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GEOLOGICAL & RADIOMETRIC SURVEY PROJECTS UNIT.

BOTTLE BAY LAKE PROPERTY  
TEMPLE TOWNSHIP.  
KENORA MINING DIVISION  
ONTARIO

F.O.B. MINING & EXPLORATION LIMITED

MAY 1976

by

M. KREMKO  
PROTOSHIELD EXPLORATION SERVICES

### Summary and Recommendations

F. O. B. Mining and Exploration Limited holds 69 unpatented mining claims within concessions 4, 5, and 6, lots 4 to 8 inclusive, Temple Township, Kenora Mining Division, Ontario. The claims are accessible by gravel road 3 miles east of Vermilion Bay off Highway 17 and 4 miles south.

A pace and compass geological and radiometric survey was run concurrently over about 40 of these claims in search of uranium mineralization. Traverses were run on claim lines and where outcrop was encountered, at various distances between claim lines or enough to establish coverage of the outcrops.

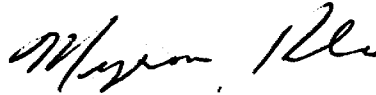
The host rock, an Algoman granite of white to pink colour intruded by red course grained biotite, hornblende pegmatite was encountered throughout the area surveyed.

Uraniferous readings on a McPhar TV 1 scintillometer were at consistent background readings of 10cpm except in areas of known mineralization (up to 2100 cpm U308) and four new localities. These anomalous results are not widespread but occur as local segregations within the pegmatites usually accompanied by yellow uranophane staining and green apatite crystals. It was hoped that this work would locate and possibly extend uranium mineralization to the point where surface diamond drilling would be justified.

Since the results of this survey were relatively negative it is recommended that no further work be carried out on this property with the exception of a radon gas survey within the claims where the outcrops carry some uranium. This survey should cover the areas of overburden within these claims (K350713 to K350719, K431546, K431551) on a regular 200 foot spaced grid. As well, a more sensitive radiometric survey could be carried out over the outcrop areas along the same lines.

It is also recommended that some of the claims be allowed to expire so that those claims that are most important may be held by the work carried out to date. The claims that should be kept in good standing are in one contiguous block of 31 claims as follows; K 350713 -K 350719 inclusive  
K431541 - K 431546 "  
K 431551  
K 431553 - K 431557 inclusive  
K 431575 - K431586 "

Respectfully submitted,



Myron B. Kremko  
(Field Geologist)

PROTOSHIELD EXPLORATION SERVICES

May 6, 1976.

GEOLOGICAL & RADIOMETRIC SURVEY  
BOTTLE BAY LAKE PROPERTY  
TEMPLE TOWNSHIP  
F.O.B. MINING AND EXPLORATION LIMITED

Introduction

During the period April 19 to May 1, 1976 a geological and radiometric survey (McPhar TV 1 Scintillometer) was run over all or part of 40 claims as follows:

K350713 - K350719 inc.  
K405718 & K405719  
K431537 - K431543 inc.  
K431546  
K431551 -  
K431554 - K431557 inc.  
K431569 - K431586 "

The claims are held in the name of F. O. B. Mining and Exploration Limited

The claims were traversed along claim lines in search of outcrop. The traverses were terminated along these claim lines if it was reasonably certain that no further outcrop was located along these lines or the property in the direction of the traverse. Where extensive outcrop was located along the claim lines, traverses were made in a sweeping effect between the claim lines so that effective coverage would be obtained. In effect the claims were prospected. The remaining 29 claims were not traversed either because they were underlain by sedimentary rocks or were covered by overburden.

Location and Access

F. O. B. Mining and Exploration Limited holds 69 contiguous mining claims in Temple Township, Kenora Mining Division within concessions 4-6 and lots 4-8. These are numbered as follows:

K350713 - 350719 inc.	K406310 - 406315 inc
K405718 - 405719 "	K431537 - 431586 "
K406109 - 406110 Y	
K406286 - 406287 "	

The claim group is accessible by road 7 miles from Vermilion Bay, Ontario. The group is about 4 miles by gravel road to its centre, south and east of Highway 17.

