2.681

Geomagnetic Survey
Wilson Option #1
Hollinger Mines Limited

010

Introduction:

To provide assessment credit for two water claims on the Wilson Option #1 property, a geomagnetic survey was conducted during the period March 24-30, 1970. The two claims numbered TB.139353 and TB.238728 are not contiguous. The survey was conducted using a Scintrex MF-1 Fluxgate magnetometer.

Location and Access:

The fourteen claim group is located approximately five miles southeast of Geraldton in southeastern Ashmore Township. The Town of Geraldton is situated on the western township boundary. The property is readily accessible via Highway 11 which passes through the central portion of the group.

Topography:

The main portion of the group is covered by spruce and alder swamps, the higher sand ridges supporting growths of spruce and poplar. The northwest and southwest portions of the group are watercovered by the Kenogamisis and Eldee Lakes respectively. The overburden consists mainly of sand and gravel with depths normally less than fifty feet.

Geology:

The property lies on a regional anticline which strikes west-northwest across the township. Due to erosion the older andesitic volcanics are exposed in the area, overlain disconformably to the north and south by Timiskaming sediments. The andesitic volcanics are of Keewatin age and they are intruded by numerous dykes of an Early Algoman hornblende gabbro.

A major northeasterly trending fault, which can be traced at least two miles south, traverses the northeast part of the

NOVEMBER, 1971

property. The displacement appears to be approximately 900 feet (in plan) moving the west block to the north with respect to the east block.

Previous Work:

The most comprehensive mapping and compilation of Ashmore Township was undertaken by H.C. Horwood and E.G. Pye for the Ontario Department of Mines(1). A complete summary of previous work appears in this publication.

Most of the early work in the area, consisted of reconnaissance surveys performed by the Ontario Department of Mines and the Geological Survey of Canada. Horwood and Pye(1) amalgamated most of this work in their 1951 publication, acknowledging Coleman (1908), Burrows (1916), Tanton (1920), Burwash (1933), Bruce (1934) and Brant (1939).

A great deal of work was later undertaken by the Ontario Department of Mines in the western portion of the township. These publications are generally in relation to the geology of the local gold mines, and are of less significance to the eastern volcanic zone.

The Walterson claims, a sixteen claim group in southeastern Ashmore and southwestern Croll Townships, was prospected for gold in 1946. The property is underlain by andesitic lavas intruded by diorites. The lavas are highly altered with only vestiges of pillows remaining, apparently related to a granitic intrusion further east. Trenching and stripping revealed two mineral occurrences in Croll Township. The first zone is a vein containing quartz and chalcopyrite, associated with a shear in the lavas which can be traced for 550 feet. A second shear, 500 feet long, cuts the lavas and then parallels a sill of diorite. This shear contains quartz, some coarse chalcopyrite and pyrite, with minor galena and sphalerite.

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(1) Sixtieth Annual Report of the Ontario Department of Mines; Vol. 60, part 5; "Ashmore Township", 1951; H.C.Horwood, E.G.Pye.

In 1962, New Bidlamaque Gold Mines Limited explored the area of the Walterson claims with particular interest in two trenches in the western portion of the group. The area is underlain by diorite and quartz diorite with some feldspar porphyry. A magnetic survey was conducted in the vicinity of the trenches, locating the north zone in a magnetic low and the south zone in a magnetic high. A northerly trending diabase dyke is outlined just east of these two zones. Five holes were drilled into the north zone with little results. The south zone contained up to fifteen percent sulphides with the best assay of 1.78 percent copper over 1.7 feet. Since the two zones were of a very limited extent, no further work was recommended.

The southern portion of the old Walterson claims is presently held by Hilda Holm. Extensive stripping and sinking of pits and trenches has been done over the property. Two holes have also been drilled, one just south of Highway 11 and a second hole further south and east near the Ashmore-Croll Township line. The first hole encountered rhyolite and andesite with some gabbro dykes. A minor amount of sulphides was also found, including pyrite, chalcopyrite and sphalerite. The southern hole intersected greywacke, diorite and rhyolite with minor pyrite and chalcopyrite.

