

# Wavy Lake Property Granite Study

- EDEN TOWNSHIP -



Prepared by:  
Robert G. Komarechka P.Geol.  
Dec. 11, 2014

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## INTRODUCTION

This work in this report was conducted to better understand the potential for dimension and coloured aggregate potential of material located on claim 4254053 in Eden Twp. of the Sudbury Mining District, Ontario. This material was recognized earlier during the evaluation of a potential silica flux quarry.

## LOCATION and ACCESS

The study area is located in the central east portion of Eden township in the District of Sudbury. It is located at a latitude of 46° 19' and longitude of 81° 05'.

Access to the area can be obtained by driving 27 kilometers south of Sudbury on Long Lake Road, Tilton lake Road and Wavy Trail. One kilometer down the Wavy Trail after the turnoff from the Tilton Lake Road a trail 2.3 km. long leads eastward to the area. For this study an overgrown bulk sample access road (now an overgrown quad trail) located north of the Wavy Lake North Shore Road was used.

Index map figure 1 and local index map figure 2 give the general location of this site.

## PROPERTY TENURE

Table 1 – List of Claims

### **SUDBURY Mining Division - 153168 - KOMARECHKA, ROBERT GERALD**

<b>Township/ Area</b>	<b>Claim Number</b>	<b>Recording Date</b>	<b>Claim Due Date</b>	<b>Statu s</b>	<b>Percent Option</b>	<b>Work Required</b>
EDEN	<a href="#">1098990</a>	1992-Jun-15	2014-Sep-14*	A	100 %	\$ 400
EDEN	<a href="#">1101671</a>	1990-Jun-18	2015-Jun-18	A	100 %	\$ 88
EDEN	<a href="#">1101672</a>	1990-Jun-18	2015-Jun-18	A	100 %	\$ 400
EDEN	<a href="#">1101771</a>	1990-Jun-18	2015-Jun-18	A	100 %	\$ 400
EDEN	<a href="#">4254053</a>	2010-Sep-23	2014-Sep-23*	A	100 %	\$ 247

\* Note Claims 1098990 & 4254053 are currently under an extension until Dec. 11, 2014.

