



42A02SE0134 2.729 BADEN

010

INTRODUCTION

In conjunction with a geological survey, a magnetic - electromagnetic survey has been carried out on the property of North Slave Mines Limited. The picket lines for control of this work were established during the period July 29th to August 26th inclusive. From August 17th to 31st, the field work for the geological survey and magnetic survey was undertaken. The electromagnetic survey was completed during the period September 23rd to 30th inclusive.

A separate report covers the geological survey on the claim group.

The object of the survey work is primarily to determine the potential importance of gold mineralization on the property. The geological work, however, indicates the possibility of significant base metal mineralization in the area.

PROPERTY, LOCATION AND ACCESS

The property of about 950 acres consists of 24 unpatented mining claims designated 326145 to 326168 inclusive.

Located in the southeast sector of Baden Township, Ontario, straddling the Montreal River, the property is about 42 miles southeast of Timmins, Ontario.

Access is most convenient by float or ski-equipped aircraft to the Montreal River from South Porcupine Lake. Alternatively, the property is accessible by boat, north on the Montreal River from Matachewan, a distance of about seven miles.

PREVIOUS WORK

Previous work on the property is outlined in the marginal notes of Map P195 by the D.D.M.

In 1936, under the supervision of G. L. Holbrooke four holes were drilled under a gold bearing quartz vein, 16 inches wide, on the west shore of the Montreal River. In one hole, Holbrooke reports a section of 40 feet which averaged 1.14 oz. gold. No significant values were encountered in the other three holes.

To the east of the Montreal River, Holbrooke reports that a strong vertical east-west trending shear, containing parallel quartz veins, yielded assays from grab samples of 0.01 to 0.46 oz. gold per ton over a width of 12 feet and a length of 600 feet. Along this zone twelve samples were taken from various pits and dumps on claims 326168 and 326165 by the staff of Shield Geophysics in July 1971.

In 1957 an electrical resistivity and self potential survey by Geophysical Engineering and Surveys Limited did not indicate any significant anomalies on the property.

GEOLOGY

General Geology

The geology of Baden Township is outlined on Map P195 by the Ontario Department of Mines.

According to this plan, acid to basic rocks intrude generally east striking metavolcanic rocks, which include variably

altered flows, tuffs, and agglomerates.

Considerable diabase, as dykes and sills, and minor bodies of pink to grey granite, quartz diorite and diorite intrude the volcanics.

The Montreal River fault, a prominent topographic feature, and the Mistinikon Lake fault, striking northwest and north respectively through the Township are the main faults in the area.

Economic Geology

As indicated under the heading "Previous Work" two gold occurrences are known to be present on the claim group. That occurrence east of the Montreal River was sampled and assayed by the staff of Shield Geophysics in July 1971.

Poorly exposed narrow, east striking grey quartz veins are present in an area of old pits and trenches. The pyritized black volcanic wallrock returned assays of a trace in gold. Quartzose material from the pit dump assayed 1.43, 0.005, 0.02, and 0.05 oz. gold per ton.

MAGNETIC SURVEY RESULTS AND INTERPRETATION

The survey method and instrument is described in the Appendix to this report. A map at a scale of one inch to two hundred feet, attached to this report, shows the contoured magnetic readings.

The magnetic susceptibilities on the property range from -4490 to 9100 gamma while the magnetic background is in the 1500

* cf (magnetic vertical field intensity / magnetic susceptibility)

to 2000 gamma range.

A fairly well defined east-west trend of the isomagnetics is apparent. This coincides with the main magnetic feature on the property a discontinuous magnetic low trending east-west along the base line. The discontinuity is thought to be caused by a series of northerly trending faults. The magnetic low is generally in the range of 1200 to 1500 gammas but isolated areas show much lower magnetic susceptibilities. Felsic to intermediate volcanic rocks are exposed in the areas of magnetic lows together with diabase. Apparently the magnetic susceptibilities are dominantly a reflection of the volcanics. The diabase, therefore, probably forms sill-like bodies of minor thicknesses rather than dykes. The gold mineralization on the property appears to be associated with the discontinuous magnetic lows, particularly east of the Montreal River, where the gold zone is adjacent to a paralleling lenticular magnetic low and high within the larger magnetic low.

Faulting striking generally north and north-northwest has been interpreted from the anomaly pattern. The north-northwest trending fault along the Montreal River is fairly well defined by the isomagnetics with an apparent right hand displacement thereby conflicting with the movement indicated on Map P195 by the Ontario Department of Mines. Relative horizontal displacement on each of the faults does not generally exceed several hundred feet. The magnetic susceptibilities, however, differ markedly from one side of a fault to the other, in some instances, suggesting significant

vertical displacement.

ELECTROMAGNETIC SURVEY RESULTS AND INTERPRETATION

The survey method and instrument is described in the Appendix to this report. Two plans at a scale of one inch to two hundred feet show the profiles and conductive zones.

East Trending Conductors

A number of generally east trending conductive zones are shown on plan 1. Based on all available data, the two most important, designated A and B, are described as follows:

Conductor A - This conductor is located between Lines 40W and 48W on the base line. The conductivity as determined from the profiles of dip angles and quadrature components is weak; however, diabase is exposed at the axis of conductivity, indicating that the source may be fairly deep below the diabase contact. Moreover, the east half of the conductor coincides with the most prominent magnetic low on the property. The conductor and coincident magnetic low appear to be interrupted by a generally north trending fault.

Conductor B - Indicated by profile inflections on Line 24E, Station 3+50 South, this weak conductor lies adjacent and parallel to the east gold zone. The conductor, several hundred feet long, and striking east, corresponds with the south contact or axis of a lenticular magnetic high. Pyrite mineralization is exposed in outcrops here, along with east striking gold-bearing quartz veining.

