

TRIGAN RESOURCES INC EAST GABBRO PROPERTY
METHUEN TOWNSHIP
SOUTHERN ONTARIO DISTRICT
ASSESSMENT REPORT FOR CLAIM 1240157



Don Phipps
November 24th, 2011

2.50158

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SUMMARY

Trigan Resources of Aurora, Ontario owns a block of Mining Leases in the southeast part of Methuen Township, covering most of a gabbroic body known as the East Gabbro. Claim 1240157 is contiguous with the Mining Leases and was staked in 2004 to cover a portion of the gabbro not covered by the Mining Leases. The Mining Leases cover a gabbro (the Eastern Gabbro) which hosts a pipe-like body of massive to semi-massive and disseminated ilmenite.

Work carried out in April 2010 on a portion of the Mining Leases consisted of precise geological mapping of the northeastern contact of the gabbro body using GPS positioning methods.

INTRODUCTION

Trigan Resources owns a block of Mining Leases in Methuen Township South, which cover ilmenite mineralization hosted by a gabbro body. Claim 1240157 was staked in January 2004 to cover a northern portion of the gabbro not covered by the mining leases. The claim is contiguous with the Mining Leases.

Previous work on the claim has consisted of geological mapping to determine the northern limit of the gabbro, and confirm the continuity of gabbro in the area of the claim.

This report covers work done in April 2010 on Mining Leases EO 231490, EO 231491, EO 219760, EO219761 and EO 41332 to define more precisely the northeastern contact of the gabbro with adjacent paragneisses.

PROPERTY

Location and Access

Claim 1240157 occupies Lot 10 Concession 3 of Methuen Township in Southern Ontario Mining District approximately 25 km north of the town of Havelock (Figure 1). Regional Road 46 lies approximately 1 km east of the claim and bisects the block of Mining Leases. A gravel road running west from Regional Road 46 gives access to the northeast corner of the claim (Figure 2).

The work covered in this report was carried out in an area just east of regional Road 46 (Figures 2 and 3). The work area is easily accessible from Regional road 46 via well-established trails.

The topography of the property is gently undulating covered by mainly deciduous forest interspersed with frequent areas of swamp. There is 10 to 15% rock exposure which occurs mainly as low inconspicuous outcrops, and areas of in-situ frost heaved boulders.

Property Description and Status

Claim 1240157 is registered in the name of Trigan Resources Inc. 35 Lauren Road, Port Perry, Ontario L9L 2A7. The Claim consists of four units located in Concession 3 Lot 10 of the southern half of Methuen Twp in Southern Ontario (Figure 2). The claim was recorded January 13th, 2004 and is due for renewal January 13th, 2015.

The claim is contiguous with, and related to, a block of Mining Leases also owned by Trigan Resources Inc.