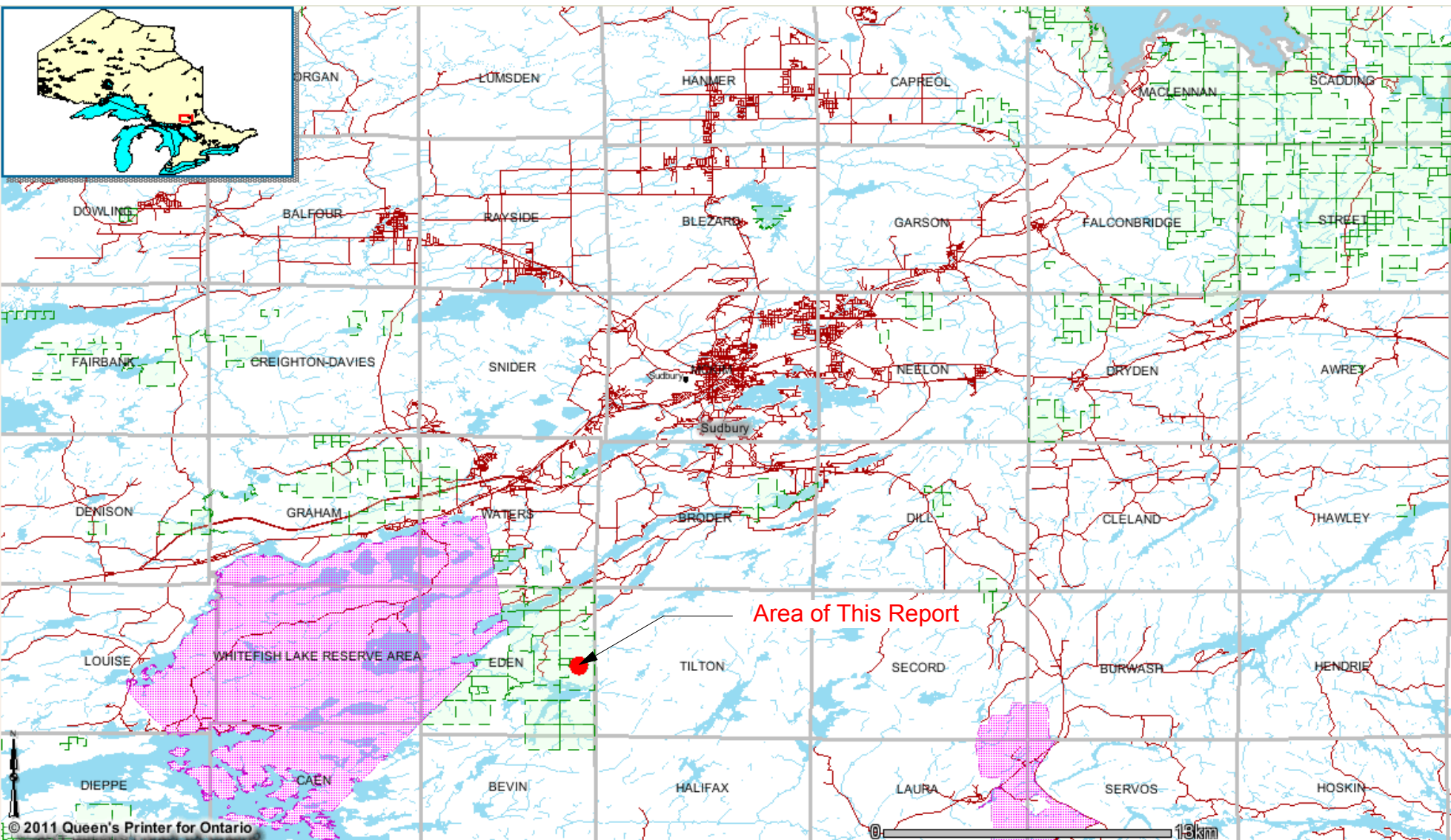


Figure 1: Location of Work

By: R. Komarechka Sept. 10, 2012

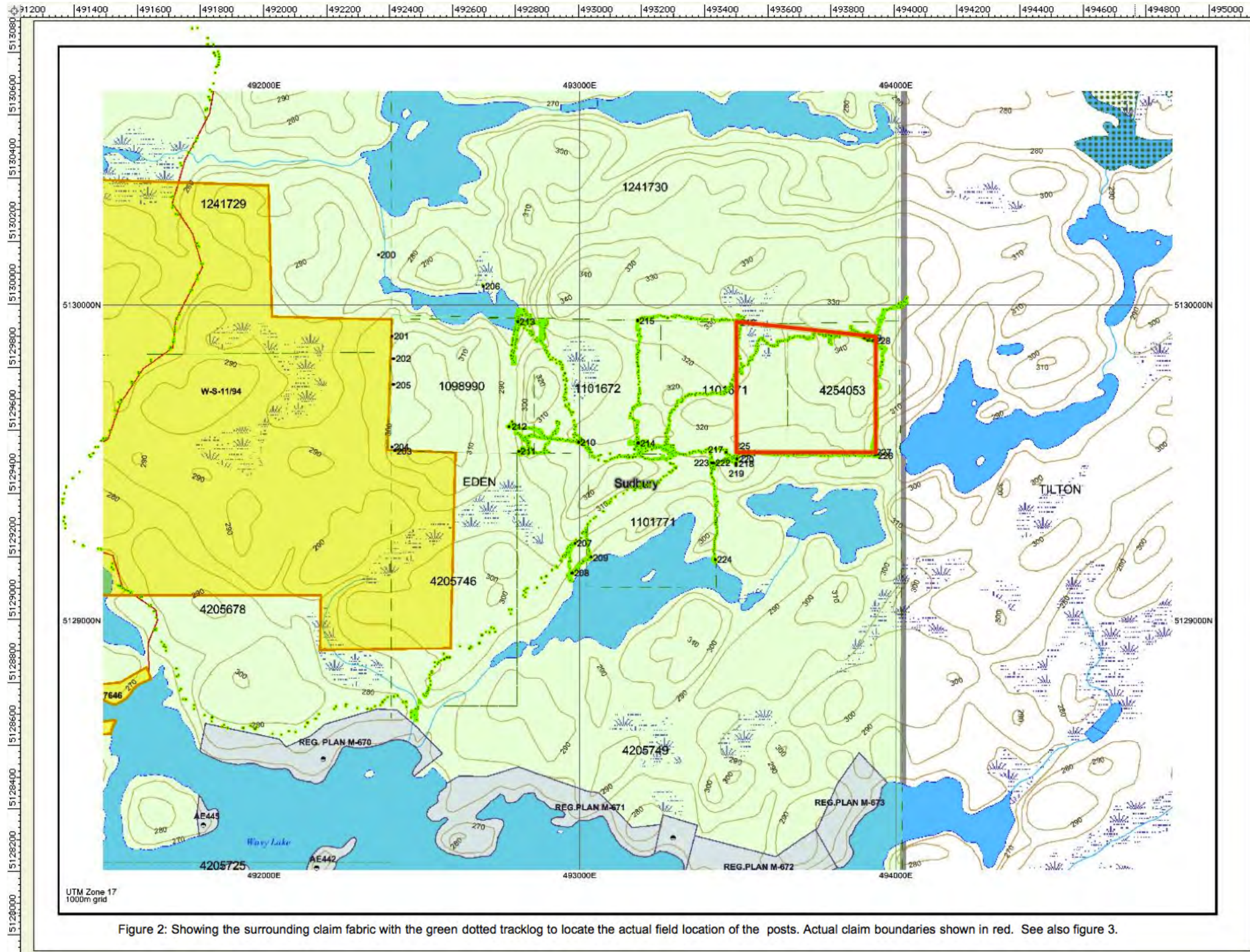


Figure 2: Showing the surrounding claim fabric with the green dotted tracklog to locate the actual field location of the posts. Actual claim boundaries shown in red. See also figure 3.

## **PREVIOUS WORK DONE BY OTHERS**

Work outside of these claims has been done on the nearby past producing Long Lake Gold Mine and various exploration work to examine a nearby extension of the Copper Cliff Offset, but aside from that, in the immediate area of this work, the following has been done;

1966: geologic thesis mapping (see Spaven, HR in references section)  
1975: mapping by the OGS in (see Card, KD in references section)  
Previous past claim staking in the area was also noted.

## **REVIIOUS WORK DONE BY CLAIMHOLDER ON THESE CLAIMS**

1991: Geologic mapping (see Komarechka in references section)  
1992: Geologic mapping (see Komarechka in references section)  
1992: Percussion Drill Evaluation (see Komarechka in references section)  
1993: Trail construction, stripping, analysis of drill cutting, bulk sampling (see Komarechka in references section)  
2000: Beep Mat Study (see Komarechka in references section)  
2010: Recutting of claim lines (see Komarechka in references section)  
2011: Silica assays of bulk sampled material on site (see Komarechka in references section)  
2012: Further silica assays submitted on the eastern marginal edges of the property  
2013: Geo-referencing of the claim posts on site

