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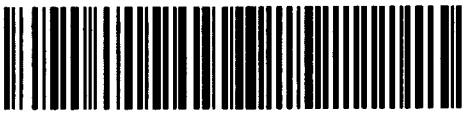
REPORT ON MAGNETOMETER SURVEY
MONTFORT GROUP OF CLAIMS
CALVERT TOWNSHIP
PORCUPINE MINING DIVISION
PROVINCE OF O



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Introduction:

The following report describes the magnetometer survey completed during the latter part of 1972 on the Montfort Group of claims in Calvert Township.

Line cutting and chaining were carried out by M. Montfort and associates from Iroquois Falls. Lines were spaced at 200 and 400 foot intervals along a base line trending N20°E and cut and chained to the boundaries of the property.

Magnetometer surveying was conducted by the writer assisted by G. Onotsky. Readings were recorded at 50 foot intervals along the offset lines using a Jalander type instrument.

Interpretation of the results, and compilation of the report, were the responsibility of the writer, Regional Geologist with Canadian Johns-Manville Co. Limited and based at Matheson, Ontario.

Property:

The Montfort property is comprised of four claims which are numbered and described as follows: -

Claims 333305, 333306, 333307 and 263880 being the north one-half of Lot 9, Concession IV, Calvert Township. Claim 263880 was recorded on May 14th, 1970 while the other three were recorded on February 4th, 1972.

This group covers approximately 160 acres.

Location and Accessibility:

Location of the claims is the northwest part of Calvert Township, Porcupine Mining Division, being as previously described -

the north half of Lot 9 in Concession IV.

Ready access is provided by paved Highway No. 578 which crosses the north part of the property at a distance of approximately three and three-quarter miles to the west of Iroquois Falls.

Topography:

To the south of Highway No. 578 the claims are characterized by extremely uniform topography with maximum change in relief being in the order of ten feet. The property is sand covered with several pits being located on the two most northerly claims immediately to the south of the highway. Low dunes, trending in a northwesterly direction and covered with second growth birch trees were noted in the central section.

Scattered areas of cedar, spruce and alder swamp, having a presumably thin cover, are shown on the accompanying plan. Jackpine grow exclusively along the west side of the claims - poplar, birch, alders and balsam trees cover the remainder of the property.

An outcrop of gabbro and intermediate volcanic rocks has been mapped on claim 263880 to the north of the highway. This bedrock exposure projects to a height of 40 to 50 feet above the sand plain to the south.

Drainage is to the south from the outcrop area by a small creek. A beaver pond has been noted in the southeast corner of the map area.

Previous Work:

Calvert Township was mapped by Dr. R. M. Ginn during 1961 for the Ontario Dept. of Mines and the results of this work are shown on Preliminary Geological Map No. P.154 on a scale of one inch equals one-quarter mile. This map shows a weak magnetic

anomaly occurring over the sand-covered section of the Montfort Property.

As reported by Dr. Ginn exploration work on the claims had previously been concentrated along a quartz vein in a northeasterly striking shear zone in the outcrop on the north part of claim 263880. This work consisted of rock trenching and diamond drilling, presumably with negative results.

Exploration work, consisting of rock trenching and stripping, was carried out by M. Montfort and associates on cherty quartz veins in shear zones in the gabbro and volcanics on the northwest part of claim 263880. This work was filed with the Ministry of Natural Resources on the due dates in 1971 and 1972 to fulfill the assessment requirements. No mineralization of economic significance was discovered during the course of this work.

General Geology:

The general geology of the area is shown on Preliminary Geological Map No. P.154 on a scale of one inch equals one-quarter mile. As previously described Calvert Township was mapped by Dr. R. M. Ginn for the Ontario Dept. of Mines in 1961. General geology is also shown on Map No. 2046 entitled "Timmins-Kirkland Lake Sheet" of the Geological Compilation Series on a scale of one inch equals four miles.