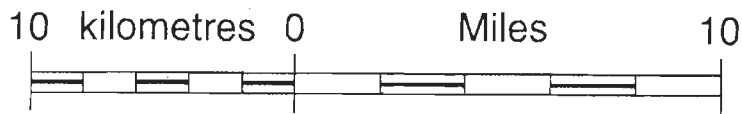
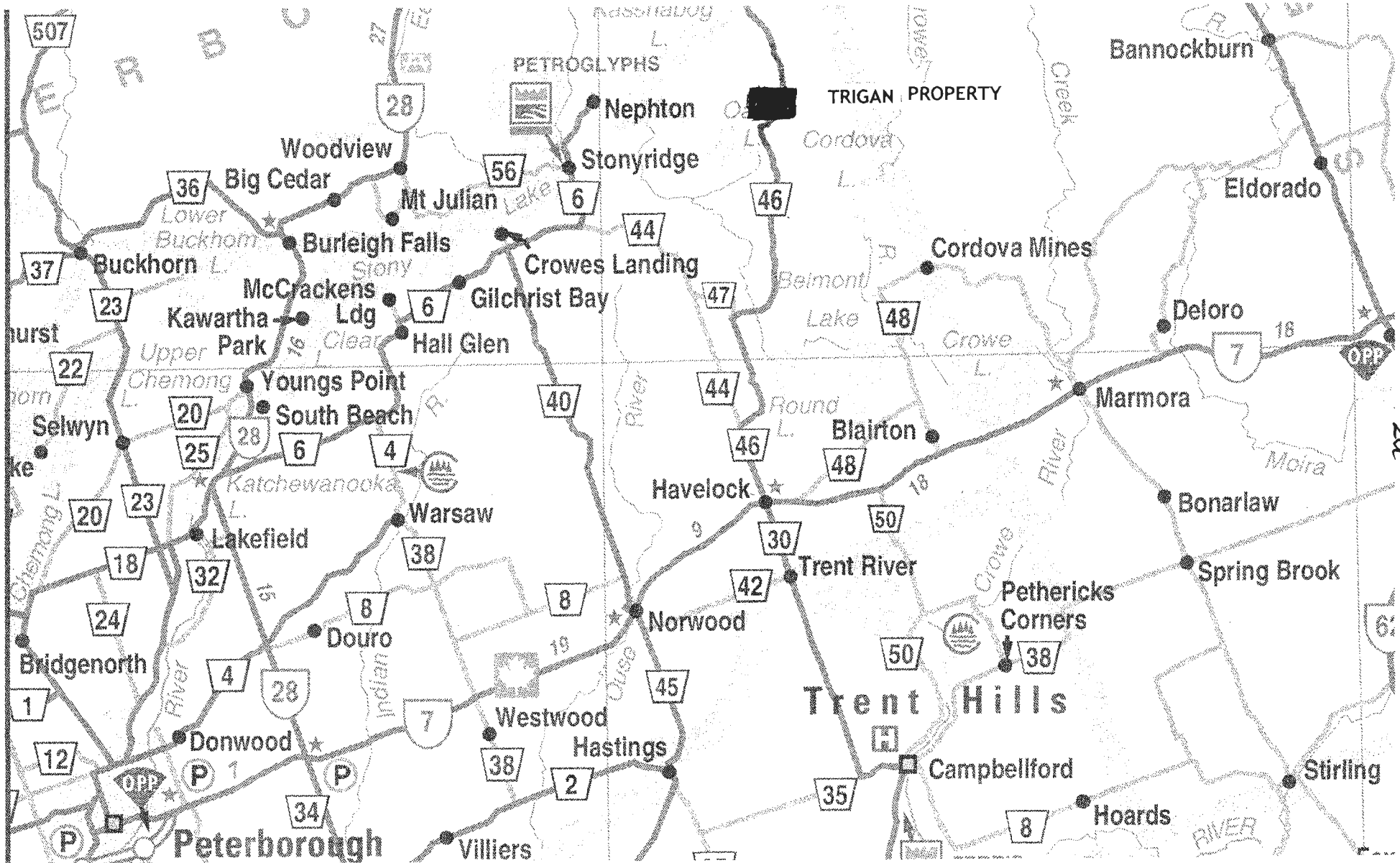


