in length from 4100 to 7500 feet and spaced 500 feet apart. The lines were oriented north-south. A Scintrex MF-1 fluxgate magnetometer was employed to survey a total of 14.8 line miles.

The magnetic survey data has been contoured with a 100 gamma contour interval. The base map scale is 1 inch = 400 feet. The magnetic grain is seen to be predominantly east-west. However, the magnetic grain is probably accentuated to the east-west by the relatively wide line spacing employed as compared to the station interval. It is possible that some base leveling problems with the magnetometer data might have introduced some trends parallel to and perpendicular to the grid lines.

The total magnetic relief is about 2100 gammas. The magnetically most active area is in the northeastern quadrant of the grid. Narrow, sharp peaks some reaching 2000 gammas are common over this quadrant. There appears to be a north-south trending contact over the central portion of the grid between rocks of moderate magnetic susceptibility to the west and higher magnetic susceptibility to the east.

The eastern portion of the southeast quadrant of the grid shows much lower magnetic susceptibilities than the northern extension of the same area. This might be due to increasing overburden cover or due to more acidic rock type.

The lowest magnetic susceptibilities are seen to occur between Lines 20 + 00 E and 30 + 00 E north of the base line. This area lies between the higher magnetic susceptibilities to the

east and moderate magnetic susceptibilities to the west. This area may be an alteration zone and is considered to be a favourable area for further investigations.

The high magnetic activity resulting in many sharp peaks over the grid area is consistent with the known geology which is primarily a variety of lava flows ranging from rhyolites to basalts. Some of the magnetic lineations are consistent with the main set of joints found on the property which strike east-northeast and have a steep southerly dip.

The source of the steep magnetic gradient along the eastern half of the base line should be investigated. The source may be either a fault, a contact or possibly problems in leveling the magnetic data to a common base. From the present data the two main areas warranting further investigations are the area of decreased magnetic susceptibilities between Lines 20 + 00 E and 30 + 00 E and near the apparent north-southerly trending contact between the areas of high magnetic activity and moderate magnetic activity."

GEOCHEMICAL SURVEY

A geochemical survey for copper was carried out on the previously cut grid lines on this property to outline any anomalous zones if any are present in this property. Geochemical samples were taken at 200 foot intervals along the grid lines. Specimens were extracted by means of a stainless steel auger at a depth of approximately one foot. In all cases an attempt was made to sample the "B" horizon, that is the soil immediately

. 6

below the humus layer so that the erratic effects attributed to concentration of metallic ions by humus and vegetable material may be avoided. Individula samples were placed in heavy manila envelopes, labeled and dispatched to chemical laboratories in Vancouver. The samples were air dried, screened and subjected to hot acid extraction. The extracted samples were then analyzed by means of atomic absorption and the results are expressed as parts per million copper. The analytical values thus obtained are plotted on the accompanying map.

The copper values expressed within this grid system is fairly uniform. The background would be 40 ppm with treshold of 80 ppm. Values up to 5 - 6 times above the background were indicated. On the northwestern part of the property fairly large size anomalous zones were indicated with the values of 5 times above the normal background. This area is considerable in size and interestingly it coincides with the known mineralized outcrop in this area.

The topography at this anomalous area is rather flat and the anomaly could not be attributed for any migrating effects.

CONCLUSIONS AND RECOMMENDATIONS

The geochemical survey and the magnetometer survey have revealed distinct anomalous areas which are very encouraging and it is recommended to carry out further exploratory work on this property. It is recommended

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to carry out about 16 miles of induced polarization surveying to distinctly outline the anomalous areas for a purpose of diamond drilling. It is also necessary to carry out detailed geological mapping on this property to correlate and interpret the anomalies obtained by the geophysical surveys.

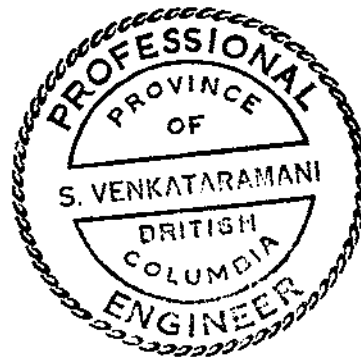
The cost for the exploration work will be prepared at a later stage as and when it is necessary.

