520/11SW-0029

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GEOLOGICAL AND GEOPHYSICAL REPORT

TO ACCOMPANY

THE TECHNICAL DATA STATEMENT

FOR

THE HANNA MINING COMPANY'S

McVICAR NO. 1 PROPERTY

March 21, 1972

B. L. Hodgins
Geologist

This report covers work carried out by The Hanna Mining Company during 1971 over the McVicar No. 1 claim group in the McVicar Lake Area. It includes linecutting, geological mapping, magnetometer and electromagnetic surveys.

McVicar No. 1 claim group consists of 54 contiguous claims covering the northwest part of McVicar Lake and the adjacent land area to the north including part of Shonia Lake. The group is within the Stoughton and McVicar Lakes Area, O.D.M. Claim Map M-2043 and M-2741 respectively in the Red Lake Mining Division of Ontario.

McVicar Lake is approximately 100 air miles north of Sioux Lookout and 65 air miles west of Pickle Lake. Access is by float equipped aircraft.

PREVIOUS WORK

The McVicar - Shonia Lakes Area has been prospected since the late 1920's when gold was reported to have been found east of Shonia Lake (Laird, 1931) in a quartz vein system in granitic rocks by two prospectors Bill Smith and Stanley Watson.

Evidence of linecutting, mapping, trenching, blasting and stripping was noted locally on the property. Most of the work was along quartz vein systems.

Two Ontario Department of Mines regional geological surveys, one by Laird (1929) and the other by K. Fenwick (1969-1971) have been completed.

They have summarized much of the previous exploration work in the area.

PERSONNEL

Personnel involved in the 1971 program included:

N. Hogg, Consultant, 805 - 69 Yonge Street, Toronto 215, Ontario
B. L. Hodgins, Party Chief, Geologist, 805 - 69 Yonge Street, Toronto 215, Ontario
D. L. Sannes, Geologist, 805 - 69 Yonge Street, Toronto 215, Ontario
L. Fritz, Geologist, 805 - 69 Yonge Street, Toronto 215, Ontario.
H. Giroux, Student assistant, P.O. Box 94, Warren, Ontario
T. Keil, Student assistant, 33 Ezra Avenue, Waterloo, Ontario
D. Hoggan, Student assistant, 36 Victoria Street, St. Catharines, Ontario
H. Willson, Student assistant, 131 Main Street West, Grimsby, Ontario
F. Babcock, Geophysical Operator, 193 Richmond Street, Richmond Hill, Ontario
L. Carpenter, Linecutter, Box 291, Sioux Lookout, Ontario
V. Bernicot, Linecutter, General Delivery, Sioux Lookout, Ontario
Brannan & Shields, Linecutting Contractors, P.O. Box 248, Red Lake, Ontario
Des O'Shannessy, Drafting Services, 405 - 160 Bay Street, Toronto 1, Ontario

PRESENT WORK

Work carried out by The Hanna Mining Company included:

1. Linecutting
2. Geological Mapping
3. ABEM Gun Survey
4. RADEM Survey
5. Magnetometer Survey

LINECUTTING

A transit controlled grid system was established over the lake area during January and over the land area during June. The baseline system was tied into baseline No. 4 of the Lang Lake claim group at 291+00 East and 362+11 East.

Picket lines which were 400 feet apart, were cut north-south, west of 132+00 east and east-west, east of 132+00 east.

The grid has been plotted on five adjoining sheets numbered 10A, 11, 12, 13 and 14 at a scale of 1" = 200 feet.

GEOLOGY - REGIONAL (Fenwick, 1971)

The bedrock in the McVicar Lakes area is of Precambrian Age. The property is underlain by metavolcanics and metasediments that form a narrow east trending belt which is approximately 30 miles long and varies in width from 1/4 to 7 miles. It extends east from Lang Lake to Wettlaufer Lake.

The metavolcanics are prominantly mafic to intermediate lavas, tuff and amphibolite on the north and south sides of the belt and felsic to intermediate lavas and pyroclastic rocks in the central part of the belt.

The metasediments are east and north of the properties and they consist of conglomerate, graywacke, argillite, iron formation and their derived schists.

The metavolcanic-metasedimentary belt is surrounded and intruded by granitic rocks.

A stock or sill of gabbro, diorite, anorthosite and anorthositic gabbro extends from the east shore of Sor Lake along the south shore of McVicar Lake to three miles east of the lake.

A quartz porphyry stock in the central area of McVicar Lake seems to be related genetically to the felsic rocks in the area.

The major structure in the western part of the metavolcanic belt is a syncline that trends about N70°E and plunges 40E to 60E. The syncline is isoclinal

and its axis is located between Boyes and Lang Lakes.

Two sets of foliations are evident; one is parallel to the primary features such as bedding and volcanic banding and the other trends N30W and is related to the quartz porphyry intrusion at McVicar Lake.

Gneissocity is common in the granitic rocks and is generally parallel to the contact with the metavolcanic-metasedimentary rocks.

Northeasterly to southeasterly trending lineaments are noted in the Lang-McVicar Lakes Area. Some of these features are accompanied by shear zones and they probably represent fault zones.

LOCAL GEOLOGY

The McVicar No. 1 property is approximately ten miles east of the western limit of the metavolcanic belt previously described. It is underlain by the formations listed below:

Felsic Intrusives	Aplite Dikes
	Granite
	Granodiorite
Mafic Intrusives	Diorite
	Gabbro
	Anorthosite
	Diabase
	Basic Dikes
Felsic Extrusives	Acid Volcanics - undifferentiated
	Rhyolites
	Chert
	Acid Tuff
Intermediate Extrusives	Dacites
	Andesites
	Intermiediate Volcanic - undifferentiated

These formations lie near the southern contact of the metavolcanic belt and they are similar to those formations which Fenwick (1971) describes as underlying the central part of the belt.

VOLCANIC FORMATIONS

Approximately 70% of the property is underlain by interbedded low grade metamorphosed volcanic formations which range in composition from rhyolitic to andesitic with the major position of them falling into the dacitic range.

The formations include massive uniform flows with fragmental members and fragmental and/or amygdaloidal flow tops and bottoms, ropy fragmental flows, agglomerates and well bedded, fine textured tuff and/or chert beds.

FELSIC VOLCANIC FORMATIONS

The separation of rhyolite and dacite in the field presented problems because there is a range of felsic volcanics that probably includes all gradations between these rocks. All of the light coloured, sericitized volcanic rocks have been grouped on the map as felsic volcanics. These include cherty tuffs, agglomerates and massive flows.

The cherty tuffs are usually narrow to several feet thick and in general, do not appear to have long strike lengths. One rather consistent bed of cherty tuff can be traced for 4,000 feet in a northeasterly direction along the edge of McVicar Lake on sheet No. 13. Adjacent to this tuff is a porphyritic dacite, characterized by prominent phenocrysts of white plagioclase and amygdules of quartz.

Rhyolitic formations are variable in size, shape and texture.

The smaller units are less than 10 feet thick and their strike length is relatively short. They are fine grained and slightly banded. West of Shonia Lake in the dacite fragmental formation many of these zones have a basic dike along one of the contacts. Numerous massive white quartz veins are usually associated with the dikes.

The rhyolitic formations range to relatively extensive units east and west of Shonia Lakes and north of McVicar Lake along baseline M-9 and they are adjacent to intrusive bodies. They occur as fine to medium grained massive units up to 1,000 feet wide and up to a mile long.

North of baseline M-9 on line 9600 East they grade into a quartz-feldspar porphyry.

West of Shonia Lake the rhyolite is a fine textured massive variety characterized by hornblende crystals.

INTERMEDIATE VOLCANIC FORMATIONS

Dacitic and andesitic volcanic formations of massive flows, agglomerates and tuff make up over half of the bedrock mapped on the property. They are chloritized to varying degrees and they are relatively soft compared to the felsic volcanic members. The weathered surface is dark gray-green, soft and usually chloritic.

Dacites are the prominent volcanic member in the central map area. They also occur as lesser interbedded members in the other volcanic area.

Andesite occurs locally throughout the map area forming relatively narrow interbedded members and they make up less than 10% of the bedrock that was mapped.

DACITES

The principal dacitic member is located on and west of baseline M-8 and it is characterized by a porphyritic texture. It has been mentioned above adjacent to the chert member. The flow has a minimum width of 800 feet and a minimum length of 3,000 feet.

The top and bottom of the flow is fine grained and porphyritic. The top (?) of the unit is exposed on baseline M-8 south of 6800 south, here it is fragmental amygdaloidal and porphyritic and is made up of a series of thin flows, tens of feet thick. The inner core of the flow is coarse grained and porphyritic.

The area in the vicinity of baseline M-5 and west of baseline M-8 is underlain by dacitic flows that are characterized by thin siliceous fragments or flows (?). They give the dacites a ropy texture and a knobby weathered surface.

An outcrop of dacitic agglomerate was mapped east of, and stratigraphically below (?) the previously described thick dacitic flow between 17,800 and 17,900 east, south of 6800 south.

The agglomeratic unit is composed of large (to 6' x 3') tear drop shaped bombs (which have amygdaloidal rims) and finely bedded tuff. This unit grades into a finely bedded mafic tuff zone to the west which seems to be the stratigraphic top.

The remainder of the dacitic members in the map area are relatively massive with a fine texture.

ANDESITE

Andesitic formations usually form relatively narrow interbedded units and make up less than 10% of the mapped bedrock.

In the northeast boundary area a series of northeast trending fine textured massive pillowed flows with interbedded tuffaceous zones underlie most of the area and they are cut by a dioritic intrusive. An EM conductive zone which was delineated in this area crossed lines 2400, 2600 and 2800 south just north of the McVicar shoreline. The outcrops in the anomalous area were stripped and a zone of conductive black tuffaceous beds were located.

One andesitic outcrop with deformed pillows was mapped south of 6800 south, west of baseline M-8.

The andesitic rocks in the west part of the property are massive to schistose, fine textured, dark gray green to dark green and highly chloritized locally.

INTRUSIVE ROCKS

The history of the intrusives within the volcanic belt is complex.

The oldest intrusions on the property were mapped south of the east end of line 4000 South, east of baseline M-7 where an old sheared gabbro was intruded by stringers of granite breccia emplaced adjacent to it. The granite breccia with fragments of fine grained dark green chloritized volcanic rock is in contact with a massive diorite which has a fine grained margin, indicating that it is younger.

The granite breccia was mapped further east along line 4000 South, west of baseline M-6 near the shore of McVicar Lake.

The most recent intrusions are locally very fresh and are from a differentiated gabbroic magma (?). They include gabbro, anorthosite, diorite, granodiorite, quartz-diorite and granite.

All of these younger intrusions appear to be related to the stock or sill which parallels the south property boundary.

The massive intrusives range from fine to very coarse texture, and they are commonly porphyritic.

Numerous quartz veins are associated with these rocks.

The intrusions are located along baseline M-7 over the peninsula east of Shonia Lake, and along baseline M-1 south of McVicar Lake. They are also along the north shore of McVicar Lake west of 17,200 east and along baseline M-9.

There are numerous north to northwesterly trending basic dikes some of which represent the youngest rocks in the area. The dike rocks vary from fine grained, highly altered, soft, dark gray-green chloritic rocks to fine to medium textured, relatively fresh, hard, dark gray rock. They range in composition from quartz diorite to diabase.

The aplitic dikes noted in the diorite may represent a late phase of the diorite intrusion.

Two pebble dikes were noted on the property, one located west of baseline M-1 at 8500 South and the other south of baseline M-9 east of line 10,800 east at 9800 south.

The fragments in the dikes are well rounded and consist of evenly altered volcanic and intrusive rocks in a fine grained volcanic groundmass.

STRUCTURE

The volcanic formations have been complexly folded and probably faulted. They seem to be wrapped around the intrusives in the McVicar-Shonia Lakes area.

The trend of the formations varies from southeast to east adjacent to the diorite, gabbro anorthositic gabbro intrusive complex in the west part. In the central part adjacent to the felsic porphyry intrusive complex the trends vary from southeast to south and in the northeast part, adjacent to the dioritic intrusions, the trends are northeasterly.

All the volcanic rocks have near vertical to vertical dips.

Volcanic flow top characteristics were noted in several outcrops west of Shonia Lake and they indicate that the formations are facing southwest.

Sedimentary grain gradation in a tuff zone in the northeast boundary area south of line 2400 south indicates that the formation tops are facing northwest.

These facing determinations indicate that the volcanic formations are facing away from the intrusive complexes.

Insufficient facing data were noted to interpret the position of synclinal and/or anticlinal axes in the map area.

Numerous shear zones were noted on the property. They usually paralleled either the formation trends or the contacts of the intrusives and volcanics. Some of the shear zones are probably related to faulting.

CONCLUSIONS

The geology described above in the regional and local sections suggest that the volcanics which underlie the property may represent the south part of a complexly folded synclinorium. The axis of which trends northwesterly.

Three and possibly four periods of intrusions may have influenced this structure.

MAGNETOMETER SURVEY

The magnetometer survey was carried out by B. L. Hodgins over the winter grid and by D. Hoggan over the summer grid. The winter survey was completed during January and the summer survey was completed during June and July.

The preparation of the maps and reports has been completed by B. L. Hodgins, the student assistants and Des O'Shannessy during June, July, August, October, November and December.

INTERPRETATION

The map area is characterized by high magnetic relief over the areas underlain by intrusive rocks and low magnetic relief over areas underlain by volcanic rocks.

