



32005NE0027 2.853 DOKIS

EM REPORT ON
THE 24 CLAIM GROUP OF
MAGUSI RIVER EXPLORATIONS INC.
DOKIS TOWNSHIP, DISTRICT OF COCHRANE
PROVINCE OF ONTARIO

PROPERTY

The claim group of Magusi River Explorations Inc. comprises 24 forty-acre mining claims in one solid block being 6 claims long east-west and 4 claims wide north-south, consisting of 960 acres or thereabouts. They were staked in January and February 1972 and are numbered L-339533 to L-339539 inclusive; L-339542 to L-339547 inclusive; L-339550 to L-339554 inclusive; L-339557 to L-339562 inclusive.

LOCATION, ACCESSIBILITY, ETC.

The claim group is located in the central part of Dokis Township, District of Cochrane, Larder Lake Mining Division, Province of Ontario. The property is 1½ miles west of mile post 59 on the boundary between Ontario and Quebec Provinces. The group is 28 miles east-northeast of Kirkland Lake, Ontario. The group is seven miles south of the all-weather highway which extends east from Matheson,

Ontario, to Duparquet, Quebec. In the summer months the claims are readily accessible by canoe from Lake Duparquet via the Magusi River which traverses the claim group in a southwesterly direction. The claims are readily accessible by air via Northwestern Airways Limited based at Lake Dufault, Quebec, to a landing on Lake Despres just east of the Interprovincial Boundary in Quebec and 1 3/4 miles east of the claim group. The flight distance is 26 air miles.

TOPOGRAPHY

The topography of the claim group is rugged. The group is traversed in a northeasterly direction by the Magusi River which empties into Lake Duparquet about 12 miles to the east in Quebec Province. Rapids occur in the river near the east boundary of the group. The group is covered with green timber. Numerous prominent outcrops occur on the south side of the river on the east and south-east part of the group. Numerous outcrops occur in the west and west central part of the claim group.

MINERAL EXPLORATION OF THE AREA

Early prospecting between 1920 and 1950 consisted of pits and trenches sunk on quartz veins and pyrite-rich

gossans, presumably in search of gold and base metals. Little is known about the early work.

In 1960, Southwest Potash Corporation geologically mapped the central part of Dokis Township. Since then no other mineral exploration has been reported as ascertained from the office of the resident geologist at Kirkland Lake, Ontario (O.D.M.N.A.) and the Assessment Library at the office of the Ontario Department of Mines and Northern Affairs at Toronto.

GENERAL GEOLOGY AND STATIGRAPHY OF DOKIS TOWNSHIP

Preliminary Map P.707, Dokis Township by O.D.M.N.A. (field work summer 1971) released to the public on December 29, 1971, states:

"All the bedrock is of Archean age, except diabase, which is considered to be Keweenaw. The bedrock consists of mafic, intermediate, and felsic volcanic rocks intruded by stocks, sills, and dikes of gabbro, diorite, granodiorite, feldspar porphyry, and diabase. Metamorphism under lower greenschist facies conditions occurred only along shear zones and near some intrusive contacts.

The mafic volcanic rocks occur in the central and southern parts of the township. They are pillowed flows

with some flow breccia. In the central part of the township, the mafic volcanic rocks occur as a "wedge" associated with a small stock of granodiorite and a small sub-volcanic stock of massive soda rhyolite and have been metamorphosed under greenschist facies conditions. In the southern part of the township basaltic andesite occurs interlayered with the intermediate volcanic rocks.

Intermediate volcanic rocks constitute the most abundant rock type in Dokis Township. They consist of massive, pillowed, and flow-breccia flows from less than 10 feet thick to greater than 200 feet thick and are interlayered with one another. Units of pyroclastic rocks of intermediate composition consisting of agglomerate, breccia, lapilli tuff, and tuff occur with the intermediate volcanic flows. They are poorly bedded irregular units from 1 foot to 2,000 feet thick.

The felsic volcanic rocks are composed of massive rhyodacite (soda rhyolite) in the form of sub-volcanic sills and dikes. Most contain bipyramidal quartz phenocrysts and feldspar phenocrysts set in a cherty aphanitic groundmass. In places, flow-breccia showing fractures resulting from flowage has formed, particularly near the intrusive contacts of the felsic sub-volcanic rocks.

Gabbro and quartz intruded the volcanic rock units. They are generally medium-grained homogeneous bodies with steep intrusive contacts. In places they contain large inclusions of volcanic rocks.

Felsic intrusive bodies occur in the central and southwest parts of Dokis Township. They consist of quartz diorite and granodiorite. Contaminated rocks of diorite composition occur near the margin of the intrusion in the central part of the township.

STRUCTURAL GEOLOGY

Folds are based on information from attitudes of pillows, flow contacts, and bedding in the pyroclastic units. A large east-trending syncline occurs in the northern half of the township and in the southern half of the township one anticline extends west from the Quebec boundary and curves south.

Faults observed from offsets of the rock units, shear zones, and topographic lineaments are divided into two sets, both of which offset one another. The most prominent set of faults is the vertical northeast-striking one which extends across the township. A set of northwest-striking faults, possibly genetically related to the former, divides the area into a series of sub-rectangular blocks."