Respectfully submitted,

SOUNDRAM ENGINEERING LIMITED

S Venkataramani

S. Venkataramani, M.Sc., P.Eng.
Consulting Geological Engineer



C E R T I F I C A T E

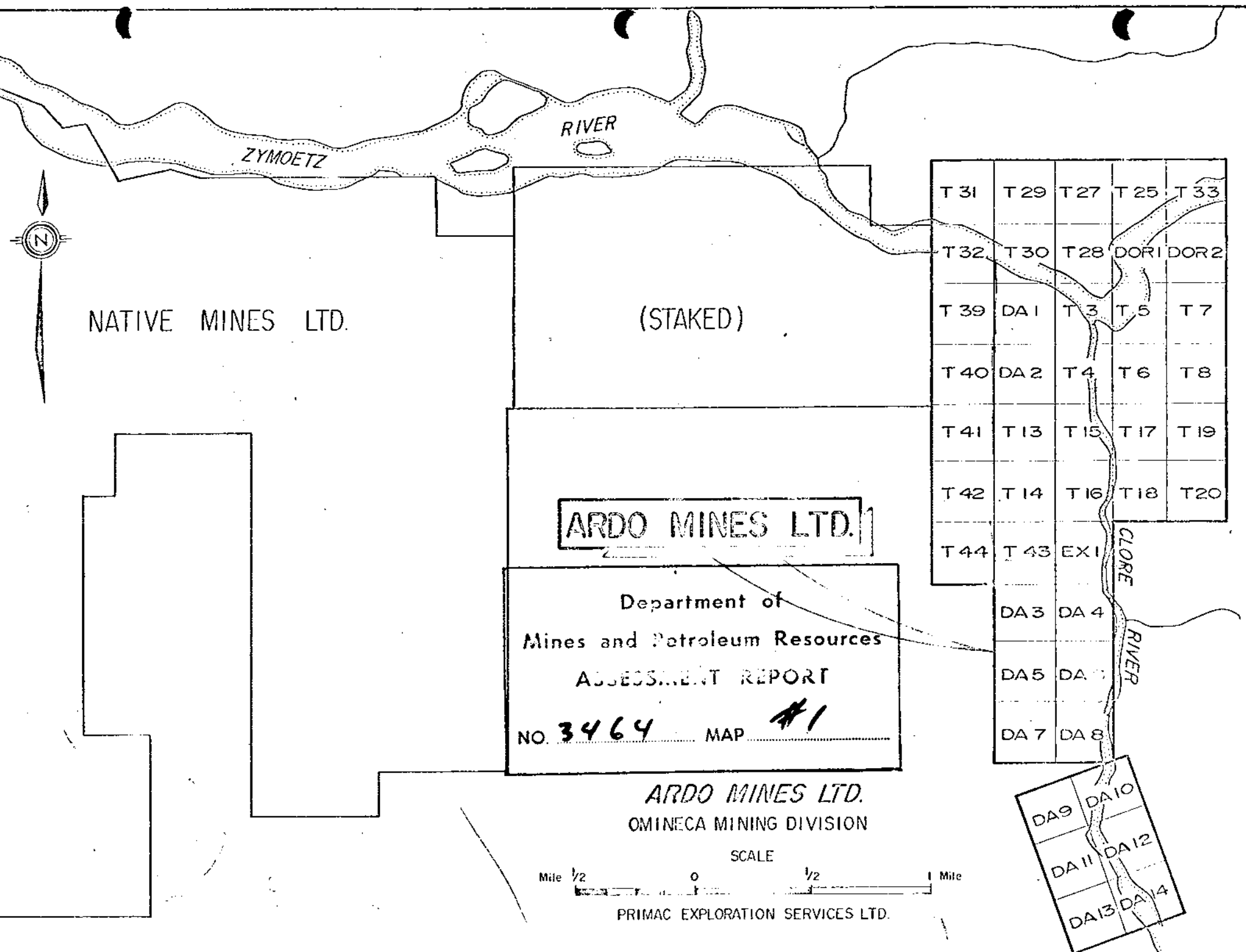
I, S. Venkataramani, of Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geologist with my office located at #750 - 890 West Pender Street, Vancouver 1, B. C.
2. I am a graduate geologist with a Master of Science Degree from the University of Madras, India.
3. I am a member of the Association of Professional Engineers of the Province of British Columbia.
4. I am a certified professional geologist belonging to the American Institute of Professional Geologists, Golden, Colorado, U.S.A.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. I have been practicing my profession for over 10 years.
7. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly in this property of the securities Ardo Mines Ltd. (N.P.L.).
8. This report is based on my personal visit to the area and from previous reports on the property and the published geological literature.

