

# **Lakefield Research**

**Mineralogical Services**

## **Microdiamond Extraction, Selection, and Description – Torngat Project Area**

**VOLUME 2**

**submitted by  
Twin Mining Corp.**

**Project Managed by: Bruce Craig Jago, Ph.D.**

**Submission Date: May 18, 2001**

**Project No.: 8901-221/LIMS#SEP0015, SEP0016, SEP0017, SEP0018, SEP0019,  
and DEC0001.R00**

**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 Lakefield Research Limited.

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Twin Mining - Microdiamond Extraction, Selection and Description-Tomgat Project Area  
8901-221 - LIMS#AUG0011, SEP0004, SEP0005, SEP0011, SEP0012, SEP0013,  
SEP0014, SEP0015, SEP0016, SEP0017, SEP0018, SEP0019 and DEC0001.R00

Lakefield Research Limited  
Mineralogical Services

## VOLUME 2

**Twin Mining Corporation**  
Attn : Hermann Derbuch, P.Eng.

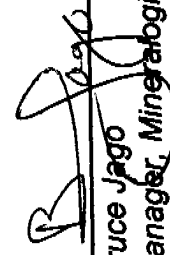
Suite 1250, 155 University Ave.  
Toronto, Ontario - M5H 3B7  
Canada  
Fax : (416) 777-0014

Lakefield, 05 23, 2001

Date Rec. : 22 September 2000  
LR. Ref. : M10015-SEP00  
Project : 8901-221

## CERTIFICATE OF ANALYSIS

Sample ID	Sample wt. kg	# Pours	Die #	Dia. ct
1: 887591	24	4	7	0.002
2: 887655	24	4	0	0.000
3: 887654	24	4	2	0.001
4: 887576	24	4	7	0.001
5: 887625	24	4	0	0.000
6: 887628	24	4	3	0.000
7: 887629	24	4	9	0.001
8: 887651	24	4	9	0.000
9: 887653	24	4	6	0.000
10: 887652	24	4	10	0.001

  
Bruce Jago  
Manager, Mineralogical Services

# Lakefield Research



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

Tel: (705) 652-2112  
Fax: (705) 652-3123  
Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

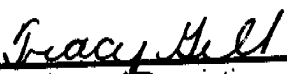
Date: April 20, 2001  
LIMS No. SEP0015.R00  
Sample No. 887591


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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.002  
Number of Diamonds: 7

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 20, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887591

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.329	0.002
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.044	0.000
	-212 / +150 µm	2	0.021	0.000
	-150 / +100 µm	3	0.011	0.000
	TOTAL	7	0.405	0.002

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.002  
 Number of Diamonds: 7

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

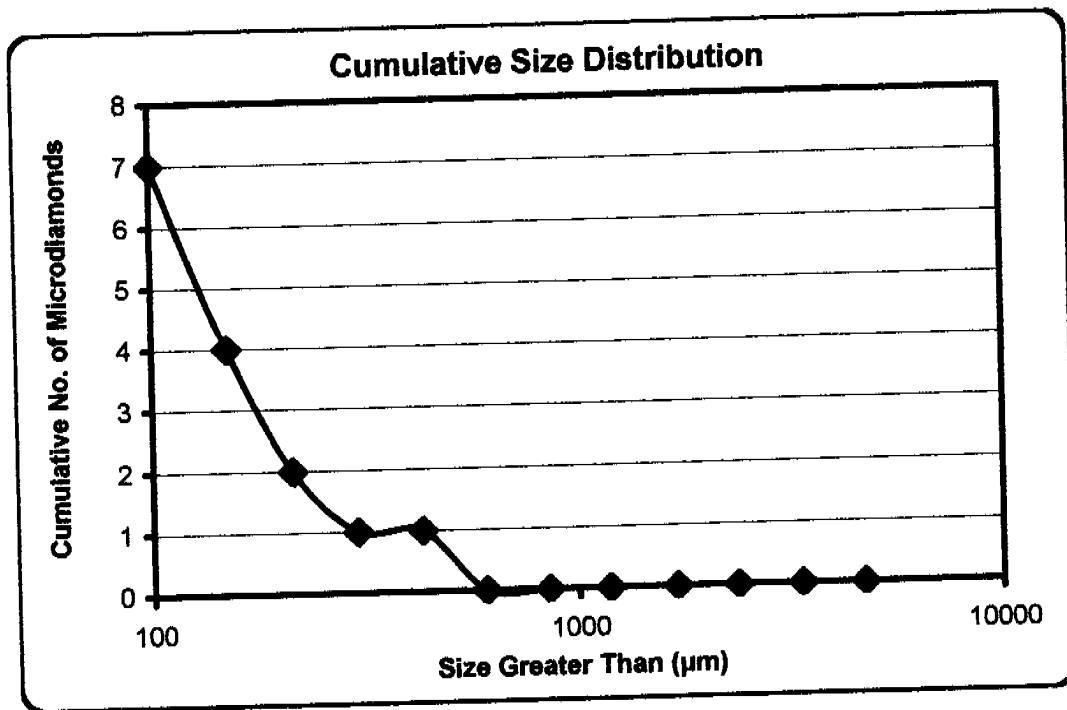
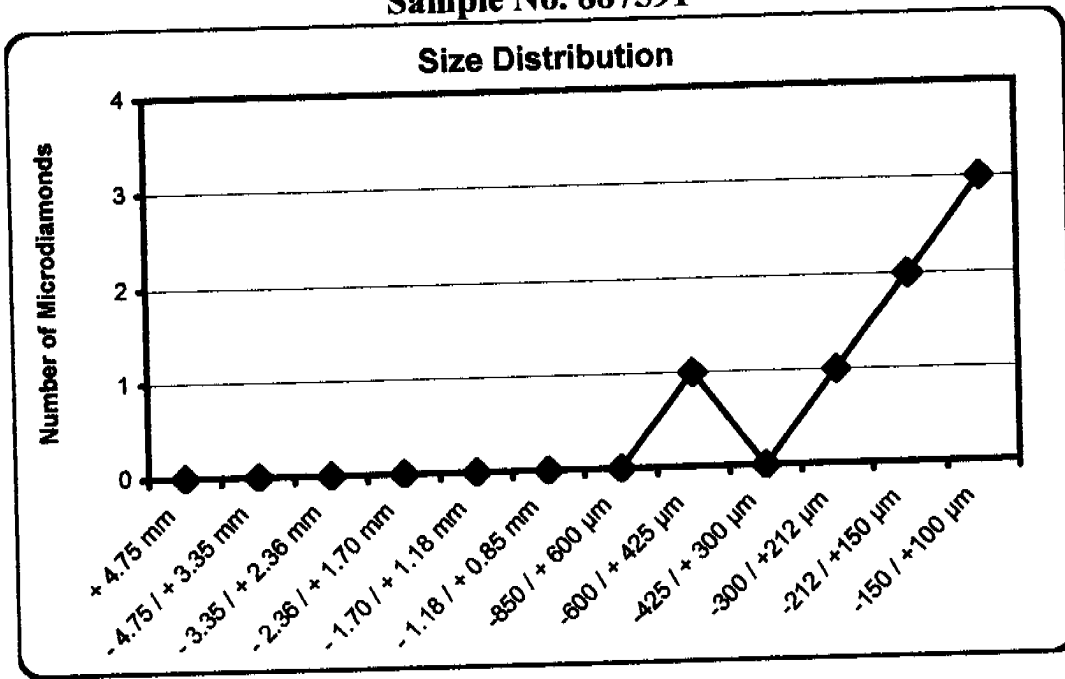
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 887591



April 20, 2001

**LAKEFIELD RESEARCH LIMITED**

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario K0L 2H0  
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 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00

Sample No. 887591

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.00000				
0				0.000	0.000000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
1	0.66	0.57	0.46		0.000000	White	Transparent	85%	Octahedral, stepped faces
1				0.329	0.001645				Sub-Total

April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0015.R00**  
 Sample No. **887591**  
 Sample Weight: **24.00 kg**

Project: **8901-221**

Client: **Twin Mining Corporation**

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
1	0.46	0.34	0.19	0.000000	White	Transparent		85%	Fragment with Crystal Faces, minor cleavages
1				0.044	0.000720	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
1	0.23	0.17	0.15	0.000000	White	Transparent		75%	Fragment with Crystal Faces, very minor cleavages
2	0.26	0.20	0.20	0.000000	Off White	Translucent		85%	Fragment with Crystal Faces, very minor cleavages, graphite inclusions
2				0.021	0.000105	<b>Sub-Total</b>			
<b>-150 / + 100 µm fraction</b>									
1	0.26	0.20	0.14	0.000000	Off White	Translucent		85%	Fragment with Crystal Faces, graphite inclusions
2	0.26	0.17	0.07	0.000000	White	Transparent		85%	Fragment with Crystal Faces, minor cleavages
3	0.14	0.14	0.07	0.000000	White	Transparent		99+%	Macle, very minor cleavages
3				0.011	0.000055	<b>Sub-Total</b>			
				0.002025	<b>TOTAL</b>				

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



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

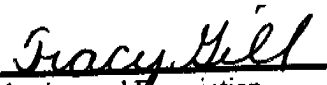
Date: April 19, 2001  
LIMS No. SEP0015.R00  
Sample No. 887655


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments 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 and silicates

Sample Weight: 24.0 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 19, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887655


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.0 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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April 19, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887655  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>

April 19, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887655  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-425 / + 300 µm fraction</b>										
0				0.000000						
0				0.0000	0.0000000	Sub-Total				
<b>-300 / + 212 µm fraction</b>										
0				0.000000						
0				0.0000	0.0000000	Sub-Total				
<b>-212 / + 150 µm fraction</b>										
0				0.000000						
0				0.0000	0.0000000	Sub-Total				
<b>-150 / + 100 µm fraction</b>										
0				0.000000						
0				0.0000	0.0000000	Sub-Total				
0				0.000000	TOTAL					

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

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Project: 8901-221  
Client: Twin Mining Corporation

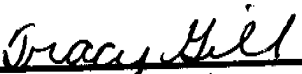
Date: April 19, 2001  
LIMS No. SEP0015.R00  
Sample No. 887654

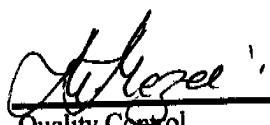
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+100	Ferromagnetic Mag	Oxides, silicates, and rock fragments
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable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

Sample Weight: 24.0 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 2

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

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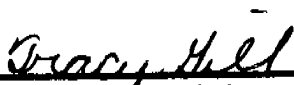
Date: April 19, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887654


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	1	0.069	0.000
	-300 / +212 µm	1	0.044	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>2</b>	<b>0.113</b>	<b>0.001</b>

**Sample Weight: 24.0 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 2**

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

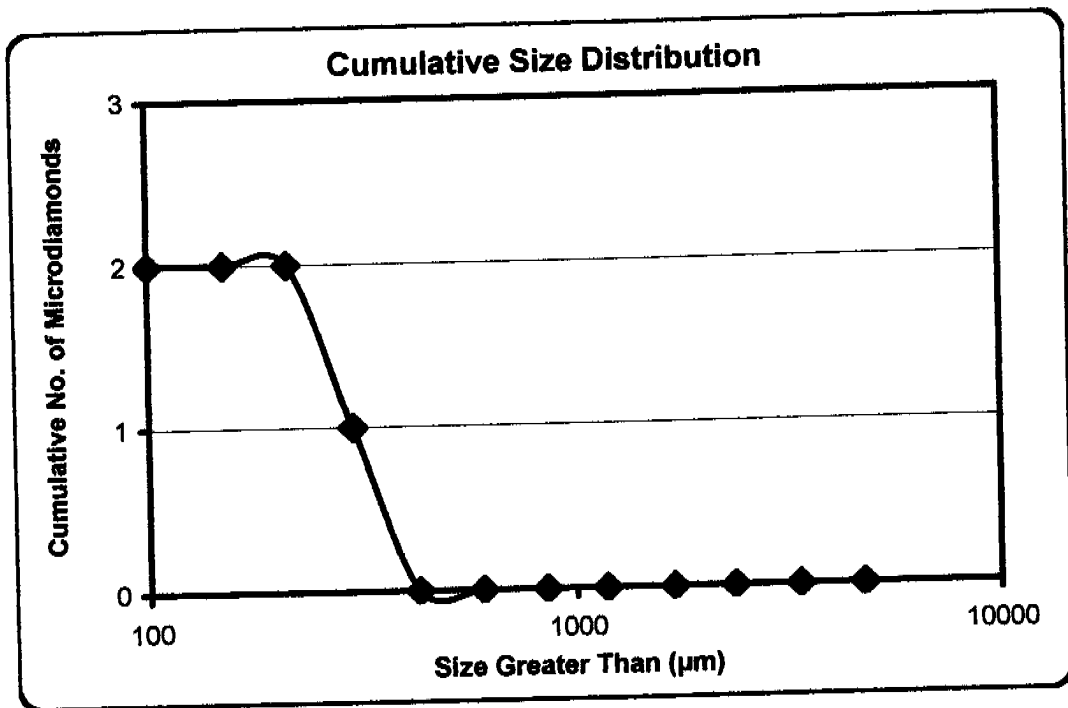
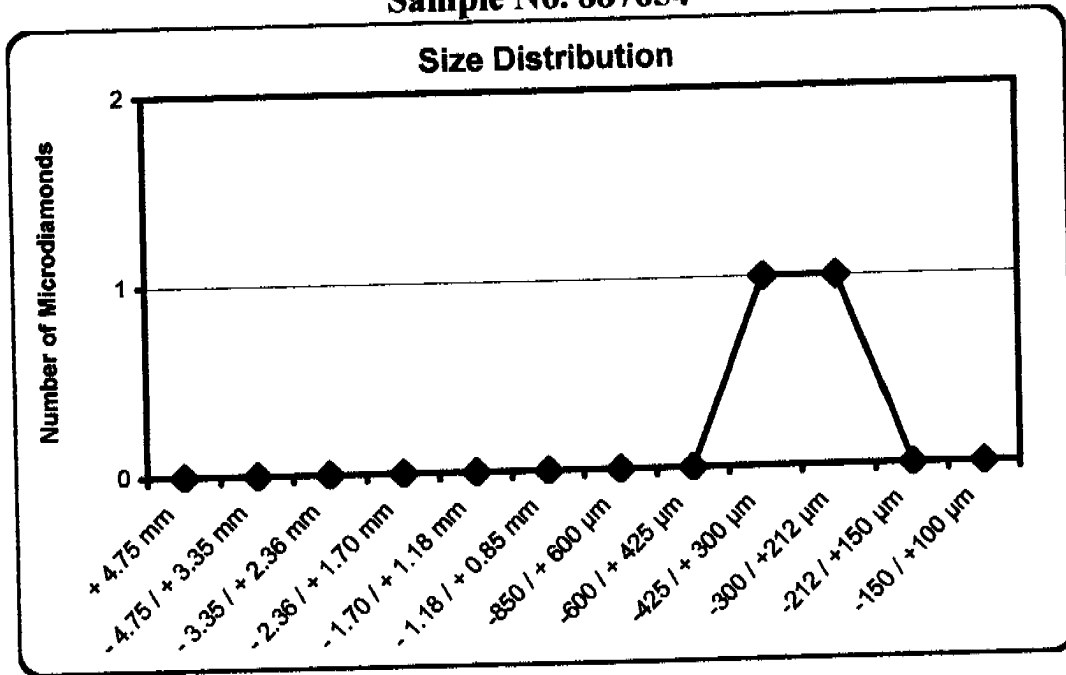
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

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# Sample No. 887654



April 19, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887654  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			



April 19, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887654  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 µm fraction</b>									
0				0.000300					
0				0.000	0.000000	Sub-Total			
<b>-425 / + 300 µm fraction</b>									
1	0.51	0.34	0.28	0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages, graphite inclusions	
1				0.069	0.000345	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
1	0.54	0.34	0.19	0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages, graphite inclusions	
1				0.044	0.000220	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
2				0.000565	TOTAL				

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

# Lakefield Research



Lakefield Research Limited  
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Fax: (705) 652-3123  
Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

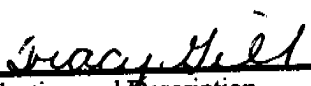
Date: April 18, 2001  
LIMS No. SEP0015.R00  
Sample No. 887576


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides and rock fragments
-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: 24.0 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 7

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

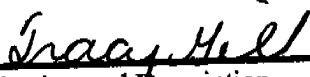
Date: April 18, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887576


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.177	0.001
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	1	0.010	0.000
	-150 / +100 µm	5	0.029	0.000
	TOTAL	7	0.216	0.001

Sample Weight: 24.0 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.001  
 Number of Diamonds: 7

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

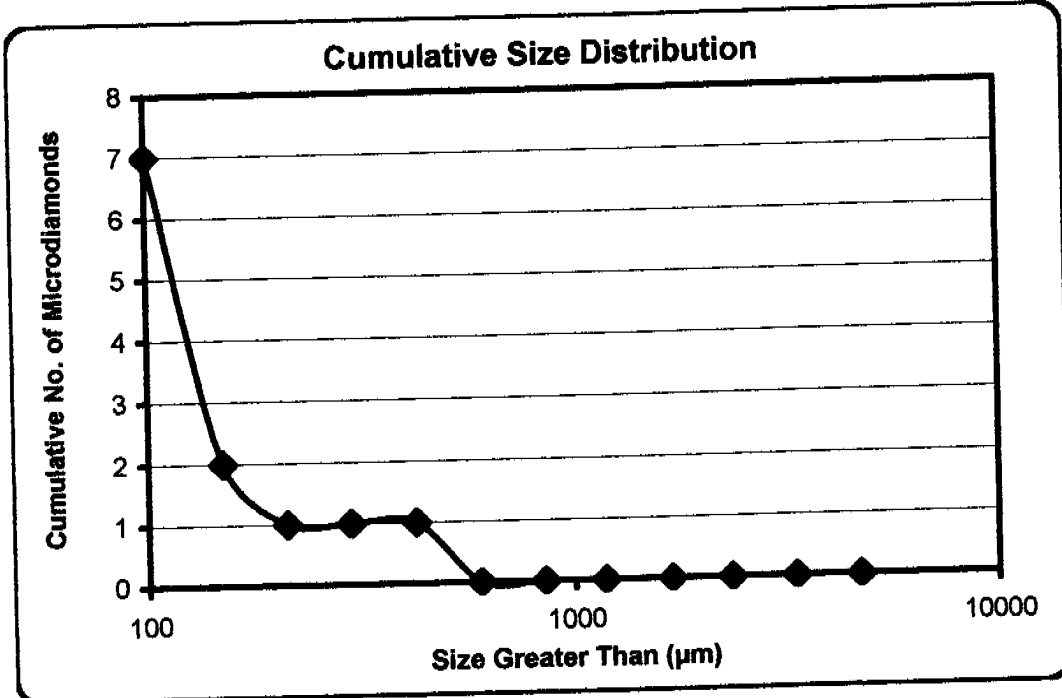
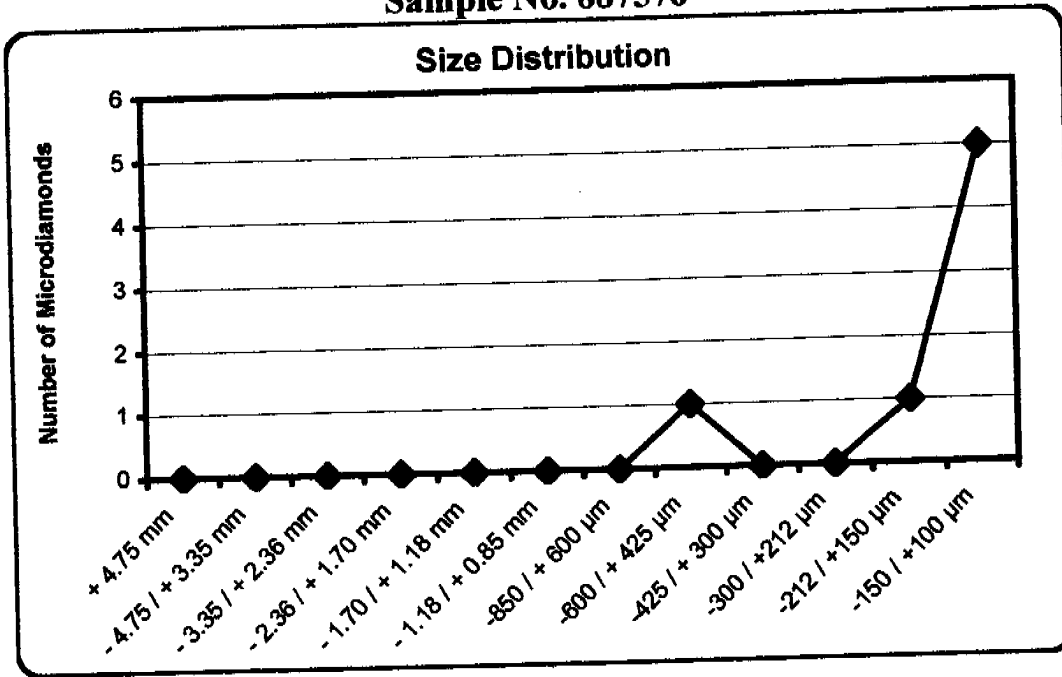
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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

# Sample No. 887576



April 18, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887576  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
1	0.54	0.48	0.39		0.000000		White	Transparent	95%
1				0.177	0.000885				Sub-Total
									Octahedral, graphite inclusions

April 18, 2001

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 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887576  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000000					<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000000					<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
1	0.23	0.20	0.12	0.000000		White	Transparent	99+%	Macle, twinned, graphite coating
1				0.010					<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
1	0.20	0.14	0.11	0.000000		White	Transparent	99+%	Octahedral, twinned, graphite inclusions
2	0.17	0.14	0.12	0.000000		White	Transparent	99+%	Octahedral
3	0.14	0.14	0.11	0.000000		White	Transparent	95%	Octahedral
4	0.17	0.17	0.09	0.000000		White	Transparent	95%	Macle
5	0.14	0.11	0.08	0.000000		White	Transparent	85%	Octahedral, stepped faces
5				0.029					<b>Sub-Total</b>
7									<b>TOTAL</b>
									0.001080

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 18, 2001  
LIMS No. SEP0015.R00  
Sample No. 887625


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+100	Ferromagnetic Mag	Oxides and rock fragments
-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: 24.0 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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



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 Fax: (705) 652-3123  
 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 18, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887625


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.0 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.

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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April 18, 2001

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 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887625  
 Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000				Sub-Total

April 18, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00

Sample No. 887625

Sample Weight: 24.0 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-425 / + 300 µm fraction</b>										
0				0.000000						
0				0.000000						<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>										
0				0.000000						
0				0.000000						<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>										
0				0.000000						
0				0.000000						<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>										
0				0.000000						
0				0.000000						<b>Sub-Total</b>
0				0.000000						<b>TOTAL</b>

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

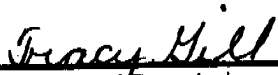
Date: April 20, 2001  
LIMS No. SEP0015.R00  
Sample No. 887628


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and oxides
+100	Ferromagnetic Mag	Rock fragments
-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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 3

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

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 20, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887628

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.018	0.000
	-212 / +150 µm	2	0.030	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>3</b>	<b>0.048</b>	<b>0.000</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.000  
 Number of Diamonds: 3

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

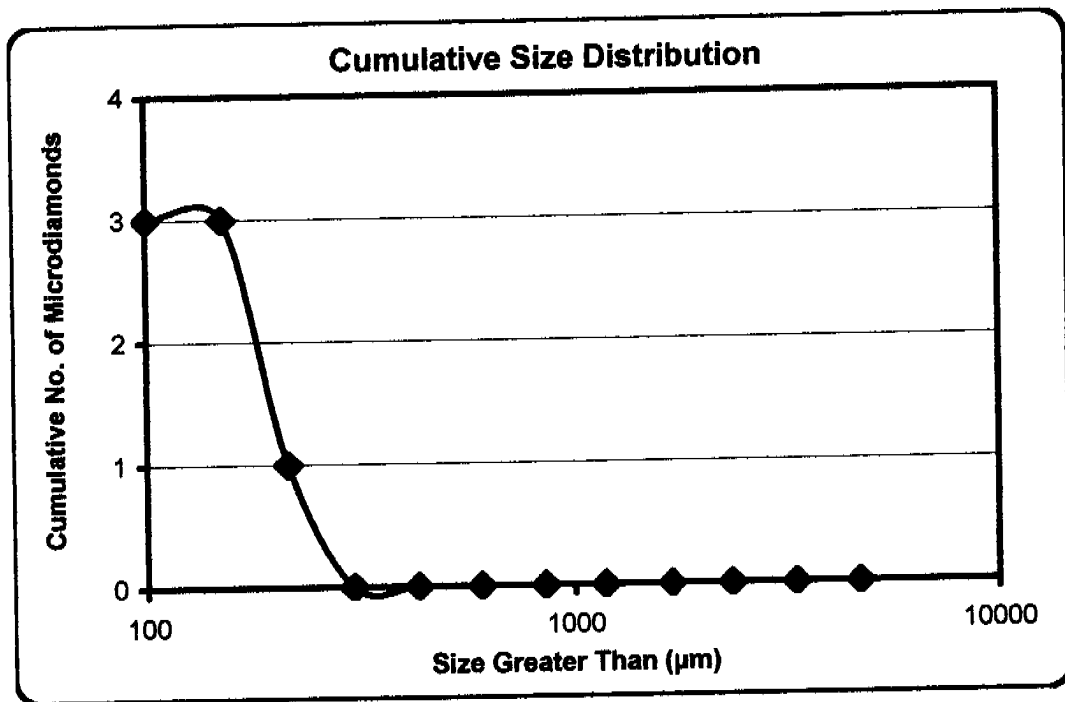
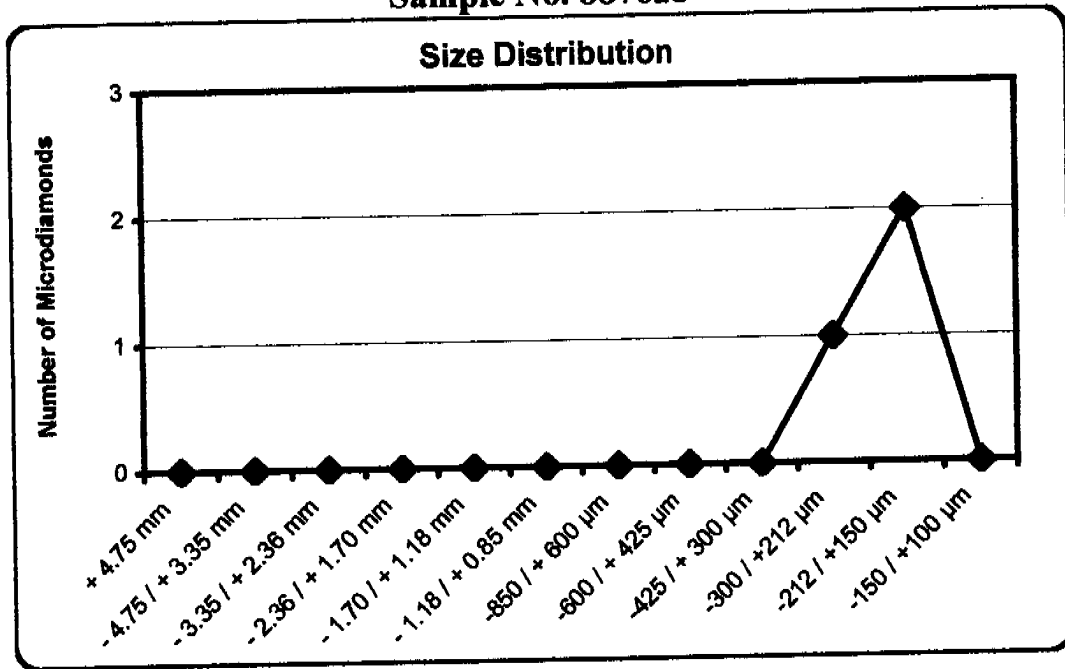
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 887628



April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887628  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	Sub-Total				

April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887628  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-300 / + 212 µm fraction</b>									
1	0.34	0.29	0.13	0.000000			Transparent	95%	Made, graphite inclusions
1				0.018					Sub-Total
<b>-212 / + 150 µm fraction</b>									
1	0.29	0.26	0.15	0.000000			Transparent	95%	Octahedral, twinned, stepped faces
2	0.26	0.20	0.15	0.000000			Transparent	99+%	Octahedral, very minor cleavages, graphite inclusions
2				0.030					Sub-Total
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
3				0.000240					TOTAL