ECONOMIC GEOLOGY

Under Economic Geology the same source states:

"Finely disseminated pyrite and pyrrhotite occurs in most of the volcanic rocks. Pyritic gossans occur locally in zones from 6 inches to 5 feet wide with lengths of 10 to 40 feet in length in the volcanic rocks along shear zones and pillow selvages. The most heavily mineralized zones occur in the central part of the township where massive pyrrhotite and pyrite replace the pillow selvages of the mafic volcanic rock. The sulphides appear to be part of the alteration which has been caused by the granodiorite intrusion to the east.

Dokis Township is a good area for primary exploration because of its close proximity to Noranda and Kirkland Lake and it has received little attention in the past. Emphasis should be given to the area around the granodiorite stock in the central part of the township where massive sulphides occur."

NOTES ON THE GEOLOGY OF THE MAGUSI RIVER EXPLORATIONS INC. CLAIMS

A circular granodiorite stock about one-half mile in diameter intrudes the volcanic rocks in the central part of the claim group. A large outcrop of rhyolite flow breccia

about 2200 feet by 1200 feet occurs adjoining the granodiorite stock on the west. Pillowed andesite and/or dacite volcanic rocks occur at the south and southwest and northeast of the granodiorite. Along the Magusi River in the east and southeast part of the group are prominent outcrops of quartz diorite and gabbro. Much mineralization of pyrite and pyrrhotite is reported to occur around the granodiorite plug in the rhyolite and other volcanic rock in the west central part of the claim group. Map P.707 shows a fault zone extending through the claim group in a S 60° W direction along the Magusi River for a length of over 6,000 feet through and beyond the claim group.

SURVEY AND INSTRUMENT DATA

During March , 1972, a line cutting program was completed over the company's 24 claim property for a total of 29.8 cut and chained miles. An east-west base line was established through the centre of the group with picket lines turned off to the north and south on 300 foot intervals to the property limits. These lines were cut and chained on 100 foot stations and tied into east-west control lines on the north and south boundaries.

An electromagnetic survey was conducted over the line network during March-April, 1972. The instrumentation

used was a Geonics EM 16, VLF electromagnetic unit, serial number 101, which utilizes the uniform horizontal fields generated by an existing network of reliable very low frequency radio transmitting stations between the frequency range of 15-25 KC. The field measured is the in-phase and out-of-phase (quadrature) components of the vertical field.

In this case, transmitting station NAA, located at Cutler, Maine, U.S.A. was used. The frequency is 17.8 KHZ and the radiated power is 1000 KW. The survey direction was a constant 20° azimuth.

Out-of-phase and In-phase component readings are plotted to the left and right side of the picket lines respectively on a profile scale of 1" = 40%. Where EM conductors are apparent, the conductor axis is illustrated on the accompanying survey plan, scale 1" = 200 feet, by shaded, half shaded, or open circles, in descending order of relative conductivity. Twenty-five line miles of EM-16 surveying was involved.

Upon completion of the initial survey a Sharpe SE 200 vertical loop survey was used to check specific EM 16 conductor axis over selected property locations.

This work was performed over a 3 day period during April, 1972. The serial number of the instrument used is No 313, operated on a frequency of 1000 cps. Both parallel line and stationary transmitter surveying methods were employed.

The stationary transmitter method involves setting the transmitter over a conductor while the receiver operator traverses the conductor on the adjacent line. If a conductor is located the transmitter then moves to the conductor location and the receiver carries on to the adjacent line as before. This method gives rise to maximum collineation of conductors.

In the parallel line method, which is standard procedure, the transmitter and receiver are situated on parallel lines at the same relative station, and traverse in the same direction.

SURVEY RESULTS

The accompanying Geonics EM-16 survey plan indicates numerous generally weak east-west trending conductor axis. The majority of these apparent conductive zones are situated north of the Magusi River. It should be noted here that the actual claim block location is approximately 1 full claim south of where indicated on provincial township map M-342.

Although the conductive zones are predominantly weak, the amplitude of anomalies is not necessarily a good measure of sulphide concentration. Other conductive entities

are likely to contribute to amplitude: E.G., overburden in some cases, topographic conditions, saline ground waters in shears or porous zones, or other electrolytic solutions possibly derived from sulphides. Weakness or absence of conductivity in an actual sulphide zone can be due to a higher silica content rather than weakness in sulphides. A silicate unit containing sulphides may sometimes be more resistive than conductive, in comparison with the enclosing rock.

In view of the extreme variations in relief in which the property is located, the majority of the apparent conductive zones may be attributed to topographic effect. This is particularly well illustrated in the case of the weak N.E.'ly trending anomaly crossing lines 15W to 0+00 in the S.E. corner of the claim group. The anomalous zone coincides with the N.W. flank of a major ^{hummock?} hillock characterized by steep slopes and cliffs. Upon examination of the topographic data plotted on the survey plan this coincidence occurs frequently, particularly in the north map area where the longer anomalous strike lengths conform to hill sides.

The drainage channels of the numerous creeks and routes of surface water run-off are clearly well worn,

sometimes to depths of 40 feet, indicative of probable heavy clay overburden over certain sections of the property. On the basis of this evidence it should be assumed that overburden effects also contribute to apparent anomalous conditions.

The SE 200 EM survey over selected anomalous EM-16 conductor axis failed to confirm any anomalous zones. The SE-200 instrument based on its low frequency will respond only to massive sulphide and/or graphitic concentrations. This therefore does not negate the possibility of disseminated sulphide occurrences within the selected survey areas performed by the SE-200 unit.

