

GM 62096

KIMBERLITE INDICATOR MINERAL CONCENTRATION, SELECTION AND ANALYSIS AND DIAMOND EXTRACTION
SELECTION AND DESCRIPTION

Documents complémentaires

Additional Files



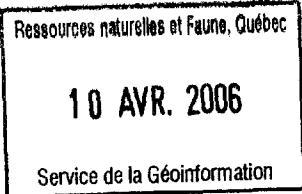
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**Énergie et Ressources
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Québec



SGS Minerals Services

An Investigation into

KIMBERLITE INDICATOR MINERAL CONCENTRATION, SELECTION AND ANALYSIS AND DIAMOND EXTRACTION SELECTION AND DESCRIPTION

prepared for

Robert Coté

8901-486 LIMS#MIMI1001-OCT05, MI1001-NOV05 and MI0008-NOV05

REÇU AU MRN

16 FEV. 2006

CENTRE DE SERVICES DES MINES

NOTE:

This report refers to the samples as received.

The practice of this Company in issuing reports of this nature is to require the recipient not to publish the report or any part thereof without the written consent of SGS Minerals Services.

SGS Minerals Services

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December 20, 2005

589905

Summary

One sample, identified as Coté-1 was submitted for till sample processing and kimberlite indicator mineral selection. Following indicator mineral selection, the samples were submitted for diamond extraction, selection and description by caustic dissolution. All recovered indicator minerals were submitted for analysis by electron microprobe.

Method

The sample was wet screened at 20 and 60 mesh. The -60 mesh material was dried and stored. The working fraction, -20+60 mesh, of sample Coté-1 was submitted for heavy liquid separation (Methylene iodide @ 3.1 g/cc). The float fraction was dried, weighed and stored. The sink fraction was submitted for by dry screening (35 mesh) and magnetic separation (hand-magnet and Frantz electromagnetic separator).

The mineral concentrates were observed with a binocular microscope for the selection of diamond indicator mineral species. A generalised flowsheet for this procedure is given in Appendix A.

Following kimberlite indicator mineral selection, the mineral concentrate was recombined with the HLS float material and -60 mesh material and submitted for caustic dissolution. The caustic dissolution residue was collected on a 150 mesh (105 μm) screen, then submitted for Frantz magnetic separation to isolate the microdiamonds in the non-paramagnetic fraction. A detailed description of the microdiamond extraction process, as well as a generalized processing flow sheet, may be found in Appendix B.

As part of our on-going commitment to providing a high quality service and to monitor the recovery efficiency of sample material in each kiln pot, we put spikes in each sample and recovered these spikes at the end of the process during microdiamond selection. The recovery of coarse, 35 mesh spikes in this group of samples was 100% and the recovery of relatively fine, 80 mesh spikes was also 100%.

16 FEB 2006

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Results

The results of kimberlite indicator mineral selection are given in Appendix C. Electron microprobe analysis data is presented in Appendix D. All diamond selection results are reported as a Certificate of Analysis in Appendix E.

A review of the selection results shows 25 olivine grains from the -20+35 mesh fraction and one clinopyroxene grain from the -35+60 mesh fraction of Coté-1 were recovered. No diamonds were observed in this sample.

