



4115SW0102 0023B1 PARKIN

010

Report on the
MAGNETOMETER SURVEY

on the Property
of

NORPICK GOLD MINES LIMITED

Claims E-59826 to 59835 inclusive
Parkin Township - Sudbury Mining Division - Ontario

by

F. C. Knight, B.Sc., P.Eng.

Toronto, Ontario

May 22, 1952

Report on the

MAGNETOMETER SURVEY

on the Property
of

NORPICK GOLD MINES LIMITED

Claims 5-59626 to 59635 inclusive
Parkin Township - Sudbury Mining Division - Ontario

by

F. C. Knight, B.Sc., P.Eng.

Toronto, Ontario

May 22, 1952

Report on the
MAGNETOMETER SURVEY

on the Property
of

NCRPICK GOLD MINES LIMITED

Claims 8-59026 to 89036 inclusive
Parkin Township - Sudbury Mining Division - Ontario

by

F. C. Knight, B.Sc., P.Eng.

Toronto, Ontario

May 22, 1952



41115SW0102 0023E1 PARKIN

010C

INDEX

	Page
Introduction	1
General Geology	1
Magnetometer Survey	3
Geological Structures outlined by the Survey	4
Summary and Recommendations	4

INDEX

	Page
Introduction	1
General Geology	1
Magnetometer Survey	3
Geological Structures outlined by the Survey	4
Summary and Recommendations	4

63:307

REPORT ON MAGNETOMETER SURVEY

NORPICK GOLD MINES LIMITED

INTRODUCTION

The property of Norpick Gold Mines Limited consists of ten unsurveyed and unpatented mining claims numbered S-59626 to S-59635 inclusive.

The claim group is located in the Sudbury Mining Division, in the west central part of Parkin Township. Six claims numbered S-59627 to S-59632 inclusive are situated in lots 7 and 8, Concession III and the remaining four claims adjoin in lots 7 and 8, Concession II. The group has an area of approximately 400 acres.

The property is situated some four miles east of the Canadian National Railway's station at Milnet and some ten miles north of the town of Capreol. It is accessible from Capreol by a well kept gravel road to within one mile of Milnet station and thence by a rough road or trail which passes within one and one-quarter miles west of its western boundary. The town of Sudbury is some twenty-seven miles to the south.

GENERAL GEOLOGY

The southern part of the Norpick Gold Mines property as shown on the Moose Mountain - Manapitai Area map No. 41-B (Ontario Department of Mines - 1932) is underlain by a Keewatin greenstone series which contacts a Temiskaming Bruce series of quartzites in the south central area in the vicinity of Concession Line II-III. This latter series is shown underlying the northern two-thirds of the property. A mass of quartz diabase classified as Keweenaw Age intrudes along the northern contact of this formation on the property.

According to the map referred to above and its accompanying report, the quartz diabase has been classified as similar to the Sudbury Keweenaw quartz diorite offset intrusive which is one of the host rocks

of the Sudbury ore deposits. A later map, the Falconbridge Sheet, No. 872A published in 1948 by the Geological Survey of Canada, has reclassified this mass as of Nipissing age which is of much less value as a host rock. Thus, in theory, a true definition has not yet been determined. However, in fact, nickel and platinum values have been obtained from this and adjacent formations on an adjoining property and as a consequence, that part of the Norpiak property underlain by this intrusive becomes a highly important area for further examination.

In the course of the Geophysical Survey recently completed, such outcrops as occurred along the picket lines were examined in a preliminary manner and their location has been noted on the accompanying plan, although the limits of these outcrop areas are probably more than has been indicated.

The shape and extent of the quartz diabase intrusive as indicated by outcrops observed during the survey, appears to be much more extensive and of a more complicated nature than is shown on existing government geological plans. Outcrops of this rock type have been observed over a width of at least 1900 feet trending across the northern portion of the claim group. It has not been determined whether these outcrops represent only one intrusive mass or several. A similar outcrop of quartz diabase or diorite has been observed near the south shore of Island Lake in the southwest part of the property.

In the brief examination of outcrops observed during the survey the following mineralization was noted. On a small outcrop at the water's edge on the south shore of Island lake some disseminated pyrite and a small amount of chalcopyrite was seen on a poorly exposed quartz diorite outcrop. This showing is located within an anomaly whose magnetic intensity was the highest located on the property. The mineralization is bounded on the south

by sheared andesite. In the north central part of the property one badly weathered and rusted diorite or diabase outcrop was noted. Some 400 feet east and slightly north, another diorite or diabase outcrop showed considerable calcite filled fracturing.

MAGNETOMETER SURVEY

With the exception of one high anomaly in the southwest part of the property on the south shore of Island Lake, the magnetic readings taken during the survey are relatively weak and uniform. Individual high magnetic readings within the diabase (or diorite) and greenstone areas may be attributed to localized concentrations of magnetite within these masses and probably have no economic significance. However, more extensive areas of values ranging over 750 gammas within the diabase or diorite areas could be caused in part by pyrrhotite disseminations. It must be borne in mind that the ore bearing sulphides of nickel found in this area are only slightly magnetic and those of copper and zinc are non-magnetic, while the more magnetic pyrrhotite is only a mineral association of the above and sometimes indicates a marker or horizon favorable to the deposition of other more important sulphide minerals.