#### Personnel Employed on the Survey

F. O. B. Mining and Exploration Limited contracted Protoshield Exploration Services of Thunder Bay, Ontario to carry out this work. M. Kremko was soley responsible for the field and office work.

#### Topography and Drainage

The topography of the claim group is typical of granitic areas of the shield in that the outcrops occur in either large masses of high terrain underlying several claims or spoadic areas within high ground. These all occur as islands within swamp areas. The entire area is covered by clay except in the larger outcrop areas and is generally treed by poplar, jackpine and spruce. Alders occupy the edges of the swamp areas which themselves are grass and spruce covered. About 20% of the area covered has been logged over in recent years.

#### Results of the Survey

The results of the survey are shown on the accompanying map at a scale of 1 inch to 400 feet.

#### Previous Work

No previous work has been recorded. The claims appear to have been staked several times. Trenching of outcrops where uranium was detected was carried out on claims K350713, K350714, K350716, K350717 and K350718 by F. O. B. Mining and Exploration Limited. These have been shown on the map as zones "F", "O", "B", "N", "I" & "G". Diamond drilling has commenced on claim K350714 on zone "N" and will be reported on separately. The area is included in a map and report by W. W. Moorehouse, Volume XLVIII, part 4, Ontario Department of Mines Annual Report, 1939, Map No. 48d.

General Geology

The consolidated rocks of the area consist of a massive grey to pink biotite, hornblende granite of Algomian age. This granite intruded arkosic sediments of Timiskaming age. The sediment occurs within the granite as unmappable lenses and blocks, giving the only strike and dip measurements available within the area mapped. According to Moorehouse the sediments surround the granite to the south east and west. The arkose is fairly siliceous and well baked at its contacts and is almost gneissic in character carrying biotite and hornblende and is medium to course grained. The perimeter of the granite was not observed, but near the supposed contact as mapped by Moorehouse the amount of sediment increases to whole outcrop proportions.

These rocks in turn have been intruded by masses and dikes of a red, pegmatitic, course grained granite. This unit consists of red potash feldspar, biotite and quartz up to 3 inches in diameter and is concentrated in the central part of the area covered. Wherever uranium mineralization has been uncovered it is always within these pegmatitic granites and is usually accompanied by yellow uranophane staining along fractures and clusters of fine to medium grained apatite crystals.

Table of Formations

Cenozoic

Recent and Pleistocene

Swamp and stream deposits, sand and clay.

-----Great Unconformity-----

Precambrian

Proterozoic

Algomian - Pegmatitic granite

-----Intrusive Contact-----

- Biotite, hornblende granite

-----Intrusive Contact-----

Timiskaming - Arkosic sediment

### Economic Geology

This property bears uraniferous pegmatitic granites as located by scintillometer prospecting and subsequent trenching. These localities bear quantities of up to 1 lb. per ton of  $U_3O_8$  as read on the scintillometer (1 lb/ ton  $U_3O_8 = 2500$  cpm) but probably up to 4 lb / ton (assaying). These are economic values. But, the greatest extent of any of these showings appears to be about 40 feet with a 2 foot width. This amount of mineralization cannot reasonably be expected at greater depths than 40 feet. As such the present showings cannot be expected to "blossum into ore bodies". Diamond drilling on these zones would be futile as the mineralization cannot be reasonably expected at depth.

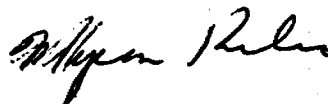
### Radiometric Survey and Results

The radiometric survey encountered only 4 additional localities of above background radiation due to Uranium. None of these localities was exceptional in amounts of  $U_3O_8$  and in extent of mineralization covering only about 10 square feet.

The mileage covered in this survey cannot be given as the measurements were on a random sampling of favourable rock accompanying the geological survey. Only positive results were recorded and located. This work was carried out in this way to give the best results with a minimum of work and maximum coverage.

The survey failed to locate any commercial quantities of uranium.