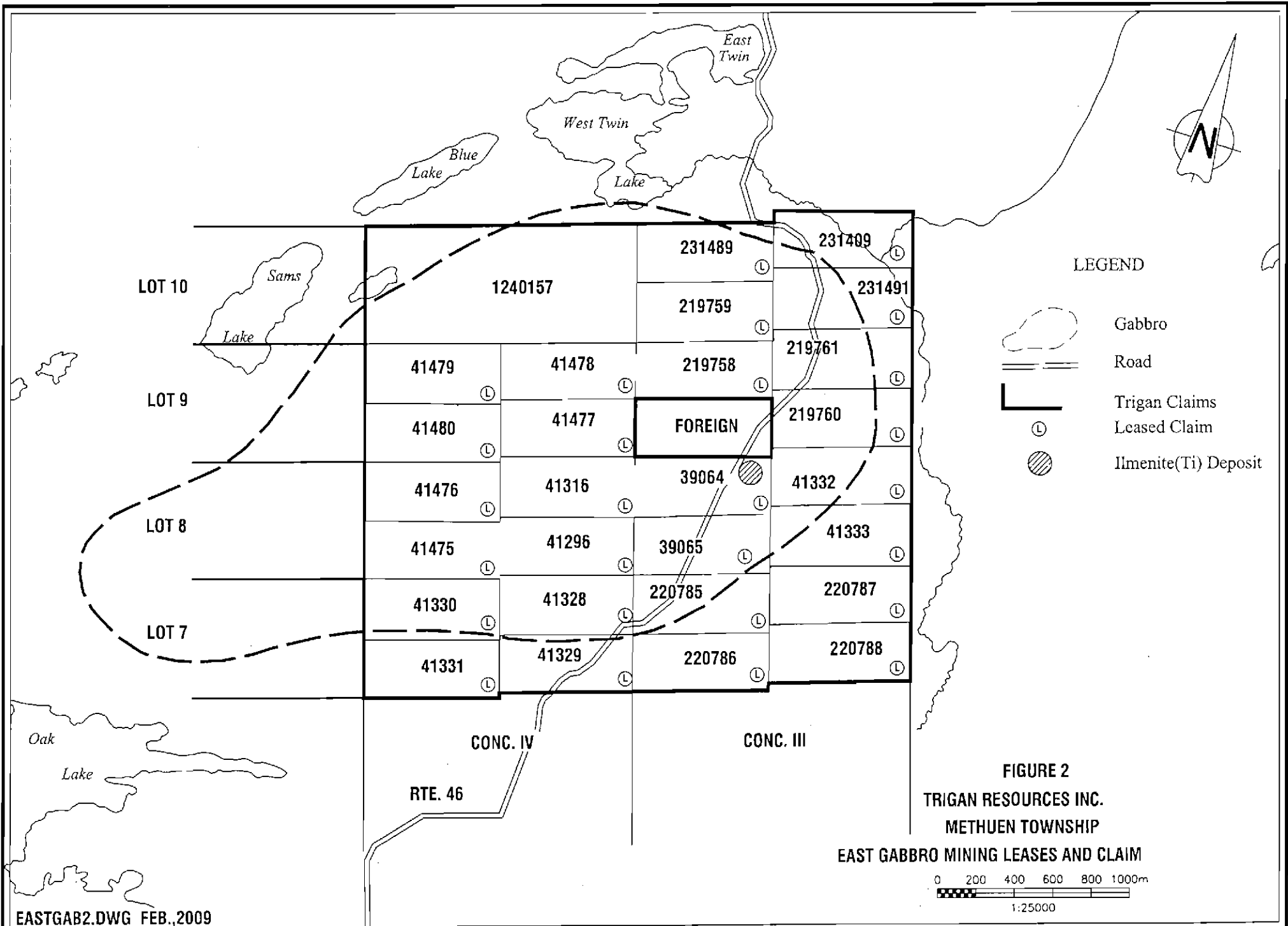
FIGURE 1
TRIGAN RESOURCES INC
METHUEN TWP PROPERTY LOCATION

PROPERTY HISTORY (Mining leases and Claim 1240157)

- Pre-1969: Trigan Resources or its precursor staked 27 claims covering the occurrence of widespread ilmenite mineralization located in the southern part of Methuen Twp. Pitting, trenching and sampling were carried out.
- 1969-70: Trigan Resource explored the ilmenite mineralization with the drilling of 29 shallow (30 to 60 m), small diameter, vertical drill holes for a total of 1227 m. Very little sampling was done on the core at this time.
- 1981-85: Canico Ltd., (Inco Ltd) optioned the property and relogged and sampled core from the earlier Trigan drilling. Inco carried out programs of detailed geological mapping, gravity and magnetometer surveys, diamond drilling (32 vertical holes for a total of 1916 m) and metallurgical testing. An open pit resource of 13 million tonnes grading 21.7% TiO₂ was calculated. Inco dropped the option in 1985.
- 1986: In June 1986, Trigan's 27 claims were brought to lease.
- 1998: Trigan commenced evaluation of the gabbro on the property as a source of high quality bedrock aggregate. Mini bulk samples were obtained by core sampling of barren gabbro from holes drilled around the ilmenite mineralization. Positive results were obtained from this initial testing of the gabbro.
- 2000: A small quarry near the eastern boundary of the gabbro was excavated to provide a 20,000 tonne bulk sample for aggregate testing to determine if the material would be suitable for commercial production. Samples were submitted to the Ontario Ministry of Transport (MTO) for investigation of the material as a new source of high quality aggregate for asphalt pavements. The gabbro product was shown to satisfy all the necessary criteria for high quality aggregate. Subsequently a test strip of the material was laid down by the MTO. The material passed the test strip requirements.
- 2003: MRT Aggregates was formed as a joint venture between Trigan Resources and the Miller Group to carry out quarrying operations to produce high quality bedrock aggregate from the gabbro in an area southeast of the ilmenite mineralization
- 2004: Claim 1240157 was recorded on January 13th 2004.
- 2005-07: Geological mapping was carried out on claim 1240157.
- 2008: Fifteen vertical, 58 ft, percussion drill holes were drilled to better define the eastern limits of the ilmenite mineralization.
- 2010: Geological mapping of the northeastern contact of the gabbro was carried out (this report).

