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GEOLOGICAL REPORT ON THE NORTHEAST PORTION OF THE QUYTA GROUP
OF THIRTY-EIGHT MINERAL CLAIMS OF NAHANNI MINES LIMITED

by R.W. Baker

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APPENDICES

GEOLOGICAL PLAN AT A SCALE OF 1 INCH TO 400 FEET.

GEOLOGICAL PLAN AT A SCALE OF 1 INCH TO 50 FEET.

(relative to the feldspar porphyry)

RECEIVED

JUN 24 1960

MINING LANDS SECTION



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MINING LANDS SECTION

GEOLOGICAL REPORT ON THE NORTHEAST PORTION OF THE QUYTA GROUP
OF THIRTY-EIGHT MINERAL CLAIMS OF NAHANNI MINES LIMITED

INTRODUCTION

The property, in whole, is located in the northwest quadrant of Pickereel Township in the Patricia Mining Division of the District of Kenora, Ontario. It is elongated over a distance of about 3- $\frac{1}{2}$ miles in a northeast-southwest direction and crosses Concessions V and VI and Lots 4 to 10 inclusive of the township. Paved Highway No. 72, which connects Sioux Lookout with Dinorwic, parallels the group directly to the southeast, and Ojibway Provincial Park adjoins directly on the north on the eastern half of the group.

The northeast end of the property, covered by this report, consists of twelve claims numbered as follows: Pa 437093 to Pa 437096 inclusive Pa 533046 & Pa 533047, Pa 533052 & Pa 533053, Pa 489918 to Pa 489921 inclusive, all in a contiguous block.

An old tote road established by Quyta Gold Mines in 1950 leads from Highway 72 in to the central part of the 12-claim block to their old campsite. This road can readily be put in shape again for wheeled vehicles, aside from a portion that is now flooded by a beaver pond and where a diversion would have to be made.

The twelve claims covered by this geological report, as well as the remaining twenty-six, are owned by Mr. Robert Fairservice, P.O. Box 644, Dryden, Ontario and are under option to Nahanni Mines Limited, Suite 1107, 330 Bay Street, Toronto, Ontario. The survey is being submitted by the company as assessment work. The work was carried out in the period May 11 to May 21 inclusive. Picket-line control was done by a crew of

six men for two days and a crew of five for the balance of the period. The writer and Mr. D.E. Harquail, both qualified geologists, did the mapping and attendant office work.

SUMMARY OF EXPLORATION WORK DONE TO DATE

With reference to Map No. 2 of this report, in the years 1950 and 1951 six trenches were put in to bedrock and 6,271 feet of diamond drilling was carried out by Quyta Gold Mines to test a strongly veined, carbonatized feldspar porphyry for gold-bearing potential over a strike length of about 1,000 feet. The zone is close to the south contact and parallels the long axis of the porphyry. Visible gold was reported to have been seen in the trenching, and interesting values over short widths were said to have been cut in at least six of the eleven holes. However, the decision was made to suspend work pending resolution of structural control problems at Newlund Mines, now Goldlund Mines Limited, 6- $\frac{1}{2}$ miles to the southwest. The property was then allowed to come open. In 1979 the ground was acquired by Mr. Fairservice.

DESCRIPTIONS OF THE FORMATIONS

1. INTERMEDIATE LAVA

There are numerous outcrops of fine grained, chloritic intermediate lava over most of the mapped area. The rock exhibits flow lineation at between 050° and 060° and in some places, especially at scarps on the sides of outcrops, schistosity has developed with strike concordant with that of the lineation, and dip about vertical.

Pillow lava was observed in claim Pa 533047. The long axes, averaging about one foot, are concordant with the volcanic lineation but tops and noses are indeterminate.

Narrow horizons of spherulitic and variolitic lava,

seldom more than two feet wide, occur in random fashion.

2. FELDSPAR PORPHYRY

A lenticular, porphyry mass, about 2,800 feet long and having a maximum width of about 500 feet, is present in the central part of the mapped block. The long axis strikes at about 058° concordant with the trend of the intermediate lava and the ends show a tapering-out in to narrow tips. The mapping has closely established the contact with the lava on the north side, the east end and at one point on the south side. These contact areas on surface closely coincide with those of the drill holes of Quyta Mines projected vertically to surface, and this would indicate that the dip of the mass is about vertical.