SGS Minerals Services
December 20, 2005

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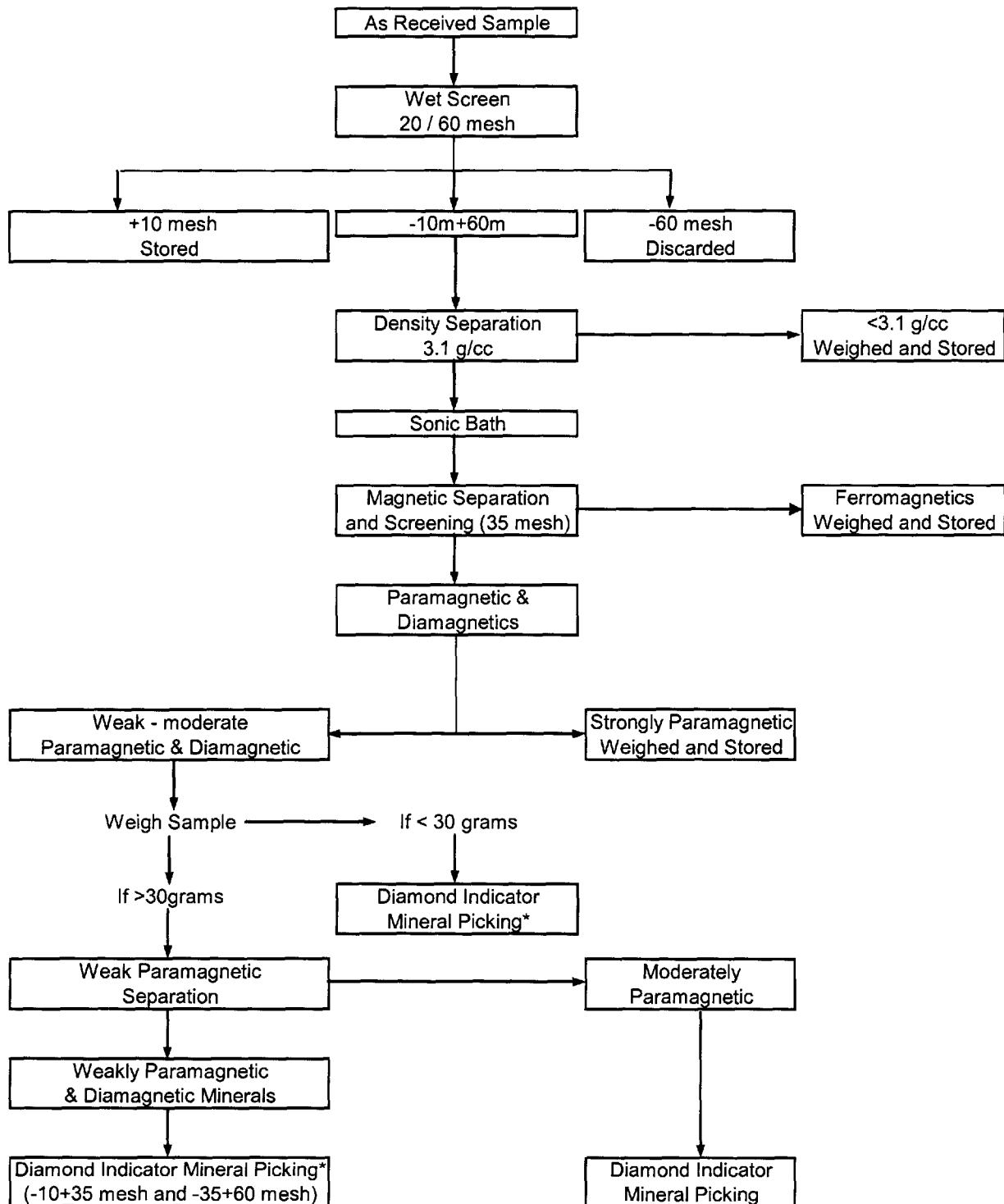
Mineral Selection: Teresa Mailith, Andrei Filippov, Tracy Gill and Elena Valeyeva

Electron Microprobe Analysis: Oleg Valeyev

APPENDIX A

KIMBERLITE INDICATOR MINERAL EXTRACTION FLOWSHEET

Kimberlite Indicator Mineral Extraction Flowsheet From Rock



*Primary diamond indicator mineral fractions

APPENDIX B

EXPLANATION OF MICRODIAMOND EXTRACTION AND SELECTION PROCEDURE AND FLOWSHEET

DIAMOND EXTRACTION BY CAUSTIC DISSOLUTION

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 property of 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.

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 150 mesh (100 μm) screen. The + 150 mesh 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 6 mesh screen to remove undigested material. The undigested material is examined microscopically by a mineralogist. If a significant amount of +6 mesh remains, or if the material consists of possible diamondiferous rock fragments, further digestion may be required. If the undigested material is of insignificant size or not considered as a possible source of diamonds, the -6 mesh residue is further processed by a two (possibly three if the residue is large) stage magnetic separation procedure utilising a permanent magnet and a Frantz Barrier Magnetic Separator.

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 of 20 or 30, 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.