Thus, because of the uniformity of magnetic readings throughout the survey, it has not been possible to definitely determine geological contacts, nor zones of mineralization. However, coupled with a geological investigation of the claims the results will form an excellent basis of determining the geological contacts through the overburdened areas and when plotted on a plan with the outcrops resulting from such a survey, these results may indicate structural features not apparent individually from either type of investigation.

The results of the survey are shown on an accompanying property

plan plotted on a scale of 1 inch equal 200 feet. It will be noted that the area covered by our survey does not conform exactly with the location of the claim posts representing the company's claims. The acreage owned by the company is located in the south half of the township which has previously been surveyed into concessions and lots and the acreage actually owned by your company is determined by this pre-existing survey. Thus we have endeavored to investigate, as closely as possible, the acreage actually owned although boundary lines cut by land survey are not discernible at this time due to intervening bush fires since the completion of the land survey some sixty years ago.

GEOLOGICAL STRUCTURES OUTLINED
BY THE SURVEY

A study of the magnetic profiles and of the distribution of outcrops as were observed along the picket lines leads to the assumed position of the geological contacts outlined on the accompanying plan. It cannot be determined from the work completed to date, whether the area indicated as quartz diabase or diorite is made of one homogeneous mass or of two or more dykes, nor has it been possible to indicate areas of faulting or structural movement if they are present. However, the importance of carrying out further examination of the diabase or diorite areas in the north and southwest portions of the property must be emphasized.

SUMMARY AND RECOMMENDATIONS

The broad area from the south shore of Blue lake to the north boundary of the property; and the south extremities of the property in the vicinity of the lower part of Island lake appear favorable for the deposition of sulphide bodies. The diabase or diorite intrusives crossing the northern one-third of the property are probably the same as those masses

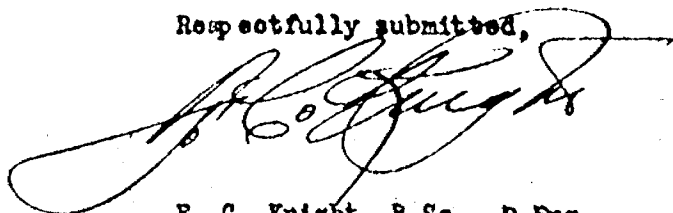
associated with the ore deposits on the property adjoining to the east. Some indication of sulphide deposition within these masses on the Norpick property are evidenced from the weathered rusty outcrop noted during the course of the geophysical survey. Sulphide mineralization has been observed in association with the diabase or diorite intrusive on the south shore of Island lake.

The numerous small outcrops observed along the picket lines in the favorable areas on the property substantiate the belief that an investigation by systematic geological mapping procedures is well warranted. This should be followed by a limited program of surface trenching should geological mapping disclose additional mineralization. Geological mapping should be carried out in detail in the vicinities of the following anomalies:

1. In the north central portion of the property to the north of Blue lake.
2. Along the south shore of Blue lake.
3. Along the south shore of Island lake.

Because of the numerous outcrops these anomalies can be more easily and less expensively examined on surface than by diamond drilling. Therefore we feel that it is an intelligent procedure in this case to refrain from diamond drilling until all possible surface work has been completed.

Respectfully submitted,



F. C. Knight, B.Sc., P.Eng.

FGK/g
Toronto, Ontario
May 22, 1952.



41155W0102 0023B1 PARKIN

020

Report on the
GEOLOGICAL SURVEY
of the Property of
WORPICK GOLD MINES LIMITED
Claims S-59626 to 59635 inclusive
Parkin Township, Sudbury Mining Division,
Ontario

by

F.C.Knight, B.Sc., P.Eng.

Toronto, Ontario

June 24, 1932.



411155W0102 0023B1 PARKIN

020C

I N D E X

	<u>Page</u>
General Statement	1
General Geology	2
Structural Features	3
Economic Geology	4
Conclusions and Recommendations	5

REPORT ON THE GEOLOGICAL SURVEY

NORPICK GOLD MINES LIMITED

Claims 8-59628 to 59835 inclusive
Parkin Township, Sudbury Mining Division, Ontario

GENERAL STATEMENT

The general description and notes with respect to the above claim group were covered in some detail in a recent report dated May 22, 1952 and will not be dealt with further in this report. However, one addition must be added with respect to access to the property. The mine road branching off from the Capreol-Milnet road, to the shaft workings of Milnet Mines Limited, is now almost finished. On the completion of this road it will be possible to drive within 2000 feet of the east boundary of your company's claim group.

In the course of the field work accompanying the geological survey it became apparent that our findings would not conform too closely with the geology as shown on the Moose Mountain-Manapitai Area Map, No. 41-E (Ontario Department of Mines - 1932). The many changes indicated must be considered normal since the survey in 1932 was carried out on a more general scale with traverses spaced at much larger intervals. Much more detail has been mapped in this program. JK

In conducting the survey the control picket lines cut for the geophysical work in April were used throughout. Traverses were made at fifty to one hundred foot intervals between all lines. The shore lines of the lakes were thoroughly investigated for outcrops. All information resulting from the field work has been plotted on a plan of a scale of 1 inch equals 200 feet. This plan has been used as an overlay to the magnetometer survey plan for a complete interpretation of the geological and structural features. The surface plan accompanying this report represents the final summation of information from both surveys.

