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Bethlehem Resources Corporation

Northair Mines Ltd.

REPORT
on
FIELD WORK

RAGEN LAKE

GROUP

MACMURCHY TWP

Ontario

District of Sudbury
Larder Lake Mining Division

NTS 41P / NW

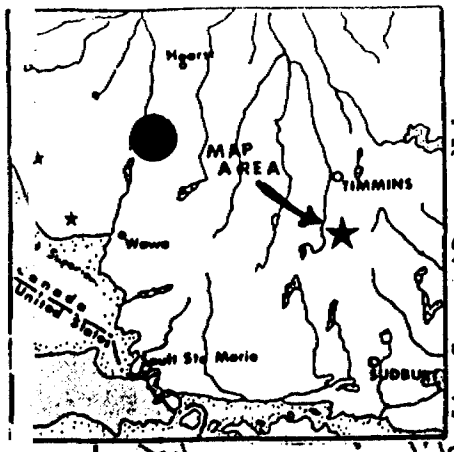
June 1990

DONALD E. GARDEN

CONTENTS

MAPS

LOCATION MAP



MAP A

INTRODUCTION

In June 1990, the Ragen Lake Property was traversed with the objective of re-locating old trenches and showing indicated on the government map (OGS 2205)

As well, the area to the south of the Bethlehem/Northair claims was traversed in order to locate the Netherton and Blacksmith Veins in addition to a reconnaissance of the geology of that region.

Samples were taken wherever there was any trace of mineralization in an effort to establish values for more detailed work.

The assay results are disappointing. Gold appears in only trace amounts, and other than along the north-east boundary, copper is low in value. Of interest is the presence of zinc in selected samples that appeared in the hand samples to bear zinc mineralization. One sample of a coarse gabbroic rock gave a nickel value of 73 ppm.

There is a trend to the copper values of pit A and some trace of gold values in the area. The geology, as depicted, shows a series of metavolcanics striking north-westerly. The veins and shears trend north-south and north-easterly.

PROPERTY, LOCATION AND ACCESS

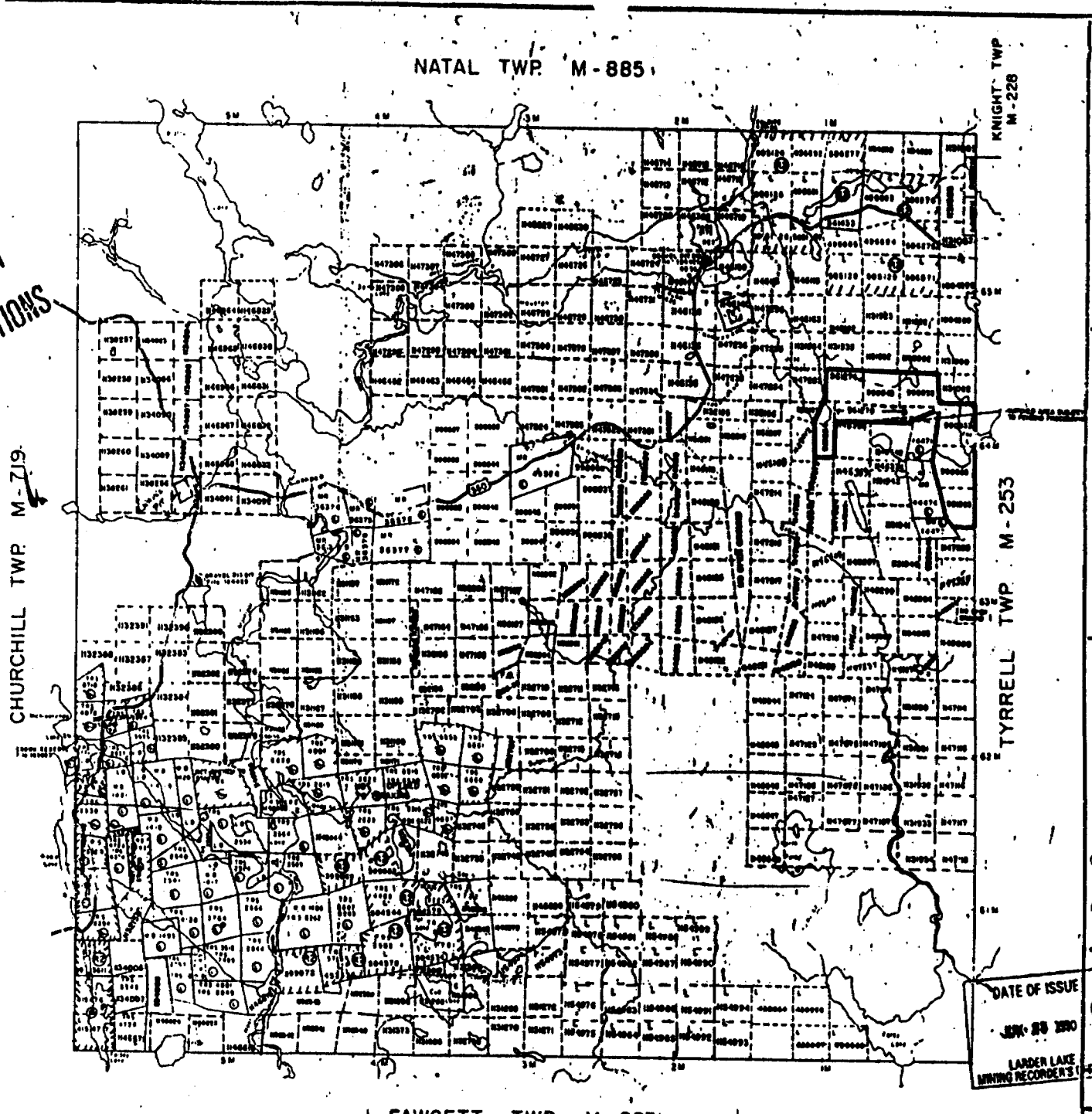
The property comprises eight contiguous claims:

L-990943	L-990933,	L-990883,	L-990833
L-961283	L-961274,	L-961278,	L-961284

There are 7 other claims on "file only". Pending a dispute on six claims to the south of the property, some of those claims could be declared valid.

The property is located in the north-east quarter of Macmurchy Township, district Sudbury, Larder Lake Mining Division. Highway 560 crosses 1½ miles north of the north boundary at a point 22km from Shining Tree to the west and 25km from Gowganda to the east.

Access can be acheived by road to Jess Lake and across by boat to the north west claim or via the Matona road to Thorn Lake and in from the east boundary. Another route is via an old tote road which is grown over with small scrub trees, from highway 560 to the north-east corner of the claim group.



THE TOWNSHIP OF

MACMURCHY

DISTRICT OF SUDBURY

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED PATENTED S R O

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers

Township closed to staking effective May 8/78 Section 38(1) of the Mining Act.

Mining Leases shown thus ⊗ have been terminated but not thrown open for staking

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O. 1970.

Order No.	File	Date	Disposition
⑤			

① Surface and Mining Rights in all Crown Land in this township Withdrawn from prospecting, staking out, sale or lease Section 35 R.S.O. 1980 The Mining Act. Order M[illegible] effective October 18, 1982 at 7:00 p.m.

**TWP. OPENED TO STAKING ORDER O-MLO1-90 EFFECTIVE APRIL 3, 1990, 7:00AM EST.

⑫ Surface and Mining Rights Withdrawn from staking section 35 of the Mining Act R.S.O. 1980. Order O-LO-90 [illegible] on April 3, 1990 at 7:01 AM E.S.T.

DATE OF ISSUE
[illegible] 28 1990
LARDER LAKE MINING RECORDER'S OFFICE

PLAN NO M-842

ONTARIO #1

MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

REGIONAL GEOLOGY

MacMurchy and Tyrrell Township were mapped by the Ontario Government in 1971, producing a geological map (2260) at 1" to 1/4" mile.

The lithographic units for MacMurchy and Tyrrell townships is described in Table I (from ODM Geoscience Report 152).

The underlying rocks are Precambrian age. The earliest rocks comprise a metavolcanic sequence. The upper section is designated an alkalic volcanic suite referred to as mafic to intermediate trachytic metavolcanics. This could be similar to the Temiskaming volcanism of the Kirkland Lake area. The older metavolcanics have been subdivided into three distinct lithologic units; mafic unit (basalt), intermediate (andesite and dacite) and a felsic unit (rhyolite and rhyodacite). They form an interlayed volcanic sequence.

The trachytic metavolcanics are, in part, interlayered with the other volcanics.

Interlayered with these older rocks are the ultramafic and mafic intrusions of serpentinite and gabbro. Subsequently, these rocks are cut by felsic intrusives and later than the felsic intrusives are the mafic intrusions of the Matachewan Type. The Huronian supergroup contacts uncomformibly on the earlier sequence and in turn is intruded by the Nipissing Diabase.

STRUCTURE

There are two major fault zones in MacMurchy Township, the Jess Lake-Foley Lake fault along the eastern boundary and the Michiwakenda fault which crosses the southwestern corner of the township. All faults trend generally to the north and northwest

The Jess Lake Fault appears to cause a major break in the strike of the metavolcanic sequence in the north part of MacMurchy. To the west, the strike is about 100 degrees Az, to the east it is about 160 degrees Az. In the south portion of MacMurchy, the continuation of the Jess Lake Fault extends into Foley Lake fault which extends southward into Fawcett township. The strike of the metavolcanic sequence does not vary much across the fault, south of Foley Lake.

The Michiwakenda fault is traced by Ribble Lake in Churchill township and is important in MacMurchy for its association with the past producing Ronda Mine.

There are several parallel fold axes trending about 100-115 degrees Az across the western portion of MacMurchy. It would appear that the volcanic sequence repeats itself from south to north. To the east of the Jess Lake fault, similar fold axes trend about 160 degrees Az.

Several shear zones are evident sub parallel to the fold axes and are likely related to limb shearing on these folds.

GEOLOGY OF THE CLAIM GROUP AREA

The major geological feature of the area is the Jess Lake fault that traces a line about 20 degrees east of south defined by the east shores of Jess Lake and Ragen Lake. This fault extends southward and at the south boundary of MacMurchy township the fault trace is nearly due south through Foley Lake.

To the west of the Jess Lake fault the metavolcanic sequence is about 100 degrees Az, to the east on the claim group, a similar sequence is about 160 degrees Az.

The volcanic sequence in the Ragen Lake area to the Thorn Lake area comprises mafic metavolcanics through intermediate to felsic metavolcanics. There is an anticlinal structure through the lake in the centre of the Brunet leased claims. It is very possible that the mineralization found in the mafic and intermediate metavolcanics to the west of the anticlinal axis is present on the east side as well in the area of Thorn Lake. The west side of Thorn Lake is overlain unconformibly by the Huronian Supergroup metasediments (greywacke, arkose, orthoconglomerate).

To the east and the north of Thorn Lake is a moderate area of mafic intrusive, Nipissing diabase.

The OGS report, GR152, describes the property as "underlain by steeply dipping pillowed basalt, andesite, porphyry and diabase dykes. Gowganda formation [Huronian supergroup]...arkose and conglomerate are also present and intruded by Nipissing diabase"

ECONOMIC GEOLOGY

Four vein systems were discovered on the old Brunet property: the Netherton vein located a bout a quarter mile east of the south tip of Ragen Lake, a second vein, the North vein, location not positively known, the Copper vein, also not located and the Blacksmith vein, just west of the round lake in the middle of the three present-day leased claim of Brunet.

Netherton Vein

This vein occupies a quartz-carbonate shear zone that strikes about 20 degrees Az and extends 4500' long. The vein itself is 200' long and is quartz, concentrated along the western side of the shear zone. Mineralization is gold and pyrite, a grab sample assaying 5.26 oz/ton gold.

North Vein

The vein strikes 290 degrees Az, dipping 80 degrees south comprising an 8 foot wide quartz carbonate shear zone with two quartz veins 6" to 10" wide in intermediate metavolcanics. The zone containing pyrite and gold, was exposed for 40 feet. Chip sampling across 8 feet yielded 0.17 oz./ton gold.

Copper Vein

This is a 3 foot wide shear zone about 50' long, striking 25 degrees Az to 50 degrees Az and dipping 20 degrees south. The zone contains quartz, massive sections of chalcopyrite and bornite. A picked sample yielded about 26.6% copper and 0.01 oz./ton gold.

Blacksmith Vein

This is an iron formation comprising interbedded black slaty metasediments, rhyolite breccias and agglomerate. The vein is arcuate striking 20 degrees at the north end and 160 degrees Az at the south end where it is 70 feet thick. Best assay yielded 0.1 oz./ton over 2 feet.

According to OGS report GR152, copper generally occurs as chalcopyrite in calcite veins and shears in andesites and felsic metavolcanics. Gold deposits occur either in silicified and carbonate shears or in quartz veins located in shears and fractures.

In a personal conversation with Mr C.W. Brunet, he states that there is an extensive iron formation just east of Ragen Lake that yielded a value of 47.32% iron. In view of recent decisions to close the Sherman Iron Mine at Temagami and the Adams Mine near Kirkland Lake, it would appear that this is not an economically feasible deposit. Also this information will have to be verified in future exploration work.

HISTORY OF EXPLORATION

1931 Original discovery of Netherton vein by prospecting "...a quartz vein 2' wide, which was traced over a length of 40 feet and showed extensive fine gold".

1937 Big Divide Gold Mines
-examined by Erie Canadian Mines Ltd. Results were unfavourable.

1946-48, 1950 Macdean Mines Ltd.
-geological survey, sampled trenches and showings

1967-68 Raylloyd Mines and Explorations
re-examined by Raylloyd and owner C.W. Brunet

1969 Madsen Red Lake Mines Ltd.
-magnetic and ground EM
-drilled 10 holes subsequent to survey

Discussion

The original Netherton vein was discovered by Big Divide Gold Mines in 1937, however subsequent sampling by Macdean in 1946 provided a grab sample yielding 5.26 oz./ton gold.

Macdean also sampled the North vein, chip sample across 8 feet yielded 0.17 oz./ton gold; the Copper vein, picked sample yielded 26.6% copper; the Blacksmith vein yielded 0.1 oz./ton gold over 2 feet.

Although the Blacksmith and the Netherton veins are not situated on the Ragen Lake Group, the possible extension of the shear zones and the veins is very feasible.

Madsen Red Lake performed the most extensive survey of the property, then 25 claims, with 29.4 miles of linecutting, two VLF surveys and a magnetometer survey followed by 10 drill holes for 553' of drilling.

The grid lines and surveys were directed in a north south direction, rendering the results almost useless. The general trend of the rock, veins and shear zones varies 25 degrees east or west of north, thus the surveys should have been directed east-west.

The drilling was done using a 7/8" core packsack drill which reached a maximum depth of 101' on hole #7. The drilling was located in four clusters north of Buster Lake and in most cases the holes were drilled along the general strike.

According to OGS report GR152, the drilling revealed minor chalcopyrite mineralization, best gold intersection being 0.065 oz./ton over four and one half feet and best silver 0.18 oz./ton over four feet.

MATONA (ASQUITH RESOURCES), Tyrrell Twp.

There has been considerable activity in the for of stripping and diamond drilling by Asquith REsources on the Matona property in Tyrrell Township about ¼ mile to the east of the Ragen Lake property. A core rack containing over 1800' of core (drilled 1988) is in place on the property. Assessment files were checked with the result of locating a compilation/drill location map and cross-sections of the drill holes.