## **GEOLOGY**

### **Regional Geology**

The area of study represents a portion of the western contact of the Eden Lake Granite with the Proterozoic Huronian rocks of the Lorrain formation.

Generally the Lorrain formation in the area, adjacent to the earlier Gowganda formation to the west, grades from a pink arkosic quartzite into a tan massive aluminous quartzite, then into a massive to banded green alumina rich orthoquartzite, then into orthoquartzite with red bands of hematitic quartzite, then into areas of orthoquartzite and cherty orthoquartzite, containing occasional reddish hematitic swirls. The highest values of silica appear to occur in the last two rock types.

From the results of previous mapping and assay results it is apparent that the occurrence of the last two members of the upper Lorrain appear along a parallel trend that matches the Gowganda-Lorrain contact as indicated in OGS map 2299. Unfortunately this contact is not continuous due to intrusions of Nippising Diabase and later Eden Lake Intrusives. In addition, alteration due to local thermal effects from these intrusions, their metasomatic alterations and small scale structural movements and folding add complexity to the geological picture.

Field observations suggest that the Eden Lake Granite frequently intruded along pre-existing (Nippising) diabase intrusions within the Huronian metasediments. This resulted in partial assimilation and occasional brecciation of the surrounding diabase and quartzites. A result of this assimilation is the production of a hybrid rock noted as grey granite on the map. This rock is frequently encountered along the contact of the Huronian metasediments and the Eden Lake Granites and is gradationally with the latter.