The remaining conductive zones on the property, some of

which are quite well defined, appear to be caused by rock contacts, shearing and water-bearing topographic features.

North Trending Conductors

Of the north trending conductors on plan 2, only one, located on the base line at Line 32 West, appears to be potentially important. The conductor strikes north-northwest within a magnetic low. This magnetic low, apparently representing part of the horizon which is associated with the gold occurrences, also is related to conductor A.

The other north trending conductive zone appears to be caused by the cross faults on the property or topographic features.

CONCLUSIONS

The magnetic survey reflects the east-west trending volcanic assemblage. Inasmuch as the extensive diabase exposure is not reflected by the magnetic survey, the diabase is interpreted to form a shallow capping over the volcanics rather than dykes.

An east trending disrupted magnetic low through the centre of the property, probably representing a particular phase of the volcanic assemblage in the area, shows displacement by north and north-northwest trending cross faults. Of this group of faults, the most prominent is the Montreal River fault. A right hand movement on this fault is suggested by the relative location of magnetic lows and direction of apparent subsidiary faults to the

east and west.

The known gold occurrences on the property are associated with rocks reflected by the magnetic low along the base line. The east gold occurrence is situated within a broad magnetic low adjacent to an isolated east trending magnetic high and weak conductive zone. The west gold occurrence is apparently situated a few hundred feet from an apparent fault in a rock horizon reflected by the magnetic low. Between Lines 28W and 32W a similar geophysical environment is present. Each of these areas merit a more detailed investigation which is specifically outlined under "Recommendations" in the geological report.

Respectfully submitted,

SHIELD GEOPHYSICS LIMITED

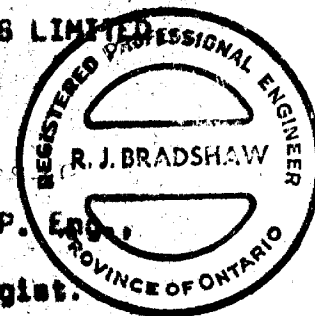
R. J. Bradshaw

R. J. Bradshaw, P. Eng.

Consulting Geologist.

Timmins, Ontario,

October 7, 1971.



C E R T I F I C A T E

I, Ronald J. Bradshaw, residing at 480 Howard Street, Timmins, Ontario, a consulting geologist with office at 26 Pine Street South, Timmins, Ontario, do hereby certify that:

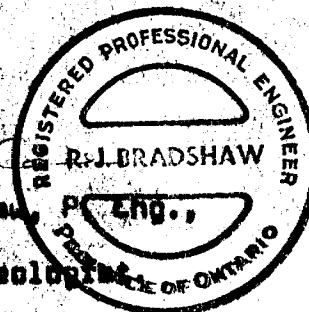
I attended Queen's University, Kingston, Ontario, and graduated with an Honours B.A. degree in Geological Sciences in 1958.

I am a Fellow of the Geological Association of Canada, and a Member of the Canadian Institute of Mining and Metallurgy and of the Association of Professional Engineers of the Province of Ontario.

I have no interest either directly or indirectly in the shares or securities of Melville Mines & Industries Ltd.

Timmins, Ontario,
October 7, 1971.

R. J. Bradshaw
R. J. Bradshaw, P. Eng.,
Consulting Geologist



A P P E N D I X

SURVEY METHOD AND INSTRUMENT DATA

Electromagnetic Survey

A Ronke EM 16, number 35, was used for the survey.

This instrument is simply a sensitive receiver covering the frequency of the new VLF-transmitting stations with means of measuring the vertical field components. The VLF-transmitting stations operate for communications with submarines at frequencies between 17.8 and 24.0 Khz. The vertical antenna current of these transmitting stations creates a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary field radiating from these bodies. This equipment measures the vertical components of these secondary fields.

The receiver has two inputs, with two receiving coils built into the instrument. One coil has a normally vertical axis and the other is horizontal.

The signal from the coil with vertical axis is first minimized by tilting the instrument. The tilt angle is calibrated in percentages. The remaining signal in this coil is finally balanced out by a measured percentage of signal from the other coil.

After a suitable station is selected, at right angles to the direction of the survey lines, readings are made of the in-phase and quadrature components where the signal has been minimized to its greatest degree. The VLF-transmitting stations at Cutler,

Maine and Panama, have been used for this survey.

The lower end of the handle will, as a rule, point towards the conductor and the instrument is so calibrated that when approaching a conductor, the angles are positive in the in-phase component.

As with any electromagnetic unit, the largest and best conductors give the highest ratio of the in-phase and quadrature components.

Magnetometer Survey

A Sharpe M.F.-1 fluxgate magnetometer was used in the magnetic survey. This instrument measures the vertical component of the earth's magnetic field in gammas. Base stations for determining the magnetic diurnal variations were established along the main base line at 100 foot intervals. Magnetic readings were taken at 50 foot intervals, along the cross lines.



42A02SE0134 2.729 BADEN

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020 JAN 3 1972

PROJECTS
SECTION

GEOLOGICAL SURVEY

on the property of

MELVILLE MINES & INDUSTRIES LTD.

Baden Township, Ontario

Timmins, Ontario,

October 7, 1971.

INTRODUCTION

In conjunction with a magnetic - electromagnetic survey, a geological survey has been carried out on the Baden Township property of Melville Mines & Industries Ltd. The 19.5 miles of picket line for control of this work were established during the period July 29th to August 26th inclusive, while the geological field work was completed during the August 17th to 31st period.

The object of the survey work was to determine the potential importance of two gold occurrences on the property.

PROPERTY, LOCATION AND ACCESS

The property of about 960 acres consists of 24 unpatented mining claims designated 326145 to 326168 inclusive.

Located in the southeast sector of Baden Township, Ontario, straddling the Montreal River, the property is about 42 miles southeast of Timmins, Ontario.