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

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Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 20, 2001  
LIMS No. SEP0015.R00  
Sample No. 887629


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides and rock fragments
-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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 9

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

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 20, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887629

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	3	0.128	0.001
	-212 / +150 µm	1	0.013	0.000
	-150 / +100 µm	5	0.023	0.000
	TOTAL	9	0.164	0.001

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.001  
 Number of Diamonds: 9

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

Tracy Hill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

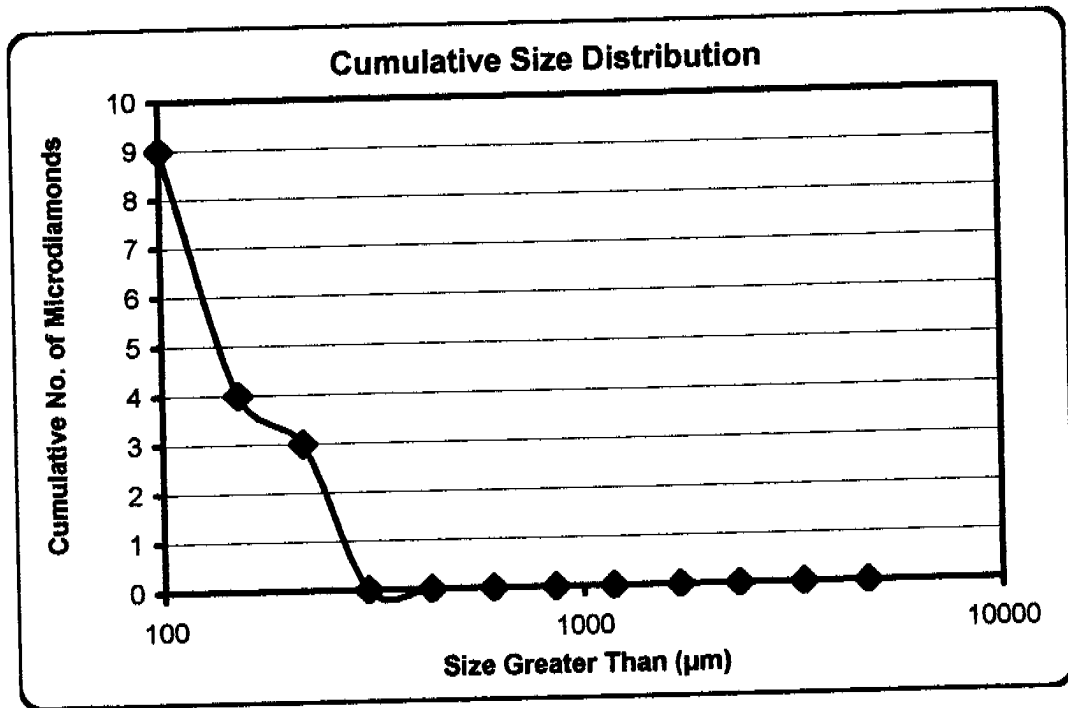
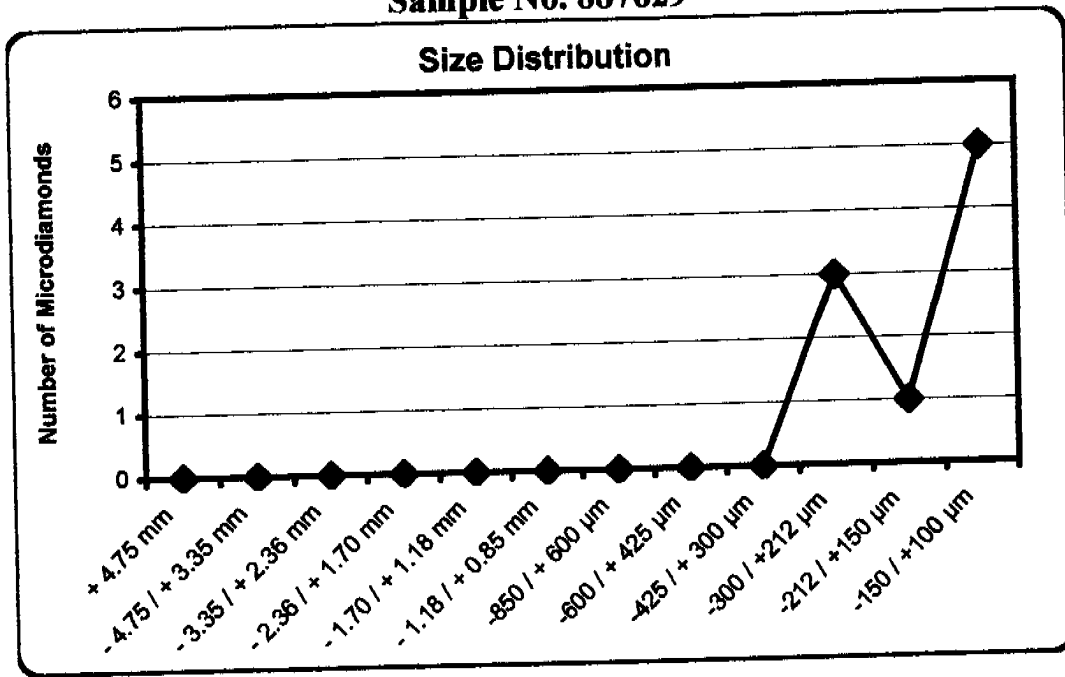
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**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.

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

# Sample No. 887629



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 Phone: 705-652-2112 E-mail: [bjago@lakefield.com](mailto:bjago@lakefield.com)  
 Fax: 705-652-3123

April 20, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887629  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-600 / + 425 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				

April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887629  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.00000					
0				0.00000					<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
1	0.46	0.31	0.18	0.00000		White	Transparent	85%	Fragment with Crystal Faces, significant cleavages
2	0.40	0.29	0.25	0.00000		White	Transparent	85%	Fragment with Crystal Faces, significant cleavages
3	0.43	0.37	0.14	0.00000		White	Transparent	85%	Fragment with Crystal Faces, significant cleavages
3				0.128					<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
1	0.26	0.20	0.12	0.00000		White	Transparent	95%	Octahedral
1				0.013					<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
1	0.26	0.17	0.09	0.00000		White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
2	0.20	0.14	0.11	0.00000		White	Transparent	95%	Octahedral, very minor cleavages
3	0.17	0.14	0.16	0.00000		White	Transparent	99+%	Octahedral, stepped faces, graphite coating
4	0.17	0.14	0.09	0.00000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
5	0.17	0.11	0.09	0.00000		White	Transparent	85%	Fragment with Crystal Faces, graphite coating
5				0.023					<b>Sub-Total</b>
9									<b>TOTAL</b>

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

# Lakefield Research



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Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: April 20, 2001

LIMS No. SEP0015.R00

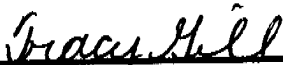
Sample No. 887651


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Not applicable
-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)	Silicates and graphite

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 9

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

  
Selection and Description  
for Robert Buchan  
Consulting Mineralogist

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 20, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887651

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	3	0.032	0.000
	-150 / +100 µm	6	0.027	0.000
	<b>TOTAL</b>	<b>9</b>	<b>0.059</b>	<b>0.000</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.000  
 Number of Diamonds: 9

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

*Tracy Hill*  
 Selection and Description  
 for Robert Buchan  
 Consulting Mineralogist

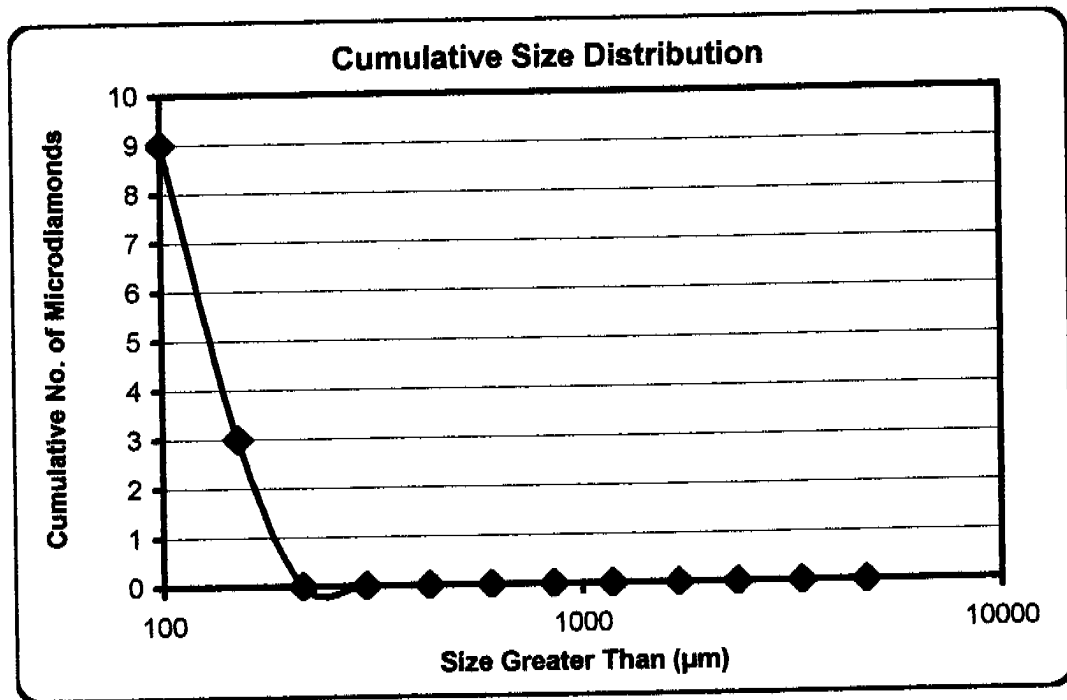
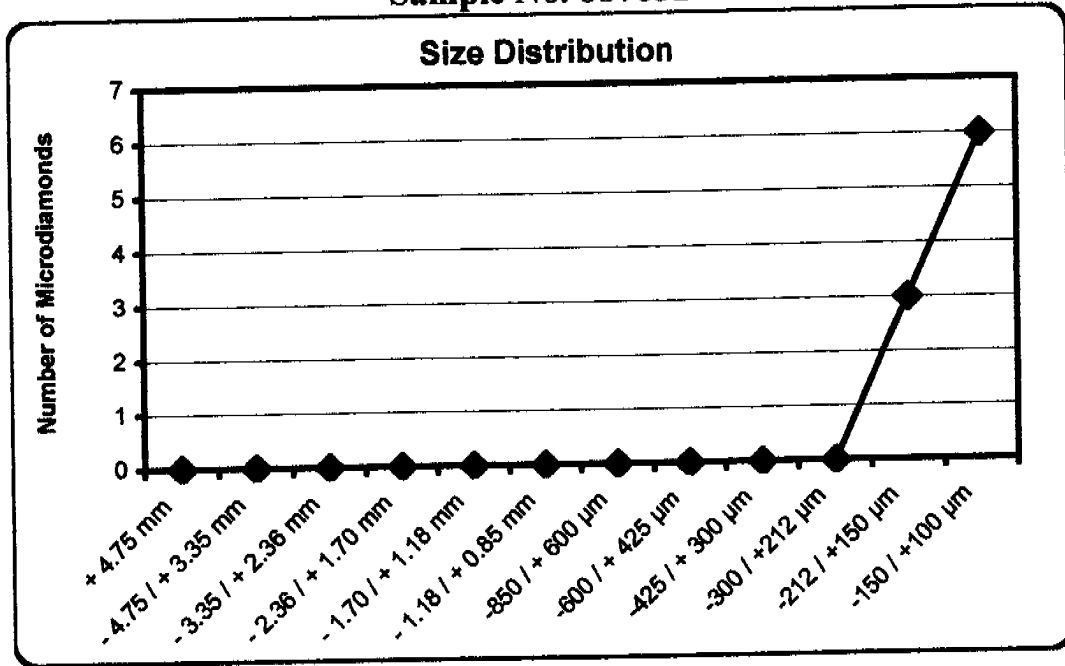
*Maria Mezei*  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 887651



April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887651  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-600 / + 425 µm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total



April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887651  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0			0.000	0.000000					Sub-Total
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0			0.000	0.000000					Sub-Total
<b>-212 / + 150 µm fraction</b>									
1	0.17	0.14	0.08	0.000000	White	Transparent		95%	Fragment with Crystal Faces, twinned, minor cleavages
2	0.20	0.14	0.12	0.000000	White	Transparent		99+%	Octahedral, very minor cleavages
3	0.20	0.17	0.11	0.000000	White	Transparent		99+%	Octahedral, very minor cleavages
3			0.032	0.000160					Sub-Total
<b>-150 / + 100 µm fraction</b>									
1	0.11	0.11	0.12	0.000000	White	Translucent		85%	Octahedral, very minor cleavages
2	0.11	0.11	0.08	0.000000	White	Transparent		85%	Octahedral, very minor cleavages
3	0.14	0.11	0.08	0.000000	White	Transparent		85%	Fragment with Crystal Faces, minor cleavages
4	0.14	0.14	0.09	0.000000	White	Transparent		95%	Macle, very minor cleavages
5	0.20	0.11	0.09	0.000000	White	Transparent		95%	Fragment with Crystal Faces, twinned, minor cleavages
6	0.17	0.14	0.09	0.000000	White	Transparent		99+%	Octahedral
6			0.027	0.000135					Sub-Total
<b>TOTAL</b>									
9				0.000295					TOTAL

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

# Lakefield Research



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Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

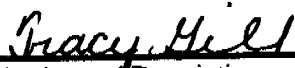
Date: April 20, 2001  
LIMS No. SEP0015.R00  
Sample No. 887653


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+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)	Silicates and graphite

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 6

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 20, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887653


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.019	0.000
	-212 / +150 µm	1	0.010	0.000
	-150 / +100 µm	4	0.015	0.000
	<b>TOTAL</b>	<b>6</b>	<b>0.044</b>	<b>0.000</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.000**  
**Number of Diamonds: 6**

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

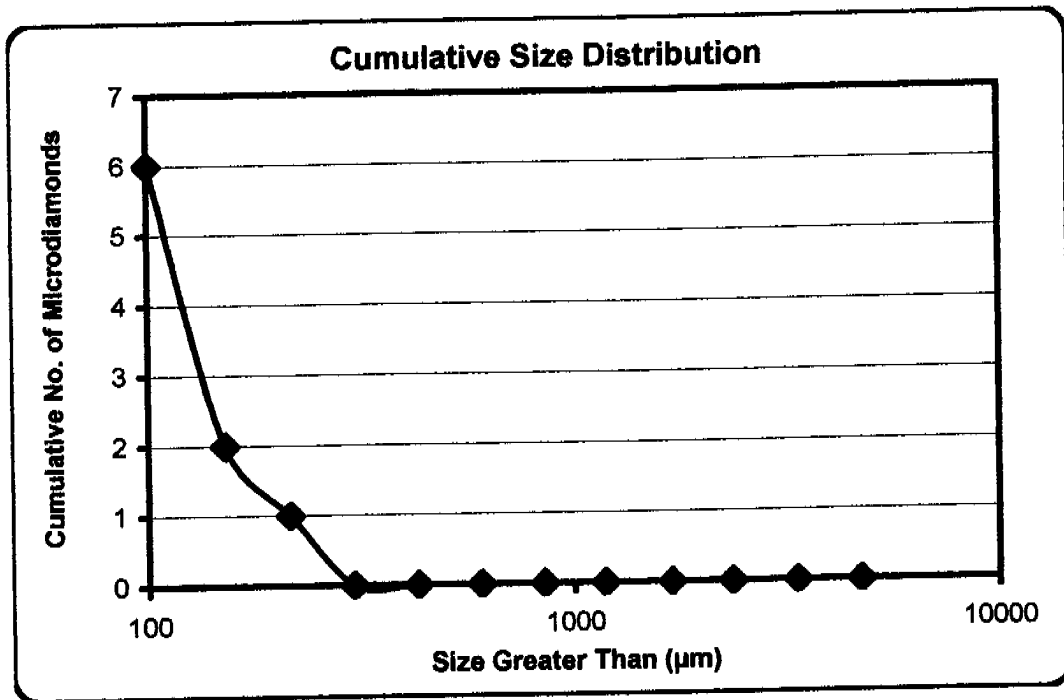
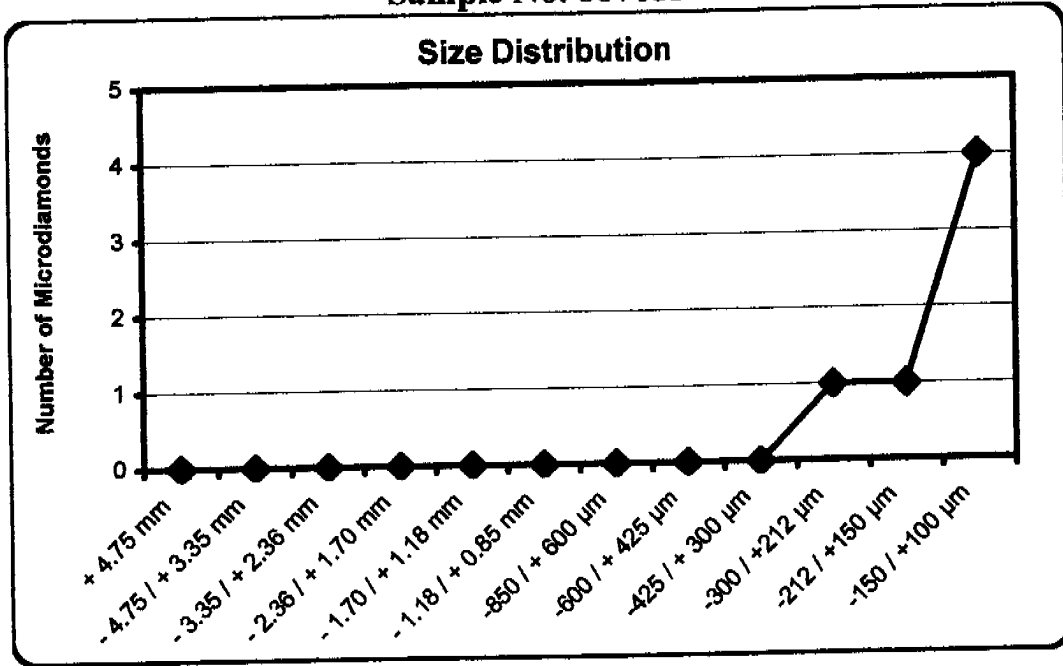
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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Sample No. 887653



April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887653  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

April 20, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887653  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats					
<b>-425 / + 300 µm fraction</b>										
0				0.000000						
0				0.000	0.000000				Sub-Total	
<b>-300 / + 212 µm fraction</b>										
1	0.23	0.23	0.20	0.000000	White	Transparent		85%	Octahedral	
1				0.019	0.000095				Sub-Total	
<b>-212 / + 150 µm fraction</b>										
1	0.20	0.14	0.10	0.000000	White	Transparent		85%	Fragment with Crystal Faces, minor cleavages	
1				0.010	0.000050				Sub-Total	
<b>-150 / + 100 µm fraction</b>										
1	0.17	0.17	0.14	0.000000	Off White	Transparent		99+%	Octahedral, graphite inclusions	
2	0.17	0.14	0.09	0.000000	White	Transparent		95%	Octahedral, minor cleavages	
3	0.14	0.11	0.12	0.000000	White	Transparent		99+%	Octahedral	
4	0.17	0.11	0.07	0.000000	White	Transparent		85%	Fragment with Crystal Faces, minor cleavages	
4				0.015	0.000075				Sub-Total	
6									0.000220	TOTAL

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

# Lakefield Research



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Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 20, 2001  
LIMS No. SEP0015.R00  
Sample No. 887652

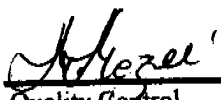
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Oxides and rock fragments
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic Mag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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 10

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

  
Selection and Description  
for Robert Buchan  
Consulting Mineralogist

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 20, 2001  
 LIMS No. SEP0015.R00  
 Sample No. 887652

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.032	0.000
	-212 / +150 µm	6	0.078	0.000
	-150 / +100 µm	3	0.018	0.000
	<b>TOTAL</b>	<b>10</b>	<b>0.128</b>	<b>0.001</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.001  
 Number of Diamonds: 10

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

Tracy Hill  
 Selection and Description

for Robert Buchan  
 Consulting Mineralogist

Maria Mezei  
 Quality Control

Maria Mezei  
 Diamond Selection Specialist

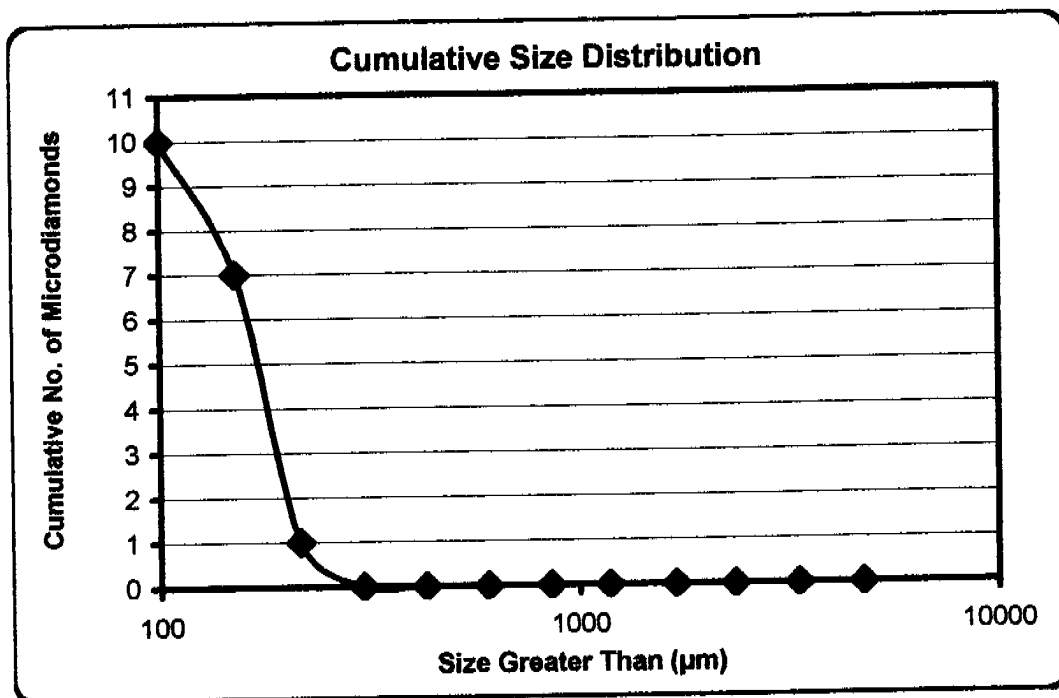
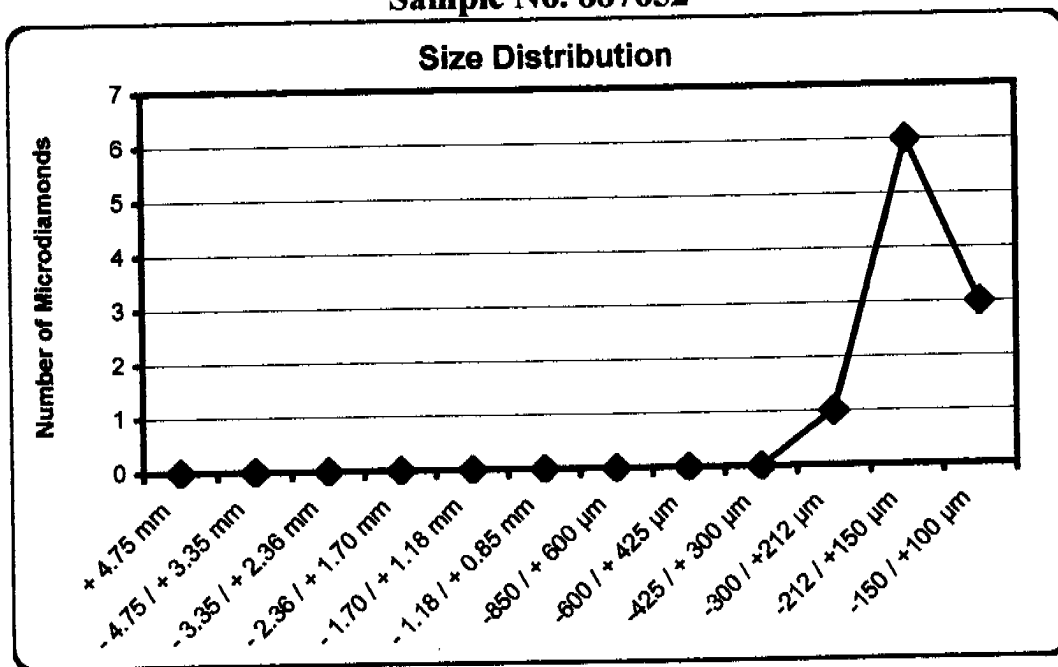
**Note:**

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



Sample No. 887652



**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

April 20, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00  
 Sample No. 887652  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-850 / + 600 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				

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April 20, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0015.R00

Sample No. 887652

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000					<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
1	0.34	0.31	0.11	0.000000	White	Transparent		99+%	Octahedral, other inclusions, very minor cleavages
1				0.032	0.000160				<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
1	0.26	0.20	0.11	0.000000	White	Transparent		95%	Octahedral, minor cleavages
2	0.20	0.20	0.15	0.000000	White	Transparent		95%	Octahedral, significant cleavages
3	0.20	0.14	0.15	0.000000	White	Transparent		95%	Macle, minor cleavages
4	0.26	0.17	0.14	0.000000	White	Transparent		95%	Octahedral, twinned, very minor cleavages
5	0.29	0.14	0.15	0.000000	White	Translucent		Note 1	Fragment on which crystal faces unrecognizable, graphite inclusion, very significant cleavages
6	0.23	0.20	0.09	0.000000	White	Transparent		95%	Macle, twinned
6				0.078	0.000390				<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
1	0.14	0.14	0.09	0.000000	White	Transparent		99+%	Octahedral, very minor cleavages
2	0.23	0.11	0.12	0.000000	White	Transparent		95%	Fragment with Crystal Faces, twinned, minor cleavages
3	0.14	0.14	0.12	0.000000	White	Transparent		85%	Octahedral, twinned, stepped faces, graphite inclusions
3				0.018	0.000090				<b>Sub-Total</b>
10					0.000640				<b>TOTAL</b>

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



## Twin Mining Corporation

Attn : Hermann Derbuch, P.Eng.