Johnston¹ states in his report that the porphyry dike is probably a porphyritic andesitic flow or crystal tuff rather than an intrusion. Of these two alternatives the former is favoured by the writer, but until such time as the rock can be closely studied in a drill program relative to contact conditions at various points the intrusive term would appear to be best.

The rock has a fabric consisting of about 30% anhedral to subhedral feldspar phenocrysts, and on occasion euhedral ones. The average crystal size is about $1/8$ " and the colour is white. The mineral is plagioclase, likely near the albite end of the albite - anorthite series. On fresh surface the groundmass is aphanitic and pale green in colour. On weathered surface the rock has a cream to pale-brownish cast, and this feature appears to be due to the oxidation of ferruginous carbonate contained in the fabric. Also, on weathered surface the feldspar phenocrysts stand out slightly above the groundmass, presenting a rough oatmeal-like appearance.

¹F.J. Johnston, "Geology of the West Minnitaki Lake Area" O.D.M.#75

In the trenching done by Quyta Mines on the south flank of the porphyry sericite is present in the zones of shearing, pointing to a potash content in the rock.

MINERALIZATION

The economic gold mineralization found by Quyta Mines in their trenching and diamond drilling occurs in association with many vein, veinlet and stringer penetrations in to the feldspar porphyry. There appears to be three types of veining, i.e. quartz-carbonate, quartz-carbonate-tourmaline and quartz-tourmaline. It is not known if any of these is specifically favoured by the gold. Quartz tourmaline appears to be the latest, as seen through cutting relationships with the other two. The tourmaline has an amorphous, sooty-black appearance, and as no crystals were seen under the hand lens for positive identification, it is tentatively given that name. The veining varies in width from about one foot down to one-half inch stringers and concentrations of these are seen to make up 50% of the exposures at some points in the trenching. Dips vary from vertical to almost flat-lying. There is less than 1% fine pyrite present and it occurs mainly in the carbonatized porphyry flanking the veining.

On the east side of Cigar Lake, slightly south of its mid-point, there is a three-foot wide quartz-tourmaline vein striking at 055° and dipping 85° south. Pyrite is associated with the veining. In the same area quartz-carbonate float is present.

Cubic pyrite, averaging about $1/16''$ in diameter can frequently be seen in the intermediate lava, both as individual crystals and as clusters. The sulphide is of a primary nature and not of economic interest.

CONCLUSIONS AND RECOMMENDATIONS

The feldspar porphyry, with its known presence of gold in a sheared, altered and heavily-veined environment represents a host that merits further investigation for the possible concentration of the metal in economic amounts. Because of the complexity of the veining further sampling of the trenches by channeling would add little to the picture and would give inconclusive results. The delineation of the porphyry by the geological mapping points to strong strike length and width.

It is recommended that a program of diamond drilling be carried out on the basis of (a) the interesting intersections obtained in the Quyta drilling, (b) the good geological environment, (c) the current strong price for the metal which points to a re-assessment of the Quyta work, (d) the unavailability of the Quyta core which was dumped in a pile near their old campsite, and which can not be used for further study and sampling.

The drilling should be initiated at a set-up opposite 7+00 W. on the baseline (see map No. 2) so as to pass underneath No.5 Trench to the intermediate lava contact and to test for the continuity for the published gold values in D.D.H. S.Q.4.

Sioux Lookout, Ontario,

June 17, 1980



R.W. Baker P.Eng.

Consulting geologist

QUALIFICATIONS OF R.W. BAKER

1. Graduate of Queen's University, Kingston, Ontario in Engineering Geology, in 1941.
2. Assistant geologist in gold mine, production geology until 1943.
3. Canadian Army until 1946.
4. Exploration geologist for several mining companies until 1963.
5. Consulting geologist to the present time.

Memberships

1. Member of the Association of Professional Engineers of the Province of Ontario.
2. Member of the Canadian Institute of Mining & Metallurgy.
3. Member of the Prospectors' and Developers' Association.

R.W. Baker

R.W. Baker, P.Eng.