Vancouver, British Columbia

S. Venkataramani, M.Sc., P.Eng.





ZYMOETZ

RIVER



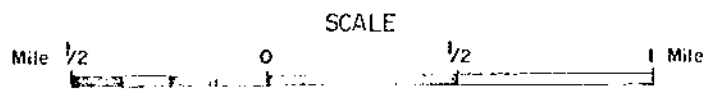
NATIVE MINES LTD.

(STAKED)

ARDO MINES LTD.

Department of
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ASSESSMENT REPORT
NO. 3464 MAP #1

ARDO MINES LTD.
OMINECA MINING DIVISION

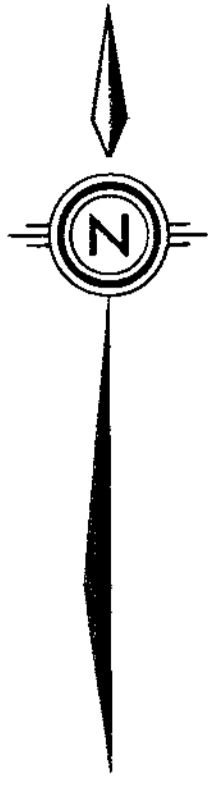


PRIMAC EXPLORATION SERVICES LTD.

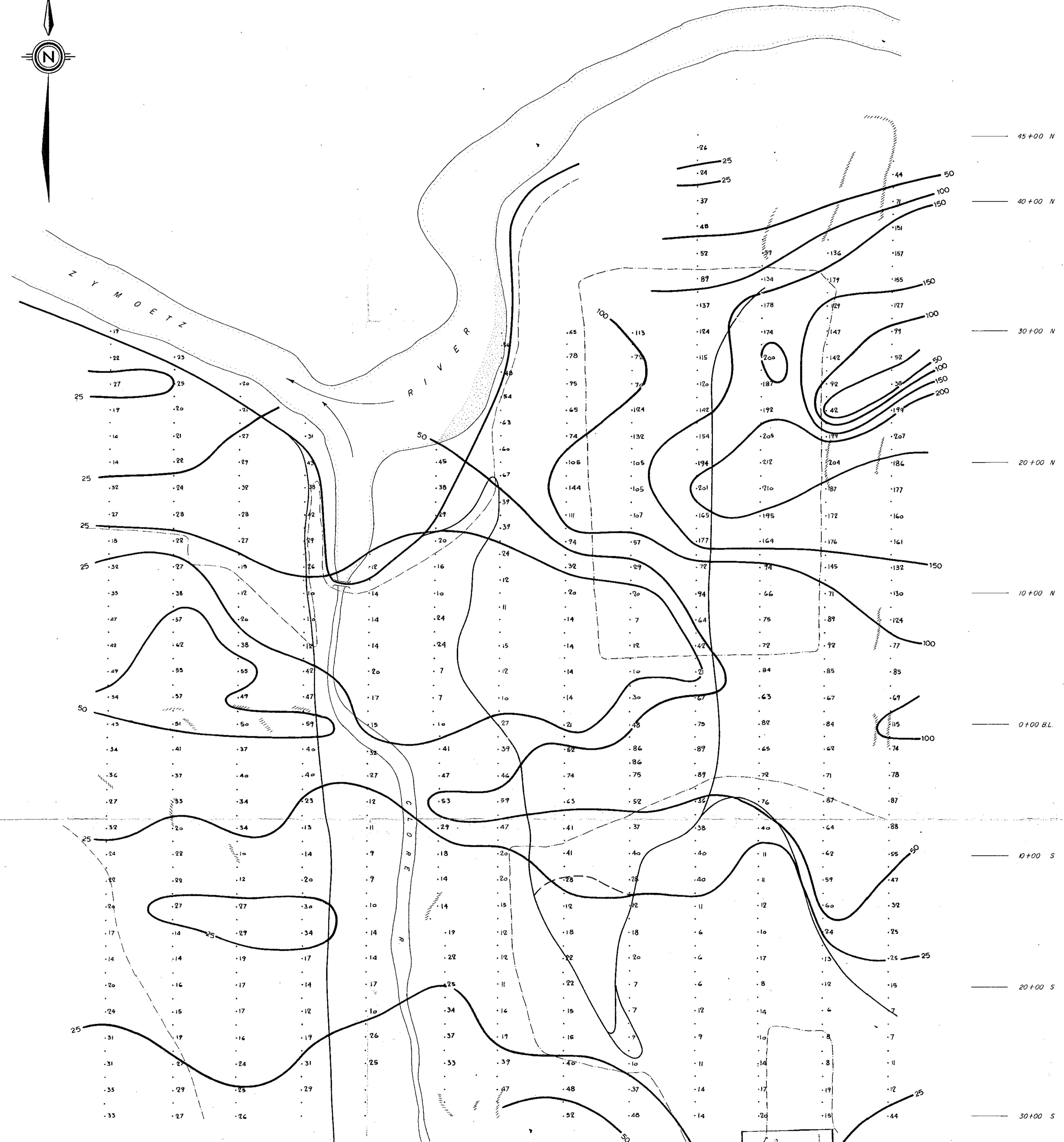
T 31	T 29	T 27	T 25	T 33
T 32	T 30	T 28	DOR1	DOR2
T 39	DA 1	T 3	T 5	T 7
T 40	DA 2	T 4	T 6	T 8
T 41	T 13	T 15	T 17	T 19
T 42	T 14	T 16	T 18	T 20
T 44	T 43	EX 1		
	DA 3	DA 4		
	DA 5	DA 6		
	DA 7	DA 8		

CLORE RIVER

DA 9	DA 10
DA 11	DA 12
DA 13	DA 14



0+00 5+00 E 10+00 E 15+00 E 20+00 E 25+00 E 30+00 E 35+00 E 40+00 E 45+00 E 50+00 E 55+00 E 60+00 E



- LEGEND**
- Logging Boundary
 - /// Rock Outcrop and/or Bluff
 - Primary Logging Road
 - Secondary Logging Road
 - Stations at 100' Intervals

