REPORT ON
GEOLOGICAL AND MAGNETIC SURVEYS
OF THE GINN CLAIM GROUP
HISLOP TOWNSHIP,
LARDER LAKE MINING DIVISION, ONTARIO

DECEMBER 1979.

A. Peter Ginn P. Eng.

1. INTRODUCTION

During the period from June until November 1979 geological, AND magnetic and ~~V.L.F~~ surveys were carried out on ten unpatented claims in the Township of Hislop, Larder Lake Mining Division of Ontario. These claims, L-512568 to L-512577 inclusive are registered in the name of A.Peter Ginn of Matheson, Ont who is submitting this report to the Ministry of Natural Resources as assessment work and to meet the requirements for M.E.A.P. The results of these surveys are to be used to assist in interpreting the geology in an area where very few of the consolidated rocks are actually exposed and is part of a program planned to include surface stripping, trenching by blasting of bed rock and by diamond drilling.

2. PROPERTY, LOCATION AND ACCESS

The property consists of claims L-512568 and L-512569 which comprise the E ½ of S ½ of lot 4 Con V and L-512570 to L-512577 incl, which make up the north halves of Lots 3 and 4 of Concession V; all in the Township of Hislop, District of South East Cochrane. It is approximately 1½ and 2½ miles north-west from the respective deposits of the New Kelore and Ross (Pamour) Mines. An excellent gravelled road (Hislop #2) runs north and south along the boundary between lots 3 and 4 and joins paved east-west highways number 101 along thenorth boudary of Hislop Township and number 572 which runs between concessions I and II. Another excellent gravelled road, linked in with the above net work, runs east and west between between Concessions V and VI. Distances by road from the property to Matheson, Ramore and Holtyre are respectively 9,8 and 6 miles. The Ontario Hydro services this whole farm area.

3. PREVIOUS EXPLORATION

In 1939 and again in 1945 Abuy Gold Mines drilled a total of eighteen holes with a footage of 4,192 on claims covered by this report. The results of this drilling are on file with the Ministry of Natural Resources. In addition, Nevada Exploration Limited completed an additional 2003 feet in 11 holes. Both programs were for the most part drilling in the vicinity of an isolated outcrop in the east central part of N ½ , lot 4, Con V. They were also apparently planned on the deduction

that the mineralized structures were striking north, north-west and dipping west; this they interpreted from evidence on the outcrop. During the present program no evidence was observed to indicate that the claims had been subjected to any survey in an effort to unravel the regional structures.

The geology of the whole area is described by Moore (1) and again in considerable detail by Prest (2) who mapped it in 1949.

4. SURVEY CONTROL

The control for the present surveying of the north nine claims was a grid of chained picket lines turned off at 90 deg. by transit and at 200 foot intervals from a north-south base line between lots 3 and 4. For the south claim similar lines were cut and chained in a north-south direction. The ends of all these lines were tied in to correct for any deviations which might have occurred. These control lines are shown on the accompanying maps. Measurements refer to a datum point at the intersection of the lot line between 3 and 4 and the Concession line between IV and V which is established as 0 + 00 latitude and 0 + 00 departure.

5. TOPOGRAPHY

The topography was mapped in detail and is shown on the geological maps included in this report. It is generally undulating to flat clay terrain which is dissected by the Pike River and its tributaries. The topographic maximum relief is approximately 60 feet. Most of the north halves of lots 3 and 4 are actively farmed while the E ½ of the S ½ of lot 4 Con V has been abandoned and is growing upin scrub brush. These farms are on the eastern fringe of the Matheson farm area; the soil is clay having been derived from the varved clay deposits of glacial lake Barlow-Ojibway.

(1) E.S. Moore, Geology and Ore Deposits of the Ramore Area, Ont. Dept. Mines, Vol XLV, 1936, pt.6.