Consulting geologist



52F16NEB086 2.3364 PICKEREL

Natural Resources

File _____

900

GEOLOGICAL - GEOCHEMICAL
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(s) GEOLOGICAL
 Township or Area PICKEREL TOWNSHIP
 Claim Holder(s) ROBERT FAIRSERVICE, BOX 644,
DRYDEN, ONTARIO, P8N 2Z3
 Survey Company NAHANNI MINES LIMITED
 Author of Report R.W. BAKER
 Address of Author 131 LIBBY BLVD., RICHMOND HILL,
ONTARIO, L4C 4V5
 Covering Dates of Survey MAY 11 to MAY 23 incl. 1980
 (linecutting to office)
 Total Miles of Line Cut 10.6

MINING CLAIMS TRAVERSED
List numerically

Pa	437093	✓
(prefix)	(number)	
Pa	437094	✓
Pa	437095	✓
Pa	437096	✓
Pa	489918	✓
Pa	489919	✓
Pa	489920	✓
Pa	489921	✓
Pa	533046	✓
Pa	533047	✓
Pa	533052	✓
Pa	533053	✓

If space insufficient, attach list

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	_____
-Radiometric	_____
-Other	_____
Geological	<u>40</u>
Geochemical	_____

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

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

DATE: June 17, 1980 SIGNATURE: R.W. Baker
Author of Report or Agent

Res. Geol. _____ Qualifications None

Previous Surveys

File No.	Type	Date	Claim Holder

NEW
NOT ON THE BOOK
QUALIFICATION
ON THIS FILE
2.3364

TOTAL CLAIMS 12

OFFICE USE ONLY



Recorded Holder	Surveymin Limited
Township or Area	Kabik Lake and Pickerel Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	Pa. 437093 - 96 incl.
Magnetometer _____ days	Pa. 489918 - 21 incl.
Radiometric _____ days	Pa. 533046, 533047
Induced polarization _____ days	pa. 533052, 533053
Section 86 (18) _____ days	
Geological _____ 40 _____ days	
Geochemical _____ days	
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 86 (15a) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey Insufficient technical data filed



Ontario

Ministry of
Natural
Resources

Notification of recording
of assessment work credits

RECEIVED

JUN 27 1981

MINING LANDS SECTION

Lands Administration Branch
Mining Lands Section
Ministry of Natural Resources
Room 1617, Whitney Block
Queen's Park, Toronto
M7A 1W3

Date of recording of work: June 10, 1980
Recorded holder: Surveymin Limited
Address: Suite 1107 - 330 Bay. St. Toronto, Ont. M5H 2S8
Township or Area: Kabik Lake and Pickerel Twp. M-2258

Type of survey and number of Assessment days credit per claim	Mining claims
Geophysical	
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Section 86 (18) _____ days	
Geological <u>457</u> days	Pa. 437093-96 incl.
Geochemical _____ days	Pa. 489918-21 incl.
	Pa. 533046 & 533047
	Pa. 533052 & 533053
Man days <input type="checkbox"/>	
Airborne <input type="checkbox"/>	
Special provision <input type="checkbox"/>	
Ground <input checked="" type="checkbox"/>	

Notice to recorded holder: July 30

- Survey reports and maps in duplicate be submitted to the Lands Administration Branch, Toronto within 60 days from the date of recording of this work.
- Reports and maps are being forwarded to the Lands Administration Branch with this letter.

Mining recorder

c.c. Surveymin Limited -Toronto
c.c. R.W. Baker-Richmond Hill



Ministry of
Natural
Resources

Ontario

Your file:

Our file: 2.3364

1980 11 24

Mr. Albert Hanson
Mining Recorder
Ministry of Natural Resources
Box 669, Court House
Sioux Lookout, Ontario
POV 2T0

Dear Sir:

Re: Mining Claims Pa. 437093 et al. Kabik Lake and Pickerel Twp.
File 2.3364

The Geological assessment work credits as shown on the attached statement have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