On the north part of the Montfort claims intermediate to basic pillowed lavas, striking northeasterly and dipping steeply to the northwest, have been intruded by a sill-like body of gabbro. A northeasterly trending shear zone in the gabbro contains a cherty quartz vein which has a maximum width of three and one-half feet and contains minor pyrite mineralization.

To the south of the highway magnetic data indicates the occurrence of a small body of serpentinite striking in an east-westerly direction and intersected by a northerly trending diabase dike. Note that no outcrops were noted on the claims to the south of the highway.

Line Cutting and Chaining:

A base line, striking N20°E, was started from the common corner of the four claims surveyed and was cut and chained to the north and south boundaries of the property. This starting location was designated as line 8+00 South. Right-angled offset lines were located every 400 feet along this base line and were cut to the northwest and southeast to cover the Montfort property.

In order to further delineate the magnetic anomaly picket lines were established at 200 foot intervals from line 2+00 North to 10+00 South. Pickets were established at 100 foot intervals along the base and offset lines by chainage. Note that a Brunton compass affixed on a tripod was used to turn off the base and picket lines. Totals of 4.2 miles of picket and 0.6 miles of base lines were cut and chained during the course of this work.

Line cutting and chaining were carried out by M. Montfort and three assistants, all from the Iroquois Falls area. Part of the work was completed in February - the remainder in August of 1972.

Magnetometer Survey:

A magnetometer survey was conducted over the Montfort claims by the writer, assisted by G. Onotsky of Iroquois Falls, during the latter part of October and early November, 1972. Magnetic readings were recorded using a Jalander type instrument (Serial #NR 57133)

having sensitivities of 11.0, 32.3, 111.0, 335.6 and 1146.0 for scales 1, 2, 3, 4 and 5 respectively.

As standard Company procedure, this instrument was checked on Munro Mine Base Station No. 2 (Munro-Beatty Sill) prior to the survey and an adjustment made so that a gamma value of 1220 corresponds to an absolute value of 57,599 ± 15 gammas.?? Note that Base Station No. 2 had previously been tied into the Government Magnetic Base Station located at Matheson.

Two base control stations were established on the property, however, Station B was used almost exclusively due to easier accessibility. Station A was established on line 18+00 South at 11+55 feet west of the base line and given a fixed value of 1620 gammas. Station B was established on line 14+00 South at 13+10 feet west of the base line - value 1652 gammas.

Base station readings were recorded at approximately two hour intervals as a check on the working condition of the instrument and to record the daily diurnal variation. Stations were spaced at 50 foot intervals along the offset lines and a total of 444 was recorded on the group. Miles traversed - 4.2.

The results of the survey are shown on the accompanying "Geo-Magnetic Contour Plan" on a scale of one inch equals 200 feet. Values have been contoured at 500 gamma intervals from 1500 to 4500 gammas. Interpretation was based upon a study of all available geological and geophysical data, the contoured magnetic plan and aerial photographs.

Magnetic readings over the gabbro outcrop in the northeast

part of the group range in intensity from 1700 to 2100 gammas. To the south and west where thick overburden conditions occur magnetic values are somewhat weaker with a large proportion varying in intensity from 1400 to 1600 gammas.

Over the intermediate to basic pillowed volcanics, readings in general range from 1400 to 1700 gammas - similar to those over the gabbro in overburden-covered areas. For interpretation purposes these rock types have been extended to the southwest along strike from previously mapped bedrock exposures.

Magnetic readings over the interpreted ultrabasic intrusive range in value from 2300 to over 4900 gammas. This is similar to values obtained over highly serpentinized peridotite bodies in the area which have been drilled by other companies. Note that the magnetic intensity of the serpentinite measured at surface has been lessened by the depth of overburden.

Tests currently in progress indicate depth of overburden covering the magnetic anomaly to be in the order of 50 feet. A gasolene-powered plugger, with rods and sampling device attached, has been used for this work. The overburden is mainly quartz-rich sand. Samples from immediately above bedrock have been shipped to Bondar-Clegg & Company Limited of Ottawa for geochemical analyses for Cu and Ni.