Just east of Crabtree Lake, Langmuir Long Lac Gold Mines did some exploration in the andesites and diorites. Stripping and trenching uncovered a 400 foot long quartz vein in the andesitic lavas. The vein contained minor chalcopyrite, pyrite, native copper and gold. No further work was indicated.

In 1950, Hard Rock Gold Mines held nine claims occupying the present northeast corner of the Hollinger property. One drill hole was emplaced, encountering diorite and andesite with some pyrite, pyrrhotite and chalcopyrite. Since the property was acquired as a gold prospect, no further work was recommended.

To the west of the present Hollinger group, the Lac Development Company did some exploration in 1934. The two easternmost claims were later acquired by Hard Rock Mines and presently by Hollinger Mines Limited. The four western claims were later acquired by Wods Mac Holdings Limited. The northern portion of the group is underlain by andesitic volcanics with conglomerates, greywackes and iron formation to the south. Both groups are intruded by diorites

and feldspar porphyries. A few quartz-carbonate veins associated with an east-west shearing in the andesites have been stripped. The veins contain pyrrhotite, chalcopyrite, pyrite and magnetite. Lac Development drilled three holes to explore these zones; however, results were poor.

Wods Mac Holdings Limited later did further stripping on outcropping gold bearing veins. Since no appreciable values in gold were encountered over any distance, no further work was performed.

In 1945, Draco Mines Limited acquired fifty-seven claims in southeastern Ashmore Township. The northern part of this group was optioned from P.J. Roche, part of which comprises the southern portion of the Hollinger group. Previously, Roche Long Lac Gold Mines had explored two shear zones with some gold values associated with the feldspar porphyry intrusions. In 1934, a shaft was sunk in that area; however, lack of finances warranted a temporary suspension of the operations. Later, in 1936, six holes were drilled in the eastern portion of Eldee Lake to cross section the area. Only low gold values were found in quartz stringers along dykes of diorite porphyry, so operations were again suspended. The original veins near the shaft area contained some visible gold as well as pyrite, arsenopyrite, sphalerite, chalcopyrite and galena.

Draco Mines Limited concentrated their interests further south to the sedimentary formations. Magnetic and electromagnetic surveys were conducted although results were not released. Eleven holes were drilled in 1946 revealing low gold values at the contacts between the sediments and the albite porphyry. On the basis of these results, no further work was recommended.

The Cash Group, which is the northwest part of the old Draco group, has no other work recorded specifically on those claims. Previous work by Draco and Roche, however, has roughly outlined the volcanic-sedimentary contact which crosses the northeastern portion of the property.

In 1934, Oklend Gold Mines began exploration on fifty-five claims that extend over five miles across southern Ashmore Township. Oklend was mainly interested in exploring the ore-bearing arkose

horizon of the Little Long Lac Mine which could be traced further east. Through dip needle surveys to outline the iron formations across water claims, two major, northerly trending faults were recognized which displace the central zone in a northerly direction. The easternmost fault shows a displacement (in plan) of approximately 1200 feet and by projection along strike, the fault passes through the north-central portion of the Hollinger property. A total of fifty-nine holes were drilled, mainly on the basis of favourable structures indicated by the dip needle surveys. A few appreciable gold values were obtained from quartz-carbonate stringers, although they were of a very limited extent. Other minerals reported in the stringers include pyrite, arsenopyrite, pyrrhotite, chalcopyrite and galena. Due to lack of results work ceased in 1947.

In 1970, Hollinger Mines Limited drilled two holes on the western portion of the property. These holes encountered andesitic volcanics, both flows and pyroclastics with minor sulphide mineralization. Magnetic and electromagnetic surveys have only been partially completed.