SH:ie

cc: Mr. R. Fairservice
Dryden, Ontario

R.W. Baker
Sioux Lookout, Ontario

Resident Geologist ✓
Sioux Lookout, Ontario

Surveymin Limited
Toronto, Ontario

VERMILION TWP. M.2272

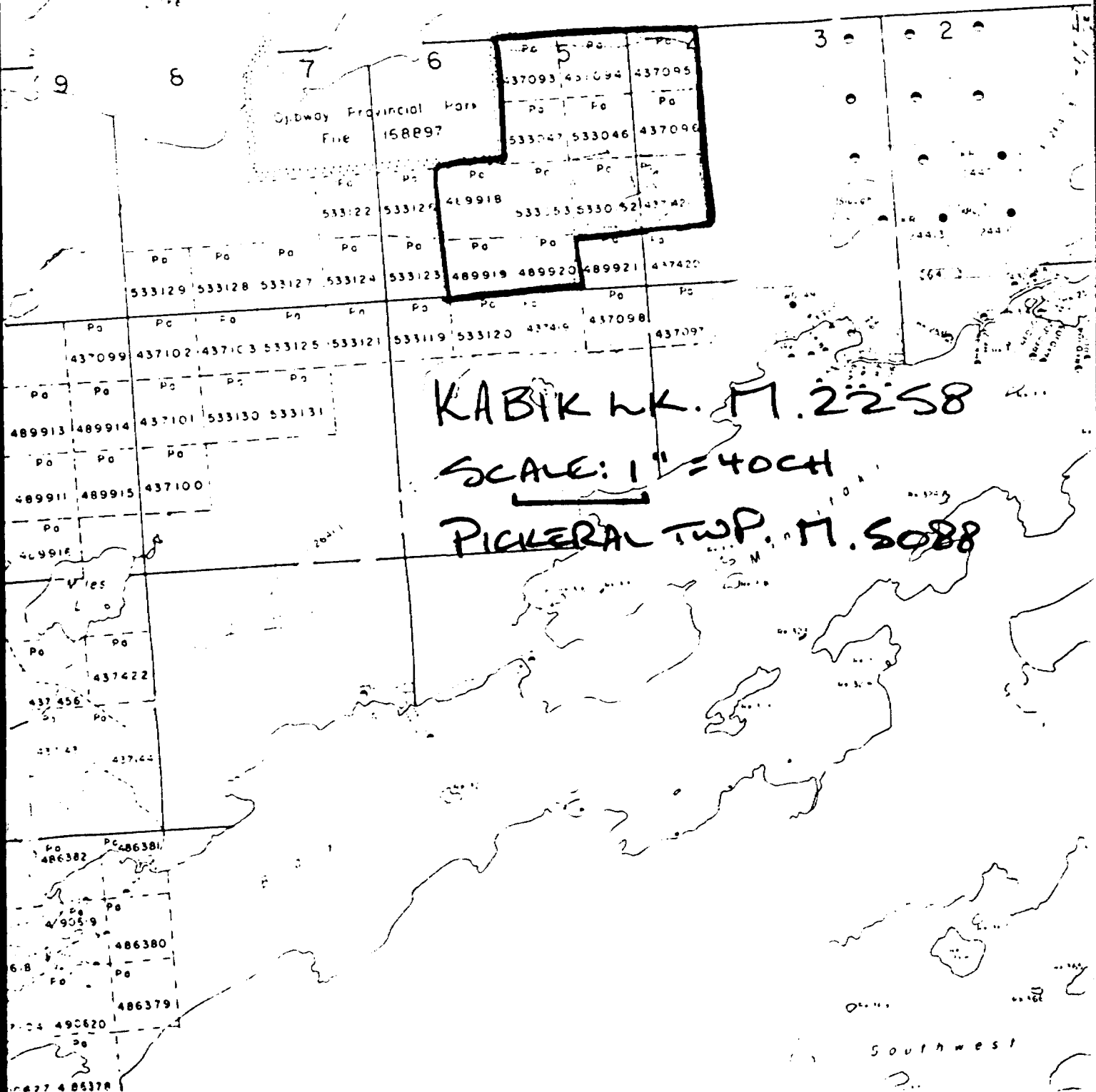
FOR STATUS REFER TO TWP. PLAN