CONCLUSIONS AND RECOMMENDATIONS

Only weak conductivity was located in the course of the EM-16 survey. The majority of the weakly anomalous zones may be attributed to topographic effect and to a lesser degree, overburden effects. The SE-200 EM check survey failed to substantiate any of the selected EM-16 conductors, however, not all of the anomalous conductors were checked, only those considered the most promising.

Although the survey was conducted during the winter months of maximum snow covering, field evidence suggests

a heavier mantle of probable clay overburden over larger areas of the property than was previously anticipated. On the basis of the complexity of the property geology and the information now at hand, a revised program of follow-up exploration is recommended.

The present situation is essentially a search for disseminated, rather than massive sulphides. The shape and trend of anomalies are then apt to be more significant than their amplitude. Magnetic correlation would be of considerable advantage from a structural and geological standpoint, as well as the possibility of locating pyrrhotite or magnetite often associated with the usual base metal sulphide occurrences.

Soil sampling and geo-chemical analysis of selected anomalous areas of the property would be of benefit in view of the complex drainage patterns coupled with known sulphide occurrences.

Prospecting and trenching as budgeted in the initial report should be reduced by 50% in view of the more limited outcrop area suggested by the field program just completed. Since transportation to the property site is a problem, the only practical accessibility via the Magusi River from the

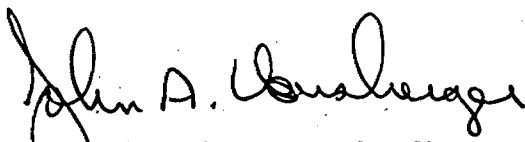
north shore of Duparquet Lake, requiring numerous portages, it is recommended that all field work be undertaken at the same time, the better to correlate the three phases of exploration.

Estimated costs of the recommended program are as follows:

1) Magnetometer Survey:	20 Miles @ \$85.00/mile	-----	\$1,700.00
2) Soil Sampling & Geo-Chem Analysis:	Approximately 4 days sampling over selected areas plus assaying of 300 samples @ \$2.00/sample ----- \$1,300.00		
3) Prospecting & Trenching:	2 Man Crew	-----	\$2,000.00
	Total		<u>\$5,000.00</u>

The above program includes an allowance for 2 days mobilization and demobilization each way by boat transportation. Mid May to the end of June would be the preferable dates to perform the work program. Diamond drilling may then be warranted as a follow-up depending on results.

Dated at Val d'Or, Quebec,
this 24th day of April, 1972.


John A. Honsberger, P. Eng.



ASSESSMENT WORK DETAILS

900

Township or Area Dokis, District of Courane

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

Chief Line Cutter Claude Devreau
or Contractor Continental Hotel, Amos, Quebec
Name Address

Party Chief Ernest Roeder
100 Curé Roy, Val d'Or, Quebec
Name Address

Consultant John A. Honsberger, P. Eng.
1030 - 6th St., Val d'Or, Que.
Name Address

List Numerically

L-339533 - 39 Incl.

L-339542 - 47 Incl.

L-339550 - 54 Incl.

L-339557 - 62 Incl.

TOTAL _____

COVERING DATES

Line Cutting March, 1972

Field March-April, 1972
Instrument work, geological mapping, sampling etc.

Office April, 1972

INSTRUMENT DATA Geonics EM-16, VLF Check
Make, Model and Type Sharpe SE 200 Vertical (Survey)
EM-16, Serial No 101
Scale Constant or Sensitivity Se 200, 1000 cps.
Or provide copy of instrument data from Manufacturer's brochure. Serial No
313

Radiometric Background Count _____

Number of Stations Within Claim Group Approx. 1300

Number of Readings Within Claim Group " 1500

Number of Miles of Line cut Within Claim Group 29.8

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 checked="" type="checkbox"/>	
Geophysical Survey	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Show Check <input checked="" type="checkbox"/>
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE April 24, 1972

SIGNED John A. Honsberger

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

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.

S4E-M

M-34S

DOKIS TWP.

DOKIS TWP.