Access is most convenient by float or ski-equipped aircraft to the Montreal River from South Porcupine Lake. Alternatively, the property is accessible by boat, north on the Montreal River from Matachewan, a distance of about seven miles.

PREVIOUS WORK

Previous work on the property is outlined in the marginal notes of Map P195 by the D.D.M.

In 1936, under the supervision of B. L. Holbrooke four holes were drilled under a gold bearing quartz vein, 16 inches wide,

on the west shore of the Montreal River. In one hole, Holbrooke reports a section of 40 feet which averaged 1.14 oz. gold. No significant values were encountered in the other three holes.

To the east of the Montreal River, Holbrooke reports that a strong vertical east-west trending shear, containing parallel quartz veins, yielded assays from grab samples of 0.01 to 0.46 oz. gold per ton over a width of 12 feet and a length of 600 feet. Along this zone twelve samples were taken from various pits and dumps on claims 326168 and 326165 by the staff of Shield Geophysics in July 1971.

In 1957 an electrical resistivity and self potential survey by Geophysical Engineering and Surveys Limited did not indicate any significant anomalies on the property.

GENERAL GEOLOGY

According to Map P195 by the Ontario Department of Mines much of Baden Township is underlain by metavolcanic rocks which have been intruded by small bodies of granitoid rocks and dykes and sills of diabase. The northeast sector of the Township is almost entirely underlain by granite.

The Montreal River fault, a major structure in the order of 100 miles long, crosses the Township and the claim group following the Montreal River in a northwest direction. In the west half of the Township the Mistinikon Lake fault strikes north.

Gold showings in the Township are found in metavolcanic

rocks near the contacts of granitoid rocks according to the observations of H. L. Lovell and assistants, geologist for the Ontario Department of Mines.

TOPOGRAPHY

Several north trending rock ridges are present on the ground and rise 50 to 100 feet above the general level of the Lake. These are formed by both basic volcanic rock and by diabase sills. The largest ridge on the west side of the claim is formed by a diabase sill. The area is one of fairly heavy tree growth and has developed after a fire 60 to 70 years ago which destroyed the original timber. Since the fire, outcrops have acquired a thick coating of moss and well rooted trees so that rock, while abundant, is impossible to view easily in most cases. Much of the rock could only be seen to a greater extent by employing considerable stripping of moss and roots.

GEOLOGY OF THE MELVILLE PROPERTY

Rock Types

Approximately 10 per cent rock exposure is present on the claim group.

Table of Formations

Diabase - sills and dykes

Intrusive Contact

Acid Intrusive Rocks

Intrusive Contact

Metavolcanics 1a Altered basic to felsic volcanic rocks
1b Altered tuff
1c Pillow lava
1d Agglomerate

The metavolcanic rocks on the property are generally dark coloured varying from a dark green to jet black, with a fine grained to aphanitic texture. The usual volcanic features are not well developed because of metamorphism. This metamorphism may account for the almost imperceptible change of dark coloured felsic volcanic rocks, with characteristic conchoidal fracture, to slightly lighter coloured intermediate type volcanic rocks at various locations on the property. There appears to be a rather higher concentration of pyrite in the volcanic rocks than is normally expected. On Line 28E, Station 155, for instance, up to 20 per cent pyrite is present in the black rhyolitic volcanics.

An area of agglomeratic volcanics trending about east is present in the west-central sector of the property on either side of a small lake. The rock exposures show stretched almost parallel fragments of amygdaloidal felsic lava in a dark green andesitic matrix.

In the south-central sector of the property, crossed by Line 20W, an area of poorly developed pillow lava is present.

On the west shore of the Montreal River near the north boundary are exposures of intermediate tuffs.

Very few granitoid rocks are exposed in the survey area. On Line 32W, Station 11N, is present a northeast trending aplite dyke, six feet wide. The volcanic rocks at two isolated locations along the east and west shores of the Montreal River have been altered by the development of pink feldspar and carbonate. These

exposures are termed granitized volcanics.

Exposures of diabase on the property are unusually widespread. Typically, medium to coarse grained, with a grey colour, the rock weathers brown. Inasmuch as there is no obvious magnetic indication of the diabase, it is probable that the rock forms sill-like bodies of minor thicknesses.

The main area of diabase exposure is present in the extreme west sector of the property. The tendency for the exposures, in forming generally north-south ridges, to reflect the long dimension of the sills, is well developed here.

Structural Geology

The few strike and dip determinations that could be observed are confirmed by the east trending isomagnetics.

The Montreal River fault trending northwesterly through the claims is of course a major structure at least 100 miles long. The magnetic susceptibilities and electromagnetic surveys on the property both confirm the existence of the fault. A right handed horizontal displacement on the fault is indicated by the magnetic survey whereas the O.D.M. postulates a left handed displacement. In any event the dominant movement on the fault is probably vertical rather than horizontal. Other faults on the property trending north and northwest are postulated from the magnetic survey. Only a few minor faults were observed in the outcrops.

One set of joints on the property parallels the northwest trending faults.

Economic Geology

The main interest in the property has evolved from the presence of two gold occurrences on either side of the Montreal River. These showings are described as follows:

East Showing - A gold-bearing quartz vein is poorly exposed between Lines 24E and 28E just south of the base line. The vein about 10 inches wide strikes east-west. Banding in the grey pyritized quartz is marked by chlorite. Although there is evidence of a fair amount of old trenching in the vicinity of the quartz vein there is no evidence of diamond drilling.

A total of 15 samples have been taken from the showing area for gold and silver analyses. Eleven samples of broken rock on the edges of the various pits returned assays ranging from trace to 0.05 oz. gold per ton. The sample material consists largely of pyritized blue-black felsic volcanics, apparently vein wallrock. Four samples of vein material assayed 1.43, 0.95, 0.06 and 0.46 oz. gold per ton.

