

52G14SE0117 52G14SW0022 PRESS LAKE

010

63.2048

McIVER LAKE PROPERTY
PATRICIA MINING DIVISION
ONTARIO

N.T. Ref. 52-G-14

SUMMARY

A programme of geological mapping, geophysics and trenching was carried out on the company owned group of 25 claims. The work investigated the economic potential of mineralization in the greenstones, granites and gabbro cropping out on the property. A detailed study was made of a zone of molybdenite-chalcopyrite mineralization in the granite.

CONCLUSIONS

Low grade copper mineralization in the greenstones is too discontinuous to be of economic interest. The mineralized zone in the granite was too low in grade to warrant further investigation. The gabbro contained little more than trace amounts of chalcopyrite in very limited areas.

Further exploration of this property by Steep Rock Iron Mines is not warranted.

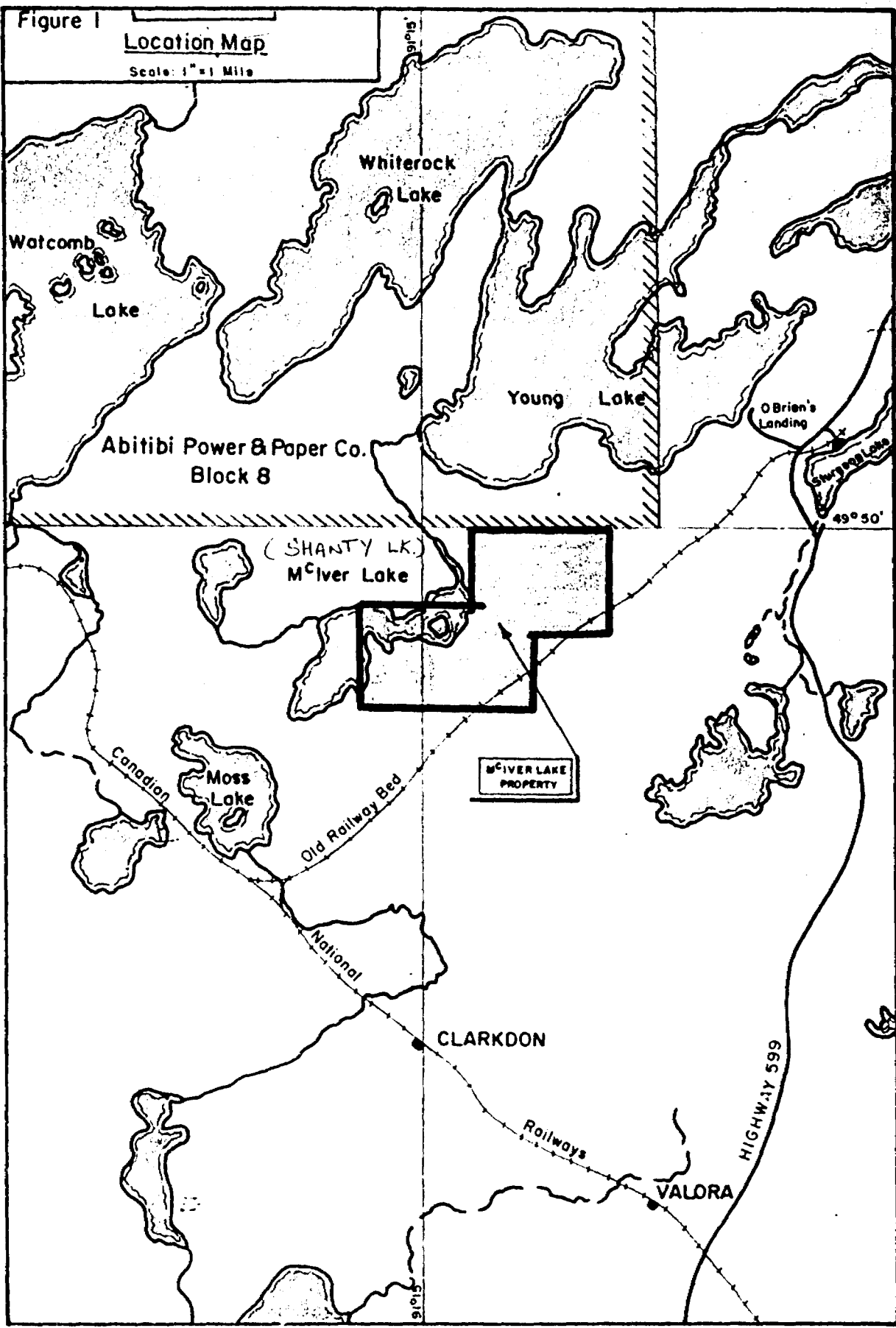
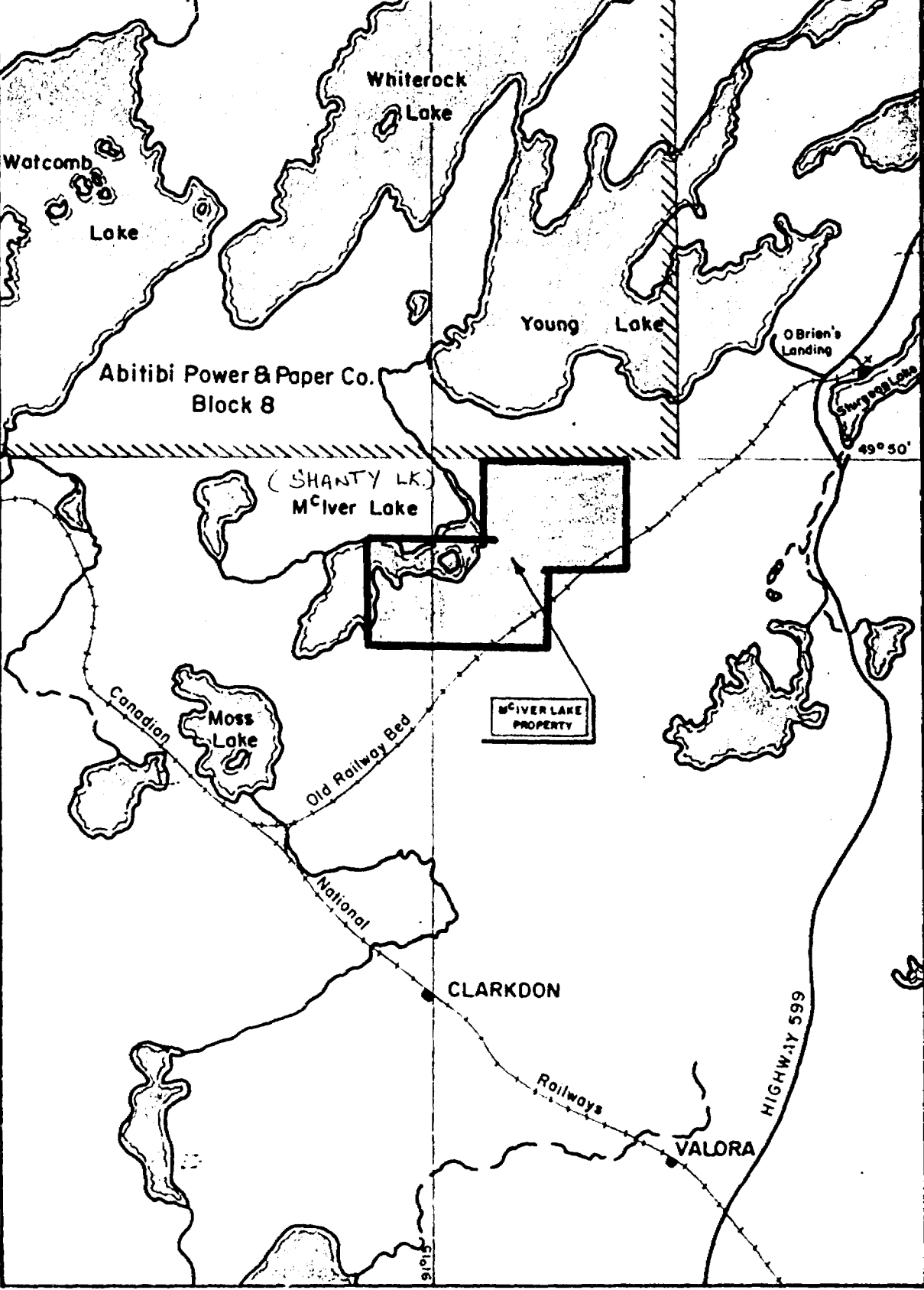


Figure 1
Location Map
Scale: 1" = 1 Mile



INTRODUCTION

An occurrence of wide spread molybdenite-chalcopyrite mineralization south of Young Lake, N.T.S. Reference 52-G-14, discovered by the company employed prospector J. Gareau, was staked in October 1965. In April 1966 a further 15 claims were added to the east and northeast of the original 10 claims. The claims included in the property, Pa. 36383 to Pa. 36392 inclusive, recorded November 2, 1965 and Pa. 36758 to Pa. 36772 inclusive, recorded April 21, 1966, are held by the staker J. Gareau, Main Street, Bryson, Quebec.

During the period April 6 to 8, 1966 a magnetometer survey was conducted covering the flooded portion of the property. From June 8, 1966 to July 13, 1966 the rest of the property was covered by geological and magnetometer surveys. Detailed work in the form of trenching, rock sampling and intensive mapping was conducted within part of Claim Pa.38387 between July 14 and July 29, 1966. All of this work was supervised or carried out by the writer.

Location and Access

The property lies within the area covered by Ontario Department of Mines Plan M-2266, southwest part of Sturgeon Lake Area, Patricia Mining Division, District of Kenora. It adjoins Block 8 of Abitibi Power and Paper Company Limited to the south and partly covers McIver Lake.

(See figure 1).

Small float planes can be landed on McIver Lake during the summer months but the small size of this lake makes take off with full loads uncertain. Access by tractor from Highway 599 is afforded to the eastern part of the property by the old spur line which connected O'Brien's Landing (Sturgeon Lake) with the C.N.R. branch line. A two mile portage between Young Lake and McIver Lake affords access on foot.