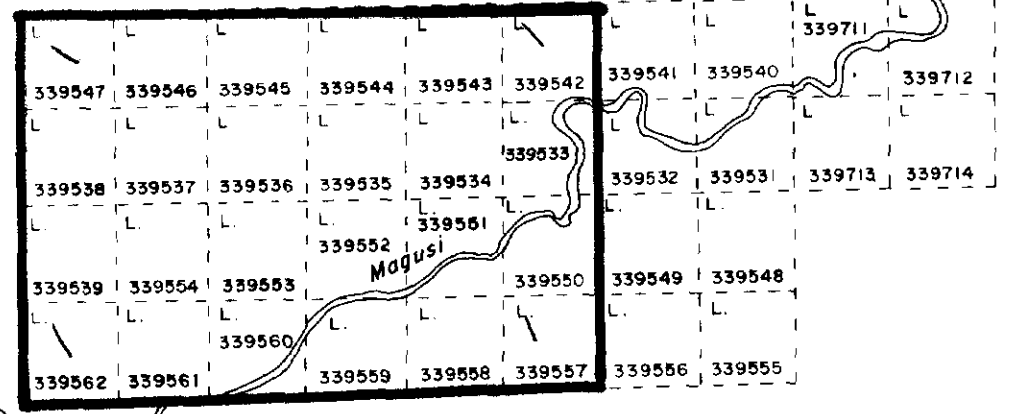
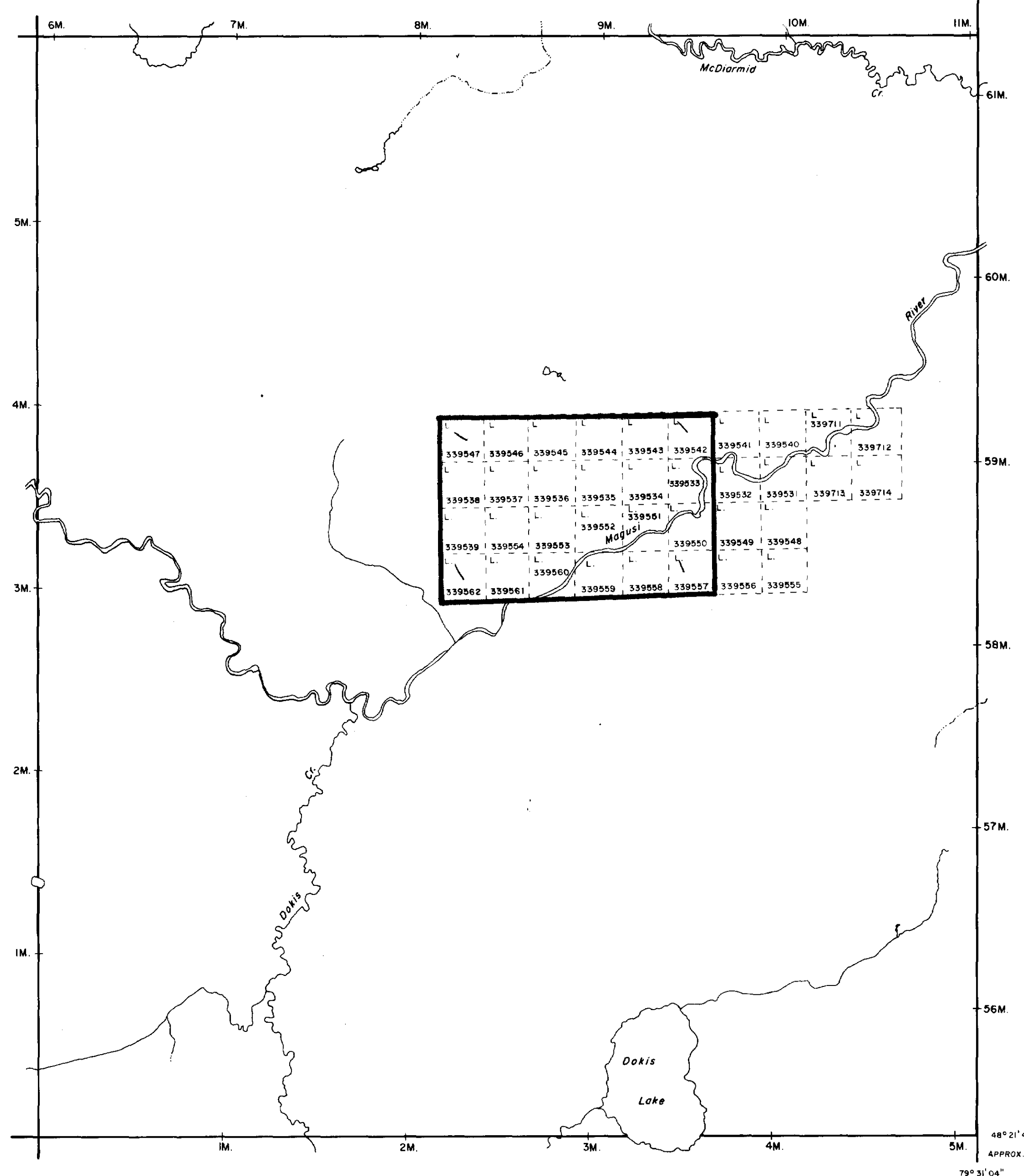
S4E-M

S4E-M

MARRIOTT TWP. M-363

TANNAHILL TWP. M-390

PONTIAC TWP. M-382

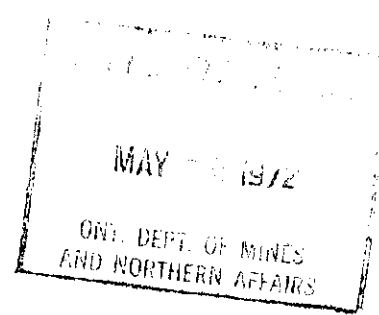


PROVINCE OF QUEBEC

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

2.853



LEGEND

- PATENTED LAND
- PATENTED FOR SURFACE RIGHTS ONLY
- LEASE
- LICENSE OF OCCUPATION
- CROWN LAND SALES
- LOCATED LAND
- CANCELLED
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- HIGHWAY & ROUTE NO.
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES

*used only with summer resort locations or when space is limited

TOWNSHIP OF
DOKIS
 DISTRICT OF
 COCHRANE

LARDER LAKE
 MINING DIVISION

SCALE : 1 INCH 40 CHAINS (1/2 MILE)