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 (35 mesh and 80 mesh) of synthetic diamonds (easily identifiable, colour treated diamond fragments. Recovery of the diamond spikes typically ranges from 97 to 100%, and for 2004 was 91.3%. Further, 2002 statistics showed that an average of 1.18 indicator mineral grains (73% of which were oxides, 27% silicates) were carried over into the caustic soda blanks run between different client's samples.

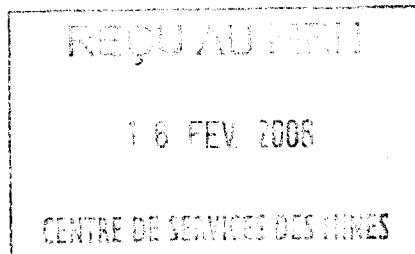
Each caustic dissolution residue is picked twice by separate diamond pickers. Questionable grains are examined by SEM-EDS for verification.

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:

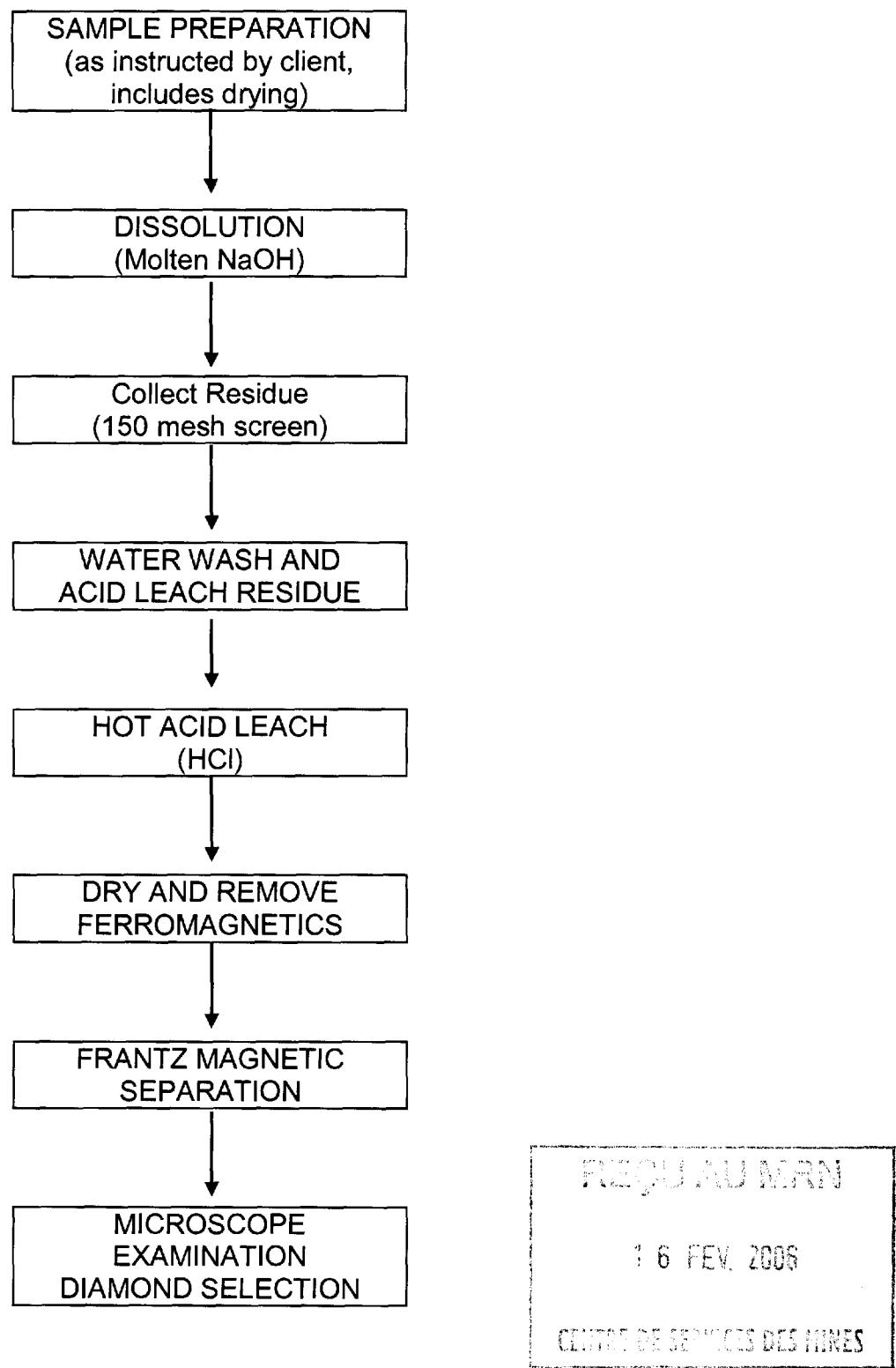
- A rigorous sample tracking procedure.
- Dedicated screens and equipment for each sample during sample processing.
- Replacement of screens between each sample after pouring caustic soda.
- Thorough washing and scrubbing of all sample containers.
- Thorough cleaning of equipment used to prepare caustic 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 Lakefield Research Limited is not responsible for the determination of the origin, quality or valuation of any diamonds recovered unless otherwise instructed by the client.