Just south of the main pit a weak conductive zone has been located which coincides with the edge of an east trending lenticular magnetic high, several hundred feet long. (See Electromagnetic - Magnetic Survey Report)

West Showing - There is no apparent surface expression of the west showing. On the marginal notes of Map P195 G. L. Holbrooke reported a drill intersection of 40 feet which assayed 1.43 oz. gold per ton. Three additional holes failed to intersect values.

During the present survey a drill hole was located at 6+00w adjacent to the base line in an area where several pits and trenches are present.

Other Mineral Occurrences - At Station 6S, Line 36E, a small amount of molybdenite mineralization was found in an intermediate volcanic rock with epidote seams. A sample of this material assayed 0.06 per cent MoS_2 .

A number of pyritized quartz veins were located during the survey work. These include a vein 6 feet wide within intermediate volcanic tuff near the north end of Line 8w. Other veins are located on Lines 4w, 8w, 32w and 52w as shown on the accompanying plan. Most of these occurrences show evidence of work in the past but none were sampled during this project.

CONCLUSIONS

The generally east striking basic to felsic metavolcanics are overlain in places by thin diabase sills. Although various volcanic structures in the metavolcanics could be recognized with difficulty, the compositional changes were so imperceptible that classification was not feasible. Based on the geophysical data, north-northwest and north trending faults are postulated to cut the volcanics with minor horizontal movement and perhaps major vertical movement. Of course the Montreal River fault is the dominant structure.

It has been determined that narrow gray quartz veins

contain the gold at the east gold showing. An arithmetic average of four assays from the vein material is 0.72 oz. gold per ton, thereby indicating that if sufficient vein material could be located a profitable mining venture might well be viable. A surface expression of the west gold showing has not yet been located.

The magnetic - electromagnetic survey studies in relation to available geological data indicates that a geological environment similar to the east gold showing is present along the base line across most of the property. More specifically an area lying between Lines 48W and 32W along the base line appears to be most interesting. Here a very prominent magnetic low is associated with two weak to moderate strength conductive zones, a condition similar to that present at the east gold showing.

A number of unsampled pyritized quartz veins located during the survey bear no particular relationship to the geophysical surveys.

On Line 32E, Station 65, an exposure of epidotized volcanic contains minor amounts of molybdenite.

RECOMMENDATIONS

It is recommended that a programme of careful prospecting, rock trenching and sampling be concentrated in three areas, namely, the east and west gold showings and that area lying along the base line between Lines 48W and 32W. At the same time the Ronka EM 16 unit should be utilized in these areas to better define the location of conductive zones and thereby assist in the possible

determination of their cause. The various quartz veins on the property should be sampled and assayed.

A three man crew, including a geologist, is proposed for this work over a two week period. Estimated cost is as follows:

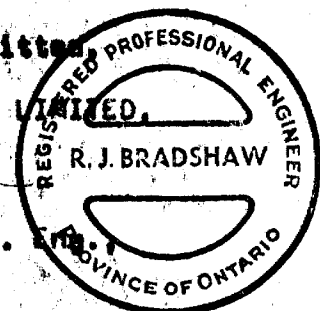
Geologist	\$1000.00
Crew of 2 men for trenching, prospecting	1500.00
Equipment (camp, plugger, food, etc.)	500.00
Transportation	200.00
Preparation of report and assays	<u>500.00</u>
Estimated Cost	<u>\$3700.00</u>

Dependent upon this work a drill programme would be formulated.

Respectfully submitted
SHIELD GEOPHYSICS LIMITED,

R. J. Bradshaw
R. J. Bradshaw, P. Eng.

per W. Gilman
W. Gilman,
Consulting Geologists.



Timmins, Ontario,
October 7, 1971.

APPENDIX

Sampling and Assays

<u>Sample No.</u>	<u>Location</u>	<u>Au/oz.</u>	<u>Ag/oz.</u>	<u>MgS₂%</u>
1. - grab with pyrite	Line 16E St. 7S	nil	0.02	
2. - grab with pyrite	Line 28E St. 15S	nil	0.01	
3. - grab with MgS ₂	Line 36E St. 6S			0.06
4. - grab with pyrite		nil	tr	
5. - grab representative	East showing quartz vein	0.95	tr	
6. - grab representative	East showing quartz vein	0.06	tr	
7. - grab representative	East showing quartz vein	0.46	tr	



ASSESSMENT WORK DETAILS

Township or Area Baden Township

Type of Survey Electromagnetic
A separate form is required for each type of survey

Chief Line Cutter Shield Geophysics Limited
Name
 or Contractor 26 Pine St. S., Timmins, Ontario
Address

Party Chief D. Young
Name
26 Pine St. S., Timmins, Ontario
Address

Consultant R. J. Bradshaw
Name
26 Pine St. S., Timmins, Ontario
Address

List numerically

326145
326147
326148
326149
326150
326153
326154
326155
326156
326157
326158
326159
326160
326161
326162
326163
326164
326165
326166
326168

COVERING DATES

Line Cutting July 29 - August 26, 1971

Field September 23 - 30, 1971
Instrument work, geological mapping, sampling etc.

Office October 1 - 7, 1971

INSTRUMENT DATA

Make, Model and Type Ronka EM 16

Scale Constant or Sensitivity See Appendix to report
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 1015

Number of Readings Within Claim Group approx. 1250

Number of Miles of Line cut Within Claim Group 19.5

Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED

	<u>20 DAYS</u> per claim	<u>40 DAYS</u> per claim	Includes (Line cutting)
Geological Survey	<input type="checkbox"/>	<input type="checkbox"/>	
Geophysical Survey	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Show Check ✓
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE October 8, 1971.