GENERAL GEOLOGY

The general geology of the area is shown on Map No. 41-E of the Ontario Department of Mines (Moose Mountain-Manapitot Area, published in 1932, and on Map 155A (Lake Huron Sheet). No recent maps have been published covering this section.

The recent survey shows the southern and southeastern parts of the property to be underlain by a Keewatin greenstone series composed principally of andesite, and basalt in lesser amounts. Numerous rhyolite flows were observed interbedded with the above types to the south and east of Island Lake. These formations have been intruded by a medium textured diorite to the south and west of Island Lake on claims S-59626 and S-59633.

The greenstone series is bordered to the north and east by the Temiskaming-Bruce series made up largely of thick beds of fine grained quartzite interbedded with greywacke. Surface outcrops usually found to be weathered to a grey color, show a marked buff weathering to the east of Blue Lake. Exposures of conglomerate were exposed to the southeast of the small lake on claim S-59635 and to the east of Blue Lake. These probably represent a basal member of the sedimentary series. However, the outcrops to the east of Blue Lake contain a few angular fragments which may represent a breccia zone related to the adjacent northeast trending fault. The rocks of this series show a general "burn" in the vicinity of the greenstone-sedimentary contact.

The sedimentary series has been intruded in the area of and to the north of Blue Lake by a southeasterly trending dyke of Nipissing diabase. This dyke, which attains a width of as much as 2000 feet on the property, has been followed for several miles to the northwest. It is composed of a coarsely crystalline matrix containing medium sized crystals of white feldspar and some

ECONOMIC GEOLOGY

Only sparse mineralization was found on the claim group. On Claim S-59627 to the north of Blue Lake and between lines "F" and "G", an exposure of highly carbonated diabase, shattered and quartz filled, was examined. A sample consisting of quartz containing sparse pyrite was assayed for gold and silver (sample #1).

The quartz diorite dyke north of the lake on claim S-59635 was found to contain considerable pyrite in places and a sample of the best mineralized material (sample #30) was assayed for gold and silver.

A third sample, consisting of diorite sparsely mineralized with pyrrhotite, from the southern part of the property (sample #7), was assayed for nickel. Assay results of these samples were as follows:

<u>Sample No.</u>	<u>Au</u>	<u>Ag</u>	<u>Ni</u>
1	Nil	Nil	-
7	-	-	Nil
30	0.01	Nil	-

Scant chalcopyrite was observed in the greenstone area to the south of the lake on claim S-59635. This mineralization appears to be similar to a mineral showing some 1200 feet to the south on an adjoining claim group. This latter deposit was very thoroughly examined many years ago by surface trenching and stripping. The estimated quality of both showings appears to be much too low to merit further consideration.

One small outcrop on the south edge of Island Lake contained a small amount of chalcopyrite. The mineralization is associated with an easterly striking shear zone situated under the southern of two strong anomalies. The exposure is poor and almost entirely under the lake. As a consequence no further information could be obtained. Its geological associations however

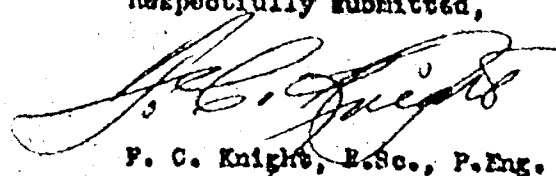
indicate that some further investigation is justified although the amount of chalcopyrite noted is not sufficient to class it in a commercial category.

CONCLUSIONS AND RECOMMENDATIONS

From observations made during the survey, only the area along the south shore of Island Lake would appear to merit further investigation. While nothing of a commercial nature was found here, disseminated chalcopyrite in association with an east-west trending shear zone was mapped. This feature is almost completely under the lake and no further information was obtainable on surface. The projected extension of the shear to the east passes under the lake and thence into a swamp or marsh. To the west the area is overburdened. Magnetically, the showing is within the area of a strong anomaly. A more complete investigation, if carried out, should take the form of a diamond drill hole collared to the south of the shear on the south shore of the lake and drilled on a northerly strike. This hole should be drilled on a dip of -45° and continued to a depth of some 450 feet to cut the mineralized shear and both anomalies. Should the drill hole intersect nothing of interest at depth, no further work should be considered.

In the above plan where the future program may be short lived, the cost of one diamond drill hole would probably be very high on a per-foot cost basis although the total cost need not be very great. Some consideration can be given to the possibility of having this hole included in the drilling program of a neighbor or other exploratory effort in the district.

Respectfully submitted,



F. C. Knight, B.Sc., P.Eng.

Toronto, Ontario
June 24, 1952.

NORPICK GOLD MINES LIMITED

APPENDIX I

Claims 8-59626 to 59635 inclusive, Parkin Township, Sudbury Mining Division, Ontario.