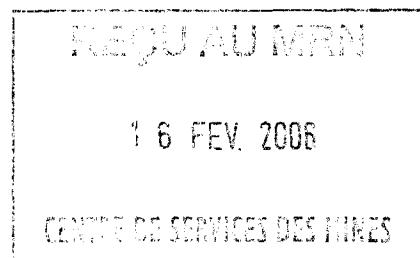


Caustic Dissolution for Microdiamond Recovery



APPENDIX C

RESULTS OF KIMBERLITE INDICATOR MINERAL SELECTION





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CERTIFICATE OF ANALYSIS

Project: 8901-486

Client: Robert Côté

Date: October 27, 2005

LIMS No: MI1001-OCT05

Size Fraction			KIMBERLITE INDICATOR MINERALS										INITIALS				
-20 +35 mesh			PRP		ECL		CPX		ILM		CHR		OPX		OLI		
No.	Sample ID	Sink Weight (g)	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	
1	Cote-1	4.32	0	-	0	-	0	-	0	-	0	-	0	-	25+	-	AF -
2	Cote-1 QC	0.01	0	-	0	-	0	-	0	-	0	-	0	-	0	-	AF -

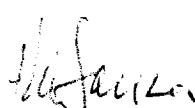
Size Fraction			KIMBERLITE INDICATOR MINERALS										INITIALS				
-35 +60 mesh			PRP		ECL		CPX		ILM		CHR		OPX		OLI		
No.	Sample ID	Sink Weight (g)	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	Pick 1	QC Pick	
1	Cote-1	11.16	0	-	0	-	1	-	0	-	0	-	0	-	-	-	AF -
2	Cote-1 QC	0.13	0	-	0	-	0	-	0	-	0	-	0	-	0	-	AF -

Note: The selected grains must be chemically analysed to classify the minerals as diamond indicators.

MINERALS

PRP PYROPE GARNET
 ECL ECLOGITIC GARNET
 CPX CLINOPYROXENE
 ILM ILMENITE

CHR CHROMITE
 OPX ORTHOPYROXENE
 OLI OLIVINE


 Hugh DeSouza, Ph.D, P.Geo.
 Group Leader - Diamond Exploration Services

APPENDIX D
ELECTRON MICROPROBE
ANALYSES

REÇU AU MRAI

16 FEV 2006

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Electron Microprobe Operating Conditions Used for Kimberlite Indicator Mineral Analysis

Date: Nov 12, 2005
Instrument: JEOL 733 Superprobe
Conditions:
Accelerating voltage - 15 kV
Cup electron beam - 20 nA
Measuring time for each standard - 20 seconds
Measuring time for each analyzed element - 20 seconds
Peak and background intensities were measured for each element

Phases Studied: 26 Kimberlite Indicator Minerals (KIM) on a single polished section

Standard Reference Materials:

The following natural and synthetic mineral standards from the Smithsonian Institute, SPI Supplies and Institute of Experimental Mineralogy were used for microprobe calibration: magnetite (Fe K α measured with the LiF crystal); rutile (Ti K α measured with the PET crystal); chromite (Cr K α measured with the PET crystal); diopside (Ca K α measured with the PET crystal, Si K α measured with the TAP crystal); rhodonite (Mn K α measured with the PET crystal); pyrope (Mg K α measured with the TAP crystal, Al K α measured with the TAP crystal); willemite (Zn L α measured with the TAP crystal), sanidine (K K α measured with the PET crystal); jadeite (Na K α measured with the TAP crystal), and synthetic NiFe₂O₄ (Ni K α measured with the LiF crystal) and metallic Nb (Nb L α measured with the PET crystal).