A diabase dike, mapped by Dr. Ginn on outcrops to the north of the Montfort claims, has been interpreted from the magnetic results as striking in a southerly direction and cutting the basic-ultrabasic intrusives and volcanics. Magnetic readings over this dike are higher in value than normal over the gabbro and volcanics and lower over the serpentinized peridotite.

Conclusions:

A magnetic anomaly having a length of approximately 2,200 feet, and a maximum width of 900 feet, has been outlined in an overburden-covered section of the Montfort property by the magnetometer survey. The anomaly, interpreted as being caused by an ultrabasic intrusive, (serpentinized peridotite) strikes in a general east-west direction across the north part of the claims. Magnetic readings range in value up to a high of slightly greater than 4900 gammas.

Recommendations:

Continue plugger tests over the magnetic anomaly to check the overburden immediately above bedrock for elements indicative of serpentinized peridotite.

Conduct an electromagnetic survey on the property to test the basic - ultrabasic contacts for sulphide mineralization.

Submitted: February 12th, 1973
by: F. J. Evelegh
Regional Geologist

900

GEOPHYSICAL – GEOL
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: Geophysical - Magnetometer

Township or Area: Calvert

Claim holder(s): Majella Montfort

Author of Report: F. J. Evelegh

Address: Box 610 Matheson. Ontario

Covering Dates of Survey: Feb 10/72 to Jan 17/73
(linecutting to office)

Total Miles of Line cut: 4.8

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	40
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: 19/3/73 SIGNATURE: F. J. Evelegh
Author of Report

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P.	333305
	333306
	333307
	263880

If space insufficient, attach list

TOTAL CLAIMS 4

OFFICE USE ONLY

PROJECTS SECTION

Res. Geol. _____ Qualifications 63.1067

Previous Surveys L. D.

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 444 Number of Readings 482

Station interval 50 feet

Line spacing 200 and 400 feet

Profile scale or Contour intervals 500 gammas
(specify for each type of survey)

MAGNETIC

Instrument Jalander - Serial #57133

Accuracy - Scale constant 11.0,32.3,111.0,335.6 & 1146.0 gammas (division for Scales 1, 2, 3, 4, 5 respectively)

Diurnal correction method Established fixed value base station recorded at 2 hour intervals. All readings corrected for diurnal changes.

Base station location
BCS "A" - Line 18 South, 1155 feet west of base line
BCS "B" - Line 14 South, 1310 feet west of base line