REGIONAL GEOLOGY

Methuen Township is underlain by mainly northeast-trending Late Precambrian, Grenville metasedimentary rocks intruded by granitic gneisses, granite, syenite and gabbro. The metasedimentary rocks have been subjected to multiphase deformation and regional metamorphism. Contact metamorphism is evident especially around some of the gabbroic intrusives. Flat lying Ordovician



limestone and dolomitic limestone occur as isolated outliers in the southern part of the Township (ODM Map 1960e).

Two ovoid-shaped, easterly-trending, basic to intermediate intrusions semi-conformably intrude the Grenville metasediments in the area of the property. These two intrusions, referred to as the East Gabbro and the West Gabbro, vary in composition through gabbroic anorthosite to gabbro to monzonite. The gabbroic anorthosite and gabbro portions of the intrusions are the focus for the establishment of an aggregate resource. In the easternmost part of the Eastern Gabbro, gabbroic anorthosite hosts a pipe-like occurrence of semi-massive to massive ilmenite mineralization.

PROPERTY GEOLOGY

Claim 1240157 covers a portion of the northern part of the East Gabbro (Figure 2) where it is in contact with mainly gneissic arenaceous metasediments (paragneisses).

The gabbro typically is a medium grained, grey, mesocratic rock consisting of mainly plagioclase with lesser amounts of mafic minerals (augite and/or hornblende); at some locations it could be described as an anorthositic gabbro.

Near surface, weathering of this rock imparts a pinkish hue to the plagioclase, misleadingly giving it the appearance of a more leucocratic acidic rock.

The East Gabbro hosts a deposit of massive to semi massive to disseminated ilmenite. The deposit outcrops just east of Route 46 in a roughly circular shape. An open pit resource of 13 million tonnes grading 21.7% TiO₂ has been calculated for this deposit.

The contact between the gabbro and the country rock metasediments can be gradational. In the contact area, inclusions of metasediments become common and the gabbro is notably finer grained. Compositional differences, in the gabbro, especially in the contact zone, are present due to contamination of the gabbroic magma by absorbed metasediments. This has resulted in a variety of gabbroic rock types being mapped in the contact zone.

CURRENT WORK CARRIED OUT

Introduction

Previous detailed geological mapping of the gabbro and adjacent host rocks, identified a rather complex, gradational, gabbro/gneiss contact zone with variations in composition and texture of the intrusive. The mapping covered by this report sought to identify the contact solely on the basis of the presence or absence of igneous texture.

The survey was carried out over a two-day period, April 26th to 27th, 2010 by Don Phipps (98 Kingsmount Blvd., Sudbury, Ontario, P3E 1K6), assisted by Mark Phipps (#21, 2401 Queen St. East, Toronto, Ontario, M4E 1H6)

A Garmin 76 GPS unit was used to locate observation sites. See Appendix for list of way points (observation sites) using NAD 27 designation.

Geological Mapping

The mapping covers the northeast portion of the gabbro contact starting from the old small quarry excavated for the original bulk testing of the gabbro, and ending where the contact crosses Regional Road 46 ((Figure 3).

