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**ASSESSMENT REPORT ON ROCK SAMPLING  
& MICRO-DIAMOND TESTING**

**ICE PROPERTY  
ELKFORD, B.C. AREA  
CANADA**

**FORT STEELE MINING DIVISION**

**N.T.S. 82 G/15W & 82J/2W**

**LATITUDE: 50°05'N  
LONGITUDE: 114°58'W**

**Owners - Quest International Resources Corp.**

**Operator - SKEENA RESOURCES LTD.  
1300-409 GRANVILLE ST.  
VANCOUVER, B.C.  
V6C 1T2**

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**Tel. (250) 489-4956  
May 28, 1999**

**GEOLOGICAL SURVEY BRANCH  
Submitted - September 28, 1999 ASSESSMENT REPORT**

26.030

## TABLE OF CONTENTS

	<b>Page</b>
<b>1.00 INTRODUCTION</b>	<b>1</b>
<b>2.00 PROPERTY DEFINITION, HISTORY, BACKGROUND INFORMATION</b>	
2.10 Tenure	2
2.20 History of Exploration for the Ice Property and Area	5
2.30 Economic Assessment	6
2.40 Summary of Work Done	7
<b>3.00 SAMPLING PROGRAM</b>	<b>7</b>
<b>4.00 MICRO-DIAMOND TESTING</b>	<b>7</b>
<b>5.00 CONCLUSIONS</b>	<b>9</b>
<b>6.00 ITEMIZED COST STATEMENT</b>	<b>9</b>
<b>7.00 AUTHOR'S QUALIFICATIONS</b>	<b>10</b>
Figure 1            Location Map            Scale 1:125,000	<b>4</b>
Figure 2            Claim Map                Scale 1: 50,000	In pocket
Figure 3            Ice Property – Known Kimberlite Pipes. Scale 1:25,000.	8
APPENDIX "A"      Lakefield Research Report	Attached

# **SKEENA RESOURCES LIMITED**

## **ASSESSMENT REPORT ON ROCK SAMPLING & MICRO-DIAMOND TESTING**

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### **1.00 INTRODUCTION**

Skeena Resources Ltd. has optioned the 450 claim units of the Ice Property from Quest International Resources Corp. with rights to earn up to a 75% interest. The Ice Property covers a number of diamondiferous kimberlites which lie on the west side of the Elk River Valley, centered around the village of Elkford. To date there are five known kimberlitic diatremes, three of which have yielded macro-diamonds during semi-bulk testing. There are also numerous drainages on the property which contain kimberlite indicator minerals extracted from heavy mineral samples.

The claims comprising the Ice Property owned solely by Quest International or optioned by Quest from others are immediately west of the Elk river and north and south of the town of Elkford, itself located about 75 air-kilometres northeast of Cranbrook in the East Kootenay region of British Columbia.

Access to the claims is available to the eastern portion of the claims along Highway 43 north up the Elk valley from Sparwood. Some logging roads west from the highway access portions of the claim block while central and western portions are accessible along 4-wheel drive trails/roads or by helicopter. The nearest major centre is the city of Fernie, B.C. located approximately one hour by road to the southwest. Fernie is located one hour (110 km) east of the city of Cranbrook, B.C. where commercial air transport is available.

Topography in the claim area is rugged with relief in the order of 2600 metres. Cliffs in excess of 100 metres are common with cirques and hanging valleys evident throughout the region. Outcrop is locally abundant at upper elevations but glacial deposits and talus cover are extensive at lower elevations. Drainages are generally V-shaped valleys. Forest cover is complete at lower elevations, becoming thinner and smaller at upper elevations. Coniferous trees, including spruce, pine, balsam, and larch are the dominant type of vegetative cover evident at all elevations whereas subordinate deciduous trees, poplar and cottonwood, are present only at lower elevations. Underbrush consists of willows and alders together with assorted berry-bearing bushes. Commercial logging activity is widespread. The claims are located in the Main Ranges of the Rockies and as such are subject to heavy snowfall during the winter months. Average annual precipitation is approximately 90 cm of which 30% is in the form of snow. Snow pack is likely present from October through to late June. Most rain during the field season occurs from June to mid-July with a drying period from then into September.

