2.2881

010

GEOPHYSICAL ENGINEERING LIMITED

NORTH BAY, ONTARIO

REPORT ON THE

GEOPHYSICAL SURVEYS

ON THE

TRITON GROUP

MACMURCHY TOWNSHIP, ONTARIO

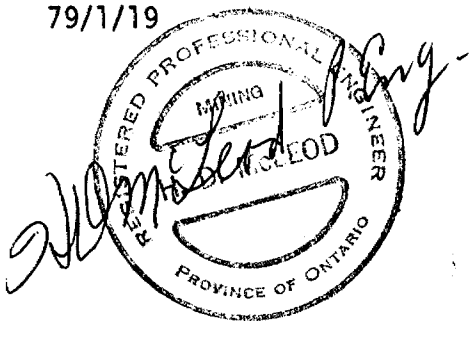
FOR

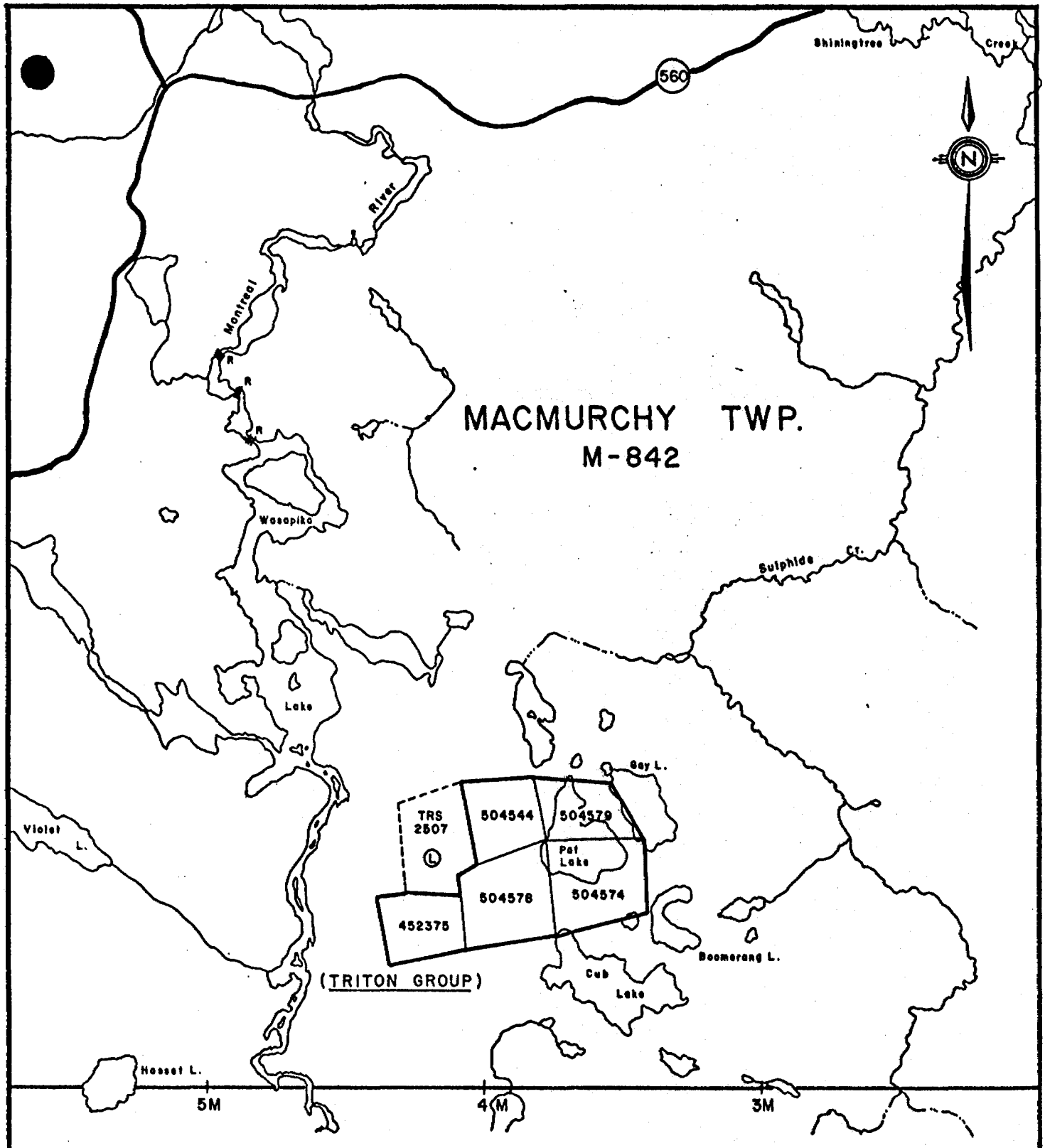
TECK CORPORATION

N.T.S. 41 P/11

REPORT NO. 636NB

79/1/19





CLAIM LOCATION MAP

JOB 1172 OCT. 1978

Scale : 1 inch = 2640 feet.