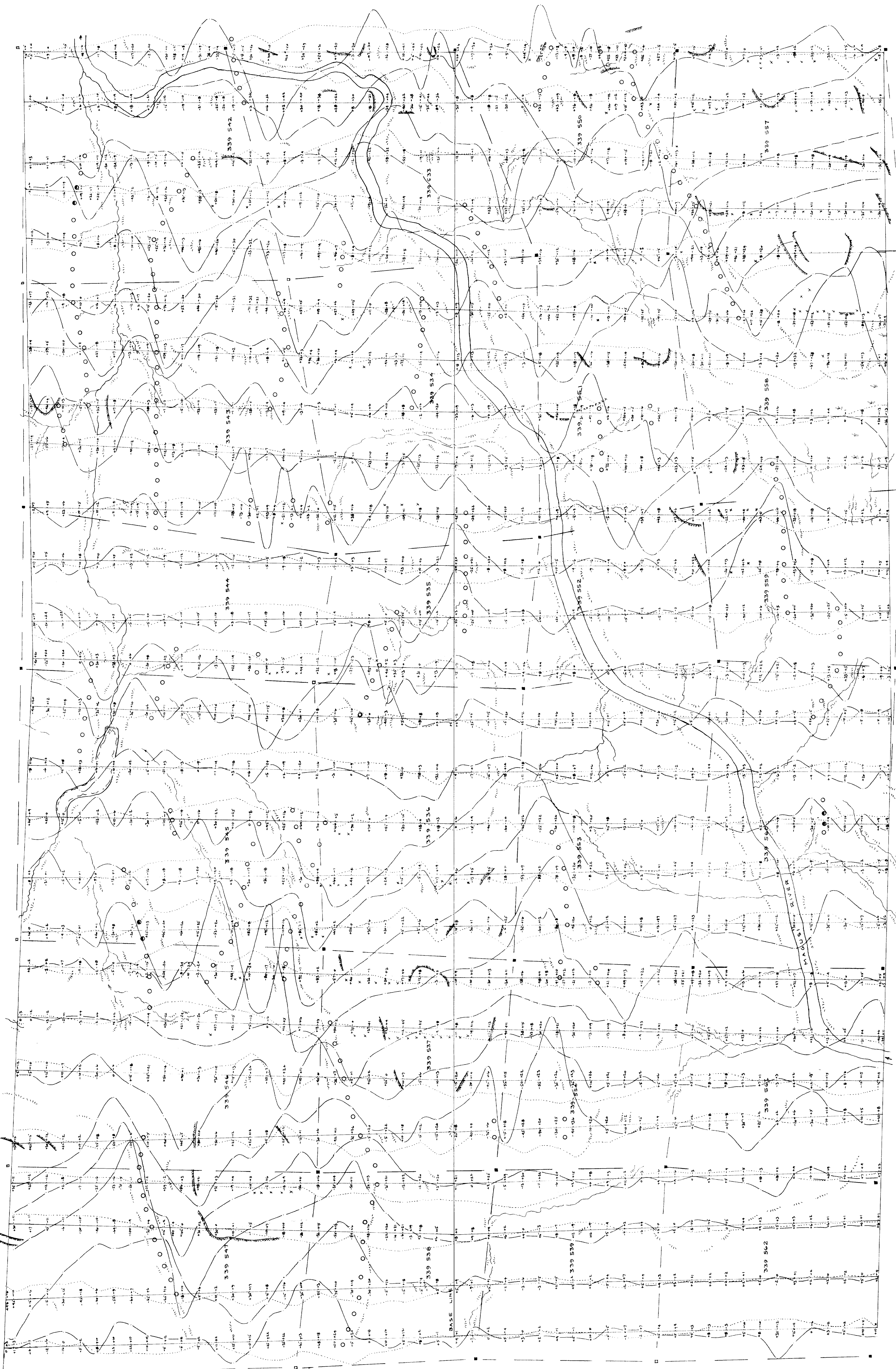
DR. R.W. NOBLE
 DATE Feb 8, 72.

PLAN NO. **M-342**

ONTARIO
 DEPARTMENT OF MINES
 AND NORTHERN AFFAIRS

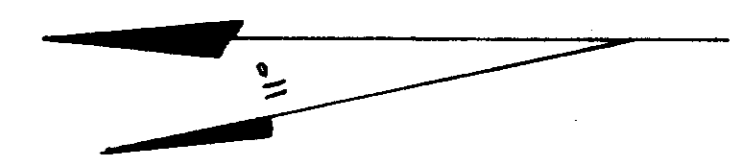
48° 21' 45"
 APPROX.
 79° 31' 04"





GEONICS EM-11
 TRANSMITTER : NAA
 SURVEY DIRECTION : AZIMUTH 20°
 IN PHASE : LEFT OF LINE
 QUADRATURE : RIGHT OF LINE

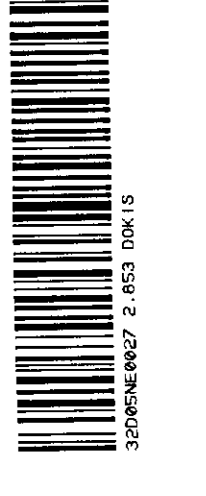
NOTE:
 PROFILES PLOTTED 1" = 40%
 ○ WEAK CONDUCTOR
 ● MEDIUM CONDUCTOR
 ● STRONG CONDUCTOR