Topography and Vegetation

Apart from steep but quite low scarps (30 - 50 feet) bordering the east shores of the lake and cutting diagonally northeast-southwest across the south western three claims, the topography is flat to gently undulating.

The western half of the property together with the northwestern claims are covered largely by evergreen forest. Swampy or at least damp ground conditions within the rest of the property has resulted in dominance of either poplar and birch or stunted spruce. Alders grow in the wettest places to the exclusion of other species.

Moose and deer are plentiful in the area and beaver signs are to be found in all the ponds as well as around the lake shores. Some of the more swampy areas have also been dammed by the beaver.

FIELD PROCEDURE

Linecutting

A baseline was established by transit survey and chaining due east across the property. North-south lines perpendicular to this baseline were cut at 400 foot intervals and extended to the property boundaries. The baseline was assigned a latitude of 10,000 feet north and pickets were established at 100 foot intervals on the cross lines by chaining. Departures were assigned by establishing the westernmost cross line as 6,000 feet east.

A total of 24.6 miles of line were established of which 20.5 miles were cut on land.

During chaining of the lines the claim posts were tied to the above grid. The lake shore and the old railway spur were also located in this way.

Geological Mapping

Bedrock exposures were tied to the cut lines by pace and compass. As in large areas of the property bedrock is covered by overburden much of the geology is interpretive. An effort has been made to differentiate on the maps between observed fact and interpretation.

Magnetometer Survey

Readings were taken with a Sharpe A-3 magnetometer at 100 foot intervals along the base line and at 50 foot intervals on the north-south lines. To compensate for diurnal variation three stations were established and readings taken before and after each day's survey. Further checks were made at each crossing of the base line.

Trenching and Detailed Geology

Over the mineralized zone in the southwest part of claim Pa.36387 east-west lines were established at 50 foot intervals by chain and compass. Stations were located at 25 foot intervals along these lines and the overburden cleared to a depth of 3 feet. Two foot deep holes were drilled in the bedrock which was then blasted to provide samples of unweathered rock for assay. Detailed geological observations were made at each station.

GEOLOGY

Previous Work

The geology of the area around McIver Lake has apparently never been mapped in detail. Geological reports published by both the Ontario Department of Mines and the Geological Survey of Canada do not discuss the area south of Young Lake. More recent maps (G.S.C. Map 557A, Watcomb 1 inch = 4 miles and O.D.M. Preliminary Map P.353, Minnitaki and Sturgeon Lakes Sheet (1 inch = 2 miles) do however show more detail than these early reports. Both these maps indicate that the rocks underlying the McIver Lake area are greenstones predominantly of basic volcanic origin. A tongue from the major granite intrusions is shown invading these greenstones from the west and terminating west of the property. East and southwest of the lake small plugs of gabbroic composition are indicated. The early reports mention that the general area is covered by a mantle of glacial drift and bedded formations of sand and gravel. These deposits often reach 40 - 50 feet in thickness.

Within the area one mineral occurrence is plotted on G.S.C. map 577A and is shown immediately east of McIver Lake. This is reported to be a sulphide replacement body containing molybdenite and chalcopyrite.

The only property in the area on which assessment work has been recorded lies immediately east of the McIver Lake claims. In 1965 the Kevill Mining group carried out a program of geophysical investigations which included magnetometer and vertical loop electro-magnetic surveys. Results of both surveys failed to outline any significantly anomalous areas.

TABLE OF FORMATIONS

Pleistocene and Recent - Glacial Deposits - till and outwash sediments -
clay, sand, gravel and boulders.

- Archean
- Diorite Dykes - medium to coarse grained, porphyritic, massive.
 - Acid Intrusives - medium to coarse grained grey biotite granite to gneissic biotite granite.
 - Basic Intrusives - medium to coarse grained, massive, gabbro.
 - Basic Metavolcanics - fine to medium grained greenstones.

DESCRIPTION OF ROCK TYPES:

Basic Metavolcanics

The greenstones comprising this sequence are generally fine to medium grained dark grey to dark grey-green rocks often with minor free quartz present. Chlorite is rarely a constituent and metallic minerals, generally pyrite but in addition some pyrrhotite and chalcopyrite, are also sometimes present. (See plans 1 & 2). Quartz veins and stringers often cut the rock.

These rocks are of approximately andesitic composition and the coarser grained beds could be described as diorite.

Basic Intrusives

The basic Intrusive suite of rocks is composed of medium to coarse grained dark green, white speckled gabbro sometimes containing quartz. In the southeast of the property one area of outcrops show an increased proportion of feldspar in this rock and it becomes almost dioritic in composition. Quartz veins and stringers are present in some outcrops but are not common. Chalcopyrite was found in a few places to be a minor constituent of the rock (See plans 1 & 2).

Acid Intrusives

The acid intrusive rocks cropping out on the property are generally light grey granites but small zones of gneissic granite are also present.

The granite is a medium to coarse grained light grey rock with biotite as the only ferromagnesian mineral. Chalcoprite and pyrite are present in minor amounts in a number of localities and molybdenite is common in one area of more intense mineralization (See Plan 1).

The gneissic granite is a medium grained grey rock foliated to give a gneissose structure. Chlorite as well as biotite is usually present. The metallic minerals found in the granite are similarly present in this rock.

In both these rock types quartz veining is common.

Diorite Dykes

The dykes mapped are composed of a massive grey porphyritic rock with feldspar phenocrysts. Biotite is the main ferromagnesian mineral present. One of the dykes contains quartz veins following its strike but the present rock is still quite massive.

Glacial Deposits

Most of the property is covered by boulder till interspersed with areas of gravel and sand. This material is largely from moraine but much of the fine material is of outwash origin. An esker follows the east shore of the western half of McIver Lake and forms the spit which divides the lake across the centre.

STRUCTURAL GEOLOGY

The oldest rocks cropping out on the property are bedded meta-volcanics, which have been strongly tilted along an east-west axis. A consistent, steep northerly dip of the bedding planes was observed but no evidence of tops was apparent. Moderate to strong jointing is present but shearing is limited to the fine grained members of the sequence. The jointing is of random orientation except in the west where a north-south strike with a steep (75° - 80°) westerly dip is general.

Intruded into the volcanic sequence are two plutons of igneous rocks. Granitic rocks outcrop in the western part of the property and are in contact with the greenstones along the west part of the northern property boundary.

Jointing and weak shearing are often present but no predominant orientations were observed. Contacts between the granite and greenstone observed in one area of outcrop show the intrusive nature of the granite.

Southeast of the granite, massive rocks of gabbroic composition crop out. One observed contact between these rocks was of intrusive nature but no evidence of age relationships can be seen.

Diorite dykes about 3 feet in width were observed cutting both the granite and gabbro.

ECONOMIC GEOLOGY

As indicated on Plans 1 and 2 occurrences of pyrite, chalcopyrite, molybdenite and pyrrhotite were observed in both the granite and the greenstone. Chalcopyrite was the only sulphide mineral noted in the gabbro. These sulphides are usually disseminated in the host rock but often are carried in the quartz veins or deposited on the joint faces.

An area of disseminated sulphide mineralization in the greenstones in the vicinity of 130W on line 112E was investigated in detail after a preliminary sample from trench 1 (see Plan 2) assayed 0.90% Cu. A check sample from this trench assayed 0.31% Cu and a sample from the adjoining trench 2 assayed 0.649% Cu. A surface representative sample from the immediate area assayed 0.49% Cu. Seventy five feet north of this area, trench 3 was sampled, the assay being 0.099% Cu (assays by Steep Rock Iron Mines' laboratory). These samples confirmed the discontinuous nature of the mineralization observed during mapping. Other areas of sulphide mineralization in the greenstones are low in grade and of limited extent. This mineral occurrence is probably the sulphide replacement body recorded on the geological maps of the area.

Sulphide mineralization in the granite is usually as chalcopyrite deposited on joint planes. Minor pyrite and chalcopyrite in quartz veins is also present. An area of more concentrated mineralization in the southwest part of claim Pa.3638' commonly has molybdenite associated with the other sulphides (see Plan 3). During prospecting two occurrences containing better than 1% molybdenite over 2 to 4 inches and float boulders

containing similar mineralization were discovered. Preliminary sampling from two outcrops in this area assayed 0.03 oz. Ag, 0.05% Cu, 0.11% MoS₂ and 0.09 oz. Ag, 0.03% Cu, 0.10% MoS₂ both samples contained a trace of gold. With this encouragement a program of sampling with complimentary geological mapping was conducted at 25 foot intervals along east-west traverse lines 50 feet apart (see Plans 3 & 4). This program showed that the molybdenite is generally associated with quartz veining but the localities where more intense concentration is present minor shearing appears to be the controlling factor. Although bornite and in one case chalcocite are sometimes associated with the chalcopyrite no significant copper mineralization was noted. The average of analyses made on 84 samples (see Plan 4) is 0.019% MoS₂, 0.03% Cu (assays by Bell-White Analytical Laboratories Ltd.)

The observed sulphide mineralization in the gabbro is of finely disseminated chalcopyrite.

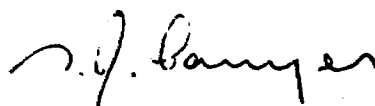
One of the diorite dykes was observed to contain minor chalcopyrite and molybdenite but these minerals were associated with quartz veins which originated in the host granite.

The origin of the metallic minerals in the greenstones and gabbros is uncertain but in the gabbros at least, these minerals appear to be syngenetic. In the granite and diorite the sulphides appear to have been introduced in the quartz veins. The concentration of the molybdenite along some shears is probably at the limits of intrusion of the quartz rich solutions containing this mineral.

MAGNETOMETER SURVEY

The purpose of the magnetometer survey was to aid in the location of rock contacts and to locate any concentrations of magnetic minerals. No significant concentrations of magnetic minerals were located. The slight peaks in the traverses in the northern part of the property (see Plan 6) indicate the presence of minor amounts of pyrrhotite in the bedrock.