SIGNED _____

TOTAL 20

Send in duplicate to:

FRED W. MATTHEWS
 SUPERVISOR-PROJECTS SECTION
 DEPARTMENT OF MINES &
 NORTHERN AFFAIRS
 WHITNEY BLOCK
 QUEEN'S PARK
 TORONTO, ONTARIO

RECEIVED
JAN 3 1972

PROJECTS
 SECTION

If space insufficient, attach list

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

- (a) substantial and systematic coverage of each claim
- (b) line spacing not exceeding 400 foot intervals
- (c) stations not exceeding 100 foot intervals or
- (d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

×

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

PERFORMANCE & COVERAGE CREDITS

ASSESSMENT WORK DETAILS

Township or Area Baden Township

Type of Survey Magnetic
A separate form is required for each type of survey

Chief Line Cutter Shield Geophysics Limited
 or Contractor 26 Pine St. S., Timmins, Ontario
Name Address

Party Chief D. Young
26 Pine St. S., Timmins, Ontario
Name Address

Consultant R. J. Bradshaw
26 Pine St. S., Timmins, Ontario
Name Address

MINING CLAIMS TRAVERSED

List numerically

326145
326146
326147
326148
326149
326150
326151
326152
326153
326154
326155
326156
326157
326158
326159
326160
326161
326162
326163
326164
326165
326166
326167
326168

COVERING DATES

Line Cutting _____

Field August 17 - 31, 1971
Instrument work, geological mapping, sampling etc.

Office September 5 - 10, October 1 - 7, 1971

INSTRUMENT DATA

Make, Model and Type Sharpe M.F.-1 fluxgate magnetometer

Scale Constant or Sensitivity + or - 10 gammas
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 1014

Number of Readings Within Claim Group approx. 2100

Number of Miles of Line cut Within Claim Group 19.5

Number of Samples Collected Within Claim Group _____

<u>CREDITS REQUESTED</u>	<u>20 DAYS</u> per claim	<u>40 DAYS</u> per claim	<u>Includes</u> (Line cutting)
Geological Survey	<input type="checkbox"/>	<input type="checkbox"/>	
Geophysical Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Show Check <input checked="" type="checkbox"/>
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE October 8, 1971

SIGNED [Signature]

TOTAL 24

Send in duplicate to:
RECEIVED
 FRED W. MATTHEWS
 SUPERVISOR-PROJECTS SECTION
 DEPARTMENT OF MINES &
 NORTHERN AFFAIRS
 WHITNEY BLOCK
 QUEEN'S PARK
 TORONTO, ONTARIO
 PROJECTS SECTION
 JAN 3 1972

If space insufficient, attach list

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

AS ASSESSMENT WORK

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If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

- (a) substantial and systematic coverage of each claim
- (b) line spacing not exceeding 400 foot intervals
- (c) stations not exceeding 100 foot intervals or
- (d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

×

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

PERFORMANCE & COVERAGE CREDITS

ASSESSMENT WORK DETAILS

Township or Area Baden Township

Type of Survey Geological
A separate form is required for each type of survey

Chief Line Cutter Shield Geophysics Limited
Name
 or Contractor 26 Pine St. S., Timmins, Ontario
Address

Party Chief W. Gilman
Name
26 Pine St. S., Timmins, Ontario
Address

Consultant R. J. Bradshaw
Name
26 Pine St. S., Timmins, Ontario
Address

COVERING DATES

Line Cutting _____

Field August 17 - 31, 1971
Instrument work, geological mapping, sampling etc.

Office September 5 - 10, October 1 - 7, 1971

INSTRUMENT DATA

Make, Model and Type _____

Scale Constant or Sensitivity _____
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 1015

Number of Readings Within Claim Group _____

Number of Miles of Line cut Within Claim Group 19.5

Number of Samples Collected Within Claim Group _____

<u>CREDITS REQUESTED</u>	<u>20 DAYS</u> per claim	<u>40 DAYS</u> per claim	Includes (Line cutting)
Geological Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Geophysical Survey	<input type="checkbox"/>	<input type="checkbox"/>	Show Check <input type="checkbox"/>
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE October 8, 1971.

SIGNED [Signature]

MINING CLAIMS TRAVERSED

List numerically

326145	
326147	
326148	
326149	
326150	
326153	
326154	
326155	
326156	
326157	
326158	
326159	
326160	
326161	
326162	
326163	
326164	
326165	
326166	
326168	
TOTAL	<u>20</u>

If space insufficient, attach list

Send in duplicate to:
RECEIVED
 FRED W. MATTHEWS
 SUPERVISOR-PROJECTS SECTION
 DEPARTMENT OF MINES & NORTHERN AFFAIRS
 WHITNEY BLOCK
 QUEEN'S PARK
 TORONTO, ONTARIO
JAN 3 1972
 PROJECTS SECTION

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

- (a) substantial and systematic coverage of each claim
- (b) line spacing not exceeding 400 foot intervals
- (c) stations not exceeding 100 foot intervals or
- (d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