QC Schedule:

The following natural and synthetic mineral standards from the Smithsonian Institute and SPI Supplies were used to QC check the microprobe calibration at the beginning, the end and in the course of the KIM analysis. The following standards were checked between the silicate (olivine and clinopyroxene) analyses:

> Magnetite	> Rhodonite
> Pyrope	> Williamite
> Chromite	> Rutile
> Diopside	> Synthetic NiFe ₂ O ₄ Spinel

QA Schedule:

For each silicate KIM grain: Fe, Cr, Mn and Ca compositions were verified with two different WD spectrometers and WD crystals. A comparative analysis was performed using the conventional Excel X-Y-Scattering charts. The average values of element compositions were reported for each DIM grain analysis if no calibration error was revealed for those values during the QA procedure.

DIM QC-QA Schedule: Oxide Weight Percent

	Pt#	SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	MgO	MnO	CaO	Na ₂ O	K ₂ O	NiO	ZnO	Total
Chr-SI3	SRM	n/a	n/a	9.92	60.50	13.04	15.20	0.11	n/a	n/a	n/a	n/a	n/a	98.77
Chr-QC	9000	0.01	0.13	10.09	60.29	13.01	15.25	0.11	0.00	0.00	0.03	0.14	0.00	99.06
Chr-QC	9000	0.00	0.17	10.05	60.62	12.93	15.14	0.12	0.01	0.00	0.01	0.15	0.00	99.20
Chr-QC	9000	0.00	0.13	10.01	60.38	13.06	15.06	0.15	0.01	0.00	0.02	0.15	0.03	99.00
Di-SPI	SRM	55.37	0.08	0.09	n/a	0.05	18.62	0.05	25.73	n/a	n/a	n/a	n/a	99.99
Di-QC	9000	55.51	0.04	0.06	0.00	0.12	18.28	0.07	26.53	0.01	0.03	0.00	0.03	100.66
Di-QC	9002	55.22	0.06	0.08	0.05	0.05	18.10	0.05	25.29	0.02	0.00	0.00	0.03	98.95
Di-QC	9002	55.31	0.06	0.05	0.00	0.04	18.17	0.04	25.44	0.00	0.01	0.04	0.03	99.19
Di-QC	9002	55.52	0.04	0.05	0.01	0.01	18.15	0.00	25.79	0.02	0.00	0.01	0.00	99.59
Mgt-SPI	SRM	n/a	n/a	n/a	n/a	92.89	n/a	n/a	n/a	n/a	n/a	n/a	n/a	92.89
Mgt-QC	9003	0.11	0.10	0.00	0.04	93.03	0.11	0.02	0.02	0.02	0.00	0.00	0.00	93.44
Mgt-QC	9003	0.09	0.06	0.03	0.06	92.81	0.10	0.02	0.00	0.00	0.01	0.04	0.05	93.28
Mgt-QC	9003	0.14	0.09	0.01	0.04	92.91	0.10	0.00	0.00	0.02	0.00	0.01	0.00	93.32
NiSpn-IEM	SRM	n/a	n/a	n/a	n/a	60.99	n/a	n/a	n/a	n/a	31.86	n/a	n/a	92.85
NiSpn-QC	9014	0.55	0.00	0.04	0.01	60.97	0.00	0.00	0.00	0.01	0.00	31.96	0.00	93.54
NiSpn-QC	9016	0.32	0.02	0.00	0.00	60.69	0.04	0.00	0.00	0.00	0.00	31.91	0.00	92.97
NiSpn-QC	9017	0.57	0.02	0.04	0.00	60.74	0.00	0.00	0.00	0.00	0.00	31.89	0.00	93.26
Prp-SI3	SRM	41.46	0.47	23.73	n/a	10.58	18.51	0.28	5.17	n/a	n/a	n/a	n/a	100.20
Prp-QC	9001	41.51	0.40	23.26	0.15	10.21	18.56	0.38	5.21	0.00	0.01	0.01	0.02	99.71
Prp-QC	9001	41.57	0.47	23.43	0.11	10.73	18.64	0.35	5.08	0.00	0.01	0.04	0.00	100.44
Prp-QC	9001	41.42	0.42	23.53	0.07	10.22	18.48	0.28	5.15	0.00	0.03	0.07	0.04	99.71
Rodon-S	SRM	49.98	n/a	n/a	n/a	1.55	0.87	37.66	6.40	n/a	n/a	n/a	7.51	103.97
Rodon-QC	9005	49.37	0.01	0.02	0.01	1.51	0.78	37.68	6.39	0.00	0.00	0.00	7.56	103.33
Rodon-QC	9005	49.73	0.00	0.00	0.00	1.64	0.74	37.45	6.64	0.01	0.00	0.02	7.37	103.60
Rodon-QC	9005	49.45	0.00	0.00	0.00	1.49	0.75	37.71	6.75	0.00	0.00	0.02	7.57	103.74
Rutile-SPI	SRM	n/a	100.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	100.00
Rutile-QC	9004	0.05	100.02	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	100.18
Rutile-QC	9004	0.11	99.99	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.16
Rutile-QC	9004	0.07	99.73	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	99.86
Wilm-S	SRM	28.09	n/a	n/a	n/a	n/a	n/a	4.82	n/a	n/a	n/a	n/a	66.89	99.80
Wilm-QC	9006	28.12	0.00	0.01	0.00	0.07	0.08	4.87	0.01	0.00	0.00	0.00	66.63	99.79
Wilm-QC	9006	27.94	0.00	0.02	0.00	0.02	0.08	4.79	0.00	0.01	0.00	0.02	66.31	99.18
Wilm-QC	9006	27.98	0.00	0.03	0.00	0.04	0.11	4.98	0.02	0.00	0.00	0.03	66.44	99.63