Respectfully submitted,



Myron B. Kremko  
(Field Geologist)  
PROTOSHIELD EXPLORATION SERVICES

May 6, 1976



Ministry of Natural Resources

File 2.2109.

GEOPHYSICAL - GEO  
TECHNICAL



52F14NE0002 2.2109 TEMPLE

900

TO BE ATTACHED AS AN A  
FACTS SHOWN HERE NEE.  
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC. PROJECTS UNIT.

Type of Survey(s) Radiometric and Geological  
Township or Area Temple Township  
Claim Holder(s) F. O. B. Mining and Exploration Ltd.  
p. o. Box 2717, Thunder Bay P, Ont  
Survey Company Protoshield Exploration Services  
Author of Report Myron Kremko  
Address of Author P. O. Box 1237, Thunder Bay F, Ont.  
Covering Dates of Survey April 19 to May 7, 1976  
(linecutting to office)  
Total Miles of Line Cut Nil

MINING CLAIMS TRAVERSED  
List numerically

K350713	K431556
<small>(prefix)</small>	<small>(number)</small>
K350714	K431557
K350715	K431569
K350716	K431570
K350717	K431571
K350718	K431572
K350719	K431573
K405718	K431574
K405719	K431575
K431537	K431576
K431538	K431577
K431539	K431578
K431540	K431579
K431541	K431580
K431542	K431581
K431543	K431582
K431546	K431583
K431551	K431584
K431554	K431585
K431555	K431586

If space insufficient, attach list

TOTAL CLAIMS 40

SPECIAL PROVISIONS  
CREDITS REQUESTED

DAYS  
per claim

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

ENTER 20 days for each  
additional survey using  
same grid.

Geophysical \_\_\_\_\_  
 -Electromagnetic \_\_\_\_\_  
 -Magnetometer \_\_\_\_\_  
 -Radiometric 20 5  
 -Other \_\_\_\_\_  
 Geological (20) dr  
 Geochemical \_\_\_\_\_

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: May 7, 1976 SIGNATURE: Myron Kremko  
Author of Report or Agent

L.P

Res. Geol. \_\_\_\_\_ Qualifications 63.2467.

Previous Surveys

File No.	Type	Date	Claim Holder
<u>no previous survey</u>			

OFFICE USE ONLY



GEOPHYSICAL TECHNICAL DATA

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

Number of Stations unrecorded Number of Readings unrecorded
Station interval intermittent Line spacing random
Profile scale the area was prospected with a scintillometer and mapped and
Contour interval only anomalous areas were recorded as on the accompanying plan.

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base Station check-in interval (hours)
Base Station location and value

ELECTROMAGNETIC

Instrument
Coil configuration
Coil separation
Accuracy
Method: Fixed transmitter Shoot back In line Parallel line
Frequency (specify V.L.F. station)
Parameters measured

GRAVITY

Instrument
Scale constant
Corrections made
Base station value and location
Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument
Method Time Domain Frequency Domain
Parameters - On time Frequency
- Off time Range
- Delay time
- Integration time
Power
Electrode array
Electrode spacing
Type of electrode

SELF POTENTIAL

Instrument \_\_\_\_\_ Range \_\_\_\_\_

Survey Method \_\_\_\_\_

Corrections made \_\_\_\_\_

RADIOMETRIC

Instrument McPhar TV 1 scintillometer serial no. 175-10

Values measured counts per minute U<sub>3</sub>O<sub>8</sub>

Energy windows (levels) (3) at 2.5, 1.6 & 0.2 MEV

Height of instrument at bedrock (anomalous) & 3' Background Count 10 cpm on mid scale

Size of detector Sodium iodide crystal 1" diameter, 1.25" thick

Overburden clay, sand and water - depth unknown  
(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey \_\_\_\_\_

Instrument \_\_\_\_\_

Accuracy \_\_\_\_\_

Parameters measured \_\_\_\_\_

Additional information (for understanding results) \_\_\_\_\_

AIRBORNE SURVEYS

Type of survey(s) \_\_\_\_\_

Instrument(s) \_\_\_\_\_  
(specify for each type of survey)