The basic rocks in the area east of baseline N-1 from 1600 South to 8400 South and on the peninsula south of 8400 South trend southwest in the north part and gradually change to a southeast trend in the south part of the property.

The trend of the intrusions of intermediate to basic rocks west of baseline N-5 changes from southeast in the north part to easterly in the south part of the property.

No trends were noted in areas underlain by the volcanic rocks.

Nothing of economic significance was defined by the magnetic survey, however, the contoured magnetic readings were used along with the outcrop distribution to determine the extent of the intrusive rocks.

RADEM SURVEYS

The RADEM survey was carried out by B. L. Hodgins over the winter grid in February and by D. Hoggan over the summer grid in July.

The maps and reports were completed by B. L. Hodgins, the student assistants and Des O'Shannessy during July, August and December.

The survey was carried out along lines usually at 800 foot intervals although, some lines at 400 foot intervals were surveyed as well.

The RADEM method was used to determine whether there were any weak conductive mineralized zones underlying the property. This method has located such deposits in New Brunswick.

Numerous anomalous zones were located on the property. These zones were surveyed with the ABEM Gun and all of the zones showed evidence of being caused by overburden conductivity. One anomalous zone located by the ABEM Gun on line 2800 East, east baseline N-6 was checked by the RADEM unit. The RADEM survey showed a strong "kick" on the profile but a "cross-over" which is characteristic of a bedrock anomaly was not obtained. It seems that the conductivity in the adjacent lake bottom sediments is much greater than the bedrock conductor.

The strong conductivity of the lake bottom sediments is also shown on line 8400 South, east of baseline N-2. The build up to the cross-over is noted along line 8000 South, west of baseline N-2 as well as on line 8400 South.

This build up distance is abnormally long (1,000 + feet). The normal influence of a bedrock conductor that has a steep dip is usually about 500 feet on either side of the cross-over.

Over the land area, anomalous zones usually coincide with swampy ground. This conductivity seems to be caused by overburden effects similar to that of the lake bottom sediments.

ABEM GUN SURVEY

This survey was completed by F. Babcock, L. Carpenter and B. L. Hodgins over the winter grid in February and by H. Giroux, H. Willson, T. Keil, and D. Hoggan over the summer grid during June and July.

The maps and reports were prepared by B. L. Hodgins, the student assistants and Des O'Shannessy during February, June, July, August and December.

Only one anomaly was defined by the survey. It intersects lines 2400, 2600 and 2800 south and strikes N45E from 241+50 east on line 2800 south. The strongest conductivity (2.5:1 - in phase:out of phase) is on line 2600 south. The interpreted width of anomaly is 20 feet. The highest coincident magnetic relief is 4000 gammas and it occurs on line 2800 south.

The outcrops in the area of the anomaly were stripped and a width of one foot of well banded dark tuff with virtually no sulphides was exposed.

Several other anomalous zones were located, however they were erratic in profile and showed characteristics of the effects of overburden conductivity and/or elevation differences between the transmitter and receiver.

REFERENCES

Laird, H. C. (1930) Geology of the Shonia Lake Area, District of Kenora (Patricia Portion.)
The Thirty-Ninth Annual Report of The Ontario Department of Mines, Vol. XXXIX, Part III, pp 1 - 21.

Penwick, K. G. (1970) Lang-Cannon Lakes area, District of Kenora (Patricia Division) Preliminary Map P-665, Geological Series, Ontario Department of Mines and Northern Affairs.

Beverly L. Hodgins,
Geologist

March 21st, 1972

52011SW0048 52011SW0029 MCVICAR LAKE

900

520/11SW
AREA OF McVICAR LK
M- 2741
SCALE: ONE INCH = 40 CHAINS
40 CHAINS

File 2.813

2.813

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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 ~~Geological, Magnetometer, RADEN, ABEM Gun~~

Township or Area ~~Stoughton and McVicar Lakes Area~~

Claim holder(s) ~~The Hanna Mining Company~~

Author of Report ~~B. L. Hodgins~~

Address ~~805 - 69 Yonge Street, Toronto 215, Ontario~~

Covering Dates of Survey Jan. 13 to March 21, 1972
(linecutting to office)

Total Miles of Line cut ~~61.8~~

SPECIAL PROVISIONS CREDITS REQUESTED		DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical	
	–Electromagnetic	~~40~~
	–Magnetometer	~~20~~
	–Radiometric	
ENTER 20 days for each additional survey using same grid.	–Other ~~RADEN~~	~~20~~
	Geological	~~20~~
	Geochemical	

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

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

DATE: ~~December 1971~~ SIGNATURE: Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications 2.267

Previous Surveys LD

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

SEE ATTACHED LIST

TOTAL CLAIMS ~~54~~

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations as per survey Number of Readings as per survey

Station interval 25', 50' and 100'

Line spacing 400 feet

Profile scale or Contour intervals Mag 100 gammas, RADEM Dip Angle 10° =1", 200%= 1", ABEM 10%-1"
(specify for each type of survey)

MAGNETIC

Instrument Scintrex MF-2, Fluxgate Magnetometer 6,543 readings

Accuracy - Scale constant 1%

Diurnal correction method All readings corrected to base stations on baselines

Base station location BL No. 4, Lang Lake Project, L352+00E

ELECTROMAGNETIC

Instrument Craelius ABEM Gun 2,557 readings RADEM VLF 1,698 readings

Coil configuration Horizontal VERTICAL

Coil separation 200 and 300 feet

Accuracy 1%

Method:	(RADEM)		(ABEM)	
	☒ Fixed transmitter	☐ Shoot back	☒ In line	☐ Parallel line

Frequency 880 cps, 3500 cps Cutler, Maine
(specify V.L.F. station)

Parameters measured In phase-out of phase component of the EM field

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION – RESISTIVITY

Instrument

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

THE HANNA MINING COMPANY

McVicar No. 1 Property

Claim Nos.	Days	Claim Nos.	Days
KRL 262950-		KRL 294638	
262951-		294639	
262952-		294640	
262953		294641	
		294642	
KRL 294613		294643	
294614		294644	
294615		294645	
294616		294646	
294617		294647	
294618		294648	
294619		294649	
294620		294650	
294621		294651	
294622		294652	
294623		294653	
294624		294654	
294625		294655	
294626		294656	
294627		294657	
294628		294658	
294629		294659	
294630		294660	
294631		294661	
294632		294662	
294633			
294634			
294635			
294636			
294637			

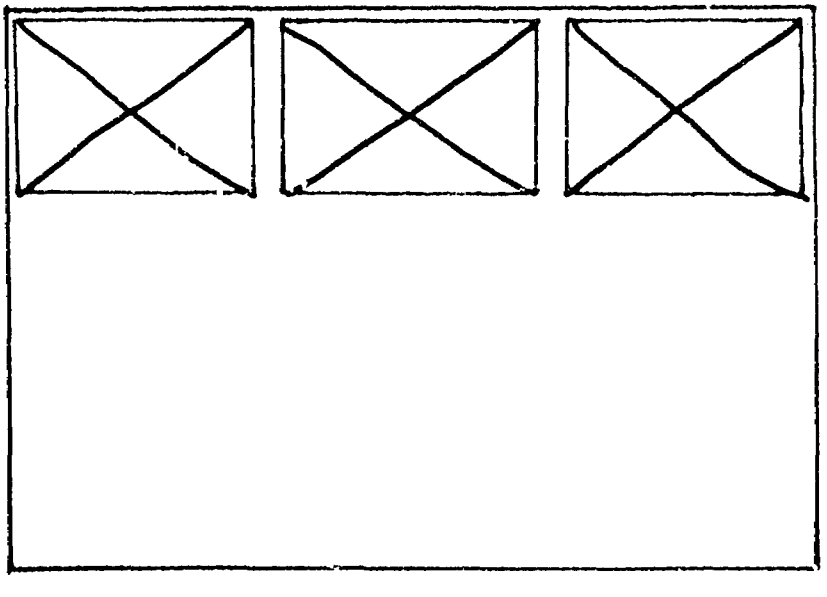
Total 54 Claims

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

520/11SW-0029 # 1-3

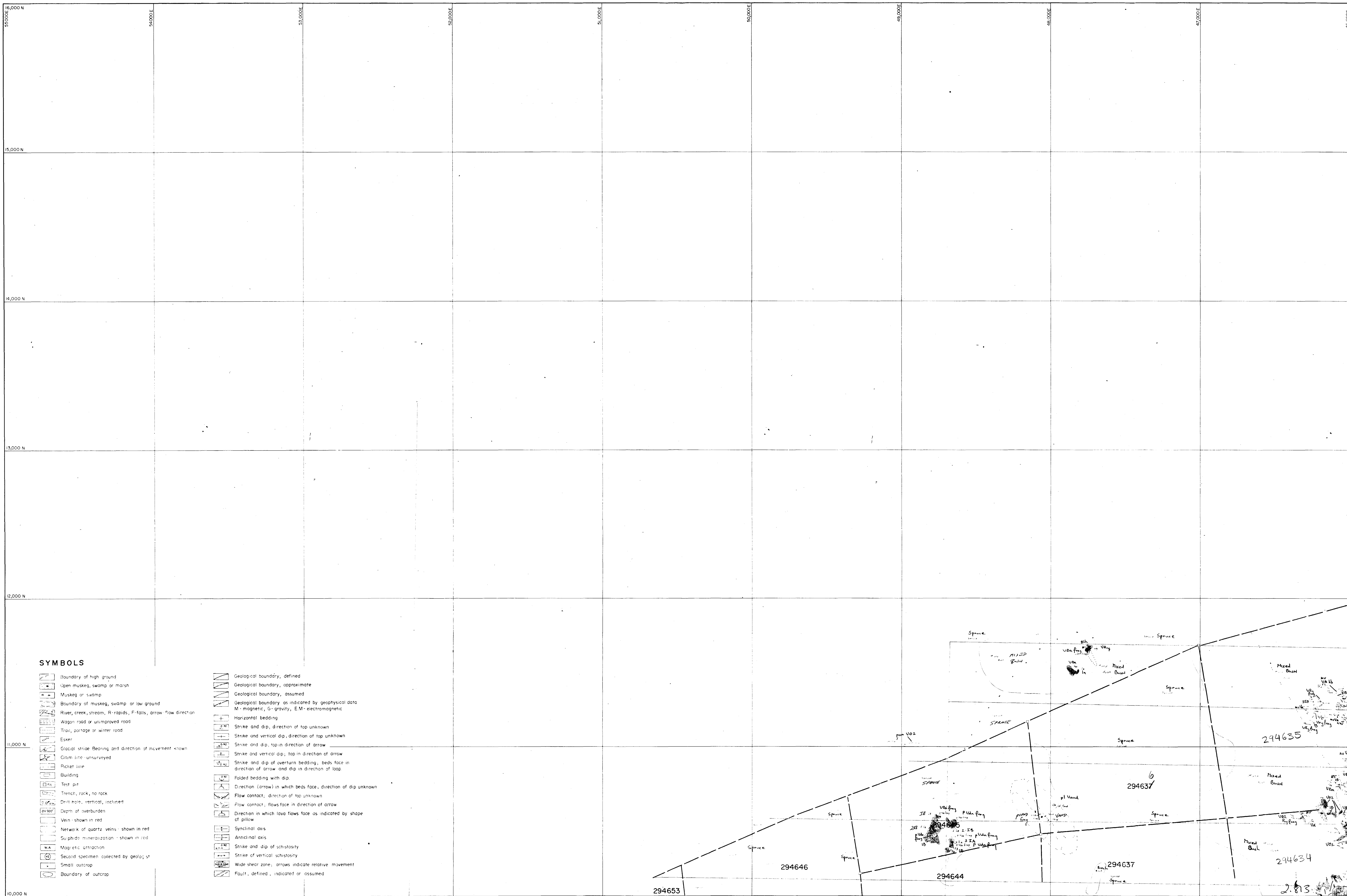
LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE

(X)



FOR ADDITIONAL INFORMATION SEE MAPS:

