

31M12SW2001 2.17856 LUNDY

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#### SUMMARY REPORT

#### **ON THE**

#### **NOVEMBER 1995**

#### **DIAMOND DRILL INVESTIGATION**

OF

#### **KIMBERLITE PIPE**

95-2

#### SUDBURY CONTACT MINES LTD.

#### **MONTREAL RIVER "A" PROPERTY**

#### LUNDY TOWNSHIP

#### LARDER LAKE MINING DIVISION

#### PREPARED BY

#### **RAYMOND J. KNOWLES, B.Sc.**

#### W.A. HUBACHECK CONSULTANTS LTD.

#### **NOVEMBER 3, 1997**



12SW2001 2.17856 LUNDY

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#### SUMMARY

- Kimberlite Pipe 95-2 was discovered on Claim 1202724 by Reverse Circulation Drill in March of 1995. A total of 3 macro and 6 micro diamonds were recovered from 77.92 kg of material. Based on these results, four holes were diamond drilled (three vertical H and NQ, 1 angled NQ) into the pipe to describe the dimensions and geology of the pipe and to gain approximately 1000 kg bulk sample for diamond and indicator analysis.
- Drilling was conducted between November 15 and December 1, 1995. Logging and sampling were conducted November 22 to December 18, 1995 on Holes MRA-95-1,2 and 4. An additional eight days was required to log MRA-95-03 in February and March of 1996.

Analysis was performed by Lakefield Research Limited. A total of 1026.3 kg on 19 samples representing a split half portion of kimberlite core was sent for Caustic Dissolution. A total of 44 diamonds were recovered the largest of which is 0.14 carats. A total of 220.8 kg on nine samples representing 25 cm every 1m of split half portion of kimberlite core was sent for attrition milling in order to recover indicator minerals. An extensive suite was selected. A subsequent recheck of the diamond indicator work yielded four additional diamonds.

In January of 1996, 18 representative samples from MRA-95-03, 04 were sent to Roger H. Mitchell, Lakehead University for thin section work and limited SEM & WDS microprobe analysis. His report is appended.

From the drilling results to date, the pipe appears to be more or less homogeneous in mineralogy as well as diamond content indicating 1 phase of eruption; however, Roger Mitchell clearly describes three distinct facies which could be better determined through additional drilling.

Based on the above encouraging results, further testing of Pipe 95-2 is required comprising additu sectional drilling, in order to understand the pipe dimension as well as vertical bulk drilling, in order to recover a substantial sample representative of the pipe as a whole.

#### **Certificate of Qualifications**

I, Raymond J. Knowles, of the City of Etobicoke, in the Province of Ontario, Canada, do hereby certify that:

- 1) I am an Exploration Geologist, residing at 79 Thirteenth Street, Etobicoke, Ontario, M8V 3H5, under contract to W. A. Hubacheck Consultants Ltd., 365 Bay St., Suite 807, Toronto, Ontario, M5H 2V1.
- 2) I am a graduate of the University of Toronto where I received my Bachelor of Science degree in Geology in 1985, and have been practising my profession as an Exploration Geologist continuously since graduation.
- 3) I am a Fellow of the Geological Association of Canada, a member of the Canadian Institute of Mining and Metallurgy and the Prospectors and Developers Association of Canada.
- 4) This report is based on personal examination of the property in 1995 and 1996.
- 5) I have no direct interest in the properties or securities of Sudbury Contact Mines Ltd..

Dated at Toronto, Ontario November 6, 1997

Raymond J. Knowles, B.Sc.

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### APPENDIX A: PLAN MAP & SECTIONS

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# LEGEND

Km1 - Heterolithic Volcanoclastic Kimberlite Breccia

Huronian

10B - Fristbrock Member sillstone

Results 35101 - Sample #

0,1 - Diamonds Micro (KO.SMM), Macro

35051 - Indicators - Garnet purple, Garnet red, garnet orange, chrome diopside, ilmenite



APPENDIX B: DDH LOGS, MS LOG AND INDICATOR LOGS HOLES 1 - 4

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Sudbury Contact Mines
216
Nov. 16/95
Nov. 22/95
Test Kimberlite Geology

-

NTS	31 M/12, SW
DISTRICT	Cobalt
TWP/LAT,LONGL	undy S-1/2 Lot 1/Con.III
CLAIM	1202724
CO-ORD. Grid	1 3, 5+00W/0+60S

CORE SIZE	но
CONTRACTOR	Benoit Drilling
DATE LOGGED N	ov. 22/24/25/29-Dec_1
LOGGED BY	Ray Knowles
DDH COMMENTS	Overburden Problem

HQ

#### Acid SURVEY AZIMUTH DIP DEPTH 90° 50 N/A 110 88°30' N/A

1

D. OF 1/0

FAGE 1/0
N/A
-90°
298m
110m

					casing left in hole.										
INTE M 🗆	RVAL Ft 🗆	7	x	LITHOTYPE	DESCRIPTION		S.	AMPLE			_		- ASSA'	YS	
FROM	то	REC	RQD		GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	sul,	Au ppb				
0	47.5			OVER	Overburden. 0 to 30m, fine to medium sands, 30m to 47.5m,										
L	ļ				bouldery till.										
L															
47.5	87.0			Km1	Heterolithic Volcaniclastic Kimberlite Breccia							<u> </u>		L	<u> </u>
L					Dark olive green with spotted texture of white clasts.										L
					55-65% clasts of primarily country rock from .5mm up to 8cm. Generally clast							<u> </u>		L	
<u> </u>					supported. Clasts are angular to sub-angular >.Scm, angular to pelletal <.5cm.		l								<u> </u>
					Clasts composed of 40% limestone all size ranges but also dominant larger clast,	<b> </b>			<u> </u>		ļ		ļ	L	I
					40% Huronian Metasediments - black, grey, grey silstone, 5-10% pelletal fragments							<u> </u>	Ĺ		
<b></b>					<3mm mostly reminent mantle xenoliths and/or kimberlite, 1% others includes leuco	ļ						Ĺ	ļ		L
			~		gneiss, 4% autoliths of hypabysal kimberlite, fine grained sub-rounded to egg shaped							<u> </u>		<b></b>	
					pelletal <2mm up to 4cm, 5% garnet (peridotite) rounded with reaction rims,							L		L	:
					xenoliths, one instance containing 20% olivine, 5% garnet & chrome diopside,	L							<u> </u>		
L					sometimes smaller ones <3-5mm containing olivine or garnet cores. Generally	 								L	
					<1cm in size. 5-10% of limestone clasts <1cm are zoned with a bleached outer rim.										L
L					Of 65% clasts, 25% are <.5cm rounded to pelletal.						L				
L					Matrix-dark olive green grey, comprised primarily of talc serpentine and fine				L			L			
					fragments of above described clasts, as well as calcite (acid reaction) (could be									·	<u> </u>

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COMPANY	<u>(</u>				NTS		CORE SIZE	SL D	irvey Epth	DIP	AZIMUTI	н	HOLE N	io. Mira	-95-01	PA	AGE 2/8
PROPERTY	r				DISTRIC	СТ	CONTRACTOR						COLLAI	R AZIMU	TH		
COMMEN	CED				TWP/LA	AT.LONG.	DATE LOGGED						COLLA	R DIP			
COMPLET	ED				CLAIM		LOGGED BY						ELEVA1	TION			
OBJECTIV	E	_	-		CO-ORD	DINATES	DDH COMMENTS						LENGT	ł			
INTE	RVAL	Ī			Γ						SAMPLE					 <u> </u>	
MU		KEC	RQD	LITHOT	(PE	GEOLOGY: (co	DESCRIPTION					<b>_</b>		<b> </b>	——	 	
FROM	то								SAMPLE NO.	FROM	то	LENGTH	¥ SUL	Au ppb			
					li	limestone dust?), in some insta	ances pale chrome green colouration (talc or										
					d	diopside?).											
						Ground mass and fine particul	ate (<2mm) matter comprised of primarily serpenti	tine									
					Р	pseudomorphs of olivine (10%	domorphs of olivine (10%-15%), 1-2% fine phlogophite flakes and trace larg										
					Р	phlogophite books (1-2mm), 1	sophite books (1-2mm), 1% fine selinite crystals throughout, in some serpent										
					р	pseudomorphs, cores have cal	cite, 15% is an amorphous dark green talc serpentin	ine									
						(kimberlite).											
					4	18.0-69.2 70% either badly br	oken and/or severely weathered so as to severely										
					n	mask or in some case obliterat	te textures and features (described in more detail										
					Ь	below). Weathered sections c	rumble or mold to the touch.										
					Р	Pervasive cleavage present at (	0 to 30° to core axis causing in the weathered core	•									
					a	breaking up into platey fragr	nents <1cm to 5cm. Cleavage goes through <1cr	m									
					ci	lasts and in most cases deflec	ted around larger clasts. After 63.7m, and better										
					P	preservation of core, the cleav	ge can be seen to be filled with .1mm wide micro										
					v	veinlets of selenite.											
					Ŀ	n some instances a cleavage f	ill every 2mm, in general .5-1cm spacing is observe	ved.									
					4	7.5-52.8 Relatitvely compete	nt section, weak cleavage at 20-30° to CA.										
					4	6.1-48.3 Becomes broken up	).										

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COMPANY	<u>,</u>				NTS		CORE SIZE	SU D	RVEY EPTH	DIP	AZIMUTI	H	HOLE N	io. Mr/	<b>\-95-0</b> 1		PA	AGE 3/8
PROPERTY	(				DISTI	RICT	CONTRACTOR						COLLAR	R AZIMU	тн			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED					- ·	COLLAI	R DIP				
COMPLET	ED	_			CLAI	M	LOGGED BY						ELEVAT	TION				
OBJECTIVI	E				CO-0	RDINATES	DDH COMMENTS						LENGT	1				
	RVAL Ft □	x	x	LITHOT	7DE		DESCRIPTION			:	SAMPLE				I	ASSAN	rs.	
FROM	то	REC	RQD	Limor		GEOLOGY: (cold	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						48.3-49.9 Lost core, ground.	· · · · · · · · · · · · · · · · · · ·											
						49.9-50.4 Core broken up alor	ng cleavage.											
						50.4-52.8 Well preserved to m	oderately broken up.											
						As before described but:												
						65-70% clasts 1mm-30 mm in s	size mostly angular, 60% limestone, 40% Huronian	n										
						siltstone, trace diorite?, 5% of I	limestone with zoned alteration, 5% pelletal								_			
						(<1mm-3mm) mostly altered m	nantle xenoliths. One case of a small garnet centre	e.	Indicator				wt.(kg)	GP	GP Red	Gong	DC	IL.
						Matrix fine grained granular, se	erpentine/talc after olivine?, fine pieces of country		35055	48.0	87.0		28.1	>85	>59	>110	> <b>8</b> 0	>75
						rock. Trace to 1% phiogophite	flakes. Only 1 small garnet observed. Smaller cla	asts	C	ustic Dissolu	tion for Diamo	nds		Micro	Macro			
						show evidence of milling or rou	unding. 5-10% < 2mm size serpentine pseudomor	rphs	35110	47.5	66.0	18.5	63.0	0	0			
						of olivine. 1 - 4x3cm autolith v	vesicular. Trace single garnets < 1mm - 2mm mos	stly										
						with black rims ie. host digested	d.											
						52.8-63.65 Strongly altered/we	athered. Very soft and/or brittle 40% of core as											
						gravel and broken tabular fragm	nents due to cleavage, 60% came out as core but is	is										
						coated and or so fragile that wa	shing won't reveal detailed textures. Breaks up											
						to the touch. Clast content seen	ns consistent with the previous section, however,											
						there are 3 or 4, 3-4cm Huronia	an clasts present and limestone is harder to recogn	nize										
						(weathered). 1-2% phlogophite t	flakes throughout, & in a few instances, books are	e										

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PROPERTY       DISTRICT       CONTRACTOR       COLLAR AZAUTH         COMMENCED       TWPLATLONG.       DATE LOGGED       COLLAR DP       COLLAR DP         COMMENCED       CAM       LOGGED BY       COMMENTS       COLLAR DP       LEWATION         DESTRUCT       COMMENTS       DOBI COMMENTS       LINCTUPE       LEWATION       LINCTUPE       COLLAR AZAUTH         NTERVAL       State       State       State       DBI COMMENTS       LINCTUPE       LINCTUPE       COLLAR AZAUTH       LINCTUPE       LINCTUPE       COLLAR AZAUTH       LINCTUPE       COLLAR AZAUTH       LINCTUPE       LINCTUPE       COLLAR AZAUTH       LINCTUPE       LINCTUPE       LINCTUPE       LINCTUPE       LINCTUPE       COLLAR AZAUTH       LINCTUPE       LINCTUP       LINCTUP       LINCTUP       LI	COMPANY					NTS		CORE SIZE	SU D	RVEY EPTH	DIP	AZIMUTI	н	HOLE N	10. MR/	<b>1-95-0</b> 1		P/	GE 4/8
COMMENCED         TWPLAT.LONG.         DATE LOGGED         COLLAN         COLLAN DP	PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIMU	тн			
COMPLETED         CLAM         LOGGE BY         DOG ONNATES         DOG O	COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
OBJECTIVE       COORDINATES       DDH COMMENTS       LENGT         M       ROM       TO       SO       LITHOTYPE       DESCRIPTION GEOLOGY: (colour, gnin size, stature, minerals, shension, ec)       SAMPLE       SAMPLE       ASSAYS         ROM       TO       Lawarn       Size $m^{+}_{0}$ L       ASSAYS         ROM       TO       Lawarn       Size $m^{+}_{0}$ L       ASSAYS         L       L       A       Observed.       L	COMPLETE	D				CLAI	м	LOGGED BY						ELEVAT	ION				
NTERVAL M         *	OBJECTIVE	!				<u>co-o</u>	RDINATES	DDH COMMENTS						LENGT	1				
REC         NO         REC         NO         Difference         Starts         FROM         TO         LENTITY         Starts         And Starts         And St		RVAL Ft 🗆	x	*	LITHOT	VDE		DESCRIPTION				SAMPLE					ASSAY	′S	
Image: Construct of the sector of the sec	FROM	то	REC	RQD	LIIIOI		GEOLOGY: (colo	ur, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	% SUL	Au ppb				
Image: Section of the sector of the secto							observed.				1		T						
1       66.2 A single 1.5mm garnet.       1							62.6 A single .5mm garnet is o	bserved.											
Image: Contract of the second seco							66.2 A single 1.5mm garnet.												
Image: Constraint of the section of the sectin of the seccient of the section of the sectin of the section of							Overall, 0.5% garnet.												
Image: Star plane in the past with 20% harder sections.       Image: Shar plane contact.         Image: Shar plane contact.       Image: Shar plane contact.         Image: Shar plane contact plane contact plane contact plane contacontact plane contact plane contact plane contact plane contact pla							60.25-63.65 Extremely weather	red, even Huronian clasts. Seen as an amorphou	s										
Sharp lower contact.       Sharp lower contact. <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>dark green serpentine rich paste</td><td>with 20% harder sections.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							dark green serpentine rich paste	with 20% harder sections.											
				_			Sharp lower contact.												
Image: Section of the section of th	_						63.65-69.6 As with main descri	iption but;				-							
Image: Sector of the sector	_			_			63.65 Relatively competent.												
Image: Selence of the selence of th					<u>_</u>		64.0-64.3 Broken up, deeply w	eathered.											
Image: Sector				_			64.3-66.6 Relatively competent	, up to 10% selenite filled parting cleavage 0-30°	,										
Image: Sector							to CA, in some instances flaking	g off with cleavage.											
Image: Solution of the second seco							66.6-68.7 Competent in shape l	but very soft and friable/brittle, selenite appears											
donut shaped 1-2mm (kimberlite autoliths?) weathered, 2-3% possible 3-4mm autoliths	_			_			to have dissolved allowing rock	to fall apart along cleavage planes, trace brown											
also trace 1 or 2 instances of very altered garnet centered pelletal fragments.       Image: Constant of the series	_						donut shaped 1-2mm (kimberlite	autoliths?) weathered, 2-3% possible 3-4mm aut	toliths										
68.7-69.2 Totally broken up 'gravel', talc serpentine mush with country rock       clasts.							also trace 1 or 2 instances of ve	ry altered garnet centered pelletal fragments.											
clasts.							68.7-69.2 Totally broken up 'gi	ravel', talc serpentine mush with country rock											
							clasts.												