(2) V.K. Prest, Geology of Hislop Township, Ont. Dept. Mines Vol.LXV, pt.5, 1956

6 GEOLOGY

6.1 SUMMARY OF GEOLOGIC INFORMATION FROM PREVIOUS EXPLORATION

Murray Watt who supervised the Abuy Gold drilling summarized the geology as follows:

> " Observations based on the results of diamond drilling indicate that the geologic structure of the rock is that of a wide shear composed of coarse to fine grained carbonatized and seritized and sometimes brecciated intruded by massive to fractured or brecciated syenite and syenite porphyry. Both lavas and syenites may or may not be mineralized and if so, it is generally by fine iron pyrite and occasionally minor amounts of chalcopyrite.
>
> The single outcrop at McBride discovery consists of a carbonatized lava breccia some of which is mineralized with considerable fine pyrite. One grab sample from one of these mineralized zones assayed $ 2.40 in gold. The strike of the shearing is N 25 Dr. E and slight dip E but this is certainly only local and does not indicate a general strike or dip from observing this one outcrop.
>
> The syenites do not correlate as continuous dikes in the drilling and hence are assumed to be small, irregular stock like masses. Its contacts are generally gradational and marked by a zone of feldspathization, sericitization and carbonatization extending outward from the intrusive. Any gold values in those syenites are in those showing the more intensive fracturing and pyritization.
>
> The only other intrusive encountered in drilling is a massive dark grey coarse-grained rock of the nature of a gabbro or diorite. It did not appear to exert any influence on mineralization or alteration on the adjoining rocks and hence or no importance in seeking gold ore. "

Tom Gledhill who reports for the Nevada Exploration Limited gives little additional information on the geology other than to repeat that of Watts. He does however feport a gold intersection in hole 74-21 returning 0.61 oz per ton across 5 ft. and that similar values could not be repeated down dip or along strike. The drill logs note a mix of such rock types as greenstone, porphyry, syenite, granite and chlorite schist. The intersection assaying 0.61 is in a section of core called "greenstone breccia" with no mention of mineralization.

GEOLOGY (Cont.)

6.2 GEOLOGY FROM THIS SURVEY

There are only three distinct areas of outcrop or diamond drill exposure ofthese claims and as these are so widely separated and geologically different no attempt is made here to correlate them and so are here described separately. They are shown on the accompanying geological map.

Near the south-east corner of claim L 512568 are several rock exposures which in this present program have been enlarged by trenching so that they now extend intermittantly in a north-south direction for over 400 feet and latekally for about 200 feet. In many places the rocks are fine to medium grained greywacke which showes distinct bedding, strikes in a north-south direction and dips vertically. Grain gradation suggests that the tops face to the ~~east~~ WEST. There are many fine cross fractures which diplace the bedding planes; in other places bedding is entirely absent. In addition to these observations of the weathered surface, the core from drill hole 79-8 (the logs of which are filed with the Ministry) shows that in some places the rocks have been altered to olive-green, which colouration is usually accompanied by moderate amounts of very fine disseminated pyrite.

On claim L-512569 about 350 feet west from the bridge which crosses the Pike River the current has undermined the south bank to expose a strip of rock about 50 feet long and 2 to 3 feet wide. and about a hundred feet south-west from this is another small outcrop (not previously reported). These are both fine grained,dark green, massive lavas of intermediate composition.

The third outcrop area is in the north central part of claim L512571 where there isone,75 foot in diameter, exposure of pillow lava. The flow structure is not distinct enough to establish with any certainty the attitude of individual flows. There is some carbonate alteration which shows up on the surface as rusty weathering along the pillow margins and carbonatized shears. The strike of the shearing here is about N 20 deg. E. and a few quartz stringers up to 6" in width cut across this and strike at about 20 deg. west of north. There are a few disconnected, very irregular masses up to 3 feet across ofpink feldspar porphyry.