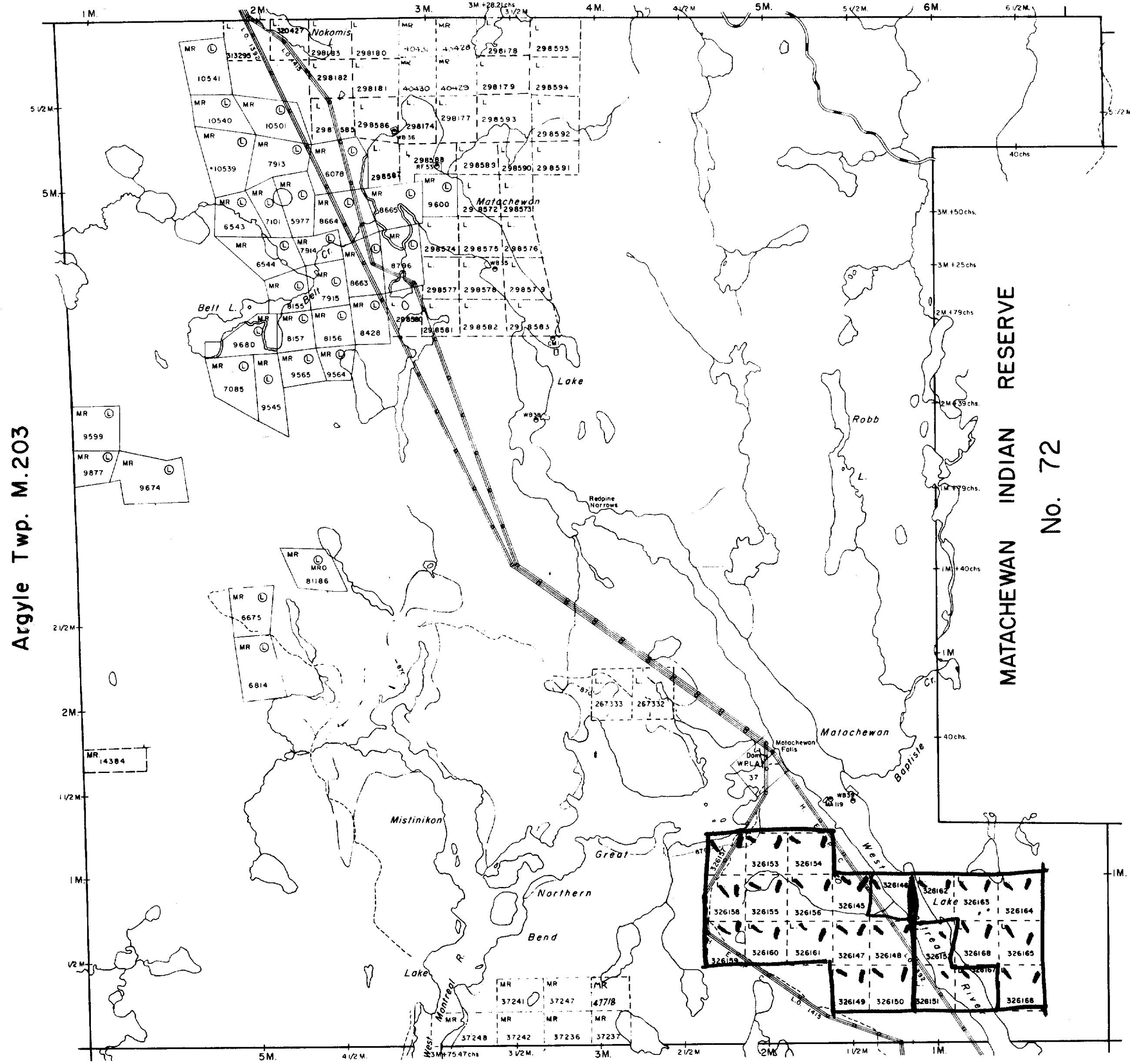
205M

BADEN TWP

205M

Robertson Twp. M.310

Shebo Twp. M.385



Argyle Twp. M.203

MATACHEWAN INDIAN RESERVE No. 72

Alma Twp. M.202

THE TOWNSHIP OF

BADEN

claim map
DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

- PATENTED LAND Ⓟ
- CROWN LAND SALE C.S.
- LEASES Ⓛ
- 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 C

NOTES

- 400' surface rights reservation around all lakes and rivers.
- Summer resort locations patented for surface rights only shown thus ⊙.
- Flooding rights to contour 870' to H.E.P.C. L.O. 7601. File 12290 vol. 2.

