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# **SAMPLING PROGRAM**

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## **Assessment Report for G. Mote Dimension Stone Property Legacy Claim S 4271864**

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**Sudbury Mining Division, LaSalle Township, ON, CA**

**UTM: Zone 17, NAD83  
615444m E, 5175791m N**

**September 21, 2018**

Prepared by:

**FUDGE**  
*& Associates*

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## **1.0 Introduction**

This assessment report details the extraction of a test sample from the dimension stone property “Property” and the results of analytical testing sent to AME Materials Engineering. The test sample was retrieved on October 28 and 29, 2017 from legacy mining claim S 4271864 registered 50% each to Gary M. Mote and Glen J. Mote, in Lasalle Township, Sudbury Mining Division. The test sample results were received on July 12, 2018.

The purpose of the testing of the sample to AME was intended to confirm if the bedrock is suitable for use as decorative stone. The material was thought to be similar to stone produced from the nearby quarries operated by Callander Industries and Kafka Granite Glitter in McAuslan Twp. Glen and Gary Mote of Callander, Ontario carried out the hand stripping and sample collection under the direction of the author. The author visited the property on October 29, 2107.

## **2.0 Location and Access**

The Property is in the south west corner of Lasalle Township approximately 1 km east of the Ontario Northland Railroad (O.N.R.), Rail Siding at Diver in the District of Nipissing, Sudbury Mining Division. From North Bay, access is northeast on Highway 63 then north via the McConnell Lake Road for 27 km, then westerly for 18 km through the abandoned Diver Air strip to mining claim S 427 1863. Post # 1 of the legacy claim is located 150 meters north of the access road at Zone 17 NAD83, 615444m Easting, 5175793m Northing.

## **3.0 Claim Status**

The Property consists of 1 legacy claim totaling 2 claims units in the south west corner of Lasalle Township approximately 1 km east of the O.N.R. siding at Diver. The claims are recorded as follows, held by Gary M. Mote and Glen J. Mote. The 2 claim units overlap Mining Lease 373723 registered to G Mote.

On 2018-APR-10 the legacy claim was converted to cell claim(s) 123989, 123990, 291860, 331071, 331072.

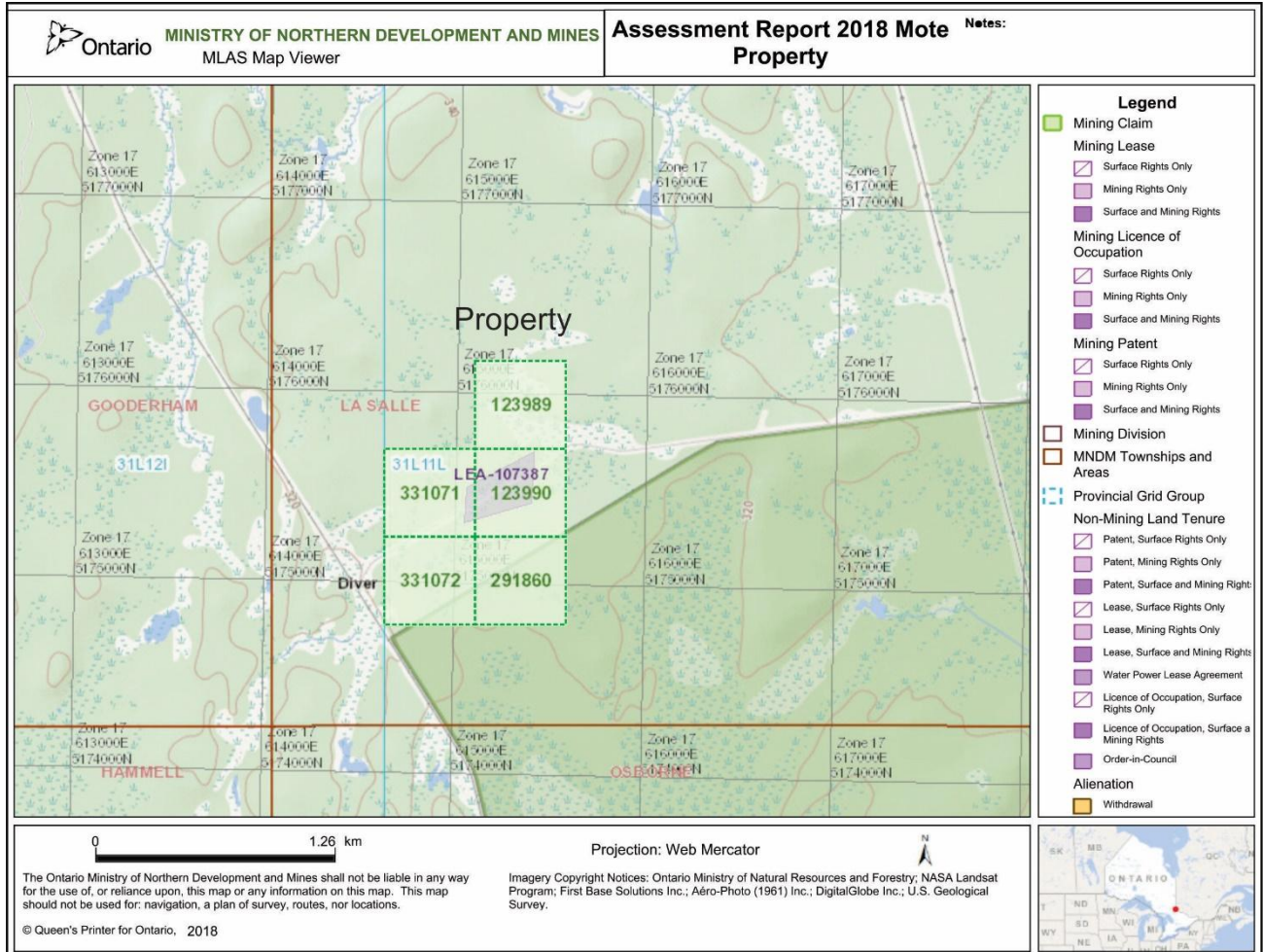
The anniversary date of the cell claim(s) 123989, 123990, 291860, 331071, 331072 is December 15, 2018.