The elongated anomaly in the southwest part of the property expresses the difference in the magnetic susceptibility of the granite and gabbro. This anomaly has been interpreted as showing the granite-gabbro contact in this area. The lack of continuance of this anomaly suggests that the gabbro is not of uniform composition as was confirmed by the geological survey.



October 1966,
Steep Rock Lake, Ontario.

S. J. Carryer, Geologist,
Exploration Department,
Steep Rock Iron Mines Limited.

WHITEROCK LAKE

YOUNG LAKE

PRESS LK.

SCALE: 1" = 40 CH

PA 36763	PA 36764	PA 36769	PA 36770	PA 37255	PA 37260
PA 36762	PA 36765	PA 36768	PA 36771	PA 37256	PA 37257
PA 36382	PA 36388	PA 36389	PA 36766	PA 36767	PA 37259
PA 36391	PA 36387	PA 36758	PA 36761	PA 36772	PA 37261
PA 36390	PA 36386	PA 36759	PA 36760		

ROSS LAKE

RED

3 M

2 M

3 M

35.03

100

10 M

11 M

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS
52G/14SW-0022-#1



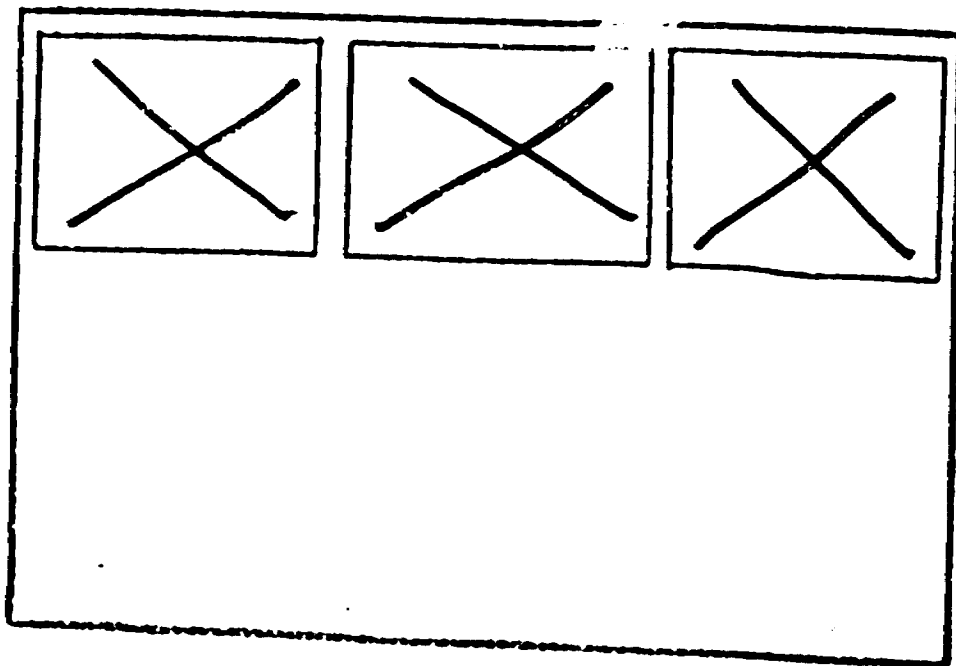
52G14SE0117 52G14SW0022 PRESS LAKE

900

#2

#3

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



FOR ADDITIONAL
INFORMATION

SEE MAPS:

52G/14SW-0022#4-#7

PLAN 11 - 100000

STURGEON LAKE

BEIDELMAN BAY

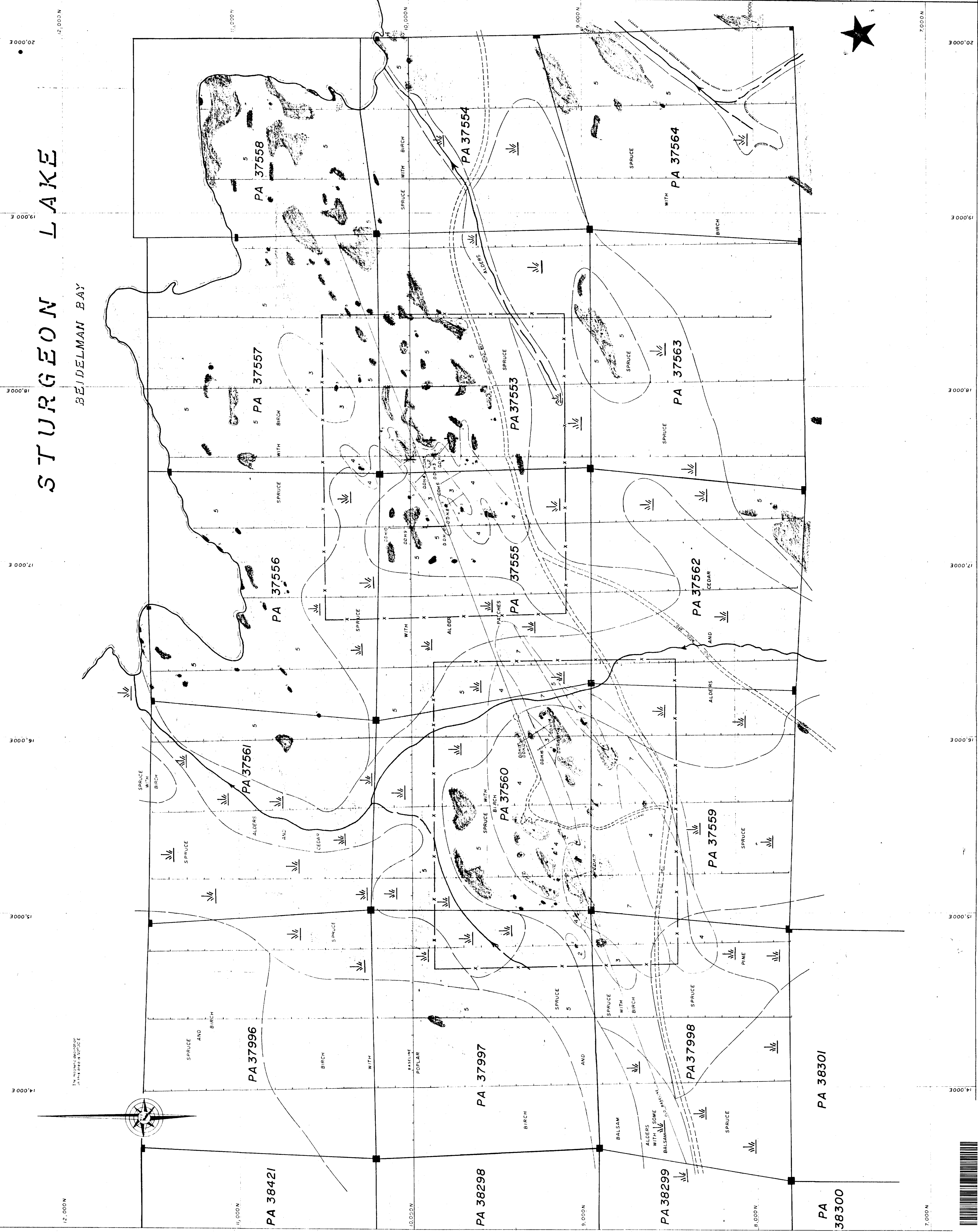
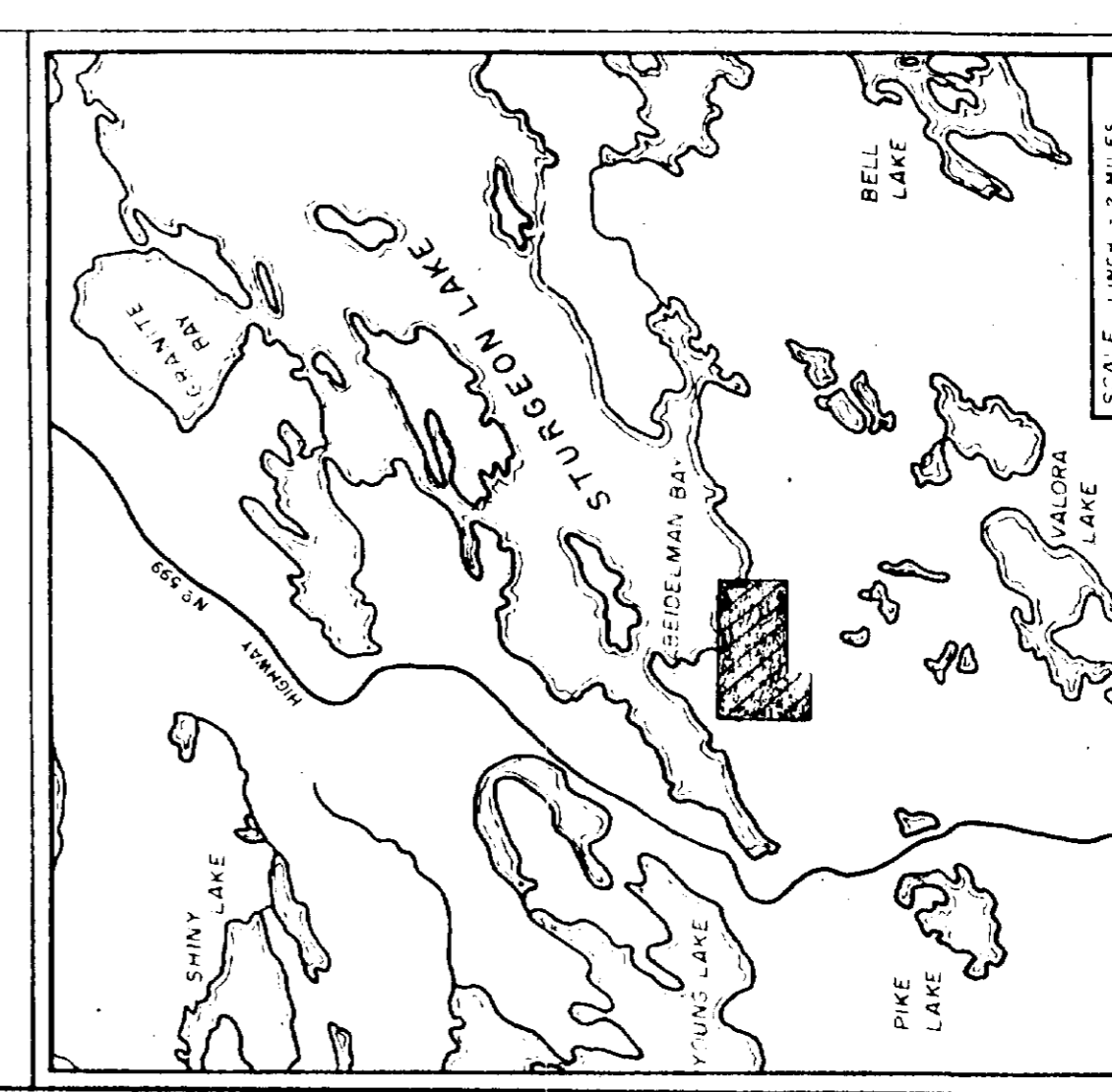
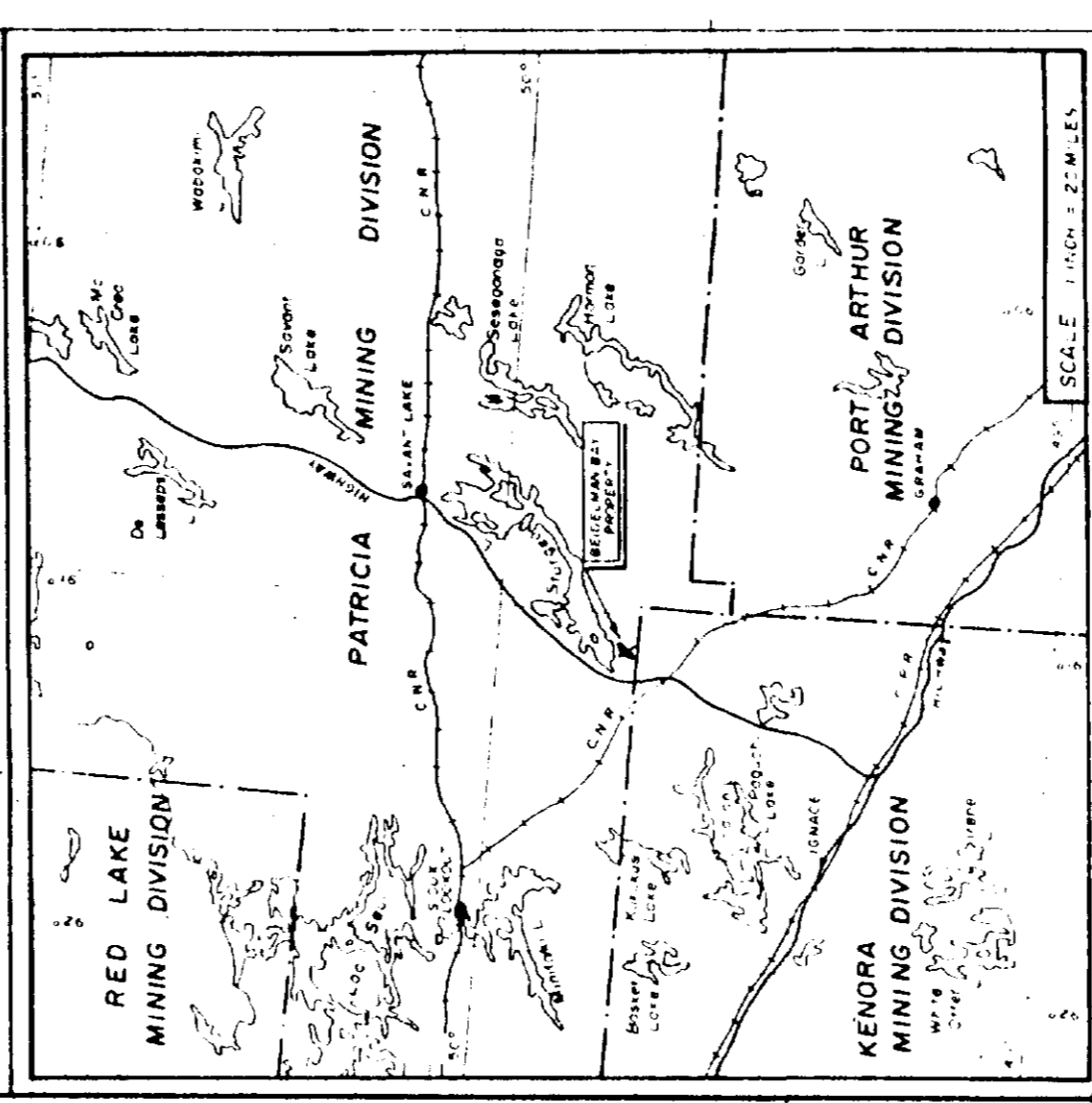