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COMPANY	<u> </u>				NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE	10. MR	A-95-01		P/	GE 5/8
PROPERTY	e in the second s				DIST	RICT	CONTRACTOR	Γ					COLLA	R AZIMU	ЛН			
COMMEN	CED				TWP/	LAT.LONG.	DATE LOGGED	Γ					COLLA	r dip				
COMPLET	ED				CLAI	M	LOGGED BY	ſ					ELEVA	TION				
OBJECTIV	E				CO-0	RDINATES	DDH COMMENTS	Ľ			*		LENGT	н				
	RVAL Ft 🗆	5	7	LITHOTY	(PE		DESCRIPTION				SAMPLE					ASSA	(S	
FROM	то	REC	RQD			GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						69.2-69.6 Relatively competen	t yet broken along fracture/cleavage planes, sele	enite										
						+/- present.		<u>.</u>										
						Overall 63.65-69.6 no significa	nt autoliths, macro mega crysts - country rock											
						>2mm, 60%, <2mm 10% - 3	0% limestone; 40% Huronian. Accessory mine	erals -										
						trace garnet, 1% phlogophite.	Matrix-serpentinized olivine ground mass, and o	crysta	ls									
						1-2mm, 15%. <2mm country	rock, 10%, pelletal grains, 5% (<2mm).											
						NOTE: Most <2mm size cour	ntry rock clasts are round to sub-round to some	what						Ľ				
			_			pelletal round to elongated. Du	e to severe weathering possible kimberlite autol	liths						<u> </u>				
						are not distinguishable from som	me country rock fragments.											
						69.6-78.9 As generally describ	ed however; better preserved but still fragile ea	sy					wi. (kg)	Dia	nonda			
						to shatter. More abundant low	er crust clasts and garnet mega crysts, nucelated	<u>i</u>		Caustic	Dissolution for Dis	monds		Micro	Macro			
						autoliths as well as pure kimber	rlite (fine grained) autoliths. Overall 2-3% garm	et	35111	66.0	79.5	13.5	54.8	0	0			
						(red wine) from <1mm to 50m	m, 1% as centres of 10mm autoliths and 2% as	garn	et									
						bearing mantle lithic fragments	generally 10mm size clasts. 2 mega clasts of g	neiss										
						4-7cm. 1 mega clast of peridot	ite (mantle xenolith) 20% olivine crystals set in											
						a fine black matrix with 5% chi	rome diopside bearing garnet (wine red). Count	try										
						rock clasts, pelletal clasts and n	natrix more or less consistent with rest of hole.					L						
						70.55-73.0 Abundant cleavage	fills (<.25mm wide each but up to 5-10% of re	ock)										
						of selenite in one case (70.65) f	racturing in a 2cm Huronian siltstone and surro	undin	g									

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COMPAN	Y		 	NTS		CORE SIZE	SU L	URVEY EPTH	DIP	AZIMUTH	ł	HOLE	NO. MR	A-95-01		P	AGE 6/8
PROPERT	Y		 	DISTI	RICT	CONTRACTOR						COLLA		ЛН			
COMMEN	CED		 	TWP/	RICT C LAT.LONG. E M L RDINATES E GEOLOGY: (colour, it with selenite. 1-2mm wide selen 35-40° at 70.55, 74.4, 75.7, 76.2 a Interesting features: 69.62 4mm wine red garnet suban 69.95 1 x 1.5cm garnet gneiss (60 70.1 3 x 4cm autolith rounded egg 70.63 9mm garnet cluster, 70.83 & 71.6 5 x 4cm angular subangular, 72.2 2.5cm autolith subrounded, 7 73.26 4mm garnet with a .25mm c surrounded by a 0.5mm rim (calcag 73.45 1.5mm garnet rimed by thin 73.55 Olivine crytals in a sphere o 73.56 Angular garnet, 2mm, 74.7 74.77 Possible large autolith 5cm 3 74.09 Phlocophic large autolith 5cm 7	DATE LOGGED						COLLA	R DIP				
COMPLET	TED			CLAI	м	LOGGED BY						ELEVA	TION				
OBJECTIV	Æ		 	CO-0	RDINATES	DDH COMMENTS						LENGT	н				
	ERVAL Ft 🗆	S PEC	\$ LITHOTY	PE		DESCRIPTION				SAMPLE					ASSA	YS	
FROM	то	N.C.			GEOLOGI: (	colour, grain size, texture, minerals, alteration, etc.)		SAMPLE NO.	FROM	то	LENGTH	X SUL	Au ppb				
	1				it with selenite. 1-2mm wide	selenite veinlets cutting cleavage and core axis at											
					35-40° at 70.55, 74.4, 75.7,	76.2 and 77.45m.											
					Interesting features:												
					69.62 4mm wine red garnet	subangular, 69.85 1mm black mica.											
					69.95 1 x 1.5cm garnet gne	iss (60% gt, 10% pyroxene, 30% quartz/feldspar).								}			
					70.1 3 x 4cm autolith round	ed egg shaped.										[]	
					70.63 9mm garnet cluster, 7	0.83 80mm garnet angular.											
					71.6 5 x 4cm angular suban	gular, leucogneiss.									$\square$		
					72.2 2.5cm autolith subroun	ded, 72.3 4mm garnet angular.											
					73.26 4mm garnet with a .2	5mm chrome diopside crystal on one edge, all											
					surrounded by a 0.5mm rim	(calcaphitic?) or kimberlite (fine grained material).											
					73.45 1.5mm garnet rimed t	by thin black.								i			
					73.55 Olivine crytals in a sp	here of black 2mm.											
					73.56 Angular garnet, 2mm,	, 74.7 elongate 1mm garnet.											
	1				74.77 Possible large autolith	5cm x 2cm, 74.85 3 x 1cm autolith.											
					74.92 Phlogophite 1mm x 3	mm, 75.13 Autolith.											
					75.7 8 x 7cm mantle xenolith	subrounded, 20% olivine crystals, 5% chrome											

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	H	HOLE	NO. MR	A-95-01		P/	AGE 7/8
PROPERTY					DIST	RICT	CONTRACTOR	Γ					COLLA	R AZIMU	JTH			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED	Γ					COLLA	R DIP				
COMPLETE	Ð				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTIVE	1				co-o	RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	7	x	LITIOT	VDE		DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD	LIIHOI		GEOLOGY: (ca	olour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul.	Au ppb				
						diopside bearing garnets, all s	set in a fine black matrix.											
						75.8-75.9 3 garnets 2mm, 4n	mm x 9mm each surrounded by 1-3mm fine gr	rained										
						black spherical rim. 76.37 au	utoliths, 76.6 autolith 1.5cm.											
	•					76.8 3 x 5mm autoliths, 76.9	mm autoliths, 76.9 Garnet gneiss 0.5 x 1cm.											
						76.95 1.5cm autolith, 77.3	cm autolith, 77.3 l x 2cm autolith.											
						77.35 0.5mm garnet, 77.5 1	lcm autolith.											
	_					77.7 2mm garnet, 77.74 0.5	x 1cm autolith, 78.1-78.18 Leucogneiss.											
						78.27 2.5mm x 0.5mm elong	gate pelletal garnet centered with 0.5mm rim.											
						78.48 Spherical garnet centre	e (1.5mm), 1mm black rim.											
	_					78.55 1.2 x 0.4cm garnet gne	eiss, 50% garnet, 50% pyroxene cut by selenit	te filled										
						cleavage/fracture.					1							
						78.75 0.5mm garnet.												
						78.9-87.0 As initially describ	ed except; 40% is very weathered and flakes	or breaks	·									
						up, brittle like, strong serpent	tinization of matrix and therefore broken core	and										
						poor return in some instances,	, breaking along cleavage near vertical (0° to	CA),					wi. (kg)	Dia	nondis			
						no garnet was observed. 2 la	rge leucogneiss clasts 4 x 3m at 84.0m and 3.	x 8cm		Caustic	Dissolution for Dia	nonds		Micro	Macro			
						at 86.6m. 1 large 3-4cm dian	3-4cm diameter autolith with 20-30% olivine altered to serper			79.5	87.0	7.5	26.3	0	0			
						at 86.55m. Maybe 3 or 4 oth	er ?1cm autoliths. Most country rock clasts	<2cm,										

#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY	,			NTS		CORE SIZE	SU D	RVEY EPTH	DIP	AZIMUT	1	HOLE	NO. MRA	-95-01		PAG	E 8/8
PROPERTY	•			DIST	RICT	CONTRACTOR						COLLA	R AZIMUT	н			
COMMENC	ED			TWP	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED			CLA	M	LOGGED BY						ELEVA	TION				
OBJECTIV	8				ORDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	x	7	LITHOTYPE		DESCRIPTION				SAMPLE					ASSAY	S	
FROM	то	REC	RQD		GEOLOGY: (	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	% SUL					
					however, same relative abun	dance as before. 10-15% rounded pelletal kimberlit	ie	Indicat	e Sample			wi. (kg)	GP Pwr	GP Red	G. Org	DC	IL
					(8%) <1-2mm. Matrix now	v serpentine/talc, very soft, difficult to recognize oliv	vine					ļ					
					pseudomorphs, abundant fin	s, abundant fine <2mm country rock.										ļ!	
					85.55-85.85 Large Huronia	Large Huronian siltstone clast fine bedding at 45° to CA. Upp			Castic	Dissolution for Diss	acanda T		Micro	Масто			
					sharp at 38° to CA, lower 8	* to CA, lower 85° to CA, possibly incorrect, lower contact ground				_							
					87.0 Contact between kimb	erlite and host Huronian siltstone contact destroyed,										'	
					broken up, but is sharp.												ļ
										_						<sup> </sup>	
87.0	110.0			10B	Huronian Firstbrook Membe	r Siltstone.			ļ								L
					Dark grey massive finely be	dded, fine grain bedding at 82° to CA. Note - core	badly										
					ringed so difficult to pick ou	t any features.											
					2-1mm size selenite veinlets	proximal to contact @ 30 and 18° to CA one with 1	%										
					sphalerite.												
					Note: 1 indicator sample 35	055 from 48.0-87, involves 33 x .25 samples.										<u> </u>	
						·····											
110.0	110.0			E.O.H.	END OF HOLE.												
					core stored cobal	+ Ont. Agnico propenty - Block	How	e_									

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COMPANY	Sudbury Contact Mines	NTS	31 M/12, SW	CORE SIZE	HQ	SURVEY DEPTH	DIP	AZIMUTH	HOLE NO. MRA-95-02	PAGE 1/11
PROPERTY	216	DISTRICT	Cobalt	CONTRACTOR	Benoit Drilling	56	90*	-	COLLAR AZIMUTH	N/A
COMMENCED	Nov. 23/95	TWP/LAT.LONGL	andy S-1/2 Lot 1/Con.III	DATE LOGGED	Dec. 2-6/95	100	88*30'	-	COLLAR DIP	-90°
COMPLETED	Nov. 26/95	CLAIM	1202724	LOGGED BY	Ray Knowles	150	87*	-	ELEVATION	299m
DBJECTIVE	Test Kimberlite Geology	CO-ORD. Grid	1 3, 3+40W/0+85S	DDH COMMENTS	Hole lost, rods broken				LENGTH	159
					not recovered, casing left in h	ole.				

Acid

	Ft 🗆	x	x	LITHOTYPE	DESCRIPTION		S	AMPLE				ASSA	YS
FROM	то	REC	RQD	Limorne	GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	sul,	Au ppb		
0	48.0			OVER	Overburden. Sand over till over bouldery till.								
		}				<u> </u>							
48.0	159.0			Kml	Heterolithic Volcaniclastic Kimberlite Breccia								
					Olive green to dark grey matrix with white grey and black clast spots.								
					Matrix supported (just) with localized clast supported.								
					Clasts - 50-60% generally anuglar to sub-angular.			<u> </u>					
					Range in size 2mm up to 8cm.								
		T			45% country rock - none are lapilli (kimberlite adhered to or coats).								
					25% limestone - 2mm-3cm but one at 340mm.							i	
					Angular, irregular (digested), 30% zoned, 10% with alteration rims, 60% non-altered.								
					20% Huronian (Firstbrook) siltstone-black, blue, grey, generally angular to sub-								
					angular, 30% have thin alteration rims, 70% are pristine, size <2mm-8cm).								
					15% gneissic texture-10% leucogneiss with <20% mafic minerals, amphibole, some								
					biotite). 5% garnet bearing amphibole/pyroxene grass green, banded gneiss, garnets								
					orange to cherry red, probably lower crystal rocks.								
					5-10% as 1-mantle xenoliths both as (a) 2-3% discrete clasts 2mm-3cm rounded to								
					sub-rounded, as amorphous green serpentinized or partially serpentinized olivine or								
					as such with 2-3mm red garnets and green chrome diopside inset.								

