Microdiamond Extraction Results

On the

Kon Kimberlite Property

Gillies Limit

Larder Lake Mining Division

By

Alan Kon

November 28, 2013

Introduction

This report is on a 25.0 Kg Kimberlite sample obtained for Gary Grabowski, District Geologist, Kirkland Lake MNDM on June 5th, 2013 and submission to SGS Lakefield for Microdiamond Extraction using caustic fusion.

The full report and results by SGS can be viewed in Appendix I

Al Kon visited the property on June 4, 2013 to make sure there was safe access and to prep the site and again on June 5th, 2013 with Gary Grabowski.

PROPERTY LOCATION AND ACCESS

The claims can be accessed by the Hound Chutes Road, an Ontario Hydro access road that departs south west from the town of Cobalt and follows the eastern side of the Montreal River. The claims are within one Km of the Hound Chutes hydro power dam and the Ragged Chutes dam.

TOPOGRAPHY AND VEGETATION

Maximum relief on the property is approximately 25 metres. Topography is generally rolling with local steep ledges and cliffs. Giroux Creek flows south and westward through the area and into the Montreal River.
Overburden is relatively shallow over the north and south parts of the claims but of unknown depth in the centre. Vegetation consists mainly of mature mixed forest and locally dense underbrush.

REGIONAL AND PROPERTY GEOLOGY

The claims are located in the southern part of the Cobalt mining camp. Regionally the area is underlain by an N-S trending trough of Huronian metasedimentary rocks (Cobalt Group, Gowganda Formation, Coleman Member - conglomerates) that cover a complex Archean mafic volcanic terrain. In the cobalt area the Archean volcanic and overlying Huronian sediments have been intruded by extensive Nipissing aged diabase sills and dykes. There is a strong possibility that the Coleman sediments in this area are underlain by a Nipissing sill. The youngest known consolidated rocks in the area are kimberlite rocks.

In 2012 Al Kon discovered a hypabyssal kimberlite dike on the property, see reports from May 17th 2012 & November 17th 2012 by Al Kon.

Samples collected by Gary Gabrowski District Geologist in 2012 were submitted to the OGS lab in Sudbury and were confirmed to be a kimberlite (OGS open file report 6287 page 12).

Recommendations

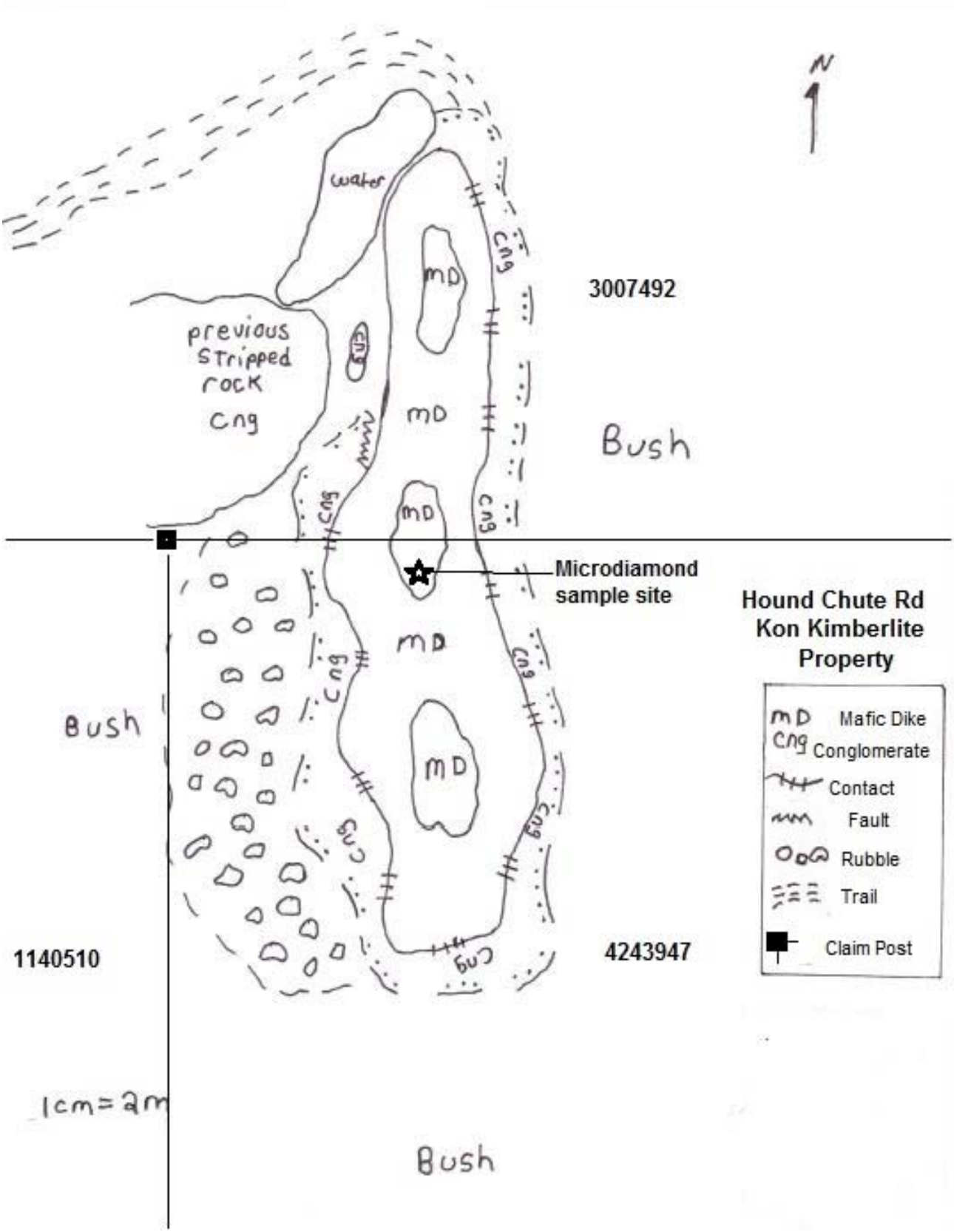
Although no microdiamonds were recovered from the sample, garnets and chromites were observed.