Outcrops were located and examined along the trend of the contact and were defined as being either gabbroic intrusive (“G” designation; igneous textured with well-defined crystals of plagioclase) or gneissic metasediment (“S” designation; poorly developed igneous texture). A “C” designation gives the best estimate for the location of the contact.

The mapping reconfirmed the somewhat transitional nature of the contact. Along the contact and at varying distances into the intrusive, there is strong evidence of contamination of the gabbro by the more felsic material of the adjacent paragneisses.

CONCLUSIONS AND RECOMMENDATIONS

Due to the gradational nature of the contact, precisely identifying the contact between the gabbro and the surrounding gneisses has been a problem with previous geological mapping in this area. Defining the contact on the basis of the presence or absence of an igneous texture as displayed by the presence of obvious decussate textured plagioclase crystals, has worked well in this area of the intrusive where the host rock is a granular textured metasediment (paragneiss).

Further mapping of the intrusive contact should use the criterion laid out above as the best means of identifying the contact.

CERTIFICATE of AUTHOR

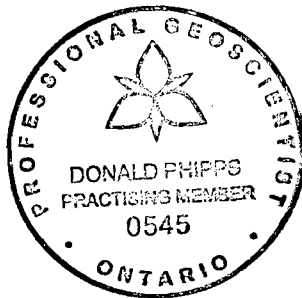
I, Donald Phipps, M.Sc, P.Geo., certify that:

1. I am a consulting Geologist with residence and business address at 98 Kingsmount Blvd., Sudbury, Ontario, P3E 1K6.
2. I graduated from the Camborne School of Mines, Camborne, Cornwall, U.K. with an ACSM Mining Diploma in 1957. In addition I obtained a B.Sc. degree in geology from McGill University in 1962, and an M.Sc. degree in oceanography from the Massachusetts Institute of Technology in 1964.
3. I am registered as a practicing member of the Association of Professional Geoscientists of Ontario. I am a Fellow of the Canadian Institute of mining and Metallurgy and a member of the Prospectors and Developers Association of Canada.
4. I have practiced my profession as an exploration geologist for more than forty years with work in Africa and North America.

Dated in Sudbury, Ontario this 24th day of November, 2011

“Signed” and “Sealed”

Donald Phipps, M.Sc., P.Geo.