Personnel:

The field survey was performed by D.R. Alexander during the time interval previously disclosed. Final drafting of the plans was done by W.B. Caughell and interpretation by the author. All are employed by Hollinger Mines Limited.

Instrument Used:

The survey was conducted using an MF-1 Fluxgate magnetometer (serial number 410114), manufactured by Scintrex Limited of Toronto. The magnetometer measures the vertical component of the earth's magnetic field with a direct readout in gammas.

Since the instrument has five separate ranges, the sensitivity changes with each individual range. To determine the instrument sensitivity an approximation of one half of the least count is used. Thus the sensitivity of the 1000 gamma range is ten gammas and the sensitivity of the 3000 gamma range is twenty-five gammas. (For further information see accompanying manufacturer's brochure).

Survey Method:

All of the instrument readings were obtained along measured picket lines, spaced 200 feet apart and striking at 180 degrees. In areas where there were only minor fluctuations in the magnetic attraction, 100 foot stations were surveyed. After drift calculations were made, the readings were plotted and contoured on the grid system. No fixed contour interval was adopted due to the large variance in magnetic attraction.

A total of 427 readings were obtained from 324 stations over 3.6 miles of picketed lines. This 3.6 miles of line includes the Base Line which was surveyed to aid in the calculation of diurnal drift.

Results of the Survey:

Megascopically, none of the rocks on surface are magnetic, although the hornblende gabbro is expected to have a stronger magnetic attraction than the andesitic volcanics. Extrapolating from outcrops, over which the magnetic survey has been completed, the hornblende gabbro appears to have a background of greater than 600 gammas. Thus the andesitic volcanics are presumed to underlie areas with a weaker magnetic attraction.

The southern portion of the Eldee Lake claim (TB.139353) has a very low magnetic attraction. The government compilation of the area suggests that a zone of Timiskaming sediments traverses this corner and extends further south.

The magnetic anomalies in the north part of Eldee Lake appear to have a stronger magnetic attraction than most of the gabbro dykes at surface. The presence of disseminated magnetite or pyrrhotite in the rock, however, may account for this.

On cross-line 2E a small but very strong magnetic anomaly can be found on the gabbro-andesite contact. It is characterized by a magnetic high with an associated strong magnetic low. This type of a response would tend to indicate a small but massive pod of pyrrhotite.

The remaining magnetic anomaly lies in the southeast part of TB.139353. It may also represent a concentration of mineralization

at an intrusive contact, probably in the form of pyrrhotite.

Conclusions:

Having examined the previous work, the area holds considerable geological interest. The present state of the property, however, indicates that magnetic and electromagnetic surveys should be completed before any final assessment. At that stage, a follow-up drilling programme would be organized to test geophysically anomalous zones.

Bibliography:

1. Sixtieth Annual Report of the Ontario Department of Mines, Vol. 60, part 5; "Ashmore Township", 1951
... H.C. Horwood, E.G. Pye.

2. Forty-Fourth Annual Report of the Ontario Department of Mines, Vol. 44, part 3; "Little Long Lac Gold Area", 1935
... E.L. Bruce.

3. Assessment files - Resident Geologist's Office.

Dan R Alexander
HOLLINGER MINES LIMITED
TIMMINS, ONTARIO

ASSESSMENT WORK DETAILS

900

Type of Survey Geophysical Mag
A separate form is required for each type o

Township or Area Ashmore Township

Chief Line Cutter or Contractor A.C. Oliver and C.P. Giles
Name
c/o Hollinger Mines Ltd., Timmins, Ont.
Address

Party Chief D. R. Alexander
Name
c/o Hollinger Mines Ltd., Timmins, Ont.
Address

Consultant
Name
Address

Geological field mapping by
Name
Address

COVERING DATES

Line Cutting March 15-30, 1971

Field March 24-30, 1971
Instrument work, geological mapping, sampling etc.