Highway Provincial Park
Fire 158297

KABIK LK. M. 2258

SCALE: 1" = 40CH

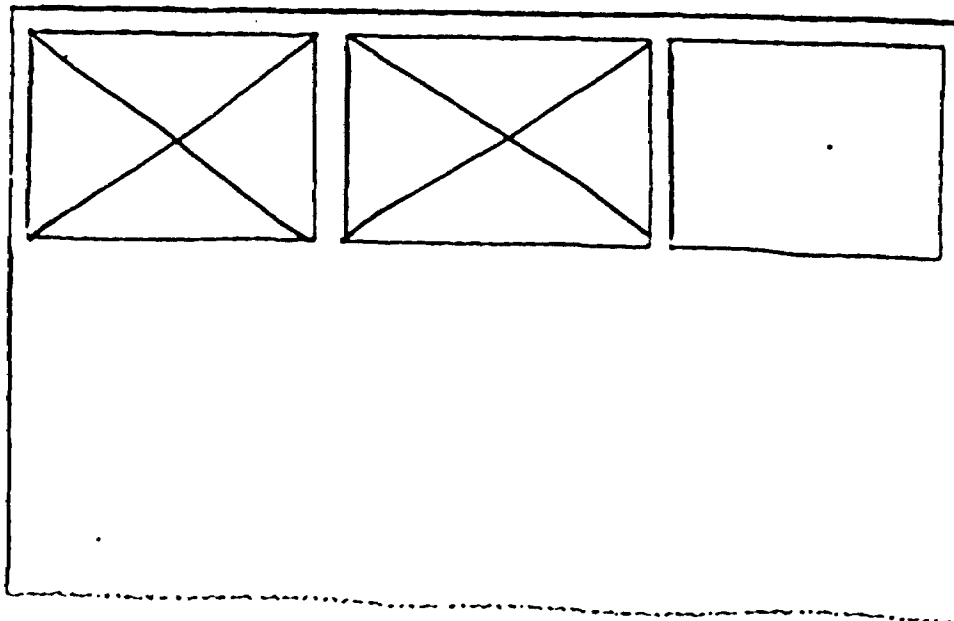
PICKERAL TWP. M. 5088



Southwest

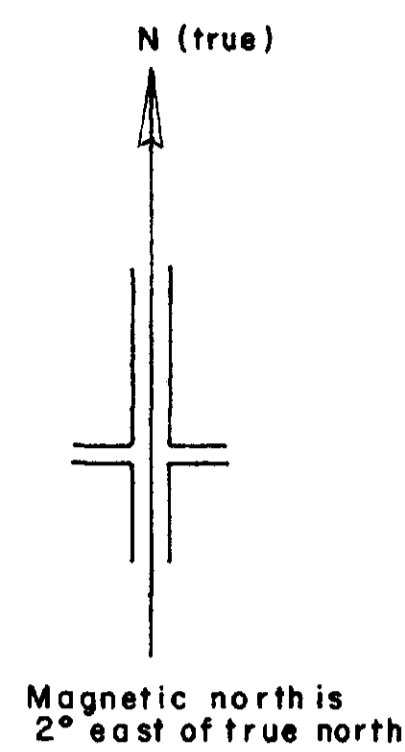
SEE ACCOMPANYING
MAP(S) IDENTIFIED AS
52 F/16 NE-0023-A1, #1, #2