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COMPANY					NTS		CORE SIZE	SU D	rvey Epth	DIP	AZIMUT	н	HOLE N	io. Mr.	A-95-02		PA	GE 2/11
PROPERTY	(				DIST	RICT	CONTRACTOR						COLLAI	RAZIMU	TH			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				<u> </u>
COMPLET	ÊD				CLAI	м	LOGGED BY		1				ELEVAT	TION				
OBJECTIVI	E				<u> </u>	RDINATES	DDH COMMENTS						LENGTI	H				
<b></b>		1	<u> </u>	1		r			<u> </u>					<u> </u>				
	RVAL Ft 🗆	x	×	LITHOT	YPE		DESCRIPTION			:	SAMPLE				4	ASSAY	′S	
FROM	10	REC	RQD			GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	<b>X</b> SUL	Au ppb				
						(b) 3-4% surrounded by spher	oidal to egg shaped hypabysal black to dark grey											
						brown kimberlite (having a fel	berlite (having a felt or mat like texture) rims from < 1mm to up to											
						as pelletal up to coarse lapilli,	mantle particles as nuclei or kernels range from											
						<1mm up to 1cm generally, (	p to 1cm generally, (in some cases coating of kimberlite is microthin											
						2-Other instances (1-2%) of ga	arnet, phlogophite or individual olivine (crystalline								2			
						to serpentinized) as kernels to	large pelletal clasts.											
						3-Autoliths 2-5% spehroidal to	egg shapred with no nuclei, however may contain											
						many individual olivine or seq	pentine crystals scattered throughout.											
						Note: Generally wherever ma	ntle xenoliths are observed, they contain chrome								:			
						diopside and violet to lilac gar	nets. Violet garnets and sometimes pelletal chrome											
						diopside are also observed nea	urby (+10cm) (fragmented larger xenolith during											
						eruption process). Sepanate of	range (softer) garnets and cherry red garnets are											
						associated with green gneiss cl	asts.											
						Very fine garnet is quite abund	lant up to 1% (mostly orange).									$\square$		
						Matrix - 35-50% <2mm mater	rial can be broken down into; (a) 6-10% fine countr	ry				T						
						rock fragments equivalent to cl	last protion, (b) < 1% gneissic, (c) 3-5% pelletal as				1							
						finer equivalents, mostly kimbe	erlite lava coats on olivine, fine garnet and or micas	s			-							
						(most olivine altered to serpent	tine), rounded to subrounded (3%), to elgonated (29	%),										

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE		URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-02			GE 3/11
PROPERTY					DIST	UCT	CONTRACTOR						COLLA	RAZIM	лн			
COMMENC	ED		_		TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLETE	Ð				CLAD	M	LOGGED BY						ELEVA	TION				
OBJECTIVE	3					RDINATES	DDH COMMENTS						LENGT	н				
INTEI M 🗆	RVAL Ft 🗆	\$	*	LITHOT	YPE		DESCRIPTION			••••	SAMPLE					ASSA	YS	
FROM	то	KEL					ur, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	<b>s</b> Sul	Au ppb				
						(d) 25-30% fine grained amorph	fine grained amorphous kimberlite dark black (fresh) to olive green serpentinized), (e) 2% discrete mica, garnet selenite, other, trace iln				_							
						(altered & serpentinized), (e) 29	serpentinized), (e) 2% discrete mica, garnet selenite, other, trace ilm											
						(f) generally calcite level is quit	Illy calcite level is quite low, an acid reaction is primarily due to fine											
						to coarse fragments of limestone	fragments of limestone.											
						No flow fabrics were observed.	fragments of limestone. fabrics were observed. Refer to detailed sample descriptions for orien											
						fabrics observed (bedding/fining	upwards ash layers?).											
						M.Sgenerally 1-2, mantle xend	oliths and autoliths are 3-8 and darker gneisses	up to										
						28. Clast have very localized in	afluence, however, a given section of core with	ι										
						abundant lapilli will generally be	e up in the 2-3 range.											
						48.0-48.4 Strongly altered grey	texture could be till not included in bulk or				_							
						indicator sample.												
						48.5-48.8 Ground core gravel	remains.											
						48.8-50.3 Moderately altered b	lue spruce green to olive green talc serpentine			T	_							
						alteration.	-30.3 Moderately altered blue spruce green to olive green talc serpentine ration.											
Í						50.3-159.0 Very competent.	B-159.0 Very competent.											
						48.4-61.5 As described above.	4-61.5 As described above.											
						Specific features:	ic features:											
						49.0-49.25 2 autoliths - 3mm, 2	25 2 autoliths - 3mm, 3cm, 0.5% mica (fine).											

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE		URVEY DEPTH	DIP	AZIMUTI	н	HOLE	NO. MR	A-95-02		PA	GE 4/11
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIMU	TH			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	Ð				CLAI	м	LOGGED BY						ELEVA	TION				
OBJECTIVE	1				C0-0	RDINATES	DDH COMMENTS						LENGT	н				
									7			<u> </u>		n				
	RVAL Ft 🗆	x	5	LITHOT	VDE		DESCRIPTION			1	SAMPLE				1	ASSAN	7S	
FROM	TO	REC	RQD	LIIIOI		GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	¥ SUL	Au ppb				
						50.0-50.25 Trace mica, altere	d broken rock.											
						51.0-51.25 3 autoliths - 1-2cm	n, area of multiple pelletals, 2-3mm.											
						52.0-52.25 2-1cm garnet lapil	lli/pelletal elongate, 2 or 3 small leucogneiss.											
						53.0-53.25 1 large phlogophi	te (3mm), 1 leucogneiss 4 x 2cm, 1 olivine bearing	ng										
						autolith 3 x 2cm.	.25 1 large phlogophite (3mm), 1 leucogneiss 4 x 2cm, 1 olivine bearing 3 x 2cm.											
						54.0-54.25 1% mica, 1 small	autolith lapilli, chrome diopside at 54.3.											
						55.0-55.25 3mm angular ilme	nite, mantle xenolith (garnet), pelletal lapilli,						w.(Kg)	Dian	nonds			
						1 leucogneiss 1% mica musco	vite/phlogophite.			Caustic Dis	solution for	Diamonds		Micro	Macro			
						57.0-57.25 Large 20 x 50mm	globular kimberlite segregation with an angular	1.5mm	35101	48.4	61.5	13.1	44.5	0	1			
						ilmenite and many finer pelleta	al lapilli, 2-3mm pelletal lapilli in arcuate tracks,											
						small garnet gneiss, elongate 1	.5cm garnet with fine black rim.											
						56.0-56.25 Nothing noteworth	ny; 56.3 globular segregation surrounding limesto	one										
						clast.												
						58.0-58.25 Increased subangu	lar pelletal lapilli <2mm-3mm, 1 contains ilmeni	ite,										
						several small lilac to wine gt,	mantle clast subangular 1.5 x 6cm with 5-1mm li	lac										
						to wine garnets and 4 or 5 chr	ome diopside (hand specimen).											
						59.0-59.25 3-5% 2-5mm pelle	tal lapilli, 1% mica, minor garnet.											
						60.0-60.25 2 chrome diopside	(mm), 3-5 fine garnets, ilmenite, 3 gneiss garne	ts are										

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE	SUR DEI	VEY PTH	DIP	AZIMUTH	] ,	HOLE NO	). MRA-9	95-02		PAGE 5	/11
PROPERTY				<u> </u>	DIST	RICT	CONTRACTOR					77	COLLAR	AZIMUTI	H			
COMMENC	ED				TWP	/LAT.LONG.	DATE LOGGED						COLLAR	DIP				
COMPLETE	ED				CLA	IM	LOGGED BY						ELEVATI	ON				
OBJECTIVE	3				C0-0	RDINATES	DDH COMMENTS						LENGTH					_
						r		<u> </u>						r			<u></u>	
INTEI M 🗆	RVAL Ft □	5	×	ITT	OTVPE		DESCRIPTION			S	AMPLE				A	SSAYS		
FROM	то	REC	RQD	LIIM		GEOLOGY: (co	vour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						orange to rose associated in da	arker gneiss.		Indicator				wi. (kg)	GP	GP Red	G Org	DC	Ш
						49.0-60.25 0.25 sections above	ve are half of an indicator sample.		35051	48.4	75.0		23.6	>60	>118	>109	> 189	>130
						61.0-74.25 0.25 sections form	n the other half for sample 35051.							3	Micro	diam	onds	
						Note: 60.0-60.5 More abund	60.5 More abundant fine chrome diopside and ilmenite grains.											
						61.5-75.0 as described previou	as described previously.											
						Specific Features: 66.0-66.5, 6	as described previously. atures: 66.0-66.5, 67.4-67.8 Mantle xenoliths with violet garnet, chrome				olution for I	Diamonds		Micro	Масто			
						diopside & fine elongate violet	t garnet pelletal and discrete violet garnet & ilmenit	ie.	35102	61.5	75.0	13.5	52.0	4	1			
						70.1-70.5 Small mantle xenol	ith 6mm x 20mm with chrome diopside & violet ga	Imet										
						scattered violet garnet and ilm	enite.									·		
						72.85 Large megacryst or ora	ange? garnet mass with olivine (serpentine).											
						73.15 1 x 3cm mantle clast w	ith violet garnet.											
						74.3 Ilmenite.												
						72.4, 72.5, 72.9 Garnet (oran	ge) mass, elongate to spherical with thin serpentine											
						black rind (pelletal/macrocryst)	) 0.5-15mm.					_						
						MS 1-3.5 avg., but kimberlite	segregation globuals, mantle and lower crystals 4-6	5.										
						75.0-88.5 As before described	1		C	austic Disso	lution for I	Diamonds						
						Specific Features: 87.3-3x3cm	mantle nodual with chrome diopside in olivine alte	red	35103	75.0	88.5	13.5	56.6	0	0			
						to serpentine. Chrome diopsid	le at 78.45, 80.7, 81.4, 81.6, 87.3, ilmenite at 83.9	95.										
						Orange garnet scattered throug	hout.											

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TORONTO, ONTARIO, CANADA

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COMPANY PROPERTY COMMENC COMPLETI OBJECTIVE	CED ED E				NTS DISTI TWP/ CLAI CO-O	RICT LAT.LONG. M RDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS	SUD	IRVEY EPTH	DIP	AZIMUTH		HOLE NO COLLAR COLLAR ELEVATI	D. MRA AZIMUT DIP ON	-95-02 TH			<u> </u>
	RVAL Ft 🗆		5	LITHOT			DESCRIPTION			9	SAMPLE					ASSAY	'S	
FROM	то	REC	RQD	LITHOT	(PE	GEOLOGY: (cok	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH		Ľ.				
	_					Megacrysts of granular phlogor	phite 81.55, 84.95.											
						88.5-102 as described before.			Cau	tic Dissolut	ion for Diar	nonds	wt. (kg)	Micro	Macro			
						Points of Interest: 88.5-89,35 More abundant mantle	errer: \$1.5-\$9.33 More abundant mantic sensible 2-20mm with chrome diopside associated.			88.5	102	13.5	54.5	2	2			
						91.65 Ilmenite, 92.0 mantle xe	Ilmenite, 92.0 mantle xenolith with chrome diopside.			r				G₽	GP Red	G Ong	DC	IL.
	_					92.24 ilmenite, 92.85 violet ga	ilmenite, 92.85 violet garnet, 93.0-93.2 5 or so >5mm mantle xenoliths, one				102		24	>71	>56	> 10.4	>109	>130
						with chrome diopside, many pe	lletal, 94.8-95.05 2-7mm mantle pelletals one								1	micro	diam	end
						with chrome diopside.												
						93.5 Chrome diopside, 93.8 la	rge (30 x 40mm) nucleated kimberlite globual.											
						94.0- Chrome diopside, 94.55	15 x 20mm mantle xenolith with chrome diopside											
						96.78-97.0 Type section taken	for display, 1 large mantle xenolith (20 x 20mm)	with										
						2 large (5mm) violet garnets &	chrome diopside, plus orange garnet (elongate),											
						kimberlite autolith, etc.												
						97.5 55 x 20mm mantle xenoli	th with partial kimberlite coat.											
						98.5 Begin to get clay alteratio	<ul> <li>55 x 20mm manue xenolitin with partial kimperine coat.</li> <li>56 Begin to get clay alteration showing up, as well as serpentine reacting with</li> </ul>											
						H <sub>2</sub> O to breakup (exfoliate), som	O to breakup (exfoliate), some larger clasts take on a burnt look with a black											
						ring (serpentine) surrouding class	sts set in a bleached out looking ground mass.											
						100.5-100.85 Strongly bleached	d, pelletals show up as black spots possible crude											
						alignments (flow) at 45° to CA.	ints (flow) at 45° to CA.											
						100.85-102 Mostly serpentine,	weak clay, no alignments.											