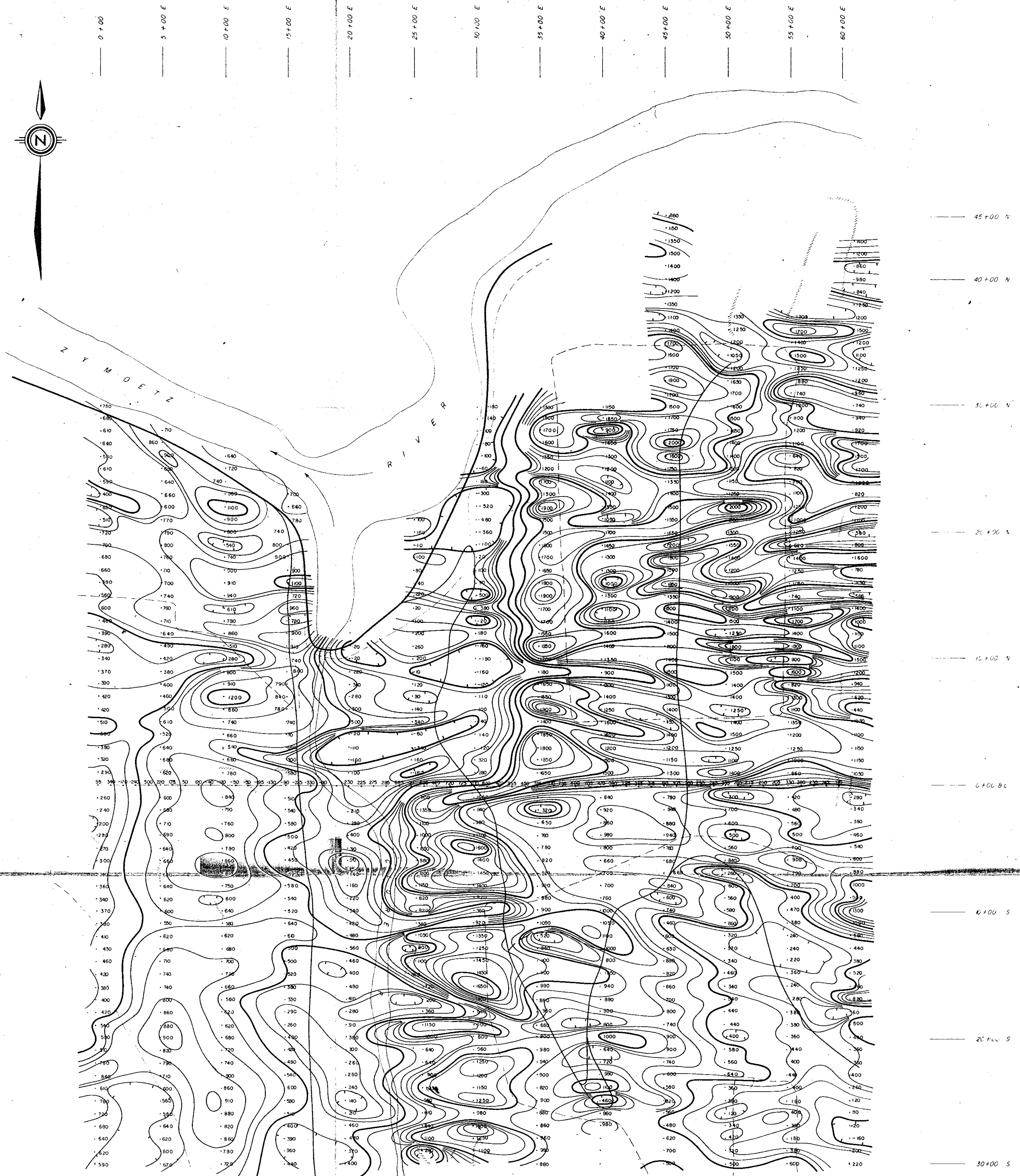
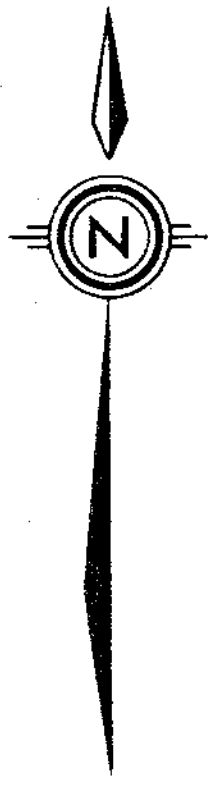
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Department of
and Petroleum Resources
MUNICIPAL DISTRICT
NO. 3464 MAP #3

GEOCHEMICAL SURVEY
ARDO MINES LTD.
T. GROUP

TERRACE AREA, B.C.





LEGEND

- Logging Boundary
- Rock Outcrop and/or Bluff
- Primary Logging Road
- Secondary Logging Road
- Stations at 100' Intervals

3464
M-2

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ASSESSMENT REPORT
NO. 3464 MAP 82

ARDO MINES LTD.
T. GROUP

MAGNETOMETER SURVEY

TERRACE AREA, B.C.

SCALE