Asquith drilled two zones, the Matona Main Zone, and the North Hare Creek Zone. Only the Hare Creek Zone yielded values, however they were not consistent along the length.

The drill core is well marked, including flagging tape indicating the mineralized zones. Four small whole core sample were taken for assay (8186, -7, -8, -9) but results are poor.

The map and sections are in Appendix II.

Samples taken as follows:

8186	M88-20,	214'
8187	M88-20	234'
8188	M88-17	313'
8189	M88-17	321'

PROGRAMME

Traverses were designed to locate old pits and trenches and old showings located on geological maps. The prime concern was to investigate the Bethlehem/Northair property, however the adjacent ground to the south was traversed as reference. Claims inspector Tom O'Connor provided a map of the "filed only" claims which were used a a reference grid. All outcrop was checked and representative samples were taken and in most cases sent for assay if there was any indication of mineralization.

Several old pits and trenches were located in the north-eastern sector of the group. Pit A was a blasted section of rock on the side of a valley and showing chalcopyrite and pyrite mineralization in quartz veins. Another pit thiry feet south was smaller, but similar. Pits B and C on the same trend are small and difficult to locate.

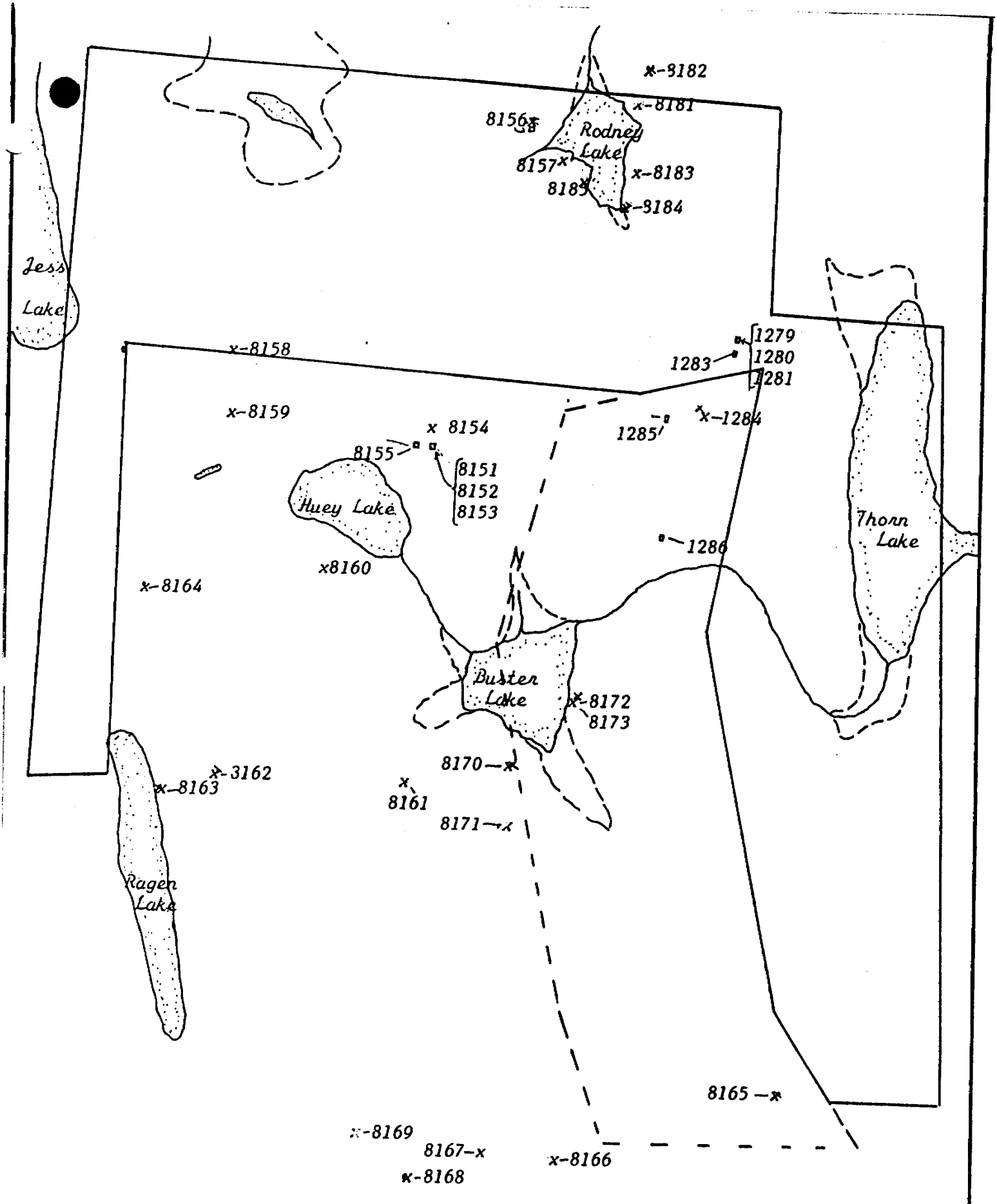
On the same trend there is reported, an area stripped by Madsen Red Lake in 1969, however it is apparent that the water level of Buster Lake is much higher and this work is obscurred by water.

The Netherton Vein which was opened in 1931 was not located. (Madsen Red Lake in 1969 also failed to locate it.). The Blacksmith Vein, which is a narrow iron formation was not located as designated on the map. A subsequent conversation with prospector Carl Forbes indicates that the vein is further west than indicated.

The region was traversed surrounding the Netherton and Blacksmith Veins and assay values yielded what appear to be background values in copper and nil or trace values in gold.

Two old pits are located just north-east of Huey Lake. They were about 10' deep and at least 8' square. There was no indication of heavy mineralization in these pits nevertheless the rock type is favourable, felsic mtevolcanics, tuff and rhyolite.

An apparent pit was marked along the north boundary, likely by the owners to the north. This was not extensively worked, and is actually considered dubious as an old pit. To the north and south of Rodney Lake, pits and gold showings were indicated. The area was checked over thoroughly and to the north there is not very much outcrop and no sign of previous work. To the south there is considerable outcrop extending south-easterly from Rodney Lake. Again there is not sign of trenching or pits. To the east of the outcrop there is an outcrop of the Gowganda sediments of the Huronian Supergroup.



SAMPLE LOCATIONS - RAGEN LAKE PROPERTY - JUNE 1990

MAP C

RESULTS

Gold values are very disappointing. Trace to nil values are the only results. Copper values in the western and northern portion appear to be "background". The "best" copper values are located along the eastern boundary, however they do not yield significant gold to make the prospect worthwhile.

A total of 51 samples were taken, 35 were submitted for assay. The copper values from Pit A, B and C along a trend range from 4070 ppm to 1440 ppm. Copper is vein type in a narrow series of veins across approximately 2', extending about 1400' in length. The claim lines are marked to the north and south and there is 500' of property to the south of pit A and 800' to the north.

Other copper values averaged about 110 ppm. which appears to be a background value.

There is considerable outcrop in the north-west sector, although the terrain is rugged with high hills separated by swamp valleys. The geology as observed is similar to the OGS map.

CONCLUSIONS

1. The most favourable location is pit A. The mineralized zone extends north-south toward the lease claims of C.W. Brunet, however Bethlehem/Northair hold the ground 500' south and 800' north of the pit along strike of the zone.

2. The area north of Rodney Lake did yield trace gold which could be a viable target area should more work be done.

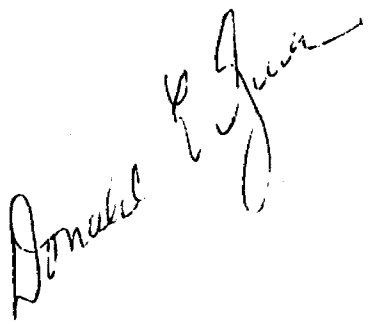
3. The excitement to stake this area appears to have been over-stated. The Blacksmith and Netherton Veins are so small that they are difficult to locate. The best showing is the copper showing of pit A.

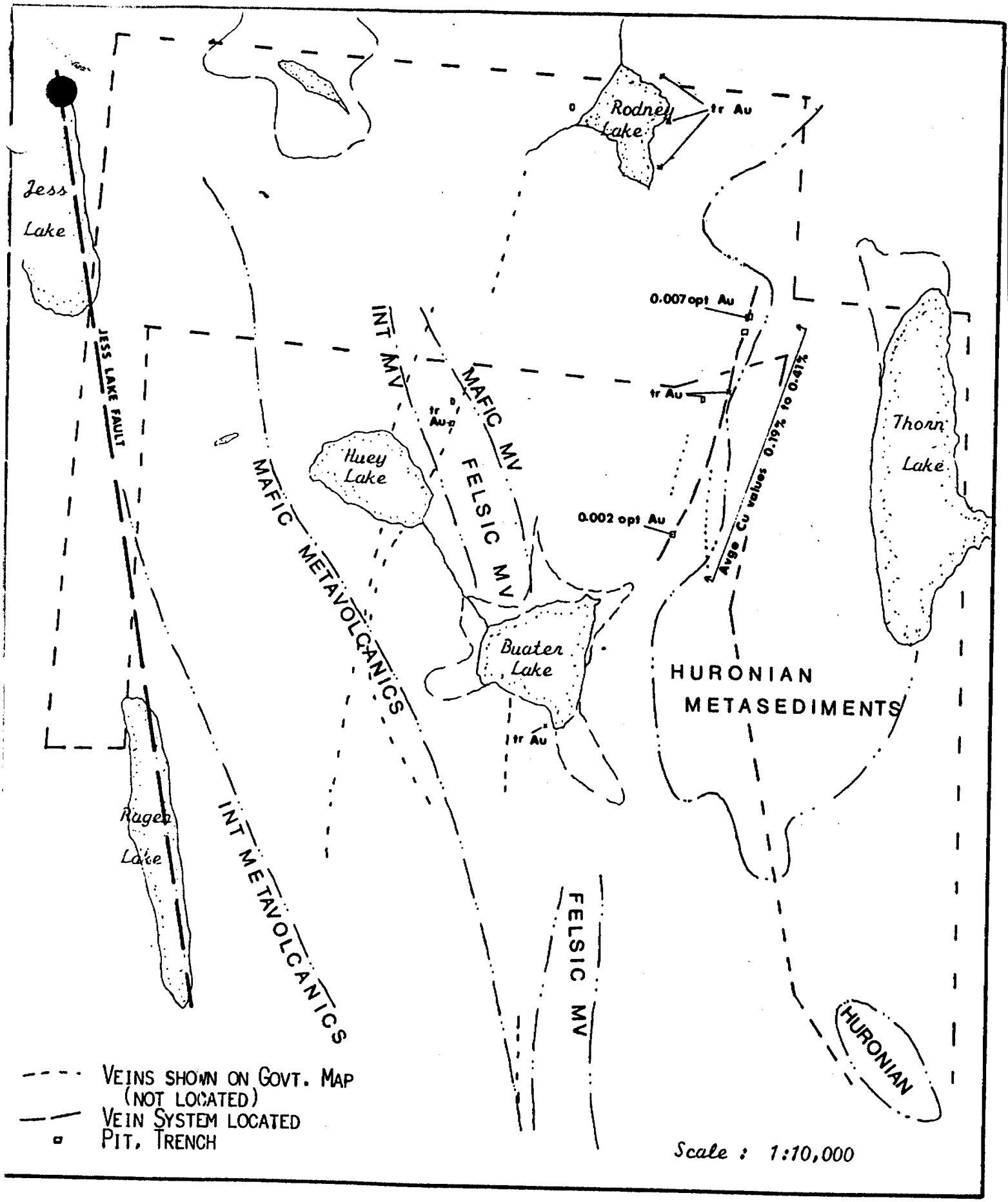
RECOMMENDATIONS

The property does not warrant further work at this time.

The claims dispute should be attended in the event that some of the disputed ground may revert to Bethlehem/Northair. At that point, the stakers of the disputed ground may want to make a deal.

If any work is to be considered, it should be focussed on the north-east area around pit A. Stripping, washing and detailed sampling is all that is recommeded. There is not sufficient evidence to warrant a geophysical survey at this time.





MAP D

RAGEN LAKE

GEOLOGY AND ASSAY VALUE

APPENDIX I

Assay forms - swastika labs

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0788-RG1

Company: **DONALD E. GARDEN** Date: JUN-14-90

Project:

Attn:

We hereby certify the following Geochemical Analysis of 4 ROCK samples submitted JUN-11-90 by D. E. GARDEN.

Sample Number	Au ppb	Au check ppb	Ag ppm	Cu ppm
1279	3		0.7	1440
1280	Nil		0.3	3720
1281	Nil		0.2	1560
1282	3	3	0.3	98

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705)642-3244 FAX (705)642-3300

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0817-RG1

Company: **DONALD E. GARDEN**

Date: JUN-21-90

Project:

Attn:

Copy 1. BETHLEHEN RES. VANCOUVER
2. HI-TEC RES. MGT.
3. DONALD E. GARDEN

We hereby certify the following Geochemical Analysis of 9 ROCK samples submitted JUN-15-90 by .

Sample Number	Au ppb	Au check ppb	Ag ppm	Cu ppm
1283	248	175	0.2	1860
1284	12		0.2	4070
1285	17		0.1	1980
1286	72	75	0.2	2460
1287	7		0.1	46
1288	3		0.1	58
1289	3		0.1	26
1290	Nil		0.5	1410
1291	Nil		0.1	115

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705)642-3244 FAX (705)642-3300

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0877-RG1

Company: DONALD E. GARDEN

Date: JUN-29-90

Project:

Attn: DONALD E. GARDEN

Copy 1. BETHLEHEM RESOURCES
2. HI TEC RESOURCES MGT.
3. DONALD E. GARDEN

We hereby certify the following Geochemical Analysis of 39 ROCK/SPLIT CORE samples submitted JUN-26-90 by DONALD E. GARDEN.

Sample Number	Au ppb	Au check ppb	Cu ppm	Ni ppm	Zn ppm
8151	12				
8152	5		21		
8153	14	24	56		
8154	Nil		8		
8155	Nil		11		
8156	Nil		103		
8157	Nil		109		
8158	Nil		131		116
8159	Nil		125	73	147
8160	Nil		118		
8161	Nil		106		106
8162	Nil		109		
8163	Nil	Nil	191		69
8164	Nil		114		83
8165	Nil		112		
8166	Nil		291		
8167	Nil		104		101
8168	Nil		129		
8169	Nil		105		
8170	3		125		
8171	Nil		67		148
8172	Nil		22		
8173	Nil		58		26
8174	Nil		86		
8175	Nil		7		
8176	Nil		7		
8177	Nil		6		
8178	Nil		8		
8179	10		36		
8180	Nil		162		

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244 FAX (705) 642-3300

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0877-RG1

Company: **DONALD E. GARDEN** Date: JUN-29-90

Project:

Attn: DONALD E. GARDEN

Copy 1. BETHLEHEM RESOURCES
2. HI TEC RESOURCES MGT.
3. DONALD E. GARDEN

We hereby certify the following Geochemical Analysis of 39 ROCK/SPLIT CORE samples submitted JUN-26-90 by DONALD E. GARDEN.