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE	S	URVEY DEPTH	DIP	AZIMUT	Ŧ	HOLE	io. Mr	A- <del>95-0</del> 2		PA	GE 7/11
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIMI	JTH			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r DIP				
COMPLETE	Ð				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTIVE	3				CO-0	RDINATES	DDH COMMENTS						LENGT	н				
(														·				
	RVAL Ft	5	x	LITHOT	VDE		DESCRIPTION				SAMPLE					ASSA	YS	
FROM	то	REC	RQD	Limor		GEOLOGY: (col	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						102-115.5 As before colour m	nedium to dark grey to olive but (2) zones of fine	e										
						grained grey beige showing ab	sence of clasts (10%) and minor flow dynamics											
						(alignment) at (a) 105-105.2 gr	adational, 105.2-105.5 increased gradational clas	st		·								
						loss, 105.5 sharp contact over	1cm back to regular +/- clast supported breccia,	•										
						contact and flow alignment @	50-55° (crator facies?)		Caus	tic Dissolu	tion for Dia	monds	wt. (kg)	Micro	Масто			
						(b) 133.4-113.65 10-15% clas	sts (country rock) alignment 55° to CA.		35105	102	115.5	13.5	58.1	1	2			
						(a) + (b) could be altered more	e massive kimberlite matrix, its not dyking as suc	ich.										
						103.45 a weak alignment is ob-	served @ 55° to CA, as with a and b above, pat	tches										
						can be observed infrequently w	vith no apparent orientation and altered autoliths	appear										
						as rounded globuals of kimberl	lite of the same texture and colour. Alteration (c	ay)										
						described in the previous section	on becomes more frequent and after 109.2 a grey	yer										
						less dark olive colouration is o	bserved 70% of the time, strongly reactive to wa	ater										
						(it exfoliated rapidly as the clay	y swells). Mantle xenoliths and their pelletal											
						equivalents seem to be less abu	indant, however, significant individuals do occur	ie.										
						106.3 20 x 30mm with violet	garnet and abundant chrome diopside.											
						108.95 10 x 20mm with ilmen	ite.											
						Pelletal clasts are generally ver	y reduced in % in part due to alteration effect											
						(they are not as visible). Autol	liths appear to be more frequent 503cm size roun	nded										

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE		SUI DE	RVEY EPTH	DIP	AZIMUTI	H	HOLE	NO. MIR	A-95-02		PA	GE 8/11
PROPERTY	,				DIST	RICT	CONTRACTOR	- [						COLLA	R AZIMI	UTH			
COMMENC	ED		· · · · · · ·		TWP/	LAT.LONG.	DATE LOGGED	- [						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY							ELEVA	TION				
OBJECTIVI	E					RDINATES	DDH COMMENTS	[						LENGT	н				
	RVAL Ft 🗆	x	5	LITHOT	YPE		DESCRIPTION				s	AMPLE					ASSA	rs	
FROM	то	REC	RQÐ	LITIOT		GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)			SAMPLE NO.	FROM	то	LENGTH						
						to subrounded grey brown fine	material in several instances this same mate	erial can											
						be seen surrounding in part or	entirely Huronian and gneissic clasts of 1-3	cm size,											
						and in some cases mantle pelle	ts. At 102.8, a 40 x 60mm autolith is suban	gular wi	th						ļ				
						subtle contact edges consisting	of a fine grey beige mat with 30% .25-2mm	n size											
						mantle pellets & at least 2 viol	et garnets one surrounded by a 1mm coat of	radial											
						phlogophite (over growth). Or	ange garnet macrocrysts (are observed infre	quently)											
						with thin black coats. And 3 c	or 4 chrome diopsides are seen as <1mm si	ze pellet	s										
						and as individual grains. In sor	ne cases, after 109.2, 5% of fine clasts >20	cm may											
						appear to be more strongly into	ernally altered ie. alteration rings and take o	na											
						'burnt' look with a darker matr	ix ring (less clay altered).												
						M.S. values generally higher 3	.4-6.6 with avg. 5.2 and some spikes at 7.0	and 10											
						(autoliths generally higher).													
						Note: Possible more abundant	kimberlite matrix more easily altered and al	so would	d										
						be reflected by higher M.S. rea	ndings. (??)												
						115.5-129.0 Colouration even	more bleached out than previous, core has	an almos	st										
						burnt ashen look, the breccia c	ountry rock fragments appear often surround	ied by a		Caust	ic Dissoluti	on for Dian	nonds	wt. (kg)	Micro	Maco			
						darker grey halo of less altered	kimberlite matrix. Suspect kimberlite mat	гiх		35106	115.5	129.0	13.5	54.4	2	2			
						altered to a talc/clay mineral gi	ving beige ash with blue/green hue, less ser	pentine.											

#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY	,				NTS	CORE SIZE	SU	JRVEY EPTH	DIP	AZIMUT	н	HOLE	NO. MRA	<b>-95-02</b>		PAC	)E 9/11
PROPERTY	1				DISTRICT	CONTRACTOR						COLLA	R AZIMU	тн			
COMMEN	CED				TWP/LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAIM	LOGGED BY						ELEVA	TION				
OBJECTIV	E				CO-ORDINATES	DDH COMMENTS						LENGT	н				
(		<u> </u>	T	T		····		1					<u>1</u>	<del></del>			
INTE M□	RVAL Ft 🗆	x	5	LITHOTY	PE	DESCRIPTION			5	SAMPLE				ļ	<b>ASSA</b> Y	(S	
FROM	то	REC	RQD		GEOLOGY	$\mathbf{X}$ : (colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH		:				
					Periodic zones that are fi	ner grained matrix rich demonstrating grain orientation	ie.			1			ir	† – –			
					at 119.5 @ 60°, 123.15-	123.35, 125.55-125.65 50-52° to CA. Zone of banding	;										
					(flow) 125.35-125.55 @	45-50° to CA.						1					[
		1			126.0-126.2 Bleached w	hite section of matrix very strong acid reaction suggest											[
					high calcite content. Up	per contact 60°, lower 52°.		Indicator				wi. (kg)	GP Par	GP Red	GON	DC	11
					Autoliths are a lot less fr	equent, no mantle xenoliths were identified.		35053	102.0	129.0		26.3	>78	>70	>79	> 80	> 130
					Garnet gneiss and leucog	neiss are still present as usual % but in some cases are											
					strongly altered (zoned).	Garnets are abundant from small pelletals to .5mm.											
					Chrome diopside exist as	8 +/- discrete grains.											
					M.S. averages 3.5 with 3	3.0-4.5 range, short sections <2.											
					Note: less mica seen mos	stly fine dust.											
					129.0-142.5 More intens	se clay alteration (kaolin), as previously described a burn	nt										
					ashen colouration with da	ark 5-10mm haloes around primarily gneissic clasts and	in		Caustic Diss	olution for	Diamonds		Micro	Macro			
					a minor way Huronian cl	asts. The halos are essentially preserved serpentinized		35107	129.0	142.5	13.5	63.5	0	0			
					kimberlite. Both garnet g	neiss & leucogneiss have not changed in content, howev	/er,										L
					they are more severely a	tered and not easily recognizable. Only 1 mantle xenolit	th										1
					was observed at 142.0. V	Very few pelletal clasts are observed corresponding with	the										
					lack of mantle xenoliths?	This part of the kimberlite pipe effectively destroyed											

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TORONTO, ONTARIO, CANADA

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COMPANY	NTS	CORE SIZE	SURVEY DEPTH	DIP	AZIMUTH	HOLE NO. MRA-95-02 PAGE 10/11
PROPERTY	DISTRICT	CONTRACTOR				COLLAR AZIMUTH
COMMENCED	TWP/LAT.LONG.	DATE LOGGED				COLLAR DIP
COMPLETED	CLAIM	LOGGED BY				ELEVATION
OBJECTIVE	CO-ORDINATES	DDH COMMENTS				LENGTH
		······································	<u> </u>			

INTE M 🗆	RVAL Ft 🗆	×	x	LITHOTYPE	DESCRIPTION		S	AMPLE					ASSA	YS	
FROM	то	REC	RQD	Liniorne	GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	+ .dt	,				
					(digested) all mantle fragments?.										
					Note: After 137.0 abundant fine grained pelletal to ragged <1mm lapilli are										
					observed as fine black dots throughout and part of matrix possibly kaolinization										
					isn't as intense and thus better preservation exist than before 137.0? (up to 5%										
					of the core as matrix).										
					Indicator minerals such as chrome diopside and violet garnets are observed up to										
					137.4 and then no longer seen ('the remains of mantle xenoliths?). Orange										
					garnets are consistantly observed but are all under 4mm & seem to relate to the										
					gneissic clasts.										
					137.05-137.15 A fine grained clast poor section grading up hole in contacts and										
					(bedding?) at 60° and 65° to CA respectfully. Mica as fine grains only and greater										
					decrease in %.										
					M.S. readings are generally lower, averaging 2.1, ranging 1.0-2.4. Some clast										
					specific spikes (ie. garnet gneiss 6-10).										
					142.5-159.0 As with previous but less intense kaolinization, as with the previous										
					after 137.0 more serpentine rich matrix and abundant, 5-10%, fine < 1mm lapilli	Causti	c Dissolutio	n for Diar	nonds	wi. (kg)	Micro	Maco			
					glass shards) black ragged to spherical.	35108	142.5	159.0	16.5	76.2	0	1			
					Still a burnt look to the clasts but less intense and matrix is a darker grey with some										

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159.0

159.0

E.O.H.

END OF HOLE.

### W.A. HUBACHECK CONSULTANTS LTD.

COMPANY	Y				NTS		CORE SIZE	-	SURVEY DEPTH	DIP	AZIMUTH		HOLE	NO. MRA	- <del>95-0</del> 2		PAGE	11/11
PROPERTY	Y				DISTR	JCT	CONTRACTOR						COLLA	R AZIMU	гн			
COMMEN	CED				TWP/L	AT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	TED				CLAIM	1	LOGGED BY						ELEVA	TION				
OBJECTIV	Æ				CO-OR	RDINATES	DDH COMMENTS						LENGT	H				
	ERVAL			LITHOTY	DE	······································	DESCRIPTION			5	SAMPLE					ASSAY	S	
FROM	то	REC	RQD	LIMOTI	r L	GEOLOGY:	(colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						dark olive. After 143.8 ch +/- every 1-2m along the c	rome diopside and violet (lilac) garnets seen perio core. Chrome diopside as single grains (shatted cr	dically ystal)										
						LOG INATES DDH DES GEOLOGY: (colour, grai ark olive. After 143.8 chrome diopsi -/- every 1-2m along the core. Chrom et in matrix and garnets (violet) surro- arnets and infrequent clear to blacken pelletal) spherical to elongate subroun koth garnet (orange) gneiss and leucog sutoliths and nucleated kimberlite glob reservation, less altered easier to see) ountry rocks can be observed. Phlog -5mm size crystals and bars. 57.65-158.05 Large limestone boulde	iolet) surrounded by .25mm black spherical rind. to blackened garnet seen as free floating and wit	Orange h a rind	Indicator				we. (kg)	GP Pur	GP Red	G.Org	DC	п
						(pelletal) spherical to elonga	ate subrounded to angular, 2 cranberry garnets at	154.5.	35054	129	159		25.0	> 80	>70	> 80	> 100	> 80
						Both garnet (orange) gneiss	and leucogneiss are present and less altered.			<u> </u>	I		ļ				ļ'	
	ļ					Autoliths and nucleated kim	berlite globuals are more prevalent (due to better						<u> </u>					
						preservation, less altered ea	sier to see) also kimberlite rinds or partial coats of	n										
						country rocks can be observ	ved. Phlogophite is more abundant 2-3% with tra	ce,										
						1-5mm size crystals and ba	15.											
						157.65-158.05 Large limes	tone boulder (angular).											
						M.S. values are generally le	evel at average 1.8 with a range of 0.46-3.0 and a	garnet										
						gneiss clast of 5.1.												
																	7	

Core Storage Cobalt Ont. Agnico Eagle Property - Block House

TORONTO, ONTARIO, CANADA

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JIAI	MON		DR	<b>ULL</b>	LU	lG l						W.A	. HUE	ACH	ECK	CON	ISUL	<b>JTAN</b>	TS LT
										See S	urvey She	;tt			1	FORON	TO, O	NTARIO	O, CANA
OMPANY	·	Sudbury	Contac	t Mines	NTS	31 M/12, SW	CORE SIZE	NQ	SU Di	rvey Epth	DIP	AZIMUTI	H	HOLE	NO. MR	A-95-03		ра	GE 1/53
ROPERTY	e			216	DIST	RICT Cobalt	CONTRACTOR	Benoit Drilling						COLLA	R AZIMI	лн			203°
OMMEN	CÉD		Nov	. 21/95	турд	AT.LONG S-1/2 Lot I/Con.III	DATE LOGGERmm. Det.	18/19 95 Feb 25-Mar 25/96						COLLA	r dip				-55
OMPLET	ED		Nov	. 26/95	CLAI	M 1202724	LOGGED BY	Raymond J. Knowles						ELEVA	TION				300m
BJECTIV	E Test P	ipe Dim	ension/C	Geology	CO-O	RD. Grid 3, 3+40W/0+95N	DDH COMMENTS	Detailed Log	U		]			LENGT	н				375m
	RVAL Ft 🗆	5	*	LITHOT	YPE		DESCRIPTION				1	SAMPLE					ASSA	YS	
FROM	то	REC	RQD	2		GEOLOGY: (	colour, grain size, texture, m	inerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
0	23	ļ		OB		Overburden sand, fine graine	zd, till.	·····						<b> </b>					
23	125.72			10B		Huronian Firstbrook Membe	siltstone.												
			_			Massive, finely laminated, d	irk grey, fine grained, be	dding/lamination @ 63-64	l⁰ to										
						fractures with calcite and tra	ce pyrite @ 5-10° to CA.	Medium angle fractures						L					
				<u> </u>		@ 36° to CA to 60° to CA (1	iot regular).								<u> </u>				
						90.2-93.0 Trace <1% calci	te coated fractures with tr	race pyrite, almost breccia	ated										
						(minor) angles 56° and 33°	o CA, bedding/lamination	n @ 63* to CA.											
						97.0 2cm breccia zone with	minor calcite filling open	late fractures.											
						After 98.0 bedding laminatio	n @ 66° to CA.												
					_	105.0 2mm wide calcite and	pyrite filled fractures @	40° to CA and before that	at										
						@ 30° to CA. Also a clean	fracture at 20° to CA, be	adding @ 66° to CA.											
						Overall competent, some mir	or blocky sections to 114	1.5.											
						114.5-125.7 Core gets block	with fracture fills of ca	lcite and plated pyrite											

.25 mm or less, also shows tension gashes 30° to CA with calcite and pyrite. .25mm thick microfill of calcite, before 115.4, 116.1 and 116.3 possible but

120.5-124.5 Open vuggy .25mm gashes 3% with trace calcite and pyrite, also 1% pyrite along fracture planes. This section is very blocky & badly broken up (60-70%)

drilling removed, @ 30\* to CA.