2.729

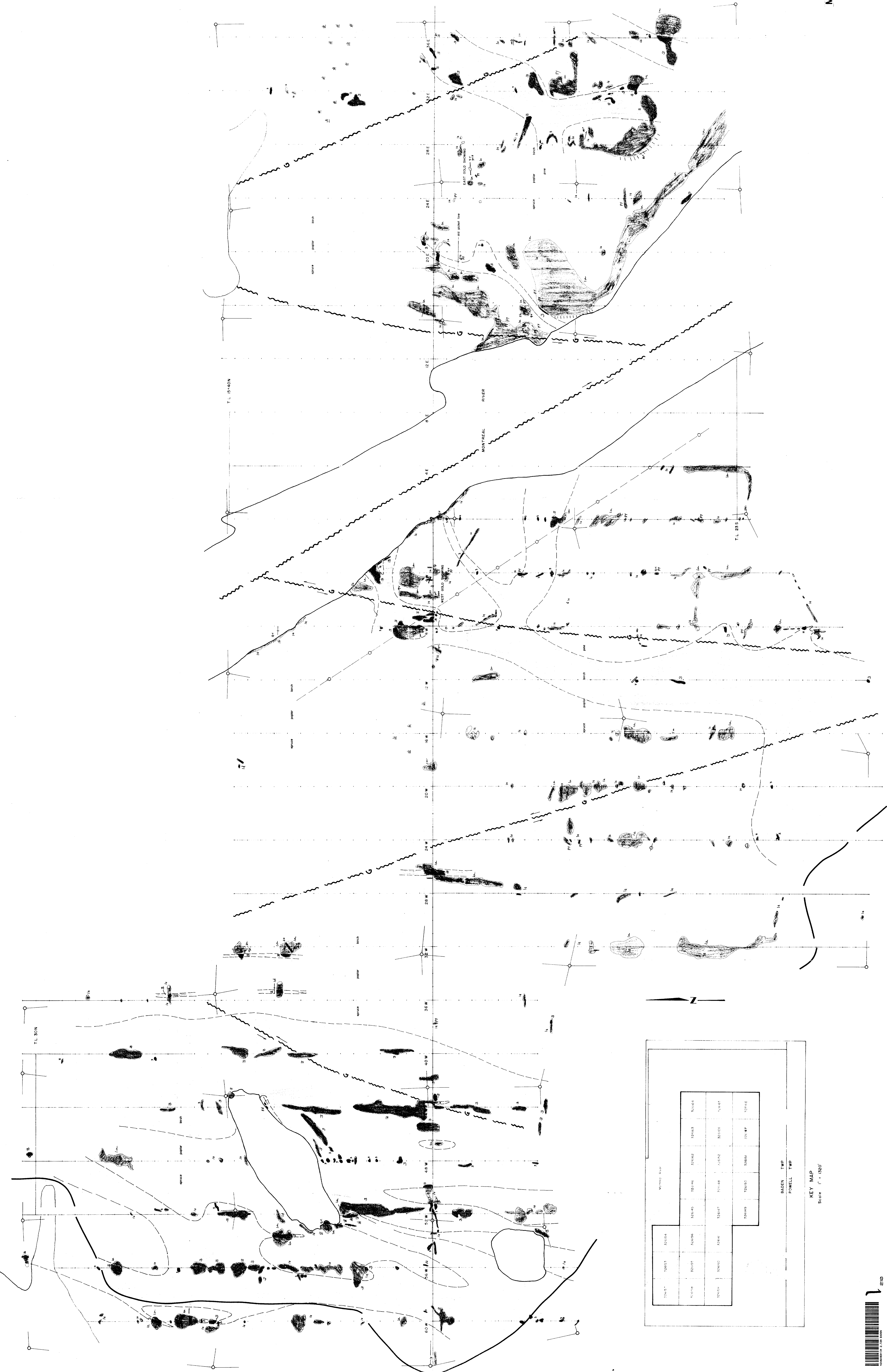
DATE OF ISSUE
JAN 7 1972
ONT. DEPT. OF MINES
AND NORTHERN AFFAIRS

PLAN NO. M.205

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS



Powell Twp. M.241



- LEGEND**
- PRECAMBRIAN**
 3 Differentiated Intrusive Contact
- Geology**
 2 Quartzite
 2.1 Quartzite
 2.2 Intrusive Contact
- Metasediments**
 1.1 Altered basic to felsic volcanic rocks
 1.2 Tuff
 1.3 Sandstone
 1.4 Argillite
 1.5 Argillite

- SYMBOLS**
- Shaded, dip indicated
 Shaded, dip indicated
 Shaded, dip indicated
 Shaded, dip indicated
 Fault, integrated from outcrops
 Fault along interpreted surface movement
 Joint with sense and direction of slip
 Rock contact, observed, covered
 Contact of rock masses
 Rock trench
 Trench pit
 Dotted and dash
 Paper representation line
 Sample
 Open and solid line
 Cliff
 Quarry area
 Pyrite mineralization
 Magnetite mineralization

KEY MAP
 Scale 1" = 1250'

272000	272000	272000	272000	272000	272000
272000	272000	272000	272000	272000	272000
272000	272000	272000	272000	272000	272000
272000	272000	272000	272000	272000	272000
272000	272000	272000	272000	272000	272000
272000	272000	272000	272000	272000	272000

BADEN TWP
 POWELL TWP





LEGEND

Measurement errors along profile line
 in black profile (%)
 dashed line profile (%)
 Profile error 1" = 40%

--- Conductivity data

INSTRUMENT: Rossi EM-30, No. 36, Recharge
 used with station 100A, Custer, Minn.

KEY MAP

Scale 1" = 1000'

1-10 W	1-9 W	1-8 W	1-7 W	1-6 W	1-5 W	1-4 W	1-3 W	1-2 W	1-1 W	1-10 E	1-9 E	1-8 E	1-7 E	1-6 E	1-5 E	1-4 E	1-3 E	1-2 E	1-1 E	

Baden Twp
Powell Twp

ELECTROMAGNETIC SURVEY
 ON THE PROPERTY OF
MELVILLE MINES & INDUSTRIES LTD.
 BADEN TOWNSHIP, ONTARIO
 BY
SHIELD GEOPHYSICS LIMITED
 SCALE 1" = 1000'
 0 200 400 600 800
 FEET
 SEPTEMBER 1971



LEGEND

Measurement stations along profile line
 in cross profile (%)
 in longitudinal profile (%)
 Profile scale 1" = 400'
 Contour interval 200'

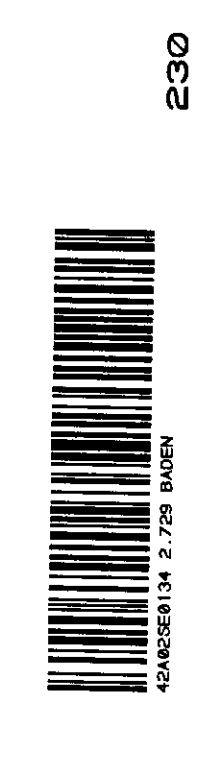
INSTRUMENT: Ranger EDM-100; Ranger
 data using standard NAD, Toronto.