Suite 1250, 155 University Ave.  
Toronto, Ontario - M5H 3B7  
Canada

Fax : (416) 777-0014

Lakefield, 05 23, 2001

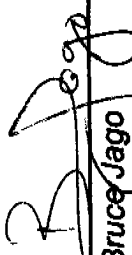
Date Rec. : 22 September 2000

LR. Ref. : M10016-SEP00

Project : 8901-221

## CERTIFICATE OF ANALYSIS

Sample ID	Sample wt. kg	# Pours	Dia #	Dia ct
1: 887577	24.00	4	7	0.001
2: 887578	24.00	4	3	0.001
3: 887580	24.00	4	3	0.000
4: 887584	24.00	4	3	0.000
5: 887614	24.00	4	0	0.000
6: 887615	24.00	4	0	0.000
7: 887617	24.00	4	0	0.000
8: 887618	24.00	4	7	0.000
9: 887621	24.00	4	2	0.000
10: 887622	24.00	4	0	0.000

  
Bruce Jago  
Manager, Mineralogical Services

# Lakefield Research



Lakefield Research Limited  
185 Concession St., Box 4300  
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Tel: (705) 652-2112  
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Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

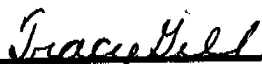
Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887577

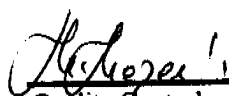
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+100	Ferromagnetic Mag	Oxides and rock fragments
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 7

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887577

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	4	0.148	0.001
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	3	0.025	0.000
	<b>TOTAL</b>	<b>7</b>	<b>0.173</b>	<b>0.001</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 7**

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

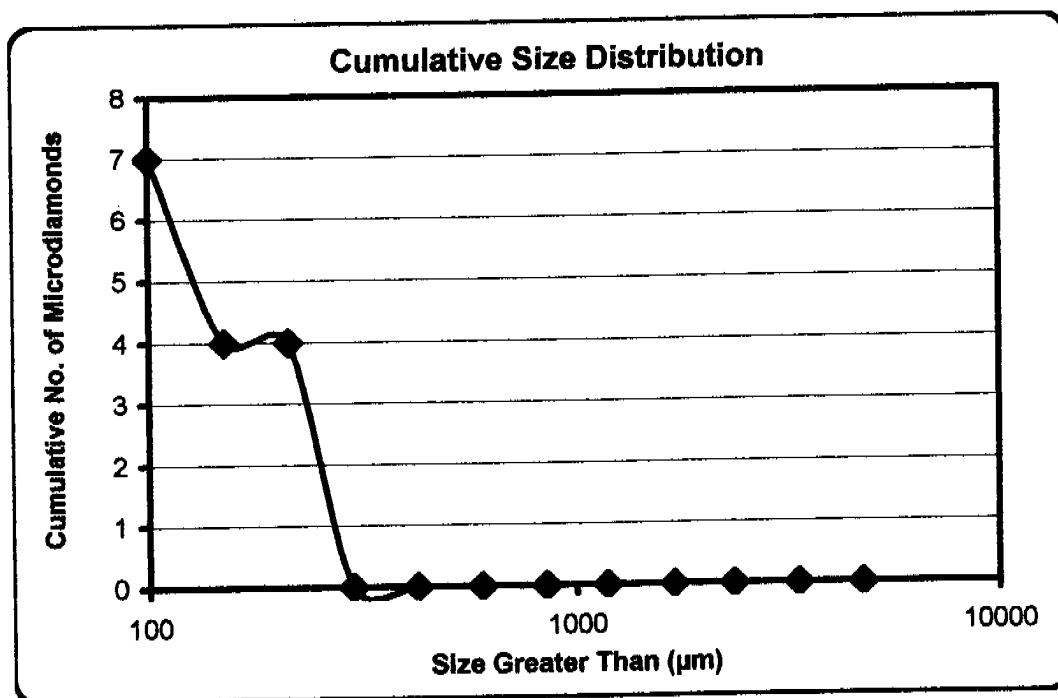
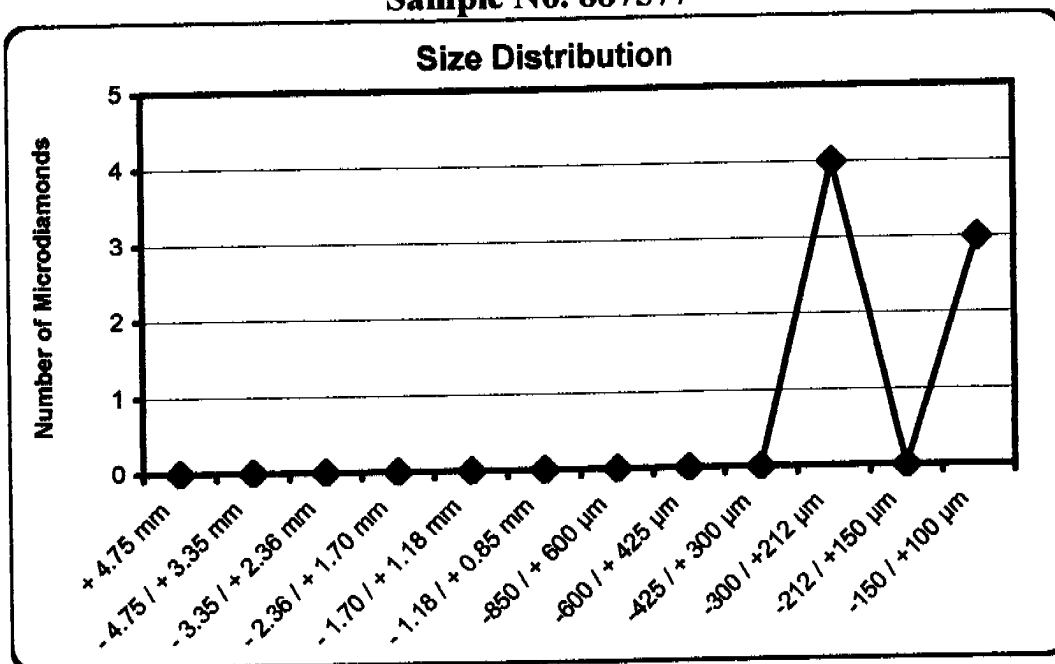
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 887577



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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00

Sample No. 887577

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						
<b>-600 / + 425 µm fraction</b>										
0				0.000000						
0				0.000000						
				0.000000						



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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00

Sample No. 887577

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-425 / + 300 µm fraction</b>										
0				0.000000						
0				0.000000						<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>										
1	0.40	0.34	0.20	0.000000	White	Transparent	95%			Macle, twinned, graphite inclusions
2	0.40	0.29	0.19	0.000000	White	Transparent	85%			Fragment with Crystal Faces, minor cleavages
3	0.31	0.26	0.24	0.000000	White	Transparent	95%			Octahedral, twinned, graphite inclusions
4	0.31	0.23	0.20	0.000000	Off White	Transparent	95%			Aggregate, minor cleavages
4				0.148	0.000740					<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>										
0				0.000000						
0				0.000000						<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>										
1	0.23	0.20	0.18	0.000000	White	Transparent	85%			Fragment with Crystal Faces, very minor cleavages, graphite inclusions
2	0.17	0.14	0.09	0.000000	Off White	Transparent	95%			Contact twinned
3	0.23	0.14	0.10	0.000000	Off White	Transparent	75%			Fragment with Crystal Faces, significant cleavages
3				0.025	0.000125					<b>Sub-Total</b>
7				0.000865						<b>TOTAL</b>

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887578


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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 3

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887578

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.147	0.001
	-425 / + 300 µm	1	0.126	0.001
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	1	0.006	0.000
	<b>TOTAL</b>	<b>3</b>	<b>0.279</b>	<b>0.001</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 3**

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

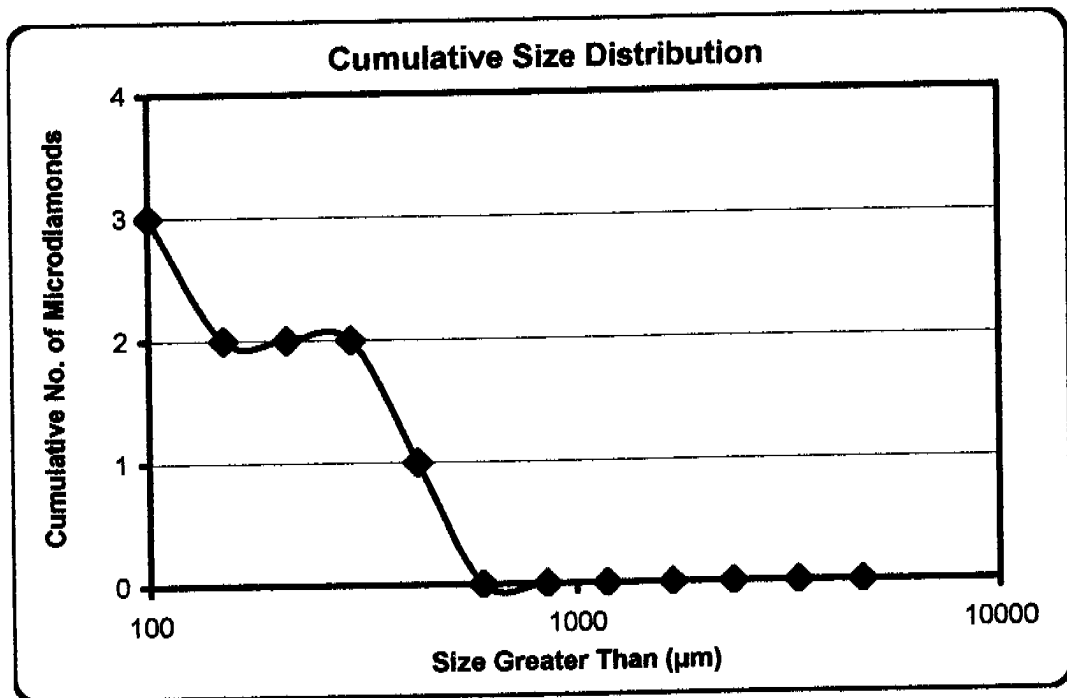
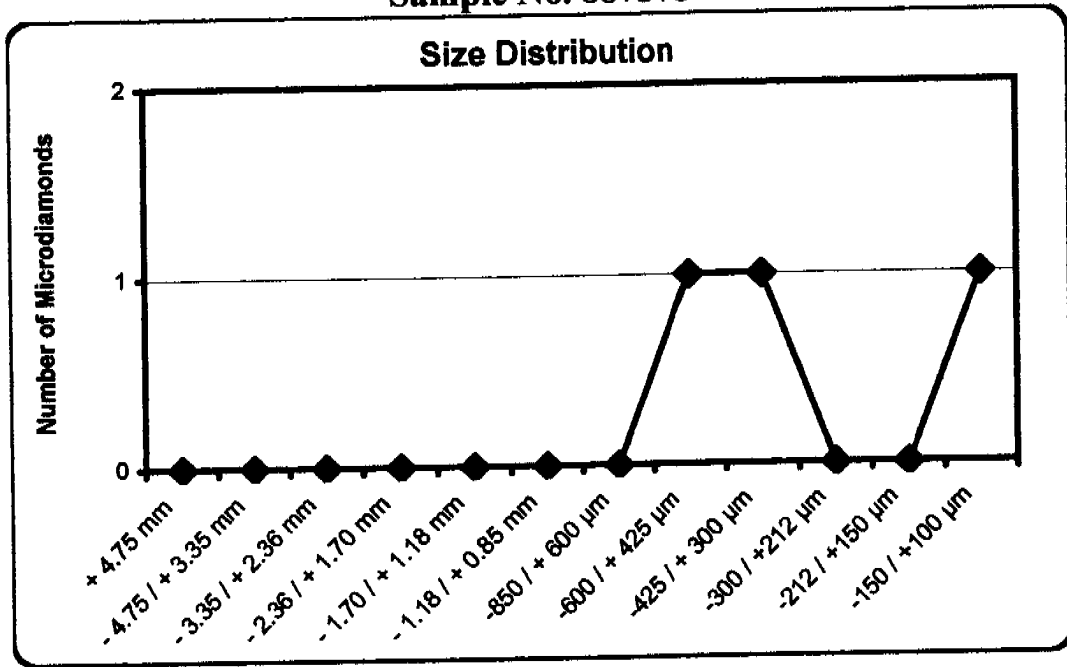
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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

# Sample No. 887578



April 24, 2001

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 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00  
 Sample No. 887578  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.00000						
0				0.000	0.000000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-600 / + 425 µm fraction</b>										
1	0.54	0.51	0.29		0.000000	White	Transparent	95%	Octahedral, stepped faces, graphite coating	
1				0.147	0.000735	Sub-Total				

**LAKEFIELD RESEARCH LIMITED**  
 P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario K0L 2H0  
 Phone: 705-652-2112 E-mail: [bjago@lakefield.com](mailto:bjago@lakefield.com)  
 Fax: 705-652-3123

April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0016.R00**  
 Sample No. **887578**  
 Sample Weight: **24.00 kg**

Project: **8901-221**

Client: **Twin Mining Corporation**

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
1	0.54	0.40	0.34	0.000000	0.000000	White	Transparent	75%	Dodecahedral, very minor cleavages
1				0.126	0.000630	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
0					0.000000				
0				0.000	0.000000	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
0					0.000000				
0				0.000	0.000000	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
1	0.20	0.14	0.17	0.000000	0.000000	White	Transparent	95%	Octahedral, twinned, graphite coating
1				0.006	0.000030	Sub-Total			
3					0.001395	TOTAL			

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

# Lakefield Research



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Lakefield, Ontario  
K0L 2H0, CANADA

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Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: April 24, 2001

LIMS No. SEP0016.R00


Sample No. 887580


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, oxides and silicates
+100	Ferromagnetic Mag	Rock fragments and 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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 3

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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 Lakefield, Ontario  
 K0L 2H0, CANADA

Tel: (705) 652-2112  
 Fax: (705) 652-3123  
 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887580

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	3	0.010	0.000
TOTAL		3	0.010	0.000

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.000  
 Number of Diamonds: 3

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

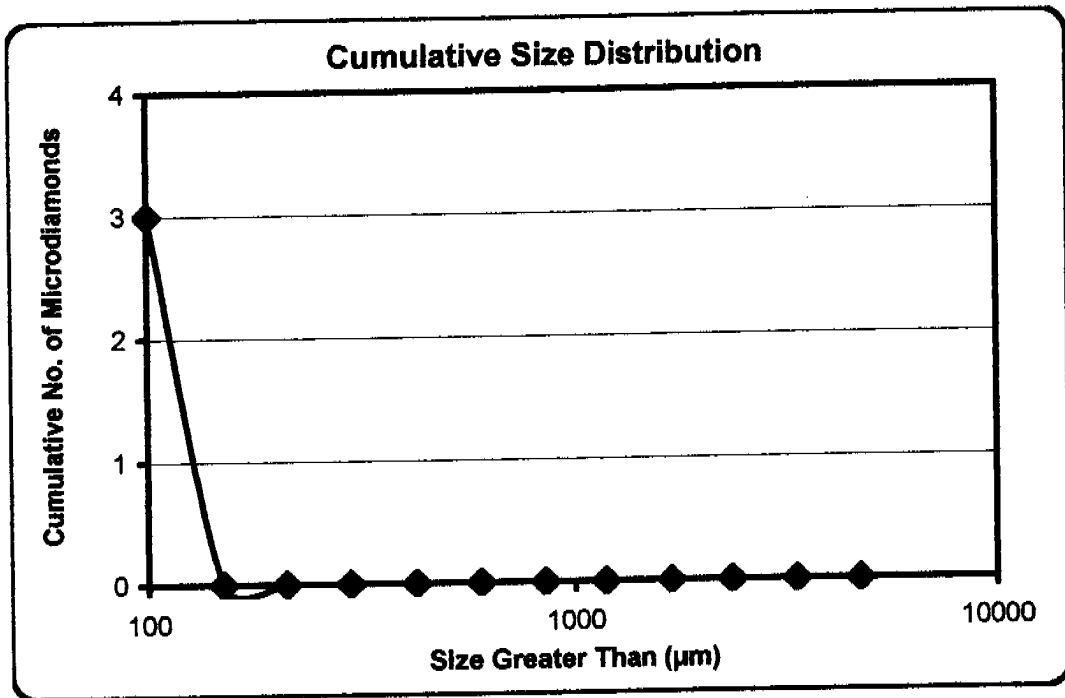
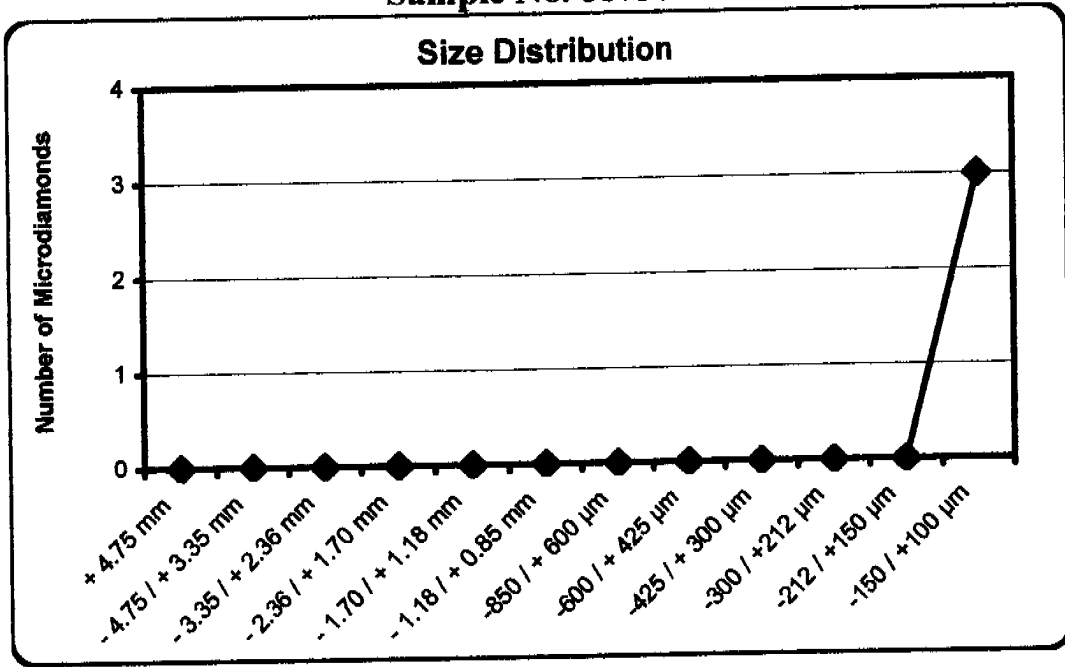
**Note:**

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.

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



# Sample No. 887580



April 24, 2001

**LAKEFIELD RESEARCH LIMITED**

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00  
 Sample No. 887580  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total

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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0016.R00

Sample No. 887580

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-300 / + 212 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-212 / + 150 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-150 / + 100 µm fraction</b>									
1	0.17	0.14	0.07		0.00000	White	Transparent	95%	Macle, twinned
2	0.17	0.11	0.07		0.00000	White	Transparent	85%	Fragment with Crystal Faces
3	0.11	0.11	0.13		0.00000	White	Transparent	75%	Dodecahedral
3				0.010	0.000050				Sub-Total
3					0.000050				TOTAL

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887584


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+100	Ferromagnetic Mag	Rock fragments and 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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 3

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

  
Selection and Description  
for Robert Buchan  
Consulting Mineralogist

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887584

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	1	0.011	0.000
	-150 / +100 µm	2	0.007	0.000
	TOTAL	3	0.018	0.000

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.000  
 Number of Diamonds: 3

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

*Tracy Hill*  
 Selection and Description  
 for Robert Buchan  
 Consulting Mineralogist

*Maria Mezei*  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00  
 Sample No. 887584  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total
<b>-600 / + 425 µm fraction</b>										
0				0.000000						
0				0.000	0.000000					Sub-Total

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April 24, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0016.R00

Sample No. 887584

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0				0.00000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
1	0.20	0.17	0.11	0.000000		White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
1				0.011	0.000055				<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
1	0.11	0.11	0.06	0.000000		White	Transparent	95%	Macle, very minor cleavages
2	0.11	0.11	0.11	0.000000		White	Transparent	99+%	Octahedral, twinned, very minor cleavages
2				0.007	0.000035				<b>Sub-Total</b>
3					0.000090				<b>TOTAL</b>

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



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

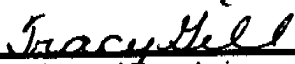
Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887614


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Rock fragments
-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 and silicates

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887614

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.00 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.

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0016.R00**  
 Sample No. **887614**  
 Sample Weight: **24.00 kg**

Project: **8901-221**

Client: **Twin Mining Corporation**

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-850 / + 600 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	Sub-Total				

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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0016.R00

Sample No. 887614

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-425 / + 300 µm fraction</b>										
0				0.000000						
0				0.000000						Sub-Total
<b>-300 / + 212 µm fraction</b>										
0				0.000000						
0				0.000000						Sub-Total
<b>-212 / + 150 µm fraction</b>										
0				0.000000						
0				0.000000						Sub-Total
<b>-150 / + 100 µm fraction</b>										
0				0.000000						
0				0.000000						Sub-Total
0				0.000000						<b>TOTAL</b>

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

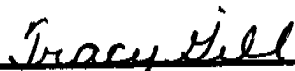
Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887615

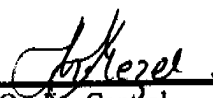
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and oxides
+100	Ferromagnetic Mag	Rock fragments
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic Mag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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: April 24, 2001

LIMS No. SEP0016.R00

Sample No. 887615

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 $\mu$ m	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 $\mu$ m	0	0.000	0.000
	-425 / + 300 $\mu$ m	0	0.000	0.000
	-300 / +212 $\mu$ m	0	0.000	0.000
	-212 / +150 $\mu$ m	0	0.000	0.000
	-150 / +100 $\mu$ m	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.00 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.

Selection and Description

Tracy Gill

Mineralogy Technician

Quality Control

Maria Mezei

Diamond Selection Specialist

### Note:

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April 24, 2001

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 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00  
 Sample No. 887615  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
<b>+ 4.75 mm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-850 / + 600 µm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total
<b>-600 / + 425 µm fraction</b>										
0					0.000000					
0				0.000	0.000000					Sub-Total

**LAKEFIELD RESEARCH LIMITED**

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 Phone: 705-652-2112 E-mail: [bjago@lakefield.com](mailto:bjago@lakefield.com)  
 Fax: 705-652-3123

April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0016.R00

Sample No. 887615

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
0					0.000000	<b>TOTAL</b>			

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



# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

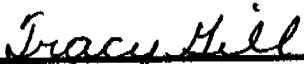
Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887617


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and oxides
+100	Ferromagnetic Mag	Rock fragments and 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 and silicates

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.*

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887617


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 $\mu$ m	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 $\mu$ m	0	0.000	0.000
	-425 / + 300 $\mu$ m	0	0.000	0.000
	-300 / +212 $\mu$ m	0	0.000	0.000
	-212 / +150 $\mu$ m	0	0.000	0.000
	-150 / +100 $\mu$ m	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.00 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.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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April 24, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00  
 Sample No. 887617  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total

April 24, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R00

Sample No. 887617

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000000					Sub-Total
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000000					Sub-Total
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000000					Sub-Total
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000000					Sub-Total
0				0.000000					TOTAL

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 25, 2001  
LIMS No. SEP0016.R01  
Sample No. 887618

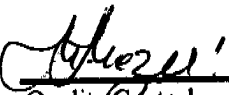
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+100	Ferromagnetic Mag	Oxides and silicates
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 7

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 25, 2001  
LIMS No. SEP0016.R01  
Sample No. 887618


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 $\mu$ m	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 $\mu$ m	0	0.000	0.000
	-425 / + 300 $\mu$ m	0	0.000	0.000
	-300 / +212 $\mu$ m	0	0.000	0.000
	-212 / +150 $\mu$ m	2	0.020	0.000
	-150 / +100 $\mu$ m	5	0.030	0.000
	TOTAL	7	0.050	0.000

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 7

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

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

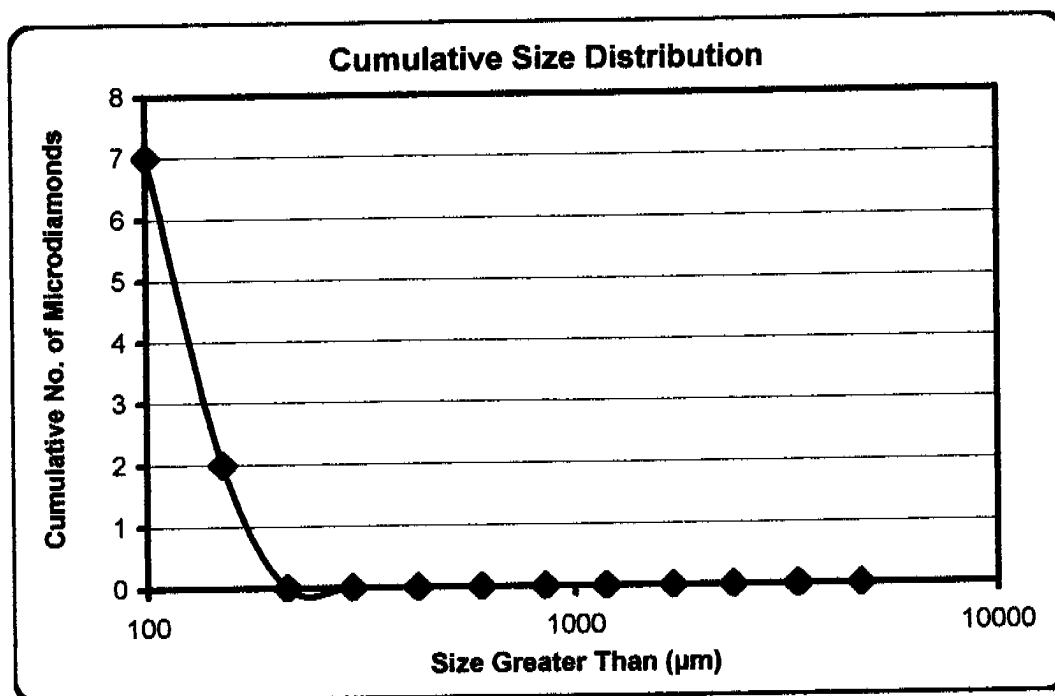
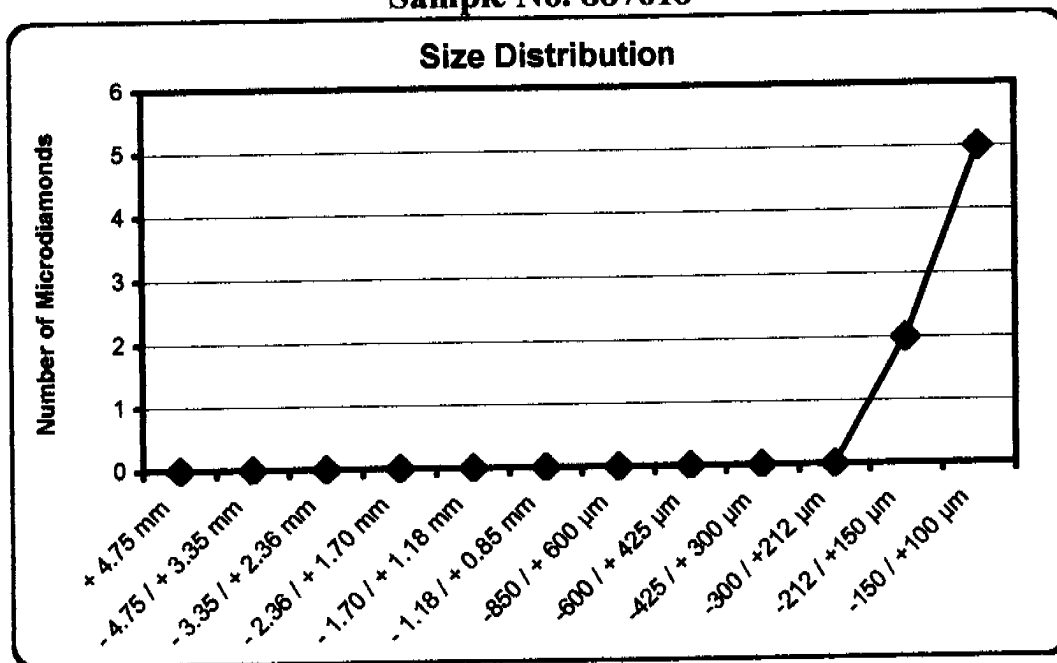
  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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# Sample No. 887618



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April 25, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0016.R01**  
 Sample No. **887618**  
 Sample Weight: **24.00 kg**

Project: **8901-221**

Client: **Twin Mining Corporation**

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-850 / + 600 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				



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April 25, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0016.R01

Sample No. 887618

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
1	0.20	0.20	0.12	0.00000		White	Transparent	99+%	Octahedral, graphite coating
2	0.34	0.26	0.07	0.00000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
2				0.020	0.000100	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
1	0.17	0.17	0.09	0.00000		White	Transparent	95%	Octahedral
2	0.20	0.14	0.12	0.000000		White	Transparent	85%	Irregular
3	0.14	0.14	0.08	0.000000		White	Transparent	95%	Octahedral, partially distorted, graphite coating
4	0.20	0.17	0.10	0.000000		Off White	Transparent	99+%	Octahedral, mineral coating
5	0.20	0.17	0.09	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
5				0.030	0.000150	Sub-Total			
7					0.000250	TOTAL			

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887621


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Rock fragments and 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)	Silicates, oxides, and graphite

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 2

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

  
Selection and Description  
for Robert Buchan  
Consulting Mineralogist

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887621


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	2	0.009	0.000
	<b>TOTAL</b>	<b>2</b>	<b>0.009</b>	<b>0.000</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.000**  
**Number of Diamonds: 2**

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

  
 Selection and Description  
 for Robert Buchan  
 Consulting Mineralogist

  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0016.R00**  
 Sample No. **887621**  
 Sample Weight: **24.00 kg**

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.00000						
0				0.000	0.000000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-600 / + 425 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				

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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0016.R00

Sample No. 887621

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-150 / + 100 µm fraction</b>									
1	0.14	0.09	0.12	0.000000	White	Transparent	95%		Octahedral, twinned, graphite inclusion, very minor cleavages
2	0.14	0.11	0.09	0.000000	Yellow	Translucent	Note 1		Fragment on which crystal faces unrecognizable, significant cleavages
2			0.009	0.000045	<b>Sub-Total</b>				
2				0.000045	<b>TOTAL</b>				