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TORONTO, ONTARIO, CANADA

COMPANY	:OMPANY 'ROPERTY :OMMENCED				NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	ห	HOLE	10. MR/	<b>\-95-03</b>		PA	GE 2/53
PROPERTY	Y				DISTRICT		CONTRACTOR						COLLA	r azimu	тн			
COMMEN	CED				TWP/LAT.LONG		DATE LOGGED	· [					COLLA	R DIP				
COMPLET	TED				CLAIM		LOGGED BY	Γ					ELEVA	TION				
OBJECTIV	Ē				CO-ORDINATES		DDH COMMENTS					].	LENGT	н				
	RVAL Ft 🗆	x	x	LITHOT		<del></del>	DESCRIPTION				SAMPLE	******	<u></u>			ASSAY	S	
FROM	то	REC	RQD			GEOLOGY: (	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	01	LENGTH	sul	Au ppb				
					124.5 1	Ocm of calcite (mm	thick) infilling of parting fractures,											
					125.2-12	5.32 Blackened con	re with similar gash partings to above filled with	th 1-2mm	<u>n</u>									
					of kimbe	rlite material (fine b	preccia).											
			·		125.68 2	mm wide lamination	n parting filled with kimberlite fine breccia @ (	56° CA.										
					125.72	Contact wiht kimber	rlite @ 45° to CA. Contact face of siltstone is	fluted										
					or scoure	d with trough and t	ridge, polished and dusted with talc, no heat ef	fect										
					(possible	weak blackening),	dark olive greying from 125.2.			_								
125.72	354.2			Kml	Heterolit	hic Volcanoclastic K	Cimberlite Breccia,	_										
					North wa	11 125.72, south wa	11 354.2.											
					Medium	grey olive-green to	dark grey olive-green with white to grey angul	ar										
					breccia f	ragments. Matrix s	upported breccia.											
					Matrix -	fine grained colour	base of 30% serpentine, 5-10% talc, 5-10% pe	lictal										
					mantle fr	agments and indicat	or (accessory) minerals, 10% country rock print	marily										
					comprise	d of limestone, Hur	onian siltstone, gneissic and mantle fragments,											
					3-5% fin	e autoliths. In total,	, 50-55% matrix.											
					Some are	as of clay alteration	where clay will replace serpentine and a light	er										
					grey gree	en colour results.												
					Some ast	like areas where c	oarse clasts give way to a <2-5mm maximum	size crud	te									

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COMPANY					NTS		CORE SIZE	SI I	URVEY DEPTH	DIP	AZIMUT	н	HOLE	10. MR	A-95-03		PAG	GE 3/53
PROPERTY					DIST	RICT	CONTRACTOR						COLLAI	R AZIMU	лн			
COMMENC	ED				TWP	LAT.LONG.	DATE LOGGED						COLLA	R DIP				<u> </u>
COMPLETE	ED				CLAI	M	LOGGED BY						ELEVAT	NON				
OBJECTIVE	3				<u> </u>	RDINATES	DDH COMMENTS						LENGT	ł				
INTE M 🗆	RVAL Ft □	5	5	LITHOT	YPE		DESCRIPTION				SAMPLE					ASSAY	′S	
FROM	то	REC	RQD			GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	s SUL	Az ppt				
						fining (crater facies?).	· · · · · · · · · · · · · · · · · · ·											
						Clasts - total 45-50% comprise	ed of up to 35% limestone ranging in size from					<u> </u>						
						2-100mm on average, 20% Hu	uronian siltstone grey to grey-green; both are an	gular										
						and only some show alteration	and/or kimberlite coatings or as nucleated auto	liths.										
						Up to 3% garnet gneiss and 1-	-3% gneiss to leucogneiss; both are found angul	ar to										
						sub-rounded and also rarely an	re found as nucleated autoliths with kimberlite co	oats.										
						3-7% mantle xenoliths, <2mn	n - 60mm, sub-rounded in shape, medium to ligh	ht green										
						white, <2-5mm, as spherical	to elongated pelletal with thin black serpentine											
						coats, the larger xenoliths tend	to be green outer alteration and possibly a blac	: <u>k</u>	<u> </u>									
						core and often contain indicate	or minerals of chrome diopside & pyrope (violet	to	l									
						purple).		_	<u> </u>									
						Autoliths and nucleated autolit	hs vary in size from 2mm up to 40mm average.											
						354.2 Lower contact @ 25* t	o CA.											
						Contact is sharp with minor ca	licite stringers to 354.4 that run parallel to the	_										
						contact.												
						352.8-354.2 Matrix rich 60-7	0% and is jet black. The same colour and textu	re as										
						some of the autoliths/nucleated	autoliths and is probably both presented first											
						phase as well as non-altered.	Seems to be abundant olivine.											

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COMPANY					NTS		CORE SIZE	SU D	JRVEY DEPTH	DIP	AZIMUTI	н	HOLE	10. MR	<b>A-95-03</b>		PA	GE 4/53
PROPERTY					DISTR	UCT	CONTRACTOR						COLLA	R AZIMU	тн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLETE	D				CLAD	M	LOGGED BY						ELEVA	TION				
OBJECTIVE					CO-01	RDINATES	DDH COMMENTS						LENGT	H				
INTER M 🗆	RVAL Ft 🗆	S REC	s RQD	LITHOT	YPE	GEOLOGY: (color	DESCRIPTION ur, grain size, texture, minerals, alteration, etc)		SAMPLE		SAMPLE		x			ASSAY	's	
				 					H0.				SUL.					
					[	125.72-132.5 (+/-) Dark olive	grey with brown rust tinge.											
				·		40% matrix - fine grained, 22%	serpentine, 10% fine country rock, 5% pelletal			┼───								
						rounded and elongate serpentine	after olivine, 2% fine muscovite, 1% indicator											
						minerals fine garnet, chrome dio	pside.		<b> </b>			<u> </u>						
						60% clasts - 25% limestone (2m	m-30mm), mostly angular, minor zoning, 20%					<u> </u>						
						Huronain siltstone, green, grey a	and black, 2mm-60mm, angular, trace zoned, 5%		┣									
						white gneiss and garnet gneiss (2	2mm-60mm) rounded, some with coats of massive	•				·						
					{	fine grained kimberlite (autolith	material), 5% autoliths most 5mm-20mm some of											
						which are nucleated, all rounded	1, 4% pelletal to rounded and elongate mantle			<u> </u>								
				·		fragments, and olivine crystals, 2	2mm up to 10mm serpentine after olivine, all wih		ļ	<u> </u>								<b></b>
						thin black (serpentine) rims, 1%	indicator minerals free floating orange garnets, a	nd	Ĺ									
						chrome diopside, pelletal .5mm	serpentine rims around violet garnets											
						Features of interest:				<u> </u>								
						126.05 1mm red garnet pelletal,	, 126.85 orange garnet pelletal, 127.5 possible											
						mantle clast, 127.6 red garnet gr	neiss, elongate orange garnet pelletal, 128 gneiss,				1							
						128.1 chrome diopside, and viole	et garnet, 128.5 garnet pelletal, gneiss,											
						128.85 chrome diopside, 129.05,	, 129.4, and 129.45 orange garnets free and pelle	tal,										
						129.7 chrome diopside, 130.0 au	stolith and large olivine, 130.5 60cm garnet gneiss	s,										
						and autolith.												

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE	1	URVEY DEPTH	DIP	AZIMUTI	н	HOLE	10. MR	A-95-03		PA	GE 5/53
PROPERTY					DISTR	RICT	CONTRACTOR						COLLA	R AZIMI	лн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	Ð	_	_		CLAD	M	LOGGED BY						ELEVA'	TION				
OBJECTIVE	1					RDINATES	DDH COMMENTS						LENGT	H				
INTER M 🗆	RVAL Ft 🗆	x	x	LITHOTY	YPE		DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD			GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)	1	SAMPLE NO.	FROM	то	LENGTH	s SUL	Au ppb				
						Overall M.S. average 1,6 with	garnet gneiss spike of 3.4.											
						126.4-128.5 Elevated M.S. 2.	0-2.65, averaging 2.5.		l									
						132.5-136.05 Clay altered, me	edium grey beige colouration (ash look), faint				_							
						alignment detectible @ 48-54*	ю CA.											
						Upper contact area broken, low	ver is sharp over 10mm.											
						Matrix is 50-55% but as descri	bed previously as per content except substitute	talc/										
						clay for serpentine at 30% and	country rock at 20%, peiletals at 5%.											
						Clasts 45-50% as described pre	eviously except Huronian contents appears to b	e										
						reduced so limestone is at 25%	, Huronian at 15%, others at 5% includes auto	liths and										
					1	nucleated autoliths and 2-10mm	pelletals/serpentine after olivine crystals.											
						Some serpentine rich haloes an	ound larger clasts.											
						Featuers of Interest:												
						133.35 Two nucleated autoliths	······································			1								
						132.95 Possible mantle xenoli	th, definite mantle xenolith, both with serpentin	e halo.										
						135.05 Ilmenite, 135.1 autolith	n, 135.85 chrome diopside pelletal.											
						M.S. ranges 0.6-1.5, average 1	.1.											
						136.05-143,4 More or less as	described 125.72-132.5.											
						Colour is a medium olive grey.	Pelletals are easier to see and are about 10%	vs.										

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COMPANY	<u>د</u>				NTS		CORE SIZE	ST.	JRVEY EPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PA	GE 6/53
PROPERTY	r				DISTR	TICT	CONTRACTOR						COLLA	RAZIM	лн			
COMMEN	CED				TWP/I	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLET	ED				CLAD	M	LOGGED BY						ELEVA	TION				
OBJECTTV	E				CO-01	RDINATES	DDH COMMENTS						LENGT	н				
	<u></u>													<u></u>				
	RVAL Ft 🗋	x	5	LITHOT	YPE		DESCRIPTION				SAMPLE					ASSA	/S	
FROM	то	REC	RQD			GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	SUL.	A. ppb				
						previous 5% estimate, most pe	letals are rounded off serpentinized olivine											
						ranging in size from <.25mm	up to 15mm.											
						142.05-142.4 70% clasts, broi	ken up limestone, showing alignment @ 38* to CA	۱.										
						Features of Interest:					ľ.		}					
						136.23 Phlogophite macrocrys	t, 136.55 & 136.7 two nucleated autoliths,											
					1	137.2 chrome diopside, 138.75	pelletal orange garnet, 138.9 chrome diopside,											
						139.55 pelletal garnet, 139.6 a	utolith, 139.83 autolith, 139.85 elongate garnet					1						
			i			pelletal, 140.15 nucleated autoi	ith, 140.55 nucleated autolith with olivine pelletal											
						as nucleous, 140.6 autolith, 14	0.9 garnet pelletal, 141.5 garnet pelletal, 142.8 2.5	5mm										
						free orange garnet, also nuclea	ted autolith, 143.0 nucleated autolith, 143.3 orange	e										
						garnet macrocryst.												
						MS variable 0.5 - 2.2 average	1.5, some autoliths 3.6.											
						143.40-143.55 section of fine g	rained material matrix (all <2mm) with a 30° upp	per										
						sharp contact and a 43° cloudy	or gradational lower contact.											
						M.S. readings in this section as	e 0, possibly this is an ash horizon, no indicators											
						or autoliths seen.												
						143.55-165.05 (24.45m) as de	scribed before ash layer, colour, texture, compositi	tion,										
						clast content etc., all are simila	r. M.S. readings average range 1.3-2.4, average											
						is 1.8 Eluctuations don't seem	to have a visible cause but are possibly due to sli	aht		í –	1					1 ]		

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COMPANY PROPERTY COMMENC COMPLETI OBJECTIVI	- EDE		······································		NTS DISTI TWP/ CLAI	RICT LAT.LONG. M RDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		URVEY DEPTH	DIP	AZIMUT	H	HOLE I COLLA COLLA ELEVA LENGT	NO. MR R AZIMI R DIP TION H	<b>А-95-03</b> ЛТН			GE 7/53
	RVAL Ft 🗆	5	x	LITHOT	YPE		DESCRIPTION	· · · · · · · ·			SAMPLE					ASSA	rs	
FROM	то	REC	RQD			GEOLOGY: (c	olour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						changes in the abundance of a altered), certainly autoliths ha gneissic fragments also attract Mantle xenoliths, serpentine a M.S. values. There are at lea significant autoliths, nucleated fallback ejecta. Locations will Scrpentine after olivine crysta a thin black rim) occur on the Fine <2mm unaltered olivine unit more or less progresses g a very sharp lower contact @	autoliths and/or unaltered kimberlite matrix (less ve increased M.S. and attract a magnet. Some a magnet and have elevated M.S. readings. After olivine crystals and pelletals have no significant ast 9 significant mantle xenoliths as well as many autoliths and kimberlite coated clasts as spheroida 1 be described below. 1s, pelletals to micro-xenoliths, <2mm-4mm (all w order of 10-15%. crystals occur at about 5% throughout this unit. To radationally into the above ash layer. It also has 30° to CA with a fining upwards ash layer.	nt vith This					SUL					
						Significant Peatures:	4 5 30mm mantle xenolith 145.23 15mm earnet e	neiss										
						60% red garnets, 145.32 phlo olivine crystals, 146.1 3mm p spherical rind of kimberlite, 1 mantle xenolith as a core to a	gophite 2mm crystal, 145.55 autolith 3cm with 309 hlogophite, 146.6 2.5cm mantle? xenolith with a 3- 46.65 nucleated autolith (Huronian) and an elongate n ellipsoidal nucleated autolith,	% fine -5mm										