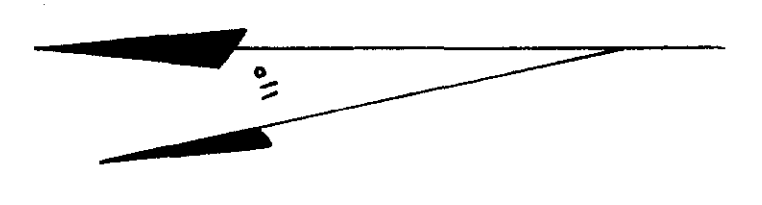
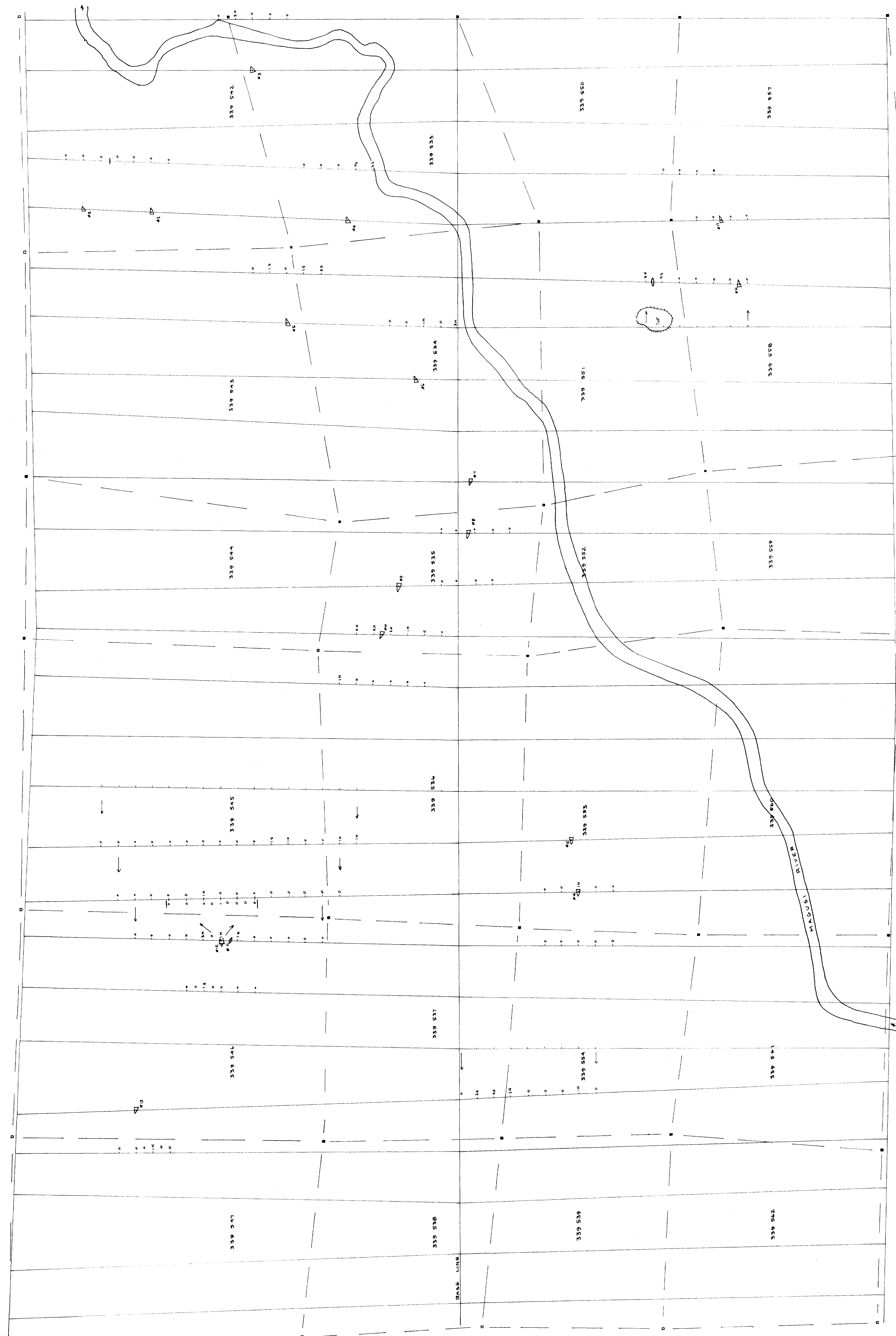


MAGUSI RIVER EXPLORATIONS INC.
 DOKIS TOWNSHIP
 LARDER LAKE MINING DIVISION
 ELECTROMAGNETIC SURVEY
 NEWS. EXPLORATION REGD.

SCALE: 1" = 200'

MAR/APR 1972
 J. A. B. [Signature]
 2855





SWAPPE SE-200
VERTICAL LOOP EM.

→ PARALLEL LINE SURVEY

▢ STATIONARY TRANS MITTER SURVEY

MAGUSI RIVER EXPLORATIONS INC.

DOKIS TOWNSHIP

LARDER LAKE MINING DIVISION

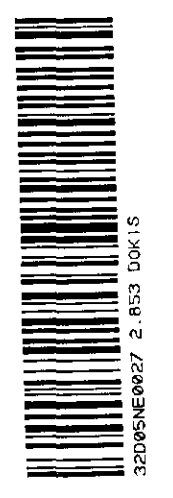
ELECTROMAGNETIC CHECK SURVEY

NEWS. EXPLORATION REG'D.