The geologic knowledge of this area has been considerably enlarged by information from drilling, particullarly with the addition from recent holes 79-12 and 79-13. The results show a great fault zone, the Destor-Porcupine, striking here about 45 deg. west of north. The succession of rocks from south-west to north-east is pillow lava, quite fresh looking and of medium composition, a gabbroic-diorite sill or flow which is followed by a succession,at least 500 feet wide, where the rocks, probably lavas, are intensely sheared and altered. Within the zone are islands, similar to the outcrop, where the rock is less altered. None of the holes drilled completely passed through the zone so we don not know its complete width or what the rocks are onits north-east flank. About 1600 feet east of the cellar of hole 79-13, near the south-west corner of claim L512574, a previously drilled north directed hole was logged by J.W.McBean as andesite containing numerous sheared and brecciated sections. Within the fault itself shearing is so intense that much core was lost in drilling and various geologist in logging it frequently have used such terms as "chlorite schist", " talc schist", and "fault gouge" and refer to alterations such as "talcose", "chloritised" and "serpentinized"; Some of these show pronounced magnetism. This Destor-Porcupine fault is the most important structural feature of this area.

The fault zone is cut by irregular patches of pink coloured rock which is sometimes distinctly porphyritic but inother case is fine grained and appears as an alteration along fractures in the host rock. Two of the holes numbers 17 from previous drilling and recent hole number 79-13 cut fresh-looking diabase which here lies within the fault zone itself.

With the exception of diabase, most of the rocks within the fault zone, both the more massive islands and the schist itself, contain a stockwork (up to 50%) ofquartz-carbonate veins. These are usually barren looking and at the most contain only sparely distributed pyrite and or chalcopyrite mineralization. Occasionally in the porphyry or felsite areas there are moderate amounts of one or both of these minerals.

7. MAGNETIC SURVEY

7.1 PERSONNEL AND INSTRUMENT

The personnel engaged in the survey were Ken Haley, Martin Sloan and A.Peter Ginn.

The instrument used was a Scentrex Limited Model MF 1 Fluxgate Magnetometer; a description of the instrument is attached.

7.2 SURVEY METHOD

The field procedure employed was as described in the above attachment. The base station was at 6+ 00 W, 0 + 00 S. with other auxilliary conveniently located base stations tied into this.

Readings were taken along the picket lines at 50 foot intervals or closer. Because of diumnal and magnetic storm problems, numerous lines had to be re-run. A good deal of the area surveyed is or was at one time under cultivation so that a good deal of magnetic interference was experienced from abandoned equipment, fences, power lines,etc.

After the data was given a preliminary contouring, numerous cross lines were surveyed to confirm or deny the contour pattern.

7.3 INTERPRETATION OF MAGNETIC DATA

The magnetic data and the interpretation of same is presented as three maps, M-1, M-2 and M-3.

Map M-1 covers claims L-512568 and 69. The southwest two thirds of the map has been interpreted as underlain by syenite. The prime reason for this that a body of syenite lies immeditely south of the area in Con IV. The syenite there is known to be locally fairly basic and also to contain a significant amount of tianiferous magnetite. It is for this reason that the anomaly in the west central part of this M 1 map has been interpreted as being underlain by syenite.

There is a reasonable probability that the low magnetics surrounding this syenite to the south and east is underlain by greywacke.

A very distinctive linear anomaly due to diabase projects into the north centre part of the map sheet from M-2 map to the north, however its position is not well defined here.

Map M-2 embraces claims L-512570, 71, 72 and 73. The Destor-Porcupine fault crosses this map sheet in a northwest direction. Associated with this fault zone are linear bodies of gabbro and altered ultrabasics both of which are magnetic; it is this property which allows the fault zone to be traced.

Diabase dikes are known from drill holes and indicated in the magnetics by linear anomalies trending in a north-northwesterly direction. At least two dikes are present; the northerly northwesterly trend of the eastern most dike is interuppted by the Destor-Porcupine system of faults.

In the northwesterly third of claim L 512571 and extending into claim L512573 is an area interpreted as an alteration-rupture zone. It trends in a north-northwesterly direction across the Destor-Porcupine fault zone. There is a distinct interruption of the magnetic pattern along it. Past drilling indicates a complex mix of rocks and specifically felsite, felsite porphyry, and green and white carbonates.