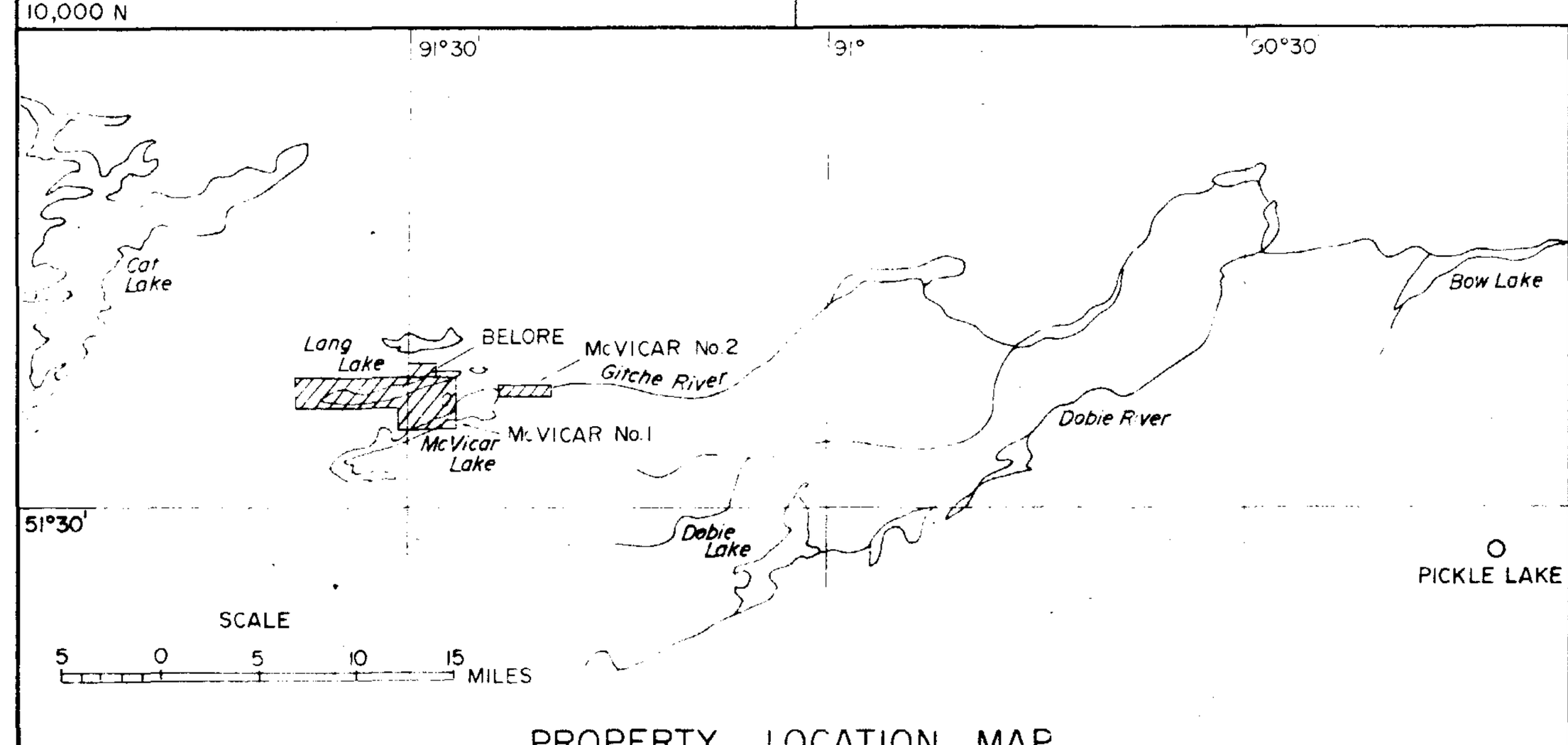
520/11SW-0029 ## 4-18



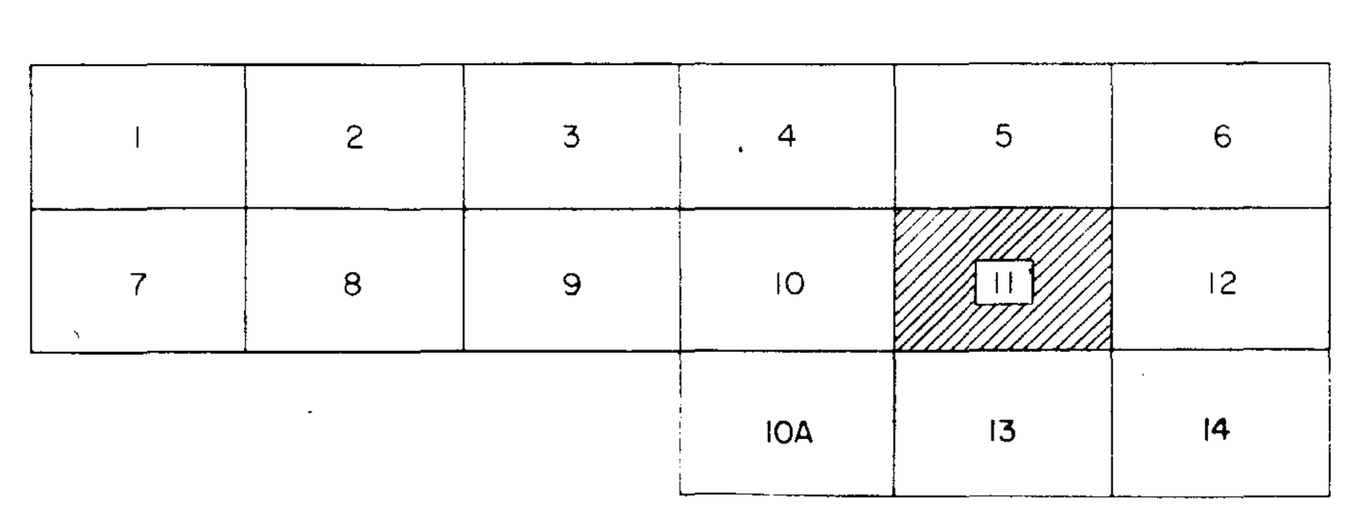
SYMBOLS

Boundary of high ground
Open muskeg, swamp or marsh
Muskeg or swamp
Boundary of muskeg, swamp or low ground
River, creek, stream, R-rapids, F-falls, arrow-flow direction
Wagon road or unimproved road
Trail, portage or winter road
Esker
Glacial striae Bearing and direction of movement known
Claim line - unsurveyed
Picket line
Building
Test pit
Trench, rock, no rock
Drill hole, vertical, inclined
Depth of overburden
Vein - shown in red
Network of quartz veins - shown in red
Sulphide mineralization - shown in red
Magnetic attraction
Second specimen collected by geologist
Small outcrop
Boundary of outcrop

Geological boundary, defined
Geological boundary, approximate
Geological boundary, assumed
Geological boundary as indicated by geophysical data M - magnetic, G - gravity, E.M - electromagnetic
Horizontal bedding
Strike and dip, direction of top unknown
Strike and vertical dip, direction of top unknown
Strike and dip, top in direction of arrow
Strike and vertical dip; top in direction of arrow
Strike and dip of overturn bedding; beds face in direction of arrow and dip in direction of loop.
Folded bedding with dip.
Direction (arrow) in which beds face; direction of dip unknown
Flow contact; direction of top unknown
Flow contact; flows face in direction of arrow
Direction in which lava flows face as indicated by shape of pillow
Synclinal axis
Anticlinal axis
Strike and dip of schistosity
Strike of vertical schistosity
Wide shear zone; arrows indicate relative movement
Fault, defined, indicated or assumed



PROPERTY LOCATION MAP



SHEET INDEX

LEGEND

ACID INTRUSIVE

IGr	IGr	Granite
IGd	IGd	Granodiorite
IAp	IAp	Apalite Dike
IDi	IDi	Diorite

BASIC INTRUSIVE

Iint	Iint	Undifferentiated
ID	ID	Diorite
IGb	IGb	Gabbro
IDb	IDb	Diabase
IAno	IAno	Anorthosite

ACID VOLCANICS

Va	VA	Undifferentiated
VRy	VRy	Rhyolite

INTERMEDIATE TO EASIC VOLCANICS

Vint	Vint	Undifferentiated
VDa	VDa	Dacite
VAno	VAnd	Andesite
	Tu	Tuff
	Bx	Breccia
	Sch	Schists

am	Amygdaloidal
csg	Coarse grained
ch	Cherty
fng	Fine grained
frag	Fragmental
mdg	Medium grained
mv	Massive
p	Porphyritic
pl	Pillowed
qe	Quartz eye
cb	Carbonate
chl	Chlorite
fs	Feldspar
hb	Hornblende
mag	Magnetite
q	Quartz
qv	Quartz vein
sr	Sericite
Ank	Ankerite

52Ø/11SW-0029, #1

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY
LANG LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

GEOLOGIC MAP

SCALE - 1" = 200'

200 FEET 0 200 400 600 FEET

Work by: D.S, NH LF, BLH	Interpretation by: Beverly L. Hodgins	Revised:
Date:	Date: Dec 6, 1971	Revised:
		N.T.S. No. 52-O-11

SHONIA LAKE

McVICAR LAKE

294624 294613 294625 294635 294626 294623 294614

16,000N 15,000N 14,000N 13,000N 12,000N 11,000N

55,000E 56,000E 57,000E 58,000E 59,000E 60,000E 61,000E 62,000E 63,000E 64,000E

16S 20S 24S 26S 28S 32S 36S 40S 44S 48S 52S

SYMBOLS

- Boundary of high ground
- Open muskeg, swamp or marsh
- Muskeg or swamp
- Boundary of muskeg, swamp or low ground
- River, creek, stream, R-rapids, F-falls, arrow-flow direction
- Wagon road or unimproved road
- Trail, portage or winter road
- Esker
- Glacial striae Bearing and direction of movement known
- Claim line - unsurveyed
- Picket line
- Building
- Test pit
- Trench, rock, no rock
- Drill hole, vertical, inclined
- Depth of overburden
- Vein - shown in red
- Network of quartz veins - shown in red
- Sulphide mineralization - shown in red
- Magnetic attraction
- Geochem specimen collected by geologist
- Small outcrop
- Boundary of outcrop
- Geological boundary, defined
- Geological boundary, approximate
- Geological boundary, assumed
- Geological boundary as indicated by geophysical data M - magnetic, G - gravity, E.M - electromagnetic
- Horizontal bedding
- Strike and dip, direction of top unknown
- Strike and vertical dip, direction of top unknown
- Strike and dip, top in direction of arrow
- Strike and vertical dip; top in direction of arrow
- Strike and dip of overturn bedding, beds face in direction of arrow and dip in direction of loop
- Folded bedding with dip
- Direction (arrow) in which beds face, direction of dip unknown
- Flow contact, direction of top unknown
- Flow contact, flows face in direction of arrow
- Direction in which lava flows face as indicated by shape of pillow
- Synclinal axis
- Anticlinal axis
- Strike and dip of schistosity
- Strike of vertical schistosity
- Wide shear zone, arrows indicate relative movement
- Fault, defined, indicated or assumed

LEGEND

ACID INTRUSIVE

- IGr Granite
- IGd Granodiorite
- IAp Aplaite Dike
- IDi Diorite

BASIC INTRUSIVE

- Int Undifferentiated
- Io Diorite
- IGb Gabbro
- IDb Diabase
- IAno Anorthosite

ACID VOLCANICS

- Va Undifferentiated
- Vrj Rhyolite

INTERMEDIATE TO EASIC VOLCANICS

- Vint Undifferentiated
- VDa Dacite
- VAnd Andesite
- Vt Tuff
- Vx Breccia
- Sch Schists

am Amygdaloidal
csg Coarse grained
ch Cherty
fng Fine grained
frag Fragmental
mdg Medium grained
mv Massive
p Porphyritic
pl Pillowed
qe Quartz eye
cb Carbonate
chl Chlorite
fs Feldspar
hb Hornblende
mag Magnetite
q Quartz
qv Quartz vein
sr Sericite
Ank Ankerite

PROPERTY LOCATION MAP

Car Lake · Long Lake · BELORE · McVICAR No.2 · Ormsby River · McVICAR No.1 · McVicar Lake · Dobie River · Dobie Lake · Bow Lake · PICKLE LAKE

SCALE 0 5 10 15 MILES

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

FOR LEGEND AND SYMBOLS SEE SHEET No. 11

THE HANNA MINING COMPANY

McVICAR No.1 & LANG LAKE PROPERTY

SHONIA & McVICAR LAKES AREA

RED LAKE MINING DIVISION - ONTARIO

GEOLOGIC MAP

SCALE - 1" = 200'

200 0 200 400 600 FEET

Work by:	Interpretation by:	Revised:
Date:	Date:	Revised: N.T.S No. 52-O-11

2913

52Ø/11SW-0029, #2

210

SYMBOLS

- Boundary of high ground
- Open muskeg, swamp or marsh
- Muskeg or swamp
- Boundary of muskeg, swamp or low ground
- River, creek, stream, R-rapids, F-falls, arrow-flow direction
- Wagon road or unimproved road
- Trail, portage or winter road
- Esker
- Glacial stride. Bearing and direction of movement known
- Claim line - unsurveyed
- Picket line
- Building
- Test pit
- Trench, rock, no rock
- Drill hole, vertical, inclined
- Depth of overburden
- Vein - shown in red
- Network of quartz veins - shown in red
- Sulphide mineralization - shown in red
- Magnetic attraction
- Second specimen collected by geologist
- Small outcrop
- Boundary of outcrop

- Geological boundary, defined
- Geological boundary, approximate
- Geological boundary, assumed
- Geological boundary as indicated by geophysical data. M - magnetic, G - gravity, E.M - electromagnetic
- Horizontal bedding
- Strike and dip, direction of top unknown
- Strike and vertical dip, direction of top unknown
- Strike and dip, top in direction of arrow
- Strike and vertical dip; top in direction of arrow
- Strike and dip of overturn bedding; beds face in direction of arrow and dip in direction of loop
- Folded bedding with dip
- Direction (arrow) in which beds face, direction of dip unknown
- Flow contact, direction of top unknown
- Flow contact, flows face in direction of arrow
- Direction in which lava flows face as indicated by shape of pillow
- Synclinal axis
- Anticlinal axis
- Strike and dip of schistosity
- Strike of vertical schistosity
- Wide shear zone, arrows indicate relative movement
- Fault, defined, indicated or assumed

LEGEND

ACID INTRUSIVE

- IGr — Granite
- IGd — Granodiorite
- IAp — Aplite Dike
- IDi — Diorite

BASIC INTRUSIVE

- Iint — Undifferentiated
- Io — Diorite
- IGb — Gabbro
- IDb — Diabase
- IAno — Anorthosite