SCALE: 1" = 200'

MAR/APR 1972

John A. ...
APR 24 1972



220

DOKIS TOWNSHIP

DISTRICT OF COCHRANE

Scale 1 inch to 1/2 mile

NTS Reference: 32 D/5
CSC Aeromagnetic Map: 46G
Geological Compilation Series Map: 2046

LEGEND

ELLIOTT, TANNANHILL, AND DOKIS TOWNSHIPS

CENOZOIC
PLEISTOCENE AND RECENT
Sand, gravel, and clay

PRECAMBRIAN
PROTEROZOIC
KEWENAWAN

6 Diabase (dikes)

Intrusive Contact

ARCHEAN
FELSIC INTRUSIVE ROCKS

- 5 Unsubdivided
- 5a Granodiorite
- 5b Quartz diorite
- 5c Syenite and mafic syenite
- 5d Contaminated rocks
- 5e Feldspar porphyry dikes

Intrusive Contact

MAFIC INTRUSIVE ROCKS

- 4 Unsubdivided mafic intrusive rocks
- 4a Gabbro
- 4b Quartz gabbro and diorite
- 4c Hornblende gabbro
- 4d Anorthosite

Intrusive Contact

VOLCANIC AND SEDIMENTARY ROCKS

FELSIC VOLCANIC ROCKS

- 3 Unsubdivided rhyodacite (soda rhyolite) or rhyolite
- 3a Massive rhyodacite or rhyolite sills
- 3b Massive rhyodacite or rhyolite dikes
- 3c Rhyolite flow-breccia and dikes
- 3e Rhyodacite or rhyolite pyroclastic breccia
- 3f Rhyodacite or rhyolite tuff
- 3g Amygdaloidal rhyodacite or rhyolite
- 3h Rhyodacite or rhyolite feldspar porphyry
- 3i Rhyodacite or rhyolite quartz porphyry

INTERMEDIATE VOLCANIC AND SEDIMENTARY ROCKS

- 2 Unsubdivided andesite or dacite
- 2a Massive andesite or dacite
- 2b Pillowed andesite or dacite
- 2c Andesite or dacite flow-breccia
- 2d Andesite or dacite agglomerate
- 2e Andesite or dacite pyroclastic breccia
- 2f Andesite or dacite lapilli tuff and tuff
- 2g Amygdaloidal andesite or dacite
- 2h Andesite or dacite feldspar porphyry
- 2j Argillite
- 2v Variolitic andesite or dacite

MAFIC VOLCANIC ROCKS

- 1 Unsubdivided basalt or basaltic andesite
- 1a Massive basalt or basaltic andesite
- 1b Pillowed basalt or basaltic andesite
- 1c Basalt or basaltic andesite flow-breccia
- 1d Diabasic basalt (includes some gabbro)
- 1g Amygdaloidal basalt or basaltic andesite
- 1h Basaltic andesite feldspar porphyry
- 1k Contact metamorphosed amphibolite
- 1v Variolitic basalt or basaltic andesite

GEOLOGICAL AND MINING SYMBOLS FOR P.705, P.706, AND P.707

- Glacial striae.
- Outwash fan.
- Esker.
- Small bedrock outcrop.
- Area of bedrock outcrop.
- Bedding, top unknown; (inclined, vertical).
- Bedding, top (arrow) from great thickness (inclined, vertical, overturned).
- Lava flow, top (arrow) from pillows shape and packing.
- Lava flow, top in direction of arrow.
- Schistosity: (horizontal, inclined, vertical).
- Geological boundary, other-side.
- Geological boundary, position interpreted.
- Lineament or fault.
- Anticline, syncline, with plunge.
- Drill hole; (vertical, inclined).

MARGINAL NOTES

Location and Access: Dokis Township is located 26 miles northeast of Kirkland Lake and 28 miles northwest of Noranda along the boundary between Quebec and Ontario. Dokis Township is accessible by canoe from Quebec via the Magusi River and by float-equipped aircraft on Dokis Lake and McDiarmid Lake to the south and north respectively.

Mineral Exploration: Early prospecting between 1910 and 1930 consisted of pitting and rock sampling on quartz veins and pyrite-rich gossans presumably in search of gold and base metals. Little is known about this early work.

In 1960 Southwest Potash Corporation geologically mapped the central part of Dokis Township. Since then no other mineral exploration has been reported.

General Geology and Stratigraphy: All the bedrock is of Archean age, except diabase, which is considered to be Keweenaw. The bedrock consists of mafic, intermediate, and felsic volcanic rocks intruded by stocks, sills, and dikes of gabbro, diorite, granodiorite, felspar porphyry, and diabase. Metamorphism under lower greenschist facies conditions occurred only along shear zones and near some intrusive contacts.

The mafic volcanic rocks occur in the central and southern parts of the township. They are pillowed flows with some flow breccia. In the central part of the township, the mafic volcanic rocks occur as a "wedge" associated with a small stock of granodiorite and a small sub-volcanic stock of massive soda rhyolite and have been metamorphosed under greenschist facies conditions. In the southern part of the township basaltic andesite occurs intercluttered with the intermediate volcanic rocks.

Intermediate volcanic rocks constitute the most abundant rock type in Dokis Township. They consist of massive, pillowed, and flow-breccia flows from less than 10 feet thick to greater than 200 feet thick and are interlayered with one another. Units of pyroclastic rocks of intermediate composition consisting of agglomerate, breccia, lapilli tuff, and tuff occur with the intermediate volcanic flows. They are poorly bedded irregular units from 1 foot to 1,000 feet thick.

The felsic volcanic rocks are composed of massive rhyodacite (soda rhyolite) in the form of subconformable dikes and stocks, and bi-pyramidal quartz porphyries and felspar porphyries, and amygdaloidal groundmass. In places, flow-breccia showing fracturing, possibly from flowage has formed, particularly near the intermediate volcanic rocks.