Further sampling will no doubt be undertaken in the future, possibly as early as the spring of 2014.

Several more low Mag anomalies thought to be associated with the kimberlite dike from where the sample was taken are in close proximity and will have to be tested as well.

Respectfully submitted by,

Alan Kon


N
water
Cng
MD
3007492
previous
Stripped
rock
Cng
Bush
Microdiamond
sample site
Hound Chute Rd
Kon Kimberlite
Property
MD Mafic Dike
Cng Conglomerate
Contact
Fault
Rubble
Trail
Claim Post
Bush
1140510
4243947
1cm=2m
Bush

Appendix I

MICRODIAMOND EXTRACTION,

SELECTION AND DESCRIPTION

prepared for

ONTARIO GEOLOGICAL SURVEY

LIMS#MI0002-SEP13 – Final Report
October 15, 2013

SGS Canada Inc. | P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0
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Member of the SGS Group (SGS SA)

Summary Report

Microdiamond extraction, selection and description was performed for one sample, identified as GG13600. The caustic dissolution residue was collected on a 75 μm (200 mesh) screen, then submitted for final screening and diamond selection. A detailed description of the microdiamond extraction process, as well as a generalized processing flow sheet, may be found in Appendix A.

No diamonds were recovered in this sample. Eclogitic garnet and chromite were noted in the sample residue. All results are reported as a Certificate of Analysis in Appendix B. Brief descriptions of the caustic fusion residues are presented in Appendix C.

ISO accredited standard operating procedures are in place for microdiamond extraction, selection and description. Any deviation from these operational procedures or unusual events that occurred during processing are noted in the non-conformance report in Appendix D. We have no report of any non-conformance issues during the processing of this sample.

As part of our on-going commitment to providing a high quality service and to monitor the recovery efficiency of microdiamonds in each kiln pot, we put synthethic diamond spikes in each sample and recover these syndites at the end of the process during microdiamond selection. The recovery of coarse, 500 μm spikes in this group of samples was 100% and the recovery of relatively fine, 180 μm spikes was also 100%. A detailed table of spike recovery is presented in Appendix A.