TABLE OF FORMATIONS

1	Dark, heavy granite
2	Felsitic, quartz, felsitic porphyry
3	Silicified and blue quartz eye granite
4	Granite, Saffordian (zone 2721200000)
5	Granite
6	Basalt

LEGEND

- Contour lines with spot
- Contour lines with measurements
- Creek
- Stream
- Outline of surface features
- Base of slope
- Area of increased surface elevation
- Spot height, 10, 20, 30
- 450' contour interval (height 100')
- 50' contour interval
- Elevation of prominence
- Contour interval 20'
- Traverse
- Dumped or loose
- Geological contact



52G/145W-0022-#1

STEEL ROCK IRON MINES LTD.
 BEIDELMAN BAY PROPERTY, STURGEON LAKE, PATRICIA MINING DIVISION

GEOLOGICAL PLAN

DATE: September, 1967
 SCALE: 1 inch = 200 feet

20,000' N
 19,000' N
 18,000' N
 17,000' N
 16,000' N
 15,000' N
 14,000' N
 13,000' N
 12,000' N

20,000' E
 19,000' E
 18,000' E
 17,000' E
 16,000' E
 15,000' E
 14,000' E

7,000' N
 8,000' N
 9,000' N
 10,000' N

2000



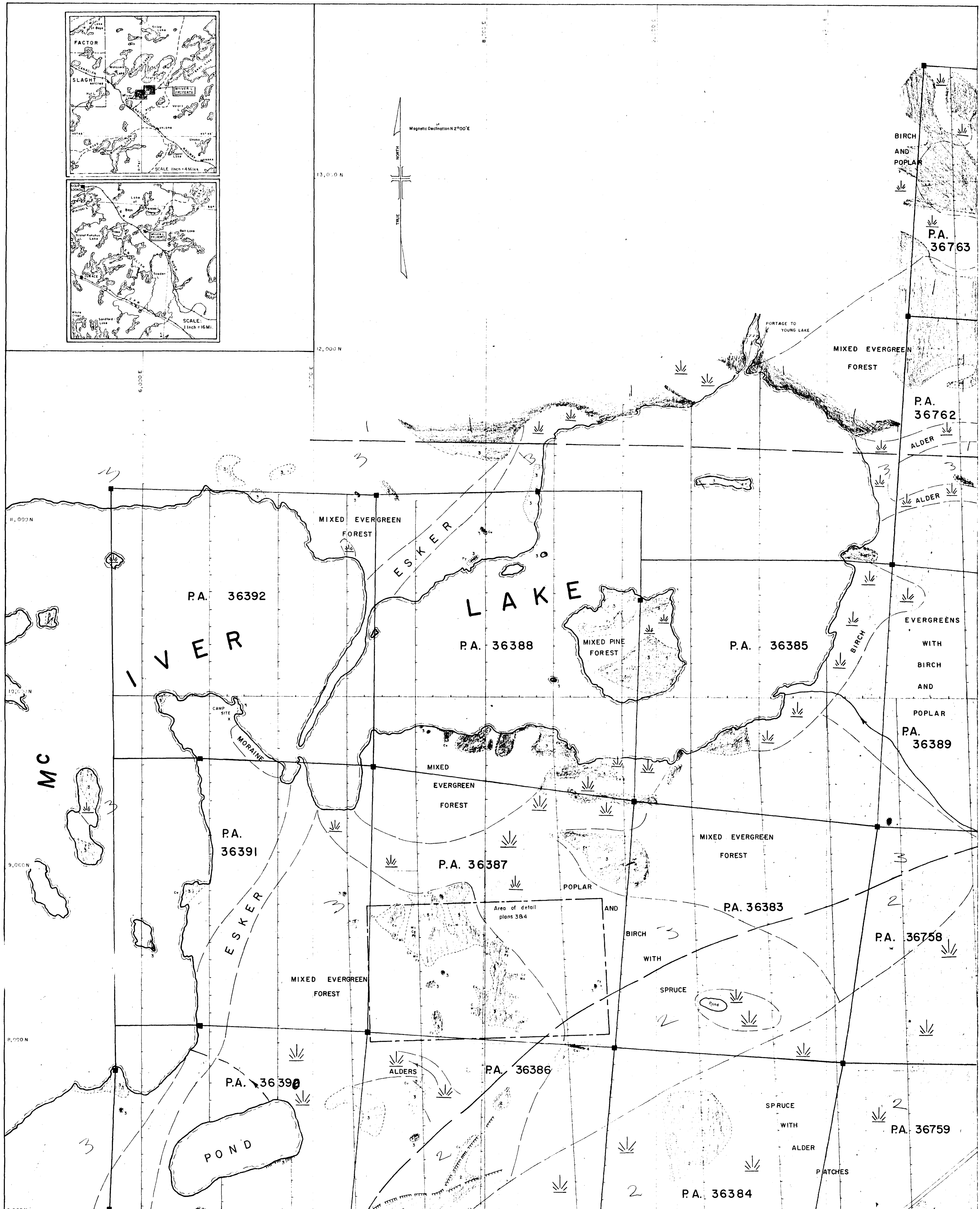
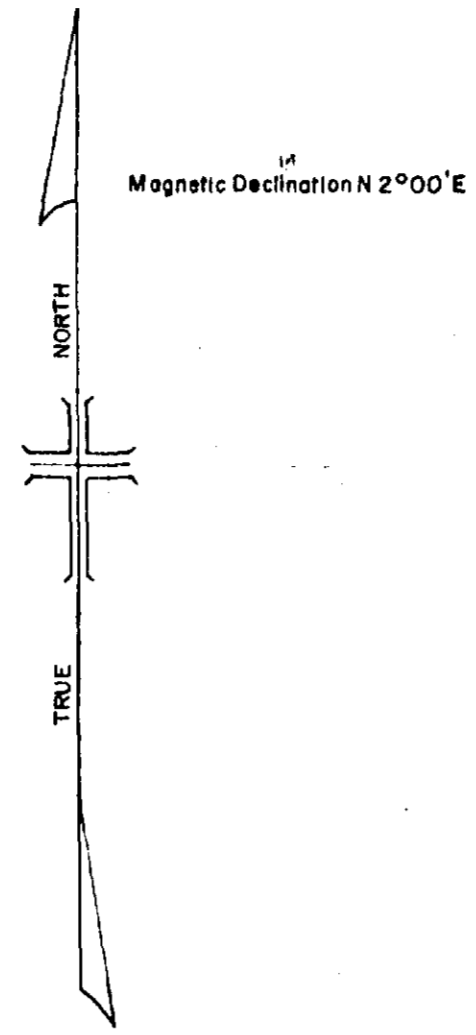
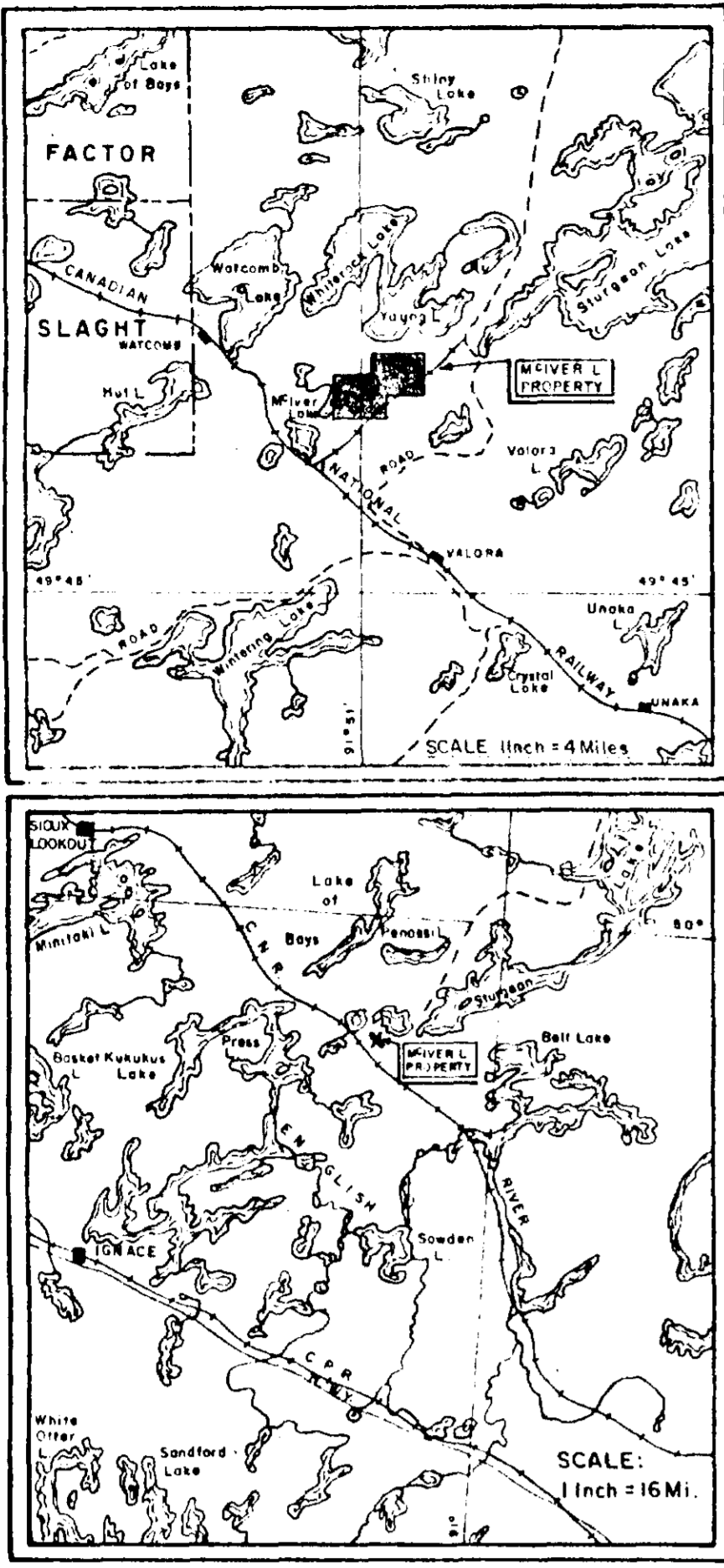


TABLE OF FORMATIONS

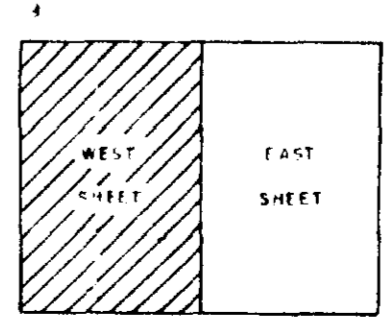
- Diorite (Oyke Rock)
- Granite
- Gabbro
- Greenstone

OBSERVED MINERALIZATION

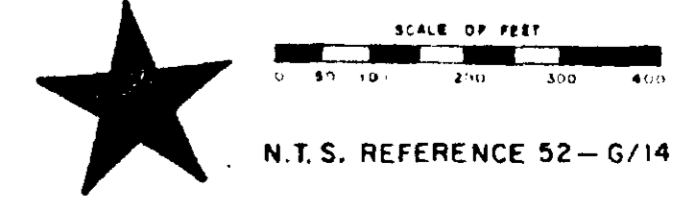
- Pyrite
- Pyrrhotite
- Chalcocypite
- Molybdenite

LEGEND

- Claim Boundaries
- Cut Lines with Measured Stations
- Creek
- Beaver Dam
- Swamp
- Base of Slope
- Outline of Surface Features
- Outcrop Area Covered by Discontinuous Patches of Overburden
- Bedrock Exposure
- Trench
- Glacial Stria
- Bedding Plane
- Joints - inclined (with shearing)
- dip unknown (approx. vertical)
- Geological Contacts - observed
- assumed



52G/145W-0022-#2



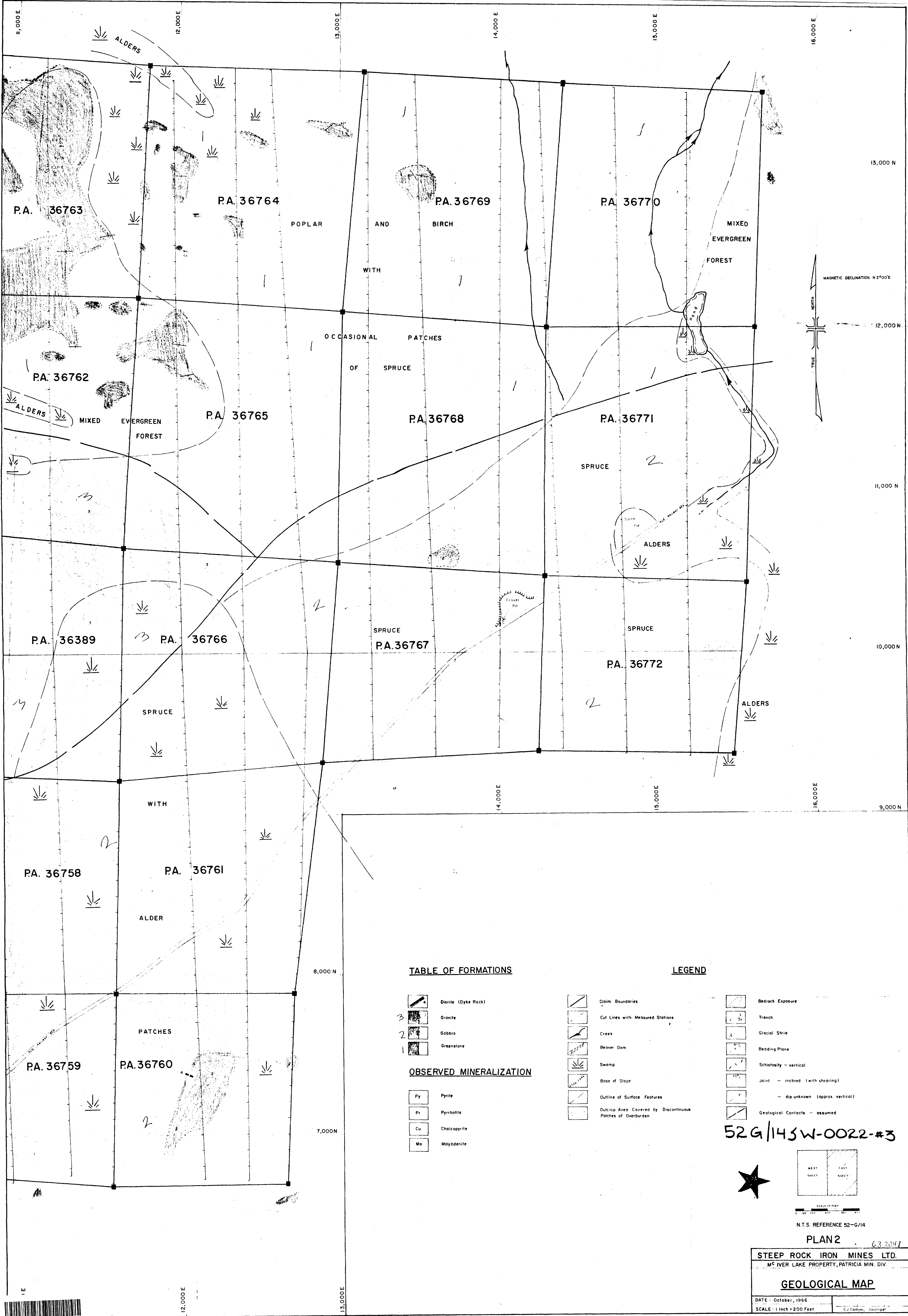
PLAN I

STEEL ROCK IRON MINES LTD.
M^CIVER LAKE PROPERTY, PATRICIA MIN. DIV.