As of the submission date of this report the claims is in good standing.

## 4.0 Property Location Map







## 5.0 Personnel

Gary and Glen Mote (Callander, Ontario), along with D. Fudge (North Bay, Ontario) carried out the sampling on October 28<sup>th</sup> and 29<sup>th</sup>, 2017.

## 6.0 Previous Work

The general area has been the subject of intermittent exploration focused on development of decorative stone since the early 1970. Most local work has focused on exploration and production from McLaren's Bay Mica and Callander Industries located 2 km to the North West along strike. Glen and Gary Mote of Callander, Ontario carried out the hand stripping and sample collection under the direction of the author. The author visited the property on October 28, 2017. There is no record of prior work on the subject claims.

## 7.0 General Geology

O.G.S. Map 2361 shows mining Claim S 4226738 to be underlain by quartzo- feldspathic gneiss. An unpublished report in 1991 by E. Bassa, Staff Geologist with the Ministry of Northern Development and Mines, Titled North Bay – Thorne Building Stone Inventory described the area as:

“The rocks metamorphosed to a lower amphibolite facies and contain appreciable amounts of mica. In places mica rich bands impart a strong somewhat variable foliation in the rock. This foliation commonly acts as a plane of weakness for splitting the stone. Grain size within these rocks ranges from microscopic flakes to larger 0.8 cm flakes adjacent to crosscutting quartz veins. Other minerals include common subhedral quartz and feldspar grains that range in size from 0.1 cm to 0.4 cm. micaceous quartzite vary both in colour and mica content. Quartz veins occur in abundance and commonly contain coarse specular hematite. These rocks have been identified as middle Precambrian (Grenville) muscovite and quartzose gneisses derived from orthoquartzites and sub-arkose and aluminous clay stones...”

Other minerals observed include biotite, feldspar and minor amounts of hematite. The stone is characterized by a distinctive olive green colour. Quality determining properties include; colour, abundance of mica, grain size, uniformity and joint spacing.

## 8.0 Sample Work Program

The sample was taken from an area previously stripped by the Property owners. The sample was acquired by physical method using sledge hammers, was carried out on October 28<sup>th</sup> and 29<sup>th</sup>, 2017 under the field direction of D. Fudge. The stripping location was chosen following prospecting in 2015 which located metamorphosed outcropping granites.

Stripped outcrop displayed typical banding although less pronounced than that found in the McLarens Bay Quarry some 2 km north west. Biotite banding impart a variable foliation in the rock. Where observed quartz veins display rolled or boudinized structure to form irregular “clots” up to 10 cm in length. Quartz “clotting” is abundant in places and carries minor amounts of hematite. Where well developed foliation occurs it acts as a plane of weakness for splitting the stone and where absent or less evident, broken rock displays an irregular fracture pattern. The stone is characterized by a distinctive olive green colour or satin black within the biotite rich bands. Color, texture and pattern, and surface finish of the stone are also normal requirements. Another important selection criterion is durability: the time measure of the ability of dimension stone to endure and to maintain its essential and distinctive characteristics of strength, resistance to decay, and appearance. Preliminary testing of important durability characteristics are listed following;