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

Date: April 24, 2001  
LIMS No. SEP0016.R00  
Sample No. 887622

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Rock fragments and 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)	Rock fragments, silicates, and oxides
-20+100	Diamagnetic Non-mag (0.5 amp)	Silicates and oxides

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### Note:

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 24, 2001  
 LIMS No. SEP0016.R00  
 Sample No. 887622

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>

**Sample Weight: 24.00 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.

*Tracy Hill*

Selection and Description

*for* Robert Buchan  
 Consulting Mineralogist

*Maria Mezei*

Quality Control

Maria Mezei  
 Diamond Selection Specialist

**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.

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

**LAKEFIELD RESEARCH LIMITED**

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 Fax: 705-652-3123

April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0016.R00  
 Sample No. 887622  
 Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-850 / + 600 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0			0.000	0.00000	<b>Sub-Total</b>				



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April 24, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0016.R00

Sample No. 887622

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
0				0.000000		<b>TOTAL</b>			

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



**Twin Mining Corporation**  
Attn : Hermann Derbuch, P.Eng.


Suite 1250, 155 University Ave.  
Toronto, Ontario - M5H 3B7  
Canada  
Fax : (416) 777-0014

Lakefield, 05 23, 2001

Date Rec. : 22 September 2000  
LR. Ref. : MI0017-SEP00  
Project : 8901-221

## CERTIFICATE OF ANALYSIS

Sample ID	Sample Wt. KG	M. Pours	Dix #	Dix Gt
1: 887598	24.00	4	4	0.002
2: 888451	24.00	4	17	0.044
3: 888471	24.00	4	0	0.000
4: 887565	24.00	4	1	0.000
5: 888468	24.00	4	0	0.000
6: 887558	24.00	4	1	0.000
7: 887561	24.00	4	4	0.001

  
Bruce Jago  
Manager, Mineralogical Services

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 26, 2001  
LIMS No. SEP0017.R00  
Sample No. 887598


Mesh	Fraction	Dissolution Residue 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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.002  
Number of Diamonds: 4

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

  
Selection and Description  
for Robert Buchan  
Consulting Mineralogist

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
 Client: **Twin Mining Corporation**

Date: April 26, 2001  
 LIMS No. **SEP0017.R00**  
 Sample No. **887598**

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.186	0.001
	-425 / + 300 µm	1	0.138	0.001
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	1	0.017	0.000
	-150 / +100 µm	1	0.005	0.000
	<b>TOTAL</b>	<b>4</b>	<b>0.346</b>	<b>0.002</b>

**Sample Weight: 24.00 kg**  
**Number of Syntites: 0**

**Total Weight (carats)\*: 0.002**  
**Number of Diamonds: 4**

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

*Tracy Hill*  
 Selection and Description  
 for Robert Buchan  
 Consulting Mineralogist

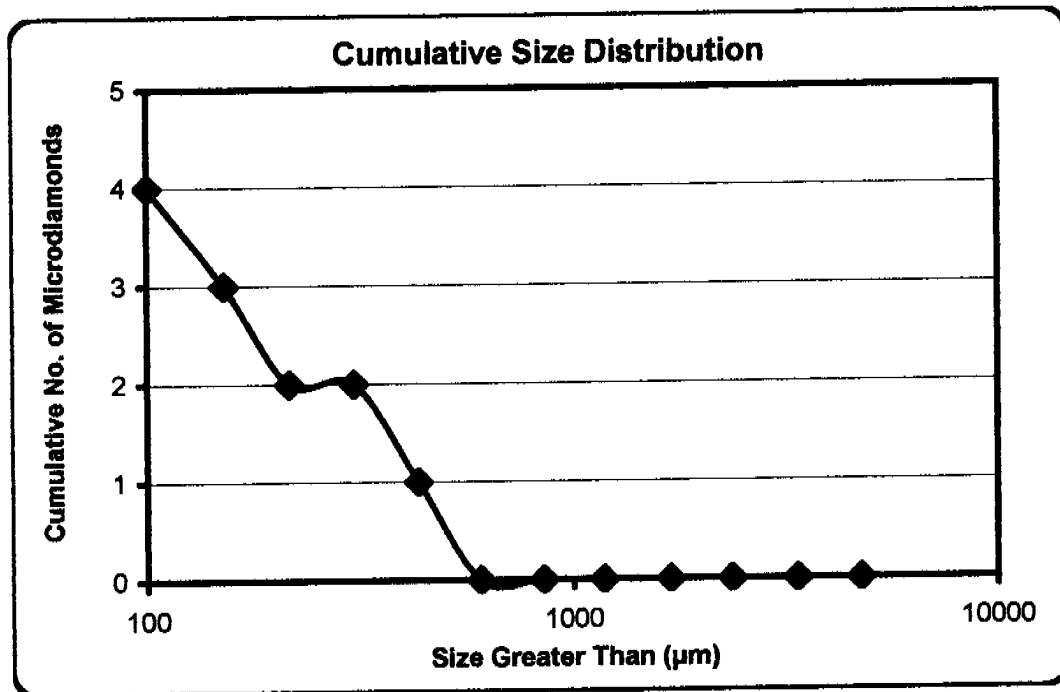
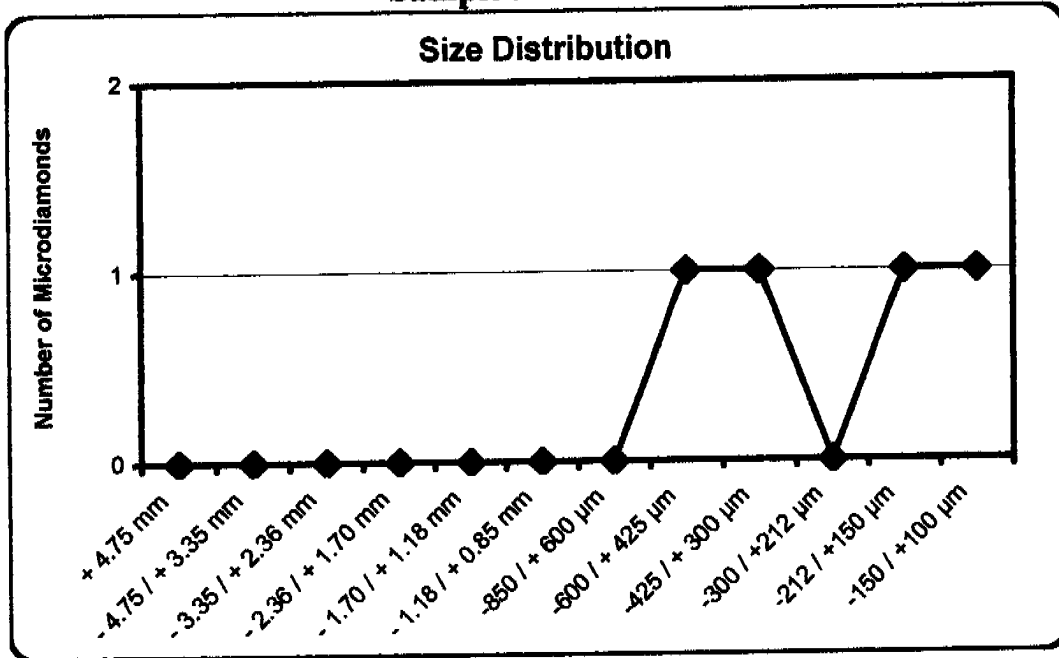
*Maria Mezei*  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 887598



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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0017.R00  
 Sample No. 887598  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.00000			Note 1	
0				0.000	0.00000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
1	0.51	0.48	0.35		0.00000	Brown	Transparent	62.5%	Fragment with Crystal Faces, graphite inclusion, twinned, minor cleavages
1				0.186	0.000930				Sub-Total

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0017.R00

Sample No. 887598

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
1	0.71	0.51	0.17	0.000000	White	Transparent	1-55%	Fragment with Crystal Faces, partially frosted, minor cleavages	
1				0.138	0.000690	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
1	0.23	0.23	0.12	0.000000	White	Transparent	95%	Octahedral, partially frosted, very minor cleavages	
1				0.017	0.000085	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
1	0.23	0.14	0.05	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages	
1				0.005	0.000025	Sub-Total			
4					0.001730	TOTAL			

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
Client: **Twin Mining Corporation**

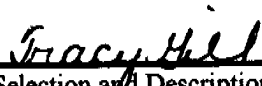
Date: April 26, 2001  
LIMS No. **SEP0017.R00**  
Sample No. **888451**


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

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.044**  
**Number of Diamonds: 17**

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

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 26, 2001  
 LIMS No. SEP0017.R00  
 Sample No. 888451

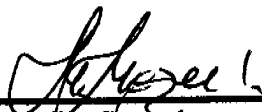
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	1	8.298	0.041
	- 1.18 / + 0.85 mm	0	0.000	0.000
	-850 / + 600 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.276	0.001
	-425 / + 300 µm	1	0.124	0.001
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	6	0.082	0.000
	-150 / +100 µm	8	0.054	0.000
	<b>TOTAL</b>	<b>17</b>	<b>8.834</b>	<b>0.044</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.044**  
**Number of Diamonds: 17**

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

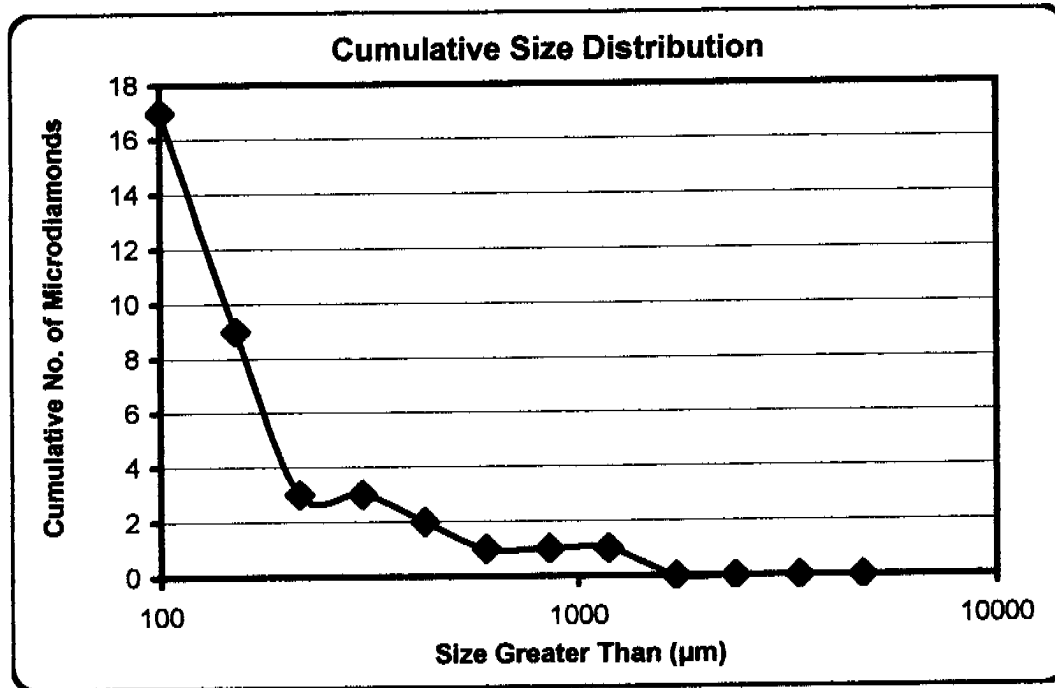
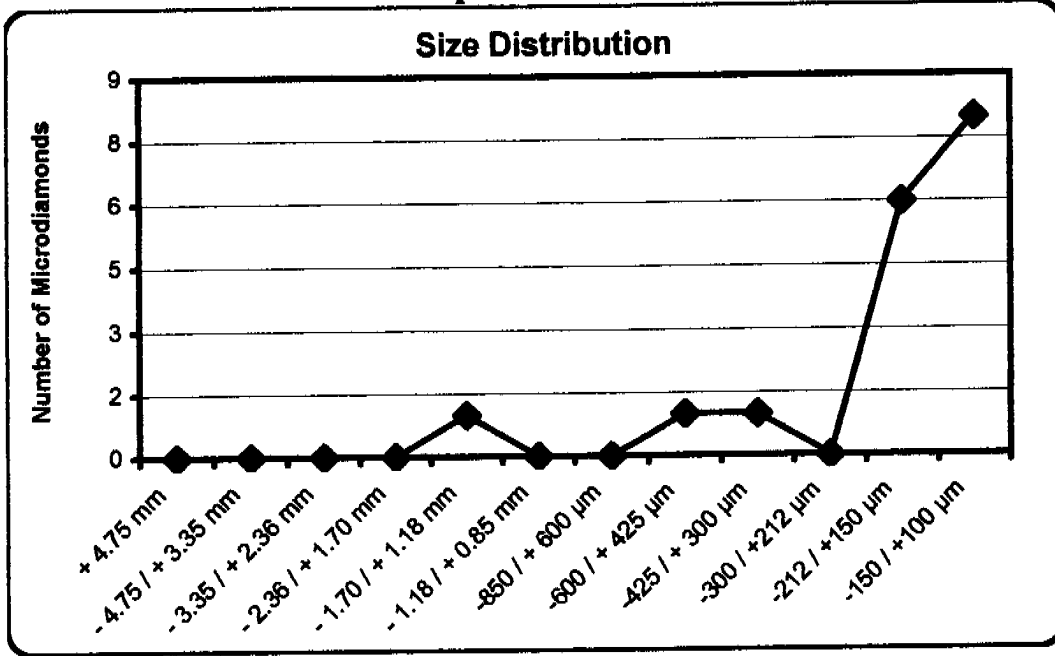
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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**Sample No. 888451**



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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0017.R00

Sample No. 888451

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000				Note 1	
0				0.000					Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
1	2.28	1.91	1.38	8.298	0.041490	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages, graphite inclusions
1				8.298	0.041490				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000					Sub-Total
<b>-600 / + 425 µm fraction</b>									
1	1.08	0.74	0.17	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages, partially frosted
1				0.276	0.001390				Sub-Total

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0017.R00

Sample No. 888451

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
1	0.66	0.37	0.30	0.000000	White	Transparent	75%	Dodecahedral	
1				0.124	0.000620	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
1	0.31	0.23	0.13	0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages, graphite inclusions	
2	0.29	0.23	0.13	0.000000	White	Translucent	75%	Aggregate	
3	0.29	0.23	0.16	0.000000	White	Translucent	85%	Fragment with Crystal Faces, very minor cleavages	
4	0.23	0.17	0.19	0.000000	White	Translucent	85%	Fragment with Crystal Faces, very minor cleavages	
5	0.23	0.23	0.17	0.000000	White	Transparent	99+%	Octahedral	
6	0.20	0.20	0.12	0.000000	White	Transparent	99+%	Octahedral	
6				0.082	0.000410	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
1	0.31	0.14	0.14	0.000000	White	Transparent	62.5%	Dodecahedral, very minor cleavages	
2	0.20	0.20	0.19	0.000000	White	Transparent	75%	Dodecahedral	
3	0.29	0.20	0.10	0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages	
4	0.20	0.14	0.11	0.000000	White	Translucent	75%	Aggregate	
5	0.17	0.17	0.14	0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages	
6	0.20	0.17	0.06	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
7	0.20	0.17	0.10	0.000000	White	Transparent	95%	Octahedral, very minor cleavages	
8	0.17	0.17	0.06	0.000000	White	Transparent	99+%	Made	
8				0.054	0.000270	Sub-Total			
17					0.04170	TOTAL			

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

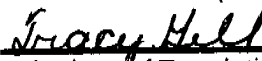
Date: April 26, 2001  
LIMS No. SEP0017.R00  
Sample No. 888471


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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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Tel: (705) 652-2112  
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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 26, 2001  
 LIMS No. SEP0017.R00  
 Sample No. 888471


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>

Sample Weight: 24.00 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.

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**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.

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

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0017.R00

Sample No. 888471

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0				0.00000				Note 1	
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0017.R00  
 Sample No. 888471  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000000					<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000000					<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000000					<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000000					<b>Sub-Total</b>
0				0.000000					<b>TOTAL</b>

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



# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: April 26, 2001

LIMS No. SEP0017.R00

Sample No. 887565

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicate
+100	Ferromagnetic Mag	Oxides and silicates
-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)	Silicate

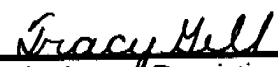
Sample Weight: 24.00 kg

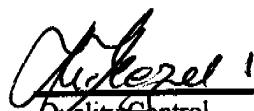
Number of Syndites: 0

Total Weight (carats)\*: 0.000

Number of Diamonds: 1

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 26, 2001  
 LIMS No. SEP0017.R00  
 Sample No. 887565

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.069	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>1</b>	<b>0.069</b>	<b>0.000</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.000**  
**Number of Diamonds: 1**

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0017.R00**  
 Sample No. **887565**  
 Sample Weight: **24.00 kg**

Project: **8901-221**  
 Client: **Twin Mining Corporation**

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0				0.00000				Note 1	
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0017.R00**  
 Sample No. **887565**  
 Sample Weight: **24.00 kg**

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.00000					
0				0.00000	<b>Sub-Total</b>				
<b>-300 / + 212 µm fraction</b>									
1	0.63	0.34	0.21	0.000000	White	Transparent		75%	Fragment with Crystal Faces, very minor cleavages
1				0.069	0.000345	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000000	<b>Sub-Total</b>				
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000000	<b>Sub-Total</b>				
1				0.000345	<b>TOTAL</b>				

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

Date: April 26, 2001  
LIMS No. SEP0017.R00  
Sample No. 887468

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Not applicable
-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)	Rock fragments, silicates, and oxides
-20+100	Diamagnetic Non-mag (0.5 amp)	Silicate, oxides and graphite

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 26, 2001  
 LIMS No. SEP0017.R00  
 Sample No. 887468

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.00 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.

*Tracy Hill*  
 Selection and Description

for Robert Buchan  
 Consulting Mineralogist

*M. Mezei*  
 Quality Control

Maria Mezei  
 Diamond Selection Specialist

**Note:**

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

LIMS No. SEP0017.R00

Sample No. 887468

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.00000			Note 1	
0				0.000	0.00000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-600 / + 425 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0017.R00

Sample No. 887468

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-300 / + 212 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-212 / + 150 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-150 / + 100 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
0					0.000000				<b>TOTAL</b>

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



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
 Client: **Twin Mining Corporation**

Date: April 26, 2001  
 LIMS No. **SEP0017.R00**  
 Sample No. **887558**

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	1	0.012	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>1</b>	<b>0.012</b>	<b>0.000</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.000**  
**Number of Diamonds: 1**

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

*Tracy Hill*  
 Selection and Description  
 Robert Buchan  
 Consulting Mineralogist

*Maria Mezei*  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Date: April 26, 2001

Client: Twin Mining Corporation

LIMS No. SEP0017.R00

Sample No. 887558

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments, silicates, and 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)	Silicates and oxides
-20+100	Diamagnetic Non-mag (0.5 amp)	Silicate and oxides

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 1

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

  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### Note:

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0017.R00

Sample No. 887558

Sample Weight: 24.00 kg

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0				0.000000				Note 1	
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0017.R00  
 Sample No. 887558  
 Sample Weight: 24.00 kg

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
1	0.14	0.14	0.11		0.000000	White	Transparent	95%	Octahedral, minor cleavages
1				0.012	0.000060				<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				<b>Sub-Total</b>
1					0.000060				<b>TOTAL</b>

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

# Lakefield Research



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

Tel: (705) 652-2112  
Fax: (705) 652-3123  
Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: April 26, 2001

LIMS No. SEP0017.R00

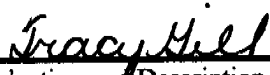
Sample No. 887561


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments and 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)	Rock fragments, silicates, and oxides
-20+100	Diamagnetic Non-mag (0.5 amp)	Silicate, graphite, and oxides

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 4

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

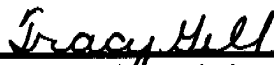
Date: April 26, 2001  
 LIMS No. SEP0017.R00  
 Sample No. 887561

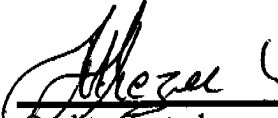
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	0	0.000	0.000
	- 1.18 / + 0.85 mm	0	0.000	0.000
	-850 / + 600 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	2	0.218	0.001
	-300 / +212 µm	1	0.034	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	1	0.004	0.000
	<b>TOTAL</b>	<b>4</b>	<b>0.256</b>	<b>0.001</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 4**

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

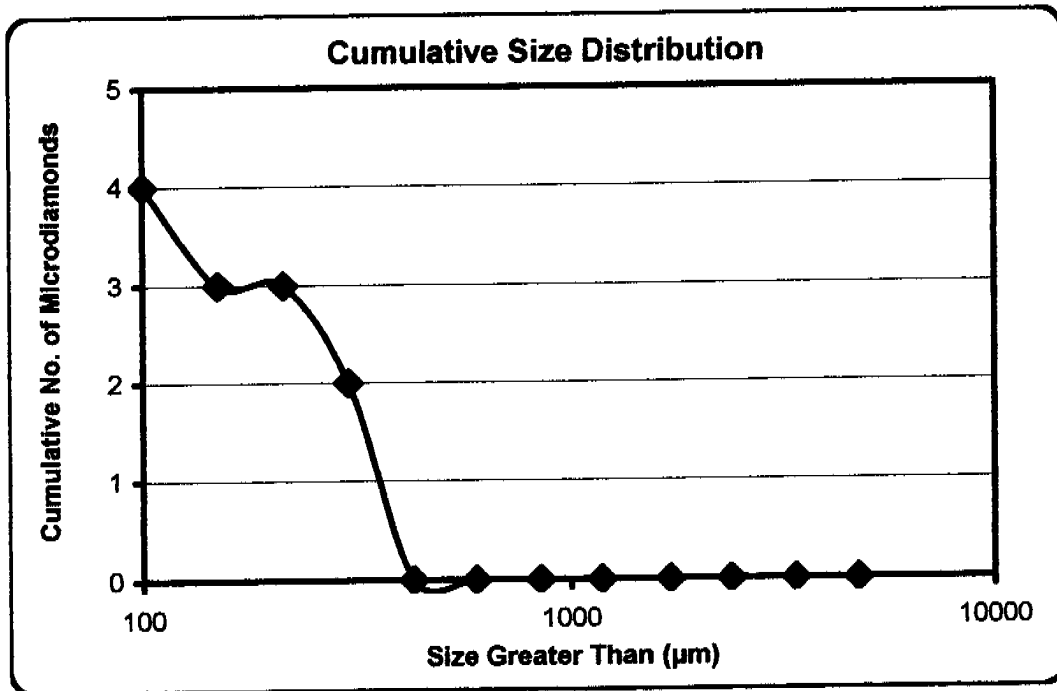
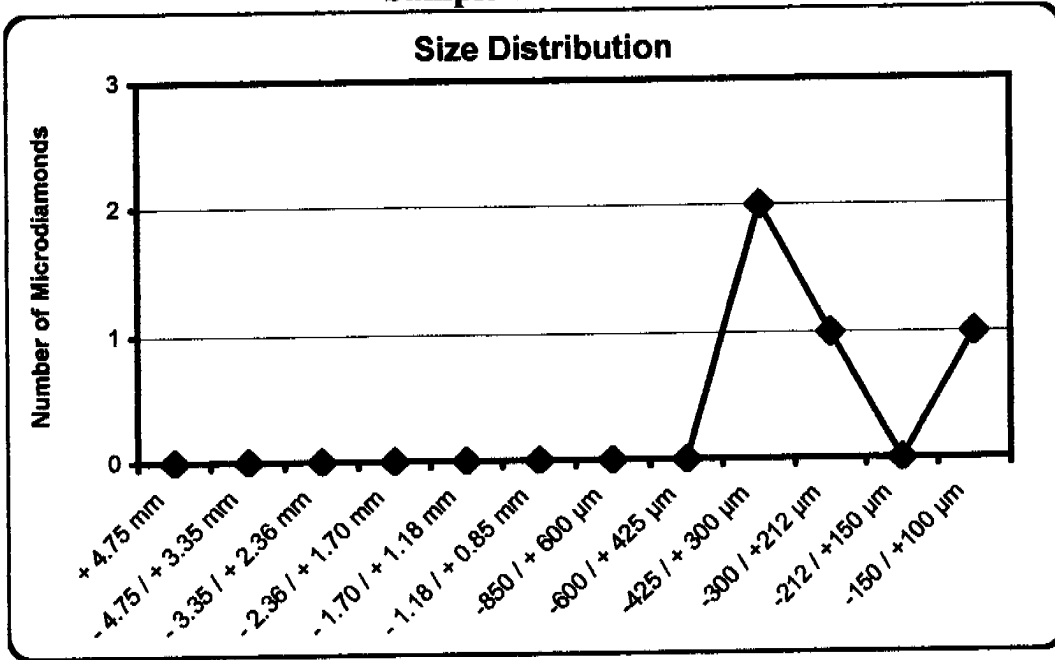
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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

# Sample No. 887561



# LAKEFIELD RESEARCH LIMITED

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 Fax: 705-652-3123

April 26, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. SEP0017.R00

Sample No. 887561

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000				Note 1	
0				0.000	0.00000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			



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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0017.R00

Sample No. 887561

Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
1	0.43	0.40	0.34		0.000000	White	Transparent	99+%	Octahedral, very minor cleavages, partially distorted
2	0.48	0.40	0.35		0.000000	White	Transparent	99+%	Octahedral, twinned
2				0.218	0.001090	<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
1	0.34	0.31	0.16		0.000000	White	Transparent	99+%	Flat Octahedral
1				0.034	0.000170	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
0					0.000000				
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-150 / + 100 µm fraction</b>									
1	0.23	0.23	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
1				0.004	0.000020	<b>Sub-Total</b>			
4					0.001280	<b>TOTAL</b>			

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

**Twin Mining Corporation**

**Attn : Hermann Derbuch, P.Eng.**

Suite 1250, 155 University Ave.  
Toronto, Ontario - M5H 3B7  
Canada  
Fax : (416) 777-0014

Lakefield, 05 23, 2001


Date Rec. : 22 September 2000

LR. Ref. : MI0018-SEP00

Project : 8901-221

## CERTIFICATE OF ANALYSIS

Sample ID	Sample Wt kg	# Pours	Dia #	Dia ct
1: 888454	24.00	4	10	0.000
2: 887596	24.00	4	5	0.001
3: 888459	12.54	2	5	0.001
4: 888470	24.00	4	11	0.001
5: 888456	24.00	4	3	0.000

  
Bruce Jagd  
Manager, Mineralogical Services

# Lakefield Research



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Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 26, 2001  
LIMS No. SEP0018.R00  
Sample No. 888454

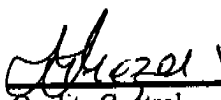
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and oxides
+100	Ferromagnetic Mag	Rock fragments and oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 10

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

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 26, 2001  
 LIMS No. SEP0018.R00  
 Sample No. 888454

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.026	0.000
	-212 / +150 µm	2	0.024	0.000
	-150 / +100 µm	7	0.027	0.000
	<b>TOTAL</b>	<b>10</b>	<b>0.077</b>	<b>0.000</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.000**  
**Number of Diamonds: 10**