Oxide Weight Percent: Silicate Analysis, 15kV, 20 nA, 500μm, 20 sec

SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	MgO	MnO	CaO	Na ₂ O	K ₂ O	NiO	ZnO	
LOD	0.032	0.026	0.043	0.028	0.050	0.024	0.056	0.026	0.022	0.032	0.058	0.080

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Robert Côté

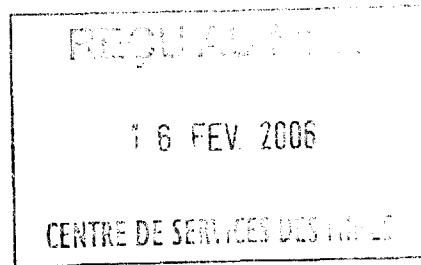
8901-486 LIMS#MI1001-OCT05, MI1001-NOV05 and MI0008-NOV05

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Mineral Type	Number	Size	Grain Numbers	Oxide Weight Percent:												
				SiO ₂	TiO ₂	Al ₂ O ₃	Cr ₂ O ₃	FeO	MgO	MnO	CaO	K ₂ O	Na ₂ O	NiO	ZnO	Total
OL	Cote-1	-20+35 mesh	1	40.66	0.13	0.05	0.13	7.97	50.38	0.14	0.10	0.02	0.05	0.46	0.03	100.12
OL	Cote-1	-20+35 mesh	2	41.10	0.02	0.00	0.01	8.04	49.72	0.11	0.03	0.00	0.01	0.45	0.03	99.52
OL	Cote-1	-20+35 mesh	3	41.27	0.02	0.00	0.03	7.34	50.29	0.10	0.02	0.01	0.00	0.41	0.03	99.51
OL	Cote-1	-20+35 mesh	4	41.39	0.01	0.01	0.04	6.67	50.95	0.13	0.02	0.00	0.01	0.39	0.02	99.66
OL	Cote-1	-20+35 mesh	5	41.02	0.02	0.02	0.07	8.72	49.18	0.09	0.08	0.00	0.01	0.40	0.01	99.61
OL	Cote-1	-20+35 mesh	6	41.16	0.06	0.04	0.12	8.37	50.06	0.15	0.07	0.01	0.02	0.43	0.06	100.56
OL	Cote-1	-20+35 mesh	7	41.01	0.03	0.01	0.08	8.11	49.90	0.11	0.05	0.00	0.02	0.47	0.07	99.87
OL	Cote-1	-20+35 mesh	8	40.76	0.05	0.01	0.06	7.76	50.70	0.13	0.04	0.02	0.04	0.42	0.06	100.04
OL	Cote-1	-20+35 mesh	9	40.91	0.03	0.06	0.08	8.61	50.19	0.17	0.21	0.02	0.01	0.41	0.05	100.75
OL	Cote-1	-20+35 mesh	10	40.93	0.03	0.01	0.02	8.31	49.44	0.08	0.02	0.00	0.02	0.37	0.01	99.23
OL	Cote-1	-20+35 mesh	11	40.80	0.02	0.01	0.07	9.07	48.48	0.13	0.05	0.00	0.02	0.35	0.02	99.02
OL	Cote-1	-20+35 mesh	12	40.55	0.02	0.04	0.09	9.13	48.62	0.12	0.09	0.00	0.01	0.37	0.06	99.12
OL	Cote-1	-20+35 mesh	13	40.90	0.02	0.00	0.02	7.78	50.14	0.11	0.04	0.00	0.02	0.37	0.01	99.42
OL	Cote-1	-20+35 mesh	14	40.92	0.01	0.01	0.01	7.91	49.85	0.11	0.02	0.01	0.00	0.39	0.01	99.24
OL	Cote-1	-20+35 mesh	15	40.84	0.01	0.01	0.02	8.05	49.60	0.10	0.02	0.01	0.00	0.39	0.03	99.08
OL	Cote-1	-20+35 mesh	16	40.96	0.04	0.03	0.09	8.82	49.34	0.12	0.07	0.00	0.02	0.41	0.03	99.93