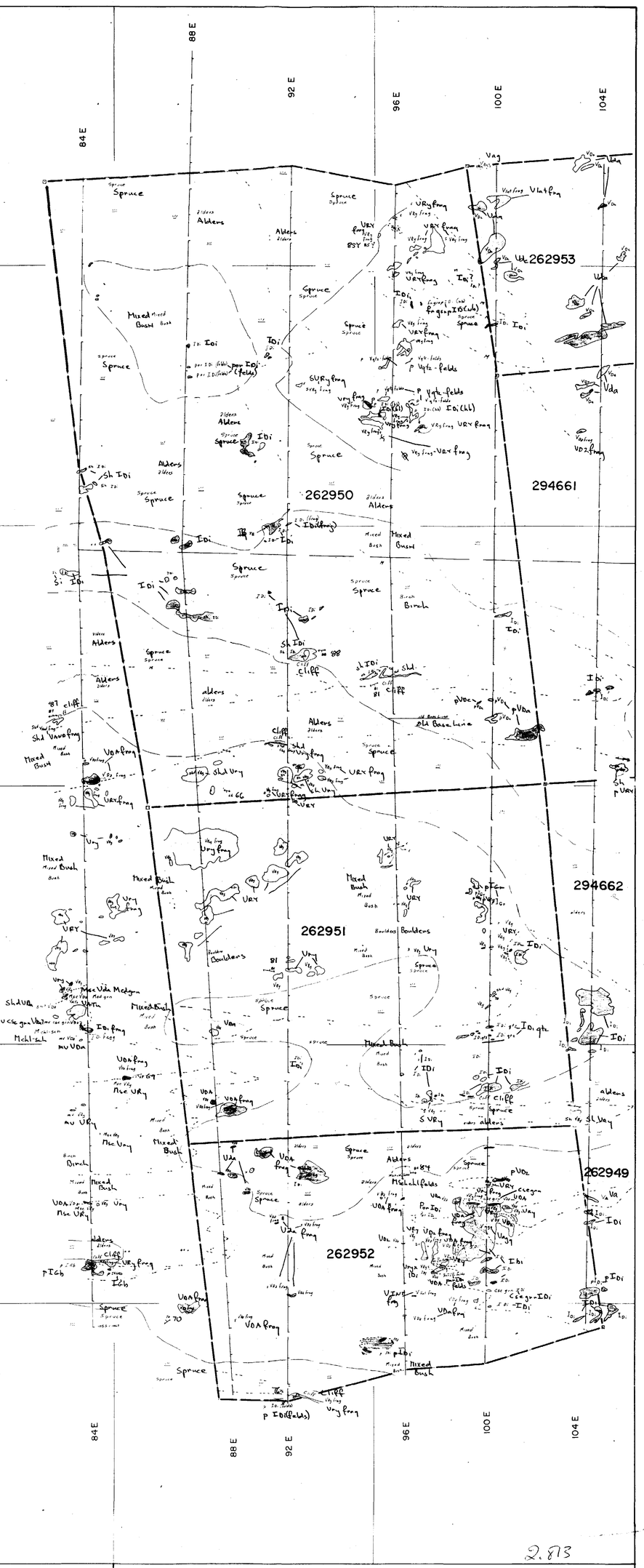
ACID VOLCANICS

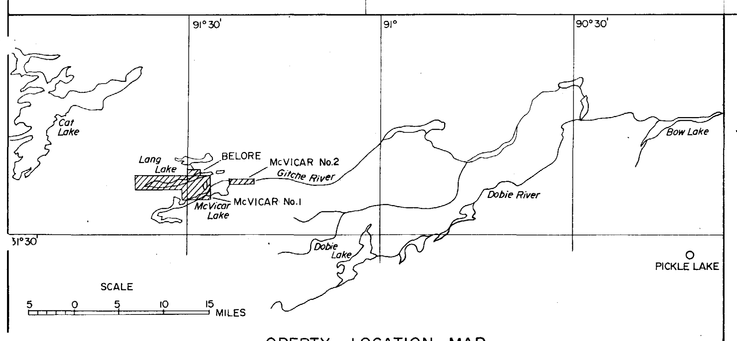
- Ua — Undifferentiated
- URy — Rhyolite

INTERMEDIATE TO EASIC VOLCANICS

- Uint — Undifferentiated
- UDa — Dacite
- UAnd — Andesite
- Tu — Tuff
- Br — Breccia
- Sch — Schists

- am — Amygdaloidal
- csg — Coarse grained
- ch — Cherty
- frg — Fine grained
- frag — Fragmental
- mdg — Medium grained
- mv — Massive
- p — Porphyritic
- pl — Pillowed
- qe — Quartz eye
- cb — Carbonate
- chl — Chlorite
- fs — Feldspar
- hb — Hornblende
- mag — Magnetite
- q — Quartz
- qv — Quartz vein
- sr — Sericite
- Ank — Ankerite





OPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

FOR LEGEND AND SYMBOLS SEE SHEET No. 11

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

GEOLOGIC MAP

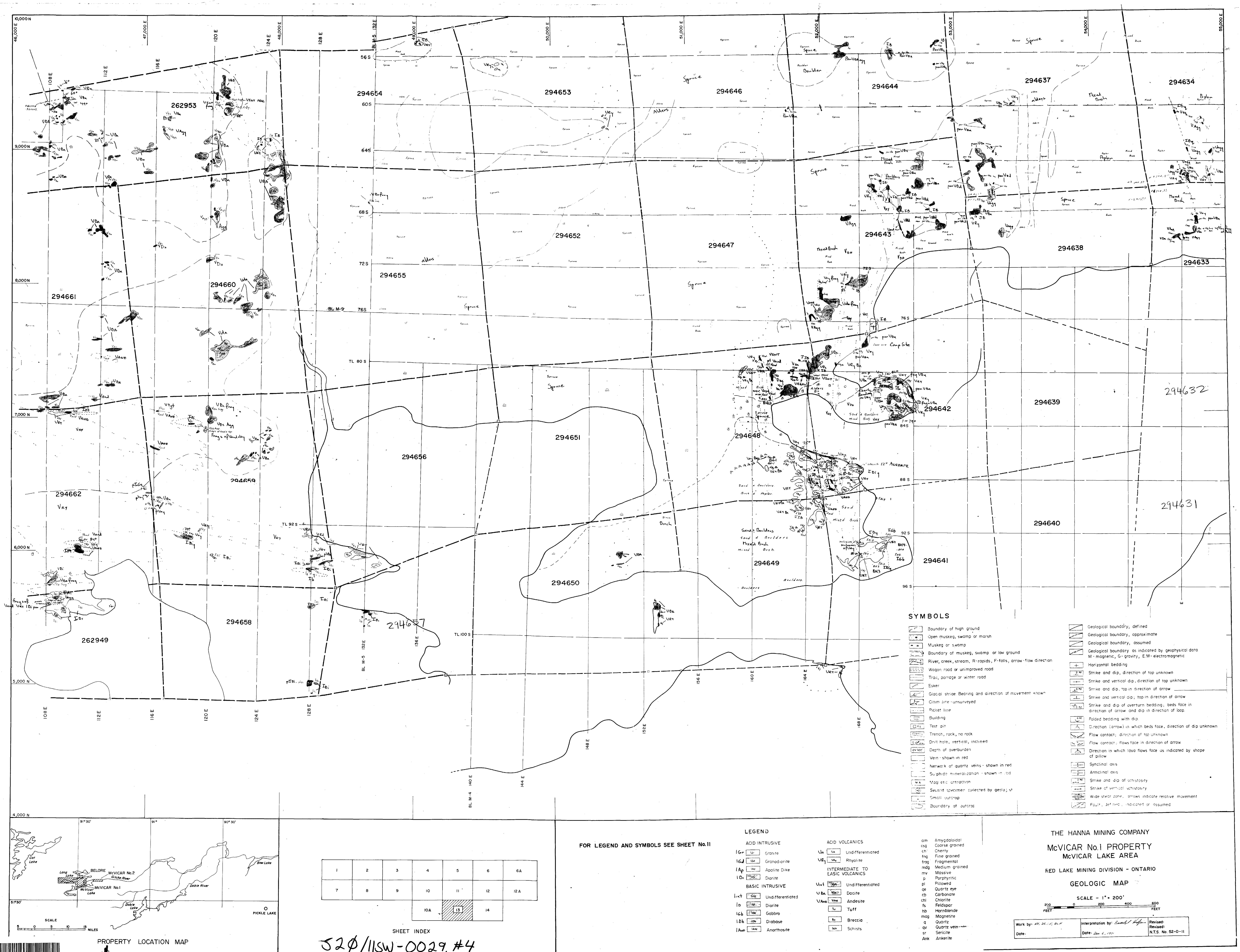
SCALE - 1" = 200'

200 0 200 400 600 FEET

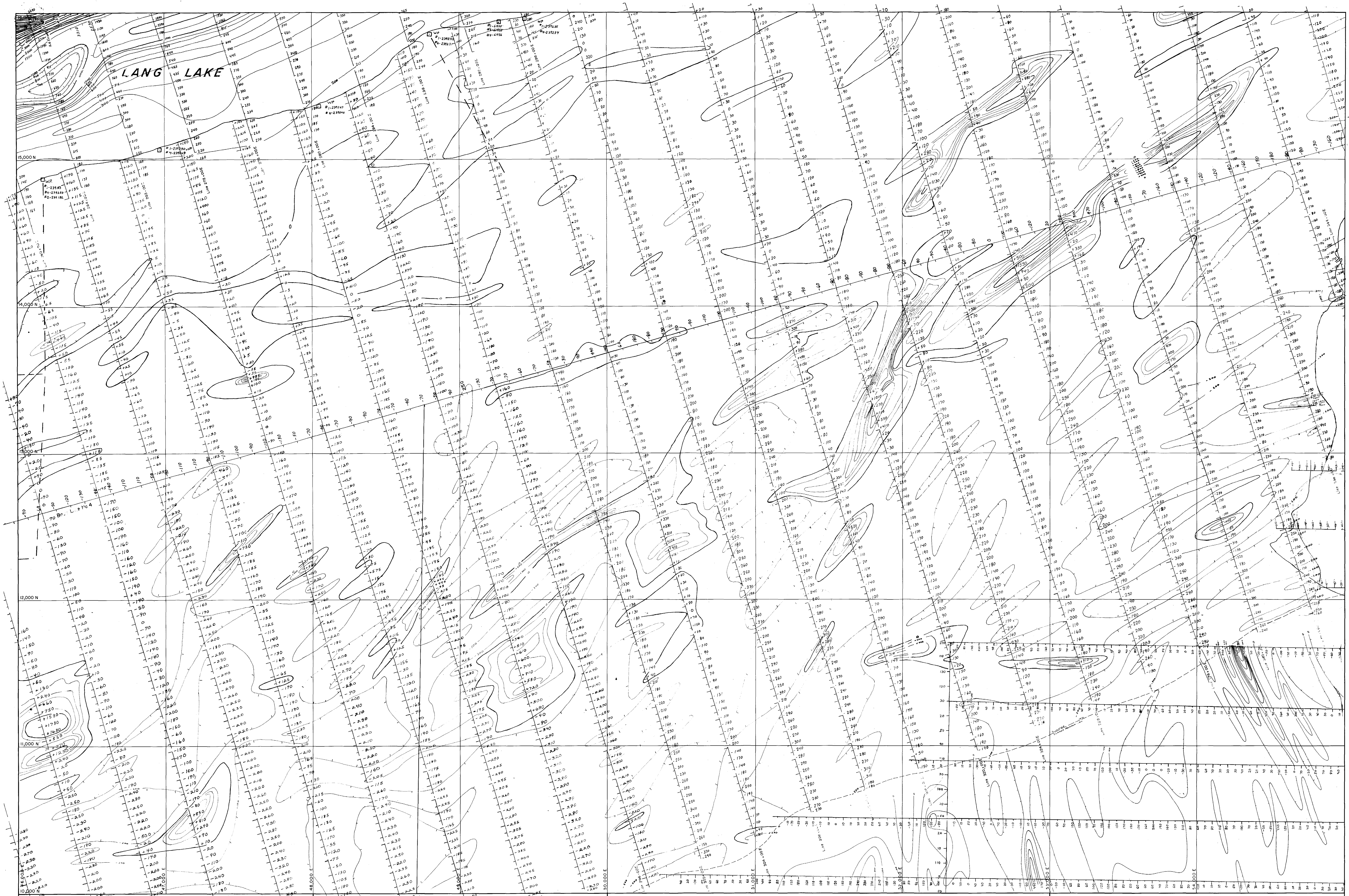
Work by:	Interpretation by: Dwight Hodgson	Revised:
Date:	Date: March 29, 1972	Revised: N.T.S No. 52-O-11