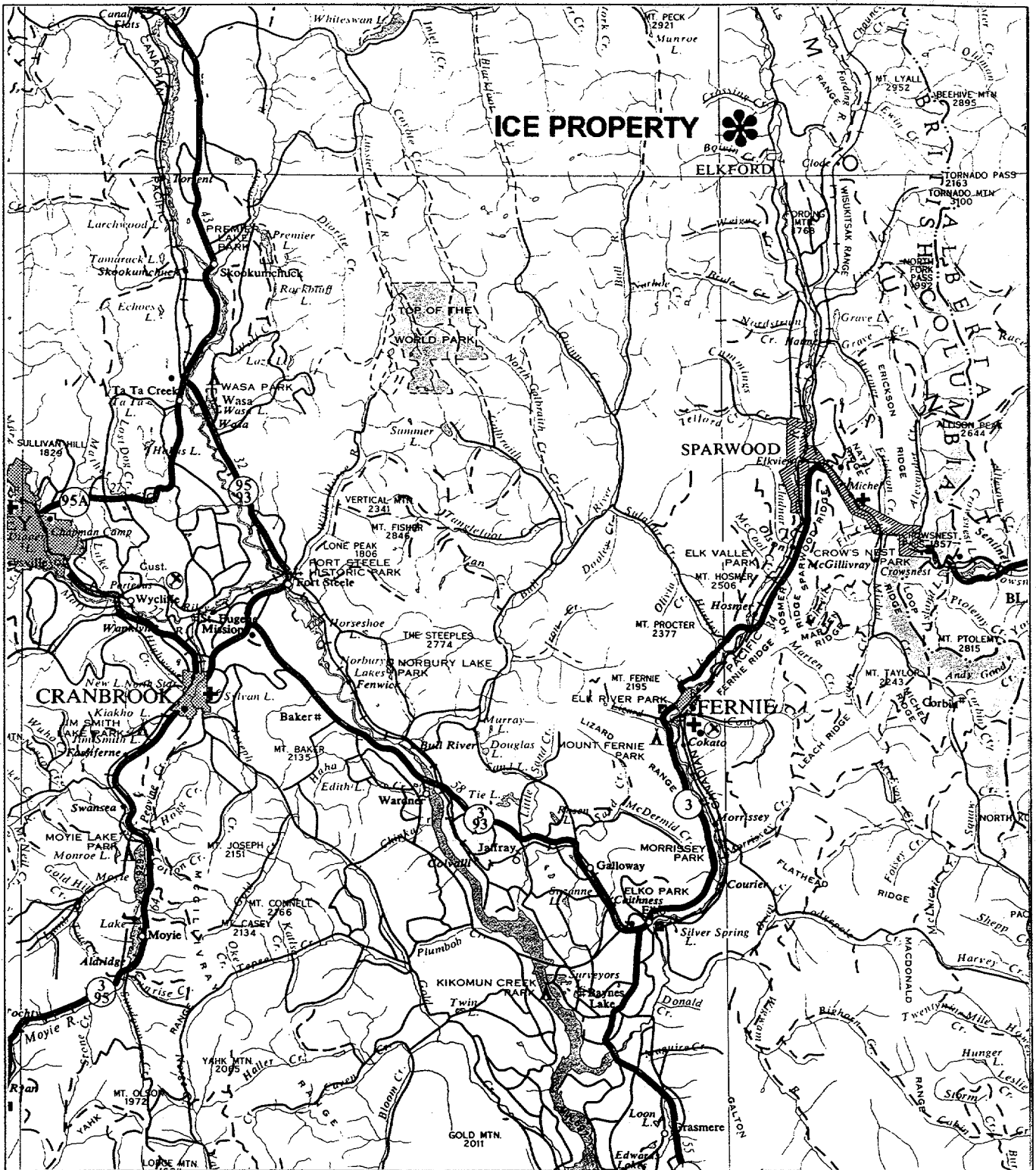
### **2.00 PROPERTY DEFINITION, HISTORY, BACKGROUND INFORMATION**

#### **2.10 Tenure**

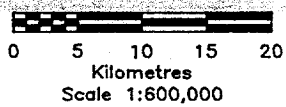
The Ice Property consists of the Ice, Gem, Pipe, Gten, and Kimberlite claims as well as two placer claims totalling 450 claim units. This covers about 132 square kilometres. The pertinent claim data is as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Anniv. Date</u>
ICE 1	1	311076	June 29/2000
ICE 2	1	311077	June 29/2000
ICE 3	1	311078	June 29/2000
ICE 4	1	311079	June 29/2000
ICE 5	1	311080	June 29/2000
ICE 6	1	311081	June 29/2000
ICE 7	1	311082	June 29/2000
ICE 8	1	311083	June 29/2000
ICE 9	1	311084	July 07/2000
ICE 10	1	311085	July 07/2000
ICE 11	1	311086	July 07/2000
ICE 12	20	317451	May 5/2000
ICE 13	16	317452	May 3/2000
ICE 14	20	317453	May 2/2000
ICE 15	20	317454	May 4/2000
ICE 16	20	317455	May 1/2000
ICE 17	20	317456	May 3/2000
ICE 18	20	317457	May 4/2000
ICE 19	20	317458	May 5/2000
ICE 20	8	317459	May 1/2000
ICE 21	20	317460	April 30/2000
ICE 22	4	317461	May 3/2000
ICE 25	18	317464	April 30/2000
ICE 26	1	317443	April 28/2000
ICE 27	1	317444	April 28/2000
ICE 28	1	317445	April 28/2000
ICE 29	1	317446	April 28/2000
ICE 30	1	317447	April 28/2000
ICE 31	1	317448	April 28/2000
ICE 32	1	317449	April 28/2000
ICE 33	1	317450	April 28/2000
ICE 36	18	317495	April 28/2000
ICE 38	20	317521	May 13/2000
ICE 39	20	317522	May 13/2000
GEM 1	1	310504	June 18/2002
GEM 2	1	310505	June 18/2002
GEM 3	1	310506	June 18/2002
GEM 4	1	310507	June 18/2002

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Anniv. Date</u>
PIPE 1	1	310508	June 20/2002
PIPE 2	1	310509	June 20/2002
PIPE 3	1	310510	June 20/2002
PIPE 4	1	310511	June 18/2002
PIPE 5	1	310512	June 18/2002
PIPE 6	1	310513	June 18/2002
PIPE 7	1	310514	June 18/2002
PIPE 8	1	310515	June 18/2002
PIPE 9	1	310516	June 18/2002
PIPE 10	1	310517	June 18/2002
PIPE 11	1	310518	June 18/2002
PIPE 12	1	310519	June 18/2002
PIPE 13	1	310520	June 18/2002
PIPE 14	1	310521	June 18/2002
PIPE 15	1	310522	June 18/2002
GTEN 1	1	310523	June 20/2002
GTEN 2	1	310524	June 20/2002
GTEN 3	1	310525	June 20/2002
GTEN 4	1	310526	June 20/2002
GTEN 5	1	310527	June 19/2002
GTEN 6	1	310528	June 19/2002
GTEN 7	1	310529	June 19/2002
GTEN 8	1	310530	June 19/2002
GTEN 9	1	310531	June 19/2002
GTEN 10	1	310532	June 19/2002
GTEN 11	1	310533	June 19/2002
GTEN 12	1	310534	June 19/2002
GTEN 13	1	310535	June 19/2002
GTEN 14	1	310536	June 19/2002
GTEN 15	1	310537	June 19/2002
GTEN 16	1	310538	June 19/2002
GTEN 17	1	310539	June 19/2002
GTEN 18	1	310540	June 19/2002
GTEN 19	1	310541	June 19/2002
GTEN 20	1	310542	June 19/2002
Kimberlite 1	20	324163	March 12/2000
Kimberlite 2	20	324164	March 12/2000
Kimberlite 3	15	324165	March 12/2000
Kimberlite 4	15	324166	March 12/2000
Kimberlite 5	16	317911	May 18/2000
Kimberlite 7	1	322614	Oct. 31/99
Kimberlite 8	1	322615	Oct. 31/99