## 9.0 Physical Property Testing

### Abrasion

Abrasion testing measures the relative quality and durability of mineral aggregates when subjected to abrasion and impact. There are two popular tests widely used today: The Los Angeles (L.A.) Abrasion Test and the Micro-Deval Test. The values derived from either of these procedures provide quantitative information about the durability of a sample aggregate. Micro-Deval Abrasion testing was completed on both the coarse and fine fractions on the Lasalle Township Sample

### **Plastic Fines;**

Plasticity is demonstrated by the ability of a material to be rolled into a thread with a diameter of 3 mm, reformed, and re-rolled into a thread with a diameter of 3 mm.

Fine materials in aggregate that exhibit plasticity are detrimental to the performance of compacted granular base and sub-base. When plastic fines coat larger aggregate particles, they may interfere with the bond in both hot mix asphalt and hydraulic cement concrete. This test may be used as an integral part of the material specification to qualitatively assess the presence of plastic fines in aggregates. While less specific for dimension stone applications it is indicative of potential overall performance and durability.

The Tile Council of North America lists specific tests which should be performed on future samples; and include but not limited to;

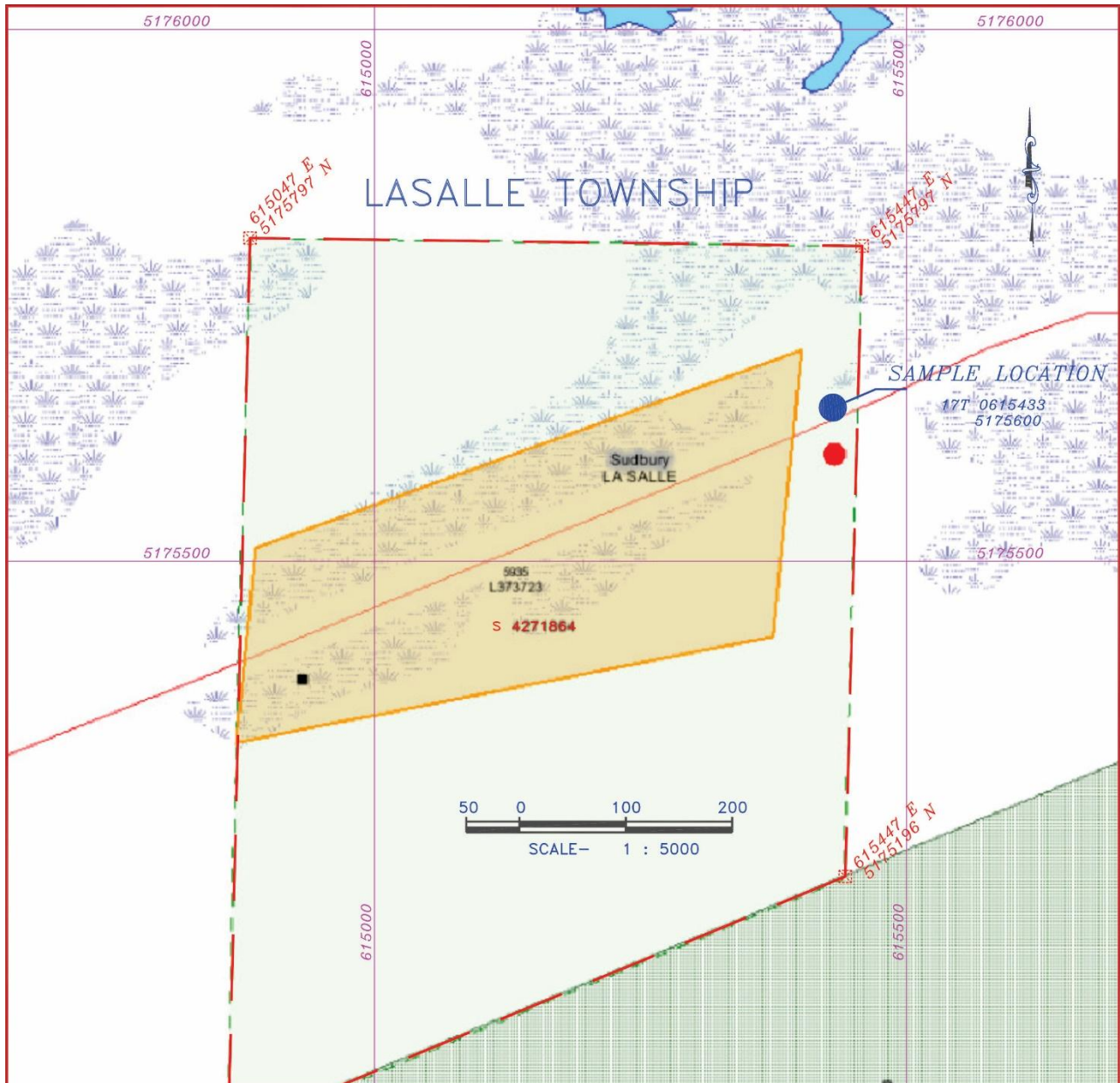
- **ASTM C170\* Compressive Strength**
- **ASTM C482 (Modified) Bond Strength**
- **ASTM C666 High Cycle Freeze/Thaw Resistance**