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COMPANY PROPERTY COMMENC	CED ED				NTS DIST TWP/ CLAI	RICT LAT.LONG. M	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY		IRVEY EPTH	DIP	AZIMUTI	I .	HOLE N COLLAI COLLAI ELEVAT	R AZIMU R AZIMU R DIP	A-95-03 TH		PA	GE 8/53
OBJECTIV	8					RDINATES	DDH COMMENTS					<u> </u>	LENGI					
INTE M 🗆	RVAL Ft 🗆	x	7	LITHOT	YPE		DESCRIPTION			S	SAMPLE					ASSA	(S	
FROM	то	REC	RQD			GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	s sul	An ppb				
						147.1 3-10mm size spheroidal	mantle xenoliths serpentine after olivine,											
						147.15 1mm red garnet kernal	pelletal, 147.55 orange garnet pelletal,											
						147.56 violet garnet (free float	ng),											
						147.6 3cm x 1.5cm elipsoidal 1	mantle xenolith, 3mm serpentine altered rind, 4mm	1										
						black core, red/violet garnet an	d chrome diopside,											
						147.61 and 147.7 Garnet pelle	tals, 148.1, garnet pelletal, 148.35 autolith,											
						148.5 Nucleated autolith, 148.	6 autolith, 149.3 autolith,											
						149.73 autolith, 149.75 2mm p	hlogophite, 149.8 garnet pelletal,								•			
						150.0-150.25 4 garnet pelletais	, 2 phlogophite crystals,											
						150.65 autolith, 151.0 autolith,	151.35 rounded gneiss 3cm,											
						151.55 Possible mantle xenolith	enveloped in a kimberlite rind,											
						151.67 and 151.7 2 separate H	uronian clasts enveloped in kimberlitic rinds,											
						152.3 2cm mantle xenolith, 153	3.2 garnet elongate pelletal,											
						153.22 garnet megacryst, 153.1	garnet megacryst,										I	
						153.3 nucleated autolith, 153.5	et megacryst, 153.1 garnet megacryst, ated autolith, 153.5 phlogophite, 154.2 nucleated autolith, 2x4cm,											
						154.6 violet garnet pelletal, 154	d autolith, 153.5 phlogophite, 154.2 nucleated autolith, 2x4cm, smet pelletal, 154.7 orange garnet,											
						155.2 Fragmental mantle xenoli	th into 3 pieces bound in fine kimberlite, one with											

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COMPANY PROPERTY COMMENC COMPLET OBJECTIVI	r CED ED E				NTS DISTRICT TWP/LAT.LONG. CLAIM CO-ORDINATES		CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		JRVEY DEPTH	DIP	AZIMUTI		HOLE N COLLAI COLLAI ELEVAT	NO. MIR. R AZIMI R DIP TION	A-95-03		PA(	GE 9/53
INTE M 🗆	RVAL Ft 🗆	×	×		DE		DESCRIPTION			5	SAMPLE				1	ASSAN	(S	
FROM	то	REC	RQD	LIIHOIT	r E	GEOLOGY: («	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	% SUL	Ana pepto				
					violet garr	net and chrome dio	pside,											
					155.65 G	arnet gneiss with 2	0% red/orange garnet, 155.85 small mantle xenol	ith,									<u> </u>	
					157.05 A	utolith, 157.75 vio	let garnet, 158.3 kimberlite segregation globuals,			<b> </b>				<u> </u>				
					159.4 Ga	met pelletal and m	cleated autolith, 159.5 50mm nucleated autolith.			ļ		<u> </u>					<b> </b>	
					160.0-160	.15 90mm angular	clast (mantle or strange Huronian) encased in a d	5-10mm										
					kimberlite	rind,											l	
					160.45 G	neiss, 160.6 elonga	ate orange garnet pelletal,											
					160.7 Au	tolith with an elong	gate mantle xenolith, garnet pelletal,											
					161.3 Ora	nge garnet macroc	ryst, autolith, 161.5 garnet fragment,											
					162.07 Ga	rnet pelletal, 162.4	nucleated autolith, 162.65 2-garnet pelletals,										I	
					162.7 Viol	iet garnet pelletal,	162.8 elongate orange garnet pelletal,											
					163.25 Nu	cleated autolith, 10	53.35 nucleated autolith, 4mm garnet,											
					163.9 Gne	iss fargment, 163.	95 3 garnet orange fragment,											
					164.65 Nu	cleated autolith, 10	54.5 4cm autolith, 164.65 gneiss.											
					<u>165.05-16</u>	5.2 Ash layer finin	g upwards to sharp upper contact @ 30° to CA.											
					Grey gree	n colouration 60-70	% matrix and/or fine clasts, definite bedding/band	ling										
					oriented g	rains and particles.												

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COMPANY PROPERTY COMMENC COMPLET OBJECTIV	r CED ED E				NTS DIST TWP/ CLAI	RICT /LAT.LONG. M IRDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		JRVEY DEPTH	DIP	AZIMUTI	I	HOLE N COLLAN COLLAN ELEVAT	no. Mir R Azimu R Dip Tion	A-95-03 /TH			E 10/53
INTE							DESCRIPTION				SAMPLE					ASSA	rs	
FROM	11 10	RBC	RQD	LITHOT	YPE	GEOLOGY: (cok	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO,	FROM	то	LENGTH	% SUL	As: ppb				
						165,2-165.55 Random kimberl	lite breccia as before ash layer,					ĺ						
						165.65 1.5cm band of 70% m	atrix with $<5mm$ size clasts, oriented @ 30° to C.	A							<sup> </sup>			
						(thin ash bed?)	, , ,								ļ!			
						<u>165.65-190.4</u> As before the as	h horizons, except less fine, <2-3mm, olivine			<u> </u>	ļ							
						crystals, more abundant autolith	as and nucleated autoliths as well as more visibly										<u> </u>	
						abundant gneiss/garnet gneiss c	lasts and fragments. Autolithic material and gneis:	s									L	
						fragments show increase M.S.	readings of 3 up to 9, whereas background (norma	ŋ										
						values range from 1.4-2.6 aver	age with 2 as an overall M.S. average.											
						At least 12 significant mantle x	enoliths are observed most with violet garnets											
						and/or chrome diopside.												
						At least 3 - <2mm ilmenite gra	ains were seen.											
						Four free floating grains of chr	ome diopside were observed.											
						Features of Interest:												
						165.8 2mm chrome diopside, 1	65.85 6mm macrocyrst of garnet, 166.4 mantle											
						xenolith (black core), 167.2 ora	inge garnet, 167.6 80 x 40mm gneiss, 168.3 chron	ne										
						diopside grain and nucleated au	tolith, 168.4 ellipsoidal garnet gneiss (30x10mm),											
						169.5 2 gneiss clasts, 170.05 at	utolith, 170.1 small mantle fragment,											

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COMPANY PROPERTY COMMENC	CED ED				TS ISTRICT WP/LAT.LONG. LAIM	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY		JRVEY JEPTH	DIP	AZIMUT		HOLE I COLLA COLLA ELEVA	no. Mir R Azimt R Dip FION	A-95-03 /TH			E 11/53
OBJECTIV	E			<u>c</u>	O-ORDINATES	DDH COMMENTS	L					LENGT	H				
	RVAL Ft 🗆	x	5	LITHOTYP	3	DESCRIPTION				SAMPLE					ASSA!	rs	
FROM	то	REC	RQD		GEOLOGY:	(colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
					170.15 phlogophite, macro	cryst, 170.45 elipsoidal garnet macrocryst, 170.7 ilm mall autolith, 170.9 and 170.98 free orange garnets.	enite										
					171.33 nucleated autolith v	vith gneiss, 171.33, 171.38 and 171.42 garnet pelletal	ls.			1							
					171.48 garent macrocryst,	171.55 small autolith and garnet pelletal, 171.7 auto	olith,										
					171.85 gneiss, 172.23 gne	iss fragment, 172.28 phlogophite macrocryst,				1							
					172.37 gneiss, 172.39 auto	blith, 172.56 gneiss, 172.7 3-garnets, 1 of which is a											
					macrocryst with black rind	, 172.95 10mm mantle xenolith, 173.3 possible mantl	le										
					xenolith, 173.66 ilmenite,	174.05 small mantle, 174.1 possible mantle, 174.13 g	garnet,										
					174.2 autolith, 174.25 auto	lith, 174.27 garnet, 174.44 possible mantle,											
					174.45 autolith, 174.52 gas	met pelletal, 174.63 nucleated autolith, 174.8 30mm											
					autolith with fine garnet pe	lletal on side, 174.92 3x6mm gneiss with kimberlite of	coat,										
					175.02 garnet pelletal, 175	.2 90mm dark gneiss (diabase?), 175.3 garnet gneiss,											
					175.35 garnet, 175.7 gneis	s, 175.75 autolith, 175.82 autolith, 176.0 nucleated										I	
					autolith, 176.05 garnet pell	etal, and garnet gneiss, 176.1 autolith, 176.13 autolith	h,			<u> </u>							
					176.57 chrome diopside, 1	76.73 elongate garnet pelletal, 176.85 small gneiss wi	ith										
					kimberlite rind, 177.13, 17	7.28, 177.4 all garnet pelletals, 177.47 gneiss,				1							

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COMPANY	? {				NTS DIST	RICT	CORE SIZE		JRVEY DEPTH	DIP	AZIMUT	H	HOLE	NO. MR.	<b>А-95-03</b> ЛТН		PAG	E 12/53
COMMEN	CED				TWP	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA'	NON	<u> </u>			
OBJECTIV	B				<u> </u>	RDINATES	DDH COMMENTS						LENGT	H				<u> </u>
INTE M 🛛	RVAL Ft 🗆	S REC	5 800	LITHOT	YPE	GEOLOGY. (m	DESCRIPTION				SAMPLE	**************************************				ASSAN	'S	
FROM	то					GEOLOGI: (@	iour, grain size, iexaire, ininerais, alteration, eu)		SAMPLE NO.	FROM	то	LENGTH	SUL	Au ppb				
				1		177.55-177.8 >8 small gnciss	ic fragments, 2 large gneissic fragments all angula	ur.	<u> </u>									
						1 garnet gneiss, 178.02 fine ga	arnet, 178.03 small autolith, 178.04 nucleated auto	olith,										
_						178.35 4mm garnet pelletal, 11	78.5 gneiss, 178.7 autolith, 178.85 60mm gneiss,						1					
						178.93 garnet, 179.1-179.6 lig	ht grey green (clay alteration), 179.19-179.28 lime	estone										
						clast, 179.8 gneiss, 179.82 aut	olith, 179.9 small gneiss, 180.05 possible mantle											
						xenolith with kimberlite, 180.1	5 autolith, fine ilmenite nearby, 180.2 garnet gneis	iss,										
						180.2 15 x 5mm mantle xenoli	ith, 2 violet garnets, 180.3 2 red garnets in a black	k										
						rind, 180.33 autolith, 180.56 s	mall mantle xenolith with black core,											
						181.0 phlogophite, 181.06 sma	il gneiss and small < 1mm ilmenite, 181.4 4mm n	nantie										
						xenolith with chrome diopside,	181.55 small gneiss, 181.65 50mm garnet gneiss,											
						181.7 garnet megacryst 20 x 2	5mm, 181.85 2 small autoliths, 182.02 small mant	tle										
						xenolith, 182.45 autolith, 182.5	83 small gneiss, 183.45 garnet, 183.66 autolith,											
						183.7 nucleated autolith, 183.9	possible mantle xenolith and gneiss, 183.92 autol	lith,										
						183.94 small mantle xenolith, I	black core, 183.95 garnet gneiss, 184.08 gneiss,											
						184.28 garnet, 184.3 60mm siz	ze mantle xenolith, 184.33 50x30 probable mantle	in a										
						5mm rind of kimberlite, 184.40	6 phlogophite macrocryst, 184.87 nucleated autolit	th										
						with mantle core, 184.9 nuclea	ted autolith, 184.92 nucleated autolith, 185.22 40m	nm										

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COMPANY PROPERTY COMMENC COMPLET	CED ED				NTS DIST TWP CLAI	RICT /LAT.LONG. M	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		JRVEY EPTH	DIP	AZIMUT	н	HOLE I COLLA COLLA ELEVA	NO. MR R AZIMU R DIP FION	A-95-03 TTH		PAG	JE 13/53
								L	1		·····	J 			· · ·			
	RVAL Ft 🗆	5	5		שמעי		DESCRIPTION				SAMPLE				1	ASSAY	′S	
FROM	το	REC	RQD	LIIIOI		GEOLOGY: («	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						autolith, 185.3-185.43 angular	gneiss fragments, 186.02 nucleated autolith 40mm	L,										
						186.18 autolith, 186.57 elonga	-185.43 angular gneiss fragments, 186.02 nucleated autolith 40mr 1. 186.57 elongate mantle xenolith with chrome diopside,			ļ			ļ					
						186.88 autolith, 186.92 nuclea	ted autolith, 187.02 nucleated autolith, 187.2 autoli	ith,				ļ						
						187.3 50mm gneiss, 187.4 elo	ngate garnet pelletal, 187.45 phlogophite megacrys	st,										
						187.65 phlogophite and garner	, 187.75 autolith, 187.85 autolith, 187.9 garnet pel	lletal,			_							
						188.0 chrome diopside, 188.1	autolith, 188.29 garnet gneiss and separate orange											
						garnet, 188.33 violet garnet pe	elletal, 188.45 autolith, 188.5 garnet, 188.54 gneiss	s x 2										
						188.8 autolith, 188.95 autolith	, 189.0 gneiss, 189.62 autolith, 189.75 nucleated											
						autolith (60mm), 189.85 20mm	n mantle xenolith, 189.95 gneiss (leuco), 190.1 auto	olith,										
						190.2 autolith, 190.27 nucleat	ed autolith, 190.35 possible mantle xenolith.											
						190.4-202.7 Lower portion of	the proceeding described section.											
						As above described except mo	derate decrease in gneiss and abundance of autolith	hs,										
						which probably reflects the dr	op in M.S. readings - 190.4-197.5 (0.7).											
						After 192.5 there is a change	in colouration to 60% of the core to a grey green,											
						possibly due to an increase in	ash/clay content to the matrix in the place of serper	ntine										
						after olivine. After 198.8, 90	% of the core is lightened. The overall clast types											
						and individual contents as well	as the overall content is similar to before. The											
						mantle xenoliths are smaller by	at their occurance per meter of core is similar to be	efore.										