**ICE PROPERTY**



**ICE PROPERTY  
INDEX MAP**

## Placer Claims

Claim Name	Record No.	Anniv. Date
Stone 1	326758	June 8/2000
Stone 2	326760	June 9/2000

Skeena Resources Ltd. optioned the Ice Claims from Quest International Resources Corp. whereby Skeena can earn up to a 75% interest. The southern half of the property is 100% owned by Quest. The Ice Property is subject to agreements Quest International has with other parties on the northern half and the west central extension portions of the claim block. The northern half of the Ice Property is subject to a Joint Venture including Quest 60%, White Knight 20%, and Brimstone Resources 20%. The west central extension block for the northern half of the Ice are known as the mineral Kimberlite claims and placer Stone claims. Quest originally optioned these claims from Newmarch and Gilbert on Aug. 4, 1994.

### 2.20 History of Exploration for the Ice Property and Area

The exploration history with respect to diamond potential in the region starts with a 1957 recognition by Hovdebo of the Crossing Creek diatreme while employed as a field worker by California Standard. In 1976, a Cominco field party recognized the same feature and tentatively identified it as a kimberlite pipe. This initiated a large exploration program in the 1977 to 1980 period with drainage sampling for indicator minerals which along with visual detection from the air discovered some 40 diatremes and dykes in the Bull/White/Palliser rivers region. Some on the ground pursuit of these alkalic, ultramafic occurrences was completed as well.

The Cross diatreme and area became the focus and in 1980 Petra Gem Explorations and partners explored the Crossing kimberlite area and located more indicator minerals indicative of additional diatreme sources.

During the 1987 to 1990 period, CF Minerals Ltd. and partners along with Dia-Met Minerals Ltd. working north of Golden, B.C. discovered diatremes and dykes in a second cluster. Subsequent work documented micro-diamonds in heavy mineral separates from drainages and drill core. The multiple occurrences have been shown to be kimberlites, lamproites, or lamprophyres.

The Island-Arc and JV property covers the original Crossing pipe and the previously located indicator mineral anomalies of pyrope garnet and nickel soil anomalies. These include the Gem, Gten, and Pipe claims. In 1993, the owners undertook a field program of sampling the sands and gravels of the creek searching for placer diamond content. Panned concentrates were visually examined with a binocular microscope.

Consolidated Ramrod Gold Corp. began an independent evaluation of the above claims and the Ice claim block in spring, 1993. Soil samples were taken from the Ice, Gten, and Pipe claims exploring for additional kimberlite and/or ultramafic occurrences. Chromium and nickel were

selected as ultramafic pathfinders because of the low background values in the host sedimentary lithologies.

In 1994, M.E. McCallum of Colorado State University examined the results for these 72 samples and reported that chemically confirmed kimberlite indicator minerals are recognized in at least 19 field samples from the Ice claims. Peridotitic garnets were noted as well as chrome diopside, ilmenite, and abundant chromite but no oxide mineral analyses were done. The presence of G9 pyrope garnets was described as very encouraging, indicating the likelihood of additional kimberlite occurrences in the area.

This work successfully located four new kimberlite diatremes in the Elkford/Crossing creek area. The heavy mineral survey also found evidence to suggest there are more undiscovered diatreme bodies.

In 1996, an exploration program was launched which was designed to test the new pipes ( Ram 5, Ram 6, and Ram 6.5) located on the west flank of the Elk River valley. It was hoped to get more information on the quality and size of diamonds. A 4-wheel drive road was constructed from the Elk river valley bottom, a total of about four kilometres. About 30 tons of surface material from each of the three pipes was collected from trenches and shipped to Fort Collins, Colorado for milling and diamond testing. This work was supervised by and reported on by M.E. McCallum of Colorado State University.

McCallum's report describes the samples and results as follows. Sample material processed included: 35 tons from the Ram 5 pipe (three batches from three trenches); 15 tons from the Ram 6 pipe (single batch from one trench); and 40 tons from the Ram 6.5 pipe (two batches from two trenches). It is important to note that material from all the sites was highly diluted by host rock shale, limestone, and clay-rich alteration products, much apparently from upslope. Weathered kimberlite products comprised less than 10% of any sample. The highest concentration of kimberlitic heavy minerals was recovered from the Ram 6.5 samples. A total of six diamonds were recovered from the processed samples.

### **2.30 Economic Assessment**

Alkaline intrusive diatremes, dykes and sills have been documented in the north-south trending Rocky Mountain Alkaline Belt (RMAB). They are currently in two fields, the Golden cluster from 50 to 90 kilometres north of Golden consisting of dykes and pipe-like bodies, totalling fourteen occurrences. These alkaline intrusions have been classified as lamprophyres, kimberlites or lamproites. Microdiamonds have been recovered from heavy mineral separates from this area. The second field or belt is the Bull/White/Elk river cluster including the Crossing, Joff, and Elkford pipes. The majority of the more than 45 occurrences are classified as lamprophyres or basaltic diatremes. However, the Cross has long been identified as a kimberlite and the more recent recognition of the adjacent Bonus pipe and three diatremes some two kilometers to the east on the west flank of the Elk valley has extended the field. These appear to be kimberlites as well and macro-diamonds have been recovered from bulk samples of the three eastern pipes (discussed later).