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

Time domain Frequency domain

Frequency Range

Power

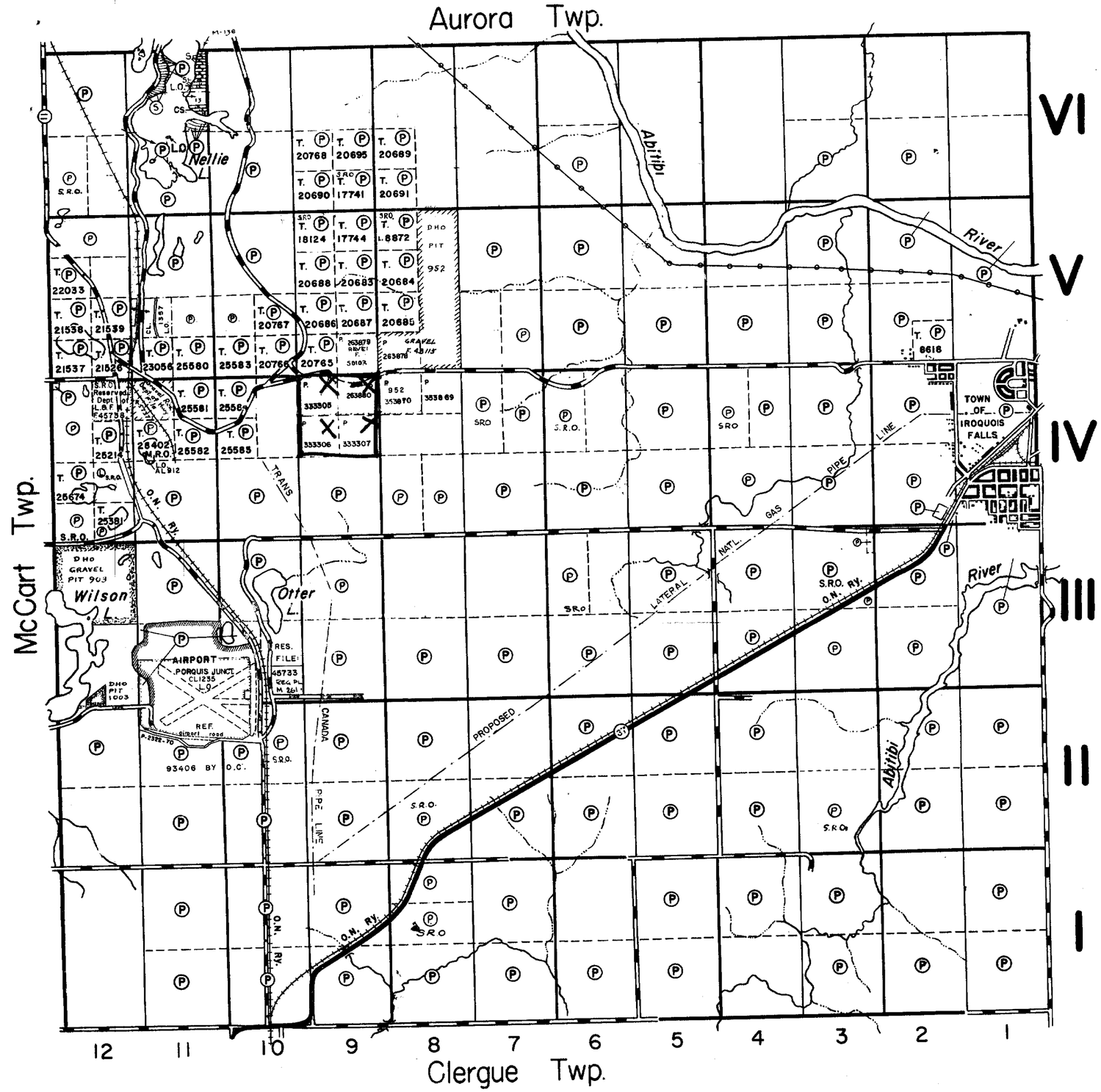
Electrode array

Electrode spacing

Type of electrode

W.432

CALVERT TWP.



THE TOWNSHIP OF CALVERT

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAY	(67)
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.

NOTES

400' Surface rights reservation around all lakes and rivers.

Gravel Pit Reserve to Dept. of Highways shown thus :

Airport Reserve to Dept of Transport shown thus :

Flooding rights along shores of Abitibi River reserved to H.E.P.C.

- MINING LANDS -
DATE OF ISSUE
MAR 23 1973
MINISTRY OF NATURAL RESOURCES

PLAN NO. – M. 435

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

J.G.