Sample Number	Au ppb	Au check ppb	Cu ppm	Ni ppm	Zn ppm
8181	3		92		
8182	3		139		
8183	7		50		
8184	Nil		83		
8185	Nil		103		
8186	14		37		
8187	Nil		27		
8188	Nil		143		
8189	3		926		

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

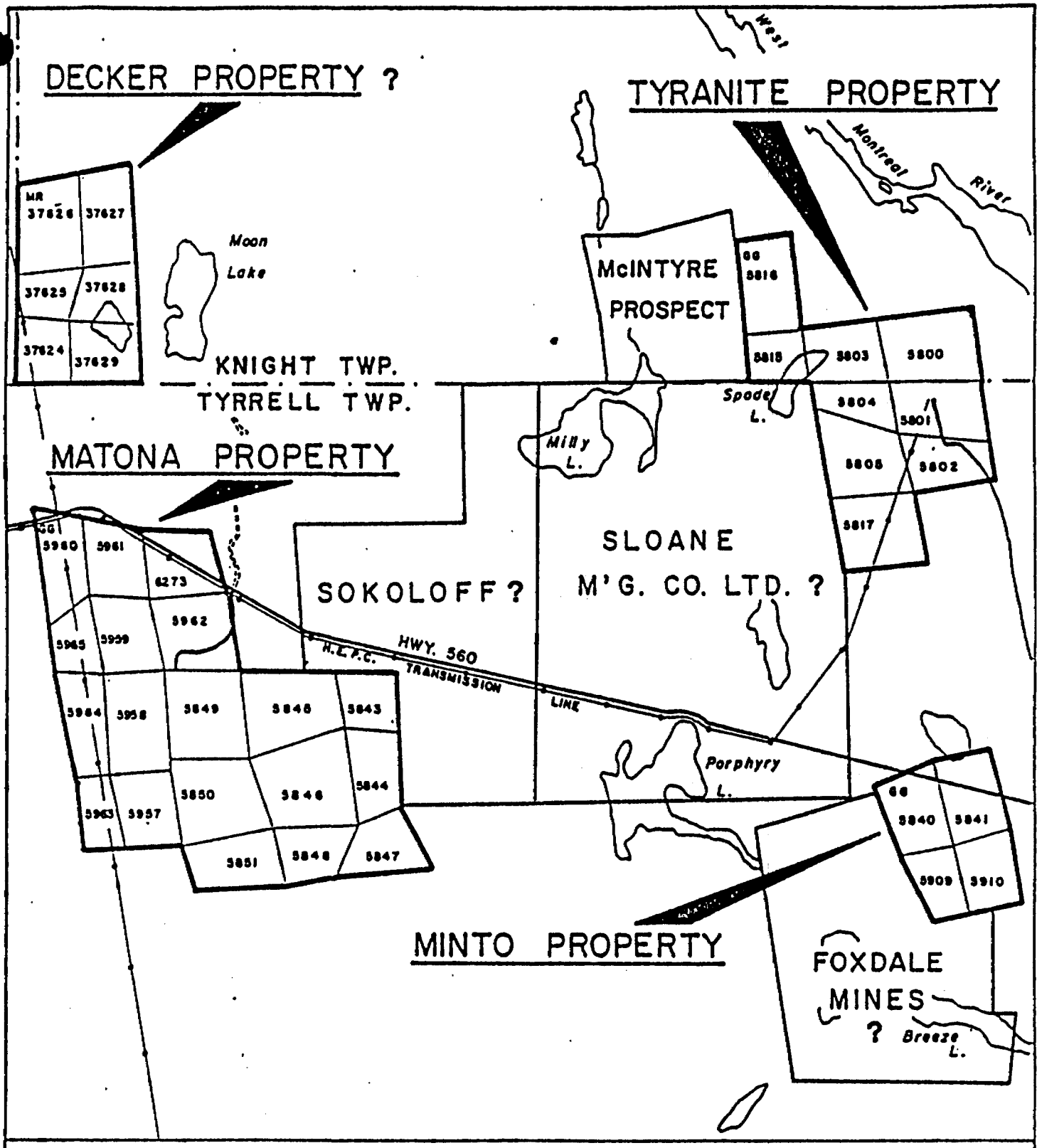
Telephone (705) 642-3244 FAX (705) 642-3300

APPENDIX II

MATONA PROPERTY - Tyrrell Township

1988 drill programme

Compilation map & sections



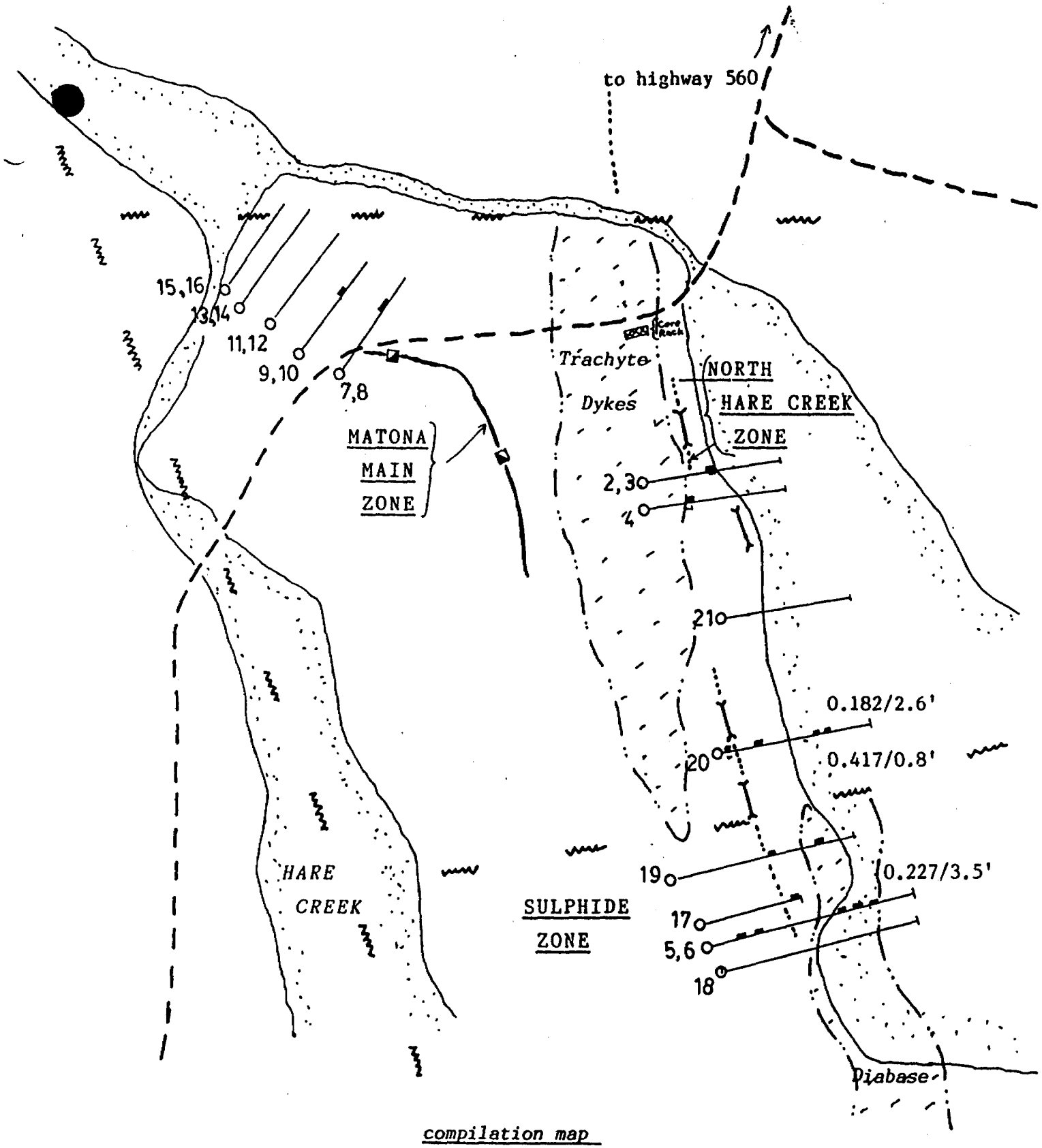
PROPERTY MAP

KNIGHT & TYRRELL TWPS

DISTRICT OF TIMISKAMING, ONT.

SCALE : 1" = 1/2 MILE SEPT., 1981

MAP NO. 2.



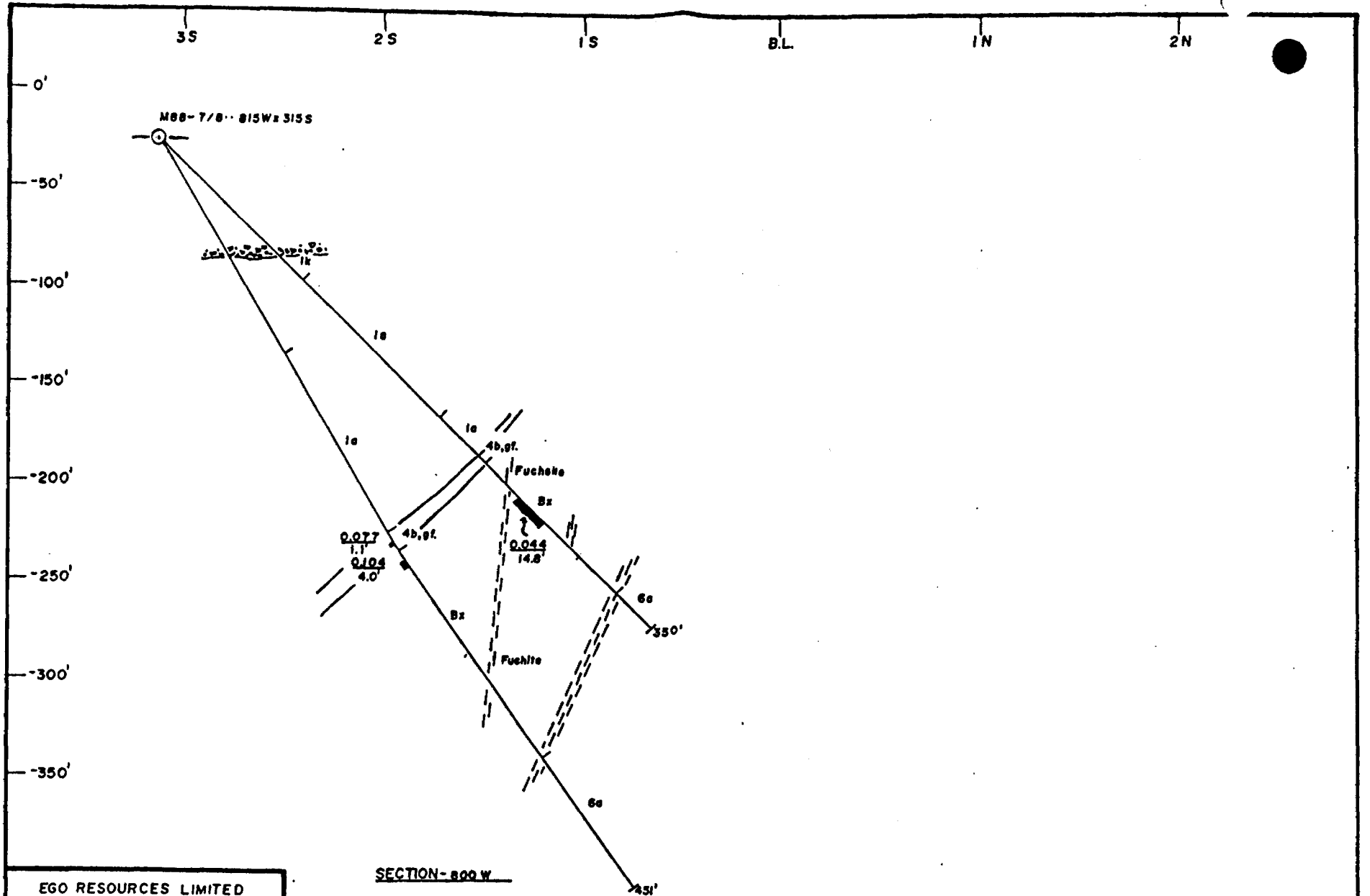
compilation map

ASQUITH RESOURCES

DRILL HOLE LOCATION

1988 - 1989

MATONA PROPERTY - TYRRELL TOWNSHIP

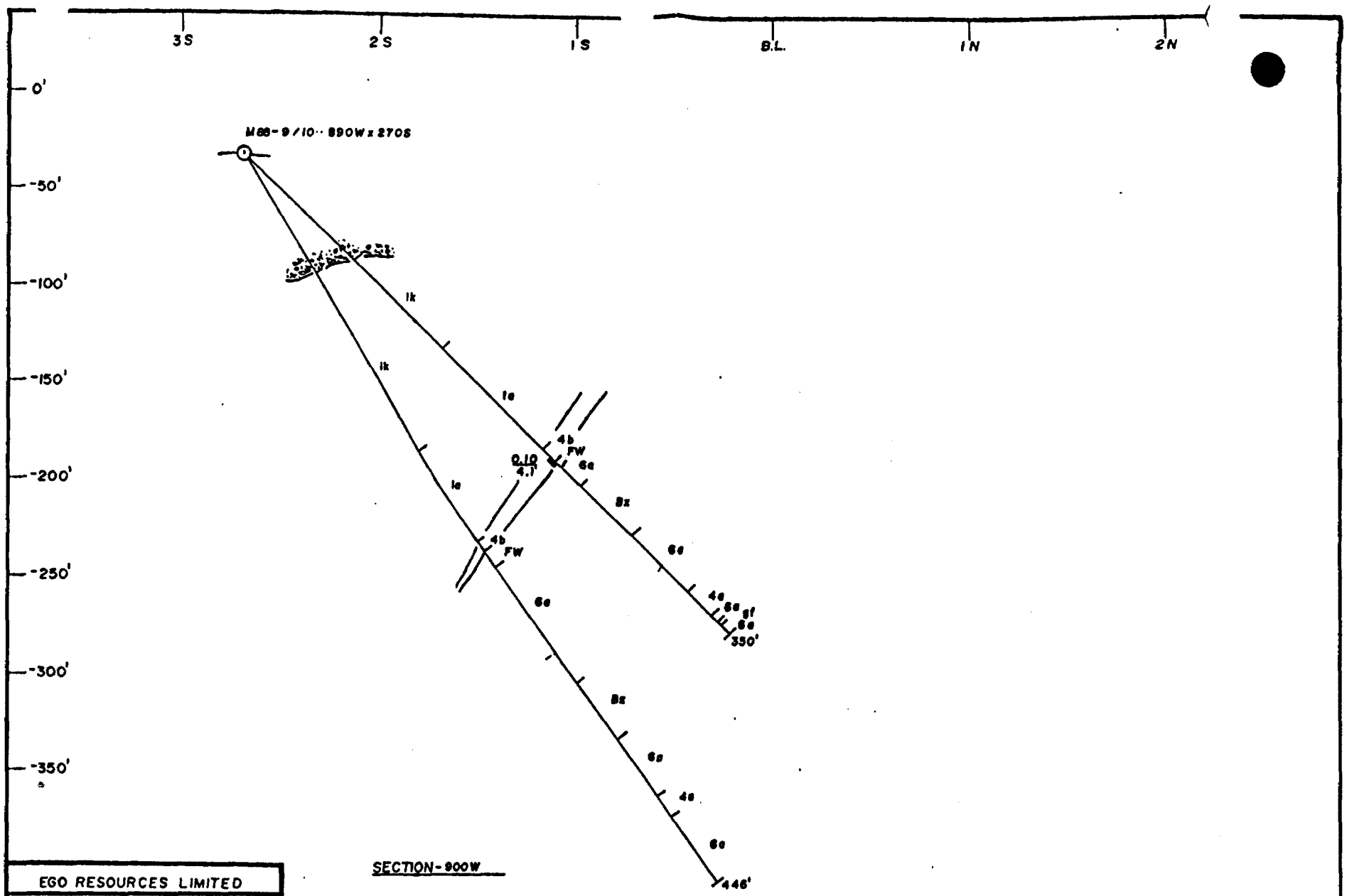


SECTION - 800 W

EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing northwest

J.L. TINDALE & ASSOCIATES INC.