#### **2.40 Summary of Work Done**

The 1998/99 work completed on the Ice Property included opening up access to three of the kimberlite pipes using a backhoe; hand sampling of rock from the three pipes - Bonus, Ram 5 and Ram 6. Samples were estimated at 100 kilograms for the Ram 5 and 6 and about 200 kilograms for the Bonus pipe. These samples were taken to the Cranbrook field office and later shipped to Lakefield Research, in Ontario, for micro-diamond tests. The samples and subsequent lab tests were done on material from claims Gten 7, Gten 18, and Gem 2.

#### **3.00 SAMPLING PROGRAM**

Although macro diamonds had been recovered from the known kimberlites, it was regarded as important to do micro-diamond tests on the pipes, excepting the Cross pipe as such work had been done previously. To complete such an evaluation, a modest sized rock sample was needed from each site. As the roads had been decommissioned, it was necessary to re-open them and proceed with the collection of representative samples.

At the Bonus pipe located only 100 m east of the Cross Pipe about 200 kg of rock was collected by hand sampling material in existing trenches. Mostly decomposed kimberlite was taken but contamination by slide rock waste was unavoidable.

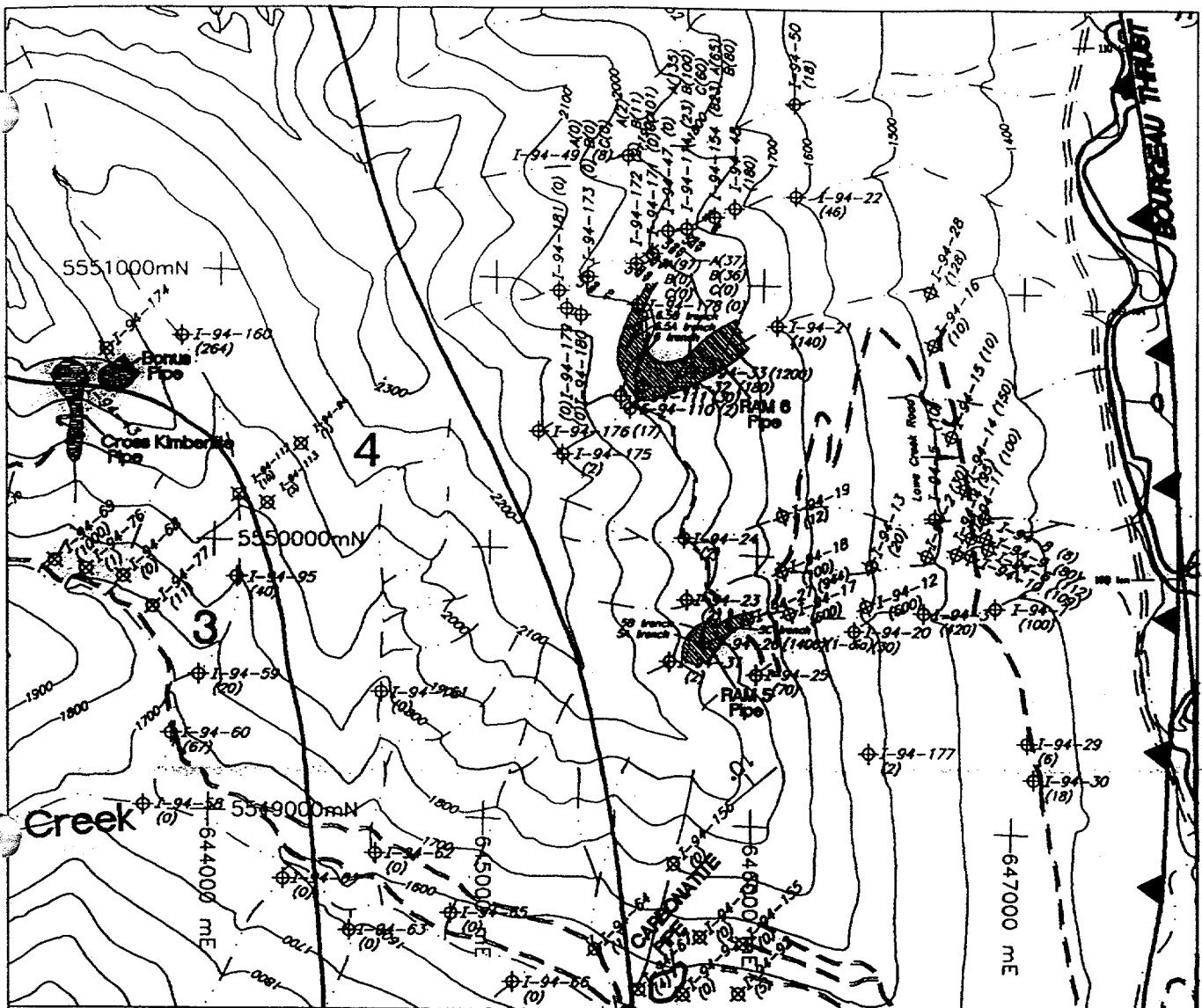
At the Ram 5 pipe located about 2.5 km east-southeast of the Cross Pipe on the western flank of the Elk River valley road access was recreated and approximately 100 kg of rock collected from existing trenches but contamination was again prevalent.

At the Ram 6 about 1 km north of the Ram 5 pipe about 100 kg of material was taken by hand from existing trenches with the same sampling problems as at the other two sites.

#### **4.00 MICRO-DIAMOND TESTING**

A standard technique for further evaluation of the diamond-hosting potential of a kimberlite body is to complete micro-diamond recovery tests. In this instance, Lakefield Research carried out the procedure on the three samples collected from the Bonus, Ram 5 and Ram 6, as described above. Their testing process is detailed in Appendix A but includes sample preparation which separating into  $\leq 8$  kg sub-samples and crushing or attrition milling if fragments are greater than 8 cm. Dissolution of each sample is completed in molten caustic soda and the +150 mesh residue is separated out. Water and acid leach baths produce a concentrate which is screened (6 mesh) and the oversize examined microscopically. A two stage magnetic separation is employed to separate residues then the remainder is submitted for microscopic examination and diamond selection. An electron microscope equipped with an EDS analyzer is used if unknown mineral grains are encountered. A certificate of analysis results which describes the colour, clarity, and morphology of each diamond. Dimensions are determined for selected micro-diamonds and the weight in milligrams for groups are measured and converted to carats.