GEOLOGICAL MAP

DATE: October, 1966
SCALE: 1 inch = 200 Feet





P.A. 36763

P.A. 36764

P.A. 36769

P.A. 36770

P.A. 36762

P.A. 36765

P.A. 36768

P.A. 36771

P.A. 36389

P.A. 36766

P.A. 36767

P.A. 36772

P.A. 36758

P.A. 36761

P.A. 36759

P.A. 36760

TABLE OF FORMATIONS

- Diorite (Dyke Rock)
- Granite
- Gabbro
- Greenstone

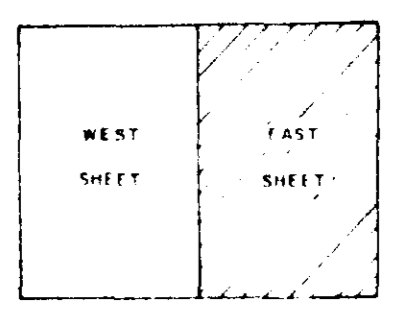
OBSERVED MINERALIZATION

- Pyrite
- Pyrrhotite
- Chalcocopyrite
- Molybdenite

LEGEND

- Claim Boundaries
- Cut Lines with Measured Stations
- Creek
- Beaver Dam
- Swamp
- Base of Slope
- Outline of Surface Features
- Outcrop Area Covered by Discontinuous Patches of Overburden
- Bedrock Exposure
- Trench
- Glacial Stria
- Bedding Plane
- Schistosity - vertical
- Joint - inclined (with shearing)
- dip unknown (approx. vertical)
- Geological Contacts - assumed

52G/143W-0022-#3



N.T.S. REFERENCE 52-G/14

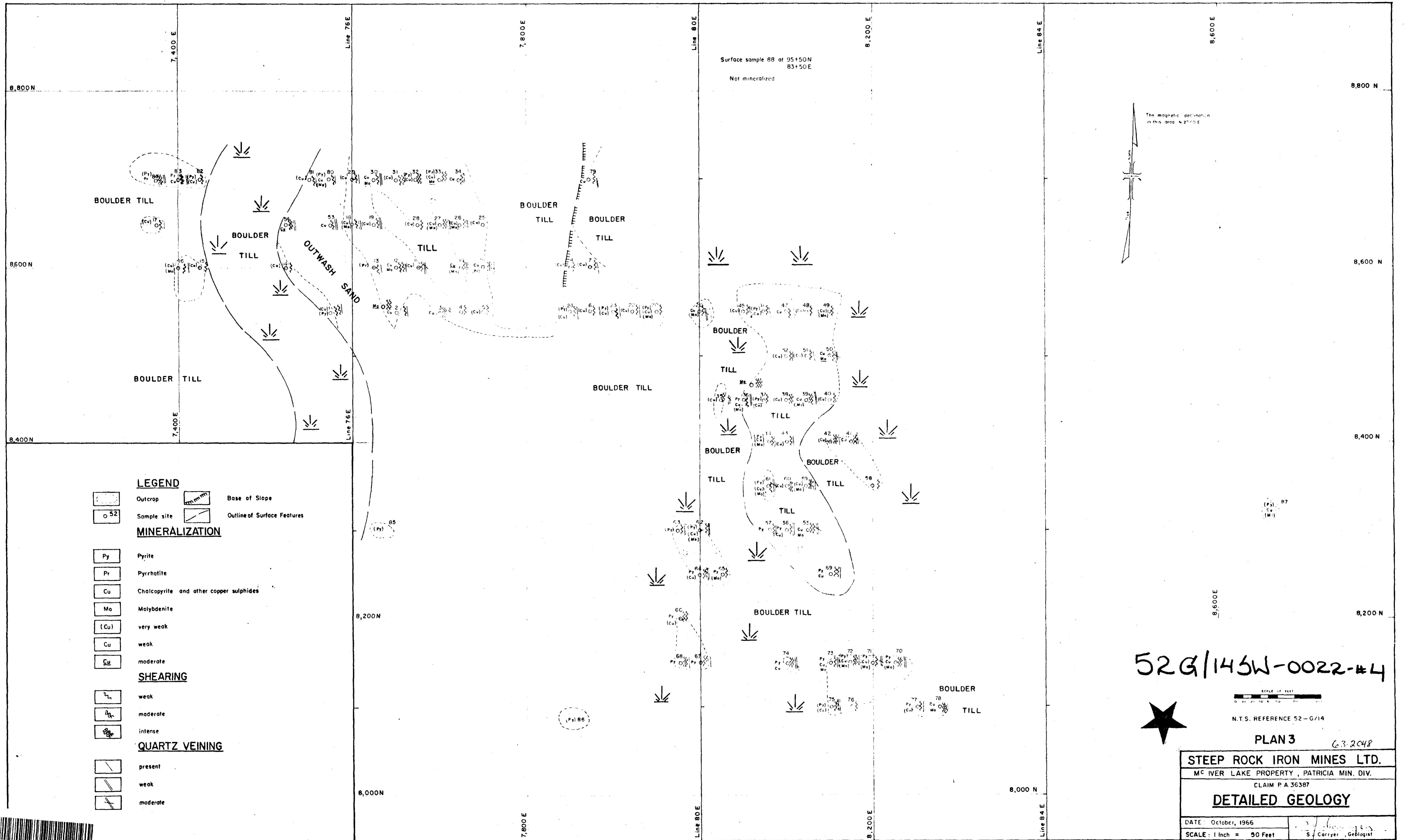
PLAN 2 632047

STEEP ROCK IRON MINES LTD.
MC IVER LAKE PROPERTY, PATRICIA MIN. DIV.

GEOLOGICAL MAP

DATE - October, 1966
SCALE - 1 inch = 200 Feet





LEGEND

- Outcrop
- Sample site
- Base of Slope
- Outline of Surface Features

MINERALIZATION

- Pyrite
- Pyrrhotite
- Chalcopyrite and other copper sulphides
- Molybdenite
- very weak
- weak
- moderate

SHEARING

- weak
- moderate
- intense

QUARTZ VEINING

- present
- weak
- moderate

52G/143W-0022-#4



SCALE OF FEET

N.T.S. REFERENCE 52-G/14

PLAN 3 *G.3.2048*

STEEP ROCK IRON MINES LTD.
 MC IVER LAKE PROPERTY, PATRICIA MIN. DIV.
 CLAIM P.A. 36387
DETAILED GEOLOGY

DATE: October, 1966
 SCALE: 1 Inch = 50 Feet
 S. Carreyer, Geologist



8,800N

8,800N

8,600N

8,600N

8,400N

8,400N

8,200N

8,200N

8,000N

8,000N

7,400 E

7,800 E

8,200 E

8,600 E

7,400 E

7,800 E

8,200 E

8,600 E

Line 76 E

Line 80 E

Line 84 E

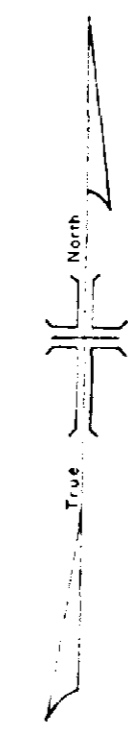
Line 76 E

Line 80 E

Line 84 E

Surface sample 88 at 95+50N
83+50E

The magnetic declination
in this area is N 2°00'E



81 83 82
0.023 0.008 0.013
0.02 0.07 0.02

81 80
0.023 0.015
0.03 0.04

29 30 31 32 33 34
0.008 0.067 0.023 0.113 0.066 0.017
0.02 0.03 0.02 0.12 0.01 0.03

79
0.09
0.11

17
0.020
0.05

54
0.020
0.13

18 19 28 27 26 25
0.053 0.008 0.011 0.016 0.017 0.013
0.09 0.05 0.02 0.02 0.03 0.01

16 15
0.023 0.019
0.04 0.04

14
0.013
0.05

13 12 11 10 9
0.021 0.027 0.020 0.033 0.019
0.03 0.12 0.03 0.14 0.12

8 7
0.016 0.027
0.07 0.05

1
0.020
0.05

2 3 4 5
0.024 0.014 0.020 0.024
0.10 0.09 0.10 0.09

24 6 23 22 21
0.008 0.024 0.039 0.031 0.056
0.02 0.03 0.03 0.06 0.01

20
0.039
0.14

45 46 47 48 49
0.05 0.010 0.008 0.009 0.013
0.02 0.02 0.02 0.02 0.01

52 51 50
0.013 0.005 0.049
0.01 Tr 0.06

35 36 37 38 39 40
0.008 0.036 0.014 0.016 0.036 0.015
0.01 0.02 0.01 0.04 0.06 Tr

44 43 42 41
0.015 0.014 0.007 0.032
0.08 0.04 0.01 0.03

61 60 59 58
0.024 0.007 0.024 0.007
0.03 0.02 0.02 0.01

85
0.007
0.01

63 62
0.015 0.010
0.01 0.03

57 56 55
0.009 0.004 0.10
0.01 Tr 0.01

64 65
0.013 0.021
0.02 0.01

69
0.011
0.02

66
0.016
0.01

68 67
0.011 0.013
0.01 0.02

74 73 72 71 70
0.008 0.021 0.016 0.019 0.015
0.01 0.02 Tr 0.01 0.01

75 76 77 78
0.009 0.013 0.008 0.019
0.02 0.01 0.05 0.02

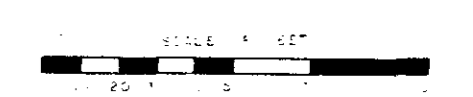
86
0.006
0.02

87
0.015
0.02

LEGEND

- 10 Sample Number
- Staked Sample Site
- .033 % MoS₂
- .14 % Cu
- Tr Trace
- Surface Sample Site

52G/143W-0022-#5



N.T.S. REFERENCE 52 - G/14

PLAN 4 63-2048

STEEP ROCK IRON MINES LTD.