The intrusion of the Eden Lake Granite and the tectonic effects of the nearby Grenville Front resulted in numerous local faults and minor local displacements. Generally the more siliceous quartzites reacted to this by brittle fracturing while the more argillaceous metasediments responded by plastic deformation as evidenced by their highly variable dip and strike.

### **Geology of the Examined Area**

The sampled area is located in the northwesternmost part of the property on claim 4252053. This area is underlain primarily by rocks of the Eden Lake Intrusion.

A brief description of these rocks are described below:

#### Mafic Dikes Unit 5

Two occurrences of these rocks were observed intruding the Eden Lake Granite although there may be others. The dikes appear to have the same strike and width (less than 1 metre wide) and may be the same age. They are a dark gray colour with a very fine to microcrystalline massive texture.

#### The Eden Lake Granite unit 4a

This rock represents the main rock type in the area studied in this report and consist of coarsely crystalline (porphyritic) orthoclase, representing about 80% of the rock with a veiled intersitial dark matrix composed of minor quartz and very finely crystalline black biotite. This combination gives the rock a striking appearance as illustrated on the cover of this report. Samples of this rock were seen and are shown in photos 6 & 7 and illustrate a slight foliation to the rock. These samples were taken from surface rocks and so have a slightly bleached orange colour due to years of chemical weathering.

#### Felsite Bands Unit 4af

These rocks occurred as minor thin units generally less than 1 metre wide and appeared to have a similar composition to the Eden Lake Intrusion but lacked the mafic component and occasionally showed some foliation. They are believed to be related to remobilization of residual fluids with the Eden Lake Granite and may have been foliated

by some minor slippage along their planes of intrusion. Generally these rocks were too narrow to map but one band 0.3 metres wide was mapped on the geological map.

#### Gray Granite Unit 4b

This rock was found at various locations as a minor unit, generally in the form of dike-like bodies within the Eden Lake Granite. Although in one area it appeared as wide as 10 metres. It has no real aggregate potential and may be related to ingested slabs of Huronian sediments (possibly of the Gowganda formation). Compositionally it consists of fine grained gray feldspar with quartz and biotite.

#### Gray Gneissic Metasedimenta Unit 4c

This rock appeared to be derived from graywackie and siltstone that was then heated by the intruding Eden lake intrusion. They appear in more abundance as a unit in the southwest of the mapping area.

#### Metagabbroic Rocks

These rocks were noted outside of this mapped area in previous mapping occurring to the southwest of the mapped area but were not encountered in the current area of mapping.

#### Quartzite Unit 2

Thin (<1m) quartz bands believed to be derived from rafted bands of Lorrain quartzite were noted in the northeast corner of the mapped area. Although the majority of this unit occurs to the east of the mapped area.

## **DESCRIPTION OF FIELD ACTIVITIES**

### **Sample Collection**

A sample was collected on the property on Sept 12, 2013 and cut on a saw to confirm the texture and unweathered colour of the rock. The result showed that the texture showed a very slight gneissosity but was generally massive. The colour however was somewhat of a bleached orange than the surface bedrock. Probably due to long term weathering effects.

### **Field Mapping**

Cursory mapping was undertaken on this area by the author earlier in 1991 but the mapping was based on a distorted enlarged airphoto. This mapping lacked accurate location information and detail. This current study utilized a geo-referenced Google Earth image on which the outcrops were accurately located and shows the correct claim locations as determined from earlier georeferencing. This was followed up with a field



visit on Dec. 9, 2014 utilizing a quad. At this time GPS tracklogs and waypoints were used as the perimeter of the outcrops were confirmed and mapped. The resulting map, at the end of this report, is more accurate and shows the location and attitude of the other minor rocks in the area.