Office

INSTRUMENT DATA Scintrex
~~Sharpe~~ Fluxgate M.F.-1
Make, Model and Type Serial No. 410114
Scale Constant or Sensitivity 1,000 Scale ± 10 gamma/scale div.
3,000 Scale ± 25 " " "
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count

Number of Stations Within Claim Group 324

Number of Readings Within Claim Group 427

Number of Miles of Line cut Within Claim Group 3.6

Number of Samples Collected Within Claim Group

CREDITS REQUESTED	20 DAYS per claim	40 DAYS per claim	Includes (Line cutting)
Geological Survey	☐	☒	
Geophysical Survey	☐	☐	Show Check ✓
Geochemical Survey	☐	☐	

DATE Nov. 19, 1971 SIGNED W. H. Hansen

HOLLINGER MINES LIMITED
TIMMINS, ONTA...

Performance and coverage credits do not apply to airborne surveys

P.S. Will be using new forms in the future with.

MINING CLAIMS TRAVERSED
List numerically

TB.139353
238728 1/3 (Lot 30)
Note: Claims not contiguous

If space insufficient, attach list

TOTAL CLAIMS 2

Send in Duplicate to:
FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES & NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

RECEIVED
NOV 22 1971
PROJECTS SECTION

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

(a) substantial and systematic coverage of each claim
(b) line spacing not exceeding 400 foot intervals
(c) stations not exceeding 100 foot intervals or
(d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

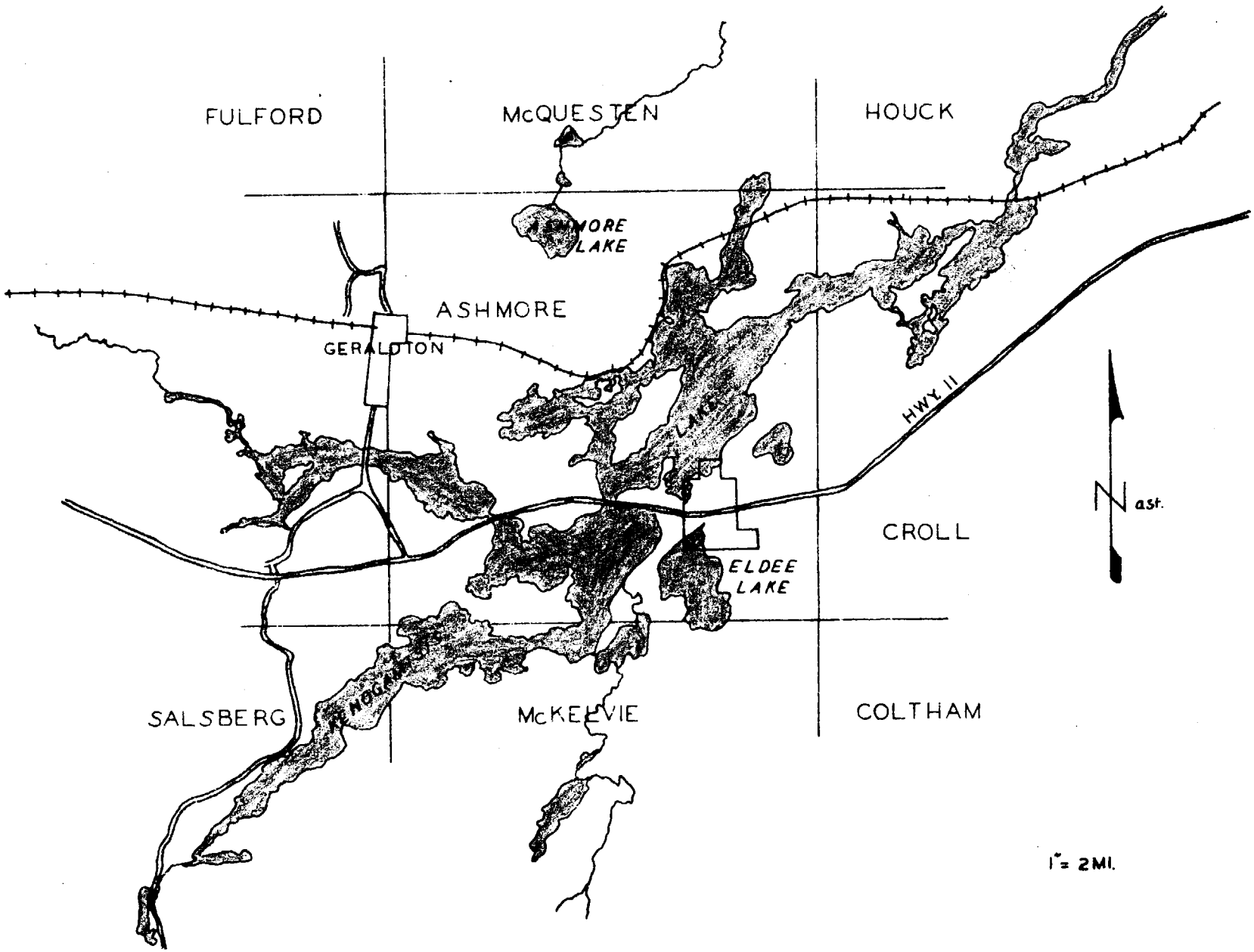
A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.