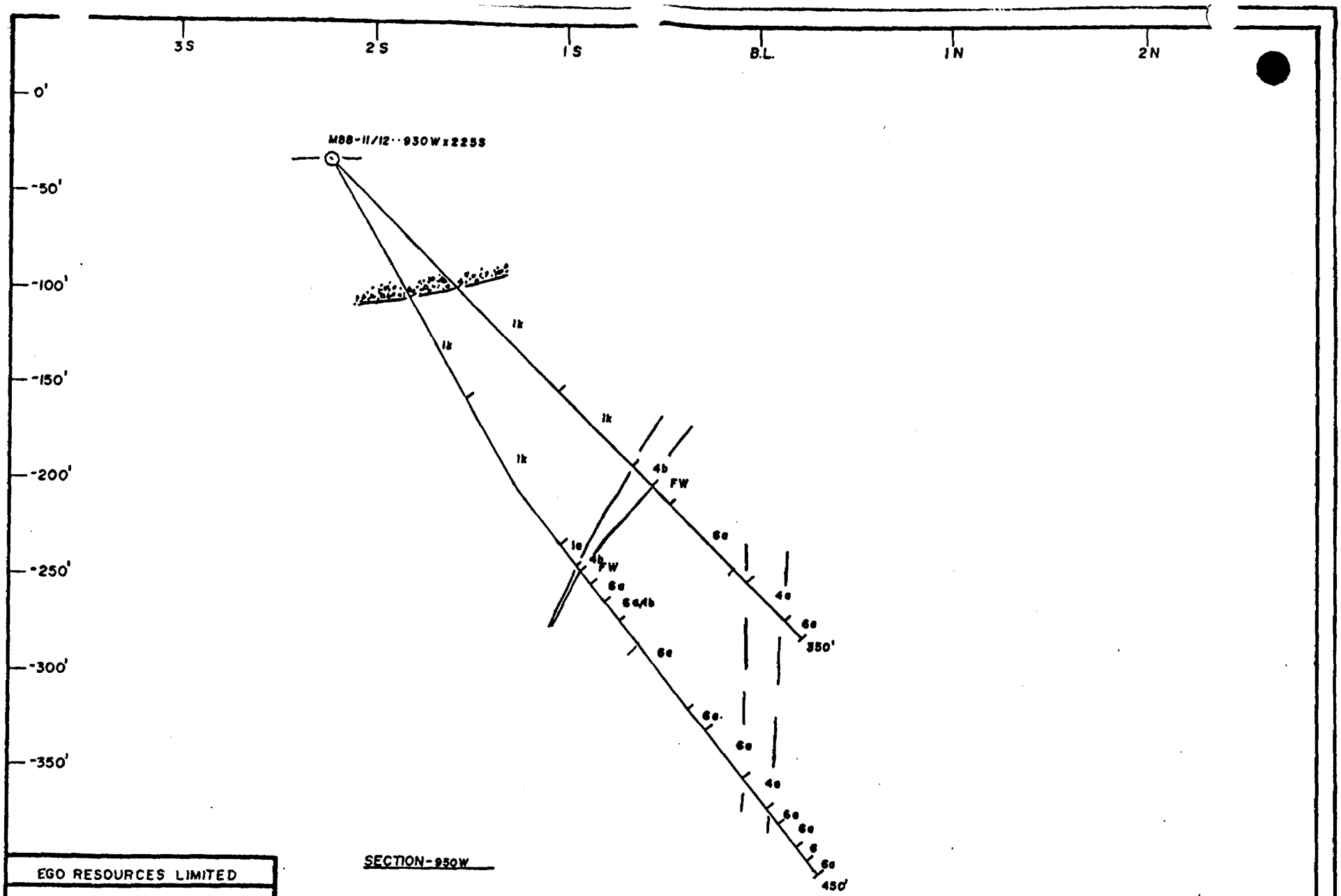


SECTION-900W

EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing northwest

J.L. TINDALE & ASSOCIATES INC.



SECTION-930W

EGO RESOURCES LIMITED

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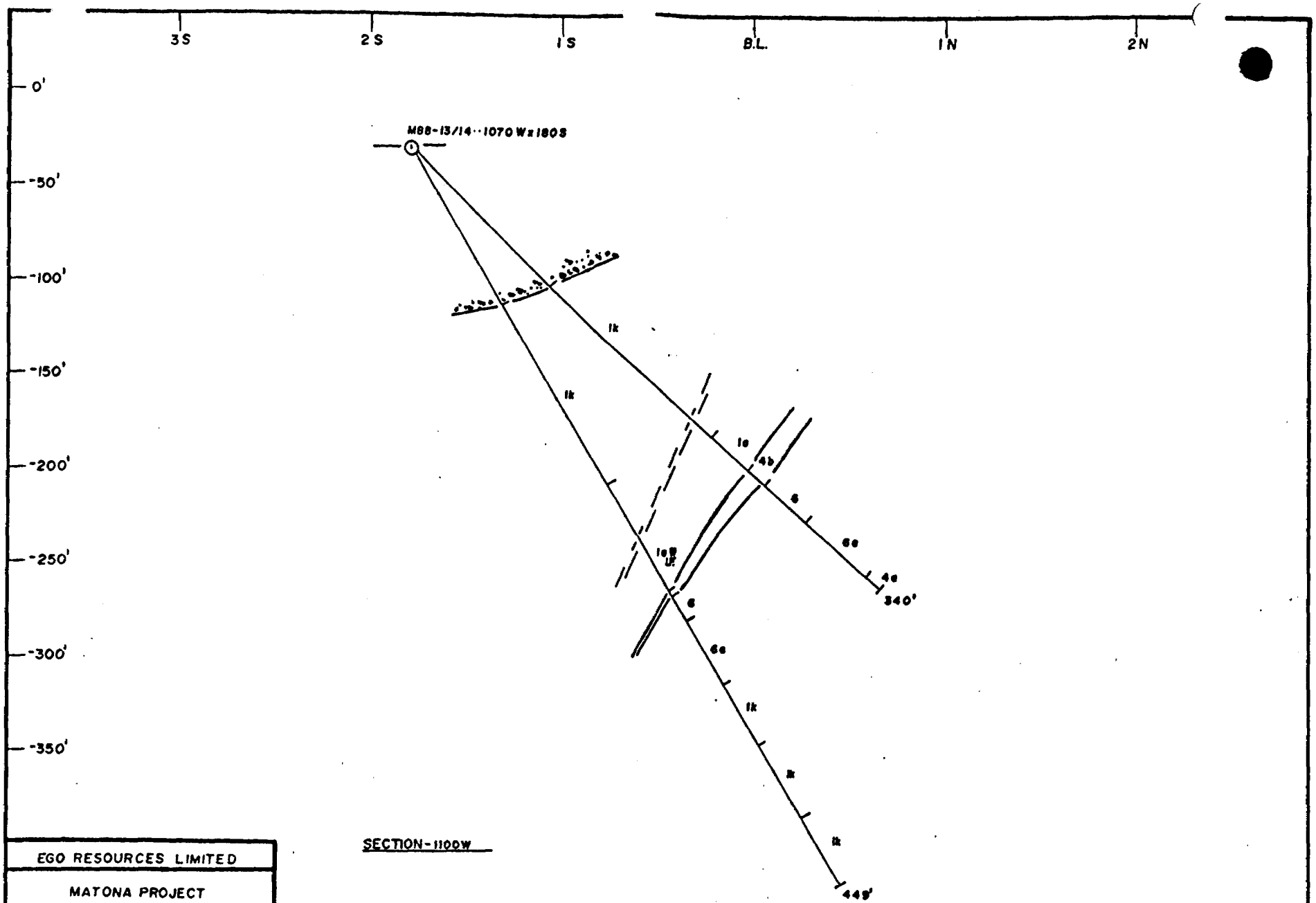
ASQUITH RESOURCES INC.
DRILL SECTION
facing northwest

J.L. TINDALE & ASSOCIATES INC.



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facing northwest

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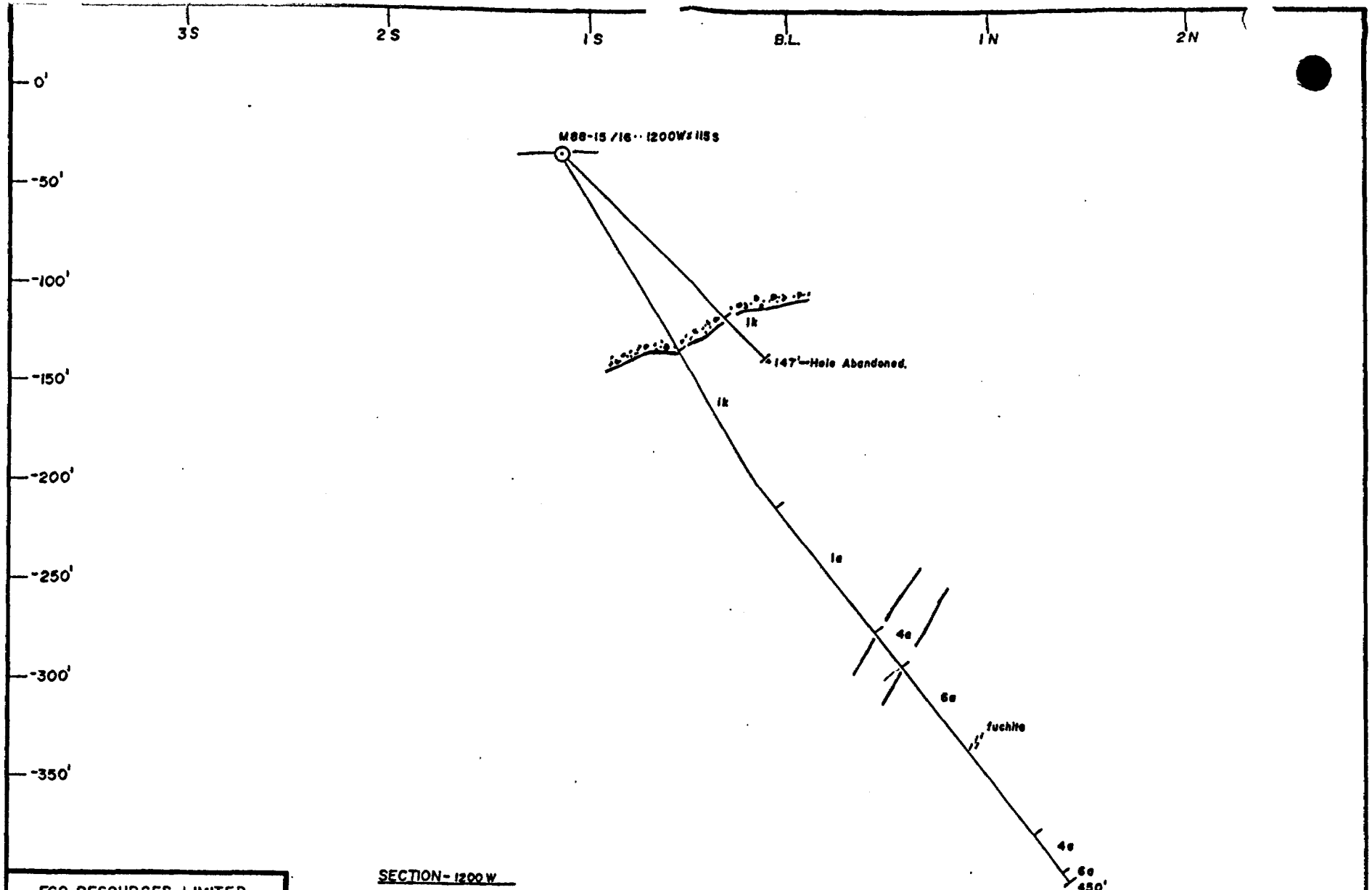

SECTION - 1200 W

EGO RESOURCES LIMITED

MATONA PROJECT
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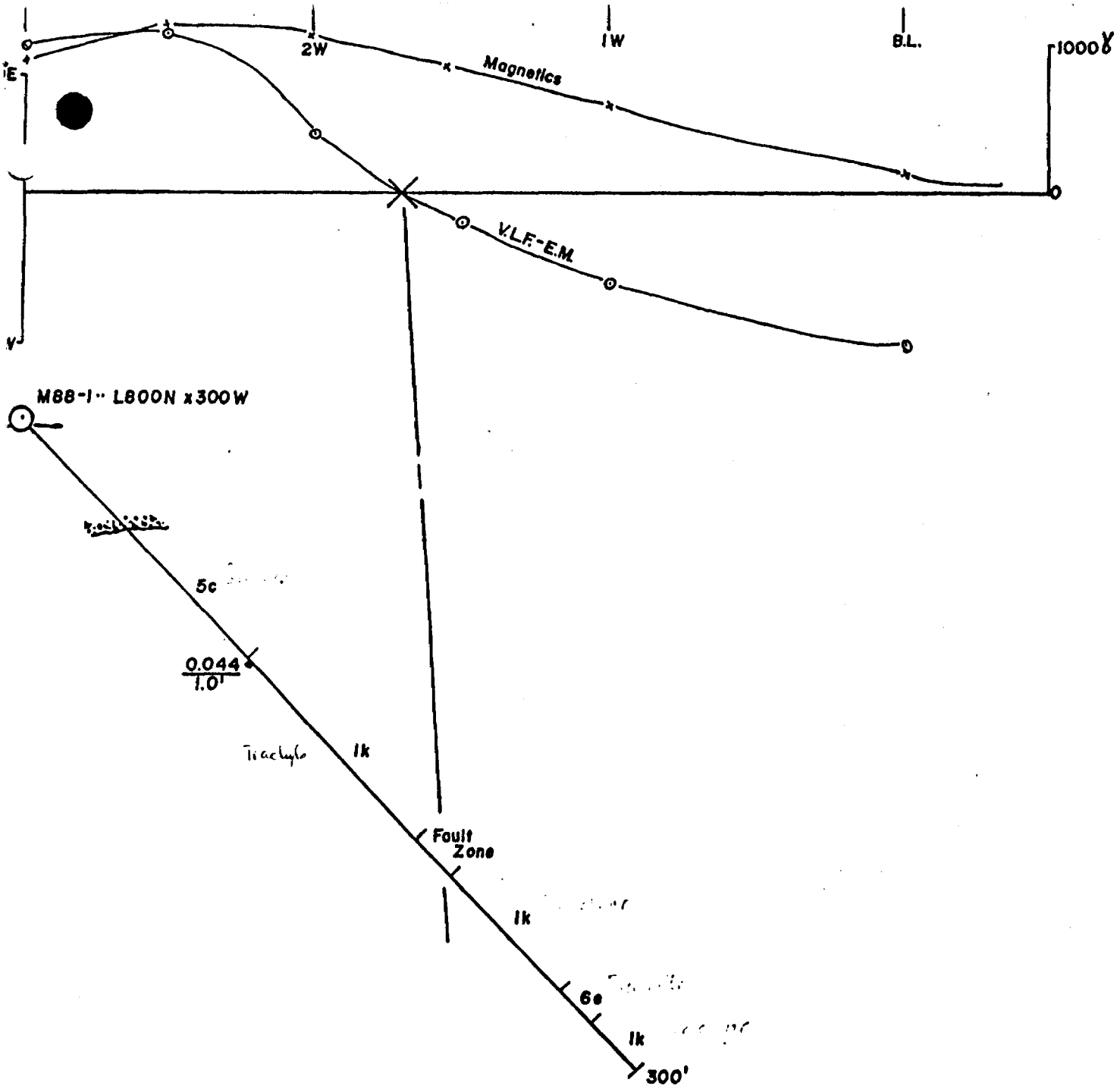
DRILL SECTION
facing northwest

J.L. TINDALE & ASSOCIATES INC.