Accuracy \_\_\_\_\_  
(specify for each type of survey)

Aircraft used \_\_\_\_\_

Sensor altitude \_\_\_\_\_

Navigation and flight path recovery method \_\_\_\_\_

Aircraft altitude \_\_\_\_\_ Line Spacing \_\_\_\_\_

Miles flown over total area \_\_\_\_\_ Over claims only \_\_\_\_\_

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken \_\_\_\_\_

Total Number of Samples \_\_\_\_\_

Type of Sample \_\_\_\_\_  
(Nature of Material)

Average Sample Weight \_\_\_\_\_

Method of Collection \_\_\_\_\_

Soil Horizon Sampled \_\_\_\_\_

Horizon Development \_\_\_\_\_

Sample Depth \_\_\_\_\_

Terrain \_\_\_\_\_

Drainage Development \_\_\_\_\_

Estimated Range of Overburden Thickness \_\_\_\_\_

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_

General \_\_\_\_\_

ANALYTICAL METHODS

Values expressed in: per cent   
p. p. m.   
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others \_\_\_\_\_

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory \_\_\_\_\_

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

General \_\_\_\_\_

NOTES

400' surface rights reservation along the shores of all lakes and rivers

This Township lies within the Corporation of the Township of MACHIN

RESERVES

- (R1) surface rights withdrawn from staking under Sect 39(d) of Mining Act (R.S.O. 50) 18 July '55 File 8651
- (R2) reserved for public use ,29Sept52 File 53817
- (R3) reserved for reforestation File 18131
- (R4) Crown reserve File 163473

SAND & GRAVEL

- (S1) Gravel File 80843

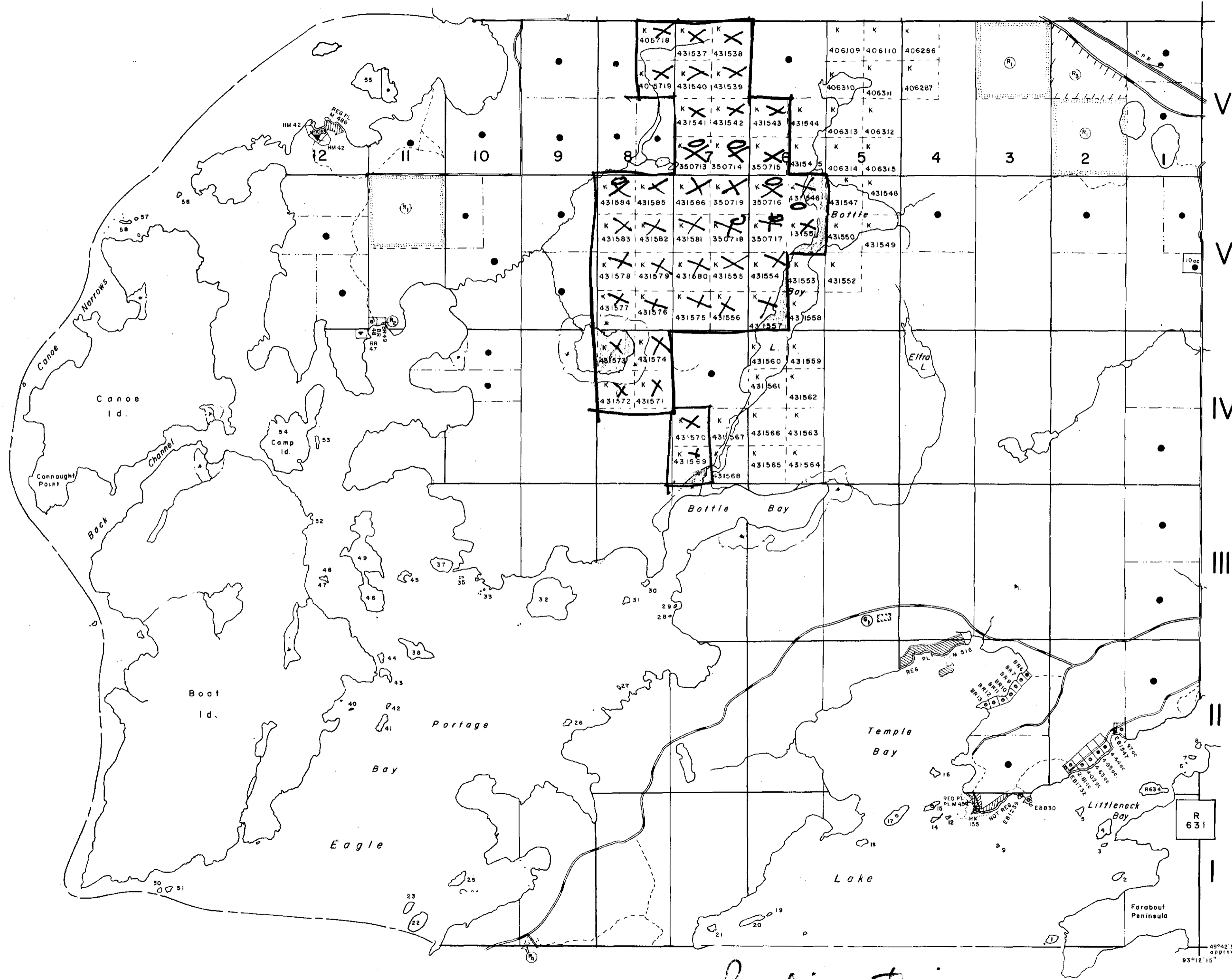
DATE OF ISSUE  
MAY 12 1976  
SURVEYS AND MAPPING  
BRANCH