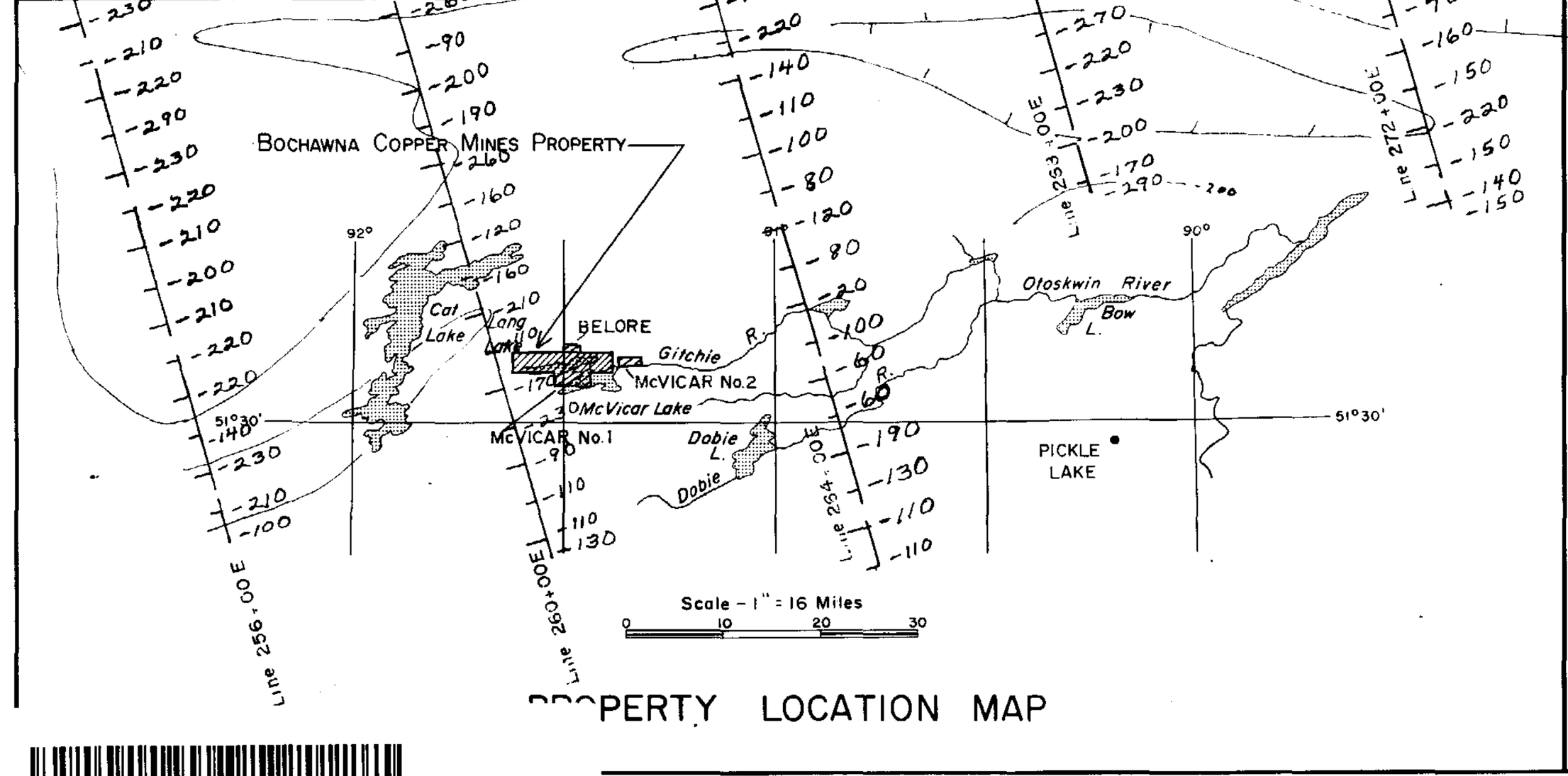
52Ø/11SW-0029, #3

2.873


THE HANNA MINING COMPANY
McVICAR No.1 PROPERTY
McVICAR LAKE AREA
RED LAKE MINING DIVISION - ONTARIO
GEOLOGIC MAP
SCALE - 1" = 200'
200 FEET 0 200 400 600 FEET
Work by: NH, DS, EF, BCH
Date:
Interpretation by:
Date: Dec 6, 1971
Revised:
Revised:
N.T.S. No. 52-0-11
FOR LEGEND AND SYMBOLS SEE SHEET No.11
SHEET INDEX
1 2 3 4 5 6 6A
7 8 9 10 11 12 12A
10A 13 14
PROPERTY LOCATION MAP
Long Lake
BELORE
McVICAR No.2
McVICAR No.1
McVicar Lake
Cat Lake
Bow Lake
Dobie River
Dobie Lake
PICKLE LAKE
91°30'
91°
90°30'
51°30'
SCALE
5 0 5 10 15 MILES
LEGEND
ACID INTRUSIVE
1Gr Granite
1Gd Granodiorite
1Ap Aplite Dike
1Di Diorite
BASIC INTRUSIVE
1ut Undifferentiated
1b Diorite
1Gb Gabbro
1Db Diabase
1An Anorthosite
ACID VOLCANICS
Va Undifferentiated
VRy Rhyolite
INTERMEDIATE TO BASIC VOLCANICS
Vut Undifferentiated
VDa Dacite
VAnd Andesite
Tuff
Breccia
Schists
am Amygdaloidal
csg Coarse grained
ch Cherty
fng Fine grained
frag Fragmental
mdg Medium grained
mv Massive
p Porphyritic
pl Pillowed
qe Quartz eye
cb Carbonate
chl Chlorite
fs Feldspar
hb Hornblende
mag Magnetite
q Quartz
qv Quartz vein
sr Sericite
Ank Ankerite
SYMBOLS
Boundary of high ground
Open muskeg, swamp or marsh
Muskeg or swamp
Boundary of muskeg, swamp or low ground
River, creek, stream, R-rapids, F-falls, arrow-flow direction
Wagon road or unimproved road
Trail, portage or winter road
Esker
Glacial striae Bearing and direction of movement known
Claim line unsurveyed
Picket line
Building
Test pit
Trench, rock, no rock
Drill hole, vertical, inclined
Depth of overburden
Vein - shown in red
Network of quartz veins - shown in red
Sulphide mineralization - shown in red
Magnetic attraction
Sound specimen collected by geologist
Small outcrop
Boundary of outcrop
Geological boundary, defined
Geological boundary, approximate
Geological boundary, assumed
Geological boundary as indicated by geophysical data M-magnetic, G-gravity, E.M.-electromagnetic
Horizontal bedding
Strike and dip, direction of top unknown
Strike and vertical dip, direction of top unknown
Strike and dip, top in direction of arrow
Strike and vertical dip, top in direction of arrow
Strike and dip of overturn bedding, beds face in direction of arrow and dip in direction of loop
Folded bedding with dip
Direction (arrow) in which beds face, direction of dip unknown
Flow contact, direction of top unknown
Flow contact, flows face in direction of arrow
Direction in which lava flows face as indicated by shape of pillow
Synclinal axis
Anticlinal axis
Strike and dip of schistosity
Strike of vertical schistosity
Wide shear zone, arrows indicate relative movement
Fault, defined, indicated or assumed
294654
294653
294646
294644
294637
294634
262953
294652
294647
294643
294638
294633
294655
294660
294661
294648
294642
294639
294632
294656
294651
294659
294662
294649
294640
294631
294650
294641
294658
294657
262949
10,000 N
9,000 N
8,000 N
7,000 N
6,000 N
5,000 N
4,000 N
46,000 E
47,000 E
48,000 E
49,000 E
50,000 E
51,000 E
52,000 E
53,000 E
54,000 E
55,000 E
108 E
112 E
116 E
120 E
124 E
128 E
132 E
136 E
140 E
144 E
148 E
152 E
156 E
160 E
164 E
168 E
56 S
60 S
64 S
68 S
72 S
76 S
TL 80 S
84 S
88 S
TL 92 S
96 S
TL 100 S
BL M-5
BL M-9
BL M-4
Spruce
Alders
Mixed Bush
Camp Site
Sand & Boulders
Boulders
52Ø/11SW-0029, #4
230


SYMBOLS
Boundary of high ground
Open muskeg, swamp or marsh
Muskeg or swamp
Boundary of muskeg, swamp or low ground
River, creek, stream, R-rapids, F-falls, arrow-flow direction
Wagon road or unimproved road
Trail, portage or winter road
Esker
Glacial striae Bearing and direction of movement known
Claim line-unsurveyed
Picket line
Building
Test pit
Trench, rock, no rock
Drill hole, vertical, inclined
Depth of overburden
Vein-shown in red
Network of quartz veins-shown in red
Sulphide mineralization-shown in red
Magnetic attraction
Selected specimen collected by geologist
Small outcrop
Boundary of outcrop
Geological boundary, defined
Geological boundary, approximate
Geological boundary, assumed
Geological boundary as indicated by geophysical data M-magnetic, G-gravity, E.M.-electromagnetic
Horizontal bedding
Strike and dip, direction of top unknown
Strike and vertical dip, direction of top unknown
Strike and dip, top in direction of arrow
Strike and vertical dip, top in direction of arrow
Strike and dip of overturn bedding, beds face in direction of arrow and dip in direction of loop
Folded bedding with dip
Direction (arrow) in which beds face, direction of dip unknown
Flow contact, direction of top unknown
Flow contact, flows face in direction of arrow
Direction in which lava flows face as indicated by shape of pillow
Synclinal axis
Anticlinal axis
Strike and dip of schistosity
Strike of vertical schistosity
Wide shear zone, arrows indicate relative movement
Fault, defined, indicated or assumed
LEGEND
ACID INTRUSIVE
IGr Granite
IGd Granodiorite
IAp Aplite Dike
IDi Diorite
BASIC INTRUSIVE
IUt Undifferentiated
ID Diorite
IGb Gabbro
IDb Diabase
IAno Anorthosite
ACID VOLCANICS
VR Undifferentiated
VRy Rhyolite
INTERMEDIATE TO BASIC VOLCANICS
VUt Undifferentiated
VDa Dacite
VAnd Andesite
Tuff
Breccia
Schists
am Amygdaloidal
csg Coarse grained
ch Cherty
fng Fine grained
frag Fragmental
mdg Medium grained
mv Massive
p Porphyritic
pl Pillowed
qe Quartz eye
cb Carbonate
chl Chlorite
fs Feldspar
hb Hornblende
mag Magnetite
q Quartz
qv Quartz vein
sr Sericite
Ank Ankerite
294627
294622
264615
294628
294621
294616
294633
294632
294629
294620
294617
294631
294630
294619
294618
BL M-7 218+00E
BL M-2 228E
10,000 N
9,000 N
8,000 N
7,000 N
6,000 N
5,000 N
4,000 N
55,000E
56,000E
57,000E
58,000E
59,000E
60,000E
61,000E
62,000E
63,000E
64,000E
PROPERTY LOCATION MAP
BELORE
McVICAR No.2
McVICAR No.1
Long Lake
McVicar Lake
Otter Lake
Bow Lake
Dobie River
Dobie Lake
PICKLE LAKE
SCALE
MILES
SHEET INDEX
1 2 3 4 5 6 6A
7 8 9 10 11 12 12A
10A 13 14
FOR LEGEND AND SYMBOLS SEE SHEET No.11
THE HANNA MINING COMPANY
McVICAR No.1 PROPERTY
McVICAR LAKE AREA
RED LAKE MINING DIVISION - ONTARIO
GEOLOGIC MAP
SCALE - 1" = 200'
FEET
Work by:
Date:
Interpretation by:
Date:
Revised:
Revised:
N.T.S. No. 52-0-11
52O/11SW-0029 #5
2.83
240





PROPERTY LOCATION MAP

SHEET INDEX

1	2	3	4	5	6
7	8	9	10	11	12
			10A	13	14

NOTE
INSTRUMENT: SHARPE M.F.I., MODEL 321
The readings are of the vertical component.

HUNDRED GAMMA CONTOURS
THOUSAND GAMMA CONTOURS
CLOSED MAGNETIC LOWS

THE HANNA MINING COMPANY
LANG LAKE & McVICAR No 1 PROPERTIES
LANG LAKE AREA
RED LAKE MINING DIVISION - ONTARIO
MAGNETIC MAP 11

SCALE - 1" = 200'
200 0 200 400 600
FEET

Work by:	Interpretation by: [signature]	Revised:
Date:	Date: June 24, 1977	Revised:
		N.T.S. No. 52-O-11

52O/11SW-0029, #6

SHONIA LAKE

LANG LAKE PROGRAM-1970
McVICAR LAKE PROGRAM-1971

294613 294624 294635 294625 294626 294623 264614

16,000 N
15,000 N
14,000 N
13,000 N
12,000 N
11,000 N
10,000 N

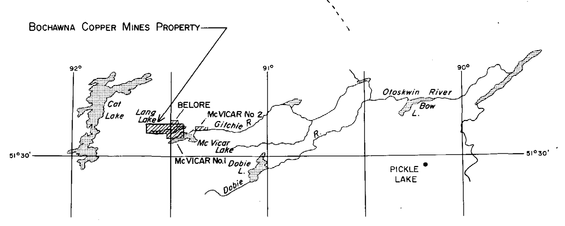
55,000 E 56,000 E 57,000 E 58,000 E 59,000 E 60,000 E 61,000 E 62,000 E 63,000 E 64,000 E

16 S 20 S 24 S 28 S 32 S 36 S 40 S 44 S 48 S 52 S

n

2·813

BOCHANNA COPPER MINES PROPERTY



PROPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT SHARPE MF1 and MF2 MODEL 321
The readings are of the vertical component.