SUMMARY

Detailed geophysical surveys of the Triton Group in MacMurchy Township has added some possible knowledge of the structural pattern but has not outlined any specific targets for further exploration.

No further work is recommended at this time.

INTRODUCTION

The Triton Group comprises five contiguous claims numbered L452375, L504544, L504574, L504578 and L504579 acquired by Teck Corporation on 77/10/17, the date the old patents came open. The claims are registered in the name of Teck Corporation, Suite 4900, Toronto Dominion Centre, Toronto, Ontario.

Complete coverage geophysical surveys were completed in two stages - claims L452375, L504544 and L504578 during the period 78/9/15 to 78/12/5 and, due to lakes, claims L504574 and L504579 during the period 78/12/18 to 78/12/23.

The work was done by Geophysical Engineering Limited personnel under the direct supervision of the writer.

LOCATION AND ACCESS

The claims are located in the south central part of MacMurchy Township a distance of 45 kilometers to the east of Gogama, Ontario. Access is by gravel and bush roads from highway 560 at a point 3 1/2 kilometers east of Shiningtree. These roads traverse the central part of the group.

GEOPHYSICAL SURVEYS

Methods - North-south picket lines were established at 200 foot intervals being cut from a central east-west base line to the boundaries of the group. A total of 23 kilometers of line were cut.

The magnetometer survey was done partly with a Sharpe Fluxgate Model MF1 magnetometer and partly with a Scintrex Model MF2-100 instrument, the specifications for both in the appendix. Readings were taken along all lines at 50-foot intervals. Hourly diurnals were taken on base stations along the base line. A total of 1090 readings were taken.

The electromagnetic survey was done with a Crone Radem VLF unit. Tilt angle readings were taken at 50-foot intervals along all the lines. The data has been plotted both as a tilt angle profiles and contoured Fraser filter. A total of 1070 stations were read.

GEOPHYSICAL RESULTS

The magnetometer survey outlined a number of linear to oval-shaped sharp anomalies trending N45°W to N70°W in claim L452375 and the west half of claim L504578 in the southwest section of the property. These cannot be related to any specific source but likely are caused by more mafic magnetite bearing horizons within the basalt flows underlying the claims.

The eastern two-thirds of the claims is featured by moderate-strength north-south linear magnetic anomalies obviously caused by diabase dikes.

The electromagnetic survey located one significant conductor, that a strong linear anomaly striking 290° through claim L504578. This follows a valley and swamps thus may have a source either in overburden or a shear zone.

The complicated anomaly pattern in the northeast section of the property is caused by conductive lake bottom sediments and shoreline effects.

GEOLOGY

The geology was not mapped in detail however most outcrops are believed to be basalt. Two shafts as shown were sunk on a gold bearing quartz vein striking 65°. A wide north-south striking quartz vein was extensively trenched in the north-west corner of claim L504578.

Ontario

41P11SE0010 2.2881 MACMURCHY

900

File

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) Magnetometer, electromagnetic

Township ~~xxxxx~~ MacMurchy

Claim Holder(s) Teck Corporation Limited,

Survey Company Geophysical Engineering Limited,

Author of Report H.D. McLeod

Address of Author North Bay, Ontario

Covering Dates of Survey 78/9/15 - 78/12/5 (linecutting to office)

Total Miles of Line Cut 9.9

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	452375 ✓
L	604544 ✓
L	604578 ✓

TOTAL CLAIMS 3

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	20
–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: 78/11/4 SIGNATURE: H.D. McLeod
Author of Report or Agent

L.D

Res. Geol. _____ Qualifications 63.105D

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag - 600 EM - 590 Number of Readings Same

Station interval 50 feet Line spacing 200 feet

Profile scale EM - 1"=40°

Contour interval Mag 100 gammas

MAGNETIC

Instrument Sharpe Fluxgate Model MF1 magnetometer.

Accuracy – Scale constant 10 gammas per scale division.

Diurnal correction method Permanent base station

Base Station check-in interval (hours) Hourly

Base Station location and value

ELECTROMAGNETIC

Instrument Crone Radem VLF unit

Coil configuration Vertical Loop

Coil separation N.A.

Accuracy N.A.

Method: ☒ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency Cutler Main (specify V.L.F. station)

Parameters measured Dip Angle

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

Ontario

Ministry of Natural Resources

File _____

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(s) Magnetometer, electromagnetic

Township or Area MacMurchy

Claim Holder(s) Teck Corporation Limited,

Survey Company Geophysical Engineering Limited

Author of Report H.D. McLeod

Address of Author North Bay, Ontario

Covering Dates of Survey 78/12/18 to 79/1/15
(linecutting to office)

Total Miles of Line Cut 4.55

MINING CLAIMS TRAVERSED
List numerically

L 504574
(prefix) (number)
L 504579

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	20
–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: 79/1/5 SIGNATURE: H.D. McLeod
Author of Report or Agent

Res. Geol. _____ Qualifications 63.1030

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 2

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag - 490 EM - 480 Number of Readings 1 time