W.432

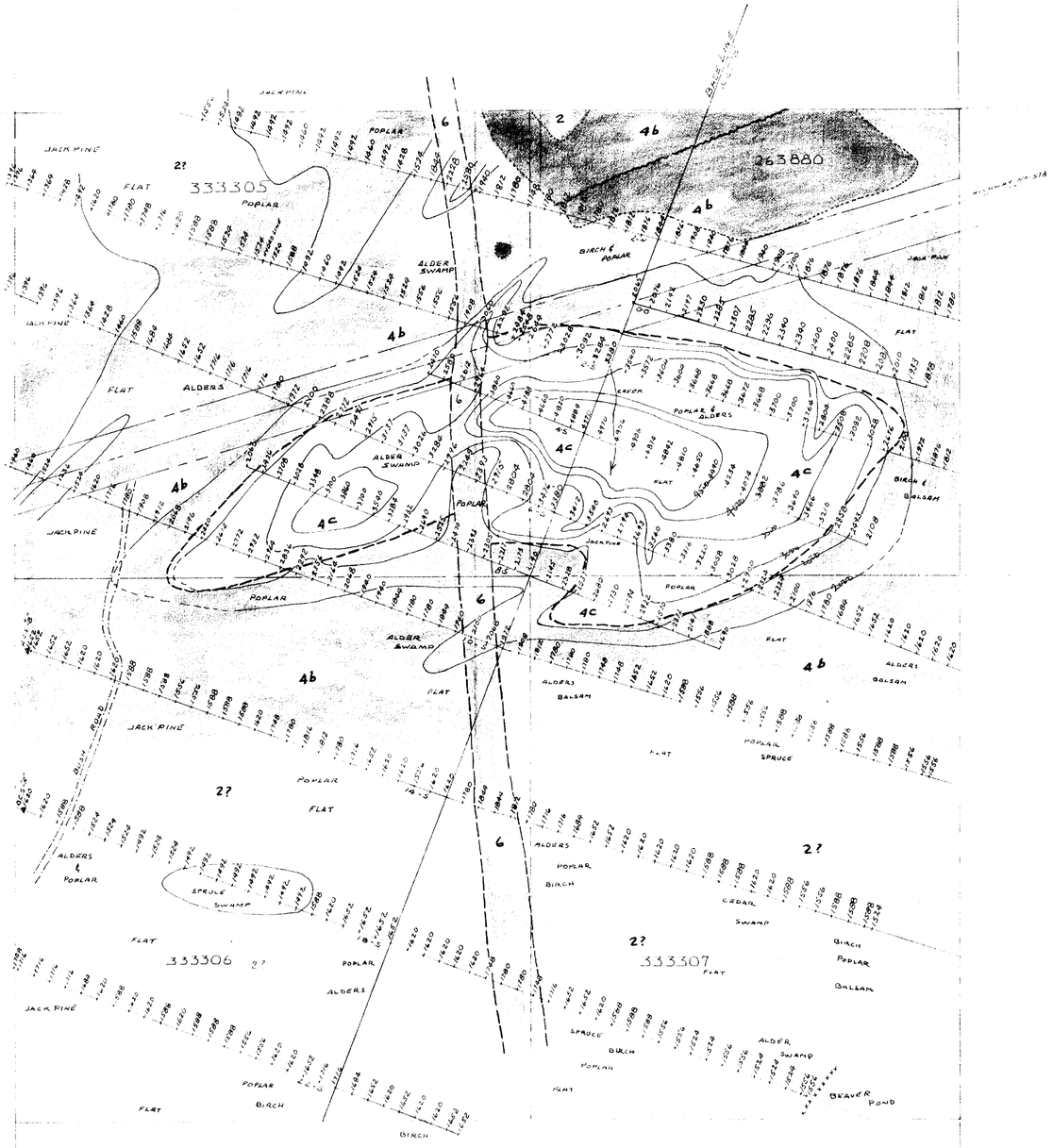
LOT - 10

LOT - 9

LOT - 8

CONC. - V

CONC. - IV



LEGEND

6 DIABASE	BCS BASE CONTROL STATION
4b GABBRO	CONTOUR INTERVAL 500g
4c SERPENTENIZED PERIDOTITE	GEOLOGICAL CONTACT
2 INTERMEDIATE TO BASIC VOLCANICS	ROCK OUTCROP
	SHEAR ZONE

GEO-MAGNETIC CONTOUR PLAN

MONTFORT PROPERTY SCALE 1"=200' CALVERT TWP.

JAN 16 1973

ADJOINS SHEET No.

ADJOINS SHEET No.

42A16NW0208 2.1174 CALVERT

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