HUNDRED GAMMA CONTOURS
THOUSAND GAMMA CONTOURS
CLOSED MAGNETIC LOWS

THE HANNA MINING COMPANY

McVICAR No.1 & LANG LAKE PROPERTY

LANG & SHONIA LAKES AREA

RED LAKE MINING DIVISION - ONTARIO

MAGNETIC MAP 12

SCALE - 1" = 200'

200 FEET 0 200 400 600 FEET

Work by:	Interpretation by: Beverly Mason	Revised:
Date:	Date: March 29, 1972	Revised: N.T.S. No. 52-O-11

52Ø/11SW-0029, #7

260

10,000 N

9,000 N

8,000 N

7,000 N

6,000 N

5,000 N

4,000 N

84 E

88 E

92 E

96 E

100 E

104 E

262953

294661

262950

262951

294662

262949

262952

n

BOCHAWANA COPPER MINES PROPERTY

Cat Lake

Long Lake

BELORE

Gitchie

McVICAR No.2

McVicar Lake

McVICAR No.1

Dable

Otoskwin River

PICKLE LAKE

Scale - 1" = 16 Miles

PERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE

INSTRUMENT: SHARPE MF1 and MF2, MODEL 321

The readings are of the vertical component.

HUNDRED GAMMA CONTOURS

THOUSAND GAMMA CONTOURS

CLOSED MAGNETIC LOWS

2.813

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

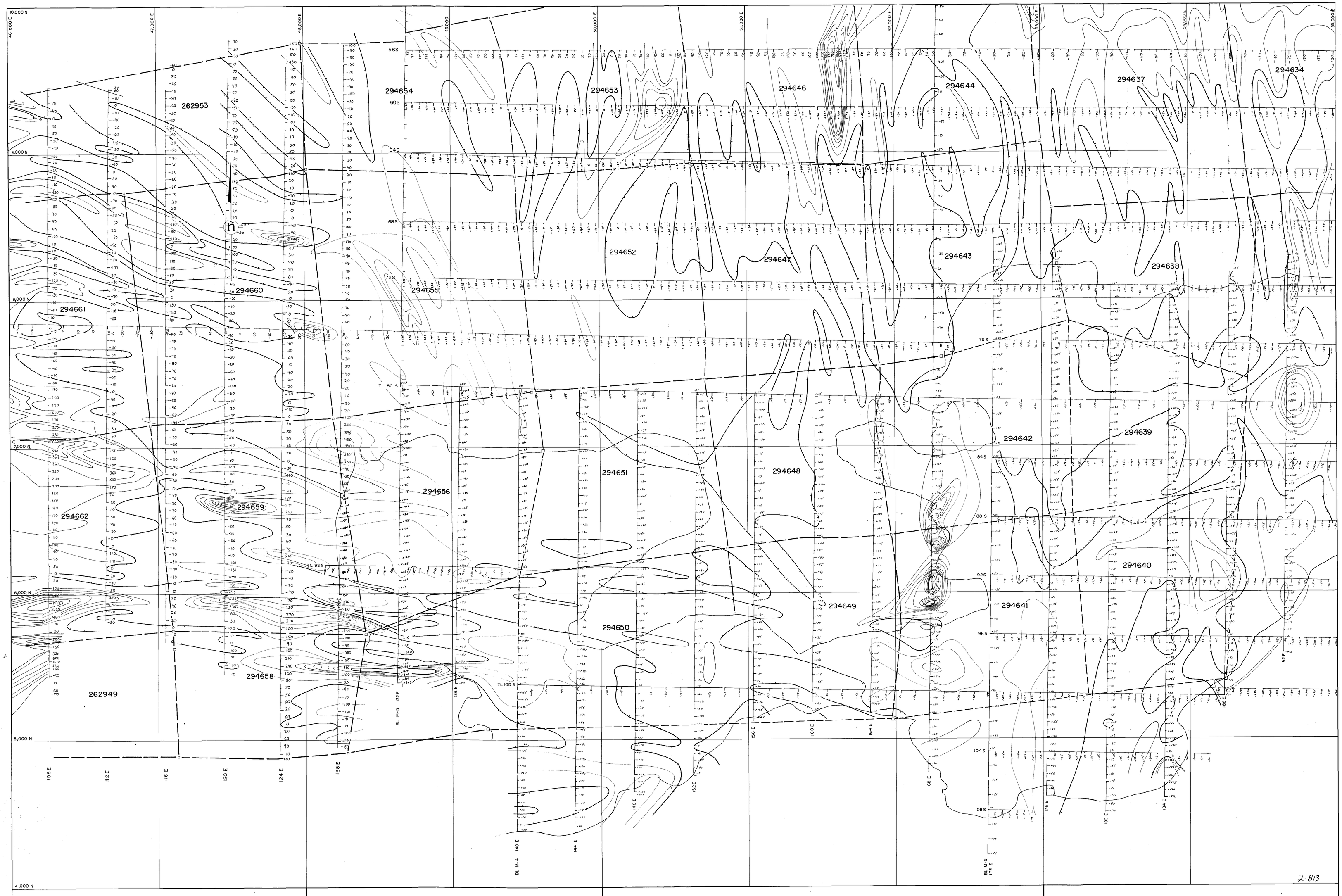
MAGNETIC MAP 10A

SCALE - 1" = 200'

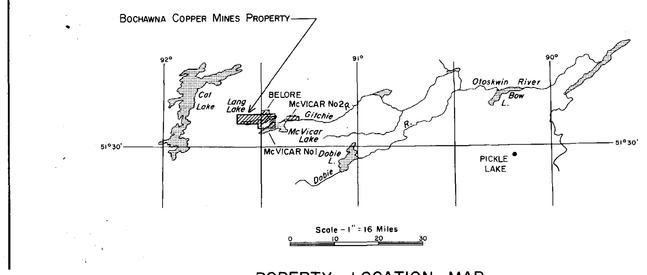
200 0 200 400 600 FEET

Work by:	Interpretation by: Dwight A. Hunter
Date:	Date: March 29, 1972
	Revised:
	Revised:
	N.T.S. No. 52-O-11

52Ø/11SW-0029 #8



2·813



ROPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT - SHARPE MF1 and MF2, MODEL 321
The readings are of the vertical component

HUNDRED GAMMA CONTOURS
THOUSAND GAMMA CONTOURS
CLOSED MAGNETIC LOWS

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

MAGNETIC MAP 13

SCALE - 1" = 200'

200 FEET 0 200 400 600 FEET

Work by:	Interpretation by:	Revised:
Date:	Date: March 24, 1972.	Revised:
		N.T.S. No. 52-O-11

52Ø/11SW-0029, #9

294627 294622 264615 294628 294621 294616 294633 294632 294629 294620 294617 294631 294630 294619 294618

10,000 N 9,000 N 8,000 N 7,000 N 6,000 N 5,000 N 4,000 N

56,000E 57,000E 58,000E 59,000E 60,000E 61,000E 62,000E 63,000E 64,000E

56S 60S 64S 68S 72S 76S 80S 84S 88S 92S 96S 100S

BL. M-2 2282

n

2·813

BOCHANNA COPPER MINES PROPERTY

Cat Lake · Long Lake · BELORE · Ghitchie · McVICAR No.2 · McVicar Lake · McVICAR No.1 · Dobie · Ottoman River · Bow L. · PICKLE LAKE

Scale - 1" = 16 Miles

PERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT: SHARPE MF1 and MF2, MODEL 321
The readings are of the vertical component.

HUNDRED GAMMA CONTOURS
THOUSAND GAMMA CONTOURS
CLOSED MAGNETIC LOWS

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

MAGNETIC MAP

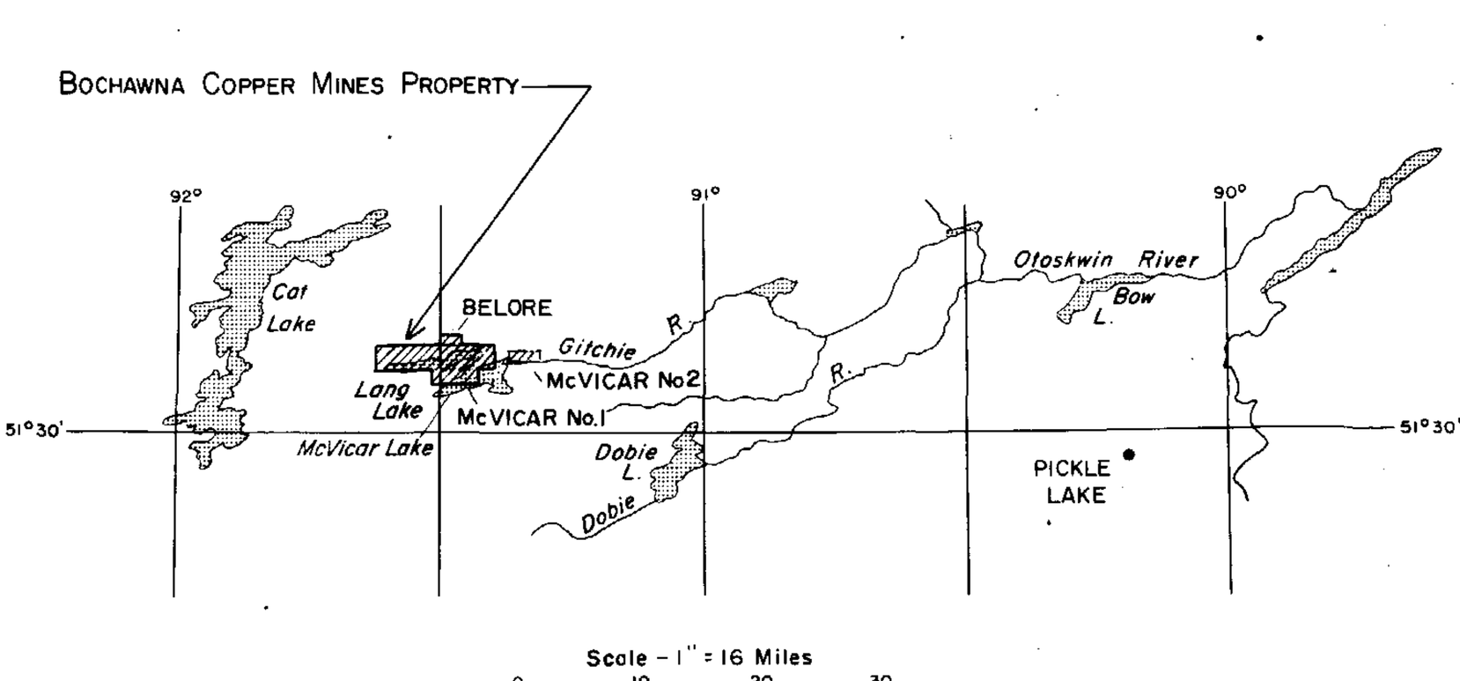
SCALE - 1" = 200'

200 FEET 0 200 400 600 FEET

Work by:	Interpretation by:	Revised:
Date:	Date: March 09, 1972.	Revised: N.T.S. No. 52-O-11

52Ø/11SW-0029, #10


LANG LAKE
Base Line No. 3
Base Line No. 4
16,000 N
15,000 N
14,000 N
13,000 N
12,000 N
11,000 N
10,000 N
47,000 E
48,000 E
50,000 E
51,000 E
52,000 E
294637
294645
294644
294646
294653
PROPERTY LOCATION MAP
Bochanna Copper Mines Property
Pickle Lake
SHEET INDEX
1 2 3 4 5 6 6A
7 8 9 10 11 12 12A
10A 13 14
NOTE
INSTRUMENT: ABEM GUN
HIGH FREQUENCY: 3520 cycles/second
LOW FREQUENCY: 880 cycles/second
IN PHASE OUT OF PHASE
HIGH FREQUENCY
LOW FREQUENCY
ONLY HIGH FREQUENCY TAKEN
THE HANNA MINING COMPANY
LANG LAKE & McVICAR No.1 PROPERTIES
LANG LAKE & SHONIA LAKE AREAS
RED LAKE MINING DIVISION - ONTARIO
ELECTROMAGNETIC MAP
SCALE - 1" = 200'
FEET
Work by:
Date:
Interpretation by:
Date:
Revised:
Revised:
N.T.S. No. 52-O-11
52Ø/11SW-0029, #11
300



OPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT: ABEM GUN
HIGH FREQUENCY: 3520 cycles/second
LOW FREQUENCY: 880 cycles/second