### **CONCLUSIONS & RECOMMENDATIONS**

The Eden Lake Granite is a very attractive rock that has excellent dimension stone potential in areas of minimal fractures and contamination of other rocks. In the area examined several localized areas appeared to have potential. Due to the uniformity of this rock the additional potential of this material for precast concrete slab facings or coloured aggregate should be further evaluated. The proximity of this rock with that of the nearby white orthoquartzite adds to the economic potential of quarrying on this property

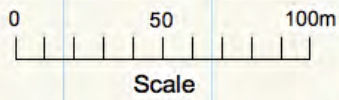
**Geological Mapping  
of Claim 4254053**

by

Robert G. Komarechka P.Geo.  
Dec. 11, 2014

**Lithology**

- 5 Mafic Dikes
- 4a Eden Lake Granite
- 4b Gray Granite (unit 4a/assimilated sediments)
- 4c Gray Granite - Metasomatized Sediments
- 3 Metadiabase (not shown on this map)
- 2 Quartzite - Lorrain Formation
- Swamp



Nast.



**Structure**

- Strike with dip 65°
- Shear Zone
- Dyke

**Symbols**

- Quad Trail
- Traverse Tracklog
- Claim Post
- Claim Line in Field
- OBM Claim Lines

Quarried Site

Co-ordinates in NAD83  
UTM Zone 17T

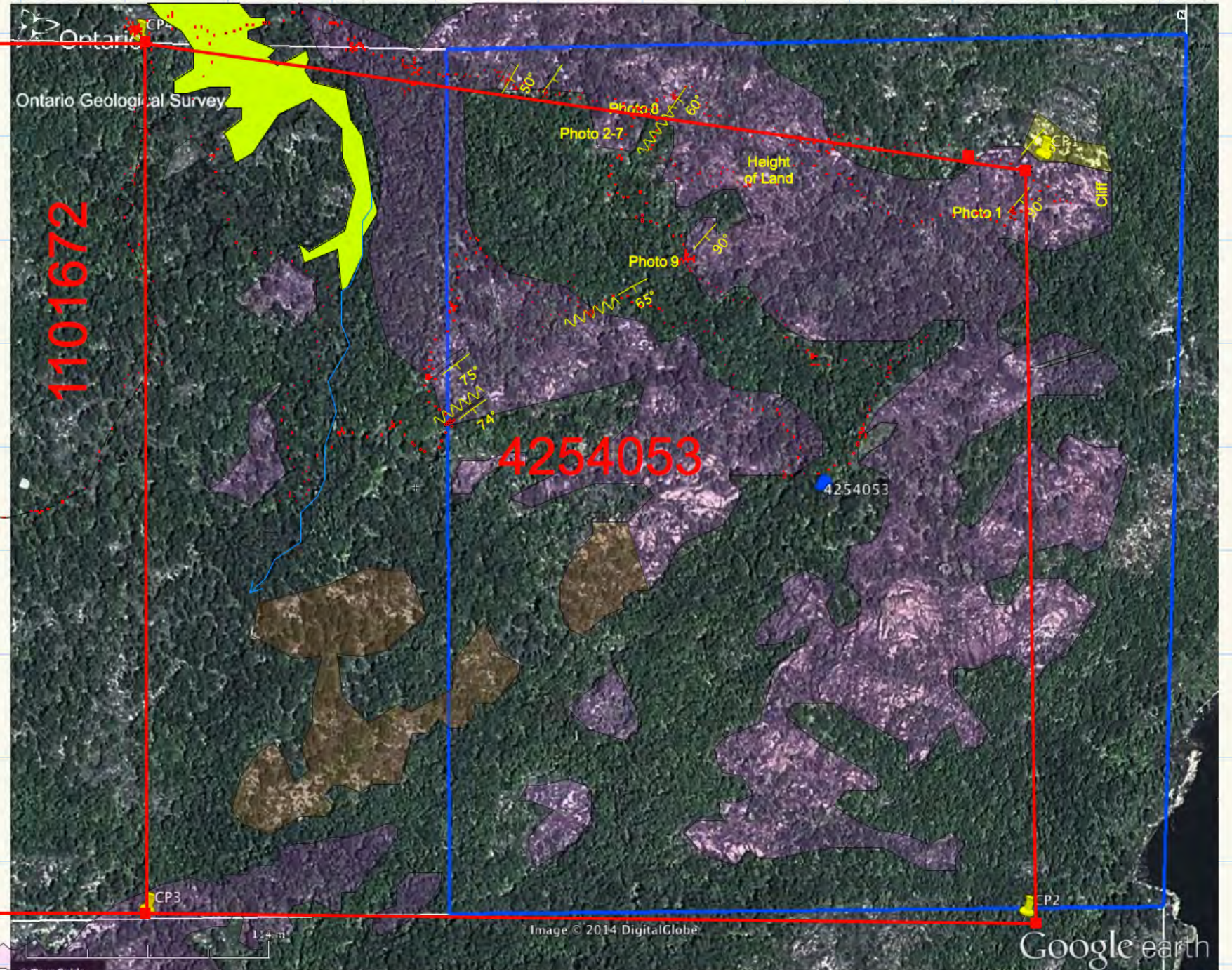


Image © 2014 DigitalGlobe

Google earth

Figure 3: Showing Google Earth Imagery with overlying outcrops, geology, tracklogs, claim fabric and location of photos in this report.









Geological Mapping  
of Claim 4254053

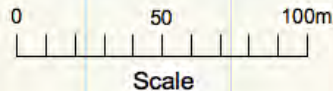
by

Robert G. Komarechka P. Geo.

Dec. 11, 2014

Lithology




-  5 Mafic Dikes
-  4a Eden Lake Granite
-  4af Eden Lake Felsite dikelets
-  4b Gray Granite (unit 4a/assimilated sediments)
-  4c Gray Granite - Metasomatized Sediments
-  3 Metadiabase (not shown on this map)
-  2 Quartzite - Lorrain Formation
-  Swamp







Nast.



Structure

-  65° Strike with dip
-  Shear Zone
-  Dyke

Symbols

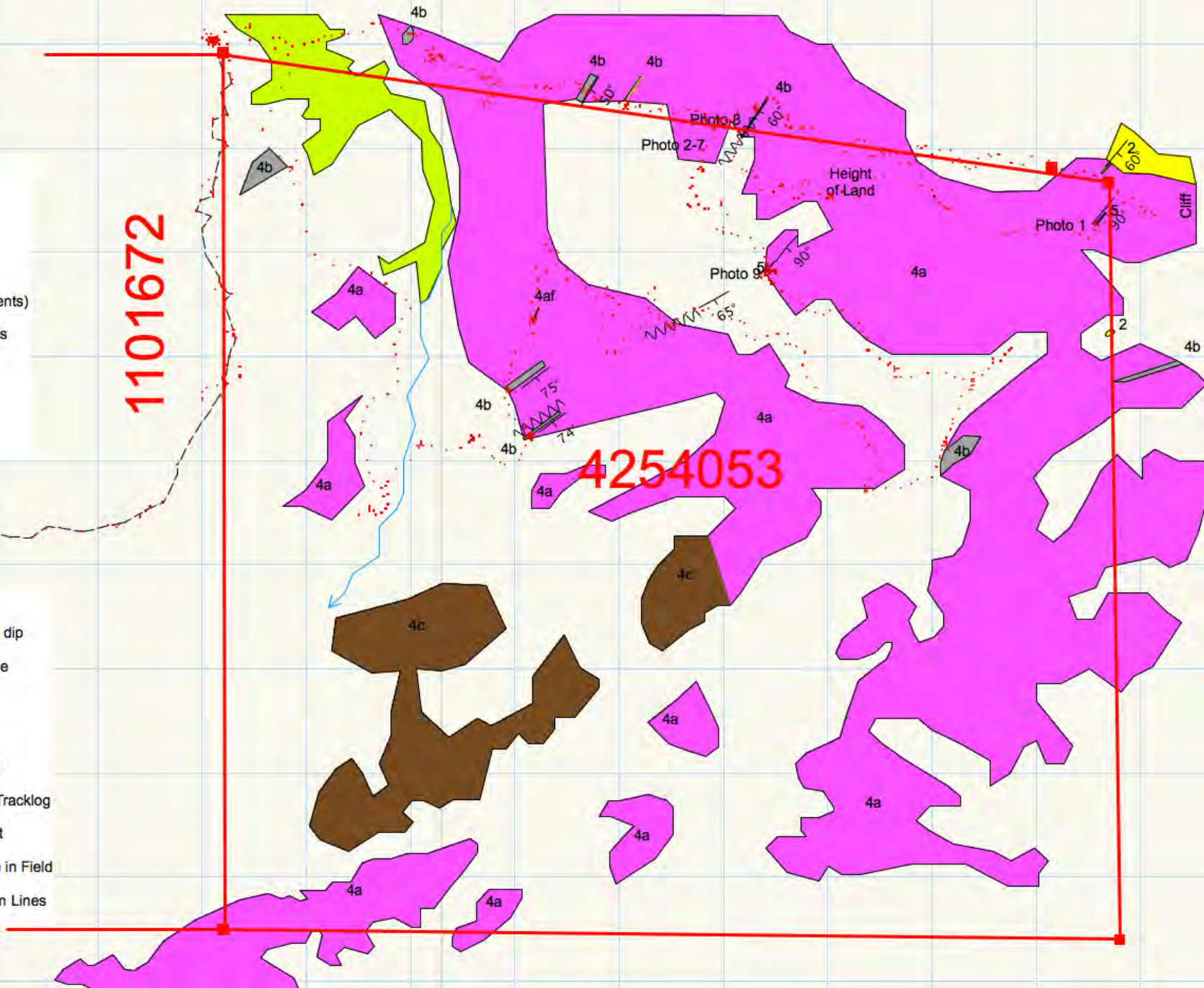
-  Quad Trail
-  Traverse Tracklog
-  Claim Post
-  Claim Line in Field
-  OBM Claim Lines