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

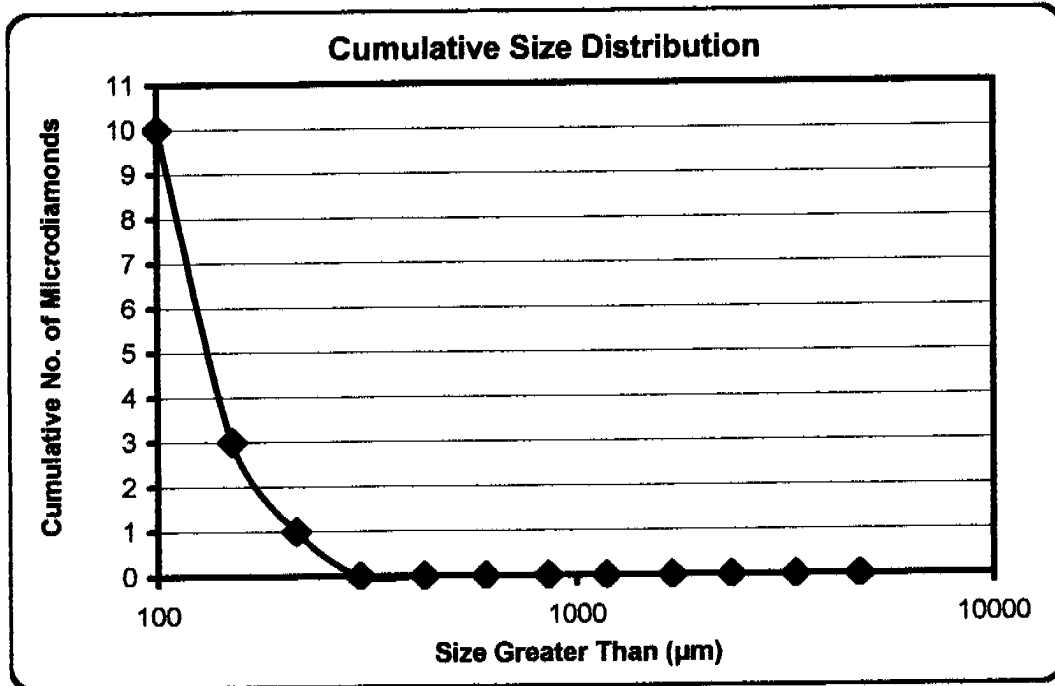
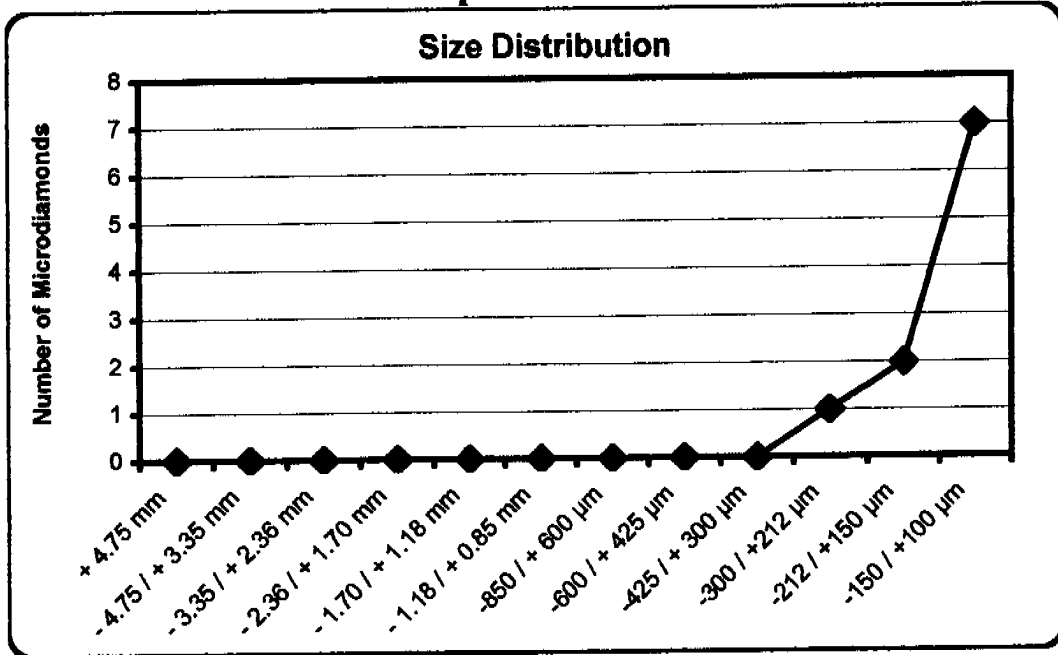
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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

# Sample No. 888454



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 Fax: 705-652-3123

April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0018.R00  
 Sample No. 888454  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

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April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0018.R00

Sample No. 888454

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-300 / + 212 µm fraction</b>									
1	0.29	0.23	0.18		0.000000	Off White	Translucent	95%	Octahedral, graphite inclusions
1				0.026	0.000130				Sub-Total
<b>-212 / + 150 µm fraction</b>									
1	0.26	0.20	0.13		0.000000	White	Transparent	95%	Octahedral, very minor cleavages
2	0.26	0.17	0.15		0.000000	White	Transparent	75%	Irregular
2				0.024	0.000120				Sub-Total
<b>-150 / + 100 µm fraction</b>									
1	0.20	0.17	0.11		0.000000	White	Transparent	99+%	Octahedral, very minor cleavages
2	0.17	0.14	0.14		0.000000	White	Transparent	99+%	Octahedral, very minor cleavages
3	0.14	0.14	0.10		0.000000	White	Transparent	95%	Octahedral, very minor cleavages
4	0.14	0.11	0.11		0.000000	White	Transparent	85%	Octahedral, very minor cleavages
5	0.14	0.11	0.09		0.000000	White	Transparent	85%	Octahedral
6	0.14	0.11	0.08		0.000000	White	Transparent	85%	Octahedral, very minor cleavages, graphite coating
7	0.14	0.11	0.06		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
7				0.027	0.000135				Sub-Total
10					0.000385				TOTAL

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

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Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 26, 2001  
LIMS No. SEP0018.R00  
Sample No. 887596

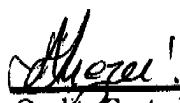
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments, silicates, and oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not 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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 5

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 26, 2001  
 LIMS No. SEP0018.R00  
 Sample No. 887596

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	1	0.130	0.001
	-300 / +212 µm	1	0.022	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	3	0.014	0.000
	TOTAL	5	0.166	0.001

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.001  
 Number of Diamonds: 5

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

Tracy Gill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

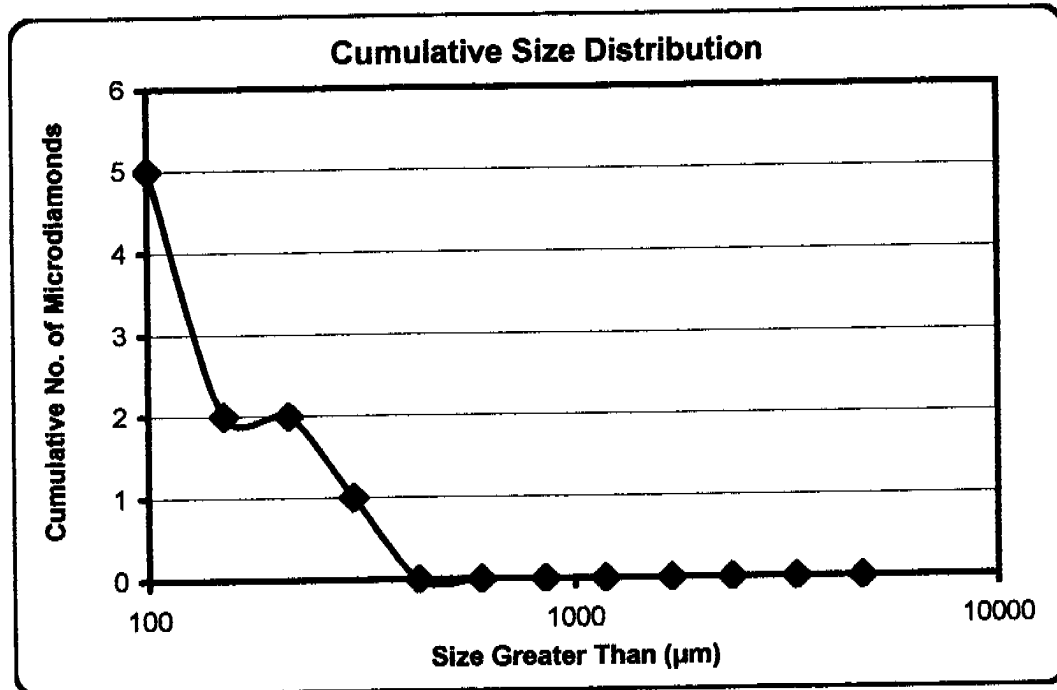
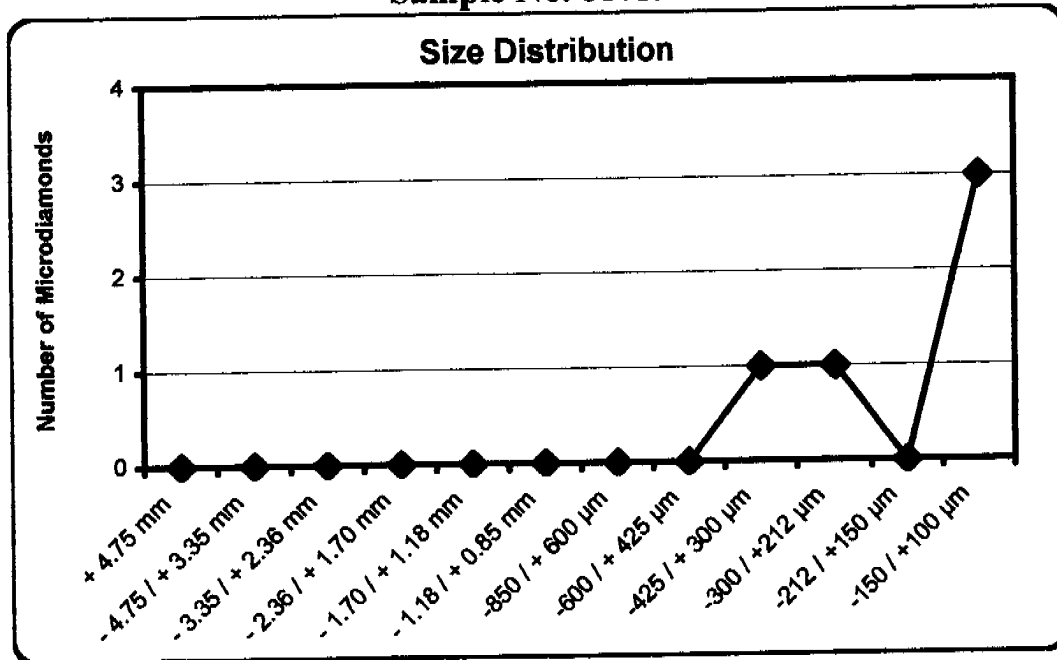
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 887596



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 Fax: 705-652-3123

April 26, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. **SEP0018.R00**  
 Sample No. **887596**  
 Sample Weight: **24.00 kg**

Project: **8901-221**

Client: **Twin Mining Corporation**

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0				0.000	0.00000	Sub-Total			

April 26, 2001

**LAKEFIELD RESEARCH LIMITED**

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 Phone: 705-652-2112 E-mail: bjago@lakefield.com  
 Fax: 705-652-3123

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0018.R00  
 Sample No. 887596  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-425 / + 300 µm fraction</b>										
1	0.48	0.48	0.36	0.000000		White	Transparent	75%		Dodecahedral
1				0.130	0.000650	<b>Sub-Total</b>				
<b>-300 / + 212 µm fraction</b>										
1	0.48	0.29	0.17	0.000000		White	Transparent	85%		Fragment with Crystal Faces, minor cleavages
1				0.022	0.000110	<b>Sub-Total</b>				
<b>-212 / + 150 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	<b>Sub-Total</b>				
<b>-150 / + 100 µm fraction</b>										
1	0.23	0.14	0.13	0.000000		White	Transparent	99+%		Octahedral, very minor cleavages
2	0.17	0.14	0.12	0.000000		White	Transparent	95%		Macle, twinned, very minor cleavages
3	0.23	0.17	0.06	0.000000		White	Translucent	Note 1		Fragment on which crystal faces unrecognizable, significant cleavages
3				0.014	0.000070	<b>Sub-Total</b>				
5					0.000830	<b>TOTAL</b>				

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

# Lakefield Research



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

Tel: (705) 652-2112  
Fax: (705) 652-3123  
Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

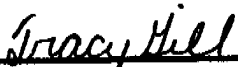
Date: April 27, 2001  
LIMS No. SEP0018.R00  
Sample No. 888459

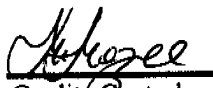
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments and oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable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

Sample Weight: 12.54 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 5

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

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.*



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: April 27, 2001  
 LIMS No. SEP0018.R00  
 Sample No. 888459

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	1	0.209	0.001
	-300 / +212 µm	1	0.024	0.000
	-212 / +150 µm	1	0.008	0.000
	-150 / +100 µm	2	0.009	0.000
	TOTAL	5	0.250	0.001

Sample Weight: 12.54 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.001  
 Number of Diamonds: 5

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

Tracy Hill  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

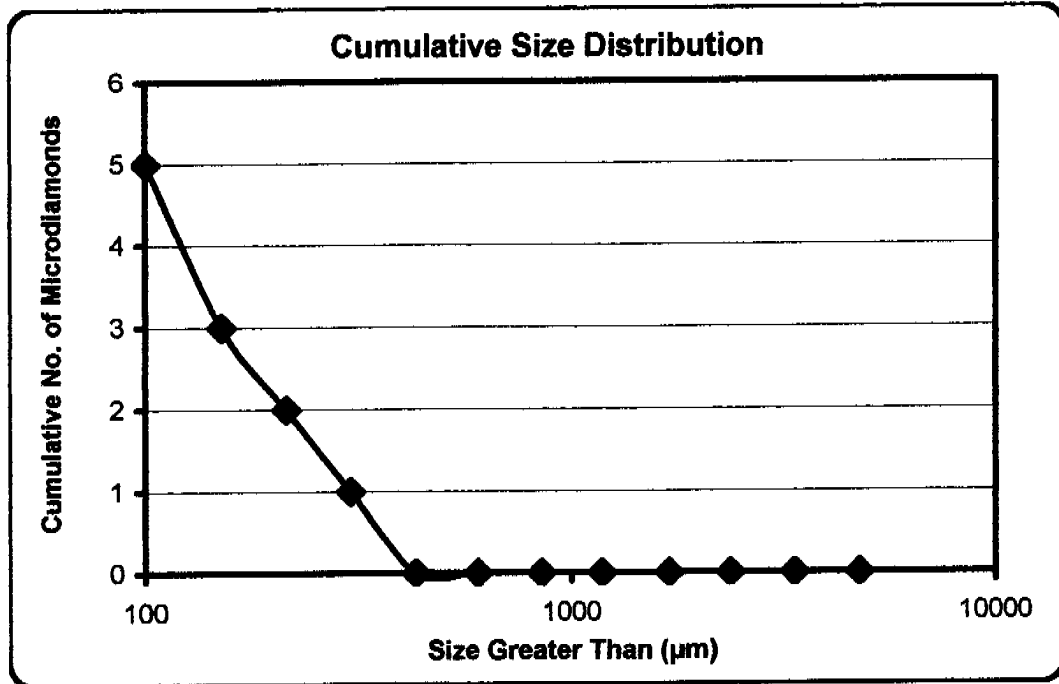
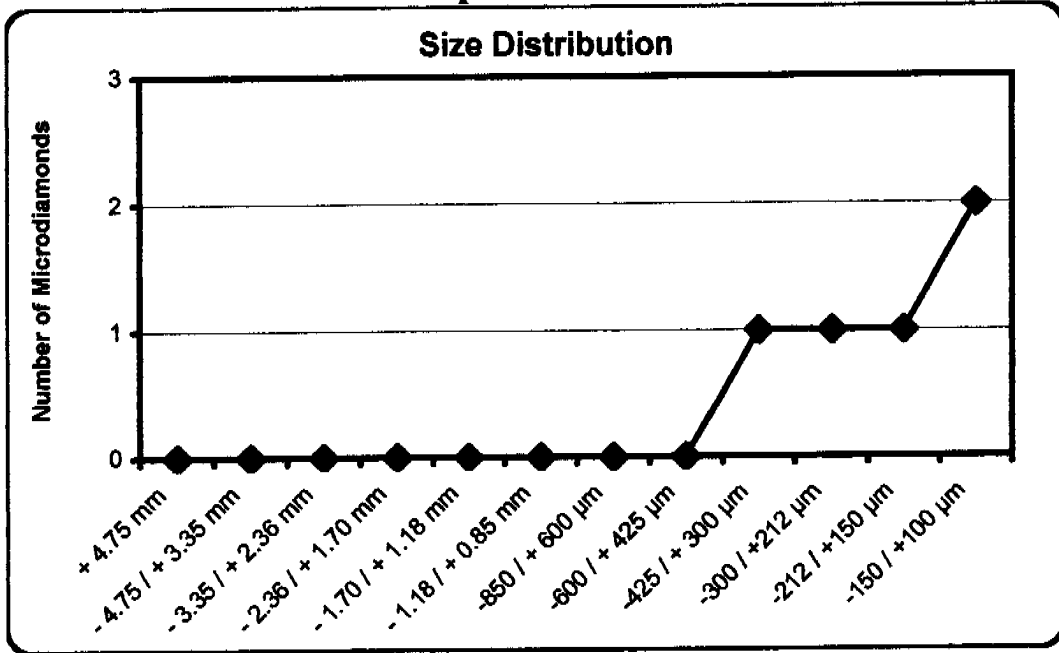
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 888459



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April 27, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0018.R00

Sample No. 888459

Sample Weight: 12.54 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-850 / + 600 µm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total
<b>-600 / + 425 µm fraction</b>										
0				0.00000						
0				0.00000						Sub-Total



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April 27, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. SEP0018.R00  
 Sample No. 888459  
 Sample Weight: 12.54 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
1	0.91	0.51	0.28	0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages	
1				0.209	0.001045	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
1	0.31	0.31	0.27	0.000000	White	Transparent	85%	Dodecahedral, graphite inclusions	
1				0.024	0.000120	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
1	0.26	0.20	0.17	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
1				0.008	0.000040	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
1	0.17	0.17	0.13	0.000000	White	Translucent	85%	Fragment with Crystal Faces, very minor cleavages	
2	0.20	0.14	0.10	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages	
2				0.009	0.000045	Sub-Total			
5					0.001250	TOTAL			

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 27, 2001  
LIMS No. SEP0018.R00  
Sample No. 888470

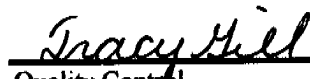
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 11

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

  
\_\_\_\_\_  
Selection and Description  
Maria Mezei  
Diamond Selection Specialist

  
\_\_\_\_\_  
Quality Control  
Tracy Gill  
Mineralogy Technician

### Note:

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: April 27, 2001  
 LIMS No. SEP0018.R00  
 Sample No. 888470

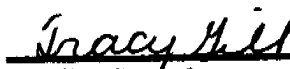
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	0	0.000	0.000
	- 1.18 / + 0.85 mm	0	0.000	0.000
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	6	0.075	0.000
	-150 / +100 µm	5	0.033	0.000
	<b>TOTAL</b>	<b>11</b>	<b>0.108</b>	<b>0.001</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 11**

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

  
 Selection and Description  
 Maria Mezei  
 Diamond Selection Specialist

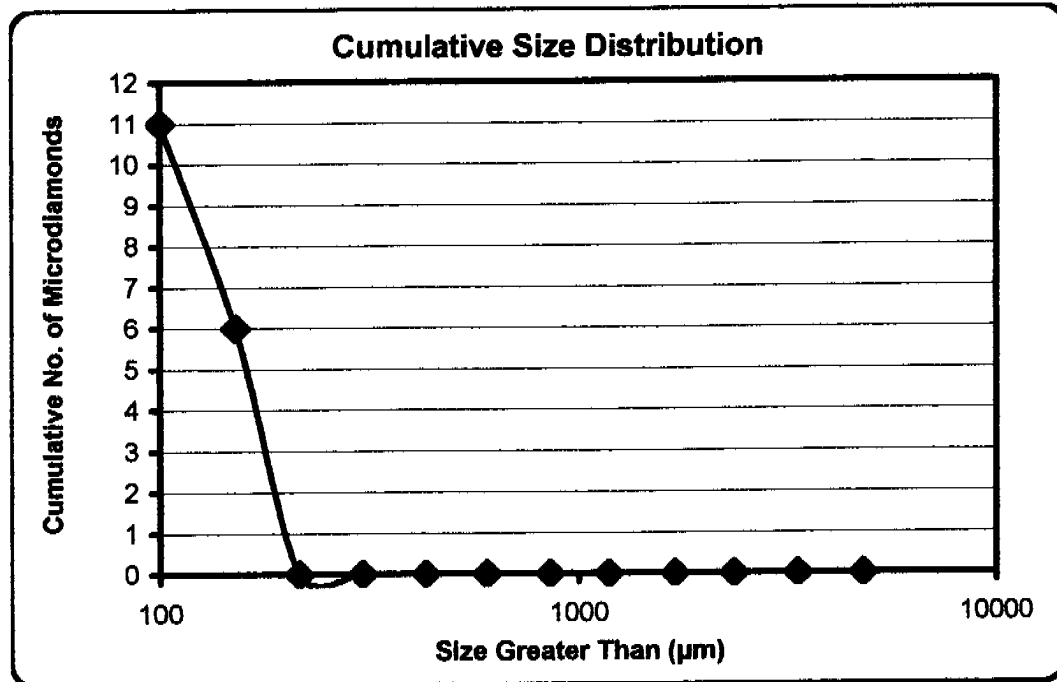
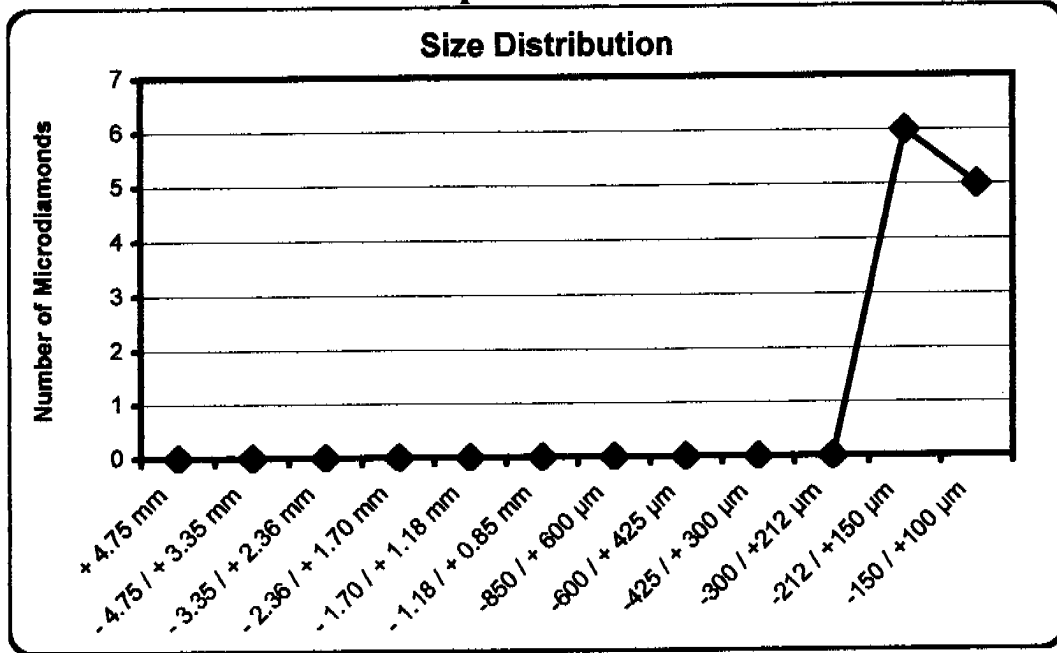
  
 Quality Control  
 Tracy Gill  
 Mineralogy Technician

**Note:**

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

# Sample No. 888470



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 Fax: 705-652-3123

April 27, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0018.R00

Sample No. 888470

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 4.75 / + 3.35 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 3.35 / + 2.36 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 2.36 / + 1.70 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 1.70 / + 1.18 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 1.18 / + 0.85 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 850 / + 600 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>- 600 / + 425 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total

**LAKEFIELD RESEARCH LIMITED**

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April 27, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0018.R00

Sample No. 888470

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-300 / + 212 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-212 / + 150 µm fraction</b>									
1	0.23	0.20	0.12		0.00000	White	Transparent	99+%	Octahedral, twinned
2	0.29	0.23	0.10		0.00000	White	Transparent	99+%	Macle, twinned, graphite inclusions
3	0.17	0.17	0.10		0.00000	White	Transparent	95%	Macle, twinned
4	0.26	0.17	0.03		0.00000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages, graphite inclusions
5	0.29	0.17	0.13		0.00000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
6	0.26	0.17	0.12		0.00000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very significant cleavages, graphite inclusions
6				0.075	0.000375				Sub-Total
<b>-150 / + 100 µm fraction</b>									
1	0.17	0.14	0.06		0.00000	White	Translucent	95%	Flat Octahedral, graphite inclusions
2	0.20	0.14	0.12		0.00000	White	Translucent	75%	Fragment with Crystal Faces, minor cleavages, graphite inclusions
3	0.14	0.11	0.08		0.00000	White	Transparent	95%	Macle, twinned
4	0.20	0.14	0.09		0.00000	White	Transparent	85%	Octahedral, contact twinned, graphite inclusions
5	0.20	0.14	0.13		0.00000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
5				0.033	0.000165				Sub-Total
11					0.000540				TOTAL

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

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K0L 2H0, CANADA

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: April 27, 2001  
LIMS No. SEP0018.R00  
Sample No. 888456


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments and 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 and silicates

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 3

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

  
\_\_\_\_\_  
Selection and Description  
Maria Mezei  
Diamond Selection Specialist

  
\_\_\_\_\_  
Quality Control  
Tracy Gill  
Mineralogy Technician

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

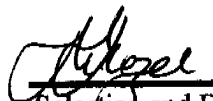
Date: April 27, 2001  
 LIMS No. SEP0018.R00  
 Sample No. 888456


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.043	0.000
	-212 / +150 µm	2	0.030	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>3</b>	<b>0.073</b>	<b>0.000</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.000  
 Number of Diamonds: 3

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

  
 Selection and Description  
 Maria Mezei  
 Diamond Selection Specialist

  
 Quality Control  
 Tracy Gill  
 Mineralogy Technician

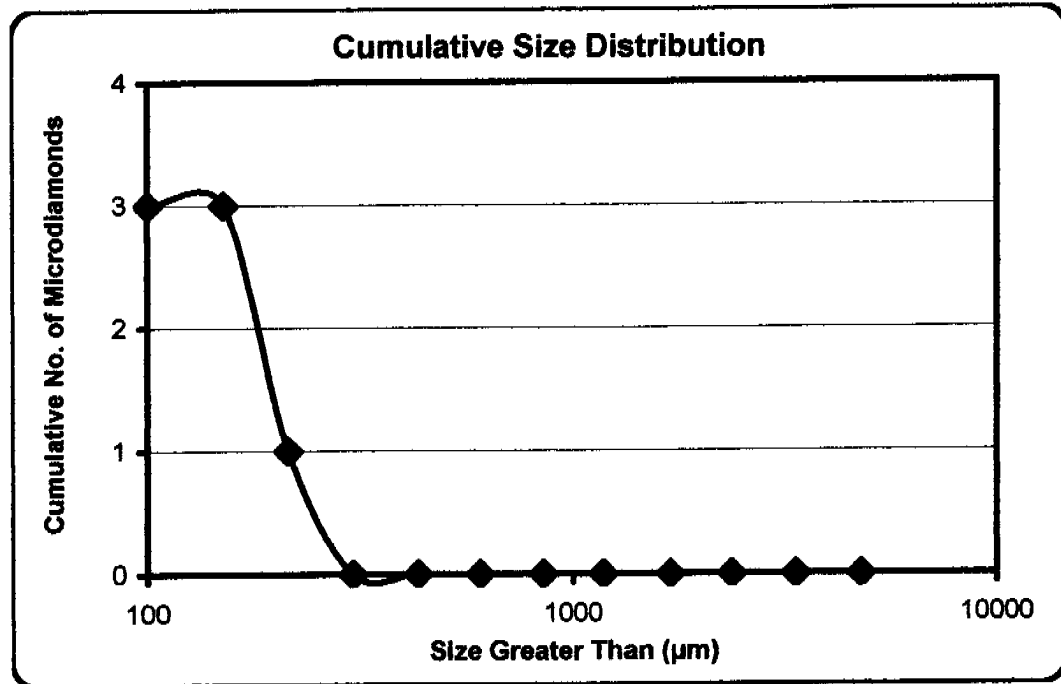
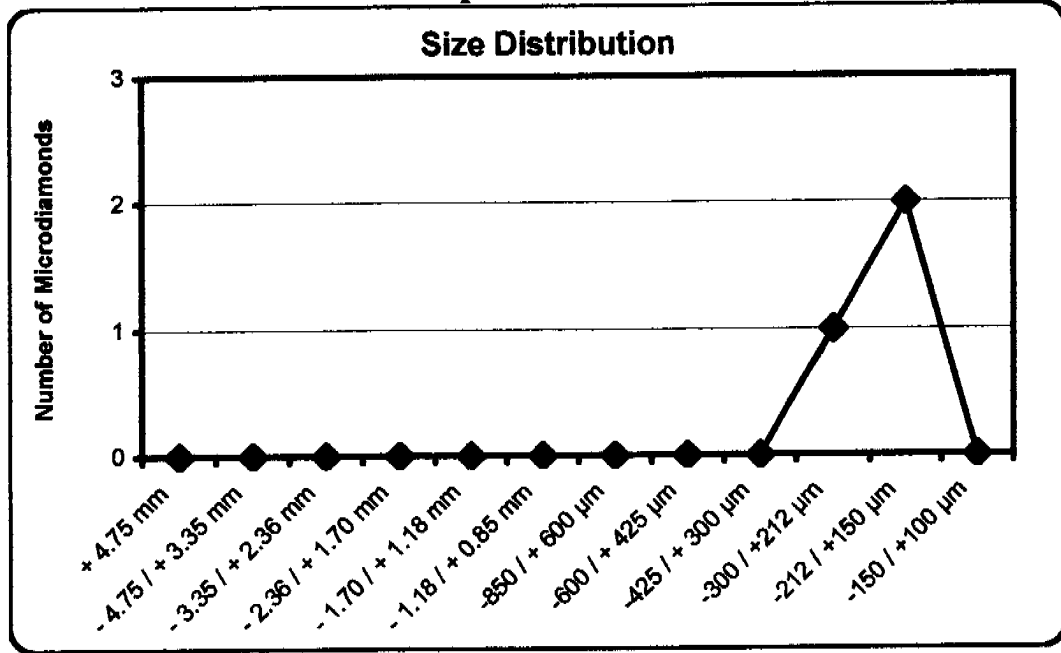
**Note:**

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



# Sample No. 888456



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April 27, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0018.R00

Sample No. 888456

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

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April 27, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0018.R00

Sample No. 888456

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.0000					
				<b>Sub-Total</b>					
<b>-300 / + 212 µm fraction</b>									
1	0.34	0.29	0.23	0.000000	White	Transparent		95%	Octahedral, contact twinned, graphite coating
1				0.043	0.000215				
				<b>Sub-Total</b>					
<b>-212 / + 150 µm fraction</b>									
1	0.23	0.20	0.16	0.000000	White	Transparent		99+%	Octahedral, twinned
2	0.20	0.17	0.18	0.000000	White	Transparent		99+%	Octahedral, twinned
2				0.030	0.000150				
				<b>Sub-Total</b>					
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.0000					
				<b>Sub-Total</b>					
				<b>TOTAL</b>	0.000365				

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

**Twin Mining Corporation**  
Attn : Hermann Derbuch, P.Eng.

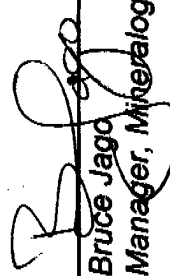
Suite 1250, 155 University Ave.  
Toronto, Ontario - M5H 3B7  
Canada  
Fax : (416) 777-0014

Lakefield, 05 23, 2001

Date Rec. : 22 September 2000  
LR. Ref. : MI0019-SEP00  
Project : 8901-221

## CERTIFICATE OF ANALYSIS

Sample ID	Sample wt. kg	# Pours	Dig #	Dig ct
1: 888465	24.0	4	0	0.000
2: 887594	24.0	4	0	0.000
3: 888458	24.0	4	0	0.000
4: 887582	24.0	4	8	0.001
5: 887583	24.0	4	0	0.000
6: 888460	24.0	4	0	0.000
7: 888463	24.0	4	0	0.000

  
Bruce Jago  
Manager, Mineralogical Services

# Lakefield Research



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

Tel: (705) 652-2112  
Fax: (705) 652-3123  
Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

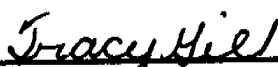
Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 888465

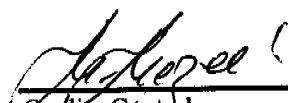
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: May 3, 2001

LIMS No. SEP0019.R00

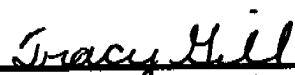
Sample No. 888465


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	TOTAL	0	0.000	0.000

Sample Weight: 24.00 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.