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Stephanie Downing, M.Sc.
Manager, Advanced Mineralogy Facility

Sample Processing by: Rick Wittekoek and Andrew Payne
Diamond Selection by: Tracy Gill and Maria Mezei
Report Preparation by: Kim Gibbs
Report Review by: Hugh de Souza and Stephanie Downing

Appendix A

Explanation of Microdiamond Extraction and Selection Procedure and Flowsheet

DIAMOND EXTRACTION BY CAUSTIC DISSOLUTION

1. Introduction

Caustic dissolution of exploration samples efficiently produces a concentrate from which diamonds can readily be extracted during microscopic examination. The process takes advantage of diamond's high resistance to caustic soda (NaOH), eliminating diamond size reduction and loss that often occurs during extraction procedures that rely on crushing and attrition milling.

2. Procedure

The samples are processed according to the attached flowsheet. Very few minerals survive the harsh chemical attack, therefore weight reductions commonly exceed 99% of the initial sample weight.

As-received samples are divided into equally sized charges of less than 8 kg. Smaller charge sizes are necessary if the sample contains a high proportion of carbonate minerals, which are vigorously reactive with NaOH (the carbonate content is evaluated by an acid test prior to charge preparation). If a high proportion of the sample is composed of fragments larger than 8 cm, simple breakage, crushing or attrition milling may be required for an effective dissolution, or the length of the dissolution process may be increased. Client consultation and approval is necessary before any size reduction of the sample is initiated.

After digestion in molten caustic soda, the sample is poured onto a large-diameter 106 μm (150 mesh) screen. The +106 μm residue is liberated from the NaOH by washing the sample in a series of water and acid leach (HCl) baths. Once all of the NaOH is dissolved and removed, the concentrate is dried and screened on a 3.35 mm screen to remove undigested material. The undigested material is examined microscopically by a mineralogist. Where +3.35 mm remains, or if the material consists of possible diamondiferous rock fragments, further digestion may be required. The final caustic fusion residue is sent for magnetic separation and screening.

The magnetically characterised residue is then submitted for microscopic examination and diamond selection. In addition to diamonds, the residue may contain partially undigested indicator minerals, colourless to opaque spinel, garnet, ilmenite, graphite, moissanite, zircon and kyanite. Each of the magnetic fractions is examined at a magnification of 40x using a binocular microscope. Grains of questionable mineralogy are examined using a scanning electron microscope equipped with an energy

dispersive spectral (SEM-EDS) analyser. Although each magnetically characterised fraction is examined, particular emphasis is given to the diamagnetic portion.

The X, Y and Z dimensions of selected microdiamonds are measured in millimetres. Macrodiamonds are weighed individually while microdiamonds are weighed in groups by size fraction, with the milligram weight, in each case, converted to carats. The colour, clarity and morphology of each diamond are determined and all observations reported in a Certificate of Analysis. Synthetic diamonds released into a sample by diamond drill bits are selected and reported as "syndites" on the diamond description sheet.

3. Quality Control

Routine quality control tests are utilized to evaluate the efficiency of the caustic dissolution processing technique, by spiking client samples with two sizes (500 μm mesh and 180 μm) of synthetic diamonds (easily identifiable, colour treated diamond crystals). Recovery of the diamond spikes typically ranges from 97 to 100%, and for 2010 was 99% for the coarse spikes and 96% for the fine spikes. Spike recoveries for sample GG13600 are listed in Table 1 below.

Table 1: Spike Recovery (%)

Sample ID	Coarse Spike Recovery	Fine Spike Recovery
GG13600	100	100

Each caustic dissolution residue is picked twice by separate diamond pickers. Questionable grains are examined by SEM-EDS for verification.

Every effort is made at each stage of sample handling during caustic dissolution, residue preparation and diamond picking to eliminate the possibility of contamination. These steps include:

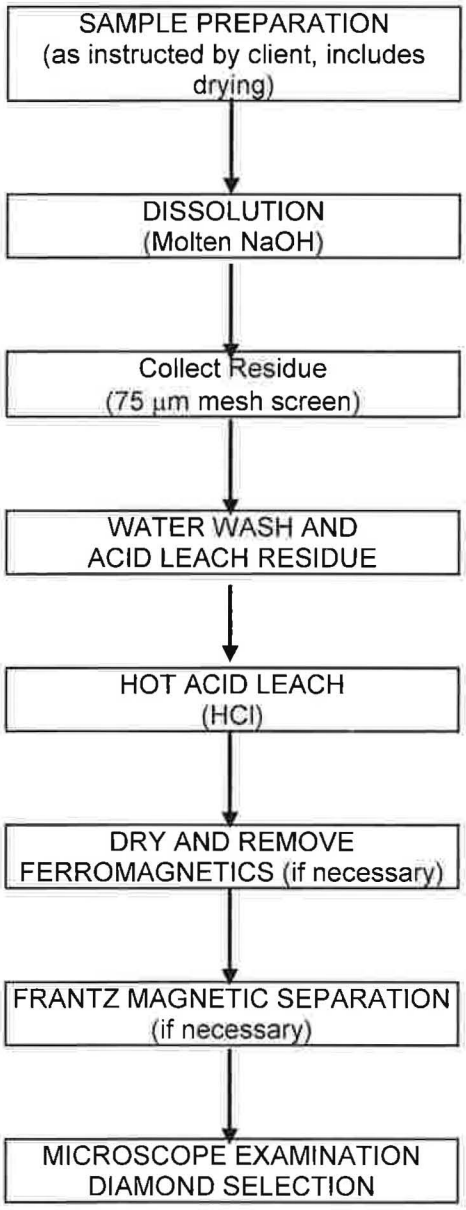
- A rigorous sample tracking procedure.
- Dedicated screens and equipment for each sample during sample processing.
- Replacement of screens between each sample after pouring caustic soda.
- Thorough washing and scrubbing of all sample containers.
- Thorough cleaning of equipment used to prepare caustic residues between each processed sample.

- Sandblasting of each kiln pot between clients projects to ensure the removal of any microdiamonds or indicator minerals.

Customized flowsheets for sample processing utilising caustic dissolution and other sample preparation techniques (magnetic, gravity, flotation, acid leaching, etc.) can be developed, in consultation with the client, to meet specialised requirements.

SGS Canada Inc. is not responsible for the determination of the origin, quality or valuation of any diamonds recovered unless otherwise instructed by the client.

Caustic Dissolution for Microdiamond Recovery



Appendix B

Certificate of Analysis

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2019 FAX: 705-652-3123

Ontario Geological Survey
Attn : Gary Gabrowski

933 Ramsey Lake Road, 3rd Floor
Sudbury, Ontario, P3E 6B5
Canada

Fax :705-670-5905

Phone: 705-670-5950/(705) 670-5768
Fax:705-670-5905

Lakefield 11-October-2013

Date Rec. : 17 September 2013
LR. Ref. : MI0002-SEP13
Project : Custom Mineralogy

CERTIFICATE OF ANALYSIS

Analysis	1: GG13600
*Caustic Wt [kg]	25.00
*Dia [#]	0
*Dia [(ct)]	0
+4.75 mm [#]	0
-4.75 +3.35 mm [#]	0
-3.35 +2.36 mm [#]	0
-2.36 +1.70 mm [#]	0
-1.70 +1.18 mm [#]	0
-1.18 +0.85 mm [#]	0
-850 +600 um [#]	0
-600 +425 um [#]	0
-425 +300 um [#]	0
-300 +212 um [#]	0
-212 +150 um [#]	0
-150 +106 um [#]	0
-106 +75 um [#]	0
*Total [pours]	3

Maria Mezei, G.G. (GIA)
Diamond Selection Specialist

OnLine LIMS

00000000029

Appendix C

Caustic Fusion Residue Descriptions

SGS Minerals Services
185 Concession St., Box 4300
Lakefield, Ontario
K0L 2H0, CANADA

Tel: (705) 652-2112
Fax: (705) 652-3123

DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **Custom Mineralogy**
Client: **Ontario Geological Survey**

Date: October 11, 2013
LIMS No. **MI0002-SEP13**
Sample No. **GG13600**

Size	Fraction	Dissolution Residue Description
+3.35 mm	Ferromagnetic Non-mag	Not applicable
-3.35 mm + 850 µm	Ferromagnetic Non-mag	Oxides and silicates
+75 µm	Ferromagnetic Mag	Not applicable
-850 +75 µm	Paramagnetic Mag (0.1 amp)	Not applicable
-850 +75 µm	Paramagnetic Mag (0.3 amp)	Not applicable
-850 +75 µm	Diamagnetic Mag (0.5 amp)	Not applicable
-850 +75 µm	Diamagnetic Non-mag (0.5 amp)	Not applicable

Sample Weight: 25.00 kg **Total Weight (carats)*: 0.000**
Number of Syndites: 0 **Number of Diamonds: 0**

* Total Weight (carats) was calculated from mg weights. All reported mg weights are measured to within 0.005 mg.