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COMPANY	r				NTS		CORE STZE	S	URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MIR	A-95-03		PAG	E 14/53
PROPERTY	· · · · · · · · · · · · · · · · · · ·				DIST	RICT	CONTRACTOR						COLLA	r azımı	лн			
COMMEN	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLET	ED				CLAI	СМ	LOGGED BY				_		ELEVA	TION				
OBJECTIV	B			_	C0-0	RDINATES	DDH COMMENTS						LENGT	н			**************************************	
	****		-						1									
INTE M 🗆	RVAL Ft 🗆	5	x		VDE		DESCRIPTION				SAMPLE					ASSAJ	rs	
FROM	то	REC	RQD		116	GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	s SUL	Au ppb				
						Lower contact sharp at 68° to	CA but irregular.						1					
						Features of Interest:												
						190.5 Elongate garnet pelletal	, 15mm autolith,											
						190.8-191.0 5 plus autoliths/nu	cleated autoliths 5mm-20mm,											
						190.9 Violet garnet, orange ga	arnet macrocryst, 191.0 pelletal - violet garnet wi	ith										
						chrome diopside, 191.05 small	mantle xenolith, 191.1-191.3 two smaller nuclear	ted										
						autoliths, two 20-30mm autolith	ns, 191.32 orange garnet pelletal, 191.35-191.6 4	small										
						gneiss fragments, 191.6-191.9	3 nucleated autoliths, 2 autoliths, 1 gneiss fragme	ent,	]									
						191.68, 191.92 garnet pelletals	, 191.84 orange garnet, 192.05 elongate garnet				-							
						pelletal, 192.4 small autolith, 1	92.3 lightening of matrix (clay alteration).											
_						192.6 small orange garnet mac	rocryst, 192.8 autolith, 192.8-193.5 lightening of	f										
						matrix again (clay alteration?),	no change in clast content or type, no obvious					<u> </u>						
						indicators or autoliths, 193.57	angular 5mm orange garnet, 193.59 orange pellet	tal,										
						193.6 gneiss, 193.64 sort of nu	cleated autolith, 193.7 autolith, 193.76 30mm au	ntolith										
						with spherical fragments of ma	ntle, one with a violet garnet (all serpentine after	•										
						olivine), 193.8 gneiss, 193.9 at	ttolith, 193.93 10mm elipsoidal orange garnet pel	iletal,										
						194.0-194.2 lightening of matri	x around a 50mm limestone clast (clay alteration)	).										
						194.4 small orange garnet, 194	.65-194.85 4 nucleated autoliths, 1 autolith,											
						194.87 orange garnet, 194.95 v	violet garnet pelletal, 194.97 autolith with mantle											

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COMPANY	•				NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAC	ie 15/53
PROPERTY	7				DIST	RICT	CONTRACTOR						COLLA	R AZIMI	тн			
COMMEN	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	М	LOGGED BY						ELEVA	TION				
OBJECTIV	B				<u> </u>	RDINATES	DDH COMMENTS						LENGT	H				
	RVAL Ft 🗆	x	x		VDE	<u> </u>	DESCRIPTION				SAMPLE					ASSA	/S	
FROM	то	REC	RQD	LIIHOI	IFE	GEOLOGY: (colo	ur, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sur.	Au ppb				
[·						fragments, 195.05 small autolith	, 2 mantle xenoliths, sub-rounded, 195.1 15mm				T							
						gneiss, 195.16 autolith, 195.2 au	utolith, 195.25 2 gneiss with partial kimberlite											
						coats, 195.35 gneiss with kimbe	rlite, 195.45 20mm gneiss, 195.55 small gneiss a	and 2										
						(3mm) garnet gneiss, 195.65 gn	eiss, mantle xenolith, elongate orange garnet pell	lictals										
						195.85 garnet gneiss, 10-15mm,	, garnet, gneiss, 195.96 autolith 15mm, 196.0,											
						196.15 suspect mantle xenoliths,	, 196.16 autolith, 196.25 and 196.35 small gneiss	is_										
						fragments, 196.52, 195.65 gneis	ss, 196.55 garnet, 196.58 3 garnet/garnet gneiss											
						fragments, 1 gneiss, 196.65 auto	olith, 196.75 gneiss, 197.1 nucleated autolith,											
						197.3 autolity, 197.5 autolith, 19	97.55 autolith, 197.6 5mm elipsoidal garnet pelle	etal,										
						197.8 autolith, 197.98 autolith,	198.05 small garnet pelletal, 198.07 gneiss,											
						198.35 3 nucleated autoliths, 19	8.52 small gneiss, 198.58 autolith and nucleated											
						autolith, 198.65 mantle xenolith	6mm rounded with black core and 4 < 1mm viol	olet										
						garnets, 198.85 violet garnet pel	lletal, 3mm autolith, 199.07 small nucleated autol	lith,										
						199.1 4 x 3 x 2 autolith with 10	% serpentine after olivine fragments and a 15mm	n sub	-									
						angular fragment of suspect man	atle (autolith is sub-rounded bomb),											
						199.3-199.75 50-60% lightened	patches (clay alteration replacing serpentine?),											
						199.55 autolith, 199.63 garnet c	hip,											
						199.75-202.7 lightened grey gree	en colouration to matrix with 10% darker areas											

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COMPANY	•				NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н .	HOLE	10. MR	A-95-03		PAC	DE 16/53
PROPERTY	•				DISTI	RICT	CONTRACTOR						COLLA	r azımı	лтн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED	L					COLLA	r dip				
COMPLET	ED				CLAI	м	LOGGED BY						ELEVA	TION				
OBJECTIVI	8					RDINATËS	DDH COMMENTS	L					LENGT	н				
<u> </u>	<u>.</u>		<u> </u>	I	<u> </u>				<u> </u>	<u></u>				1				
	RVAL	5					DESCRIPTION				SAMPLE					ASSAN	/S	
FROM	то	REC	RQD		YPE	GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
				İ		(clay alteration), 199.8 sub-ang	gular 20mm mantle xenolith with black core,					<u> </u>						
						199.95 autolith, 200.12 autolith	h, 200.22 gneiss, nucleated autolith, 200.3 gneis	s,										
						200.35-200.75 nucleated autoli	iths, 3 autoliths, 200.4 2 gneiss fragments, 200.5	5 small										
						garnet gneiss, 200.87 autolith,	201.0 elongate 10mm garnet pelletal with partia	ıl										
						kimberlite coat, 201.02 garnet	gneiss (10mm), 201.5 nucleated autolith,											
						201.1 nucleated autolith, autoli	ith, 201.3 autolith, 201.35 garnet gneiss, 201.6 a	autoliti	ı,									
						201.6 3-nucleated autoliths-nuc	sleous is a mantle fragment 7mm with a grain of	-										
						chrome diopside, 201.75 nucle	ated autolith, 202.1 autolith, 202.18 garnet,											
						202.3 gneiss, 202.34 nucleated	autolith, free garnet, 202.37 gneiss, 202.45 aut	tolith,										
						gneiss, 202.5 50mm autolith, 2	202.64 garnet pelletal, 202.7 sharp lower contact	t										
						irregular (erronsional) but gene	erally 68° to CA.											
						202.7-202.9 Fining upward as	sh layer (?) crudely bedded, 70% matrix, 30% cl	lasts,										
						matrix is clay rich serpentine a	fter olivine, 20% fine country rock (<1mm), 5	%										
						1-3mm serpentine after olivine,	, fine mantle pelletals; 202.72 1mm red garnet,											
						202.8 nucleated autolith.												
						Lower contact plus or minur 6	5* to CA.											
						202.9-209.3 As previously des	scribed above the ash layer, lightening colouration	on	_									
						probably due to increase clay of	content at the expense of serpentine. Some areas	s are										

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TORONTO, ONTARIO, CANADA

COMPANY	<i>(</i>				NTS		CORE SIZE	SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PA	GE 17/53
PROPERTY	Y			<del></del>	DIST	RICT	CONTRACTOR					COLLA	RAZIMI	TH			
COMMEN	CED				TWP	/LAT.LONG.	DATE LOGGED					COLLA	R DIP				
COMPLET	ED				CLA	DM	LOGGED BY					ELEVA	TION				
OBJECTIV	E				CO	DRDINATES	DDH COMMENTS		<u> </u>	I		LENGT	н				
INTE M 🗆	RVAL Ft 🗆	x	5	LITHO	LADE		DESCRIPTION			SAMPLE	<u></u>				ASSA	YS	
FROM	то	REC	RQD			GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)	SAMPLI NO.	FROM	то	LENGTH	sur.	Au ppb				
						more faded then others reflect	ing varying degrees of clay alteration. In most case	s							<u> </u>		
						alteration is most intense aroun	nd larger limestone clasts. Clast type content and										
						relative percentage occurrence	is similar also to before. Indicator minerals and										
						autolith populations are all also	o similar.										
						203.4-203.8 More intense fad	ling light grey green matrix. Weak grain orientation	1									
						@ 40-50° to CA. Perhaps als	so an increase in $<2mm$ size fraction (+10%-20%).										
						M.S. readings 1.1-1.9, averag	ing 1.5.										
						Features of Interest:											
						203.07 Large nucleated autolit	h and small nucleated autolith, 203.12 small autolith	is,									
	ļ			]		203.3 mantle xenolith serpenti	ne after olivine with 30% orange garnet on one side										
						203.4 small autolith, 203.55 g	arnet fragment, 203.68 red garnet, 203.73 autolith,										
						203.78 autolith and nucleated	autolith, 203.83 nucleated autolith, 203.9 2-nucleated	d l									
						autoliths, 204.0 small autolith,	204.4 autolith, 204.55 autolith, 204.75 nucleated										
						autolith, chrome diopside, gara	net peleltal, 204.8 nucleated autolith, 204.9 autoliths	,			<u> </u>						
	1					205.0 autolith, orange garnet r	nass, 205.1 autolith, 205.2 autolith, 205.25 nucleate	d									
						autolith, 205.52 autolith, 206.3	5 orange garnet, 206.5 limestone with kimberlite,										
						205.65 25mm limestone with h	25.5.2 automit, 200.5.5 orange gamet, 200.5 millestone with automite,										
						nucleated autolith, 205.8 nucle	ated autolith, 205.9 25mm nucleated autolith, gneiss				1						

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TORONTO, ONTARIO, CANADA

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COMPANY					אדא	CORE SIZE	SUI	RVEY PTH	DIP	AZIMUTI	i	HOLE	10. MR/	<b>\-95-03</b>		PAG	E 18/53
PROPERTY				•	DISTRICT	CONTRACTOR						COLLA	R AZIMU	тн			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
COMMENC	ED				TWP/LAT.LONG.	DATE LOGGED						COLLA	R DIP				<u> </u>
COMPLETE	Ð				CLAIM	LOGGED BY						ELEVA	TION				
OBJECTIVE	1				CO-ORDINATES	DDH COMMENTS						LENGT	н				
[ <b></b>			<u></u>				<u> </u>						1				
	RVAL Ft 🗆	x	x	LITHOTY		DESCRIPTION			5	SAMPLE				1	ASSA	(S	
FROM	то	REC	RQD	Limori	GEOLOGY: (ca	olour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
					205.95 small autoliths, 207.1	limestone with kimberlite adhere, small autolith,											
					207.15 limestone with kimber	lite adhere, small autolith, 207.2 gneiss, 207.3 gneis	is,										
					207.37 nucleated autoliths, or	ange garnet pelletal, 207.4, 207.43 small autoliths,											
					207.8 garnet mass (garnet gne	eiss?), 208.15 4mm garnet pelletal, 208.25 small gar	net										
					pelletal, nucleated autolith, 20	8.43 garnet gneiss, 208.45 autolith, garnet gneiss,											
					208.5 garnet gneiss, 208.55 g	neiss, 208.59 gneiss, 208.7 pelletal, 208.72 garnet,											
					208.8 gneiss, 208.85 < 1mm	ilmenite, 208.96 nucleated autolith, 209.0 autoliths,											
					209.23 3mm garnet pelletal.												
					209.3-223.0 As before except	less clay? alteration. Core is generally darker green	n										
					grey but still a small portion of	of clay alteration exists (3-5%).											
					209.3-211.2 Perhaps an abun	dance of autoliths explains an average M.S. of 1.4.											
					After 211.2 average M.S. rea	dings drop to 0.6. Autoliths although still present											
					are decreased in number. Gn	eiss, garnet gneiss, autoliths and mantle fragments											
					are evenly distributed through	out this section after 211.2. Proportion of clasts											
					and individual percentages are	similar to the previous sections.											
					222.0-222.6 Clast rich 60-70	%. In this instance Huronian clasts, then kimberlite,											
					then limestone, then gneiss in	order of general abundance.											
					223.0 Sharp contact, colour c	difference dark to light, no grain or clast shearing											
					rules out slip faults, most likel	ly depositional @ 33° to CA. Possibly the lower un	it										

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE N	10. MR	A-95-03		PAC	E 19/53
PROPERTY	t .				DIST	RICT	CONTRACTOR	Γ					COLLA	R AZIMU	тн			
COMMEN	CED				TWP	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	NON				
OBJECTIV	B				co-0	ORDINATES	DDH COMMENTS						LENGT	1				
				γ		f								<u> </u>	<del></del>			
	RVAL Ft 🗆		*				DESCRIPTION				SAMPLE				ł	ASSAN	(S	
FROM	то	REC	RQD	LITHOT	YPE	GEOLOGY: (co	olour, grain size, texture, minerals, alteration, etc)		SAMPLE	· · · · · · · · · · · · · · · · · · ·			5					
				<u> </u>		. <u> </u>			NO.	FROM	то	LENGTH	SUL					
						was erroded before deposition	(slump scour). There is no fining sequence her	ere like	<u>.                                    </u>				ļ					
						the previous contacts.											]	
						Features of Interest:				-								
						209.63 2-autoliths, 209.75 au	tolith, 209.78 gneiss, 209.92 nucleated autolith,	•										
						210.05 autolith, 210.06 garnet	t, 210.07 phlogophite, 210.1 phlogophite, garnet	x,										
						210.16 autolith, 210.24 nuclea	ated autolith, 210.3 sort of nucleated autolith and	d										
						small autolith, 210.35-210.4 2	-autoliths, 1 nucleated autolith, 210.5-210.55 lar,	rge										
						nucleated autolith 30mm, 30m	m autolith and gneiss,											
						210.7 2 small gneiss, 1 small	autolith, 210.85 autolith, 211.0 nucleated autolith	th,										
						211.1 autolith, 211.15 garnet of	clongate orange fragment, 211.3 garnet pelletal											
			-			(orange), 211.75 autolith nucle	cated, 211.9 gneiss, 212.3 autolith, 212.5 40mm	n										
						nucleated autolith, 212.8 3 small	all gneiss fragments, 212.95 autolith, 213.15 gne	neiss,										
						213.15 elongate orange garnet	pelletal, 213.2-213.3 3 nucleated autoliths, 1 a	autolith	h,									
						213.3 violet garnet pelletal, 21	3.35 orange garnet pelletal, 213.5 5 small gneis	ssic										
						fragments, 1 small garnet, 213	.6 autolith nucleated sort of, 213.66 autolith,					1						
						213.7 garnet gneiss, 213.74 or	range garnet pelletal, gneiss, 213.5 rounded man	ntle										
						xenolith 10mm, sub-rounded 3	Omm mantle xenolith with black core, larger 15	5-20mr	n									
						autolith, 213.9 small orange ga	arnet, 213.97 small garnet pelletal, 214.07 gneis	ss.										