  
 Selection and Description  
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 Mineralogy Technician

  
 Quality Control  
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 Phone: 705-652-2112 E-mail: bjago@lakefield.com  
 Fax: 705-652-3123

May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0019.R00

Sample No. 888465

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.0000					<b>Sub-Total</b>

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0019.R00

Sample No. 888465

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-300 / + 212 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-212 / + 150 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-150 / + 100 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
0					0.000000				<b>TOTAL</b>

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



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Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

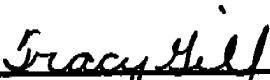
Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 887594

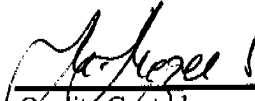
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and oxides
+100	Ferromagnetic Mag	Rock fragments and oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
\_\_\_\_\_  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
\_\_\_\_\_  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
 Client: **Twin Mining Corporation**

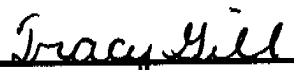
Date: May 3, 2001  
 LIMS No. **SEP0019.R00**  
 Sample No. **887594**


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>

**Sample Weight: 24.00 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.

  
 Selection and Description  
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 Mineralogy Technician

  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

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 Fax: 705-652-3123

May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 887594

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-1.18 / + 0.85 mm fraction</b>									
1				0.000003					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-850 / + 600 µm fraction</b>									
1				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-600 / + 425 µm fraction</b>									
1				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0019.R00  
 Sample No. 887594  
 Sample Weight: 24.00 kg

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-425 / + 300 µm fraction</b>										
0				0.00000						
0				0.000	0.000000	Sub-Total				
<b>-300 / + 212 µm fraction</b>										
0				0.00000						
0				0.000	0.000000	Sub-Total				
<b>-212 / + 150 µm fraction</b>										
0				0.00000						
0				0.000	0.000000	Sub-Total				
<b>-150 / + 100 µm fraction</b>										
0				0.00000						
0				0.000	0.000000	Sub-Total				
0				0.000000		<b>TOTAL</b>				

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

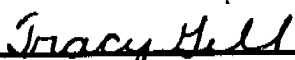
Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 888458

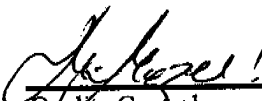
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments and oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: May 3, 2001  
 LIMS No. SEP0019.R00  
 Sample No. 888458

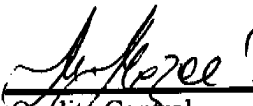
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	0	0.000	0.000
	- 1.18 / + 0.85 mm	0	0.000	0.000
	-850 / + 600 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	0	0.000	0.000

Sample Weight: 24.00 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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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0019.R00

Sample No. 888458

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-850 / + 600 µm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total
<b>-600 / + 425 µm fraction</b>										
0				0.00000						
0				0.000	0.000000					Sub-Total

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 888458

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.0000	0.000000				<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.0000	0.000000				<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.0000	0.000000				<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.0000	0.000000				<b>Sub-Total</b>
0					0.000000				<b>TOTAL</b>

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



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 887582

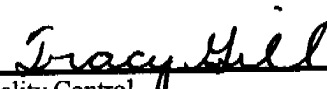
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Not applicable
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.001  
Number of Diamonds: 8

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

  
\_\_\_\_\_  
Selection and Description  
Maria Mezei  
Diamond Selection Specialist

  
\_\_\_\_\_  
Quality Control  
Tracy Gill  
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.*



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 Fax: (705) 652-3123  
 Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
 Client: **Twin Mining Corporation**


Date: May 3, 2001  
 LIMS No. **SEP0019.R00**  
 Sample No. **887582**

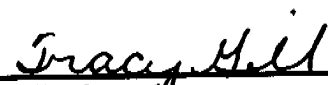
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	0	0.000	0.000
	- 1.18 / + 0.85 mm	0	0.000	0.000
	-850 / + 600 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	4	0.144	0.001
	-212 / +150 µm	1	0.007	0.000
	-150 / +100 µm	3	0.009	0.000
	<b>TOTAL</b>	<b>8</b>	<b>0.160</b>	<b>0.001</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 8**

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

  
 Selection and Description  
 Maria Mezei  
 Diamond Selection Specialist

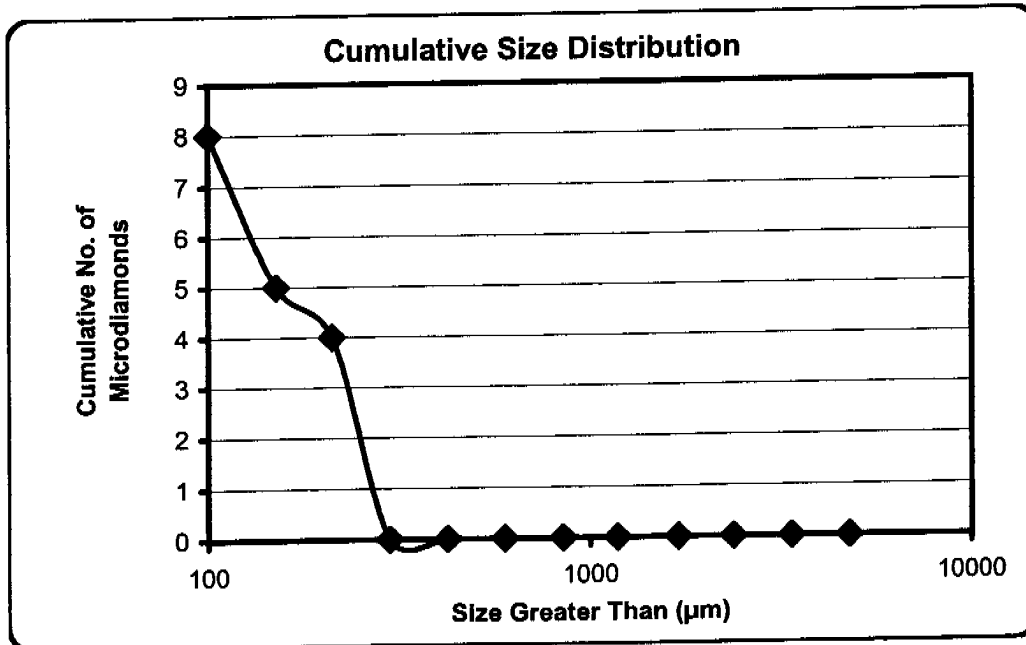
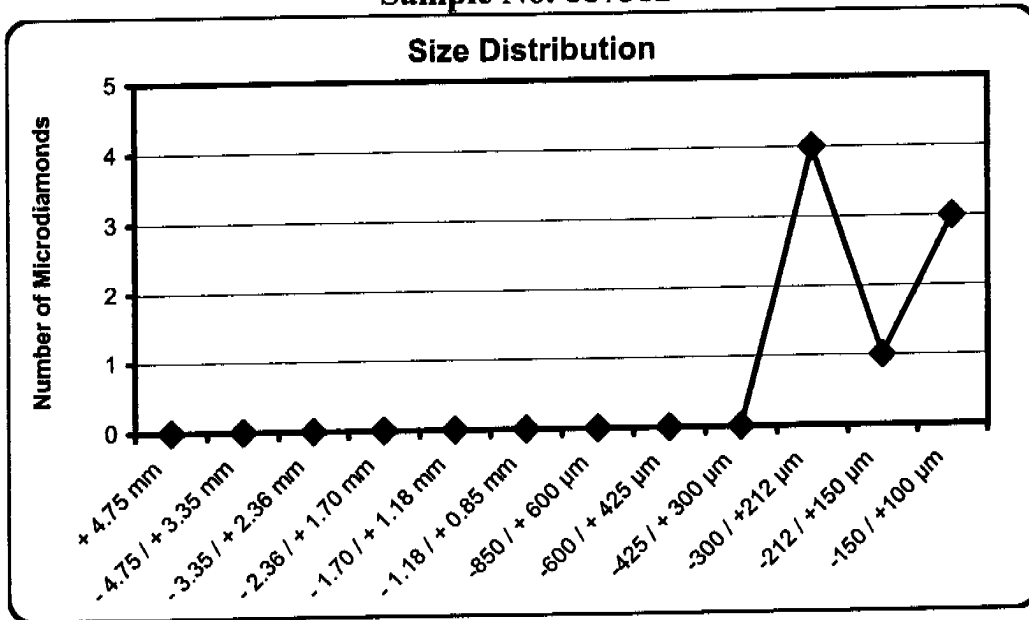
  
 Quality Control  
 Tracy Gill  
 Mineralogy Technician

**Note:**

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Sample No. 887582



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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0019.R00

Sample No. 887582

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 887582

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description
	X	Y	Z	mg	Carats				
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
1	0.43	0.29	0.14	0.000000	White	Transparent	62.5% Note 1	Fragment with Crystal Faces, minor cleavages	
2	0.46	0.34	0.19	0.000000	Grey	Translucent	Note 1	Fragment on which crystal faces unrecognizable, very significant cleavages, graphite inclusions	
3	0.34	0.29	0.16	0.000000	White	Transparent	62.5% Note 1	Fragment with Crystal Faces, minor cleavages	
4	0.43	0.29	0.18	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages	
4				0.144	0.000720				<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
1	0.26	0.23	0.09	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
1				0.007	0.000035				<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
1	0.20	0.14	0.06	0.000000	White	Transparent	62.5% Note 1	Fragment with Crystal Faces, minor cleavages	
2	0.14	0.11	0.09	0.000000	White	Transparent	62.5% Note 1	Fragment with Crystal Faces, minor cleavages	
3	0.17	0.11	0.10	0.000000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
3				0.009	0.000045				<b>Sub-Total</b>
8					0.000800				<b>TOTAL</b>

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

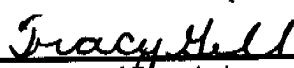
Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 887583

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

Sample Weight: 24.00g  
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 measured to within 0.002 mg.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: May 3, 2001  
 LIMS No. SEP0019.R00  
 Sample No. 887583


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	0	0.000	0.000

Sample Weight: 24.00g  
 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.

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. SEP0019.R00

Sample No. 887583

Client: Twin Mining Corporation

Sample Weight: 24.00g

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total



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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 887583

Sample Weight: 24.00g

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-425 / + 300 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-300 / + 212 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-212 / + 150 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
0				0.00000	0.000000	TOTAL			

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 888460

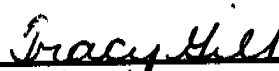
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable
-20+100	Diamagnetic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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
\_\_\_\_\_  
Selection and Description  
Maria Mezei  
Diamond Selection Specialist

  
\_\_\_\_\_  
Quality Control  
Tracy Gill  
Mineralogy Technician

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

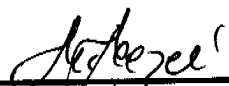
Date: May 3, 2001  
 LIMS No. SEP0019.R00  
 Sample No. 888460

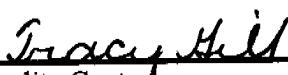
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	0	0.000	0.000
	- 1.18 / + 0.85 mm	0	0.000	0.000
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	0	0.000	0.000

**Sample Weight: 24.00 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.

  
 Selection and Description  
 Maria Mezei  
 Diamond Selection Specialist

  
 Quality Control  
 Tracy Gill  
 Mineralogy Technician

**Note:**

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 888460

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0				0.000000				Note 1	
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	<b>Sub-Total</b>			

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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 888460

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0				0.000000					
									<b>Sub-Total</b>
0				0.000000					<b>TOTAL</b>

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: May 3, 2001  
LIMS No. SEP0019.R00  
Sample No. 888463

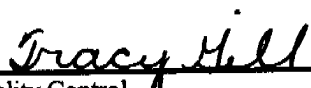
Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments and oxides
-20+100	Paramagnetic Mag (0.1 amp)	Not applicable
-20+100	Paramagnetic Mag (0.3 amp)	Not applicable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

Sample Weight: 24.00 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 measured to within 0.002 mg.

  
\_\_\_\_\_  
Selection and Description  
Maria Mezei  
Diamond Selection Specialist

  
\_\_\_\_\_  
Quality Control  
Tracy Gill  
Mineralogy Technician

### Note:

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 Email: bjago@lakefield.com

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: May 3, 2001  
 LIMS No. SEP0019.R00  
 Sample No. 888463

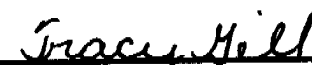
	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 4.75 mm	0	0.000	0.000
	- 4.75 / + 3.35 mm	0	0.000	0.000
	- 3.35 / + 2.36 mm	0	0.000	0.000
	- 2.36 / + 1.70 mm	0	0.000	0.000
	- 1.70 / + 1.18 mm	0	0.000	0.000
	- 1.18 / + 0.85 mm	0	0.000	0.000
Stones Described Individually / Group Weighed	-850 / + 600 µm	0	0.000	0.000
	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	0	0.000	0.000
	-212 / +150 µm	0	0.000	0.000
	-150 / +100 µm	0	0.000	0.000
	<b>TOTAL</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>

**Sample Weight: 24.00 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.

  
 Selection and Description  
 Maria Mezei  
 Diamond Selection Specialist

  
 Quality Control  
 Tracy Gill  
 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.

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

# LAKEFIELD RESEARCH LIMITED

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

May 3, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 888463

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					Note 1
0	0.000			0.000000	<b>Sub-Total</b>				
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0	0.000			0.000000	<b>Sub-Total</b>				
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0	0.000			0.000000	<b>Sub-Total</b>				
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0	0.000			0.000000	<b>Sub-Total</b>				
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0	0.000			0.000000	<b>Sub-Total</b>				
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0	0.000			0.000000	<b>Sub-Total</b>				
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0	0.000			0.000000	<b>Sub-Total</b>				



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May 3, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. SEP0019.R00

Sample No. 888463

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-425 / + 300 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-300 / + 212 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-212 / + 150 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
<b>-150 / + 100 µm fraction</b>									
0				0.000000					
0			0.000	0.000000	<b>Sub-Total</b>				
0				0.000000	<b>TOTAL</b>				

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

**Twin Mining Corporation**  
 Attn : Hermann Derbuch, P.Eng.

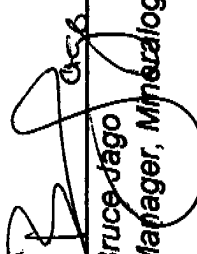
Suite 1250, 155 University Ave.  
 Toronto, Ontario - M5H 3B7  
 Canada  
 Fax : (416) 777-0014

Lakefield, 05 23, 2001

Date Rec. : 07 December 2000  
 LR. Ref. : MI0001-DEC00  
 Project : 8901-221

## CERTIFICATE OF ANALYSIS

Sample ID	Wt kg	# Pours	Dis #	Dis (cc)
1: 888401	24	4	20	0.008
2: 888402	24	4	20	0.004
3: 888403	24	4	15	0.004
4: 888404	24	4	10	0.003
5: 888472	24	4	7	0.001
6: 888473	24	4	3	0.000
7: 888474	24	4	18	0.006
8: 888475	24	4	38	0.009
9: 888476	24	4	27	0.011

  
**Bruce Jago**  
 Manager, Metallurgical Services

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: December 20, 2000  
LIMS No. DEC0001.R00  
Sample No. 888401

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and silicates
+100	Ferromagnetic Mag	Rock fragments and 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 and silicates

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.008  
Number of Diamonds: 20

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

  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Date: December 20, 2000

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888401

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	1	1.304	0.007
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	2	0.129	0.001
	-300 / +212 µm	1	0.057	0.000
	-212 / +150 µm	6	0.081	0.000
	-150 / +100 µm	10	0.038	0.000
	<b>TOTAL</b>	<b>20</b>	<b>1.609</b>	<b>0.008</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.008  
 Number of Diamonds: 20

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

*Tracy Hill*

Selection and Description

for Robert Buchan  
 Consulting Mineralogist

*Maria Mezei*

Quality Control

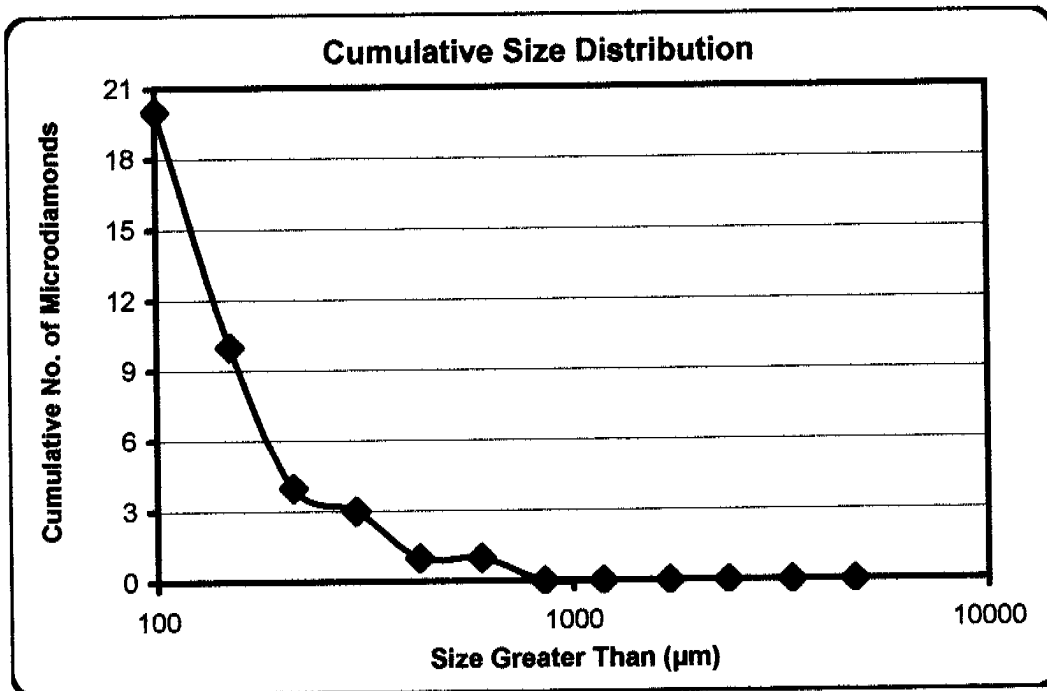
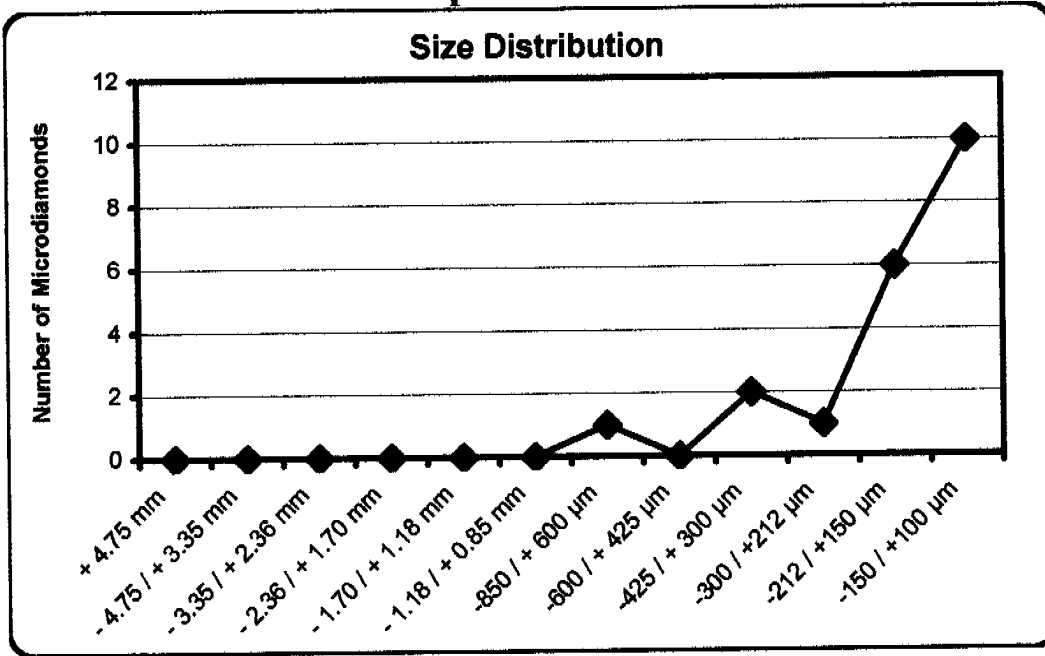
Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 888401



December 20, 2000

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. DEC0001.R00  
 Sample No. 888401  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000				<b>Sub-Total</b>
<b>-850 / + 600 µm fraction</b>									
1	1.03	0.77	0.31	1.304	0.006520		White	Transparent	85%
1				1.304	0.006520				Octahedral, very minor cleavages
									<b>Sub-Total</b>

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December 20, 2000

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

LIMS No. DEC0001.R00  
 Sample No. 888401  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, m			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 µm fraction</b>									
0				0.000000					
0				0.000					<b>Sub-Total</b>
<b>-425 / + 300 µm fraction</b>									
1	0.43	0.20	0.16	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
2	0.48	0.31	0.26	0.000000		White	Transparent	75%	Fragment with Crystal Faces, twinned, very minor cleavages
2				0.129		<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
1	0.29	0.26	0.25	0.000000		White	Transparent	95%	Octahedral, twinned, very minor cleavages
1				0.057		<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
1	0.26	0.14	0.12	0.000000		White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
2	0.29	0.17	0.12	0.000000		White	Transparent	95%	Fragment with Crystal Faces, very minor cleavages
3	0.20	0.17	0.14	0.000000		White	Transparent	95%	Fragment on which crystal faces unrecognizable, very minor cleavages
4	0.26	0.14	0.08	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
5	0.31	0.26	0.12	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
6	0.31	0.17	0.05	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very significant cleavages
6				0.081		<b>Sub-Total</b>			
<b>-150 / + 100 µm fraction</b>									
1	0.14	0.11	0.06	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very minor cleavages
2	0.14	0.09	0.08	0.000000		White	Transparent	95%	Octahedral, twinned, very minor cleavages
3	0.14	0.11	0.07	0.000000		White	Transparent	99+%	Octahedral, very minor cleavages
4	0.11	0.11	0.09	0.000000		White	Translucent	62.5%	Fragment on which crystal faces unrecognizable, very significant cleavages

**LAKEFIELD RESEARCH LIMITED**

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December 20, 2000

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888401

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	No. tone Dimension, m			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
5	0.11	0.09	0.08		0.000000	White	Transparent	99+%	Fragment on which crystal faces unrecognizable, very minor cleavages	
6	0.14	0.09	0.09		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
7	0.17	0.11	0.07		0.000000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, twinned, very significant cleavages	
8	0.14	0.14	0.05		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very minor cleavages	
9	0.11	0.06	0.08		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages	
10	0.14	0.11	0.12		0.000000	White	Translucent	99+%	Macle, very minor cleavages	
10				0.038	0.000190	Sub-Total				

20				0.008045	TOTAL					
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Note - Diamond Fragments - No Crystal Faces - Preservation (Resorption) cannot be estimated.



# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
Client: **Twin Mining Corporation**

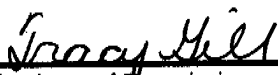
Date: January 25, 2001  
LIMS No. **DEC0001.R00**  
Sample No. **888402**

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments and oxides
+100	Ferromagnetic Mag	Rock fragments and 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)	Rock fragments, oxides, and silicates
-20+100	Diamagnetic Non-mag (0.5 amp)	Silicates and graphite


**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.004**  
**Number of Diamonds: 20**

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

  
\_\_\_\_\_  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
\_\_\_\_\_  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

Date: January 25, 2001

LIMS No. DEC0001.R00

Sample No. 888402

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.195	0.001
	-425 / + 300 µm	3	0.364	0.002
	-300 / +212 µm	4	0.137	0.001
	-212 / +150 µm	5	0.051	0.000
	-150 / +100 µm	7	0.039	0.000
	<b>TOTAL</b>	<b>20</b>	<b>0.786</b>	<b>0.004</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.004**  
**Number of Diamonds: 20**

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

*Tracy Hill*  
 Selection and Description

for Robert Buchan  
 Consulting Mineralogist

*M. Mezei*  
 Quality Control

Maria Mezei  
 Diamond Selection Specialist

**Note:**

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00  
 Sample No. 888402

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.00000				
0				0.000	0.00000				Sub-Total

January 25, 2001

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. DEC0001.R00  
 Sample No. 888402  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 µm fraction</b>									
1	0.57	0.43	0.29	0.195	0.000975	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
1				0.195	0.000975	<b>Sub-Total</b>			
<b>-425 / + 300 µm fraction</b>									
1	0.40	0.29	0.26		0.000000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
2	0.57	0.37	0.27		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
3	0.66	0.31	0.24		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
3				0.364	0.001820	<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
1	0.34	0.23	0.15		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
2	0.29	0.26	0.11		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, very minor cleavages
3	0.60	0.23	0.14		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
4	0.40	0.29	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
4				0.137	0.000685	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
1	0.34	0.23	0.10		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
2	0.17	0.17	0.11		0.000000	White	Transparent	95%	Octahedral, very minor cleavages
3	0.17	0.14	0.11		0.000000	White	Transparent	95%	Fragment with Crystal Faces, twinned, very minor cleavages
4	0.31	0.26	0.12		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
5	0.34	0.23	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
5				0.051	0.000255	<b>Sub-Total</b>			

# 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

January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888402

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology	
	X	Y	Z							
<b>-150 / + 100 µm fraction</b>										
1	0.23	0.14	0.07		0.000000	White	Translucent	Note 1	Fragment with Crystal Faces, twinned, significant cleavages	
2	0.17	0.11	0.08		0.000000	White	Translucent	62.5%	Fragment with Crystal Faces, minor cleavages	
3	0.17	0.17	0.08		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
4	0.11	0.09	0.10		0.000000	White	Transparent	95%	Made, very minor cleavages	
5	0.23	0.14	0.11		0.000000	White	Transparent	85%	Contact twinned	
6	0.17	0.11	0.10		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages	
7	0.14	0.11	0.08		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
				0.039	0.000195	Sub-Total				
20						0.003930	TOTAL			

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

# Lakefield Research



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Email: [bjago@lakefield.com](mailto:bjago@lakefield.com)

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
Client: **Twin Mining Corporation**

Date: January 25, 200  
LIMS No. **DEC0001.R00**  
Sample No. **888403**

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides and rock fragments
-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 and silicates


**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.004**  
**Number of Diamonds: 15**

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

  
\_\_\_\_\_  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
\_\_\_\_\_  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### 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.*



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: January 25, 200  
 LIMS No. DEC0001.R00  
 Sample No. 888403

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	2	0.552	0.003
	-425 / + 300 µm	1	0.069	0.000
	-300 / +212 µm	2	0.084	0.000
	-212 / +150 µm	6	0.075	0.000
	-150 / +100 µm	4	0.018	0.000
	<b>TOTAL</b>	<b>15</b>	<b>0.798</b>	<b>0.004</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.004**  
**Number of Diamonds: 15**

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

Tracy Mills  
 Selection and Description  
 for Robert Buchan  
 Consulting Mineralogist

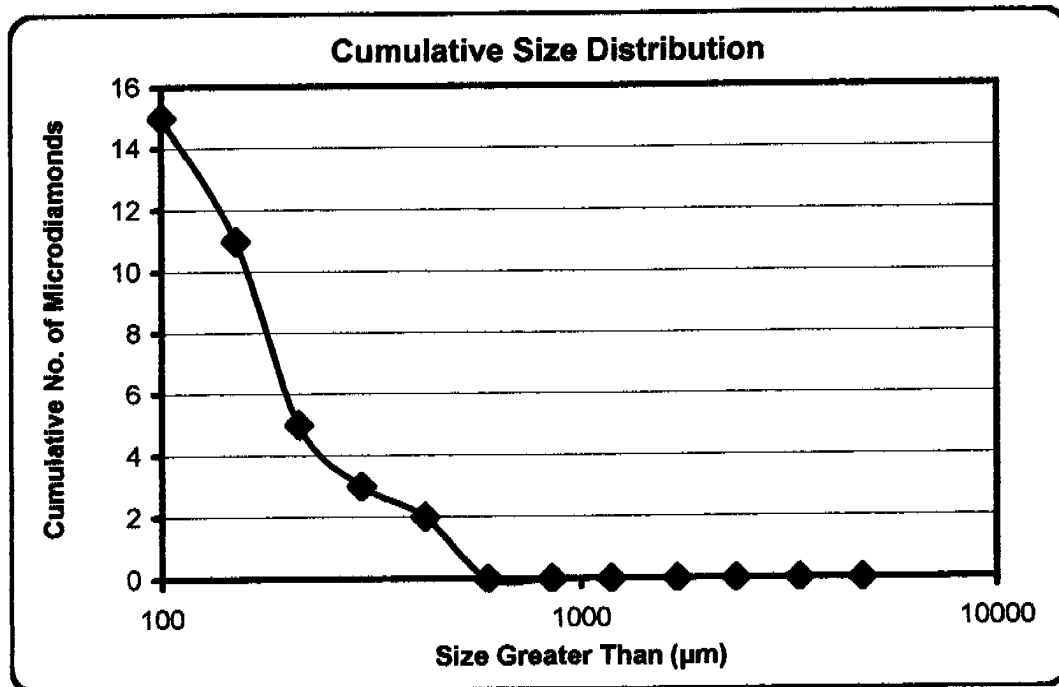
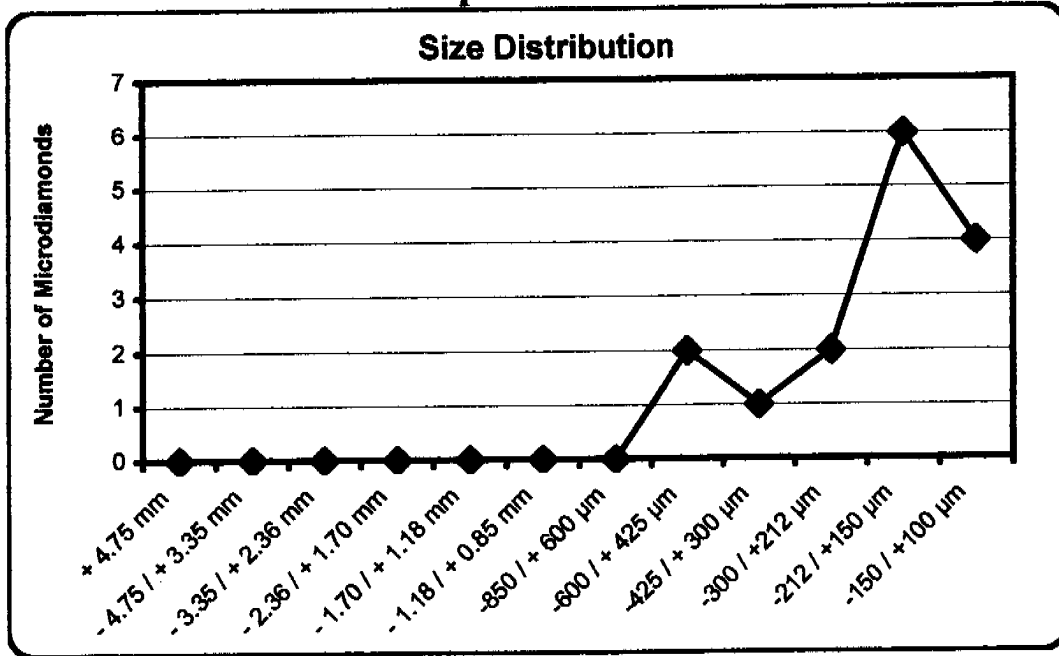
Maria Mezei  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 888403





January 25, 200

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. DEC0001.R00  
 Sample No. 888403  
 Sample Weight: 24.00 kg

Project: 8901-221

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

January 25, 200

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

LIMS No. DEC0001.R00  
 Sample No. 888403  
 Sample Weight: 24.00 kg

Project: 8901-221  
 Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z					
<b>-850 / + 600 µm fraction</b>								
0				0.000000				
0				0.000	<b>Sub-Total</b>			
<b>-600 / + 425 µm fraction</b>								
1	0.63	0.48	0.44	0.000000	White	Translucent	62.5%	Fragment with Crystal Faces, very minor cleavages
2	0.57	0.40	0.27	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, graphite inclusion, minor cleavages
2				0.552	<b>Sub-Total</b>			
<b>-425 / + 300 µm fraction</b>								
1	0.40	0.34	0.20	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
1				0.069	<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>								
1	0.31	0.20	0.19	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, graphite inclusion, very minor cleavages
2	0.31	0.20	0.24	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, very minor cleavages
2				0.084	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>								
1	0.14	0.14	0.14	0.000000	White	Transparent	99+%	Octahedral, twinned, very minor cleavages
2	0.26	0.23	0.07	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very minor cleavages
3	0.23	0.14	0.11	0.000000	Off White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
4	0.23	0.17	0.15	0.000000	White	Transparent	95%	Octahedral, very minor cleavages
5	0.20	0.17	0.10	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, very minor cleavages
6	0.29	0.14	0.13	0.000000	White	Translucent	62.5%	Fragment with Crystal Faces, very minor cleavages
6				0.075	<b>Sub-Total</b>			

January 25, 200

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**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888403

Sample Weight: 24.00 kg

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-150 / + 100 µm fraction</b>									
1	0.14	0.11	0.07	0.00000	Off White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, graphite inclusion	
2	0.17	0.11	0.06	0.00000	White	Translucent	62.5%	Fragment with Crystal Faces, minor cleavages	
3	0.11	0.09	0.10	0.00000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages	
4	0.11	0.11	0.06	0.00000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
4				0.018	0.00090	Sub-Total			
15					0.003990	TOTAL			

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
Client: **Twin Mining Corporation**


Date: January 10, 2000  
LIMS No. **DEC0001.R00**  
Sample No. **888404**


Mesh	Fraction	Dissolution Residue 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 and silicates

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.003**  
**Number of Diamonds: 10**

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

  
\_\_\_\_\_  
Selection and Description  
Maria Mezei  
Diamond Selection Specialist

  
\_\_\_\_\_  
Quality Control  
Tracy Gill  
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.*

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Date: January 10, 2000

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888404

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 $\mu$ m	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 $\mu$ m	1	0.373	0.002
	-425 / + 300 $\mu$ m	1	0.234	0.001
	-300 / +212 $\mu$ m	1	0.038	0.000
	-212 / +150 $\mu$ m	3	0.033	m47/200
	-150 / +100 $\mu$ m	4	0.048	0.000
	TOTAL	10	0.726	0.003

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.003  
Number of Diamonds: 10

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

Selection and Description  
Maria Mezei  
Diamond Selection Specialist

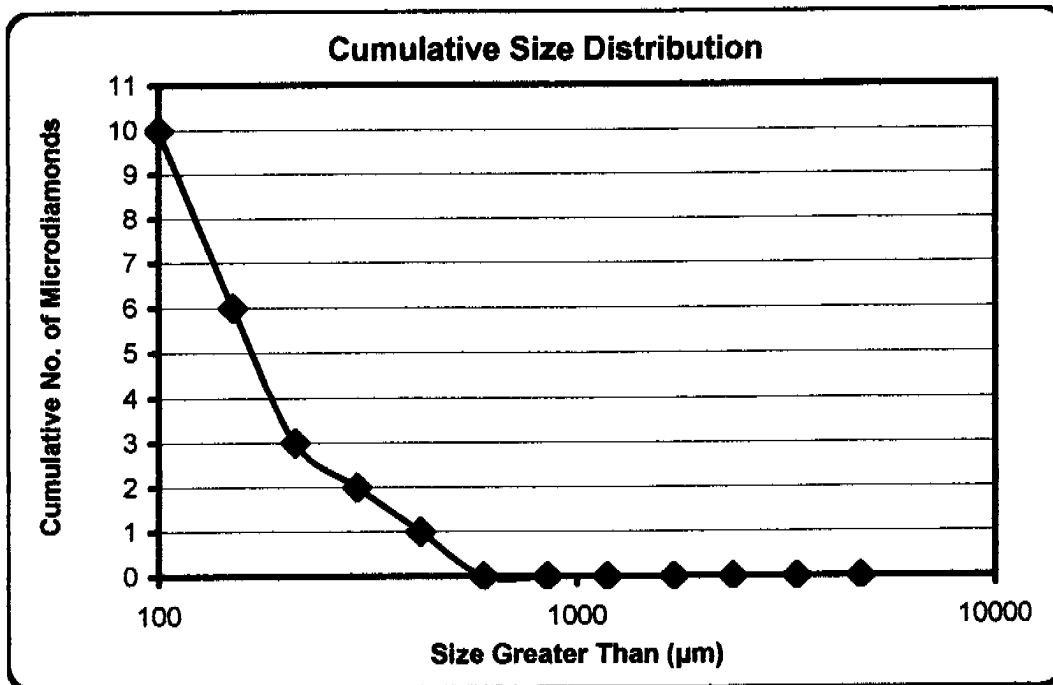
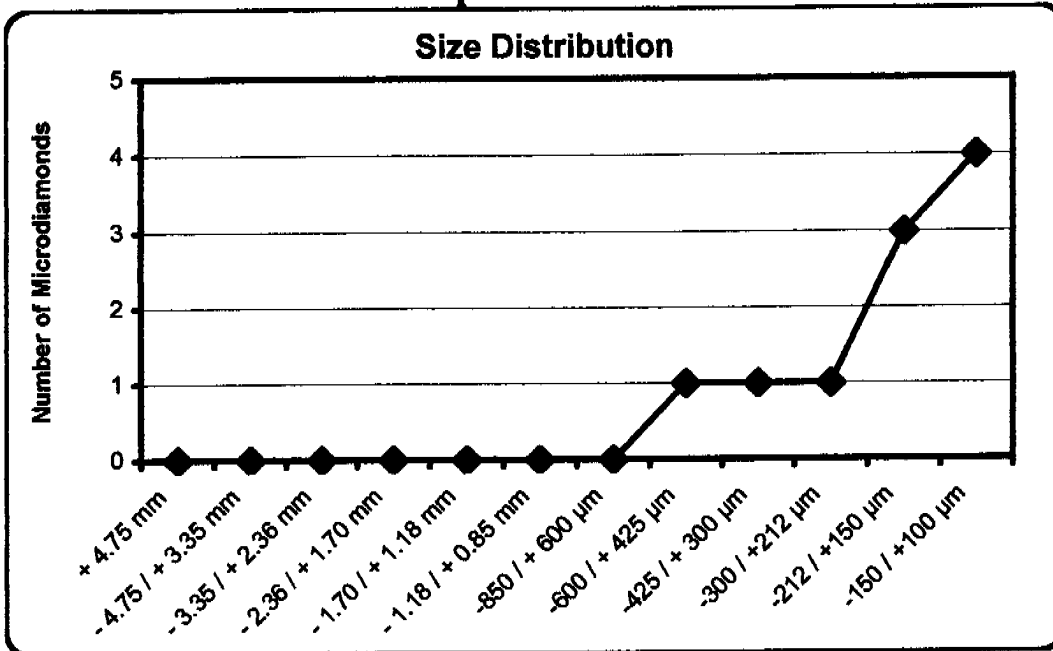
Quality Control  
Tracy Gill  
Mineralogy Technician

### Note:

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# Sample No. 888404



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January 10, 2000

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888404

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
0					0.00000					
0				0.000	0.00000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>										
0					0.00000					
0				0.000	0.00000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>										
0					0.00000					
0				0.000	0.00000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>										
0					0.00000					
0				0.000	0.00000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>										
0					0.00000					
0				0.000	0.00000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>										
0					0.00000					
0				0.000	0.00000	Sub-Total				
<b>-850 / + 600 µm fraction</b>										
0					0.00000					
0				0.000	0.00000	Sub-Total				

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January 10, 2000

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221  
 Client: Twin Mining Corporation  
 LIMS No. DEC0001.R00  
 Sample No. 888404  
 Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>-600 / + 425 µm fraction</b>										
1	0.83	0.71	0.38	0.000000	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, significant cleavages	
1				0.373	0.001865	<b>Sub-Total</b>				
<b>-425 / + 300 µm fraction</b>										
1	0.94	0.66	0.24	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
1				0.234	0.001170	<b>Sub-Total</b>				
<b>-300 / + 212 µm fraction</b>										
1	0.37	0.31	0.09	0.000000	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages	
1				0.038	0.000190	<b>Sub-Total</b>				
<b>-212 / + 150 µm fraction</b>										
1	0.34	0.29	0.11	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very significant cleavages	
2	0.23	0.17	0.15	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages	
3	0.23	0.17	0.16	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
3				0.033	0.000165	<b>Sub-Total</b>				
<b>-150 / + 100 µm fraction</b>										
1	0.29	0.17	0.07	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages	
2	0.20	0.14	0.09	0.000000	0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages	
3	0.20	0.17	0.06	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages	
4	0.17	0.17	0.05	0.000000	0.000000	White	Transparent	Note 1	Fragment with Crystal Faces, minor cleavages	
4				0.048	0.000240	<b>Sub-Total</b>				
<b>TOTAL</b>										
10										0.003630

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



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
Client: **Twin Mining Corporation**


Date: December 20, 2000  
LIMS No. **DEC0001.R00**  
Sample No. **888472**


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments
+100	Ferromagnetic Mag	Oxides and rock fragments
-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 and silicates

Sample Weight: **24.00 kg**  
Number of Syndites: **0**

Total Weight (carats)\*: **0.001**  
Number of Diamonds: **7**

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

  
Selection and Description

 Robert Buchan  
Consulting Mineralogist



Quality Control  
Maria Mezei  
Diamond Selection Specialist

### Note:

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: **8901-221**  
 Client: **Twin Mining Corporation**

Date: December 20, 2000  
 LIMS No. **DEC0001.R00**  
 Sample No. **888472**

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	1	0.096	0.000
	-300 / +212 µm	1	0.061	0.000
	-212 / +150 µm	1	0.019	0.000
	-150 / +100 µm	4	0.023	0.000
	<b>TOTAL</b>	<b>7</b>	<b>0.199</b>	<b>0.001</b>

**Sample Weight: 24.00 kg**  
**Number of Syndites: 0**

**Total Weight (carats)\*: 0.001**  
**Number of Diamonds: 7**

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

*Tracy Hill*

Selection and Description

for Robert Buchan  
 Consulting Mineralogist

*Maria Mezei*

Quality Control

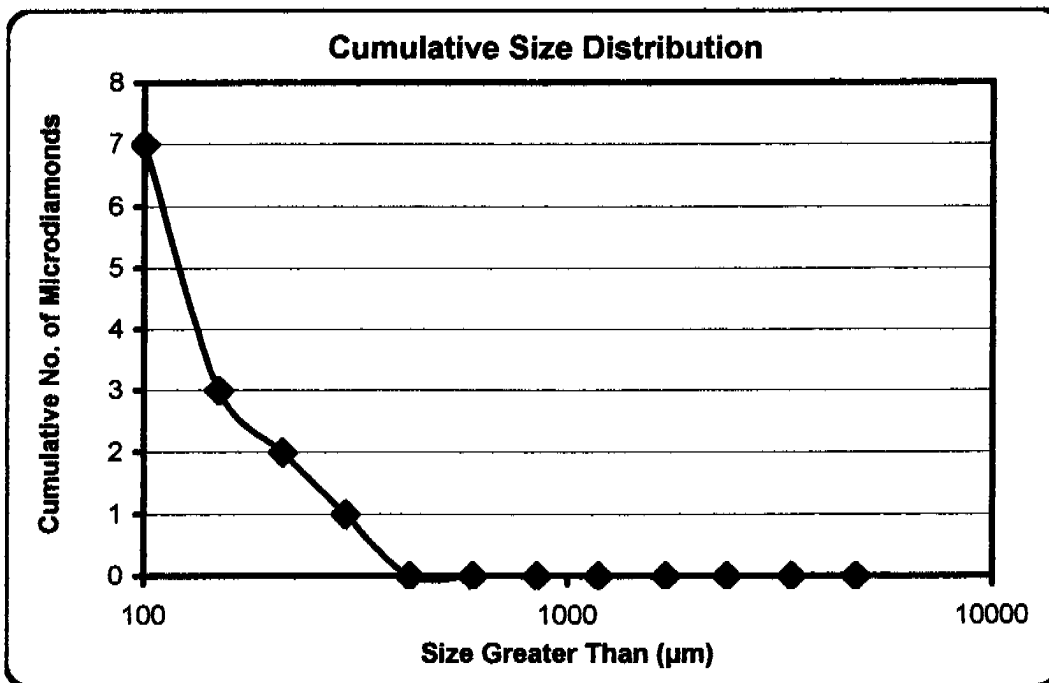
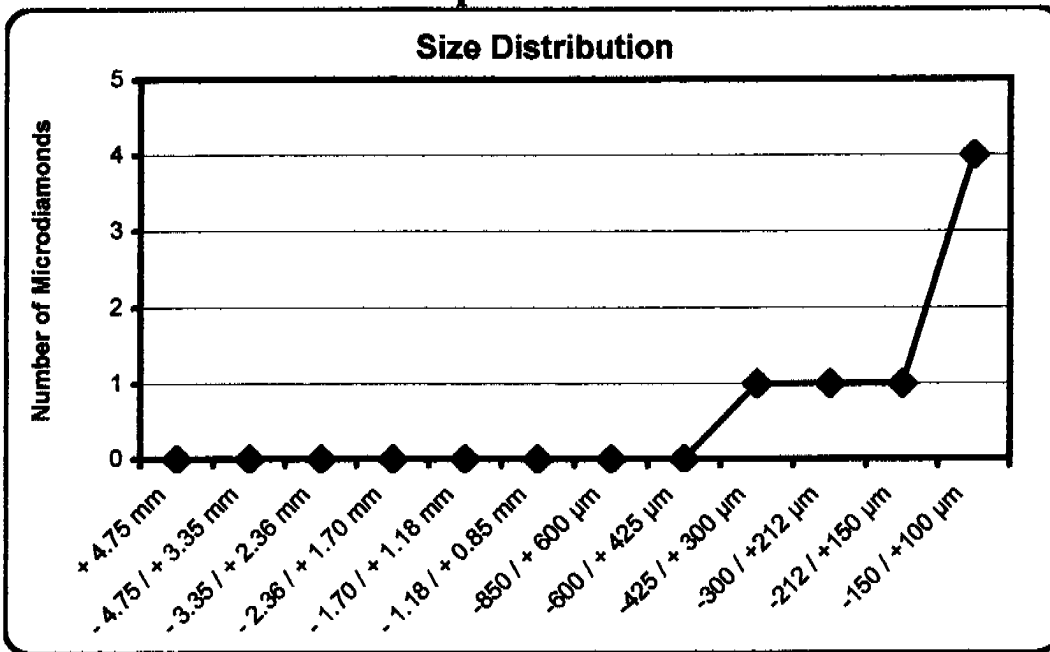
Maria Mezei  
 Diamond Selection Specialist

**Note:**

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

# Sample No. 888472



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 Fax: 705-652-3123

December 20, 2000

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888472

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			
<b>-850 / + 600 µm fraction</b>									
0				0.000000					
0				0.000	0.000000	Sub-Total			

**LAKEFIELD RESEARCH LIMITED**  
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December 20, 2000

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888472

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description
	X	Y	Z	mg	Carats				
<b>-600 / + 425 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				
<b>-425 / + 300 µm fraction</b>									
1	0.37	0.34	0.29		0.000000	White	Transparent	95%	Fragment with Crystal Faces, twinned, very minor cleavages
1				0.096	0.000480				
<b>-300 / + 212 µm fraction</b>									
1	0.34	0.29	0.26		0.000000	Off White	Transparent	62.5%	Fragment with Crystal Faces, minor inclusions, minor cleavages
1				0.061	0.000305				
<b>-212 / + 150 µm fraction</b>									
1	0.34	0.14	0.12		0.000000	White	Transparent	75%	Fragment with Crystal Faces, very minor cleavages
1				0.019	0.000095				
<b>-150 / + 100 µm fraction</b>									
1	0.14	0.14	0.08		0.000000	White	Transparent	75%	Fragment on which crystal faces unrecognizable, very minor cleavages
2	0.14	0.11	0.10		0.000000	White	Transparent	62.5%	Tetrahedral, very minor cleavages
3	0.17	0.11	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
4	0.17	0.14	0.09		0.000000	White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
4				0.023	0.000115				
<b>Sub-Total</b>									
7					0.000995				
<b>TOTAL</b>									

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation

Date: January 25, 2001  
LIMS No. DEC0001.R00  
Sample No. 888473

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides and rock fragments
-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)	Silicates and graphite


Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.000  
Number of Diamonds: 3

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

  
Selection and Description

for Robert Buchan  
Consulting Mineralogist

  
Quality Control

Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation

Date: January 25, 2001  
 LIMS No. DEC0001.R00  
 Sample No. 888473

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	0	0.000	0.000
	-425 / + 300 µm	0	0.000	0.000
	-300 / +212 µm	1	0.045	0.000
	-212 / +150 µm	2	0.035	0.000
	-150 / +100 µm	0	0.000	0.000
	TOTAL	3	0.080	0.000

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.000  
 Number of Diamonds: 3

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

*Tracy Hill*

Selection and Description

for Robert Buchan  
 Consulting Mineralogist

*Maria Mezei*

Quality Control

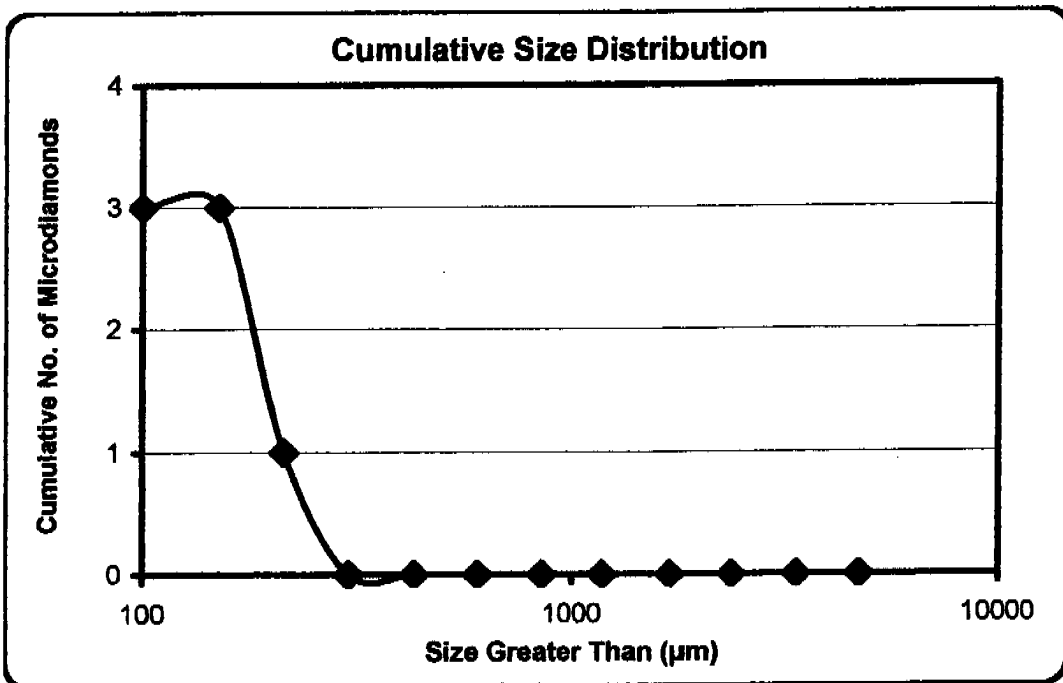
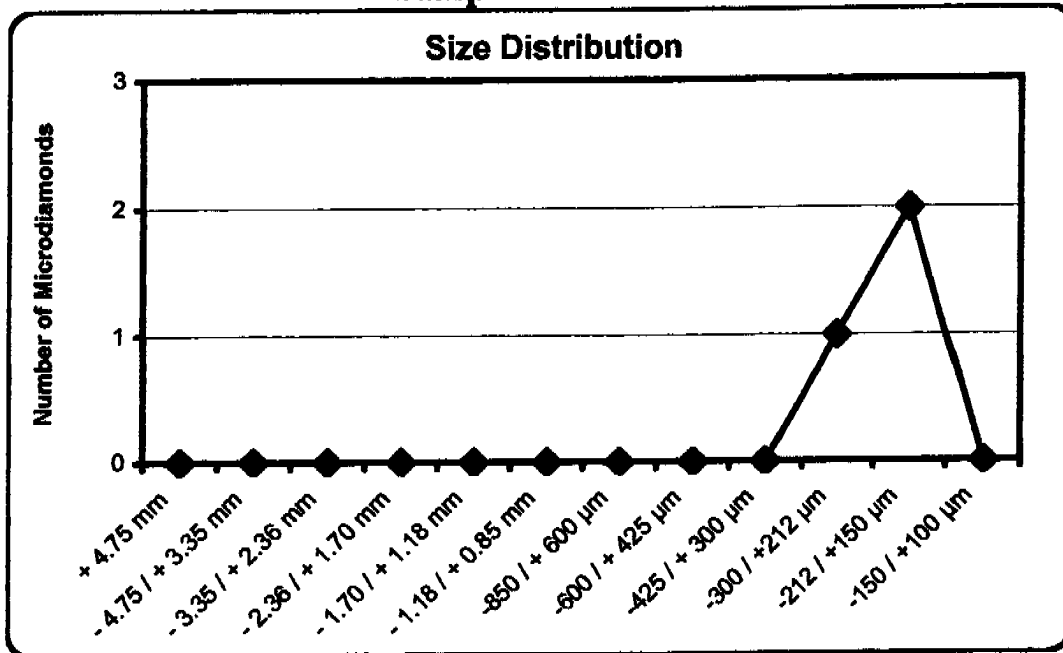
Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 888473





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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888473

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888473

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-600 / + 425 <math>\mu</math>m fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-425 / + 300 <math>\mu</math>m fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
<b>-300 / + 212 <math>\mu</math>m fraction</b>									
1	0.34	0.29	0.16	0.00000	White	Transparent		62.5%	Fragment with Crystal Faces, minor cleavages
1				0.045	0.000225	Sub-Total			
<b>-212 / + 150 <math>\mu</math>m fraction</b>									
1	0.23	0.20	0.13	0.00000	White	Transparent		Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
2	0.26	0.14	0.10	0.00000	White	Transparent		62.5%	Tetrahedral, very minor cleavages
2				0.035	0.000175	Sub-Total			
<b>-150 / + 100 <math>\mu</math>m fraction</b>									
0				0.00000					
0				0.000	0.000000	Sub-Total			
3					0.000400	TOTAL			

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

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
Client: Twin Mining Corporation


Date: January 25, 2001  
LIMS No. DEC0001.R00  
Sample No. 888474


Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Rock fragments, silicates, and 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 and silicates

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.006  
Number of Diamonds: 18

\* Total Weight (carats) was calculated from mg weights. All reported mg weights are measured to within 0.002 mg.  
\*\*Note: Two microdiamonds were lost during transfer.