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



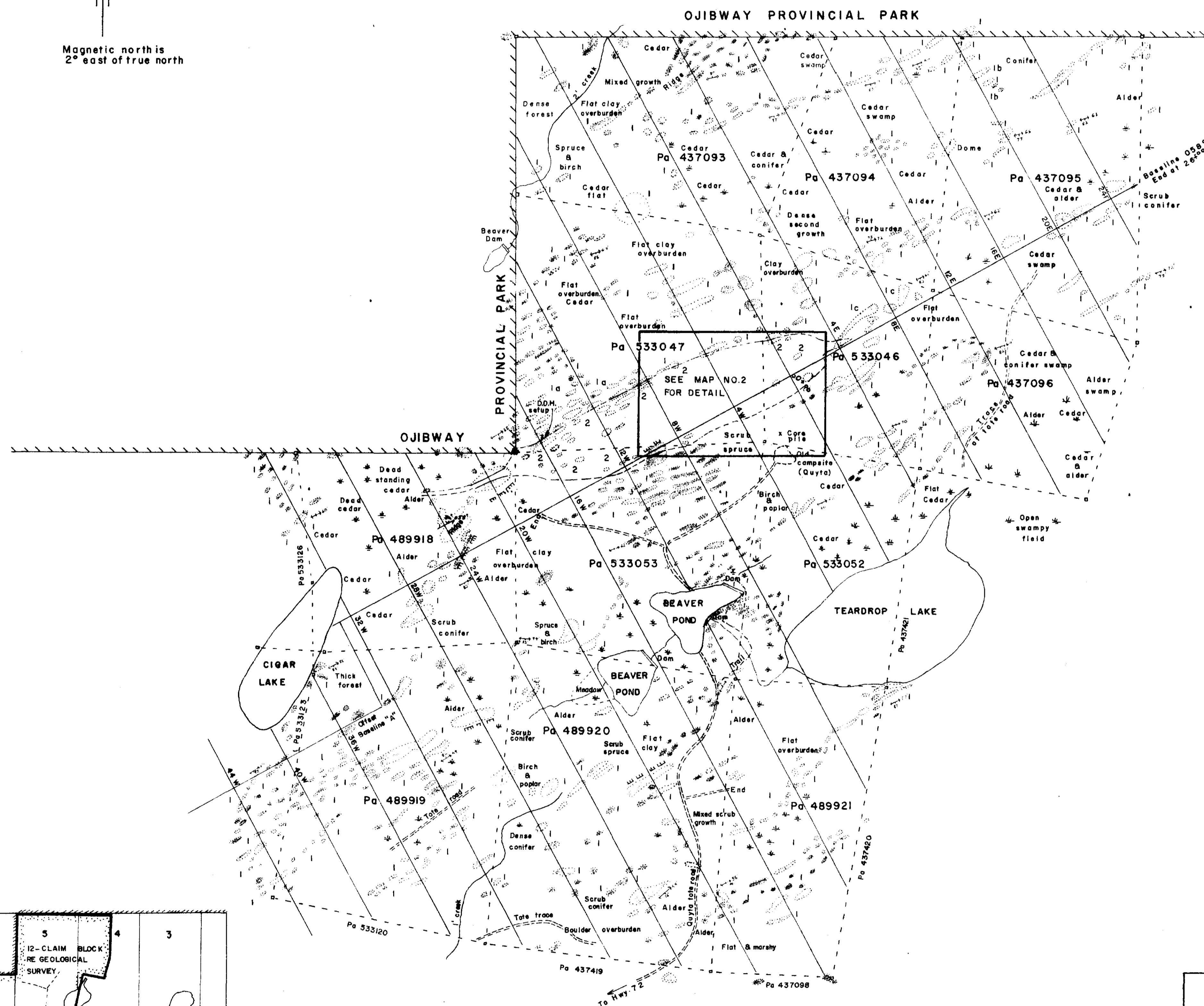
Lat. 49° 58' 30"

Lat. 49° 58' 30"