For the three pipes involved the results were as follows (please see Appendix A for further details):

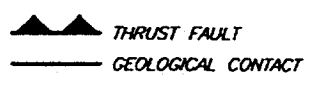


Last Update (Y/M/D):

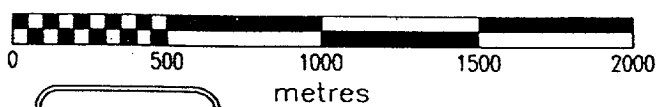
# LEGEND

- 6** Jurassic Fernie Group:  
grey, brownish grey, and black shale, siltstone and sandstone; limestone; glauconitic sandstone and shale.
- 5** Triassic Spray River Formation:  
dark grey silty shale, siltstone, and shale; light grey dolomitic or sideritic argilloaceous siltstone
- 4** Pennsylvanian and Permian Rocky Mountain Formation:  
light grey quartzitic, dolomitic, and calcareous sandstone; dark grey sandstone; dolomite; cherty dolomite; chert

- 3** Mississippian Rundle Group (15-17) Etherington Formation:  
light grey limestone; cherty limestone; and calcarenitic limestone; dolomite; cherty dolomite; green and red shale; siltstone; breccia; anhydrite.



⊕ I-94-160 (264) Stream or Soil sample location/number, Pyrope Garnets (# indicated) in Stream/Soil sample



## ICE PROPERTY

Known Kimberlite Pipes

Scale: 1:25000	Drawn by R. Pighin (99)
Map Reference:	

CAD Filename:

FIGURE 3

**Bonus Pipe:**

Sample Weight = 177.79 kg  
 Total Weight (carats) = 0.001  
 Number of diamonds = 6

**Ram 5:**

Sample Weight = 89.23 kg  
 Total Weight (carats) = 0.000  
 Number of diamonds = 1

**Ram 6:**

Sample Weight = 89.23 kg  
 Total Weight (carats) = 0.000  
 Number of diamonds = 0

**5.00 CONCLUSIONS**

The Bonus Pipe produced enough micro-diamonds to be interesting. The Ram 5 and 6 tests are not encouraging, however the results may not be entirely representative of the pips because of the following. Lakefield Research mentions some digestion problems with the caustic soda due to high carbonate content. Limestone xenoliths are common within the pipes and contamination was a problem in the sampling. It is also true that the samples collected from the pipes may not be representative areally or for the different phases present within the kimberlites. Additional sampling and micro-diamond testing may be required in the future.

**6.00 ITEMIZED COST STATEMENT**

Geological Consulting - location and selection of samples	11.5 days @ \$330/day 3.0 days @ \$300/day	\$ 4,695
Sampling - EK Expediting	2 days @ \$164/day 2 days @ \$175/day & truck 2 X \$100	1,278
Equipment Rental - Ram Exploration		2,000
Lakefield Research - Micro-diamond test		10,548
Technical Support - typing, forms	2 days @ \$175/day	350
Shipping of samples		<u>200</u>
<b>TOTAL =</b>		<b>\$19,071</b>

## 7.00 AUTHOR'S QUALIFICATIONS

DOUGLAS ANDERSON, Author

I, Douglas Anderson, Consulting Geological Engineer, with my office at 3205 6<sup>th</sup>. St. South in Cranbrook, B.C., V1C 6K1 hereby certify that:

I received my Bachelor of Applied Science in 1969 from the University of British Columbia, specializing in geological engineering.

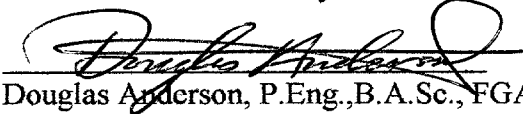
I have practiced my profession since 1969, dominantly with Cominco Ltd. in a number of capacities all over Western Canada.

I am a Registered Professional Engineer and member of the Association of Professional Engineers and Geoscientists of B.C., and I am authorized to use their seal which has been affixed to this report.

I am also a Fellow of the Geological Association of Canada.



Dated this *28th day of September, 1999*

  
Douglas Anderson, P.Eng., B.A.Sc., FGAC  
Consulting Geological Eng.

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APPENDIX "A"

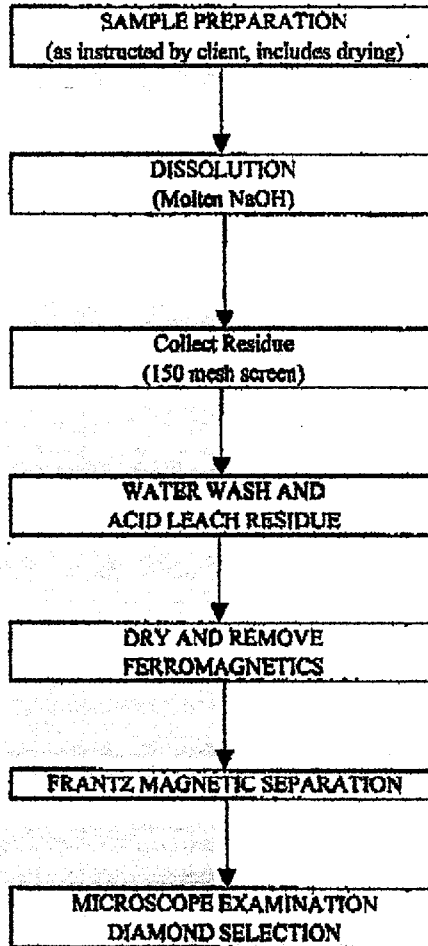
**Lakefield Research Report**

Lakefield Research Limited  
Mineralogical Services



185 Concession Street, Postal Bag 4300  
Lakefield, Ontario, Canada, K0L 2H0  
Tel: (705) 652-2019 Fax: (705) 652-3123

### Caustic Dissolution Processing for Microdiamond Recovery



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Tel: 55-31-288-1122 Fax: 55-31-288-1140