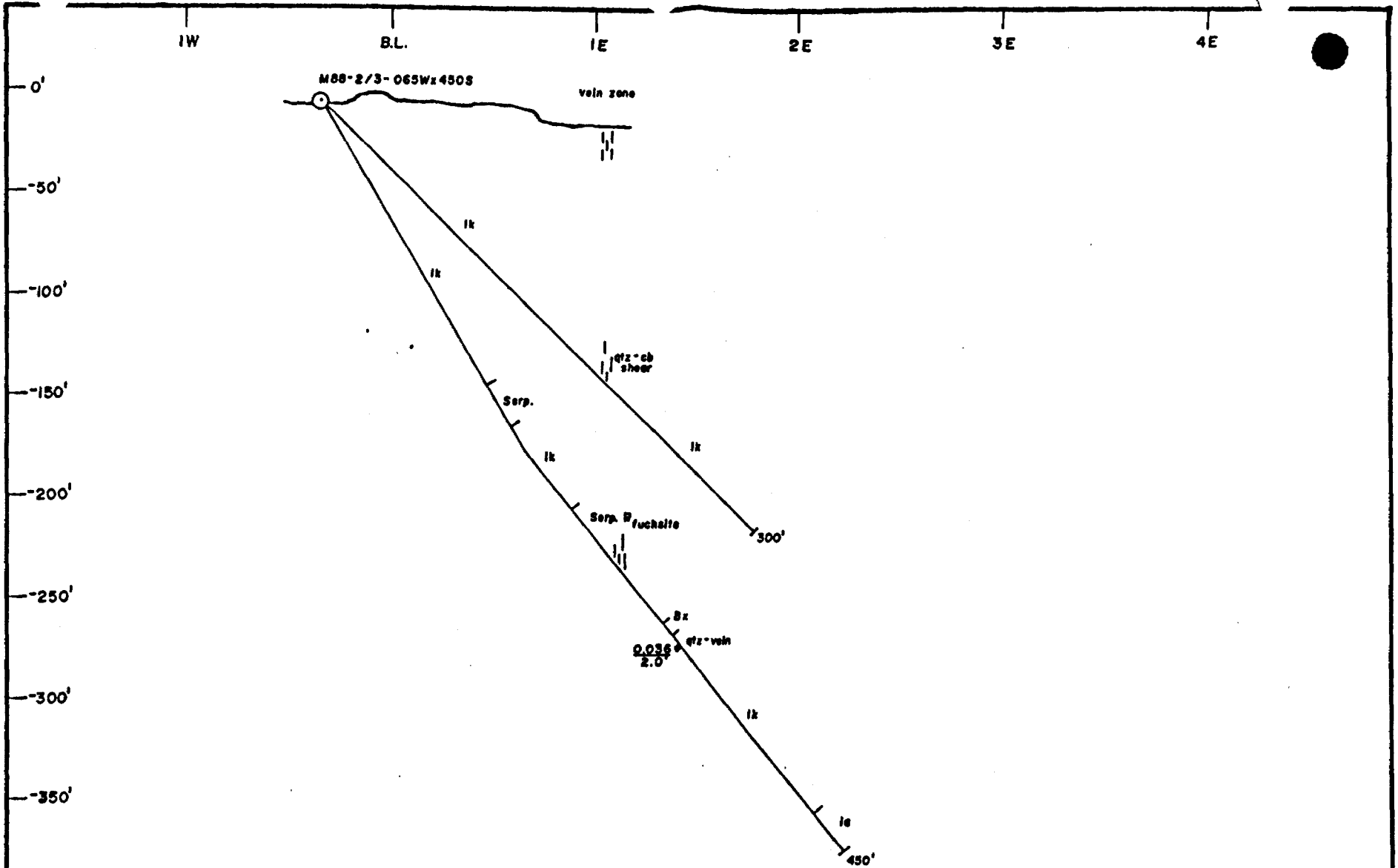


EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

SECTION: 800N

J. TINDALE & ASSOCIATES INC.

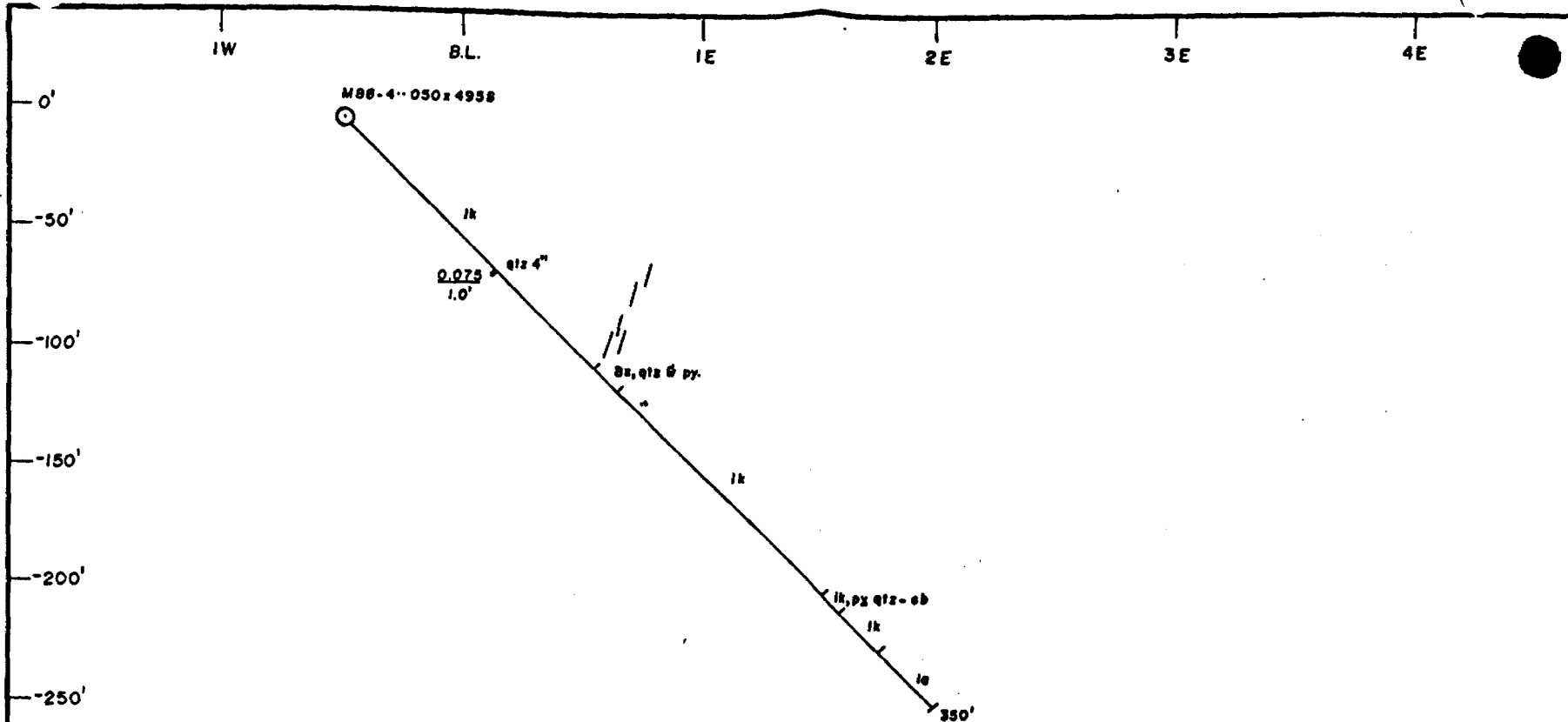


EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.

SECTION: 450S

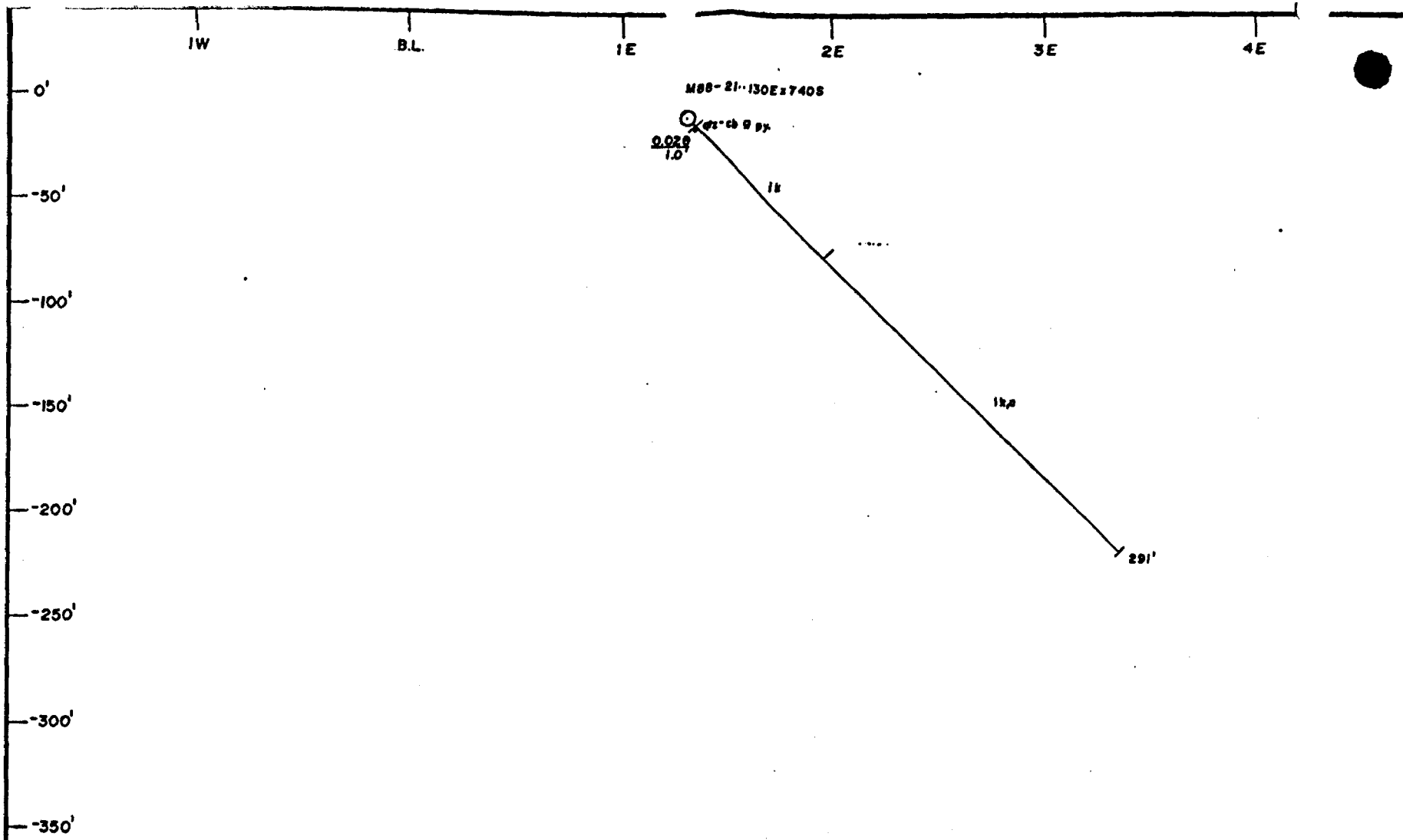


EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.

SECTION: 500S



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EGO RESOURCES LIMITED

MATONA PROJECT
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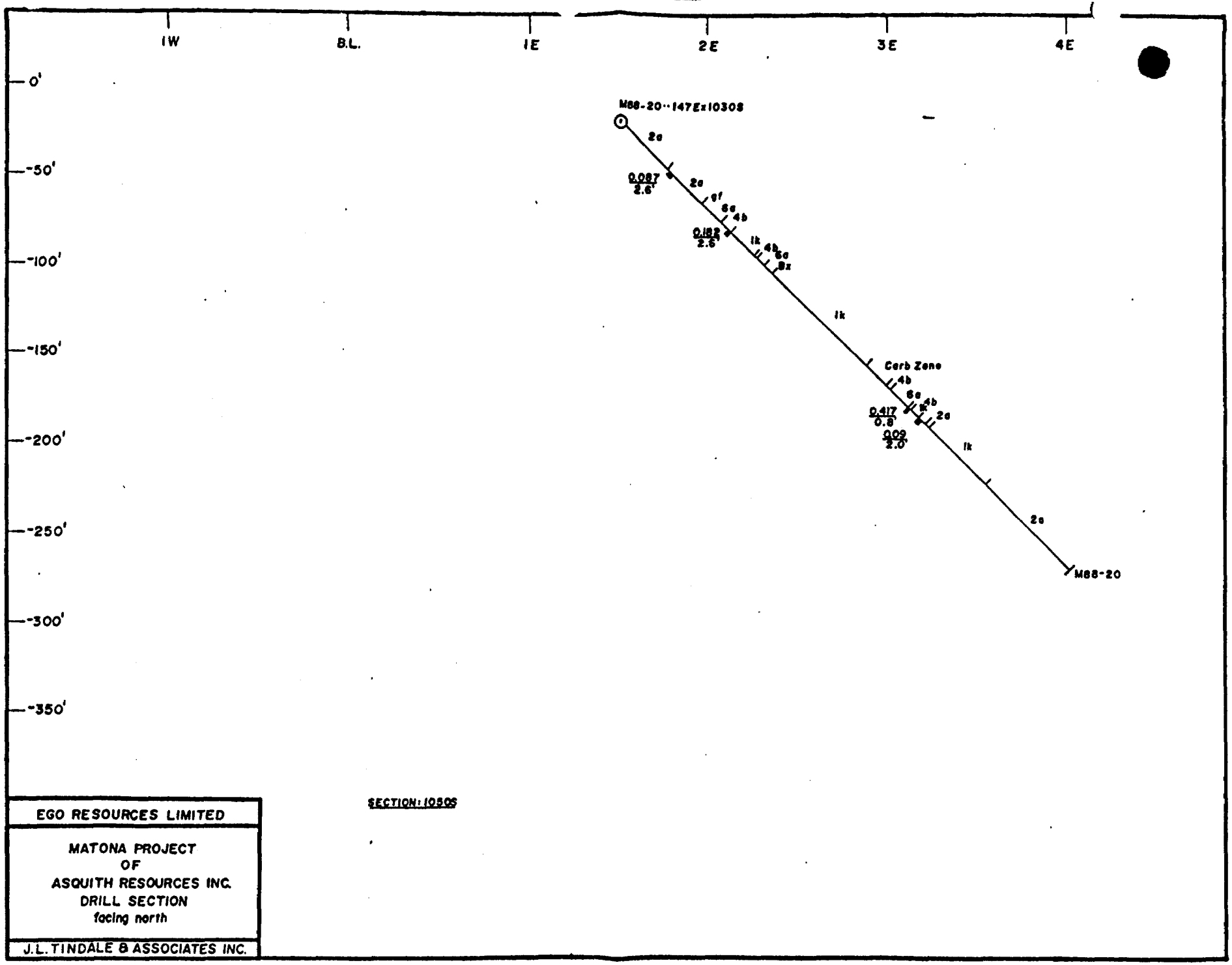
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.