Quarried Site

Co-ordinates in NAD83  
UTM Zone 17T

1101672

4254053



## REFERENCES

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1975: Geology of the Louise-Eden Area, District of Sudbury; Ontario Div. Mines, GR124, 66p. Accompanied by Map 2299, Scale, 1 inch to 1/2 mile.
2. Komarechka, Robert G.,  
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3. Komarechka, Robert G.,  
1992: Lorrain Orthoquartzite Study - Silica Potential - Claims #S1117707, S1117708 and S1094930 - Eden Township, Jan. 1992.
4. Komarechka, Robert G.,  
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5. Komarechka, Robert G.,  
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- 6.. Komarechka, Robert G.,  
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7. . Komarechka, Robert G.,  
2013: Wavy Lake Silica Property – Claim Geo-referencing
8. Spaven, H. R.,  
1966: Granite Tectonics in part of Eden Township, Sudbury District, Ontario; unpublished Msc. thesis, McMaster University, Hamilton, Ontario.

## CERTIFICATE

I, Robert G. Komarechka, of the City of Sudbury, in the Province of Ontario hereby certify as follows:

1. That I am a consulting geologist currently residing in Sudbury.
2. That I am a graduate, BSc. Geology major, of Laurentian University of Sudbury, Ontario, a registered professional geologist in the Province of Alberta affiliated with the Canadian Council of Professional Engineers, and I have been practicing my profession for 30 years.
3. That I have an interest in the properties at this time.
4. That this report is based on field observations and assays undertaken during the summer and fall of 2014.



Robert G. Komarechka P.Geol.

Dated at Sudbury, Ontario, this 11<sup>th</sup> day of December, 2014.

## Photos



Photo1: Eden Lake Granite looking eastward above cliff edge showing the topographical height along the western side of claim 4252053. Note the later minor felsite dikelet across the outcrop.



Photo 2: Showing an area of sound Eden Lake Granite south of the northern boundary of claim 4254053.





Photo 3: Close up of the same area of Photo 2. Note the rock to the top left of Rusty (the dog). This surface sample was later sawcut and shown in photos 5 & 6.



Photo 4: Closer view of the area shown in photo 3 above showing uniform rock texture.



Photo 5: Same area as figure 4 close up showing uniform texture.



Figure 6: Sawcut sample of the boulder shown in figure 3. As this sample was exposed to the surface it is expected that the fresher samples would show a less weathered orange colour and a more reddish tone as illustrated in figure 5.



Figure 7: Sawcut sample of the boulder shown in figure 3. This photo shows a side 90° to that in figure 6 and indicates a slight foliation.



Photo 8: Showing a shear along the left side of a grey granite band (possibly a rafted metasedimentary slab)



Photo 9: Showing a vertical late mafic dike cutting the Eden Lake Granite.