LAKEFIELD RESEARCH CHILE S.A., Los Ebanistas 6585, Parque Industrial La Reina, Santiago, Chile  
Fono 56-2-273-0487 Facsimil 56-2-273-0250



## Quality Control

Routine quality control tests are utilised to evaluate the efficiency of the caustic dissolution processing technique by running blank samples spiked with "Congo Rounds". The chance of diamond or indicator mineral contamination is evaluated by running caustic soda blanks between client's samples and examining the residue for microdiamonds and indicator minerals. Recovery of the diamond spikes typically ranges from 97 to 100 %. 1998 statistics showed that, on average, only a single indicator mineral grain was carried over into the caustic soda blanks run between different client's samples.

Each 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 once a month to remove any scale build-up that might entrap 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.

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.

## 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 uses diamond's property of high resistance to caustic soda (NaOH) and eliminates diamond size reduction and losses that often occur 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 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 that are vigorously reactive with NaOH (evaluated by an acid test completed prior to charge preparation). If a high proportion of the sample is composed of greater than 8 cm fragments, simple breakage, crushing or attrition milling may be required, or the length of the dissolution process 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 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 the + 6 mesh material is significant or 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 400x 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 and 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.

**Microdiamond Extraction, Selection and Description  
R901-203/LIMS#MAY0005 and MAY0006.R99**

**Lakefield Research Limited  
Mineralogical Services**

**APPENDIX B**

**EXPLANATION OF MICRODIAMOND EXTRACTION  
AND SELECTION PROCEDURE AND FLOWSHEET**

**LAKEFIELD RESEARCH LIMITED**

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario K0L 2H0  
 Phone: 705-652-2112 E-mail: bjago@lakefield.com  
 Fax: 705-652-3123

June 17, 1999

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-208

Client: Skeena Resources Limited

LIMS No. MAY0006.R99  
 Sample No. RAM PIPE #6  
 Sample Weight: 89.23 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description
	X	Y	Z	mg	Carats				Morphology
<b><i>Stones Weighed Individually</i></b>									
0					0.000000				
				0.000	0.000000	<b>Sub-Total</b>			
<b><i>Stones Weighed as a Group</i></b>									
0					0.000000				
				0.000	0.000000	<b>Sub-Total</b>			
					0.000000	<b>TOTAL</b>			

AUG. 17. 1999 3:57PM ENTS MANAGEMENT INC

NO. 303 P. 6/15

# Lakefield Research



Lakefield Research Limited  
185 Concession St., Box 4300  
Lakefield, Ontario  
K0L 2H0, CANADA

Tel: (705) 652-2000  
Fax: (705) 652-6365  
Email: mail@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

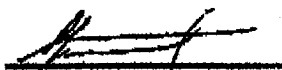
Project: 8901-208  
Client: Skeena Resources Limited


Date: June 17, 1999  
LIMS No. MAY0006.R99  
Sample No. RAM PIPE #6

Mesh	Fraction	Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Silicates and oxides
+100	Ferromagnetic Mag	Oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic Mag (0.5 amp)	Oxides and silicates
-20+100	Diamagnetic Non-mag (0.5 amp)	Oxides, silicates, and graphite

Sample Weight: 89.23 kg  
Total Weight (carats)\*: 0.000  
Number of Diamonds: 0  
Number of Syndites: 0

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

  
Selection and Description  
Valeri Artamonov  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Assistant Rare and Precious Gem Mineralogist

### Note:

Lakefield Research Limited 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.

AUG. 17. 1999 3:57PM BMTS MANAGEMENT INC NO. 303 P. 8/15

**LAKEFIELD RESEARCH LIMITED**

June 17, 1999

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario K0L 2H0  
 Phone: 705-652-2112 E-mail: bjagos@lakefield.com  
 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-208

LIMS No. MAY0006.R99  
 Sample No. RAM PIPE #5  
 Sample Weight: 89.23 kg

Client: Skeena Resources Limited

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
<b><i>Stones Weighed Individually</i></b>										
0					0.000000					
				0.000	0.000000	<b>Sub-Total</b>				
<b><i>Stones Weighed as a Group</i></b>										
1	0.17	0.17	0.08	0.004	0.000020	White	Transparent	75%	Tetrahexahedral, partially distorted	
				0.004	0.000020	<b>Sub-Total</b>				
					0.000020	<b>TOTAL</b>				

# Lakefield Research



Lakefield Research Limited  
 185 Concession St., Box 4300  
 Lakefield, Ontario  
 K0L 2H0, CANADA

Tel: (705) 652-2000  
 Fax: (705) 652-6365  
 Email: mail@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-208

Date: June 17, 1999

Client: Skeena Resources Limited


LIMS No. MAY0006.R99

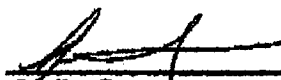
Sample No. RAM PIPE #5

Mesh	Fraction	Description
+6	Ferromagnetic Non-mag	Rock fragments
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic Mag (0.5 amp)	Oxides and silicates
-20+100	Diamagnetic Non-mag (0.5 amp)	Oxides, silicates, and graphite

Sample Weight: 89.23 kg  
 Total Weight (carats)\*: 0.000  
 Number of Diamonds: 1  
 Number of Syndites: 0

\* Total Weight (carats) was calculated from mg weights. All reported mg weights are measured to within 0.002 mg.  
 Note: Zircon and Pink Corundum was observed in sample.