Map M-3 covers claims L512574, 75, 76 and 77. The Destor Porcupine fault and associated magnetic rocks cross the southwest corner of this sheet. Also in this part of the sheet there evidence of a northeast trending cross fault and a distinct change in the magnetics across it.

Two anomalies of unknown cause, namely 3 + 00 E, L44 N; and 13 + 00 E, L 28 N are sufficiently sharp to suggest that they are near the surface.

The northeast part of the sheet with low magnetics is considered to be underlain with sediments.

Respectfully Submitted Dec. 1979

A. Peter Ginn M.Sc.

REGISTERED PROFESSIONAL ENGINEER
MINING
A. PETER GINN
PROVINCE OF ONTARIO

Ontario

Ministry of Natu

GEOPHYSICAL – GEOLOG
TECHNICAL DAT

42A09SW0275 2.3182 HISLOP

900

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOLOGICAL AND MAGNETOMETER
Township or Area MISLOP TOWNSHIP.
Claim Holder(s) A. PETER GINN.

Survey Company A. PETER GINN
Author of Report A. PETER GINN.
Address of Author BOX 359, MATHESON. ONT
Covering Dates of Survey JUNE 1 TO NOV. 15, 1979
(linecutting to office)
Total Miles of Line Cut 18¼

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	
–Magnetometer	40
–Radiometric	
–Other	
Geological	20
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Dec. 15/79 SIGNATURE: _____
Author of Report or Agent

L.D.

Res. Geol. _____ Qualifications in the qualification book

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	512568
	512569
	512570
	512571
	512572
	512573
	512574
	512575
	512576
	512577

TOTAL CLAIMS 10

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings 4000+

Station interval 50 FT. OR LESS Line spacing 200 FT.

Profile scale _____

Contour interval 100 GAMMAS OR LESS.

MAGNETIC

Instrument SEE ENCLOSED

Accuracy – Scale constant MANUFACTURERS

Diurnal correction method SPECIFICATIONS.

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

Beatty Twp.

Bowman Twp.

Guibord Twp.

Playfair Twp.

Northern Ontario Natural Gas Pipe Line

Froome L.

Lowlar L.

Salve

Black

Pike River

ONTARIO NORTHLAND RAILWAY

VIMY RIDGE STA.

HOLTYRE

SECONDARY HWY P 3256 - 8

572

Northern Ont. Natural Gas Pipe Line file: 163503

VI V IV III II I

13 12 11 10 9 8 7 6 5 4 3 2 1

THE TOWNSHIP OF

2.3182

HISLOP

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

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

NOTES

Holtyre Townsite Shown Thus:

Gravel Reserve Shown Thus:

400' Surface rights reservation around all lakes and rivers.

DATE OF ISSUE
JAN - 9 1980
SURVEYS AND MAPPING BR.

PLAN NO.- M-355

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A09SW0275 2.3182 HISLOP

200

CON VI

CON V

ABANDONED FIELD

HAYFIELD

OATFIELD

OPEN

MIXED BUSH

L 512574

L 512575

SLASHED BUSH

POWERLINE

LOT 4

LOT 3

MIXED BUSH

HAY FIELD

MIXED BUSH

HAYFIELD

L 512576

L 512577

FENCE

OPEN

PIKE R.

ABANDONED FIELD

ABANDONED FIELD

50N

48N

46N

44N

42N

40N

38N

36N

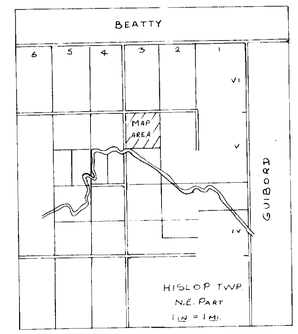
34N

32N

30N

28N

KEY MAP



LEGEND

6 DIABASE.

5 SYENITE, SYENITE PORPHYRY.

4 DIORITE.

3 GABBRO.

2 SEDIMENTS

1 VOLCANICS

SHEARING.