Photo 1 –Stripped Outcrop

LASALLE SAMPLE LOCATION PLAN



SOURCE :  
ONTARIO CLAIMaps III

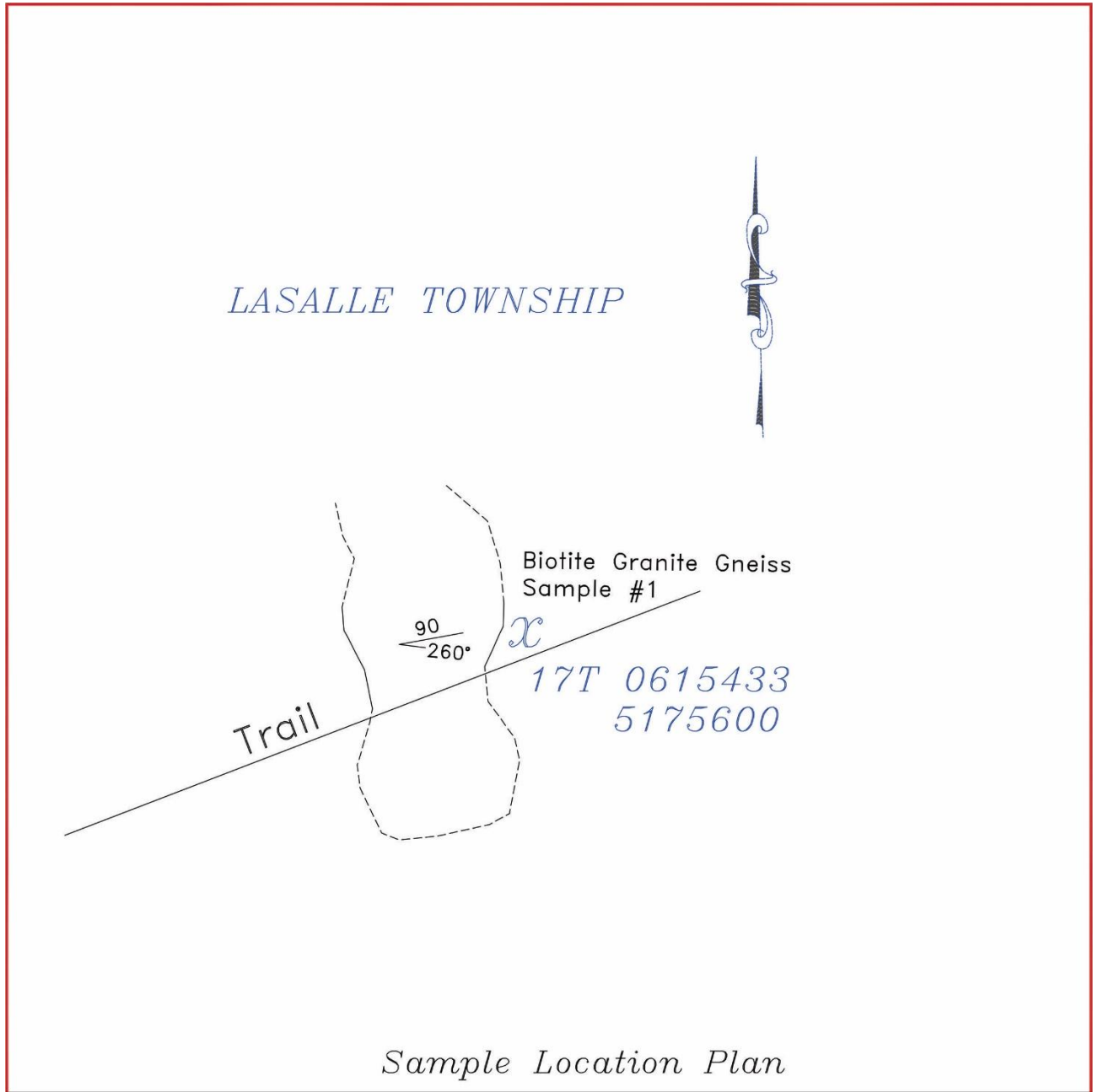
*Sample Location Plan*

Fig. 1

Owner:	Gary Mote & Glen Mote P.O. BOX 121 CALLANDER, ON Canada POH 1H0
MINING CLAIM S4271864 LASALLE TOWNSHIP SUDBURY MINING DISTRICT	
Drawn by: P.Chandler	Checked by: D. T. Fudge
Date: Sept. 11, 2015	Scale: AS SHOWN