SUMMARY OF ASSESSMENT WORK

<u>Claim No.</u>	<u>Equivalent 8 Hr. Man Days - Geo- physical Survey</u>	<u>Equivalent 8 Hr. Man Days - Geo- logical Survey</u>	<u>Total Days</u>
8-59626	18.65	22.95	41.6
8-59627	18.65	22.95	41.6
8-59628	18.65	22.95	41.6
8-59629	18.65	22.95	41.6
8-59630	18.65	22.95	41.6
8-59631	18.65	23.95	41.6
8-59632	18.65	22.95	41.6
8-59633	18.65	22.95	41.6
8-59634	18.65	22.95	41.6
8-59635	18.65	22.95	41.6
TOTALS	186.5	229.5	416.0

Line Outting and Chaining

L. Gervais - Milnet Ontario
A. Skreoky - 1405 - 330 Bay St., Toronto, Ontario
Period April 7-18 inclusive, 1952.

Geophysical (Magnetometer) Survey - Field Work

A. Skreoky)
F.C. Knight) 1405 - 330 Bay St., Toronto, Ontario

Period - April 16-18 inclusive, 1952
May 7-18 inclusive, 1952

Instrument - Sharpe B-1 Magnetometer, Serial No. 501, Gamma Factor - 31.7.

Field Calculations

F. C. Knight

Geological Survey - Field Work

A. Skreoky)
F.C. Knight) 1405 - 330 Bay St., Toronto, Ontario

Period - May 31-June 11 inclusive, 1952.

APPENDIX I (Continued)

NORPICK GOLD MINES LIMITED

Draughting, Interpretations, Reports, etc.

F. C. Knight, 1405 - 350 Bay St., Toronto, Ontario

Breakdown

Line Cutting and Chaining - April 7 - 18 inclusive, 1952

<u>Man Days</u>	<u>Hrs./ Day</u>	<u>Total Hrs.</u>	<u>x Factor</u>	<u>Total Hrs. x Factor</u>	<u>Equivalent 8 Hr. Man days</u>
19	10	190	x 4	760	95

Geophysical Survey (Field Work) April 9, 10, 17

18	11	198	x 4	792	99
----	----	-----	-----	-----	----

Calculations

-	-	20	x 4	80	10
---	---	----	-----	----	----

Geological Survey (Field Work)

24	11	264	x 4	1056	132
----	----	-----	-----	------	-----

Draughting, Interpretation & Reports

20	3	180	x 4	640	80
----	---	-----	-----	-----	----

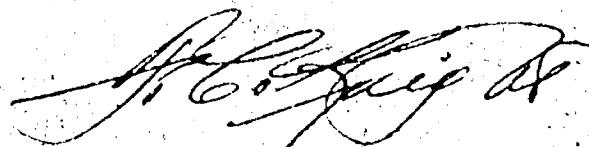
TOTAL 416

This work has been apportioned as follows:

	<u>Geophysical Survey</u>	<u>Geological Survey</u>	<u>Total</u>
Line Cutting	47.5	47.5	95.0
Geophysical field work	99.00		99.0
Geophysical Calculations	10.0		10.0
Geological field work		132.0	132.0
Draughting, Interpretation, Reports	30.0	50.0	80.0
TOTALS	186.5	229.5	416.0

On per claim basis -

Geophysical Survey	18.65
Geological Survey	22.95
Total per claim	41.6



NORPICK GOLD MINES LIMITED

Ontario

Inclusive, 1952

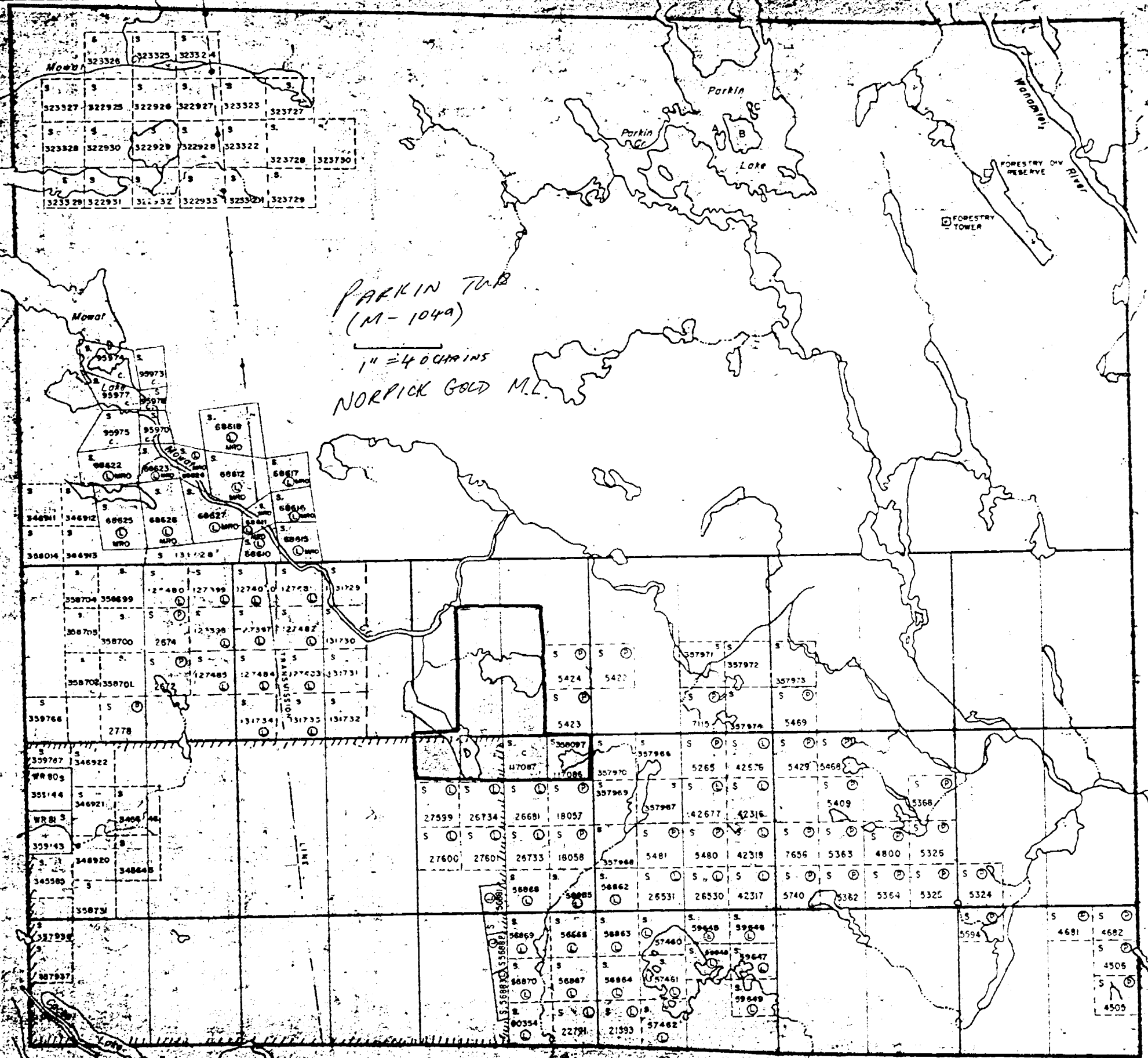
Cal. Yrs. Factor Equivalent
8 Hr. Man days