MCIVER LAKE PROPERTY, PATRICIA MIN. DIV.

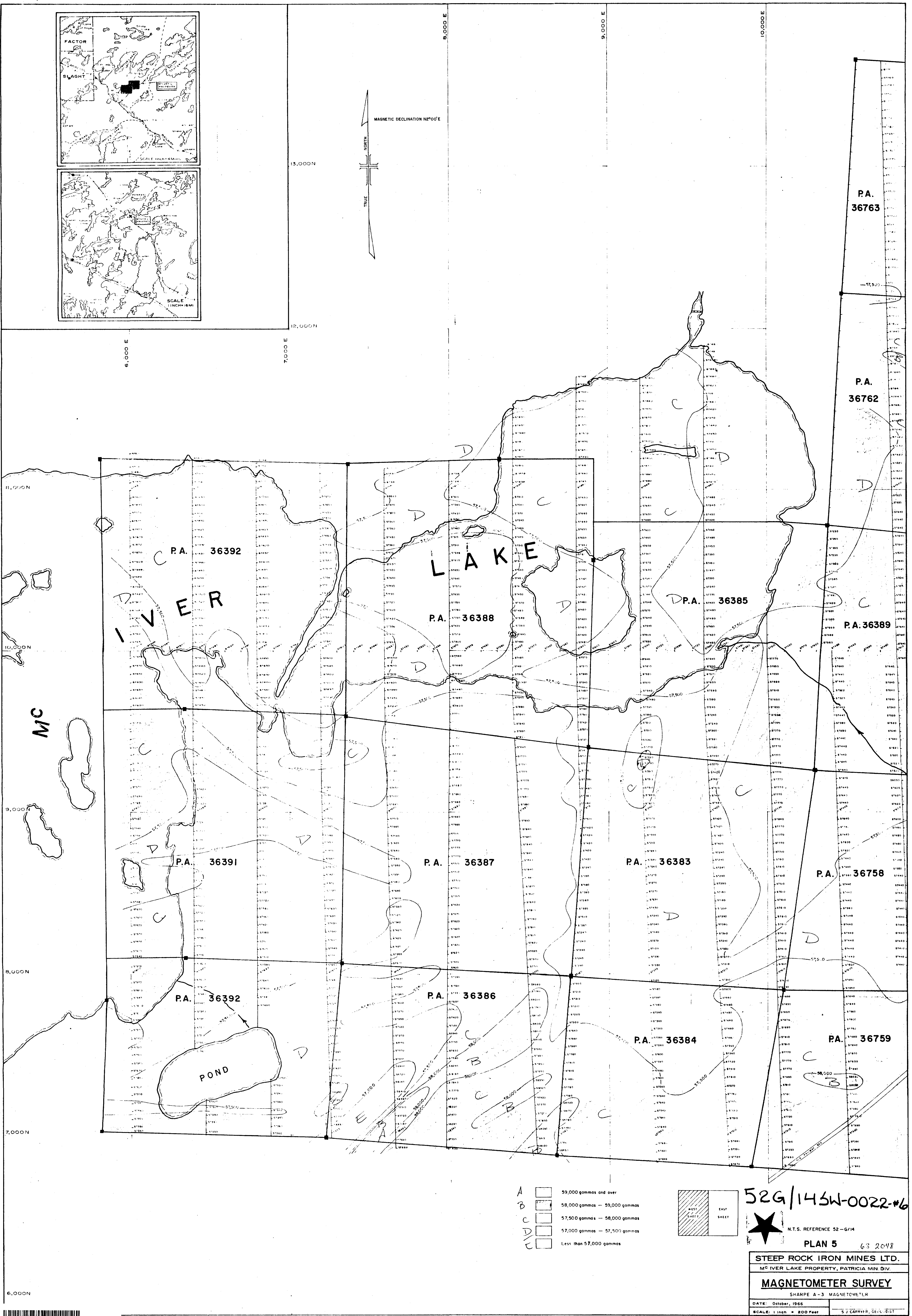
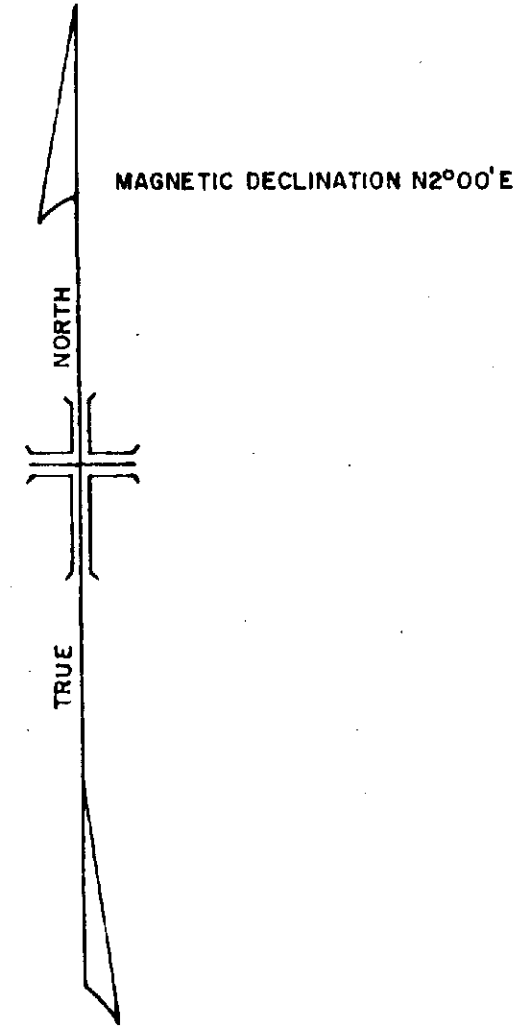
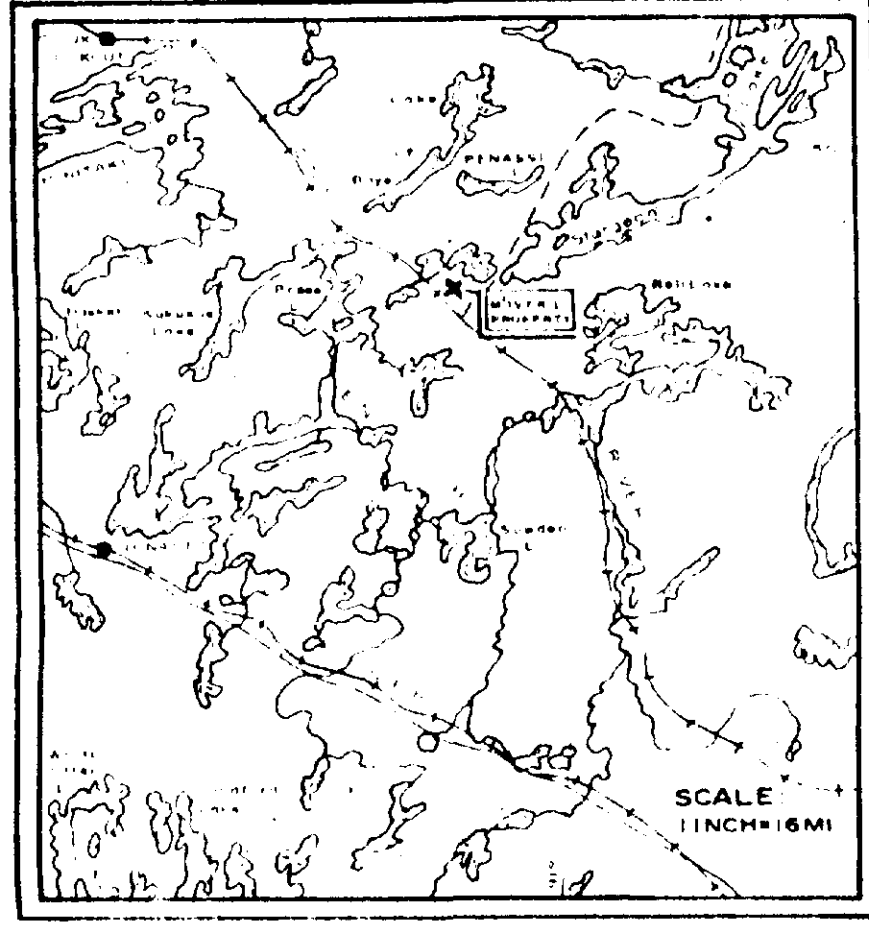
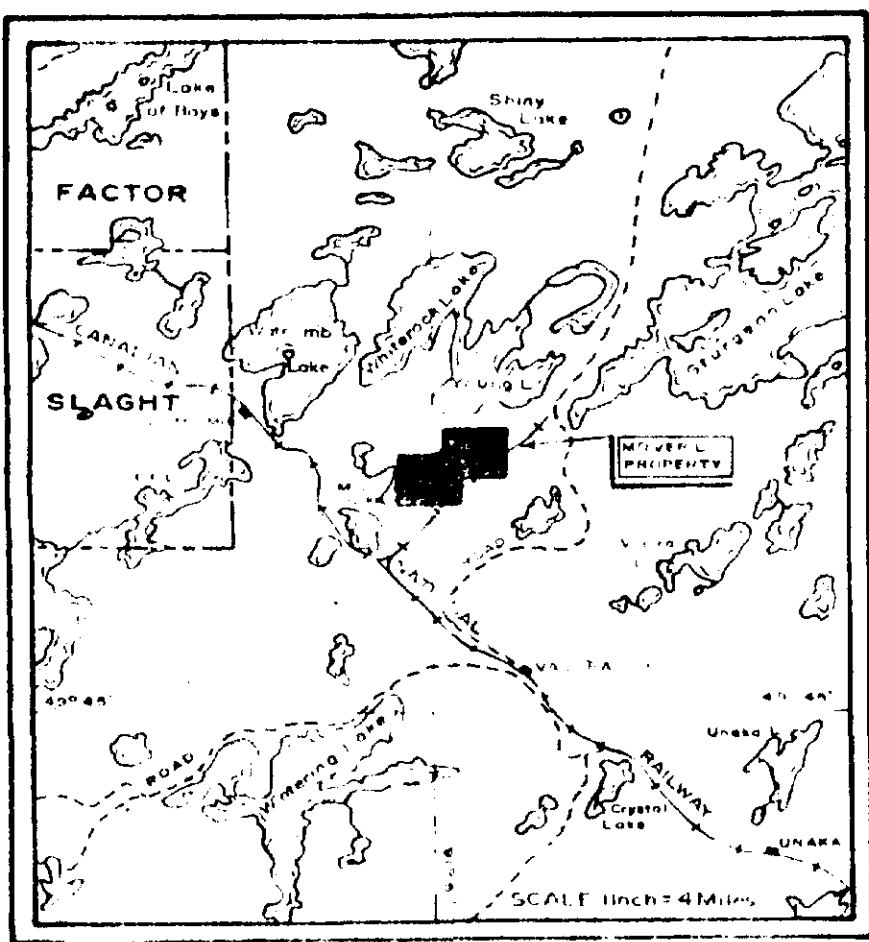
CLAIM P.A. 36387