KEY MAP
 Scale 1" = 1000'

32097	32093	32094					
32098	32095	32096	32092	32091	32090	32089	32088
32099	32094	32095	32096	32097	32098	32099	32100

BADEN TWP
 POWELL TWP

ELECTROMAGNETIC SURVEY
 ON THE PROPERTY OF
MELVILLE MINES & INDUSTRIES LTD.
 BADEN TOWNSHIP ONTARIO
 BY
SHIELD GEOPHYSICS LIMITED
 SEPTEMBER 1971

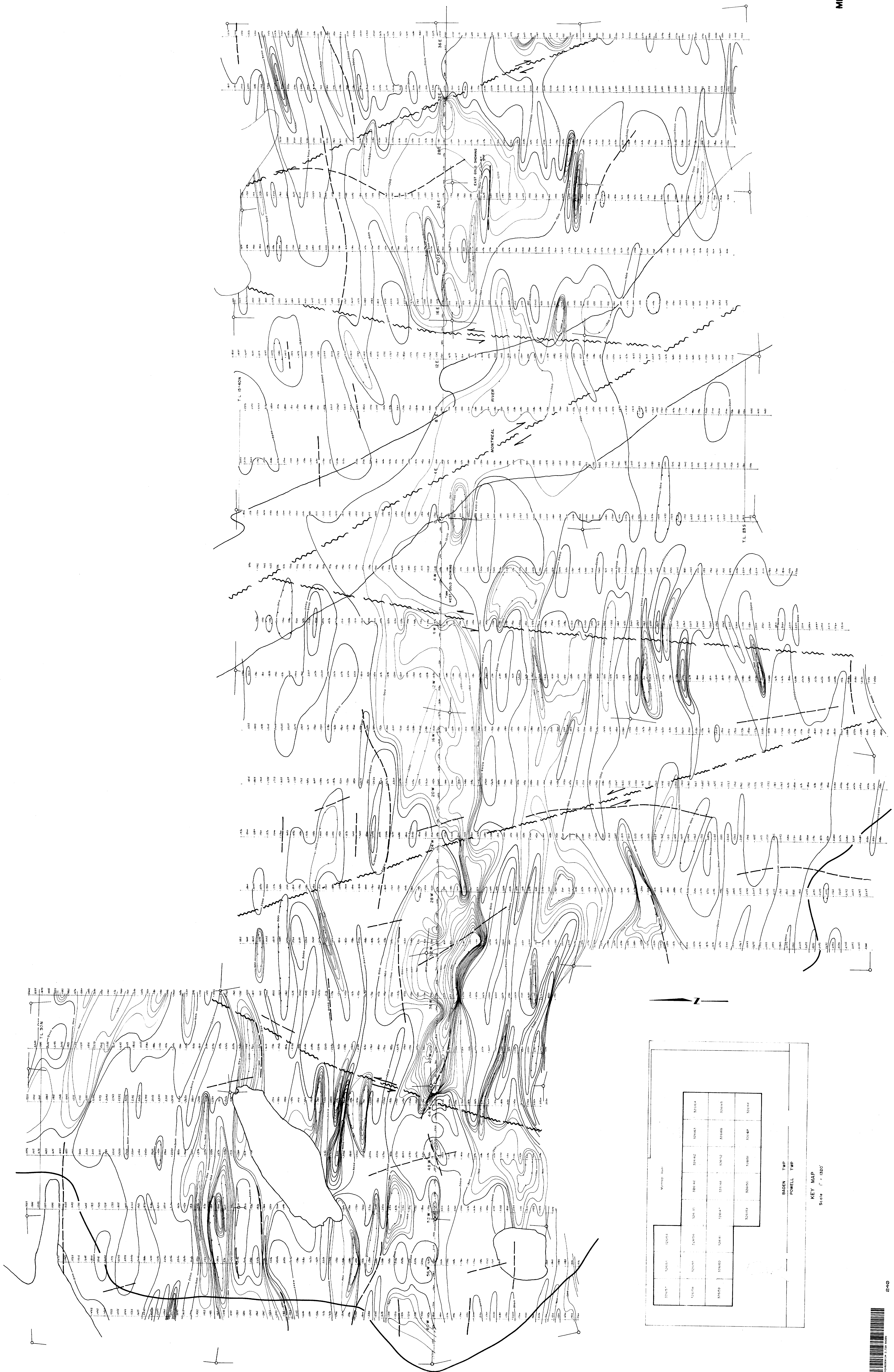
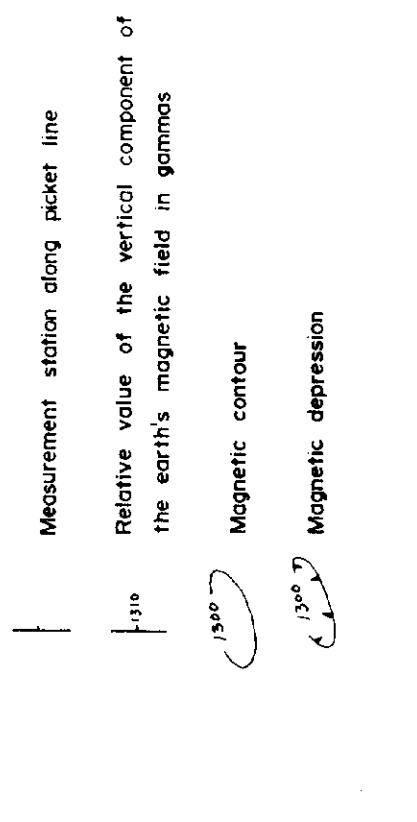


MAGNETOMETER SURVEY
ON THE PROPERTY OF
MELVILLE MINES & INDUSTRIES LTD.
BADEN TOWNSHIP, ONTARIO
BY
SHIELD GEOPHYSICS LIMITED

MEASUREMENTS ALONG STRIKE LINE
INDICATED BY DASHED LINE
AND THE SPACING OF THE
MAGNETIC ANOMALY
MAGNETIC CENTER
MAGNETIC DEPRESSION

INSTRUMENT: Slope MF-1 Magnetometer
Foil, imported from Japan
CONDUCTOR: SIA

LEGEND



KEY MAP
SCALE 1" = 1000'

32N05	32N10	32N15	32N20	32N25	32N30	32N35	32N40	32N45	32N50
32E05	32E10	32E15	32E20	32E25	32E30	32E35	32E40	32E45	32E50

BADEN TWP
POWELL TWP