MUTRIE Tp. M.2013

VERMILION BAY M.2046

M. 1729



GARNET BAY M.1729

*Radiometric*

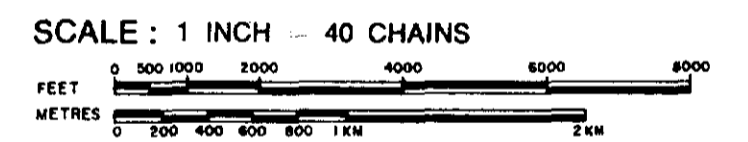
BUCHAN BAY M.1288

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES: TOWNSHIPS, BASE LINES, ETC.
- LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES: LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKOG
- MINES

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
CROWN LAND SALE	C.S.
ORDER-IN-COUNCIL	O.C.
RESERVATION	
CANCELLED	
SAND & GRAVEL	



ACRES	HECTARES
40	16

TOWNSHIP 2.2109.

TEMPLE

DISTRICT KENORA  
MINING DIVISION KENORA

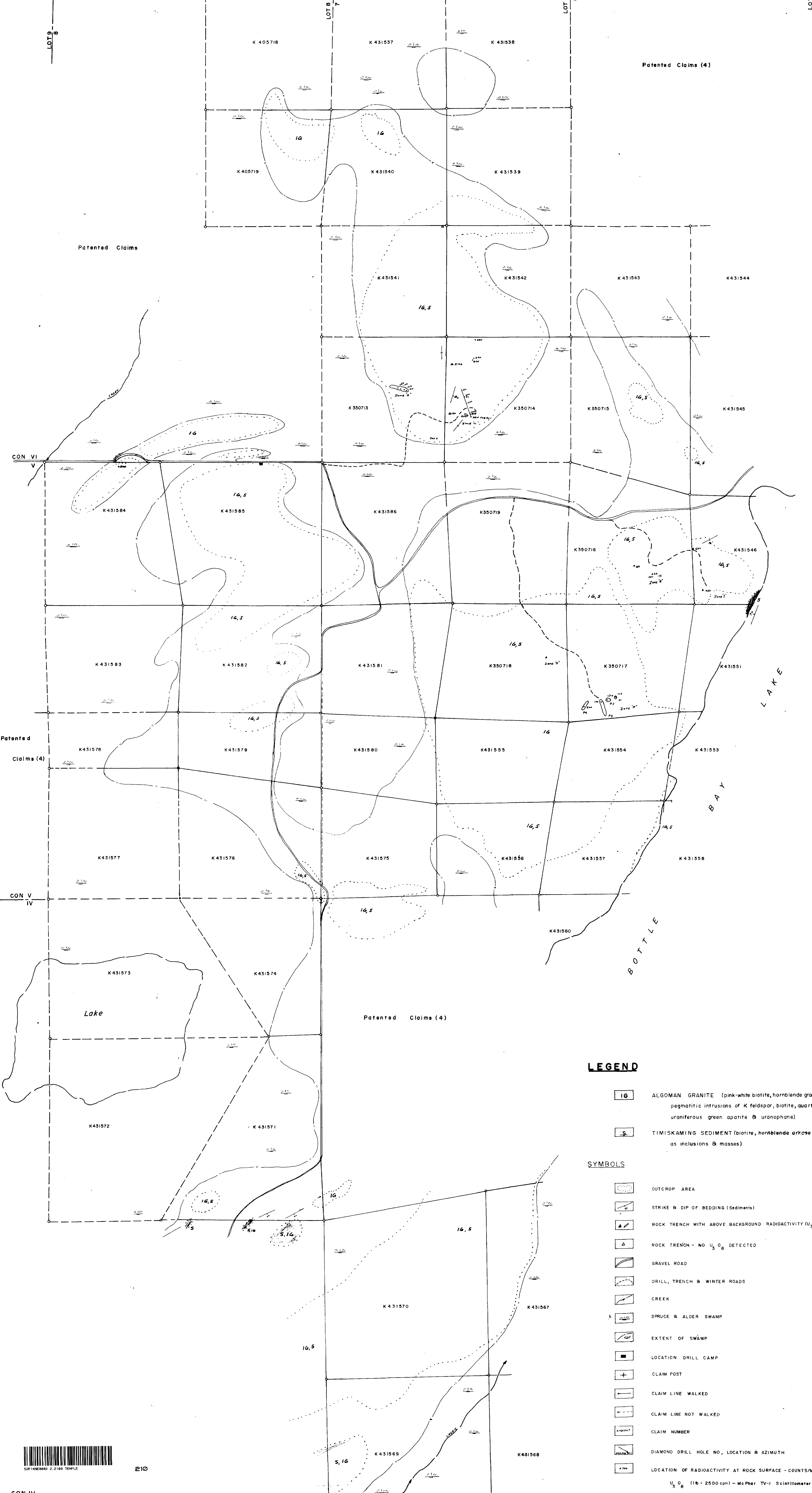
Ministry of Natural Resources

Ontario Surveys and Mapping Branch

Date 9-75 Plan No.