SAMPLE ANALYSES

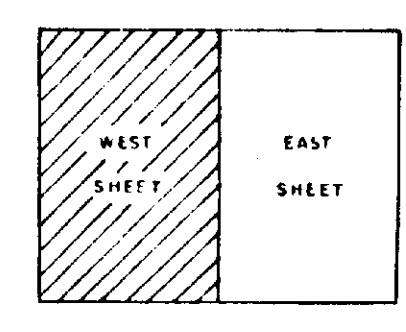
DATE: October, 1966

SCALE: 1 Inch = 50 Feet





- A 59,000 gammas and over
- B 58,000 gammas — 59,000 gammas
- C 57,500 gammas — 58,000 gammas
- D 57,000 gammas — 57,500 gammas
- E Less than 57,000 gammas

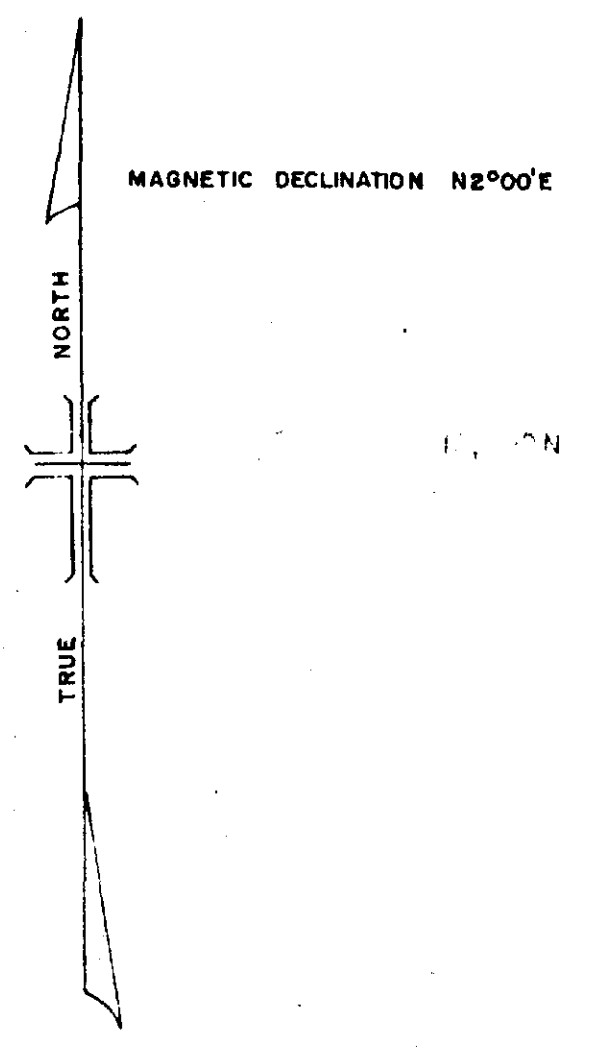
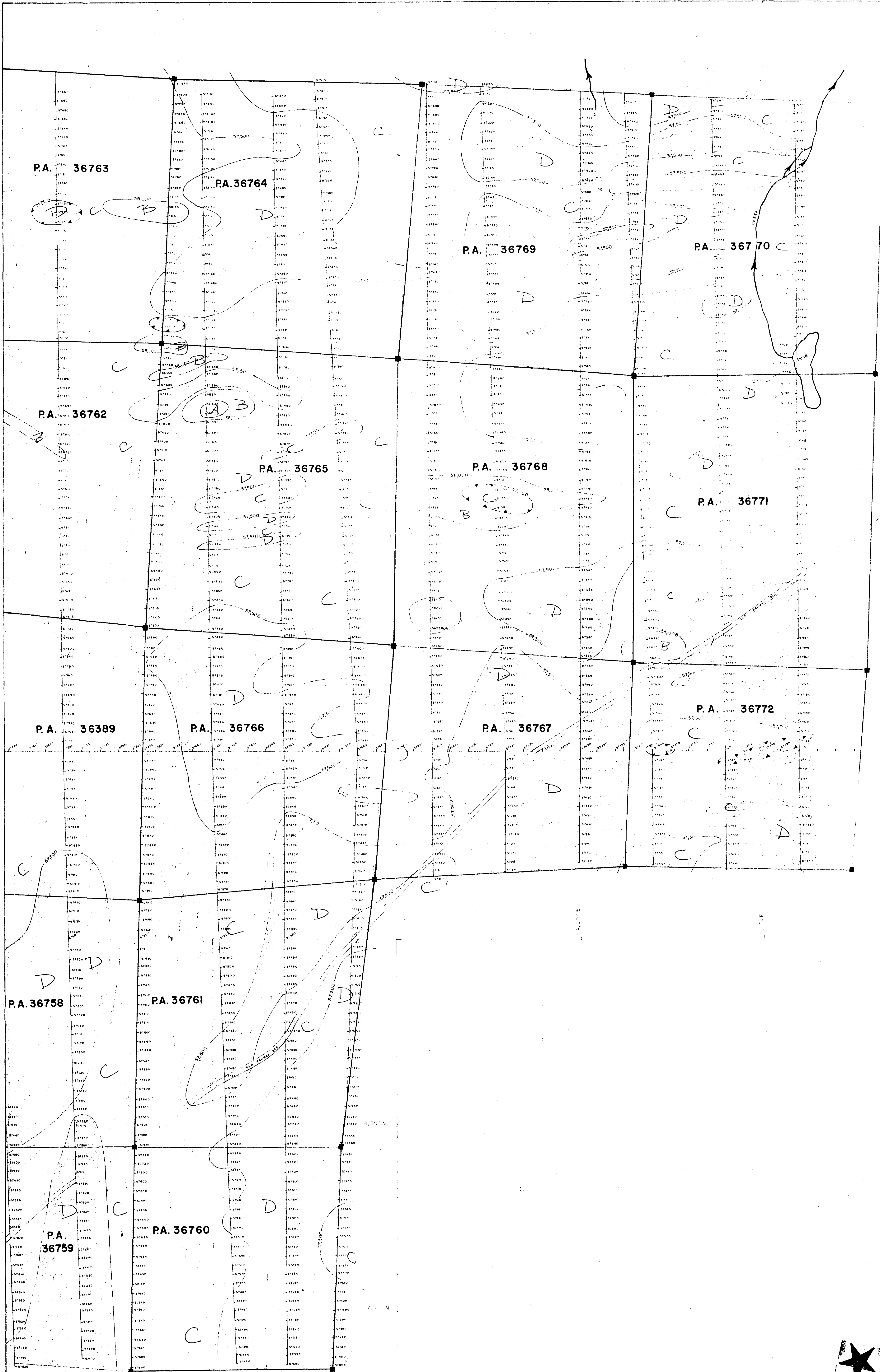


52G/143W-0022-#6

N.T.S. REFERENCE 52-G/14
 PLAN 5 63 2048

STEEL ROCK IRON MINES LTD.	
MC IVER LAKE PROPERTY, PATRICIA MIN. DIV.	
MAGNETOMETER SURVEY	
SHARPE A-3 MAGNETOMETER	
DATE: October, 1966	
SCALE: 1 inch = 200 Feet	S.J. CARRER, Geol. Dist.





- A 59,000 gammas and over
- B 58,000 gammas - 59,000 gammas
- C 57,500 gammas - 58,000 gammas
- D 57,000 gammas - 57,500 gammas
- E Less than 57,000 gammas

★
 52G/145W-0022-#7
 N.T.S. REFERENCE 52-G/14

PLAN 6 632048

STEEL ROCK IRON MINES LTD.
 McIVER LAKE PROPERTY, PATRICIA MIN. DIV.

MAGNETOMETER SURVEY

SH-41E A-3 MAGNETOMETER

DATE: October, 1966

SCALE: 1 inch = 200 Feet

S. J. Corry, Geophys.