Selection and Description
Maria Mezei
Diamond Selection Specialist

Quality Control
Tracy Gill
Mineralogy Technologist

Note:
SGS Minerals Services is not responsible for the determination of the origin, quality or value of any diamonds recovered. Each +600 µm stone was individually weighed, and the -600 µm stones were weighed in groups. Stone dimensions are limited to accuracy of three dimensional measurements of irregular shapes using a petrographic microscope.

Accredited by the Standards Council of Canada to the ISO/IEC Guide 25 standard for specific registered tests.

Appendix D

Non-Conformance Report

Non-Conformance Report

SGS Minerals Services is an ISO 17025 accredited facility. Standard operating procedures are in place for all parts of this procedure, including diamond extraction by caustic dissolution and diamond selection and identification. There were no discrepancies from these operating procedures during the processing and examination of sample GG13600.

595000E 600000E 605000E

5240000N

5235000N

BLOCK 12 Kelvin Lake BLOCK 18 BLOCK 19 BLOCK 20 Slate Lake 4654 BLOCK 28 BLOCK 27 BLOCK 26 BLOCK 25 BLOCK 24 4272027 BLOCK 23 BLOCK 22 BLOCK 15 BLOCK 14 BLOCK 17 BLOCK 16 4278538 1247794 1240229 4272032 T19489 T19490 T19573 4272035 4272036 4272025 3004219 4267284 4272009 4272026 4272041 4272040 Darwin Lake Ice Chisel Lake T19613 T19612 Schumann Lake Frog Lake Chopin Lake Longfellow Lake Suddie Lake Saltlick Lake Joachim Lake Borden Lake Hidden Lake Divide Lake Expanse Lake Edison Lake Pine Lake Blueberry Lake Hound Chute Lake Hearst Lake Johnson Lake Roosevelt Lake Rousseau Lake Bryan Lake Bill Lake Rede Lake Larder Lake LORRAIN GILLIES LIMIT W.P.L.A. 60 W-L-58/96 W.P.L.A. NO 43 W-L-56/96 W-ONT-63/96 WP2008-329 WP2008-330 WP2008-196 WP2008-333 4273067 4273068 3007492 4243947 1140510 4262043 4272029 4272028 4271882 4271880 4272030 4271883 4271885 4271884 T19467 T19607 4264312 4264311 4263927 LOT 1, CON 7 4266659 LOT 2, CON 7 LOT 3, CON 7 4266660 LOT 1, CON 6 LOT 2, CON 6 LOT 3, CON 6 4266662 LOT 1, CON 5 LOT 2, CON 5 LOT 3, CON 5 LOT 1, CON 4 LOT 2, CON 4 LOT 3, CON 4 LOT 4, CON 4 LOT 2, CON 3 LOT 1, CON 3 4263905 LOT 3, CON 3 4263903 LOT 4, CON 3 LOT 3, CON 2 LOT 2, CON 2 LOT 1, CON 2 LOT 2, CON 1 4268297 4268296 BLOCK 49 3007435 BLOCK 48 3007436 BLOCK 47 BLOCK 46 BLOCK 45 BLOCK 44 BLOCK 43 BLOCK 59 3007439 BLOCK 58 4243548 BLOCK 57 4243547 BLOCK 56 BLOCK 55 BLOCK 54 BLOCK 53 BLOCK 66 BLOCK 65 BLOCK 64 BLOCK 63 BLOCK 62 BLOCK 67 3011794 3011807 BLOCK 68 4704 4709 BLOCK 76 3018980 3018979 BLOCK 75 BLOCK 74 BLOCK 73 BLOCK 72 BLOCK 71 3003902 BLOCK 38 3007432 BLOCK 37 3007433 BLOCK 36 BLOCK 35 BLOCK 34 BLOCK 33 BLOCK 32 T19989 T19991 T19990 T19987 T19988 T19801 T19800 T19799 T19794 T19793 T19795

UTM Zone 17
5000m grid