Whitney Block Queen's Park, Toronto

M.2047

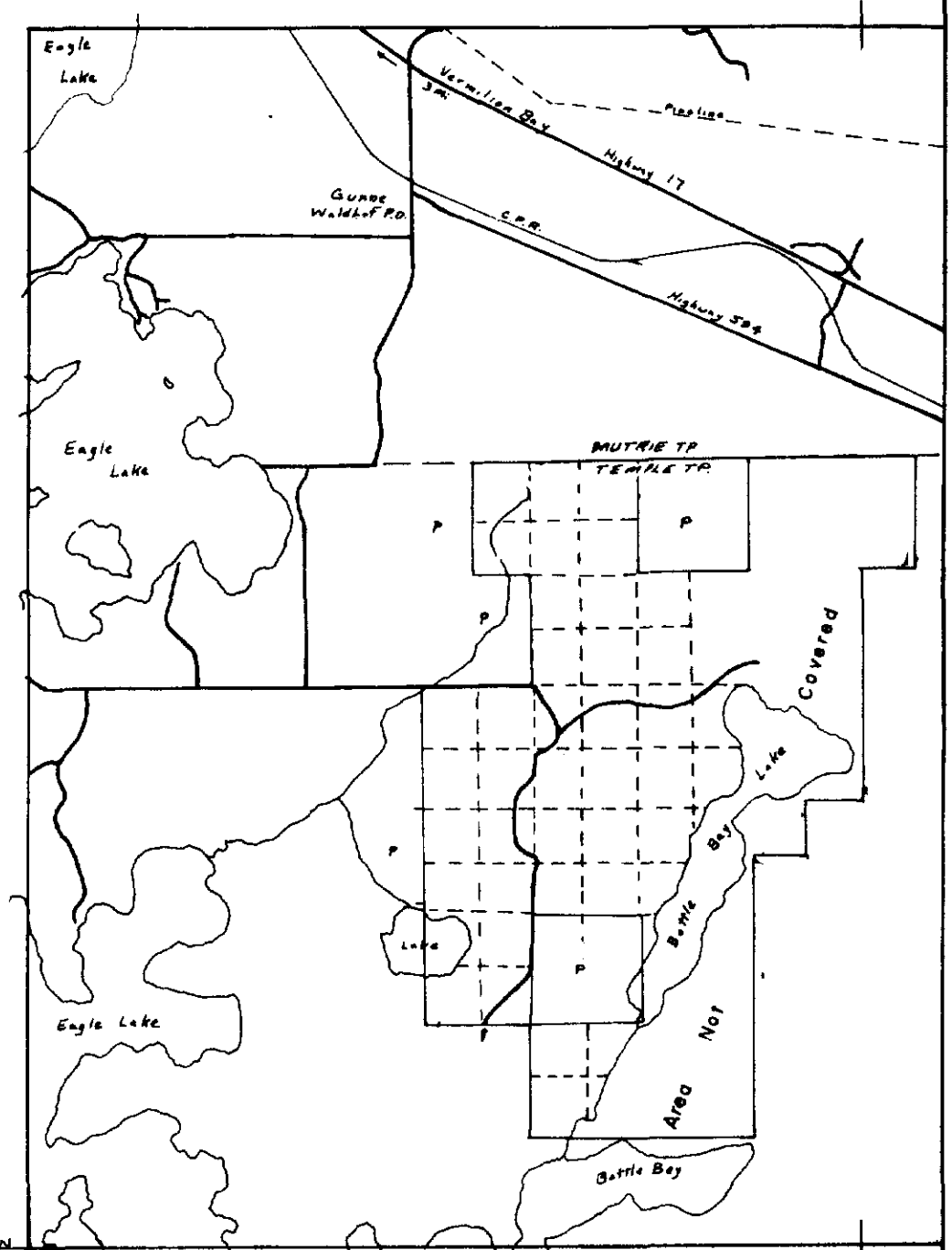


**LEGEND**

- 16** ALGOMAN GRANITE (pink-white biotite, hornblende granite with pink pegmatitic intrusions of K feldspar, biotite, quartz & locally uraniferous green apatite & uranophane)
- 5** TIMISKAMING SEDIMENT (biotite, hornblende arkose - siliceous as inclusions & masses)

**SYMBOLS**

- OUTCROP AREA
- STRIKE & DIP OF BEDDING (Sediments)
- ROCK TRENCH WITH ABOVE BACKGROUND RADIOACTIVITY (U<sub>3</sub>O<sub>8</sub>)
- ROCK TRENCH - NO U<sub>3</sub>O<sub>8</sub> DETECTED
- GRAVEL ROAD
- DRILL, TRENCH & WINTER ROADS
- CREEK
- SPRUCE & ALDER SWAMP
- EXTENT OF SWAMP
- LOCATION DRILL CAMP
- CLAIM POST
- CLAIM LINE WALKED
- CLAIM LINE NOT WALKED
- CLAIM NUMBER
- DIAMOND DRILL HOLE NO., LOCATION & AZIMUTH
- LOCATION OF RADIOACTIVITY AT ROCK SURFACE - COUNTS/MIN



May 5, 1976	F.O.B. MINING & EXPLORATION LIMITED	Scale 1"=400'
	Bottle Bay Property Temple Township	
Drawn by: M. Kremko, B.A.Sc. <i>M. Kremko</i>	<b>GEOLOGY &amp; RADIOMETRICS</b>	Date by: M. Kremko, B.A.Sc.
Kenora M.D.	By: Protoshield Exploration Services	NTS 52F14