FULFORD
McQUESTEN
HOUCK
ASHMORE LAKE
ASHMORE
GERALDTON
HWY. 11
CROLL
ELDEE LAKE
SALSBERG
McKELVIE
COLTHAM
1" = 2MI.

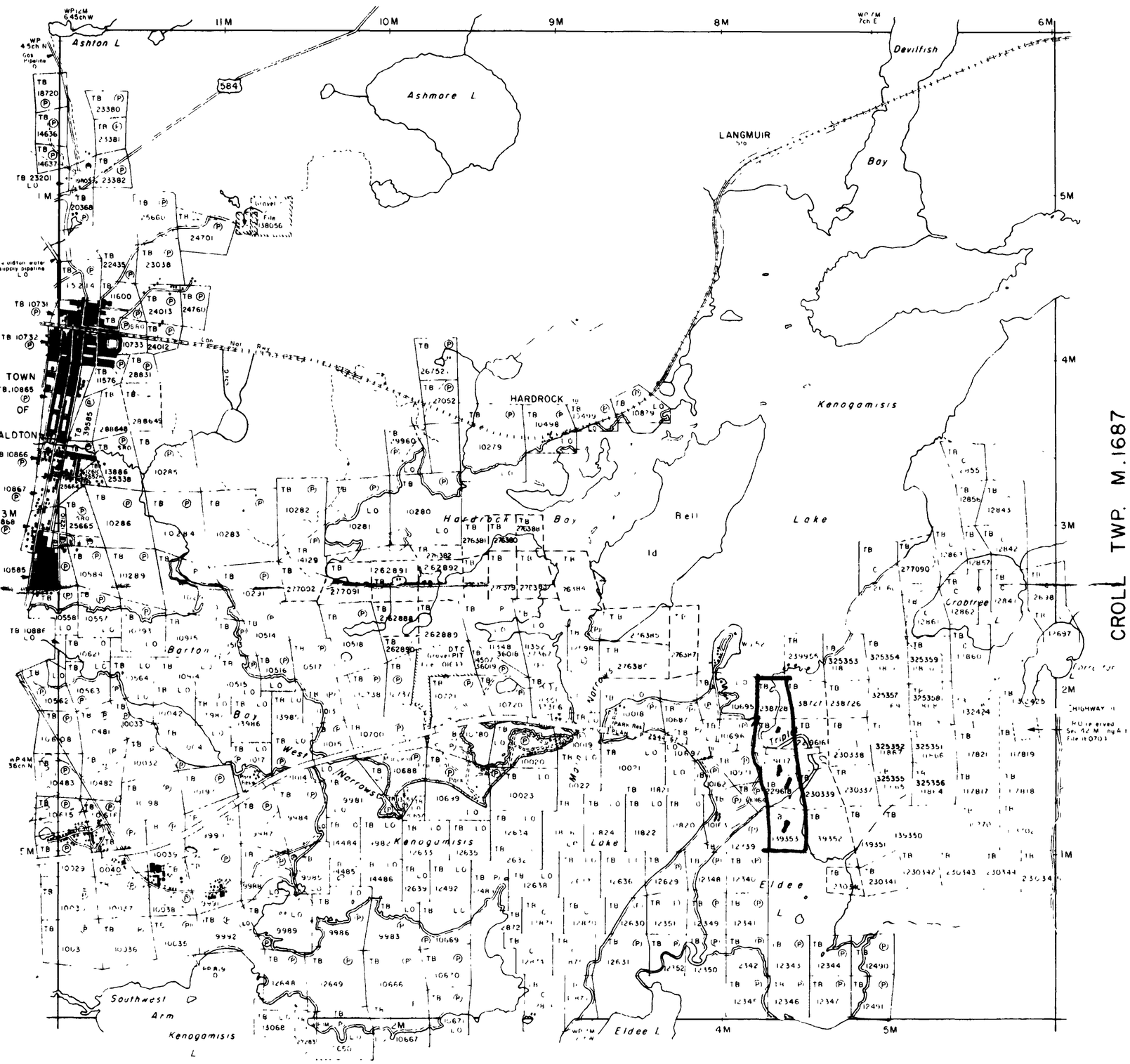
KEY MAP

McQUESTON TWP. M.1811

ERRINGTON TWP. M.1706

CROLL TWP. M.1687

McKELVIE TWP. M.1809



TOWNSHIP OF

ASHMORE

claim map.

DISTRICT OF
THUNDER BAY

THUNDER BAY
MINING DIVISION

SCALE : 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	Ⓟ or ●
PATENTED FOR SURFACE RIGHTS ONLY	◒
LEASES	(L)
LICENSE OF OCCUPATION	LO
CROWN LAND SALE	CS
LOCATED LAND	Loc
CANCELLED	C
MINING RIGHTS ONLY	MRO
SURFACE RIGHTS ONLY	SRO
HIGHWAY & ROUTE No	(17)
ROADS	
TRAILS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	⚒

*Used only with summer resort locations or when space is limited

NOTES

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

Original shoreline shown thus

2.681

PLAN NO. M.1636

**ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS**

KENOGAMISIS LAKE

TB 238728

ANDESITIC VOLCANICS

HORNBLENDE GABBRO

HORNBLENDE GABBRO

ANDESITIC VOLCANICS

HORNBLENDE GABBRO

HORNBLENDE GABBRO

ANDESITIC VOLCANICS

HARD ROCK MINES

ANDESITIC VOLCANICS

Hornblende Gabbro

HOLLINGER

Acid Tuff

ACID TUFF

0+00 BL

ANDESITIC VOLCANICS

2E

4E

HORNBLENDE GABBRO

ANDESITIC VOLCANICS

ANDESITIC VOLCANICS

TB 139353

HORNBLENDE GABBRO

ANDESITIC VOLCANICS

ANDESITIC VOLCANICS

Andesitic Volcanics

Hornblende Gabbro

ANDESITIC VOLCANICS

SEDIMENTS

6E 8E 10E 12E 14E 16E 18E 20E 22E 24E 26E 28E 30E

N

AST

LEGEND

ELDEE LAKE

ALGOMAN

- Hornblende Gabbro

TIMISKAMING

- Sediments

KEEWATIN

- Andesitic Volcanics

MF - 1

GEOMAGNETIC SURVEY

TB139353 , TB238728

WILSON OPTION No 1

ASHMORE TWP

HOLLINGER MINES

LTD

1" = 200'

Dave R Alexander

HOLLINGER MINES LIMITED

TIMMINS, ONTARIO

2.681