SECTION: 10505

EGO RESOURCES LIMITED

MATONA PROJECT
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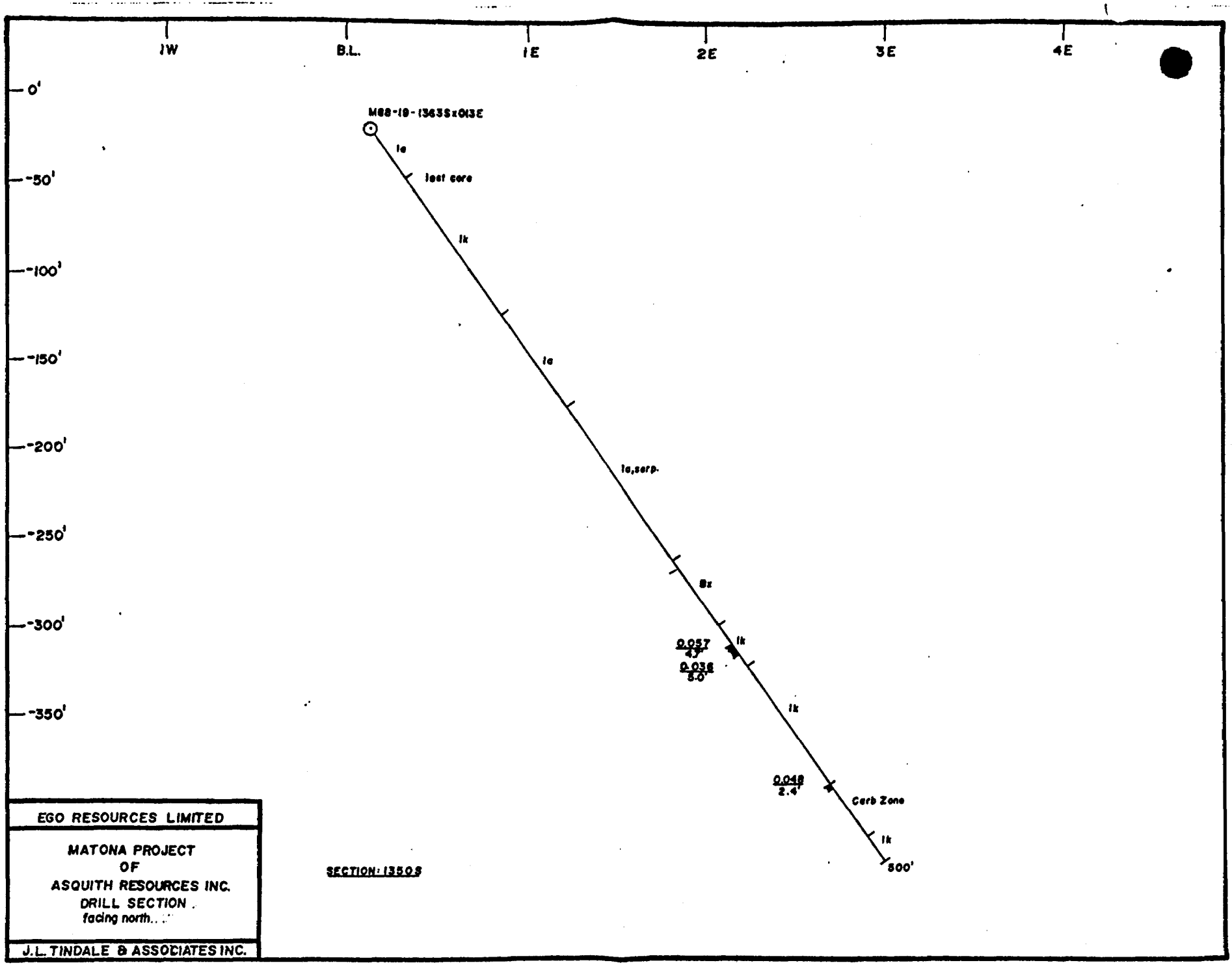
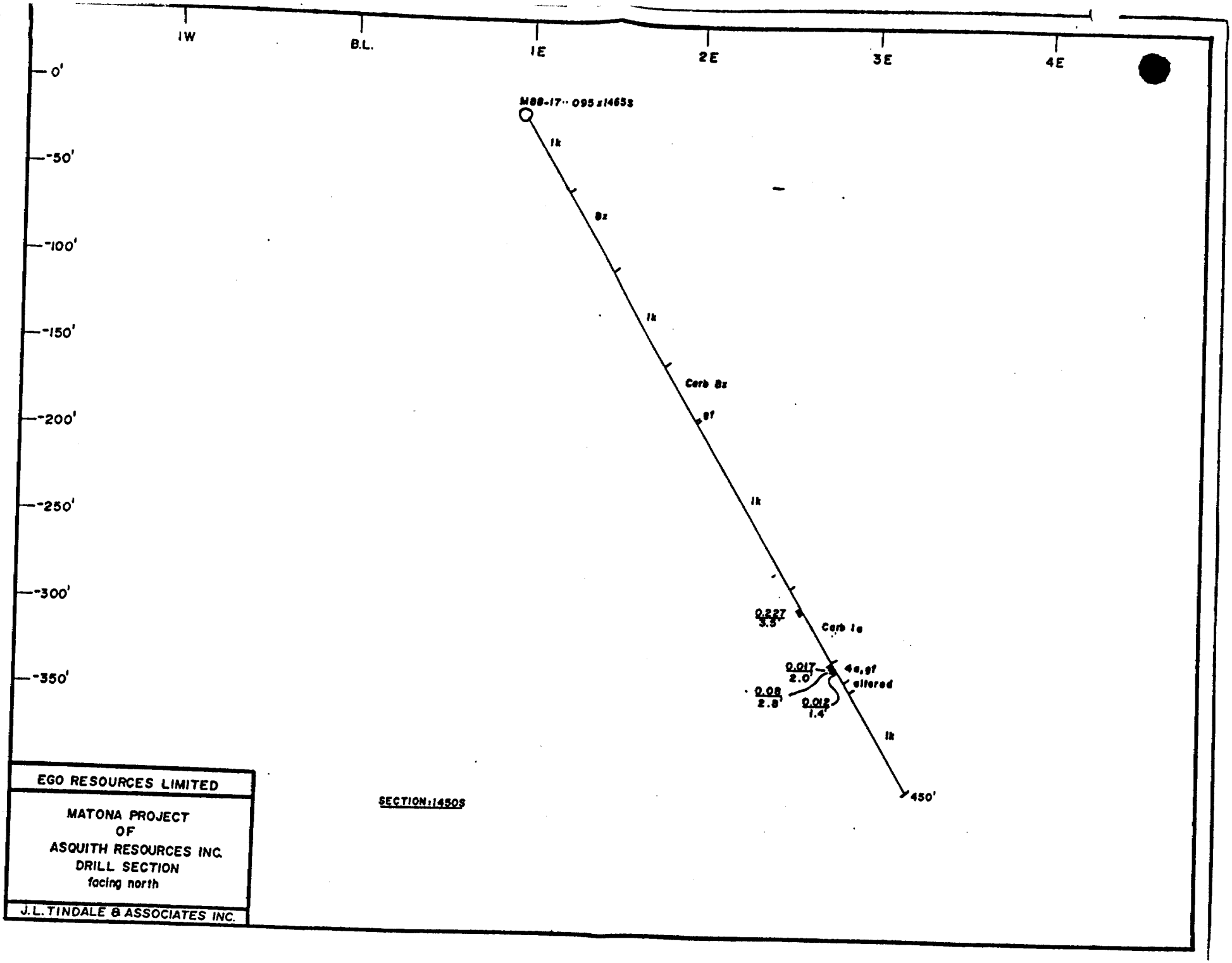
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.


1W
B.L.
1E
2E
3E
4E
0'
-50'
-100'
-150'
-200'
-250'
-300'
-350'
M88-19-1363S x 013E
1a
lost core
1k
1a
1a, serp.
8x
0.057
4.9'
0.036
5.0'
1k
1k
0.048
2.4'
Carb Zone
1k
500'
EGO RESOURCES LIMITED
MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION .
facing north. . .
J.L. TINDALE & ASSOCIATES INC.
SECTION: 1350S

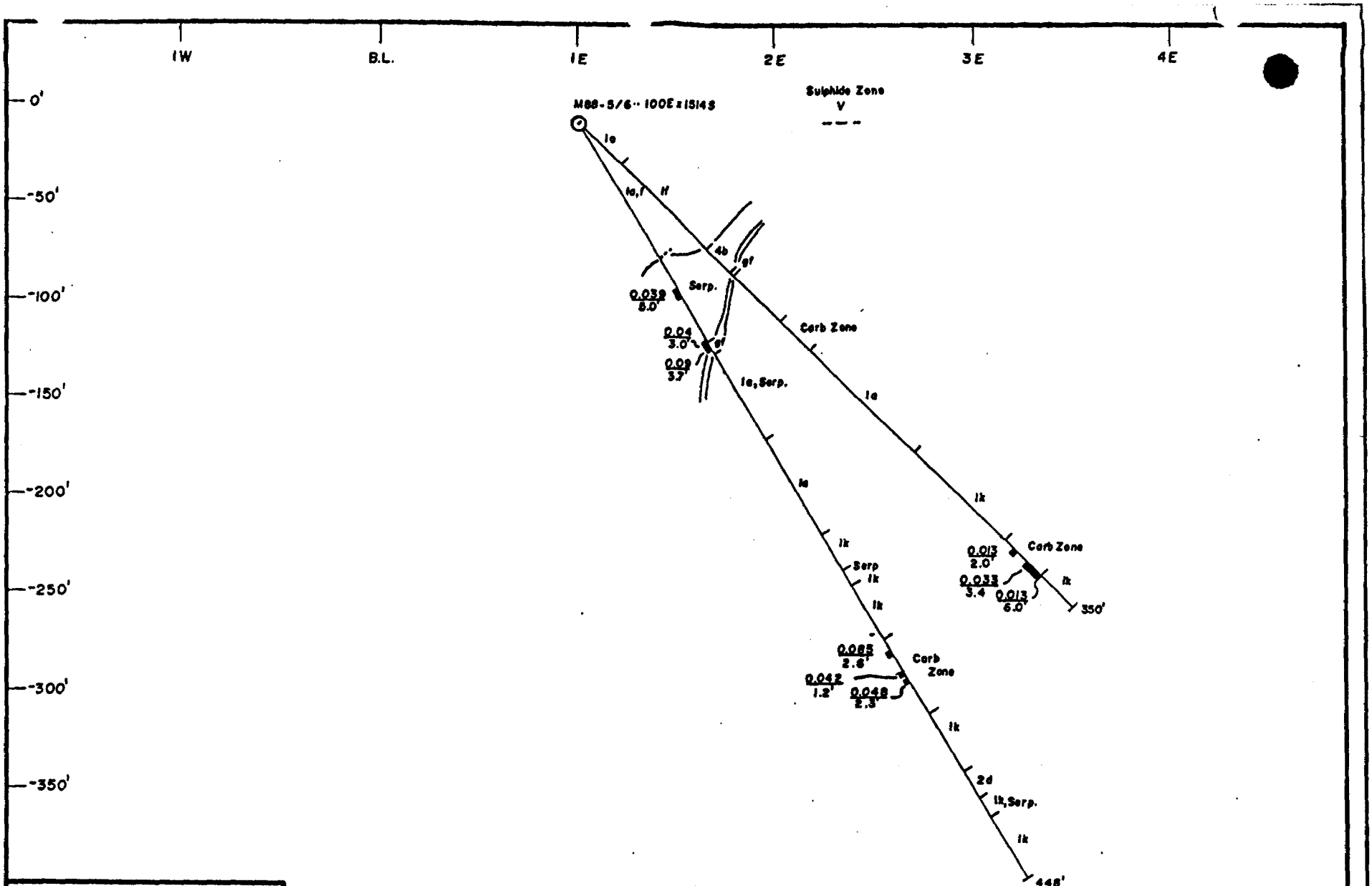


EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.

SECTION: 1450S

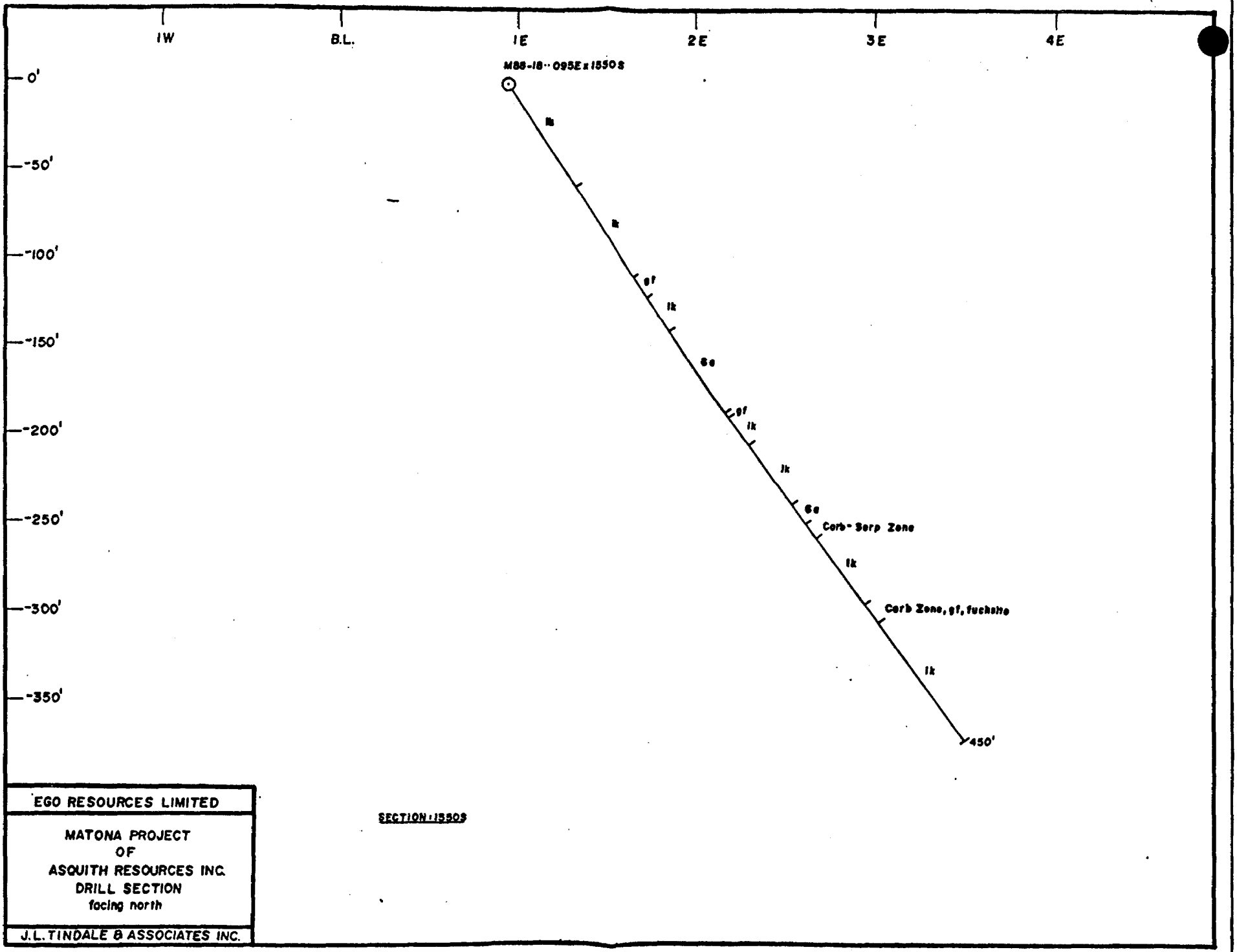


EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.