SYMBOLS

- OUTCROP
- TRENCH OR PIT
- TWP. ROAD
- TRACTOR ROAD
- CREEK (SEASONAL)
- SLOPE OF TERRAIN
- TOPO & OR VEGETATION B'DRY
- BUILDING
- DIAMOND DRILL HOLE
- POPLAR BUSH
- SPRUCE BUSH
- TAG ALDER (SWAMP)
- CULVERT
- BRIDGE

ONTARIO REGISTERED PROFESSIONAL ENGINEER A. PETER GRIN PROVINCE OF ONTARIO

GEOLOGY

N½ LOT 3 CON. V

HISLOP TWP.

DIST. OF S.E. COCHRANE

SCALE: 1 IN. = 100 FT.

G-

PIKE RIVER

FENCE 13+11

25+90

CREST OF HILL

4+15.5W

PIKE RIVER

1+28W

L 24N

L 22N

L 20N

L 512569

L 18N

ABANDONED FIELD

L 16N

14+03W 9+90W

14+04N 7+87W

14+03W 6+03W

14+01N 3+96W

14+04N 2+04W

L 14N

13+26N.

CREST OF HILL

ABANDONED FIELD

L 512568

L 12W

L 10W

8W

6W

4W

2W

CON. V

CON IV

LOT 4

POWER LINE

LOT 3

Abandoned Field

2

BEDS 1 TO 5' WIDE TOPS FACING W

2

2

2

TRENCH

P.D.H. 79-8

2

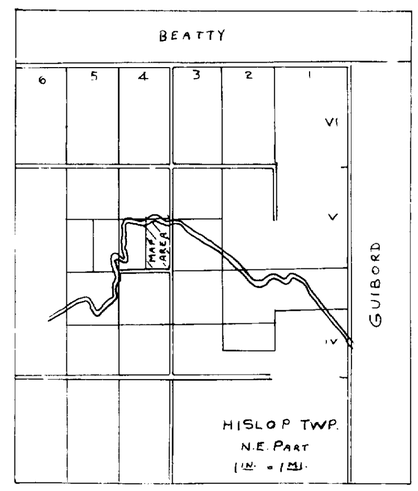
2

2

220

42A09SW0275 2.3182 HISLOP

KEY MAP



GRID NORTH

LEGEND

6 DIABASE

5 SYENITE, SYENITE PORPHYRY.

4 DIORITE.

3 GABBRO

2 SEDIMENTS

1 VOLCANICS

SHEARING

SYMBOLS

OUTCROP

TRENCH OR PIT

TWP. ROAD

TRACTOR ROAD

CREEK (SEASONAL)

SLOPE OF TERRAIN

TOPO & OR VEGETATION B'DRY

BUILDING

DIAMOND DRILL HOLE

POPLAR BUSH

SPRUCE BUSH

TAG ALDER (SWAMP)

CULVERT

BRIDGE

REGISTERED PROFESSIONAL ENGINEER
MINING
A. PETER GINN
PROVINCE OF ONTARIO

GEOLOGY

S.E. 1/4 LOT 4 CON. V

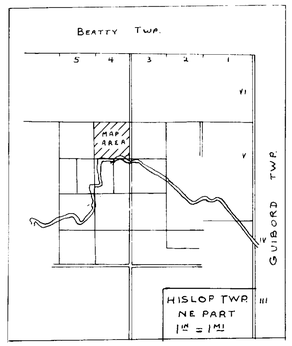
HISLOP TWP.

DIST. OF S.E. COCHRANE

SCALE: 1 IN. = 100 FT

G-1

KEY MAP



CON. VI
CON. V

50N
48N
46N
44N
42N
40N
38N
36N
34N
32N
30N
28N
26N

L 512572
L 512573
L 512570
L 512571

LOT 4
LOT 3

POWER LINE
FENCE
STRAIGHT DITCH
CREEK
OPEN PASTURE
WOODED PASTURE
WOOD PILE
PIKE RIVER
BRIDGE

D.D.H. 79-17
D.D.H. 79-18
D.D.H. 79-19

LEGEND

6	DIABASE
5	SYENITE, SYENITE PORPHYRY
4	DIORITE.
3	GABBRO
2	SEDIMENTS
1	VOLCANICS
	SHEARING OR SCHIST

SYMBOLS

- OUTCROP
- TRENCH OR PIT
- TWP. ROAD
- TRACTOR ROAD
- CREEK (SEASONAL)
- SLOPE OF TERRAIN
- TOPO & OR VEGETATION B'DRY
- BUILDING
- DIAMOND DRILL HOLE
- POPLAR BUSH
- SPRUCE BUSH
- TAG ALDER (SWAMP)
- CULVERT
- BRIDGE