  
 Selection and Description  
 Maria Mezei  
 Assistant Rare and Precious Gem Mineralogist

  
 Quality Control  
 Valeri Artamonov  
 Mineralogy Technician

**Note:**

Lakefield Research Limited 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.

# LAKEFIELD RESEARCH LIMITED

P.O. Box 4300, 185 Concession St., Lakefield, Ontario, K0L 2H0  
Phone : 705-652-2019 - FAX : 705-652-3123

Skeena Resources Limited  
409 Granville St, Ste 1300  
Vancouver, BC, V6C 1T2 - Canada

Attn : Rupert Allan  
Fax : (604) 684-9877

Lakefield, June 17, 1999

Date Rec. : May 14, 1999  
LR. Ref. : MAY0006.R99  
Reference : LR9901267  
Project : 8901-208

## CERTIFICATE OF ANALYSIS

No.	Sample ID	Wt # Pours kg	Dia #	Dia cc
1	Ram Pipe #5	89.11	15	1 0.000
2	Ram Pipe #6	89.23	15	0 0.000

  
Bruce Craig Jago Ph.D.

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

This report refers to the samples as-received. Lakefield Research Limited is not responsible for the determination of origin, quality, or value of any diamonds recovered.

AUG. 17. 1999

3:58PM

BMTS MANAGEMENT INC

NO. 303

P. 10/15



AUG. 17. 1999 3:58PM BHTS MANAGEMENT INC NO. 303 P. 11/15

# LAKEFIELD RESEARCH LIMITED

June 8, 1999

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario K0L 2H0  
 Phone: 705-652-2112 E-mail: bjago@lakefield.com  
 Fax: 705-652-3123

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

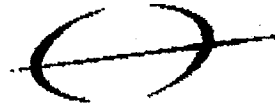
Project: 8901-208

LIMS No. MAY0005.R9  
 Sample No. Bonus Pipe  
 Sample Weight: 177.79 kg

Client: Skeena Resources Limited

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description
	X	Y	Z	mg	Carats				Morphology
<b>Stones Weighed Individually</b>									
0					0.000000				
				0.000	0.000000	<b>Sub-Total</b>			
<b>Stones Weighed as a Group</b>									
1	0.48	0.34	0.18		0.000000	White	Transparent	62.5%	Fragment on which crystal faces unrecognizable, very significant cleavages
2	0.43	0.29	0.13		0.000000	White	Transparent	62.5%	Fragment on which crystal faces unrecognizable, very significant cleavages
3	0.31	0.29	0.10		0.000000	White	Transparent	75%	Fragment on which crystal faces unrecognizable, very significant cleavages
4	0.31	0.23	0.14		0.000000	White	Transparent	62.5%	Fragment on which crystal faces unrecognizable, significant cleavages
5	0.34	0.17	0.09		0.000000	White	Transparent	62.5%	Fragment on which crystal faces unrecognizable, very significant cleavages
6	0.20	0.14	0.10		0.000000	White	Transparent	62.5%	Fragment on which crystal faces unrecognizable, very significant cleavages
				0.112	0.000580	<b>Sub-Total</b>			
					0.000580	<b>TOTAL</b>			

# Lakefield Research



Lakefield Research Limited  
 185 Concession St., Box 4300  
 Lakefield, Ontario  
 K0L 2H0, CANADA

Tel: (705) 652-2112  
 Fax: (705) 652-6365  
 E-mail: bja@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

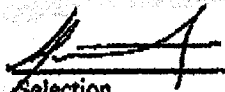
Project: 8901-208  
 Client: Skaena Resources Limited


Date: June 8, 1999  
 Lims. No: MAY0005.R99  
 Sample No: Bonus Pipe

Mesh	Fraction	Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic Mag (0.5 amp)	Oxides and silicates
-20+100	Diamagnetic Non-mag (0.5 amp)	Oxides, silicates, and graphite

Sample Weight: 177.79 kg  
 Total Weight (carats)\*: 0.001  
 Number of Diamonds: 6  
 Number of Syndites: 0

\* Total Weight (carats) was calculated from mg weights. All reported mg weights are measured to within 0.002 mg.  
 Note: Pink Corundum was observed in sample.

  
 Selection  
 for Eileen Beier  
 Mineralogy Technician

  
 Description and Quality Control  
 Maria Mezel  
 Assistant Rare and Precious Gem Mineralogist

Note:  
 Lakefield Research Limited 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.

# LAKEFIELD RESEARCH LIMITED

P.O. Box 4300, 185 Concession St., Lakefield, Ontario, K0L 2H0  
Phone : 705-652-2019 - FAX : 705-652-3123

Skeena Resources Limited  
409 Granville St, Ste 1300  
Vancouver, BC, V6C 1T2 - Canada


Attn : Rupert Allan  
Fax : (604) 684-9877

Lakefield, June 8, 1999

Date Rec. : May 14, 1999  
LR. Ref. : MAY0005.R99  
Reference : LR9901267  
Project : 8901-208

## CERTIFICATE OF ANALYSIS

No.	Sample ID	Wt # Pours kg	Dia #	Dia ct
1	Bonus Pipe	177.79	32	6 0.001

  
Bruce Craig Jago, Ph.D.

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

This report refers to the samples as-received. Lakefield Research Limited is not responsible for the determination of origin, quality, or value of any diamonds recovered.

AUG. 17. 1999 3:59PM EMTS MANAGEMENT INC

NO. 303 P. 13/15

**Microdiamond Extraction, Selection and Description**  
**8901-200/LJMS#MAY0005 and MAY0006.R99**

**Lakefield Research Limited**  
**Mineralogical Services**

**APPENDIX A**

**CERTIFICATE OF ANALYSIS**  
**RESULTS OF MICRODIAMOND**  
**EXTRACTION, SELECTION AND DESCRIPTION**

Microdiamond Extraction, Selection and Description  
 8901-208/LIMS#MAY0005 and MAY0006.R99

Lakefield Research Limited  
 Mineralogical Services

**Summary**

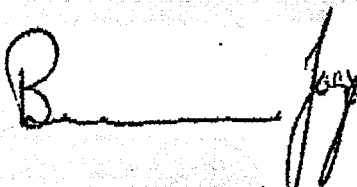
**Microdiamond Extraction, Selection and Description**

Microdiamond extraction, selection and description were completed on three bulk rock samples (Table 1) using our standard caustic fusion technique with collection of caustic residues on a 150 mesh screen. Results are reported as a Certificate of Analysis in Appendix A; a generalised flowsheet and explanation of the technique are given in Appendix B.