OL	Cote-1	-20+35 mesh	17	40.78	0.02	0.01	0.02	8.09	49.76	0.11	0.02	0.00	0.00	0.37	0.03	99.22
OL	Cote-1	-20+35 mesh	18	41.00	0.04	0.02	0.15	8.52	49.76	0.14	0.09	0.01	0.02	0.44	0.08	100.26
OL	Cote-1	-20+35 mesh	19	40.70	0.02	0.01	0.09	8.41	49.29	0.11	0.08	0.01	0.01	0.39	0.02	99.13
OL	Cote-1	-20+35 mesh	20	41.11	0.05	0.01	0.06	8.02	49.94	0.11	0.04	0.02	0.03	0.46	0.05	99.90
OL	Cote-1	-20+35 mesh	21	40.75	0.03	0.01	0.09	7.80	49.77	0.12	0.05	0.00	0.01	0.38	0.02	99.04
OL	Cote-1	-20+35 mesh	22	40.80	0.01	0.01	0.05	7.58	50.06	0.09	0.03	0.01	0.02	0.41	0.00	99.07
OL	Cote-1	-20+35 mesh	23	40.90	0.03	0.01	0.04	7.59	49.91	0.09	0.03	0.00	0.02	0.40	0.01	99.02
OL	Cote-1	-20+35 mesh	24	41.23	0.06	0.02	0.07	7.43	50.17	0.13	0.04	0.01	0.03	0.49	0.08	99.75
OL	Cote-1	-20+35 mesh	25	41.07	0.07	0.04	0.07	9.37	48.98	0.13	0.07	0.02	0.06	0.47	0.05	100.40
CPX	Cote-1	-35+60 mesh	1	54.50	0.06	0.96	0.69	3.07	16.13	0.09	23.13	0.00	0.61	0.11	0.02	99.39

APPENDIX E

CERTIFICATE OF ANALYSIS RESULTS OF MICRODIAMOND EXTRACTION, SELECTION AND DESCRIPTION



Robert Cote
Attn : Robert Cote

8331 De L'esperance
Quebec, QC
G2K 1S1, Canada

Phone: 418-623-3085
Fax:

Lakefield Monday, December 19,
2005

Date Rec. : 03 November 2005
LR Report : MI0008-NOV05
Project : 8901-486
Client Ref : LR2502524

CERTIFICATE OF ANALYSIS

Sample ID	*Caustic Wt kg	*Dia #	*Dia (ct)	*Total pours
1: Cote-1	6.33	0	0.000	1



Maria Mezei
Maria Mezei
Diamond Selection Specialist

Email: apedneault@sympatico.ca



**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: **8901-486**

Date: December 19, 2005

Client: **Robert Coté**

LIMS No. **MI0008-NOV05**

Sample No. **Cote-1**

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+150	Ferromagnetic Mag	Oxides and silicates
-20+150	Ferromagnetic Non-mag (Fus. Res.)	Oxides, silicates, and graphite
-20+150	Paramagnetic Mag (0.3 amp)	Not applicable
-20+150	Diamagnetic Mag (0.5 amp)	Not applicable
-20+150	Diamagnetic Non-mag (0.5 amp)	Not applicable

Sample Weight: 6.33 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 0.002 mg.