92° 12' Long

92° 12' Long

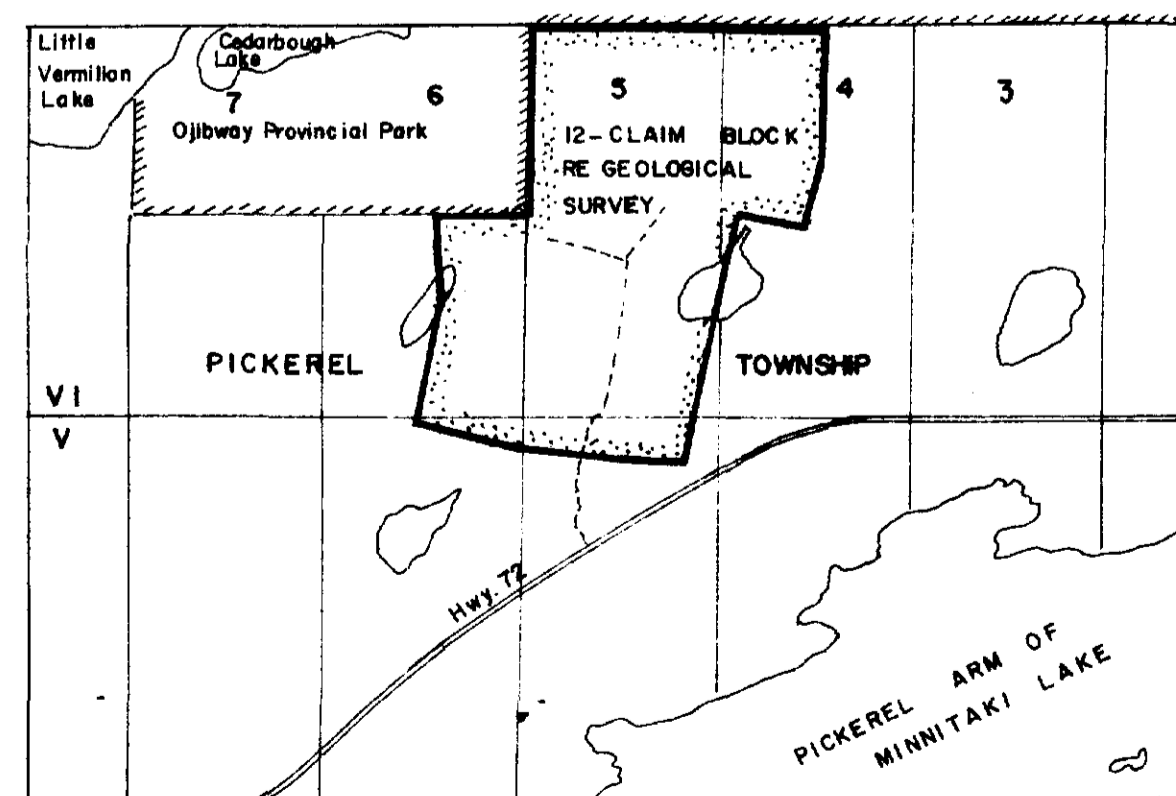


LEGEND

- 2 Feldspar porphyry
- 1 Intermediate lava
 - la: pillow
 - lb: spherulitic
 - lc: variolitic

SYMBOLS

- Rock outcrop
- Contact, defined & approximate
- Flow lineation, strike & dip
- Schistosity, strike & dip
- Swamp
- Scarp
- Tote road (circa 1950 & before)



INDEX MAP
1 inch to 1/2 mile

52F/16NE-0023-A1-#1

NAHANNI MINES LIMITED

**GEOLOGICAL PLAN OF THE NORTHEAST
PORTION OF THE QUYTA CLAIM GROUP**

MAPPING DONE BY DE. HARQUAIL AND R.W. BAKER
DURING THE PERIOD MAY 11 TO 21, 1980 INCL.
FROM PICKET LINE CONTROL AT 400' INTERVALS.

TO ACCOMPANY REPORT BY R.W. BAKER P. ENG. CONSULTING
GEOLOGIST.

SCALE: 1 inch to 400 feet

June 2, 1980

R.W. Baker

MAP NO. 1



200



It is noted in the Northern Mine of April 12, 1951 that hole N-9 gave some positive indications, including one showing 1.17 gms. across 1.4 ft.

935' at 230' from collar of DDH SQ 4 collar of DDH SQ 6. Coordinates not available from log of SQ 5 for collar location.

172' south to collar of DDH SQ 12 (log incomplete)

45' (lined) from C.P.C. W. on baseline on claim map for Plot No. 2, 533,047, 3, 533,048, 4, 533,049

- LEGEND**
- 2 Feldspar porphyry
 - 2a Altered zone
 - 2b Carbonatized (ferrous) re outcrop mapping
 - Volcanics (intermediate lava)
 - 1a Sperrilite flow
 - 1b Altered volcanic
 - Quartz vein per diamond drilling

- SYMBOLS**
- R 5 Trench, with original number
 - Outcrop, with report reference number
 - 298(10) Steep, bedrock face
 - 1:38° Strike & dip of schistosity
 - 0.10 ozs Au/ton over 3 ft

S2F 16NE-0023-A1-#2
NAHANNI MINES LIMITED
QUYTA PROPERTY

GEOLOGICAL PLAN SHOWING 1950-1951 DIAMOND DRILLING PROJECTED VERTICALLY TO SURFACE & MAPPING IN THE FALL OF 1979 RELATIVE TO 1300 FT. OF NEWLY - CUT BASELINE
 Diamond drill logging by J.W. MacLeod
 Mapping by R.W.Baker

SCALE: 1" TO 50'

To accompany report by R.W.Baker

MAP NO. 2