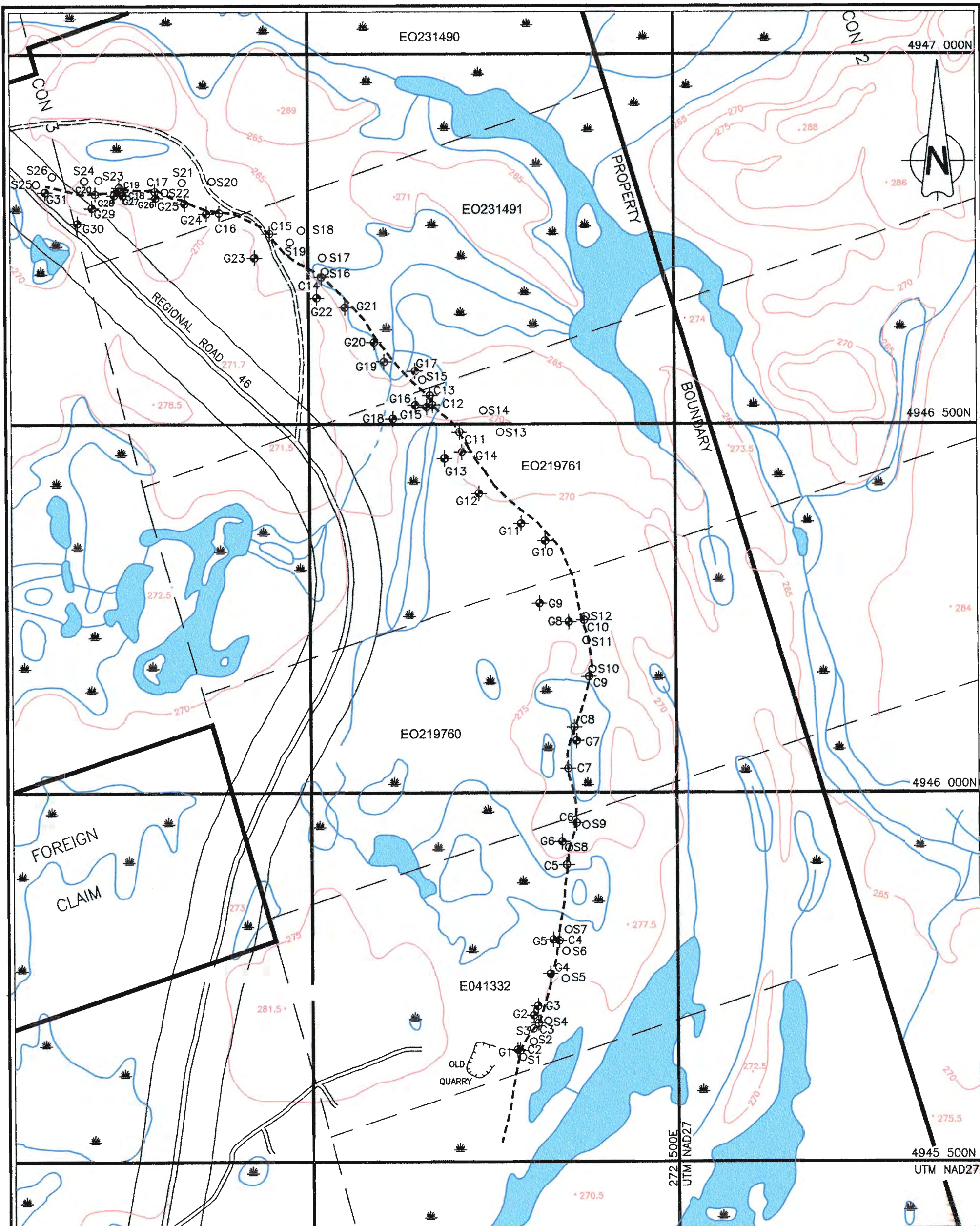
Donald Phipps

APPENDIX

GPS Waypoint Data

NAD 1927 CGQ 77 UTM Zone 18N

Waypoint	Easting	Northing	Elevation	Waypoint	Easting	Northing	Elevation
A	272 266.12E	4945 632.48N	274.58 m	S13	272 261.21E	4946 489.07N	266.89 m
BH16	272 041.91E	4945 748.42N	283.47 m	S14	272 238.83E	4946 518.58N	260.59 m
C10	272 374.42E	4946 233.13N	280.35 m	S15	272 155.55E	4946 560.27N	283.23 m
C11	272 205.89E	4946 489.04N	288.28 m	S16	272 022.76E	4946 706.52N	278.43 m
C12	272 168.86E	4946 526.27N	269.53 m	S17	272 019.32E	4946 725.25N	261.36 m
C13	272 165.74E	4946 538.72N	289 m	S18	271 993.77E	4946 743.23N	262.32 m
C14	272 017.95E	4946 699.24N	277.70 m	S19	271 975.21E	4946 745.99N	272.42 m
C15	271 947.30E	4946 757.74N	268.09 m	S2	272 301.86E	4945 662.76N	268.57 m
C16	271 878.69E	4946 785.54N	276.50 m	S20	271 868.98E	4946 828.55N	275.06 m
C17	271 790.90E	4946 814.78N	270.25 m	S21	271 828.25E	4946 827.06N	271.22 m
C18	271 744.84E	4946 814.89N	279.39 m	S22	271 804.48E	4946 813.83N	265.45 m
C19	271 742.27E	4946 820.31N	283.47 m	S23	271 714.38E	4946 830.66N	265.93 m
C2	272 283.26E	4945 650.74N	269.53 m	S24	271 694.79E	4946 829.69N	262.80 m
C20	271 709.49E	4946 811.55N	253.67 m	S25	271 628.77E	4946 825.13N	264.49 m
C3	272 308.87E	4945 687.97N	265.93 m	S26	271 650.80E	4946 835.69N	267.61 m
C4	272 337.97E	4945 799.90N	271.94 m	S3	272 301.84E	4945 680.45N	273.38 m
C5	272 348.73E	4945 902.50N	279.87 m	S4	272 322.03E	4945 690.70N	267.13 m
C6	272 362.54E	4945 959.24N	280.11 m	S5	272 345.88E	4945 748.46N	271.22 m
C7	272 351.48E	4946 032.64N	281.31 m	S6	272 347.16E	4945 785.55N	275.78 m
C8	272 360.19E	4946 088.20N	271.46 m	S7	272 350.51E	4945 814.78N	277.94 m
C9	272 380.69E	4946 157.03N	276.50 m	S8	272 351.73E	4945 925.90N	276.02 m
FC1	271 923.79E	4945 573.37N	261.84 m	S9	272 375.73E	4945 956.38N	276.02 m
G1	272 279.93E	4945 651.84N	272.90 m	T1	272 288.33E	4946 134.24N	272.90 m
G10	272 321.80E	4946 342.10N	272.18 m	X01	272 210.64E	4945 620.44N	278.67 m
G11	272 289.08E	4946 365.51N	268.33 m				