SECTION: 1500S



SECTION: 1550S

EGO RESOURCES LIMITED

MATONA PROJECT
OF
ASQUITH RESOURCES INC.
DRILL SECTION
facing north

J.L. TINDALE & ASSOCIATES INC.

Bethlehem Resources Corporation

Northair Mines Ltd.

REPORT
on
FIELD WORK

SHINING MOUNTAIN
GROUP

MACMURCHY TWP

Ontario

District of Sudbury
Larder Lake Mining Division

NTS 41P / NW

June 1990

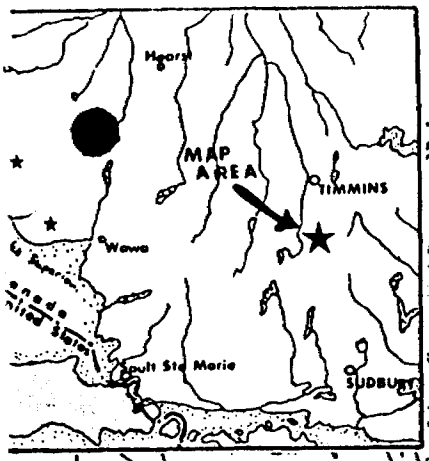
DONALD E. GARDEN

CONTENTS

MAPS

APPENDIX

LOCATION MAP



KNIGHT

T A L

Houston Lake

SHINING MOUNTAIN Group

Jess Lake

RAGEN LAKE Group

MACMURCHY

TYRRELL

Sulphide Creek

GRANITE LAKE Group

FAWCETT

Shining Tree Lake

LEONARD

Granite Lake

Fawcett Lake

South Sandstrum Lake

SANDSTRUM LAKE Group

MAP A

INTRODUCTION

During June 1990, the Shining Mountain Group was traversed in order to define regional geology and to locate mineralized zones. The claim group straddles highway 560 and is easily accessible to the north and south by means of timber roads.

In 1969, Motka Canada cut a grid, did a self-potential survey, magnetometer survey, some reconnaissance mapping and later diamond drilling.

To the west of the 15-claim group, on the west portion of the five patented of C. W. Brunet, there is a long trench exposing a series of thin chalcopyrite rich quartz-carbonate veins. The host rock is a brittle, very fine-grained red rhyolite that is well fractured.

The preliminary exploration work revealed felsic volcanis north of highway 560 and more mafic metavolcanics to the south. One well mineralized zone of massive pyrite was checked along the south boundary where it crosses the Nadeua timber road. The claim group was checked for similar rock types to the red rhyolite on the Brunet claim to the west.

Drilling in 1972 by Getty yielded assays of platinum/palladium, however the area of drilling is swampy and would not lend itself to surface investigation.

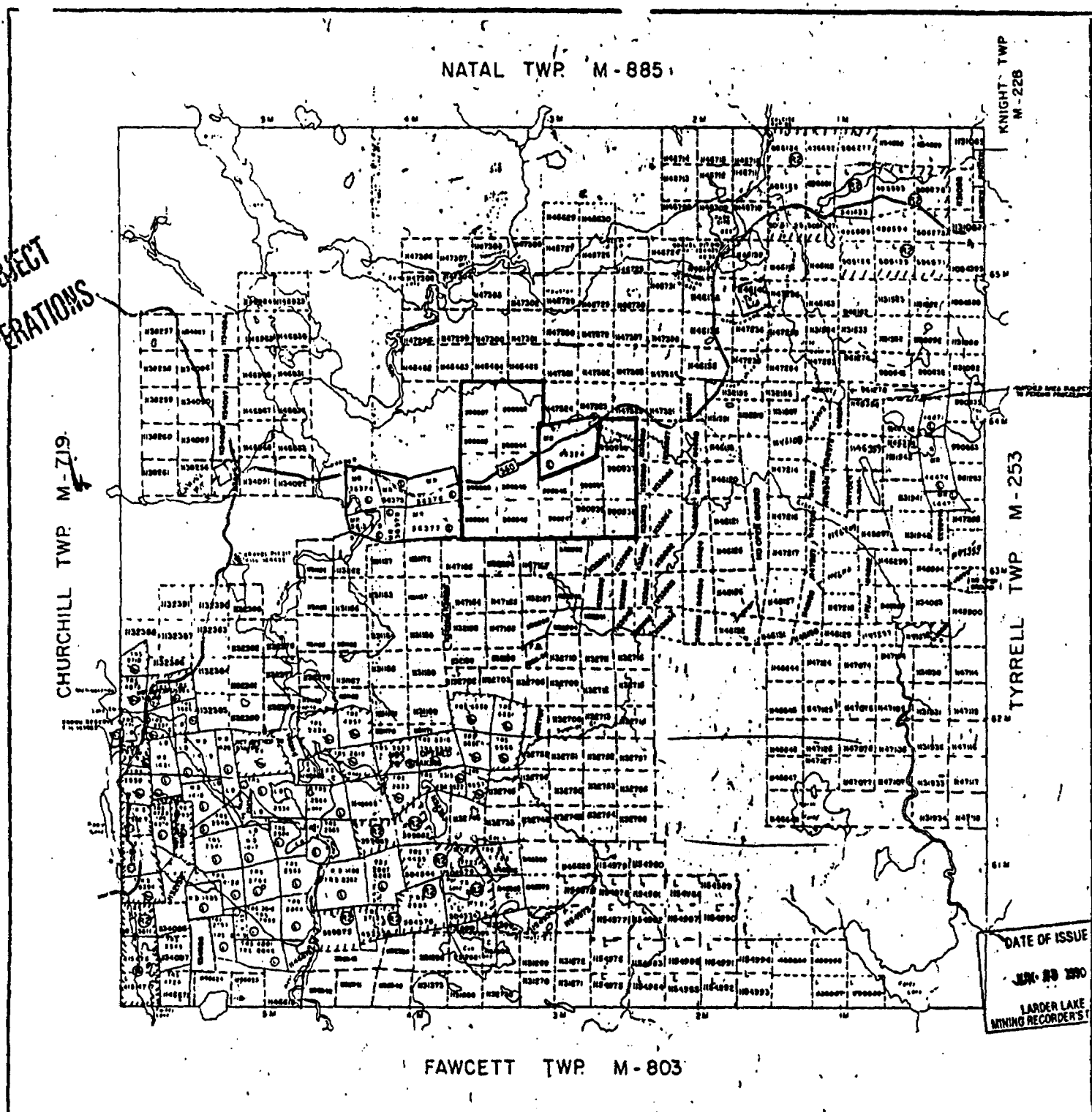
PROPERTY, LOCATION AND ACCESS

The property comprises 15 contiguous claims in MacMurchy township as follows:

L-990844	8:00 am EST		
990845	10:00 am EST		
990846	12:00 am EST		
990847	2:00 pm EST		
990848	4:00 pm EST		
990934	8:00 am EST		
990935	10:00 am EST	____	Staked : 4/4/90
990936	12:00 pm EST	____	Recorded: 10/4/90
990937	2:00 pm EST		
990938	4:00 pm EST		
990884	8:00 am EST		
990885	10:00 am EST		
990886	12:00 pm EST		
990887	2:00 pm EST		
990888	4:00 pm EST		

These claims straddle highway 560 just east of the Montreal River and touch Shining Tree Creek in the east. The town of Shining Tree is about 14 km west, Gowganda is located about 46 km east. they are bounded on the east and west by leased claims owned by C.W. Brunet of North Bay Ontario.

The property is readily accessible from highway 560 and a good lumber road, the Nadeau Rd (formerly the Bay Lumber Road), that extends southward from highway 560 near the west boundary of the claims. South of highway 560 the area has been timbered. As a result, there are several short timber roads through the area.



THE TOWNSHIP OF

MACMURCHY

DISTRICT OF SUDBURY

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND (P)
CROWN LAND SALE C.S.
LEASES (L)
LOCATED LAND Loc
LICENSE OF OCCUPATION L.O.
MINING RIGHTS ONLY M.R.O.
SURFACE RIGHTS ONLY S.R.O.
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED PATENTED S.R.O.

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers

Township closed to staking effective May 8/78 Section 36(1) of the Mining Act.

Mining Leases shown thus (M) have been terminated but Not Thrown Open For Staking

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O. 1970.

Order No.	File	Date	Disposition
(1)	[illegible]	[illegible]	[illegible]

(1) Surface and Mining Rights in all Crown Land in this township withdrawn from prospecting, staking out, sale or lease pursuant to Section 35 R.S.O. 1980 the Mining Act. Order M[illegible] effective October 18, 1982 at 2:00 p.m.

**TWP. OPENED TO STAKING ORDER O-M[illegible]
EFFECTIVE APRIL 3, 1990, 7:00AM EST.

(2) Surface and Mining Rights withdrawn from staking section 35 of the Mining Act R.S.O. 1980. Order M-42-90 [illegible] effective on April 3, 1990 at 7:01 AM E.S.T.

DATE OF ISSUE
JUN 28 1990
LARDER LAKE MINING RECORDER'S OFFICE

PLAN NO M-842

ONTARIO #1

MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

MAP B - CLAIM MAP
(REDUCED TO 50%)

REGIONAL GEOLOGY

MacMurchy and Tyrrell Township were mapped by the Ontario Government in 1971, producing a geological map (2360) at 1" to 1/4" mile.

The lithographic units for MacMurchy and Tyrrell townships is described in Table I (from ODM Geoscience Report 152).

The underlying rocks are Precambrian age. The earliest rocks comprise a metavolcanic sequence. The upper section is designated an alkalic volcanic suite referred to as mafic to intermediate trachytic metavolcanics. This could be similar to the Temiskaming volcanism of the Kirkland Lake area. The older metavolcanics have been subdivided into three distinct lithologic units; mafic unit (basalt), intermediate (andesite and dacite) and a felsic unit (rhyolite and rhyodacite). They form an interlayered volcanic sequence.

The trachytic metavolcanics are, in part, interlayered with the other volcanics.

Interlayered with these older rocks are the ultramafic and mafic intrusions of serpentinite and gabbro. Subsequently, these rocks are cut by felsic intrusives and later than the felsic intrusives are the mafic intrusions of the Matachewan Type. The Huronian supergroup contacts uncomformibly on the earlier sequence and, in turn, is intruded by the Nipissing Diabase.

STRUCTURE

There are two major fault zones in MacMurchy Township, the Jess Lake-Foley Lake fault along the eastern boundary and the Michiwakenda fault which crosses the southwestern corner of the township. All faults trend generally to the north and northwest

The Jess Lake Fault appears to cause a major break in the strike of the metavolcanic sequence in the north part of MacMurchy. To the west, the strike is about 100 degrees Az, to the east it is about 160 degrees Az. In the south portion of MacMurchy, the continuation of the Jess Lake Fault extends into Foley Lake fault which extends southward into Fawcett township. The strike of the metavolcanic sequence does not vary much across the fault, south of Foley Lake.

The Michiwakenda fault is traced by Ribble Lake in Churchill township and is important in MacMurchy for its association with the past producing Ronda Mine.

There are several parallel fold axes trending about 100-115 degrees Az across the western portion of MacMurchy. It would appear that the volcanic sequence repeats itself from south to north. To the east of the Jess Lake fault, similar fold axes trend about 160 degrees Az.

Several shear zones are evident sub parallel to the fold axes and are likely related to limb shearing on these folds.

GEOLOGY OF CLAIM GROUP

In 1964 Mokta Canada Ltd. completed a geological reconnaissance of the ground that was part of the present 15-claim group.

Their purpose was primarily to sample for petrographic analysis; a survey along a zone 3000' wide straddling the highway. their preliminary classification is as follows:

a) **Red Rocks** (pale to dark)-seems to be lava, sometimes fractured

b) **Grey Rocks** (greenish pale to dark)-very common also seems to be lava with some dark and siliceous fissures. May be of same nature as "a" but paler with ferruginous and sandy weathering.

c) **Dark Crystalline Rocks**
-with ferruginous weathering, fine grained in places, difficult to distinguish from "b".

d) **Red Porphyry with White Phenocrysts**

e) **Fractured Rocks** various pale, pale and dark, dark and red, dark.

There are also mineralized rocks, chlorotized zones, pale quartzite, purple and some iron formations.

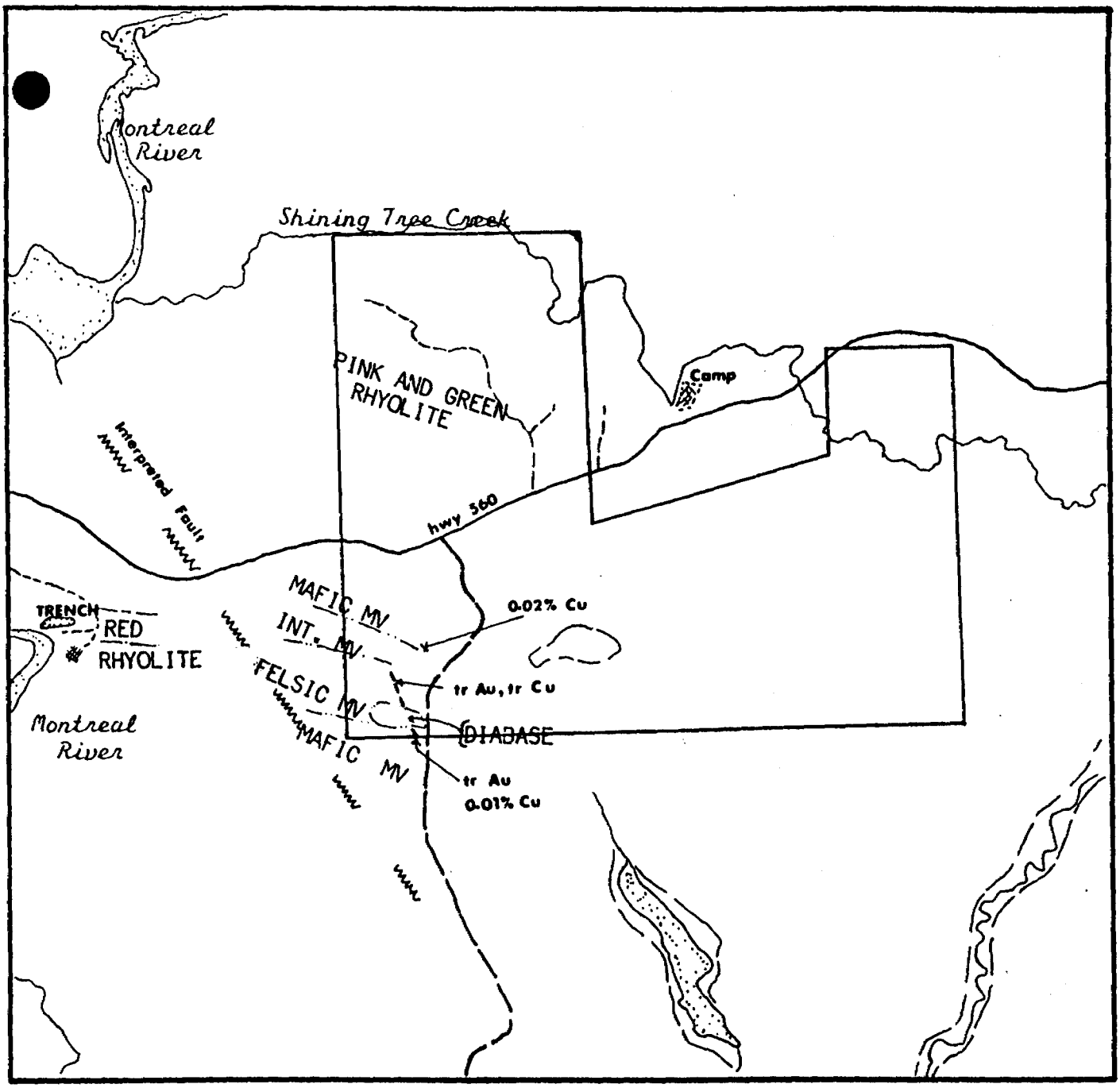
In 1965 Mokta completed their survey and produced the following table of formations:

Feldspar Porphyry	
Red and Green Rhyolites	Gabbro
Andesite	Rhyolite

This seems to coincide with their previous descriptions

In 1971 the OGS mapped the area on 1" to the 1/4 mile scale (Map 2365 with OGS Report GR152). The report includes a description of the Brunet claims, optioned by Mokta in the area of the present Shining Mountain Group. The copper showing is a "vein type" consisting of a quartz-carbonate vein striking east, dipping 75 degrees south in brecciated red rhyolite. A later examination of the showing indicated the rocks dip vertically with a north-west strike.