760	95
17	
792	99
80	10
1056	132
640	80
TOTAL	416

Geological Survey	Total
47.5	95.0
	99.0
	10.0
132.0	132.0
56.0	80.0
229.5	416.0

H. C. [Signature]

HURON TWP. M-944



12 11 10 9 8 7 6 5 4 3 2 1

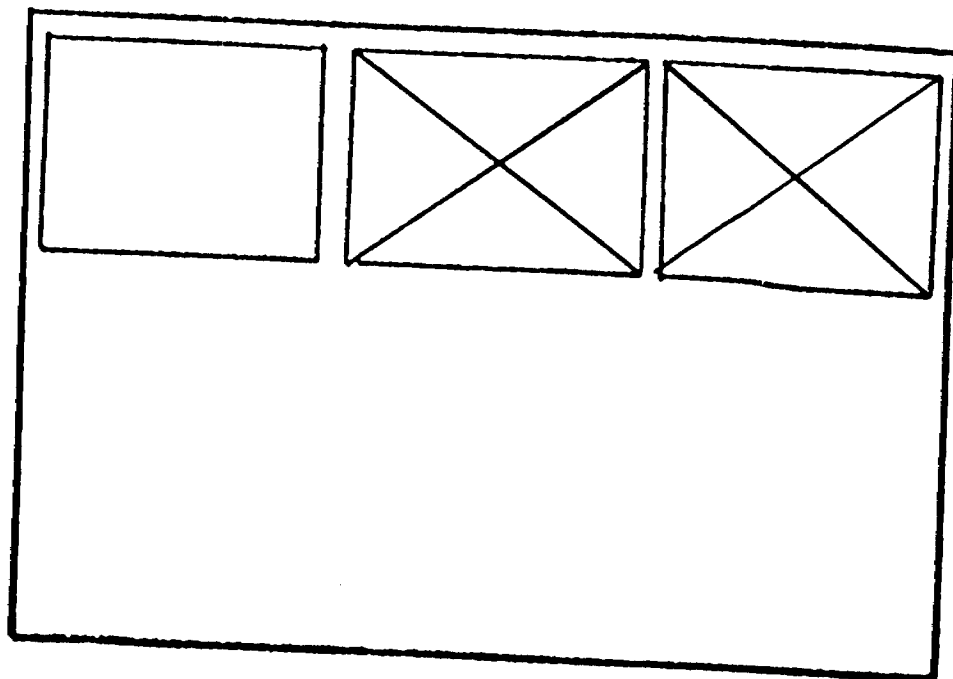
Norman Twp. M-1027

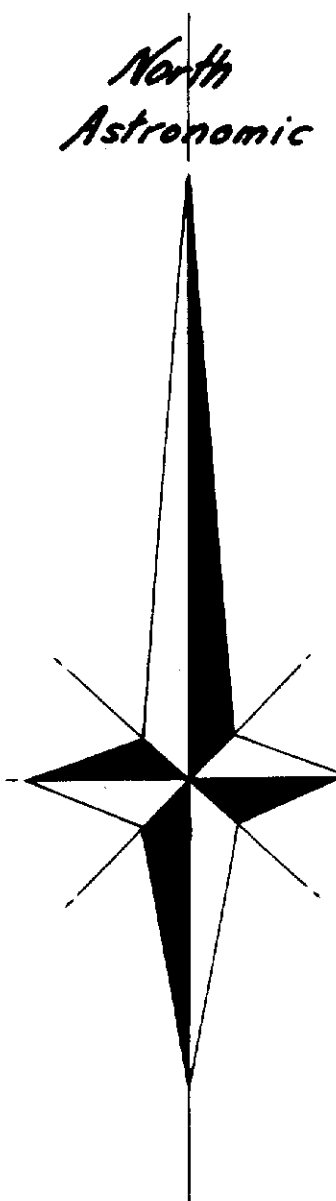
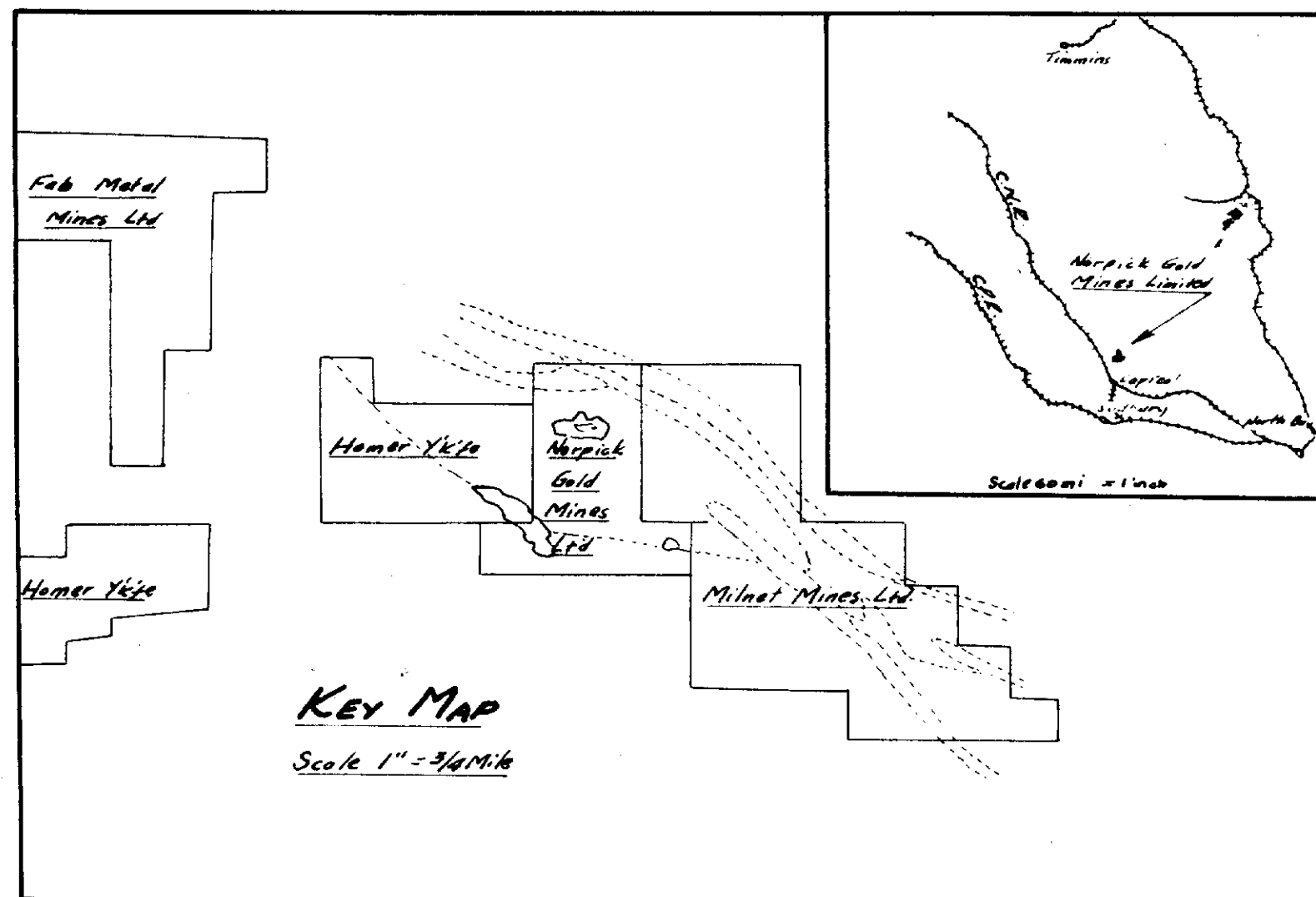
Aylmer Twp. M-641