LASALLE SAMPLE DETAILS



Sample Location Plan

Fig. 2

Owner:	Gary Mote & Glen Mote P.O. BOX 121 CALLANDER, ON Canada POH 1H0
MINING CLAIM S4271864 LASALLE TOWNSHIP SUDBURY MINING DISTRICT	
Drawn by: P.Chandler	Checked by: D. T. Fudge
Date: Sept. 11, 2015	Scale: AS SHOWN

## 9.0 AME Analytical Results



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Mr. Don Fudge, President  
Fudge & Associates  
160 Bryan Road  
North Bay, Ontario  
P1C 1C2

July 12, 2018

AME Project No.: 30232.002

**Re: Aggregate Testing Results  
Blast Rock, Lasalle  
Lab No.: MG-29627**

Further to the receipt of one (1) blast rock sample in our Laboratory, testing has been completed as requested for the following physical properties:

<b>Test Standard</b>	<b>Description</b>
LS-618	Micro Deval Abrasion of Coarse Aggregate
LS-619	Micro Deval Abrasion of Fine Aggregate
LS-631	Presence of Plastic Fines in Aggregate

The aggregate was tested in accordance with the applicable standards outlined in the "MTO Laboratory Testing Manual". The Reference specifications are OPSS.PROV1010. The test results and applicable specifications are presented in the following Table 1.

Laboratory Aggregate Testing  
Blast Rock, Lasalle  
Project No. 30232.002  
July 12, 2018

Page No. 2

**Table 1**  
**Result Summary Blast Rock, Lasalle**

Sample Number	Description / Test Method	Test Result	Specifications for Granular A
MG-29627	Micro Deval Coarse / LS-618	32.3% Loss * (Control 12.9%)	Maximum 25% Loss
MG-29627	Micro Deval Fine / LS-619	6.6% Loss (Control 17.8%)	Maximum 30% Loss
MG-29627	Plastic Fines / LS-631	NP (Non-Plastic)	Non-Plastic

Specifications source: OPSS 1010, "Aggregates for Base, Subbase, Select Subgrade and Backfill Material" April 2013.

\* Out of Specifications

We trust this report contains the information you require. If you have any questions, please do not hesitate to contact this office.

Yours truly,

**AME – Materials Engineering**



Jessica Yao, P.Eng.  
Laboratory Supervisor



Scott Crowley, C.E.T  
Manager, Quality and Materials Testing





## 10.0 Conclusions and Recommendations

The abundance of green mica and black biotite both which “sparkle” when exposed to sunlight should make it an attractive dimension or landscape product: the abundant mica however is likely responsible for “out of specification” Micro Deval result of 32.3 % vs 25% maximum. Exterior applications without added sealers could be problematic. Further testing in line with The Tile Council of North America Standards should be performed; in particular ASTM C666 High Cycle Freeze/Thaw Resistance is recommended.

As a next step toward commercial production, a bulk sample of up to 1000 tonnes should be acquired by cutting rough blocks and further processed into marketable dimension products; residual stone could be crushed for landscape markets or resin/stone composite products. Recovery of residual mica from crusher fines should be investigated as a potential marketable by-product.

CERTIFICATION

I, Donald Thomas Fudge of North Bay, Ontario hereby certify that:

1. I hold a three-year Business Administration Diploma from Cambrian College of Applied Arts, North Bay, Ontario obtained in 1969,
2. That I am a Prospector and have been practicing my profession since 1975 in Ontario, Quebec, Newfoundland, Manitoba, Alberta, British Columbia, The United States of America, Jamaica, Guyana and China.
3. That I have been employed directly by Teck Corporation, Metallgesellschaft Canada Limited, and the Ontario Ministry of Natural Resources and have been self-employed with Fudge & Associates since 1984.
4. I have based my conclusions and recommendations contained in this report on knowledge of the area, my previous experience and on the results of the fieldwork conducted on the property.
5. That I hold no interest in the property either directly or indirectly.

Dated this 21<sup>st</sup> day of September 2018  
At North Bay Ontario

***Don T. Fudge***

## **Appendix “A” - Cost Summary**