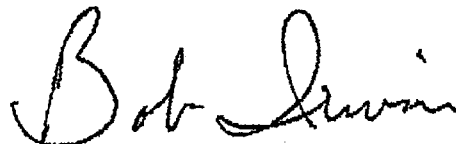
Table 1: Summary of bulk rock samples processed for Skeena Resources Inc.

LIMS#	Sample #
MAY0005.R99	Bonus Pipe
MAY0006.R99	Ram Pipe #5 Ram Pipe #6

**LAKEFIELD RESEARCH LIMITED**

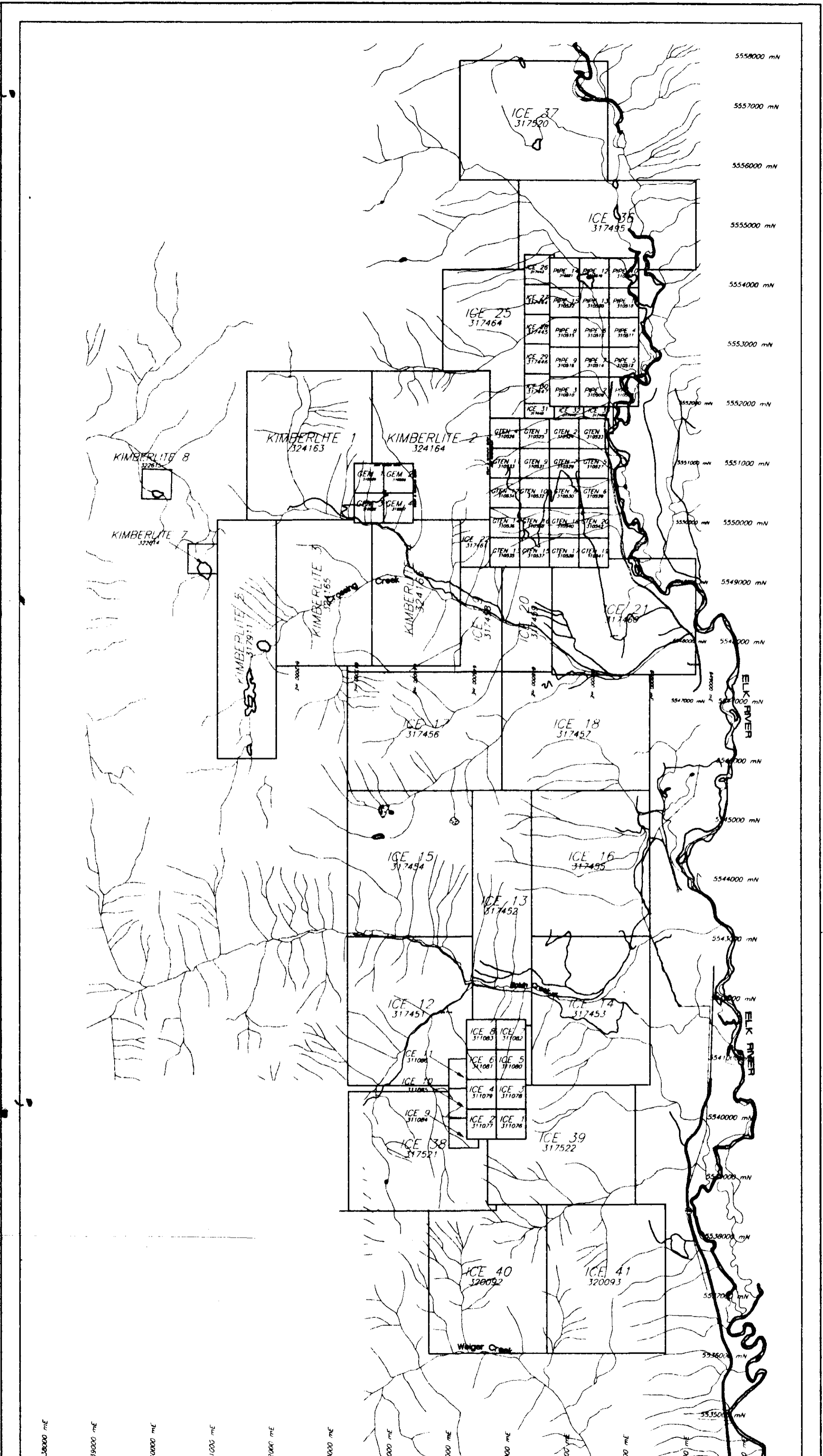


Bruce Craig Jago, Ph.D.  
 Head - Diamond Exploration Services  
 Lakefield Research Limited  
 Dated: July 26, 1999



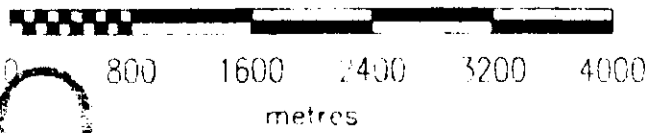
Bob Irwin  
 Business Manager - Mineralogical Services

Technical Support: Rob Gill, Scott Young, Jeff Voyer



GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

26,030



<b>ICE PROPERTY</b>	
CLAIM MAP	
SCHEDULE A	Scale: 1:50000
Revised by R. Sida (99)	
Map Reference: N1, R2014E, R2015W, H2J02W, H2J03E	

Last Update (Y/M/D): 05/21/1997

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