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

PARKIN-0023-B1, #1, #2

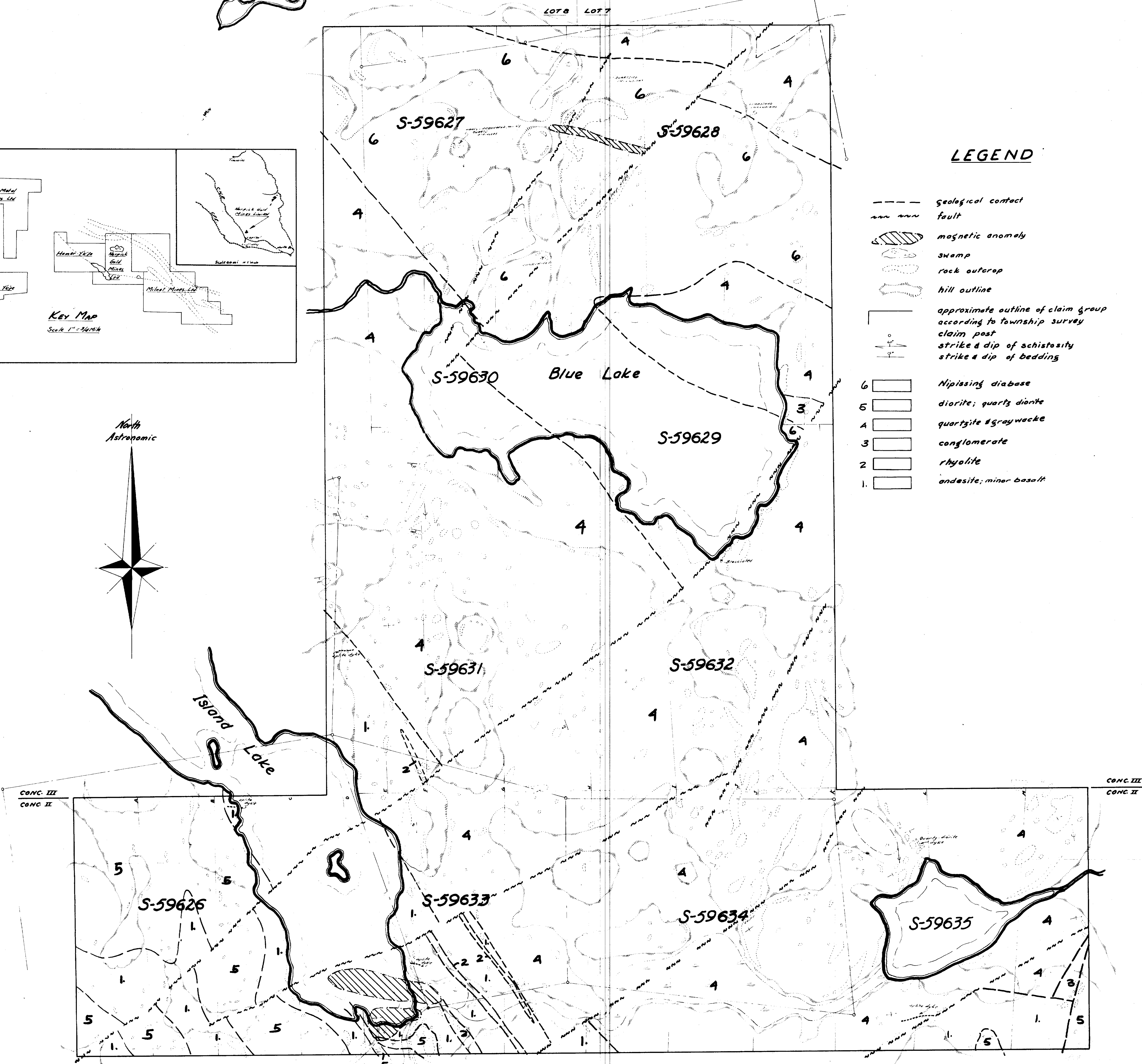
LOCATED IN THE MAP
CHANNEL IN THE FOLLOWING
SEQUENCE (X)





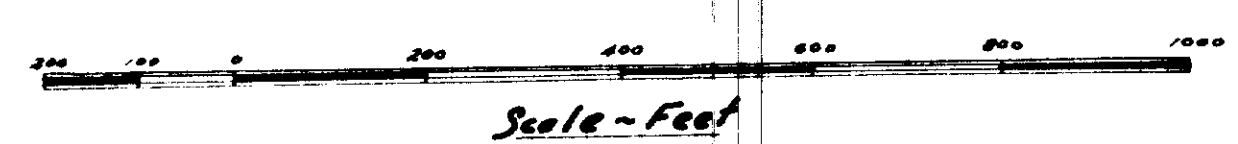
LEGEND

- geological contact
 - fault
 - ▨ magnetic anomaly
 - ☁ swamp
 - ⬭ rock outcrop
 - ⬭ hill outline
 - ⬭ approximate outline of claim group according to township survey
 - ⬭ claim post
 - ↖ strike & dip of schistosity
 - ↘ strike & dip of bedding
- | | | |
|---|---|-------------------------|
| 6 | ▭ | Nipissing diabase |
| 5 | ▭ | diorite; quartz diorite |
| 4 | ▭ | quartzite & graywacke |
| 3 | ▭ | conglomerate |
| 2 | ▭ | rhyolite |
| 1 | ▭ | andesite; minor basalt |