	IN PHASE	OUT OF PHASE
HIGH FREQUENCY	100	0
LOW FREQUENCY	100	0
ONLY LOW FREQUENCY TAKEN	100	0

THE HANNA MINING COMPANY

McVICAR No.1 & LANG LAKE PROPERTY

SHONIA & McVICAR LAKES AREA

RED LAKE MINING DIVISION - ONTARIO 12

ELECTROMAGNETIC MAP

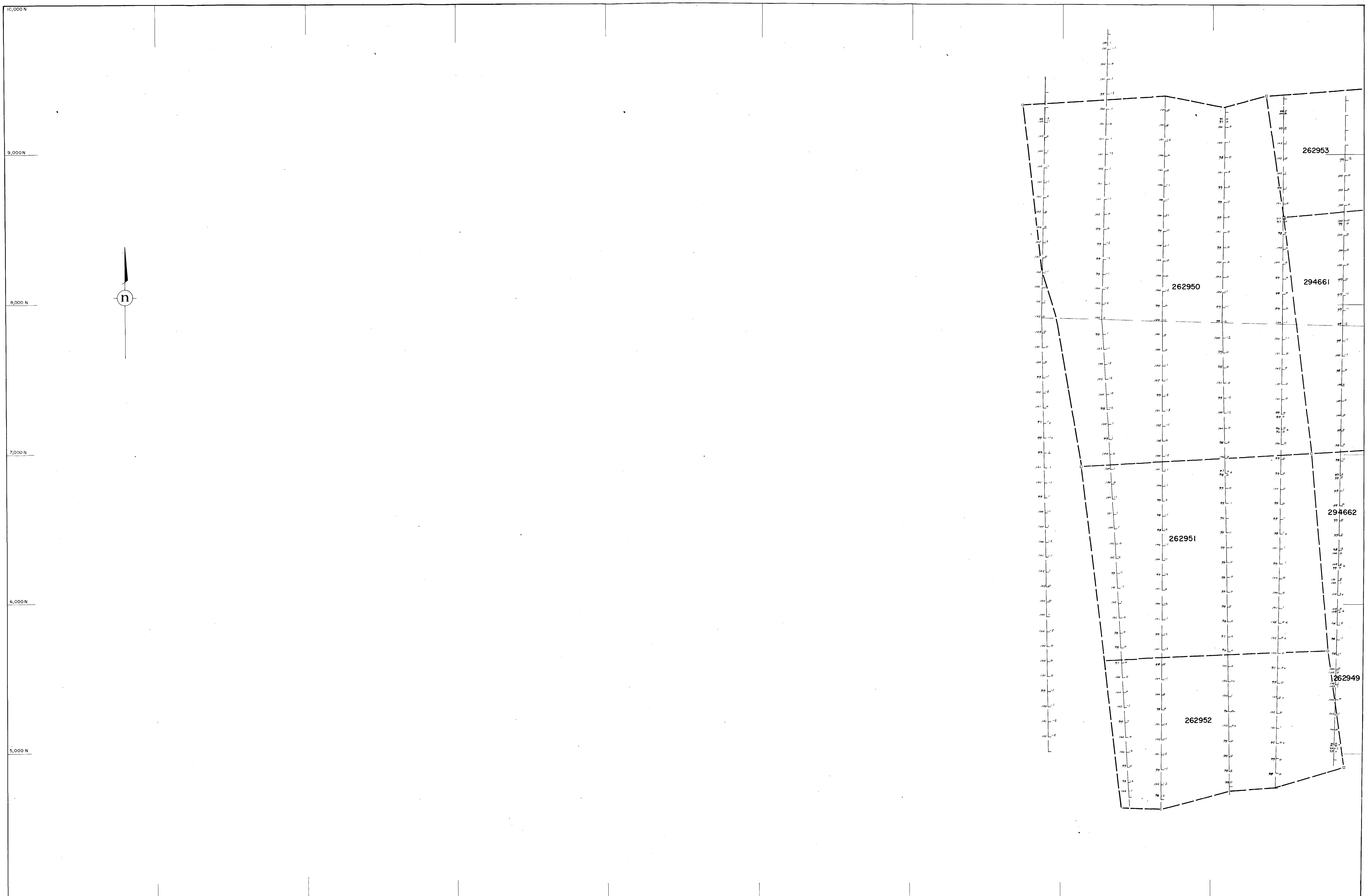
SCALE - 1" = 200'

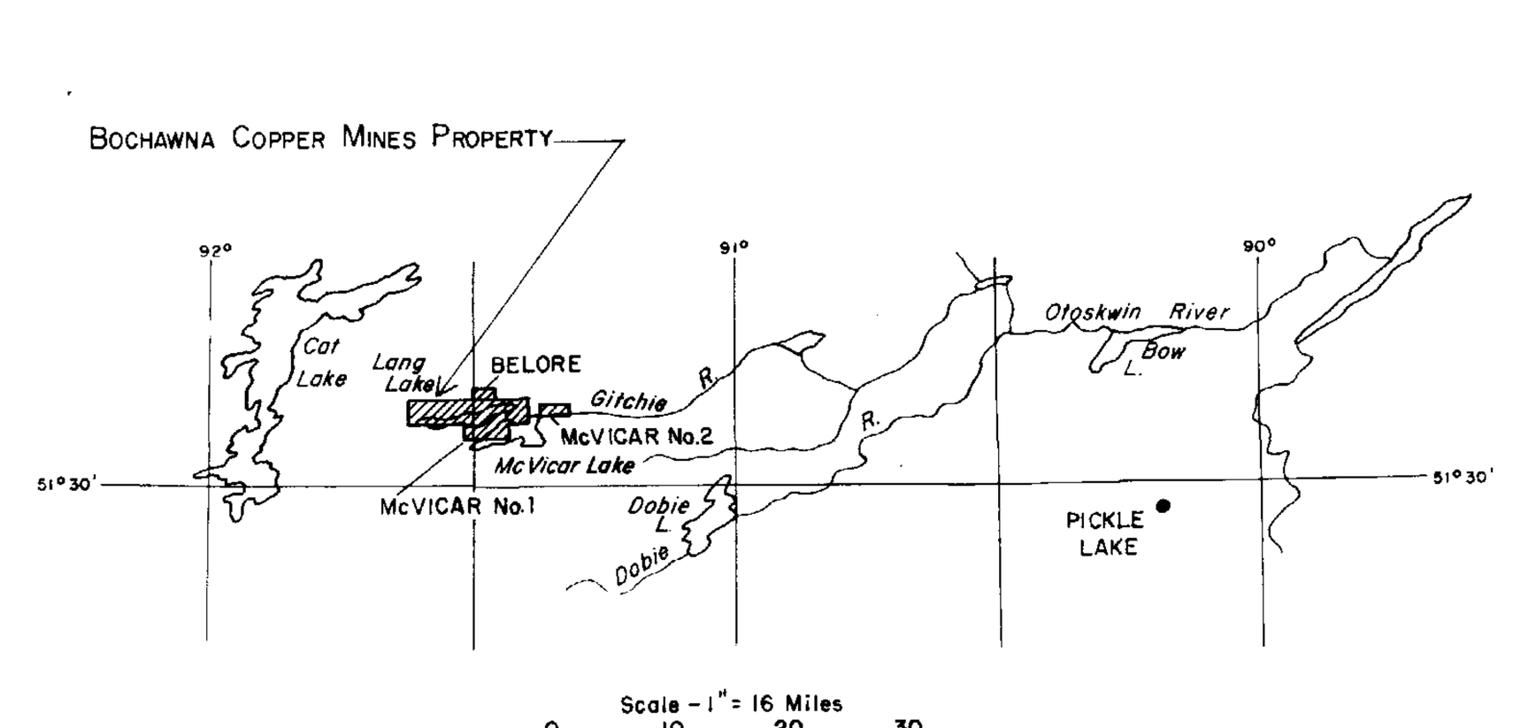
200 FEET 0 200 400 600 FEET

Work by:	Interpretation by: [signature]	Revised:
Date:	Date: March 19, 1970	Revised: N.T.S. No. 52-O-11

52O/11SW-0029, #12

310





OPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT: ABEM GUN
LOW FREQUENCY=880cps
HIGH FREQUENCY=3520cps

In Phase — Out of Phase
High Frequency
Low Frequency
Only Low Frequency Reading Taken

52Ø/11SW-0029, #13

2.813

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION – ONTARIO 10A

ELECTROMAGNETIC MAP

SCALE – 1" = 200'

200 0 200 400 600 FEET

Work by:	Interpretation by: [signature]	Revised:
Date:	Date: March 29, 1972	N.T.S. No. 52-O-11

10,000 N
9,000 N
8,000 N
7,000 N
6,000 N
5,000 N
4,000 N

47,000 E
48,000 E
49,000 E
50,000 E
51,000 E
52,000 E
53,000 E
54,000 E

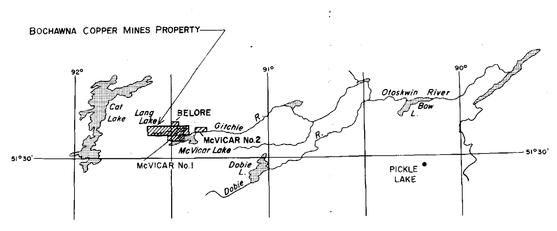
TL 80 S
TL 92 S
TL 100 S
BL M-5 132 E
136 E
140 E
144 E
148 E
152 E
156 E
160 E
164 E
168 E
172 E
176 E
180 E
184 E
188 E
192 E
BL M-4
BL M-3

72 S
76 S
84 S
88 S
92 S
96 S
104 S
108 S

294642
294639
294640
294641

2-813

BIOCHAWNA COPPER MINES PROPERTY



Scale - 1" = 16 Miles

PERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT: ABEM GUN
LOW FREQUENCY=880cps
HIGH FREQUENCY=3520cps

In Phase / Out of Phase
High Frequency
Low Frequency
Only Low Frequency Reading Taken

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

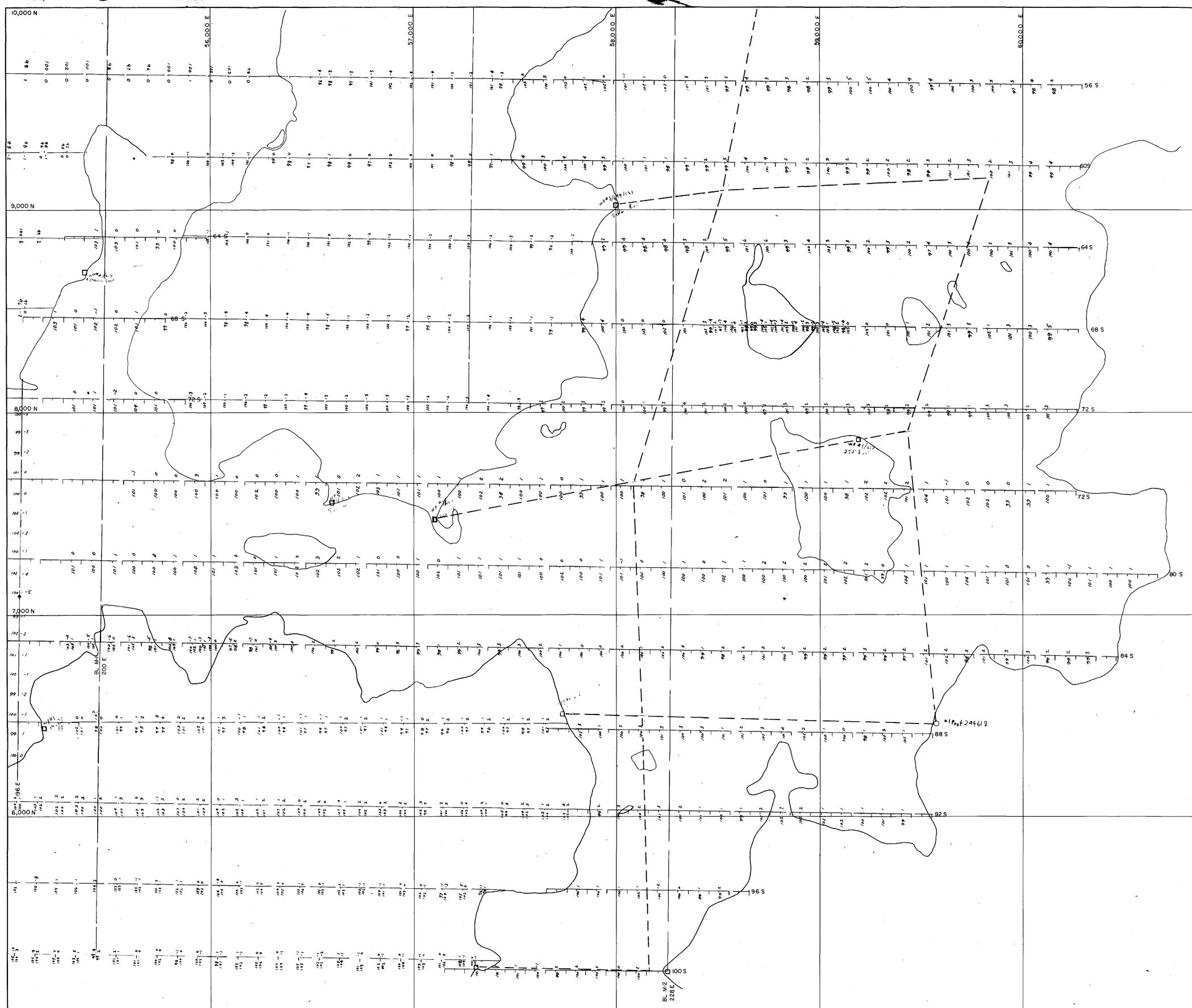
ELECTROMAGNETIC MAP 13

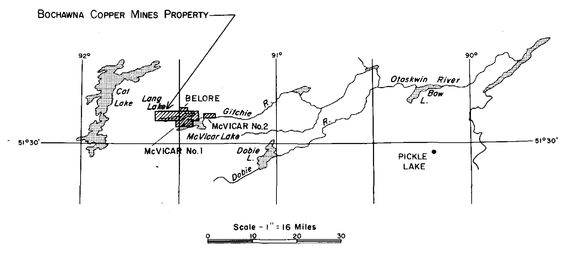
SCALE - 1" = 200'

200 FEET 0 200 400 600 FEET

Work by:	Interpretation by: Geoffrey Hodgkiss	Revised:
Date:	Date: March 29, 1972	N.T.S. No. 52-O-11

52Ø/11SW-0029, #14





ERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

NOTE
INSTRUMENT: ABEM GUN
LOW FREQUENCY=880 cps
HIGH FREQUENCY=3520 cps

In Phase — Out of Phase
High Frequency
Low Frequency
Only Low Frequency Reading Taken