A. PETER GILL
PROFESSIONAL ENGINEER
MINING
PROVINCE OF ONTARIO

GEOLOGY
N½ LOT 4 CON. V
HISLOP TWP.
DIST. OF S.E. COCHRANE
SCALE: 1IN = 100 FT.

42A09SW8275 2.3182 HISLOP

230

G-

CON. V

L512574

L512575

L512576

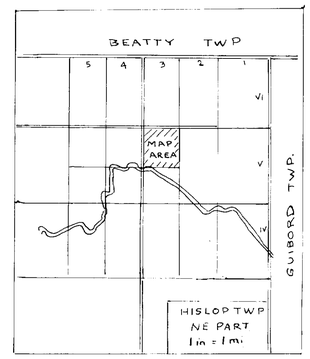
L512577

LOT 4

LOT 3

53+05N
50N
48N
46N
44N
42N
40N
38N
36N
34N
32N
30N
28N

KEY MAP



6 Diabase dikes
5 Syenite
7 Ultrabasics
3 Gabbro
? Anomalies,- cause unidentified
Non-magnetic rocks
Alteration-rupture zones
DesTor-Porcupine Fault (main element)
Faults of DesTor-Porc. System
Cross faults

A. PETER GINN
PROFESSIONAL ENGINEER

MAGNETICS
N½ LOT 3 CON. V
HISLOP TWP.
Dist. of S.E. COCHRANE
SCALE : 1 in = 100 ft.

240

M 3

PIKE RIVER

L 512569

L 512568

LOT 4

LOT 3

CON V

CON IV

BASE STATION

Fence

- 6 Diabase dikes
- 5 Syenite
- 7 Ultrabasics
- 3 Gabbro
- Anomalies,- cause unidentified
- Non-magnetic rocks
- Alteration-rupture zones
- Destor-Porcupine Fault (main element)
- Faults of Destor-Porc. System
- Cross faults

REGISTERED PROFESSIONAL ENG. A. PETER GUIN PROVINCE OF ONTARIO

MAGNETICS
SE¼ LOT 4 CON. V
HISLOP TWP.
Dist. of SE Cochrane
Scale: 1 in = 100 ft.

250

M1

CON. VI
53+05N
CON. V

50N
48N
46N
44N
42N
40N
38N
36N
34N
32N
30N
28N

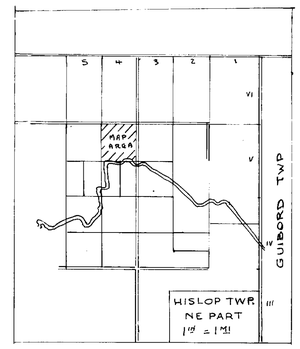
LOT 3
LOT 4

L-512572
L-512573
L-512570
L-512571

CREEK
CREEK
CREEK
CREEK

PIKE RIVER
PIKE RIVER

KEY MAP



6 Diabase dikes
5 Syenite
7 Ultrabasics
3 Gabbro
? Anomalies, - cause unidentified
Non-magnetic rocks
Alteration-rupture zones
Destor-Porcupine Fault (main element)
Faults of Destor-Porc. System
Cross Faults

REGISTERED PROFESSIONAL ENGINEER
MINING
A. PETER GINN
PROVINCE OF ONTARIO

MAGNETICS
N½ LOT 4 CON V
HISLOP TWP
DIST OF S.E. COCHRANE
SCALE 1 IN. = 100 FT.

42A09SW0275 2.3182 HISLOP

260

M2