NORPICK GOLD MINES LIMITED
Parkin Township - Sudbury Mining Division - Ontario

SURFACE PLAN



63-307


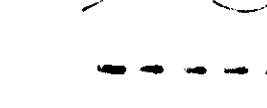



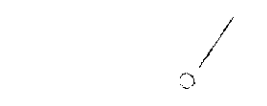



PARKIN-0023-B1, #1

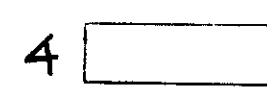





Handwritten signature and date: 1/16/52



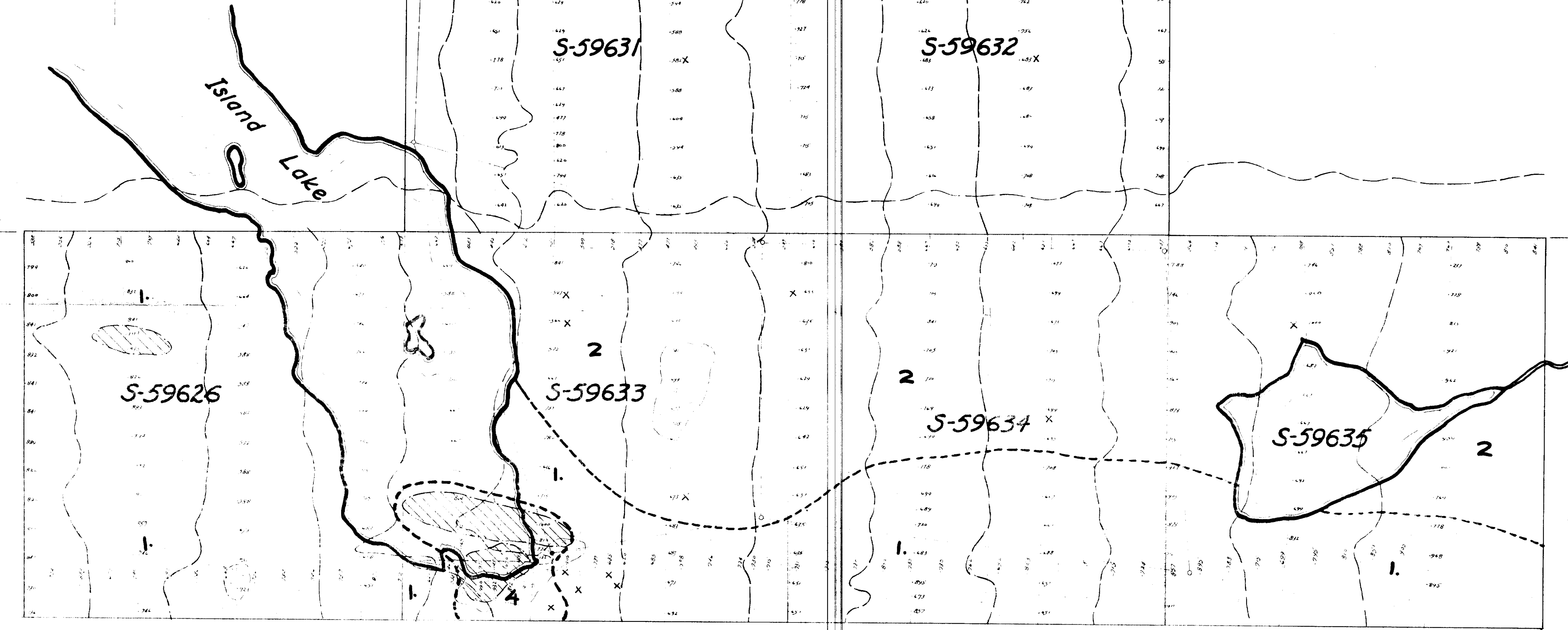
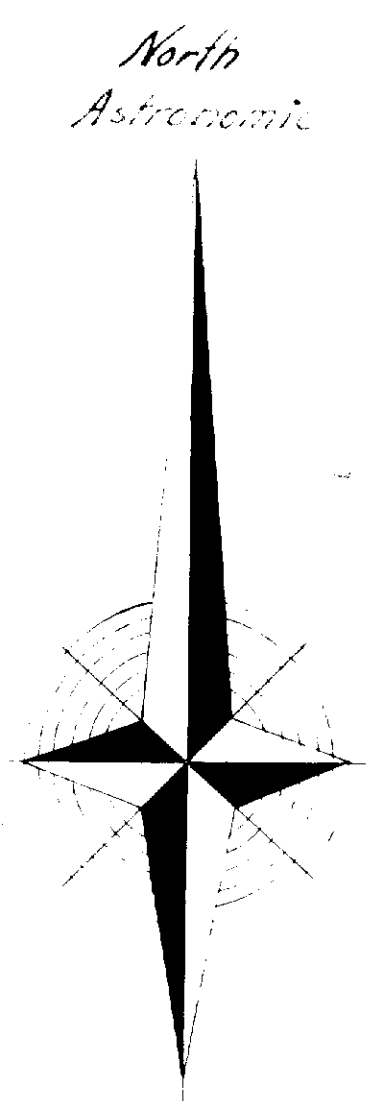
LOT 8 LOT 7

LEGEND

-  magnetic base station
-  magnetic profile - 500 gammas - 1 inch
-  geological contact assumed
-  fault assumed
-  magnetic anomaly
-  swamp
-  rock outcrop
-  claim post
-  approximate outline of claim group according to township survey

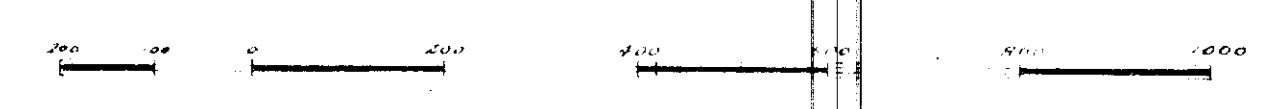
- 4  quartz, diabase, quartzite
- 3  greywacke & limestone
-  quartzite
- 2  quartzite & conglomerate
-  rhyolite
- 1  greenstone

KEY MAP
Scale 1" = 1 mile



NORPICK GOLD MINES LIMITED
 Parkin Township, Sudbury Mining Division, Ontario

MAGNETIC PROFILE PLAN



PARKIN-0023-B1, #2