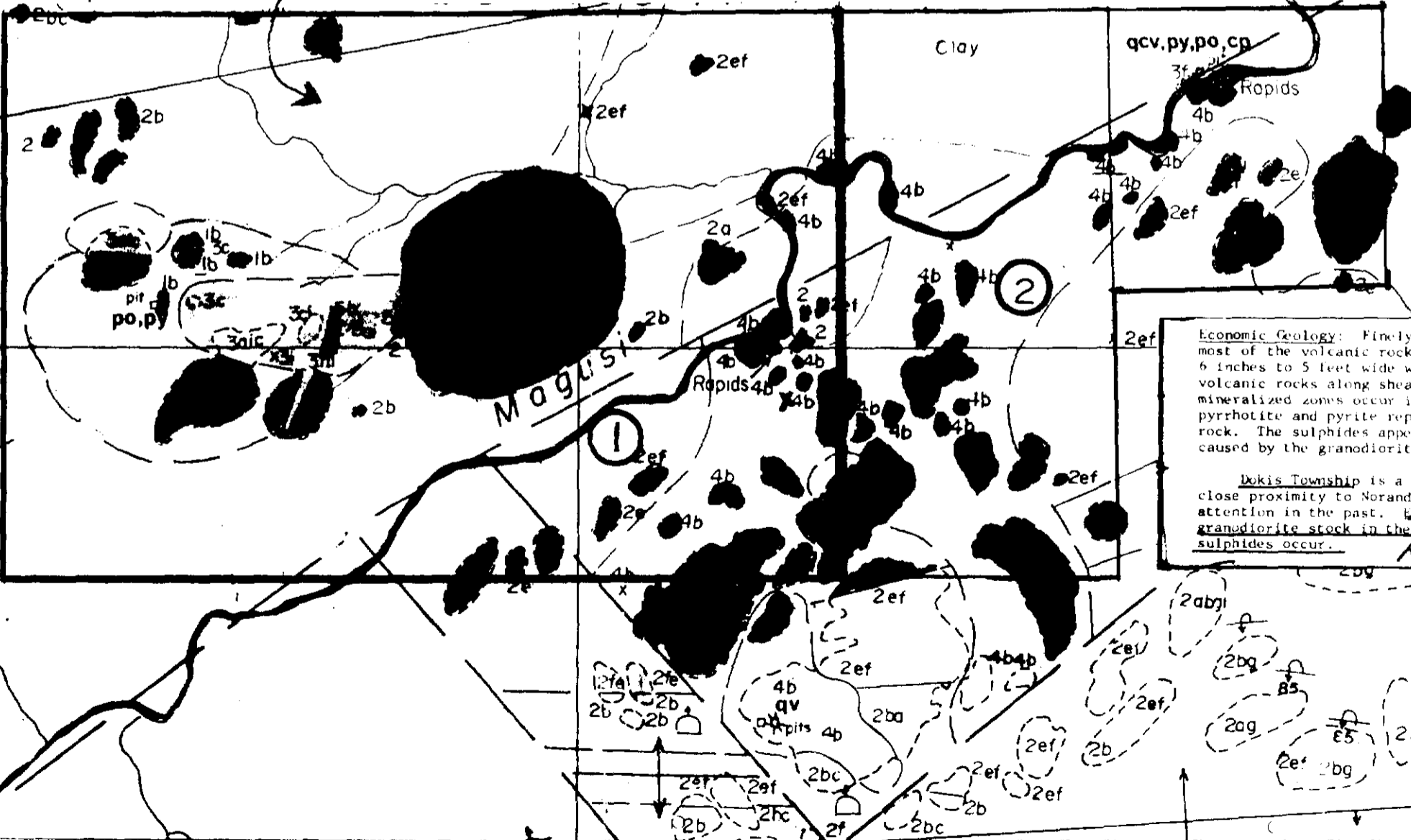
Gabbro and quartz intruded the volcanic rock units. They are generally medium-grained homogeneous bodies with steeply dipping, sub-parallel foliation in places they contain large inclusions of volcanic rocks.

Felsic intrusive bodies occur in the central and southern parts of Dokis Township. They consist of quartz porphyries and amygdaloidal groundmass. Contaminated rocks of diorite, quartz diorite, and granodiorite occur in an intrusion in the central part of the township.

Structural Geology: Folds are based on 200 feet thick flow breccia pillows, flow contacts, and bedding in the volcanic rocks. A north-south east-trending syncline occurs in the northern half of the township. The southern half of the township is anticlinally folded with a west-trending Quebec boundary and curves south.

Faults observed from outcrops of the rock units consist of normal topographic lineaments are divided into the following types: (1) a north-south striking one which extends across the township; (2) a north-south striking fault, possibly genetically related to the first, which divides the area into a series of subrectangular blocks.

MAGUSI RIVER EXPLORATIONS INC



Economic Geology: Finely disseminated pyrite and pyrrhotite occurs in most of the volcanic rocks. Pyritic gossans occur locally in zones from 6 inches to 5 feet wide with lengths of 10 to 40 feet in length in the volcanic rocks along shear zones and pillow selvages. The most heavily mineralized zones occur in the central part of the township where massive pyrrhotite and pyrite replace the pillow selvages of the mafic volcanic rock. The sulphides appear to be part of the alteration which has been caused by the granodiorite intrusion to the east.

Dokis Township is a good area for primary exploration because of its close proximity to Noranda and Kirkland Lake and it has received little attention in the past. Emphasis should be given to the area around the granodiorite stock in the central part of the township where massive sulphides occur.

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O.D.M.N.