Station interval 50 feet Line spacing 200 feet

Profile scale EM - 1" = 40°

Contour interval Mag - 100 gammas

MAGNETIC

Instrument Scintrex Fluxgate Model MF-2-100 magnetometer

Accuracy – Scale constant ± 0.5% of full scale

Diurnal correction method Permanent base stations

Base Station check-in interval (hours) Hourly

Base Station location and value

ELECTROMAGNETIC

Instrument Crone Radem VLF unit

Coil configuration Vertical loop

Coil separation NA

Accuracy NA

Method: ☒ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency Cutler Maine (specify V.L.F. station)

Parameters measured Dip Angle

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

NATAL TWP. M-885

KNIGHT TWP. M-228

CHURCHILL TWP. M-719

TYRRELL TWP. M-253

FAWCETT TWP. M-803

THE TOWNSHIP OF 2.2881

MACMURCHY

DISTRICT OF SUDBURY

LARDER LAKE 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.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED PATENTED S.R.O.	C.

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

Township closed to staking effective May 8/78 Section 387 of the Mining Act.

Mining Leases shown thus (L) have been terminated but Not Thrown Open For Staking.

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O 1970.

	Order No.	File	Date	Disposition
(R)	W.66/76	188517	19/11/76	S.R.O.

DATE OF ISSUE
JAN 22 1979
SURVEYS AND MAPPING BRANCH

PLAN NO. M-842

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

41P11SE0010 2.2881 MACMURCHY

L504544

L504579

L504574

L504578

L452375

LAKE

LAKE

POND

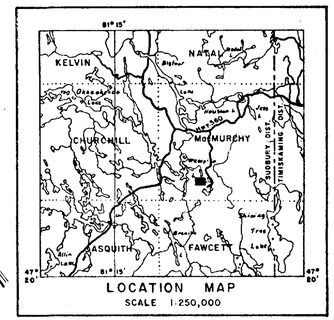
(Ken Leach - TRS 2507)

DDH

W.P.

Az. 090°

4+00W 2+00W 0+00 2+00E 4+00E 6+00E 8+00E 10+00E 12+00E 14+00E 16+00E 18+00E 20+00E 22+00E 24+00E 26+00E 28+00E 30+00E 32+00E 34+00E 36+00E 38+00E 40+00E 42+00E 44+00E



LOCATION MAP
SCALE 1:250,000

MAGNETOMETER SURVEY (MAG)

270 - Gammas
480
730
1170
1610

INSTRUMENT : Fluxgate MF-1 & MF-2 Magnetometer
OPERATOR : R. Craig / W. Marrion

MAGNETOMETER SURVEY
OF THE
TRITON GROUP
MACMURCHY TWP. ONTARIO
FOR
TECK CORPORATION
BY
GEOPHYSICAL ENGINEERING LTD.

REGISTERED PROFESSIONAL ENGINEER WILLIAM STUART WELLS PROVINCE OF ONTARIO

METRES 100 50 0 50 100
FEET 200 0 200

Drawn by C.E.K. Checked by	DATE 78-10-3	JOB 1172	N.T.S. 41-P-11	Dwg. 5545 b

Revised: 1978-12-12

41P11SE0010 2.2881 MACMURCHY

L504579

LAKE

LAKE

L504544

L504574

(Ken Leach - TRS2507)

W.P.

Az. 090°

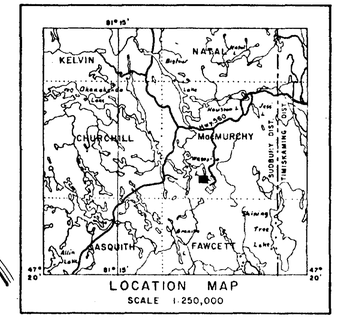
DDH

L452375

L504578

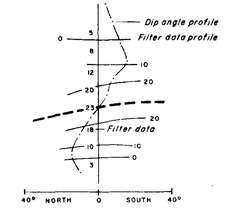
POND

4+00W 2+00W 0+00 2+00E 4+00E 6+00E 8+00E 10+00E 12+00E 14+00E 16+00E 18+00E 20+00E 22+00E 24+00E 26+00E 28+00E 30+00E 32+00E 34+00E 36+00E 38+00E 40+00E 42+00E 44+00E



LOCATION MAP
SCALE 1:250,000

VERY LOW FREQUENCY
V.L.F.E.M.



INSTRUMENT : CRONE V.L.F. UNIT
TX.-STATION : CUTLER MAINE
OPERATOR : R.CRAIG - D.FUDGE

ELECTROMAGNETIC SURVEY

OF THE

TRITON GROUP

MACMURCHY TWP. ONTARIO

FOR

TECK CORPORATION

BY

GEOPHYSICAL ENGINEERING LTD.

METRES 100 50 0 50 100

FEET 200 0 200

REVISED : 78-12-12

41P11SE0016 2.2881 MACMURCHY

220

Drawn by C.E.K	DATE 78-10-3	JOB 1172	N.T.S. 41-P-11	Dwg. 5544 a
Checked by				