G12	272 232.07E	4946 406.13N	272.90 m				
G13	272 185.01E	4946 453.43N	277.22 m				
G14	272 208.95E	4946 461.95N	257.76 m				
G15	272 161.29E	4946 523.24N	264.97 m				
G16	272 145.73E	4946 525.82N	270.50 m				
G17	272 145.45E	4946 572.06N	274.34 m				
G18	272 115.04E	4946 507.34N	278.43 m				
G19	272 103.22E	4946 584.50N	268.09 m				
G2	272 302.45E	4945 698.34N	269.53 m				
G20	272 089.84E	4946 610.39N	262.08 m				
G21	272 050.36E	4946 657.86N	269.29 m				
G22	272 011.16E	4946 670.75N	272.66 m				
G23	271 926.75E	4946 724.94N	267.61 m				
G24	271 861.31E	4946 784.56N	273.14 m				
G25	271 831.71E	4946 798.43N	237.09 m				
G26	271 792.09E	4946 806.00N	260.64 m				
G27	271 747.34E	4946 809.88N	289.72 m				
G28	271 735.54E	4946 810.06N	280.83 m				
G29	271 704.98E	4946 792.70N	277.70 m				
G3	272 308.12E	4945 711.27N	275.30 m				
G30	271 685.15E	4946 771.77N	270.01 m				
G31	271 641.14E	4946 814.20N	262.32 m				
G4	272 325.51E	4945 754.79N	271.70 m				
G5	272 329.71E	4945 801.13N	270.01 m				
G6	272 342.75E	4945 933.87N	277.70 m				
G7	272 363.14E	4946 069.57N	270.74 m				
G8	272 353.45E	4946 230.85N	294.77 m				
G9	272 313.82E	4946 255.98N	276.02 m				
GG1	271 993.75E	4945 781.29N	282.03 m				
IL1	271 988.36E	4945 772.77N	277.70 m				
IL2BLDR	271 962.18E	4945 745.39N	277.94 m				
OLD BH1	271 941.72E	4945 735.53N	280.83 m				
OLDBH2	271 924.69E	4945 548.83N	270.50 m				
QUARRY	272 168.49E	4945 671.21N	279.15 m				
S1	272 286.75E	4945 641.95N	270.50 m				
S10	272 385.55E	4946 167.01N	277.22 m				
S11	272 377.43E	4946 205.77N	278.18 m				
S12	272 376.67E	4946 237.99N	278.67 m				



TRIGAN RESOURCES INC			
Project: EAST GABBRO		Area: METHUEN TPNWSHJP	
MAPPING OF EAST GABBRO NE CONTACT		SHEET 1 of 1	FIGURE 3
Supervisor: D. PHIPPS	Instrument: GPS	Survey date: APRIL,2010	
Compiled by: D. PHIPPS	Drawn by: W.E.M.	Date drawn: MAY,2010	Revised:
Scale: 1:5000	File: TRIGAN-NAD27.DWG	UTM:	NAD27

LEGEND

- OS9 Metasediment Outcrop
- ◆ G7 Gabbro Outcrop
- ⊕ C8 Assumed Gabbro/Metasediment Contact
- - - Trace of Gabbro Contact

0 100 200m
1:5000