Tracy Gill
Selection and Description

Tracy Gill
Mineralogy Technician

Elena Valeyeva
Quality Control

Elena Valeyeva
Mineralogy Technician

Note:

SGS Minerals Services is not responsible for the determination of the origin, quality or value of any diamonds recovered. Each +35 mesh (Tyler sieve; +0.420 mm) stone was individually weighed, and the -35 mesh 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.

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Date: December 19, 2005

Client: **Robert Côté**LIMS No. **MI0008-NOV05**Sample No. **Cote-1**

Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
+ 4.75 mm	0	0.000	0.000
- 4.75 / + 3.35 mm	0	0.000	0.000
- 3.35 / + 2.36 mm	0	0.000	0.000
- 2.36 / + 1.70 mm	0	0.000	0.000
- 1.70 / + 1.18 mm	0	0.000	0.000
- 1.18 / + 0.85 mm	0	0.000	0.000
-850 / + 600 μ m	0	0.000	0.000
Stones Described and Weighed Individually / Individually / Group Weighed	-600 / + 425 μ m	0.000	0.000
	-425 / + 300 μ m	0.000	0.000
	-300 / +212 μ m	0.000	0.000
	-212 / +150 μ m	0.000	0.000
	-150 / +105 μ m	0.000	0.000
TOTAL	0	0.000	0.000

Sample Weight: 6.33 kg
Number of Syndites: 0

Total Weight (carats)*: 0.000
Number of Diamonds: 0

* Total Weight (carats) was calculated from mg weights. All reported mg weights are weighed to within 0.002 mg.

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DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-486

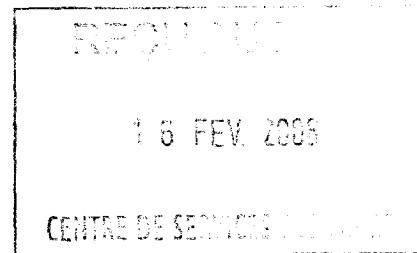
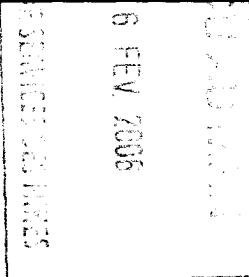
LIMS No. MI0008-NOV05

Client: Robert Côté

Sample No. Cote-1

Sample Weight: 6.33 kg

No.	Stone Dimension, mm			Weight		Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats		
+ 4.75 mm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-4.75 / + 3.35 mm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-3.35 / + 2.36 mm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-2.36 / + 1.70 mm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-1.70 / + 1.18 mm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-1.18 / + 0.85 mm fraction							
0				0.000000			
0				0.000000	Sub-Total		



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LIMS No. MI0008-NOV05

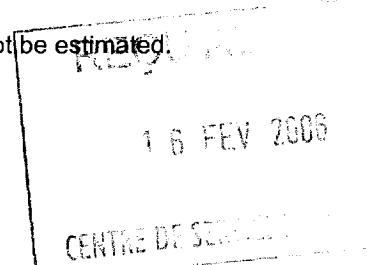
Sample No. Cote-1

Client: Robert Coté

Sample Weight: 6.33 kg

No.	Stone Dimension, mm			Weight		Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats		
-850 / + 600 μm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-600 / + 425 μm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-425 / + 300 μm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-300 / + 212 μm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-212 / + 150 μm fraction							
0				0.000000			
0				0.000000	Sub-Total		
-150 / + 105 μm fraction							
0				0.000000			
0				0.000000	Sub-Total		
0				0.000000	TOTAL		

Note 1: Diamond Fragments - No Crystal Faces - Preservation (Resorption) cannot be estimated.





NAD 83

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UTM 5783146



Reg. 589905