From Map 2365, the property is underlain by a series of acid to mafic metavolcanics trending generally 100 degrees Az. there is a mafic intrrusive on the 5 leased- claims group to the west of Shining Mountain Group and to the south.



MAP C

SHINING MOUNTAIN

GEOLOGY AND ASSAY VALUES

SCALE: 1" = 400'

ECONOMIC GEOLOGY

The quartz carbonate vein containing the copper showing is 5 feet wide and was exposed for a length of 150 feet. A chip sample (Raylloyd Mines and Explorations Ltd.) yielded 6.9% copper over four feet. minerals are chalcopyrite, bornite and specularite.

In 1965, 1966 Mokta Canada Ltd. drilled 15 holes, 13 of which are located on the five leased claims to the west of the Shining Mountain Group. All holes intersected mineralization varying from pyrite, pyrrhotite, chalcopyrite, specularite, limonite, chert and jasper.

Two of the 15 holes are located on the Shining Mountain Group. One, drilled 240 degrees Az-45 degrees dip for 362' did not yield assays. A second hole, drilled at 45 degrees Az-50 degrees for 525' yielded assays of gold, silver and copper.

Of interest, a hole recorded as drilled in 1976 by Getty Mining Northeast Ltd. and located approximately in the southwest corner of present claim L-990847 yielded assays of copper, zinc, silver, gold and platinum/palladium group. Mineralization was noted as graphite, pyrite and chert. The hole was drilled 225 degrees Az-45 degrees for 350'.

HISTORY OF EXPLORATION

Before 1964
C.W. Brunet-prospecting

1964-65 Mokta Canada Ltd
-geological mapping
-geophysical surveying-magnetometer
-self potential
-IP
-diamond drilling (15 holes)

1967 Raylloyd Mining and Explorations Ltd.
-examined property

1972 C.W. Brunet
-stripping, washing, trenching

1976 Getty Mining Northeast Ltd.
-geological
-drilling

Discussion

Prior to 1964 the ground was prospected resulting in a copper showing. The showing is in a quartz carbonate vein striking east, dip 75 degrees south. The vein is 5' wide and exposed for 150'. A chip sample taken by Raylloyd in 1967 analysed 6.91% copper over 4 feet. The mineralization is chalcopyrite, bornite and specularite.

During 1964 and 1965 Mokta did a magnetometer survey and self potential survey. Their report does not consider the results to be conclusive. However, it is apparent that two mag highs coincide with the Nipissing Diabase intrusive. The other locations are likely to be similar. The self-potential survey delineates a trend that curves across the southwest corner of the Shining Mountain claim Group.

The overall picture of mag and self-potential surveys indicates that the the east-west trending of metavolcanics could be turning southerly, possibly bending to parallel the Jess Lake fault.

Thirteen of the 15 drill holes were located in the area of the five lease claims to the west. Two holes were drilled on the claim group; one is listed as having assays for gold , silver and copper.

In 1976, Getty Mining Northeast drilled a 350' hole located at the south of the present claim groups. This hole encountered copper, zinc, silver, gold and platinum/palladium.

There is a copper showing indicated on Mokta's map located on the single lease claim adjacent to Shining Tree Creek.

PROGRAMME

The western area, north and south of highway 560 was investigated. The eastern portion is mostly swamp covered, little outcrop.

The trenched showing on the five-claim group of Brunet was visited. The mineralized zone is exposed for over 150'. The zone is a series of quartz-carbonate veins across 5 to 8 feet. Values were reported as high as 6.9% copper which is quite likely as there are sections of massive chalcopyrite and pyrite. Host rock is red rhyolite, very fine-grained and well fractured. The strike at that location is east-west. This criteria for mineralization was considered when traversing the claim group.

An outcrop with massive suphides is located along the south boundary, just west of the Nadeau road. The northern extension of this zone was also an exploration target. Earlier investigarion of the zone indicates a north-west trend, but cut off to the north by a section of diabase.

From the Mokta assessment report, a copper showing was indicated on the single claim of Brunet, just north of the highway and west of Shining Tree Creek. This was also a target for investigation.

RESULTS

1. The red rhyolite as observed at the trenching does not appear to extend eastward from the showing, however a fine-grained pinkish rhyolite is interbedded with a pale green rhyolite north of highway 560. This is on a north-easterly trend from the showing, not easterly. There is no apparent mineralization, assays yield nil gold, trace copper.

2. The area of the claim group south of highway 560, west of the Nadeau road is mostly mafic pillowed basalt grading southward to andesite alternating with thin layers of grey rhyolite. Assays from samples in the area yield nil gold to trace copper.

3. The diabase located 200' north of the south boundary at the Nadeau Road, appears to be concordant with the trend of the metavolcanics and extends for 300' north of the southern contact. The sulfide zone on the south side of the diabase was located to the north, however the outcrop is sparse. Samples from both locations are insignificant.

4. The copper showing on the one-claim of Brunet proved to be chalcopyrite mineralization in a coarse mafic intusive. The country rock has sparse pyrite mineralization and does not yield values. The copper showing assay is 0.14% copper.

CONCLUSIONS

The copper vein on the Brunet five-claim group does not extend easterly onto the Bethlehem/Northair claim group. (casual conversation with R. Annett of Shining Tree - he said that the mineralization "pinches out" at depth"). The metavolcanic sequence observed on the western claims ranges from felsic to mafic metavolcanics.

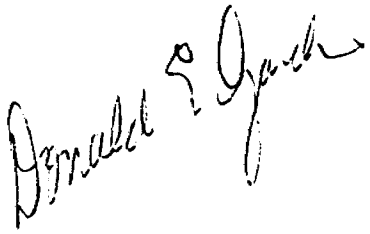
The massive sulphide zone appears to cross-cut the general trend, trending itself north-west. The diabase along the southern boundary is concordant with the metavolcanic sequence, likely a sill-like intrusive body.

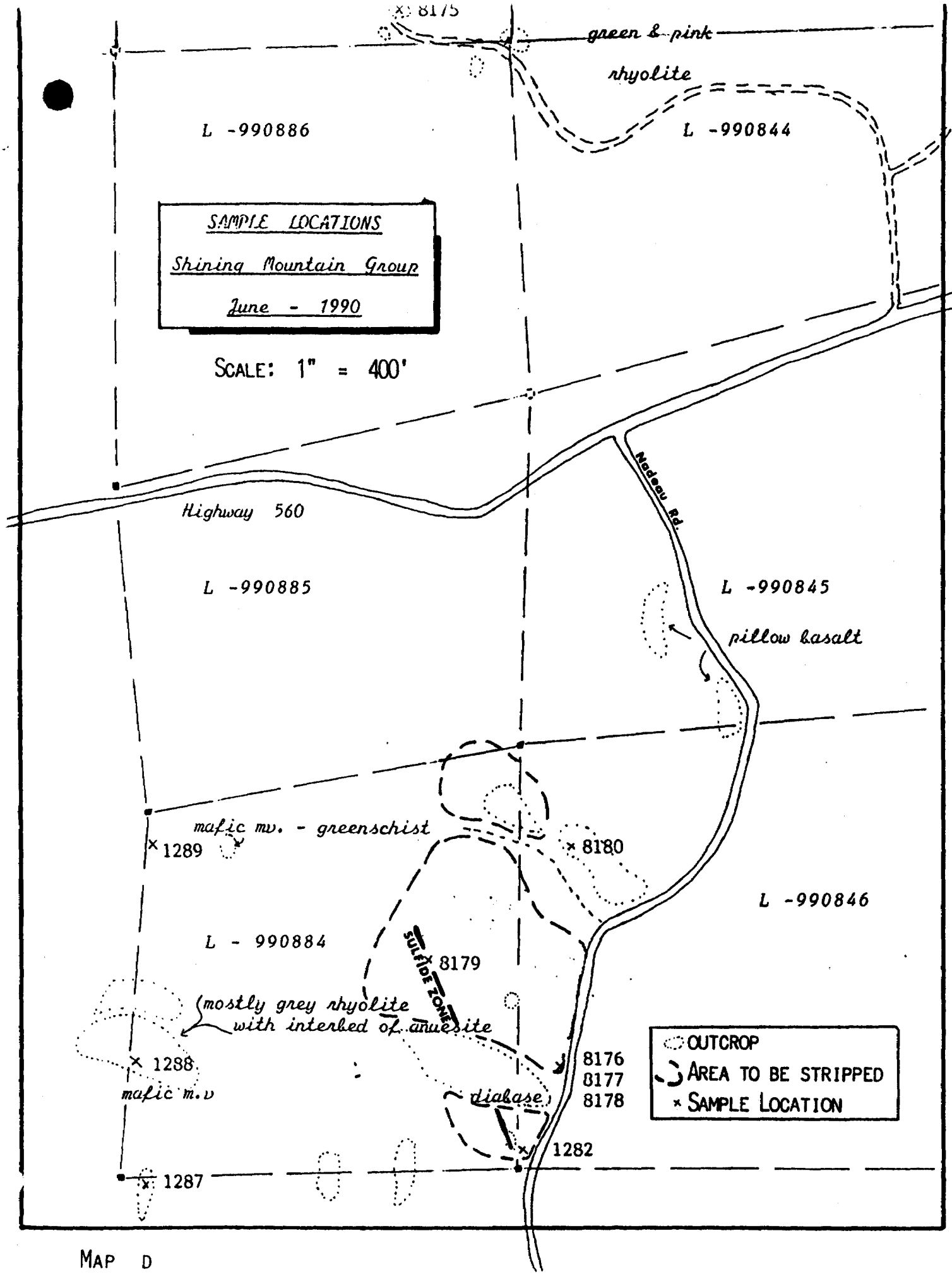
Mineralization, except for the thin band of massive pyrite, is sparse; assays, including the sulphide zone are very disappointing.

RECOMMENDATIONS

No further work is recommended at this time.

Should further work be considered, then a programme of stripping and washing the area north of the diabase and west of the Nadeau Road would be the most feasible approach. Although the area was timbered and re-planted, the Ministry of Natural Resources would consider compensation in the form of a work performance using the bulldozer.




8175
green & pink
rhyolite
L -990886
L -990844
SAMPLE LOCATIONS
Shining Mountain Group
June - 1990
SCALE: 1" = 400'
Nadeau Rd.
Highway 560
L -990885
L -990845
pillow basalt
mafic mv. - greenschist
1289
8180
L -990846
L - 990884
SULFIDE ZONE
8179
(mostly grey rhyolite
with interbed of anuesite
1288
mafic m.v
8176
8177
8178
diabase
1282
1287
OUTCROP
AREA TO BE STRIPPED
SAMPLE LOCATION

MAP D

APPENDIX I

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0788-RG1

Company: **DONALD E. GARDEN** Date: JUN-14-90

Project:

Attn:

We hereby certify the following Geochemical Analysis of 4 ROCK samples submitted JUN-11-90 by D. E. GARDEN.

Sample Number	Au ppb	Au check ppb	Ag ppm	Cu ppm
1279	3		0.7	1440
1280	Nil		0.3	3720
1281	Nil		0.2	1560
1282	3	3	0.3	98

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244 FAX (705)642-3300

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0817-RG1

Company: **DONALD E. GARDEN**

Date: JUN-21-90

Project:

Attn:

Copy 1. BETHLEHEN RES. VANCOUVER
2. HI-TEC RES. MGT.
3. DONALD E. GARDEN

We hereby certify the following Geochemical Analysis of 9 ROCK samples submitted JUN-15-90 by .

Sample Number	Au ppb	Au check ppb	Ag ppm	Cu ppm
1283	248	175	0.2	1860
1284	12		0.2	4070
1285	17		0.1	1980
1286	72	75	0.2	2460
1287	7		0.1	46
1288	3		0.1	58
1289	3		0.1	26
1290	Nil		0.5	1410
1291	Nil		0.1	115

Certified by _____

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705)642-3244 FAX (705)642-3300

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

0W-0877-RG1

Company: DONALD E. GARDEN
Project:
Attn: DONALD E. GARDEN

Date: JUN-29-90
Copy 1. BETHLEHEM RESOURCES
2. HI TEC RESOURCES MGT.
3. DONALD E. GARDEN

We hereby certify the following Geochemical Analysis of 39 ROCK/SPLIT CORE samples submitted JUN-26-90 by DONALD E. GARDEN.

Sample Number	Au ppb	Au check ppb	Cu ppm	Ni ppm	Zn ppm
8151	12				
8152	5		21		
8153	14	24	56		
8154	Nil		8		
8155	Nil		11		
8156	Nil		103		
8157	Nil		109		
8158	Nil		131		116
8159	Nil		125	73	147
8160	Nil		118		
8161	Nil		106		106
8162	Nil		109		
8163	Nil	Nil	191		69
8164	Nil		114		83
8165	Nil		112		
8166	Nil		291		
8167	Nil		104		101
8168	Nil		129		
8169	Nil		105		
8170	3		125		
8171	Nil		67		148
8172	Nil		22		
8173	Nil		58		26
8174	Nil		86		
8175	Nil		7		
8176	Nil		7		
8177	Nil		6		
8178	Nil		8		
8179	10		36		
8180	Nil		162		

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

Established 1928

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

0W-0877-RG1

Company: **DONALD E. GARDEN** Date: JUN-29-90

Project:

Attn: DONALD E. GARDEN

Copy 1. BETHLEHEM RESOURCES
2. HI TEC RESOURCES MGT.
3. DONALD E. GARDEN

We hereby certify the following Geochemical Analysis of 39 ROCK/SPLIT CORE samples submitted JUN-26-90 by DONALD E. GARDEN.

Sample Number	Au ppb	Au check ppb	Cu ppm	Ni ppm	Zn ppm
8181	3		92		
8182	3		139		
8183	7		50		
8184	Nil		83		
8185	Nil		103		
8186	14		37		
8187	Nil		27		
8188	Nil		143		
8189	3		926		

Certified by G. Lebel

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244 FAX (705) 642-3300