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: January 25, 2001  
 LIMS No. DEC0001.R00  
 Sample No. 888474

	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.258	0.001
	-425 / + 300 µm	6	0.652	0.003
	-300 / +212 µm	3	0.158	0.001
	-212 / +150 µm	3	0.034	0.000
	-150 / +100 µm	5	0.033	0.000
	TOTAL	18	1.135	0.006

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.006  
 Number of Diamonds: 18

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

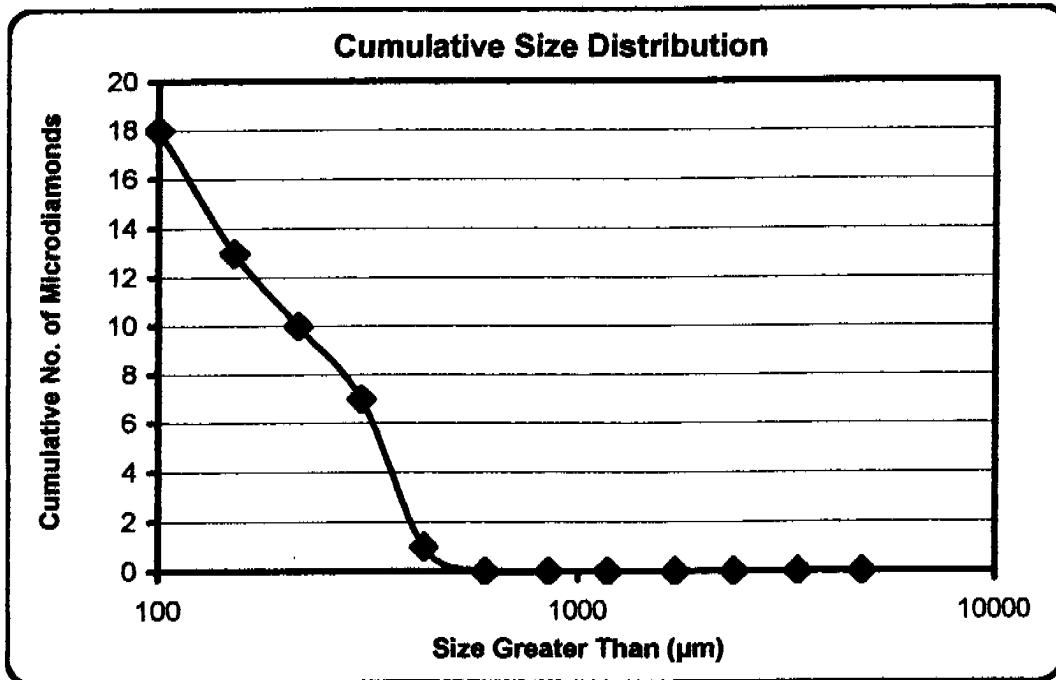
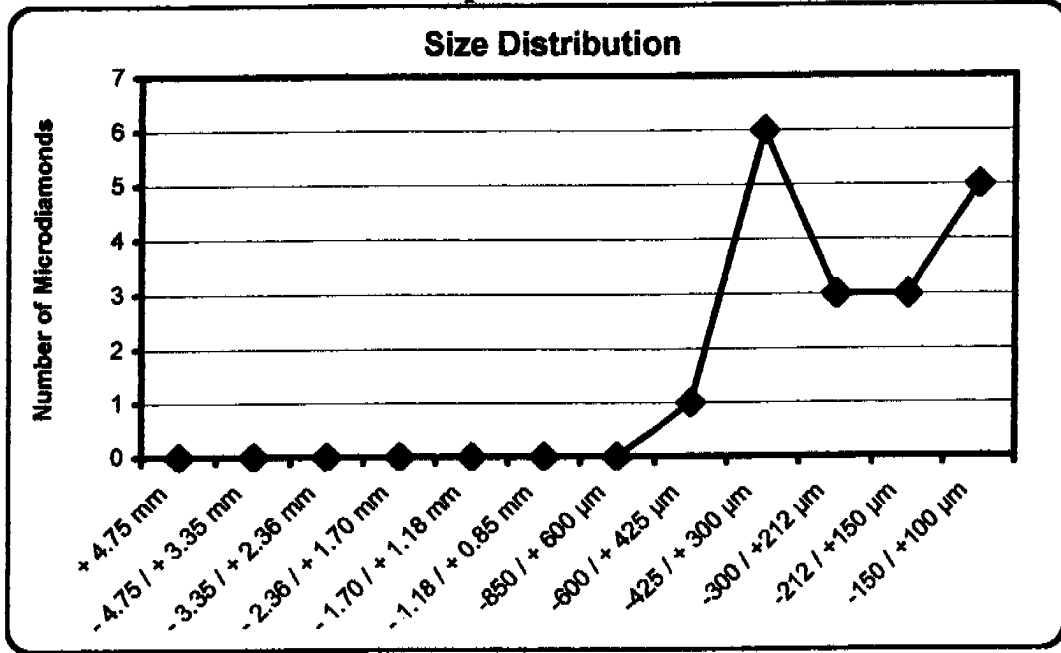
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 888474



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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888474

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z						Morphology	
<b>+ 4.75 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-4.75 / + 3.35 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-3.35 / + 2.36 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-2.36 / + 1.70 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.70 / + 1.18 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-1.18 / + 0.85 mm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				
<b>-850 / + 600 µm fraction</b>										
0				0.000000						
0				0.000	0.000000	Sub-Total				

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January 25, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888474

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-600 / + 425 µm fraction</b>									
1	0.66	0.60	0.39		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
1				0.258	0.001290	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
						<b>Sub-Total</b>			
<b>-425 / + 300 µm fraction</b>									
1	0.66	0.57	0.35		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
2	0.54	0.37	0.36		0.000000	White	Transparent	62.5%	Dodecahedral
3	0.63	0.37	0.22		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
4	0.54	0.40	0.22		0.000000	White	Transparent	85%	Dodecahedral, very minor cleavages
5	0.43	0.37	0.27		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages, graphite inclusions
6	0.54	0.34	0.22		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
6				0.652	0.003260	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
						<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
1	0.66	0.34	0.13		0.000000	White	Transparent	85%	Fragment with Crystal Faces, twinned, minor cleavages
2	0.46	0.37	0.24		0.000000	White	Transparent	62.5%	Dodecahedral
3	0.34	0.31	0.16		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
3				0.158	0.000790	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
						<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
1	0.29	0.23	0.15		0.000000	White	Transparent	95%	Octahedral, twinned
2	0.23	0.23	0.16		0.000000	White	Translucent	85%	Fragment with Crystal Faces, minor cleavages
3	0.26	0.23	0.11		0.000000	White	Transparent	62.5%	Dodecahedral, very minor cleavages
3				0.034	0.000170	White	Transparent	62.5%	Dodecahedral, very minor cleavages
						<b>Sub-Total</b>			
<b>-150 / + 100 µm fraction</b>									

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888474

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
1	0.34	0.17	0.07		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
2	0.31	0.20	0.09		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
3	0.29	0.17	0.11		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
4	0.23	0.20	0.10		0.000000	White	Transparent	62.5%	Dodecahedral
5	0.20	0.14	0.08		0.000000	White	Transparent	62.5%	Dodecahedral
				0.033	0.000165	Sub-Total			
18						0.005675	TOTAL		

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



# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Date: January 25, 2001

Client: Twin Mining Corporation

LIMS No. DEC0001.R00


Sample No. 888475

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides and rock fragments
-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)	Rock fragments, silicates, and oxides
-20+100	Diamagnetic Non-mag (0.5 amp)	Oxides and silicates

Sample Weight: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.009  
Number of Diamonds: 38

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.

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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: January 25, 2001  
 LIMS No. DEC0001.R00  
 Sample No. 888475


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	0	0.000	0.000
Stones Described Individually / Group Weighed	-600 / + 425 µm	2	0.768	0.004
	-425 / + 300 µm	3	0.393	0.002
	-300 / +212 µm	10	0.424	0.002
	-212 / +150 µm	9	0.142	0.001
	-150 / +100 µm	14	0.082	0.000
	<b>TOTAL</b>	<b>38</b>	<b>1.809</b>	<b>0.009</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.009  
 Number of Diamonds: 38

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

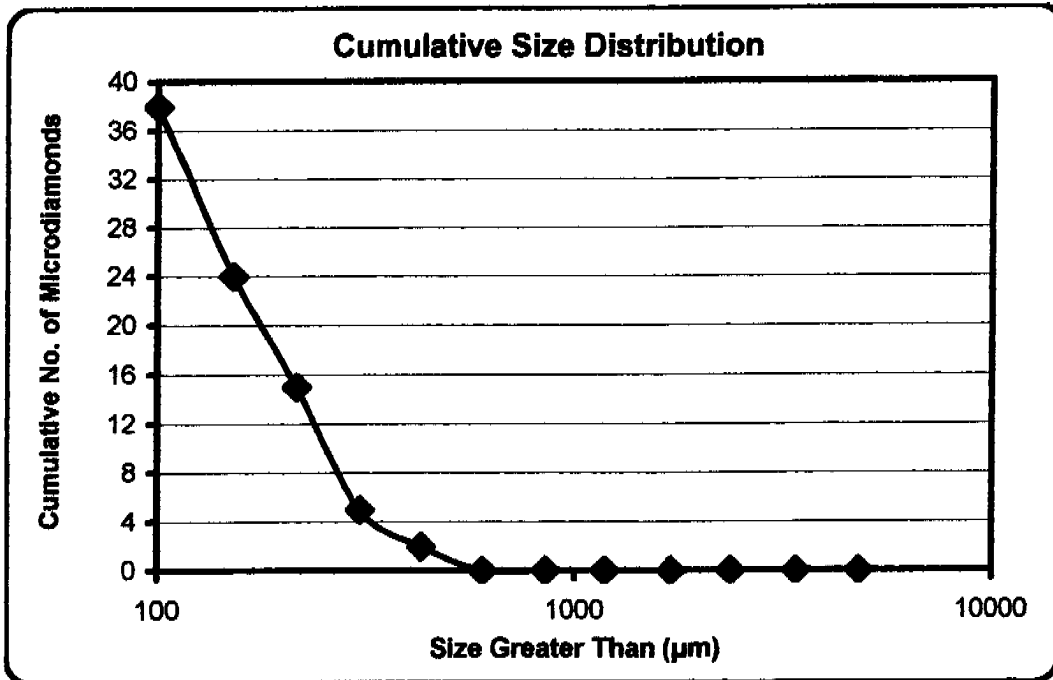
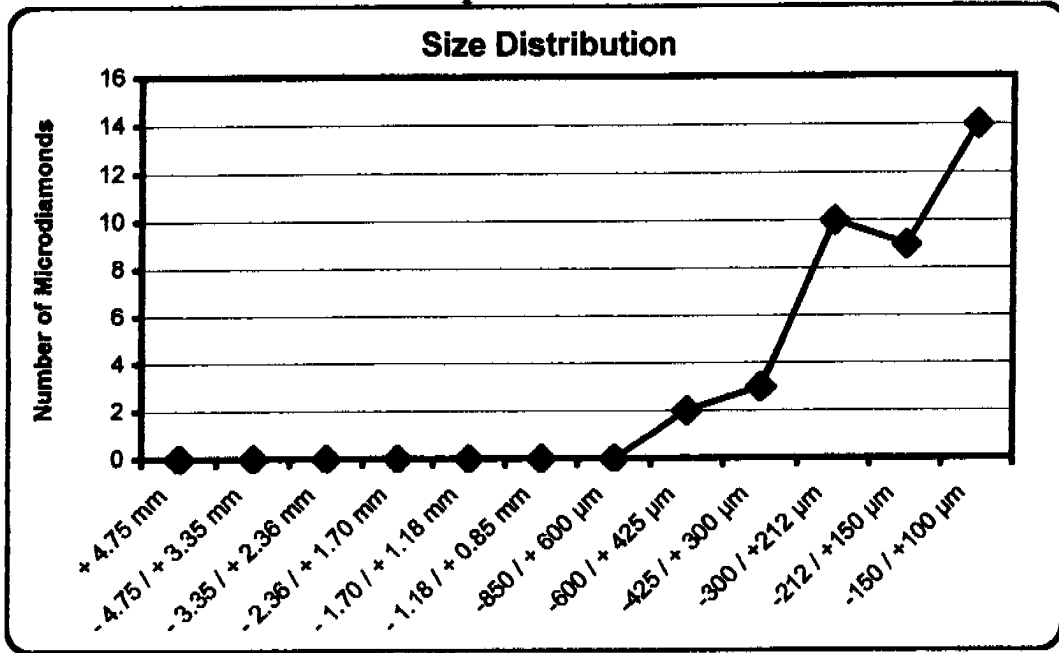
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**Note:**

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# Sample No. 888475



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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00  
 Sample No. 888475  
 Sample Weight: 24.00 kg

Client: Twin Mining Corporation

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>+ 4.75 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
0					0.000000				
0				0.000	0.000000				Sub-Total

# LAKEFIELD RESEARCH LIMITED

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888475

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-600 / + 425 <math>\mu</math>m fraction</b>									
1	0.86	0.83	0.48		0.000000	White	Transparent	95%	Octahedral, twinned, stepped faces, very minor cleavages
2	0.91	0.57	0.36		0.000000	White	Transparent	85%	Fragment with Crystal Faces, stepped faces, very minor cleavages
2				0.768	0.003840	<b>Sub-Total</b>			
<b>-425 / + 300 <math>\mu</math>m fraction</b>									
1	0.57	0.46	0.36		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
2	0.57	0.40	0.25		0.000000	White	Transparent	85%	Fragment with Crystal Faces, stepped faces, minor cleavages
3	0.57	0.43	0.33		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
3				0.393	0.001965	<b>Sub-Total</b>			
<b>-300 / + 212 <math>\mu</math>m fraction</b>									
1	0.57	0.40	0.20		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
2	0.48	0.29	0.17		0.000000	White	Opaque	85%	Fragment with Crystal Faces, graphite coating, significant cleavages
3	0.51	0.40	0.14		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
4	0.46	0.37	0.23		0.000000	White	Translucent	85%	Fragment with Crystal Faces, graphite inclusions, minor cleavages
5	0.40	0.40	0.14		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
6	0.48	0.31	0.22		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
7	0.46	0.31	0.21		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
8	0.40	0.29	0.27		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
9	0.34	0.26	0.21		0.000000	White	Transparent	62.5%	Octahedral, very minor cleavages
10	0.31	0.31	0.14		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
10				0.424	0.002120	<b>Sub-Total</b>			

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888475

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-212 / + 150 µm fraction</b>									
1	0.29	0.23	0.12		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
2	0.31	0.20	0.19		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
3	0.26	0.23	0.19		0.000000	White	Translucent	85%	Fragment with Crystal Faces, graphite coating, significant cleavages
4	0.26	0.20	0.17		0.000000	White	Transparent	62.5%	Dodecahedral
5	0.23	0.23	0.10		0.000000	White	Transparent	62.5%	Dodecahedral
6	0.29	0.20	0.14		0.000000	White	Transparent	62.5%	Dodecahedral
7	0.29	0.26	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
8	0.23	0.23	0.15		0.000000	White	Translucent	Note 1	Fragment on which crystal faces unrecognizable, graphite inclusions, significant cleavages
9	0.26	0.14	0.18		0.000000	White	Opaque	62.5%	Aggregates
9				0.142	0.000710	Sub-Total			
<b>-150 / + 100 µm fraction</b>									
1	0.29	0.17	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
2	0.29	0.14	0.07		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
3	0.26	0.20	0.09		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
4	0.17	0.17	0.10		0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, minor cleavages
5	0.20	0.17	0.10		0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages, graphite inclusions
6	0.17	0.17	0.14		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
7	0.17	0.14	0.12		0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
8	0.20	0.11	0.11		0.000000	White	Transparent	62.5%	Dodecahedral
9	0.23	0.17	0.11		0.000000	White	Transparent	62.5%	Dodecahedral

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

LIMS No. DEC0001.R00

Sample No. 888475

Client: Twin Mining Corporation

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description	
	X	Y	Z	mg	Carats				Morphology	
10	0.17	0.17	0.08		0.000000	White	Transparent	99+%	Macle	
11	0.11	0.11	0.10		0.000000	White	Transparent	99+%	Octahedral	
12	0.14	0.11	0.14		0.000000	White	Transparent	62.5%	Dodecahedral	
13	0.14	0.14	0.06		0.000000	White	Translucent	85%	Fragment with Crystal Faces, very minor cleavages	
14	0.17	0.14	0.10		0.000000	White	Transparent	85%	Octahedral, beinned	
14				0.082	0.000410	Sub-Total				
38					0.009045	TOTAL				

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

# Lakefield Research



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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Date: January 25, 2001

Client: Twin Mining Corporation

LIMS No. DEC0001.R00


Sample No. 888476

Mesh	Fraction	Dissolution Residue Description
+6	Ferromagnetic Non-mag	Not applicable
-6+20	Ferromagnetic Non-mag	Rock fragments, silicates, and oxides
+100	Ferromagnetic Mag	Oxides and rock fragments
-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: 24.00 kg  
Number of Syndites: 0

Total Weight (carats)\*: 0.011  
Number of Diamonds: 27

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

  
Selection and Description  
Tracy Gill  
Mineralogy Technician

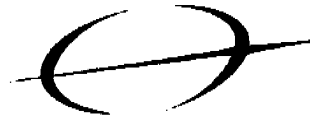
  
Quality Control  
Maria Mezei  
Diamond Selection Specialist

### 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.*





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## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221  
 Client: Twin Mining Corporation


Date: January 25, 2001  
 LIMS No. DEC0001.R00  
 Sample No. 888476


	Diamond Size Fractions	Number of Stones in Group	Group Weight (mg)	Group Carats (calculated)
Stones Described and Weighed Individually	+ 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 µm	2	1.420	0.007
Stones Described Individually / Group Weighed	-600 / + 425 µm	1	0.207	0.001
	-425 / + 300 µm	3	0.287	0.001
	-300 / +212 µm	5	0.136	0.001
	-212 / +150 µm	6	0.080	0.000
	-150 / +100 µm	10	0.059	0.000
	<b>TOTAL</b>	<b>27</b>	<b>2.189</b>	<b>0.011</b>

Sample Weight: 24.00 kg  
 Number of Syndites: 0

Total Weight (carats)\*: 0.011  
 Number of Diamonds: 27

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

  
 Selection and Description  
 Tracy Gill  
 Mineralogy Technician

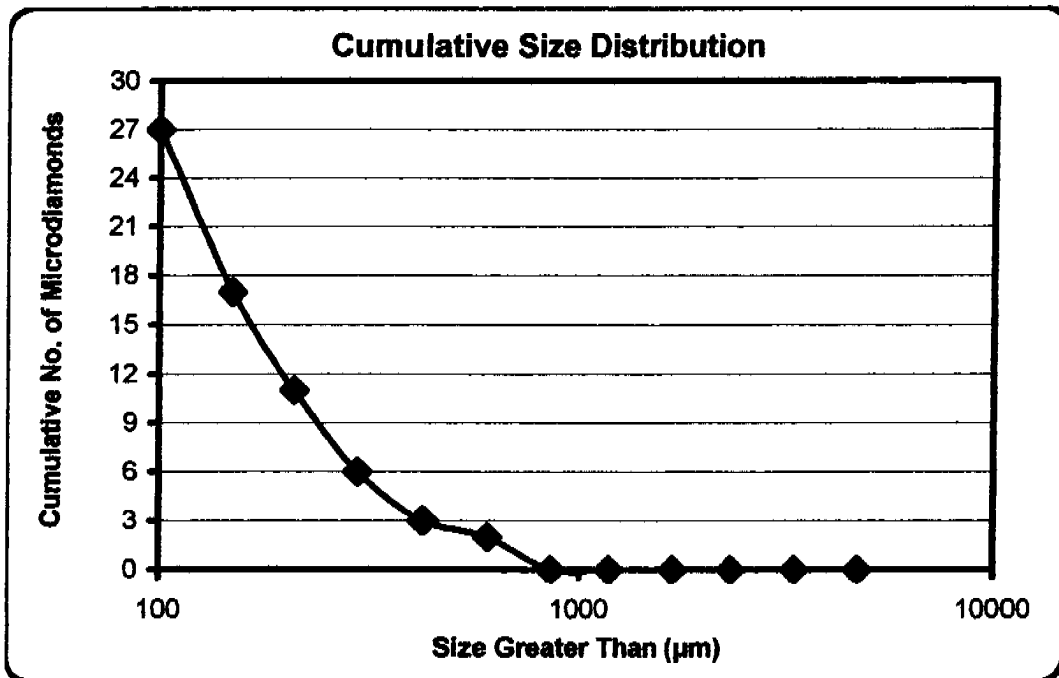
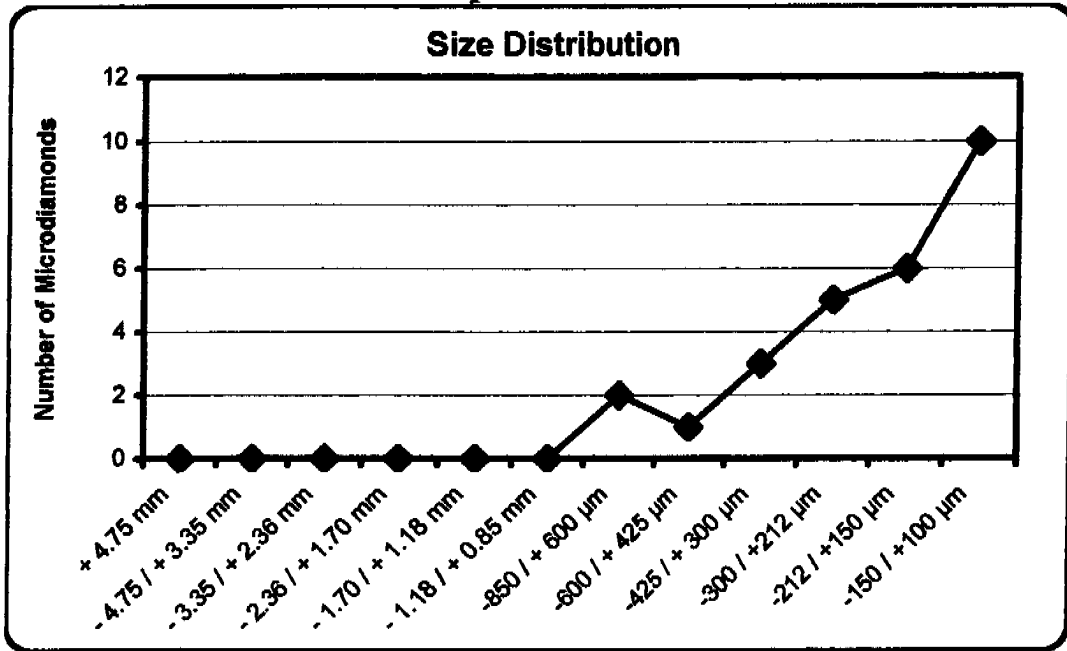
  
 Quality Control  
 Maria Mezei  
 Diamond Selection Specialist

**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.

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

# Sample No. 888476



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January 25, 2001

**DIAMOND RECOVERY BY CAUSTIC DISSOLUTION**

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888476

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>+ 4.75 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-4.75 / + 3.35 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-3.35 / + 2.36 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-2.36 / + 1.70 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-1.70 / + 1.18 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-1.18 / + 0.85 mm fraction</b>									
0				0.00000					
0				0.000	0.000000				Sub-Total
<b>-850 / + 600 µm fraction</b>									
1	1.05	0.86	0.41	0.773	0.003865		Transparent	85%	Fragment with Crystal Faces, minor cleavages
2	0.91	0.71	0.65	0.647	0.003235		Transparent	85%	Fragment with Crystal Faces, minor cleavages
2				1.420	0.007100				Sub-Total

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888476

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight		Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z	mg	Carats				
<b>-600 / + 425 µm fraction</b>									
1	0.63	0.57	0.26	0.000000	0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
1				0.207	0.001035	<b>Sub-Total</b>			
<b>-425 / + 300 µm fraction</b>									
1	0.54	0.54	0.22	0.000000	0.000000	Off White	Transparent	62.5%	Dodecahedral
2	0.48	0.37	0.23	0.000000	0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
3	0.40	0.37	0.27	0.000000	0.000000	White	Translucent	62.5%	Dodecahedral
3				0.287	0.001435	<b>Sub-Total</b>			
<b>-300 / + 212 µm fraction</b>									
1	0.43	0.29	0.15	0.000000	0.000000	Off White	Transparent	85%	Fragment with Crystal Faces, binned, minor cleavages
2	0.34	0.34	0.20	0.000000	0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
3	0.37	0.26	0.10	0.000000	0.000000	White	Transparent	85%	Fragment with Crystal Faces, minor cleavages
4	0.37	0.31	0.23	0.000000	0.000000	White	Transparent	62.5%	Dodecahedral
5	0.34	0.26	0.18	0.000000	0.000000	Grey	Translucent	85%	Fragment with Crystal Faces, significant cleavages
5				0.136	0.000680	<b>Sub-Total</b>			
<b>-212 / + 150 µm fraction</b>									
1	0.37	0.31	0.09	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
2	0.40	0.14	0.08	0.000000	0.000000	White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, very minor cleavages
3	0.34	0.14	0.11	0.000000	0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
4	0.26	0.20	0.17	0.000000	0.000000	White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
5	0.29	0.23	0.13	0.000000	0.000000	White	Transparent	62.5%	Tetrahedral, very minor cleavages
6	0.29	0.23	0.20	0.000000	0.000000	White	Translucent	85%	Fragment with Crystal Faces, binned
6				0.080	0.000400	<b>Sub-Total</b>			

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January 25, 2001

## DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8901-221

Client: Twin Mining Corporation

LIMS No. DEC0001.R00

Sample No. 888476

Sample Weight: 24.00 kg

No.	Stone Dimension, mm			Weight mg	Carats	Colour	Clarity	Percent Preservation	Stone Description Morphology
	X	Y	Z						
<b>-150 / + 100 µm fraction</b>									
1	0.20	0.17	0.10	0.000000		White	Transparent	85%	Fragment with Crystal Faces
2	0.20	0.20	0.10	0.000000		White	Transparent	85%	Fragment with Crystal Faces, very minor cleavages
3	0.37	0.14	0.09	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
4	0.14	0.14	0.09	0.000000		White	Transparent	85%	Fragment with Crystal Faces
5	0.20	0.11	0.09	0.000000		White	Transparent	85%	Fragment on which crystal faces unrecognizable, very minor cleavages
6	0.23	0.14	0.10	0.000000		White	Transparent	62.5%	Fragment with Crystal Faces, minor cleavages
7	0.17	0.11	0.11	0.000000		White	Transparent	62.5%	Tetrahedral, very minor cleavages
8	0.17	0.17	0.11	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
9	0.11	0.11	0.10	0.000000		White	Transparent	Note 1	Fragment on which crystal faces unrecognizable, significant cleavages
10	0.26	0.11	0.10	0.000000		White	Transparent	95%	Octahedral, twinned
10				0.059	0.000295	<b>Sub-Total</b>			
27						<b>0.010945 TOTAL</b>			

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