2.813

THE HANNA MINING COMPANY

McVICAR No.1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO

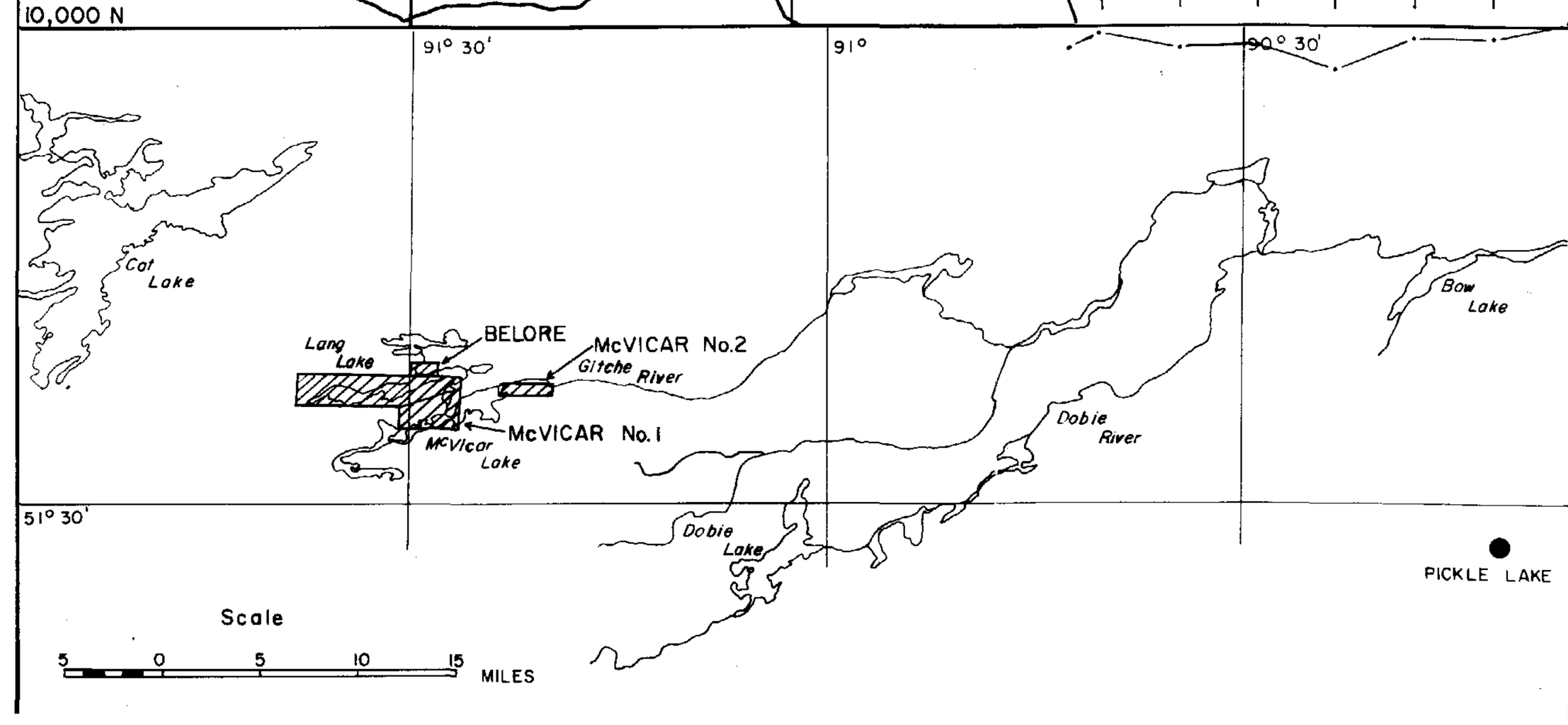
ELECTROMAGNETIC MAP 14

SCALE - 1" = 200'

200 FEET 0 200 400 600 FEET

Work by:	Interpretation by: [illegible]	Revised:
Date:	Date: March 29, 1972.	Revised: N.T.S. No. 52-0-11

52Ø/11SW-0029, #15



OPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

INSTRUMENT Crone VLF RADEM

STATION Cutler, Maine

Frequency 17.8 Kcps

Readings 1 inch = 20 degrees

Cross-Overs on North-South Lines, left to right; on East-West Lines, bottom to top

52∅/11SW-0029, #16

THE HANNA MINING COMPANY

McVICAR No. 1 PROPERTY

McVICAR LAKE AREA

RED LAKE MINING DIVISION - ONTARIO 12

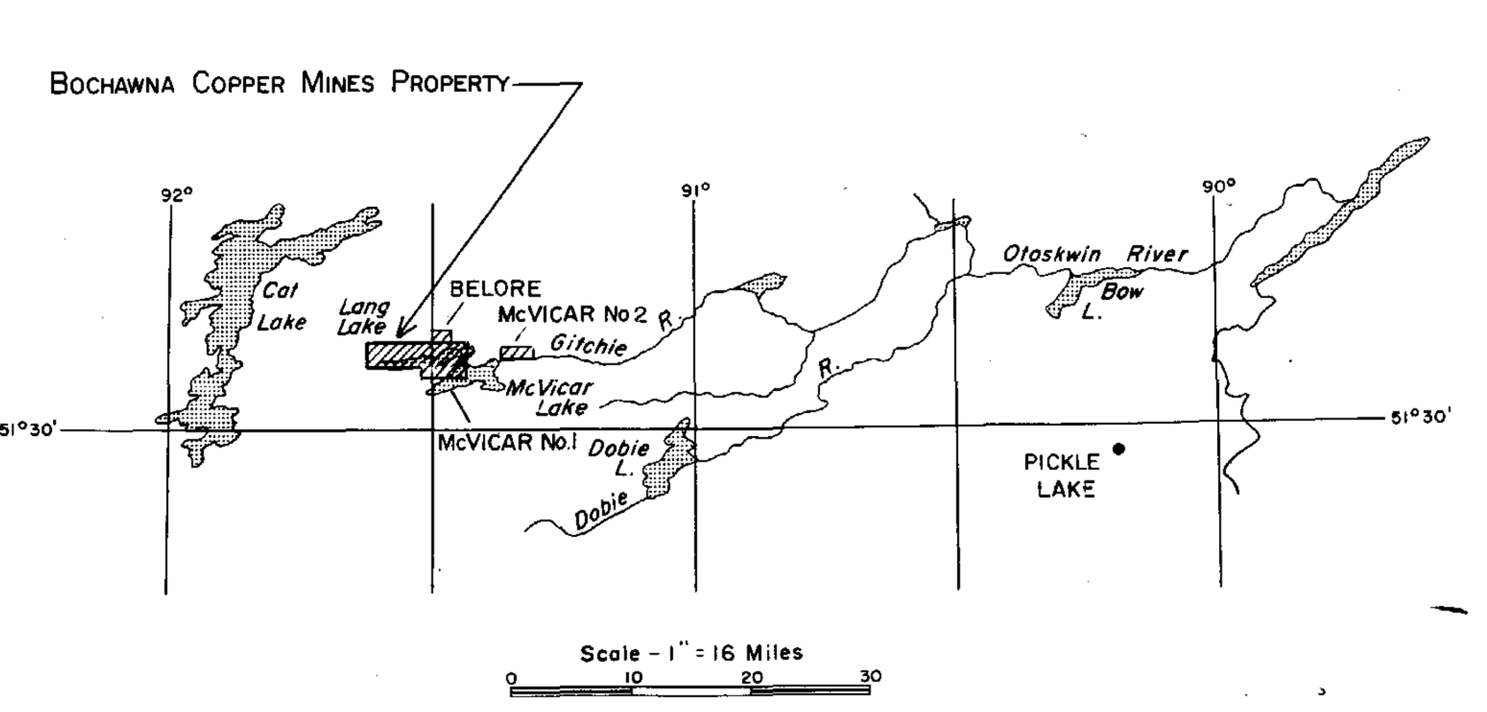
RADEM SURVEY

SCALE - 1" = 200'

200 0 200 400 600 FEET

Work by:	Interpretation by: [signature]	Revised
Date:	Date: March 24, 1972	NTS No. 52-O-11

350



PROPERTY LOCATION MAP

1	2	3	4	5	6	6A
7	8	9	10	11	12	12A
			10A	13	14	

SHEET INDEX

INSTRUMENT: Crone VLF RADEM

STATION: Cutler, Maine

Frequency 17.8 K cps

Readings 1 inch = 20 degrees

Cross-Overs on North-South Lines, left to right (+ -0)

on East-West Lines, bottom to top

520/11SW-0029 #17

THE HANNA MINING COMPANY

McVICAR No. 1 PROPERTY

McVICAR LAKE AREA

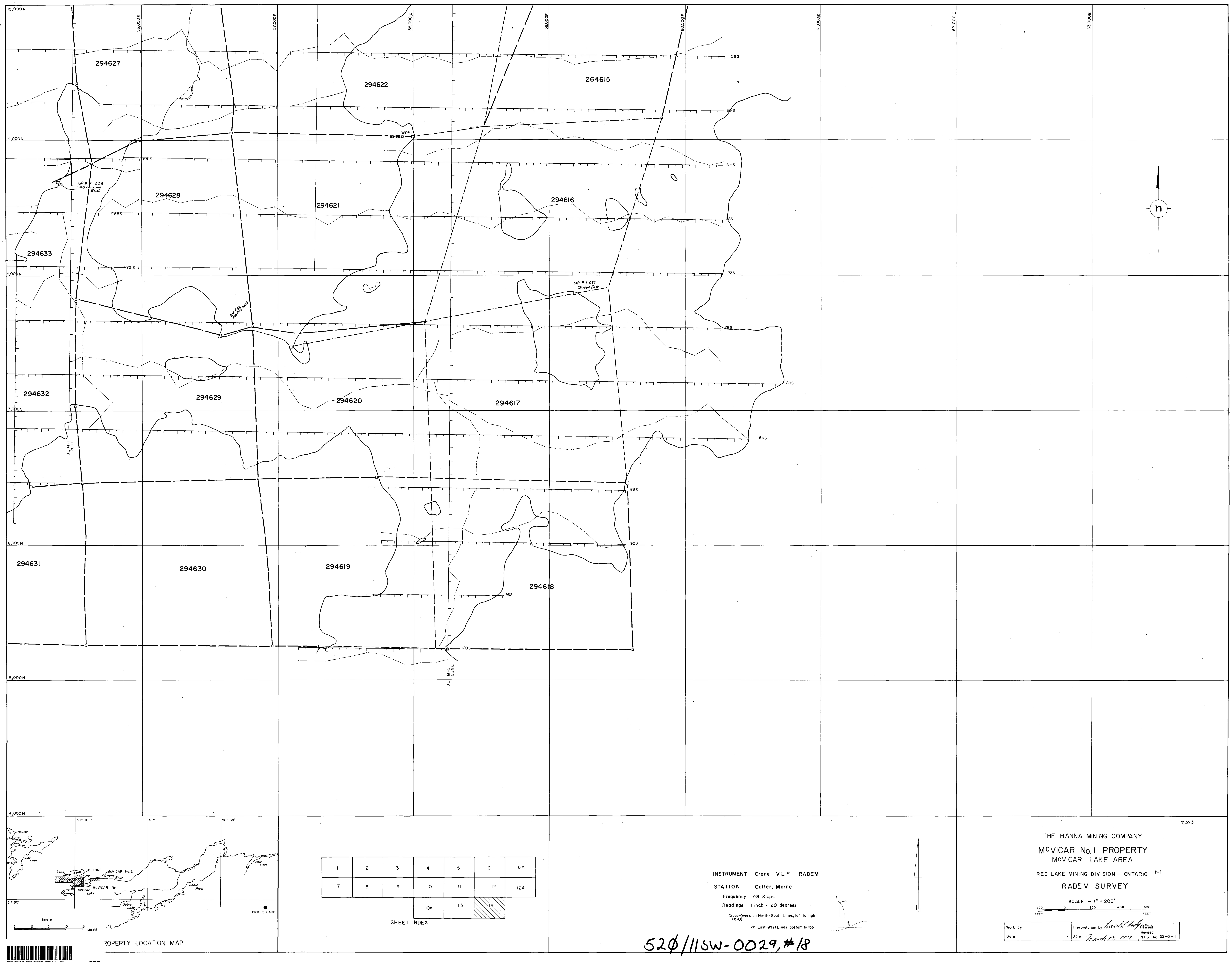
RED LAKE MINING DIVISION - ONTARIO 13

RADEM SURVEY

SCALE - 1" = 200'

Work by:	Interpretation by:	Revised:
Date:	Date:	Revised: N.T.S. No. 52-O-11

360


THE HANNA MINING COMPANY
McVICAR No. I PROPERTY
McVICAR LAKE AREA
RED LAKE MINING DIVISION - ONTARIO
RADEM SURVEY
SCALE - 1" = 200'
INSTRUMENT Crone VLF RADEM
STATION Cutler, Maine
Frequency 17.8 Kcps
Readings 1 inch = 20 degrees
Cross-Overs on North-South Lines, left to right (K-O)
on East-West Lines, bottom to top
SHEET INDEX
PROPERTY LOCATION MAP
PICKLE LAKE
Work by
Date
Interpretation by
Date
Revised
Revised
NTS No 52-0-11
52O/11SW-0029,#18
294627
294622
264615
294628
294621
294616
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294620
294617
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294630
294619
294618
10,000 N
9,000 N
8,000 N
7,000 N
6,000 N
5,000 N
4,000 N
56,000 E
57,000 E
58,000 E
59,000 E
60,000 E
61,000 E
62,000 E
63,000 E
56S
60S
64S
68S
72S
76S
80S
84S
88S
92S
96S
100S
BL M-1 200E
BL M-2 228E
370