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE	S	URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAC	E 20/53
PROPERTY	(				DIST	RICT	CONTRACTOR						COLLA	RAZIMI	лтн			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTIVI	Е				<u>co-o</u>	RDINATES	DDH COMMENTS						LENGT	н				
1	wa			<u></u>					1	·····				¥				1
		_					DESCRIPTION				SAMPLE	:				ASSA	rs.	
		REC	RQD	LITHOT	YPE	GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)				1	<b></b>						
				[					NO.	FROM	то	LENGTH	SUL.					
						214.15 small autolith, 214.23	garnet chip, 214.35 small gneiss,						ļ					
						214.45 violet garnet pelletal, 2	14.5-214.6 3 gneiss, 1 garnet gneiss, 1 phlogoph	hite,										
						214.75 autolith, 214.85 autolith	h, 214.9 gneiss, 215.2 nucleated autolith,											
						215.45 ilmenite, partial nuclear	ted autolith, 215.55 orange garnet macrocryst pe	iletal,										
						215.7 autolith, nucleated autoli	ith, 215.75 10x20mm mantle xenolith mass of											
						chrome diopside and phlogoph	ite, 215.95 small orange garnet, nucleated autol	ith,										
						216.0 3 autoliths with mantle x	cenolith fragments, 216.2 autolith,											
						216.3 small mantle xenolith, 2	16.33 3 nucleated autoliths, 216.4-216.5 2 game	t		1								
						gneiss, 216.95 autolith, 217.0	orange garnet, autolith, 217.05 gneiss, chrome							1				
						diopside, garnet, 217.2 2 garne	et gneiss, gniess, mantle/kimberlite angular clast,											
						2 autoliths, 217.3 small mantle	xenolith, gneiss, garnet pelletal, nucleated autoli	ith,										
						217.42 garnet, 217.5 autolith,	nucleated autolith, 217.55-217.56 2 autoliths, 2											
						mantle 10-20mm xenoliths, sm	all gneiss, 217.7 nucleated autolith,											
						217.78 garnet pelletal, 217.8	garnet gneiss, 30mm nucleated autolith,		1									
						217.8-217.9 2 small autoliths.	217.9 garnet pelletal, phlogophite lath.											
						218.0-218.05 nucleated autolith	1. 2 autoliths, gneiss, 218,1 2 nucleated autoliths.				1							
						218.2-218.25 2 autoliths. 2 gnd	siss. 1 garnet, 218.35 orange garnet, autolith.		1		1		1					
						218.4 gneiss, 218.5 gneiss, 2 a	nutoliths, 218.6 autolith, gneiss, 218.7 autolith,		1		1	1	1					

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TORONTO, ONTARIO, CANADA

COMPANY	. <u> </u>			<u> </u>	NTS		CORE SIZE	SU D	irvey Epth	DIP	AZIMUT	н	HOLE	10. MR	<b>\-95-0</b> 3		PAG	E 21/53
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	r azimu	тн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	D				CLAI	м	LOGGED BY						ELEVAT	TION				
OBJECTIVE						RDINATES	DDH COMMENTS						LENGT	н				
INTER				<u></u>										<b></b>				
	Ft 🛛	5	×	LITHOT	VDE		DESCRIPTION			9	SAMPLE				1	ASSAY	'S	
FROM	то	REC	RQD	Limoi		GEOLOGY: (col	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	An ppb				
						218.75 orange garnet macro 25	5x8mm, 219.02 nucleated autolith,											
						219.1 garnet gneiss, 219.13 gn	eiss, 219.23 small orange garnet pelletal, small											
						autolith, 219.3 garnet gneiss, g	neiss, 219.4-219.45 autolith, 3 gneiss,											
						219.5 violet garnet, 219.7 kiml	berlite coatings orange garnet, 219.75 orange											
						garnet chip, autolith, 219.9 aut	olith, 219.95 autolith, 220.05 nucleated autolith,											
_						autolith, 220.15 nucleated autol	lith, 220.2 kimberlite fragment?,											
						220.25 gneiss, 220.3 35mm nu	cleated autolith, 220.37 chrome diopside, small											
						autolith, 220.65 small autolith,	220.75 orange garnet, 220.85 autolith,											
						221.0 nucleated autolith, 221.2	5 small mantle xenolith, 221.45 gneiss,											
						221.6 small autolith, 221.8 40n	nm nucleated autolith with angular 30cm mantle/											
						kimberlite fragment as nucleous	s, 221.9-222.0 10x15mm rounded mantle xenolith											
						with chrome diopside, 20mm a	utolith, small orange garnet, gneiss fragment,											
						222.0-222.65 coarse near clast	supported section, 20% matrix, 40% country rock	:										
						clasts, 20% garnet gneiss (2), a	ingular kimberlite (5), gneiss (2), autolith with											
						and without mantle fragments (	5), and mantle pelletals and angular fragments (3),	,										
						222.7 3mm orange garnet, 222.	.98 small mantle and small autolith.											
						223.0 Sharp contact? colour ch	ange from darker green to lighter green @											
						30° to CA. If a sediment, wou	ld call it a scour contact plus or minus exhibiting											
						load structures.												

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TORONTO, ONTARIO, CANADA

COMPANY	•				NTS		CORE SIZE		SUR DEP	VEY TH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PA	GE 22/53
PROPERTY	r				DISTR	ист	CONTRACTOR	_						COLLA	R AZIMI	лтн			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED							COLLA	r dip				
COMPLET	ED				CLAD	M	LOGGED BY							ELEVA	TION				
OBJECTIV	B				CO-01	RDINATES	DDH COMMENTS	[ [						LENGT	н				
INTE M C	RVAL Ft 🗆	\$	5	LITHOTY	/PE	<u></u>	DESCRIPTION			<u></u>	S	SAMPLE		<u> </u>			ASSA	rs	
FROM	то	REC	RQD			GEOLOGY: (e	colour, grain size, texture, minerals, alteration, etc)			SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						223.0-235.3 As before with	medium to light grey green matrix, no real c	hange											
						other than the above coarse u	unit and the contact colouration at 223.0, class	t types			<u> </u>				<u> </u>				
						and abundances are similar.	Light to medium matrix colouration becomes	patchy				<u> </u>							
						in part with darker resulting t	from less clay content and thus higher serper	tine.							 				
						235.3 was chosen as a gradat	tional change point to medium to darker gree	n matrix											
						colouration. M.S. is low at 0	D.6 average.												
						Features of Interest:													
						223.02 autolith, 223.08 autoli	ith, 223.27 autolith, 223.35 30mm nucleated	autolith,					<u> </u>						
						gneiss, 223.55 nucleated auto	lith, small gneiss, 223.6 gneiss, 223.62 elon	ate oran	ige									L	
		_				garnet pelletal/macrocryst, 22	23.65 autolith, 223.68 small mantle xenolith,	utolith,											
						223.75 small garnet chip, 35r	mm garnet gneiss, 223.8 gneiss, 224.05 2 au	oliths, 1										Ĺ	
						mantle, 224.12 10mm mantle	with violet garnet, 223.3 nucleated autolith,	small											
						garnet gneiss, 223.45 garnet	pelletal, 224.53 garnet gneiss with kimberlite	coat,											
						224.6 garnet, 224.7 autolith,	224.75 garnet pelletal, 224.77 small gneiss,	mall				<u> </u>							
						mantle xenolith, 224.9 garnet.	, 225.0 gneiss, 225.1 autolith, 225.2-225.4 n	ucleated											
						autoliths, 5 autoliths, 1 elonga	ate garnet, 225.45 20x50 angular kimberlite o	lasts,											
						225.57 30mm rounded mantle	e xenolith with 30% olivine and 3% wine red	garnets,											
						225.6 2 gneiss, autolith, 2mm	garnet pelletal, 235.7 autoliths, nucleated au	toliths,											

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TORONTO, ONTARIO, CANADA

								[	SURVEY	DIP	AZIMUT	H						
COMPAN	Y				NTS		CORE SIZE		DEPTH				HOLE	NO. MI	(A-95-03		PA0	GE 23/53
PROPERT	Y				DIST	RICT	CONTRACTOR						COLL	R AZIM	UTH			
COMMEN	CED				TWP/I	LAT.LONG.	DATE LOGGED			_			COLL	R DIP				
COMPLET	TED				CLAD	м	LOGGED BY						ELEV	TION				
OBJECTIV	E				CO-01	RDINATES	DDH COMMENTS						LENG	тн				
					<u> </u>				<u> </u>	• • • • •								
	RVAL Ft 🗆	5	x	LITHOTY	PE		DESCRIPTION				SAMPLE					ASSA	YS	
FROM	то	REC	RQD	LIINOIT	IL.	GEOLOGY: («	colour, grain size, texture, minerals, alteration, etc)		SAMP NO.	LE FROM	то	LENGTH	sul	Au ppb				
				Ī	i	violet garnet pelletal, 225.7-2	225.8 4 or so smaller autoliths, 225.85 gamet g	neiss.								T	[	
						226.2-226.3 3 nucleated auto	oliths, 1 autolith, garnet, 226.35 rounded mantle	xenol	ith			1						1
						(15mm) with chrome diopside	le and violet garnets, 226.45-226.55 2 nucleated	autoli	ths,					1				
						I autolith, garnet pelletal, 22	26.7 3mm orange garnet, 20mm gneiss,						1					
	1					226.75 5x20 mantle xenolith,	, 226.9 autolith, 227.25 autolith, 227.35 garnet	gneiss,										
						227.43 gneiss, nucleated auto	olith, 227.5 autolith, 227.55 violet garnet pelleta											
						227.6 garnet pelletal (3mm) e	elongate, gneiss, nucleated autolith,											
						227.65 gneiss chip, nucleated	d autolith, 227.95 2 gneiss, angular kimberlite o	clast,										
						228.25 2 autoliths, 228.4 2 a	nutoliths, 228.45 nucleated autolith, 3mm orange	garne	t,						1	1		
						228.55 2 gneiss, nucleated au	utolith, 228.72 mantle xenolith, free chrome dio	pside,								1		
						autolith, 229.02 nucleated aut	tolith with mantle core, 229.23 30mm autolith,											
						229.25 50mm mantle rounded	d xenolith with 15% chrome diopside, 5% game	et,				1				1		
						229.35-229.45 4 autoliths wit	th small mantle fragments, 229.58 gneiss,											
						229.6 7mm mantle xenolith w	with chrome diopside, 229.62 gneiss, 229.75 gne	eiss,										
						229.78 garnet, 229.85 gneiss	5, 229.88 garnet, 229.95, 230.02 3 autoliths, 1 m	nucleat	ed,									
						autolith, 230.1-230.25 5 auto	oliths (4mm-30mm), violet garnet pelletal,											
						230.28 small mantle, small at	utolith, 230.3-230.5 4 rounded to subangular kir	mberlit	ie i									
						fragments, 2 nucleated autolit	ths, 1 gneiss, 230.75 small mantle, 230.95 20m	m										

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP		AZIMUTI	н	HOLE	NO. MIR	A-95-03		PAC	JE 24/53
PROPERTY	,				DIST	RICT	CONTRACTOR			-				COLLA	R AZIM	лн			
COMMEN	CED				TWP/	LAT.LONG.	DATE LOGGED	Γ						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY	Γ						ELEVA	TION				
OBJECTIV	3					RDINATES	DDH COMMENTS	E						LENGT	H				
	RVAL Ft 🗆		*	LITHOT	VDE		DESCRIPTION	<u></u>			S	AMPLE					ASSA	rs	
FROM	70	REC	RQD		ILE	GEOLOGY: (	colour, grain size, texture, minerals, alteration, etc)		SAM NC	LE FR	м	то	LENGTH	sul	A a ppb				
						mantle xenolith with chrome	diopside, 231.1-231.2 small mantle pelletal with	th chrom	e 🗌										
						diopside, 2 nucleated autolith	ns, 4 small autoliths, 1-20mm mantle xenolith w	/ith											
						violet garnets and chrome di	opside, 231.34 small gneiss, 5x10 mantle xenol	lith with											
						violet garnets, 231.6 autolith	, 231.7 mantle, 231.84 mantle, 231.85 orange i	garnet							L				
						pelletal, nucleated autolith wi	ith mantle, 232.03 autolith, 232.1 autolith, garnet	et gneis:											
						(40mm), 232.2 elongate viole	et garnet pelletal, 232.37 4mm orange garnet m	ass,											
						232.45 violet garnet pelletal,	232.6 nucleated autolith, gneiss, 232.65 autolith	th,											
						232.8 nucleated autolith, 232	.85 orange garnet, 232.95 gneiss, 233.1 orange	e garnet											
						pelletal, 233.45 autolith, 233	.54 garnet, 233.6 gneiss, phlogophite, 233.65 n	nucleated											
						autolith, 233.7 garnet elongat	te pelletal, 233.8 garnet, gneiss, phlogophite,												
						233.85 gneiss, violet garnet	pelletal, 233.95 autolith, 234.2 nucleated autolith	h,											
						234.35 nucleated autolith, 23	4.6 autolith, 234.7 3 autoliths, 234.8 nucleated	autolith,											
						234.9 mantle.													
						235.3-264.3 As described pr	reviously except less clay alteration. The matrix	x is											
						essentially serpentine and tal	c after olivine and <2mm country rock. Clast	type											
						content and clast content rela	tive to matrix is very similar as are indicator ty	pes											
						and content. In several insta	nces a weak orientation to particals can be obse	erved											
			1	1		generally at a range of 50-56	*, averaging 54* to CA. An even weaker rare	ly seen											

### W.A. HUBACHECK CONSULTANTS LTD.

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE	SL D	rvey Epth	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PA	GE 25/53
PROPERTY	<u> </u>				DIST	RICT	CONTRACTOR						COLLA	r azimi	лн			·····
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED					_	COLLA	r dip				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTIVI	B				<u> </u>	RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	7	5	LITHOTY	/PE		DESCRIPTION				SAMPLE	( <u></u>				ASSA	YS	T
FROM	סז	REC	RQD	2		GEOLOGY: (ex	olour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul.	Au ppb				
						orientation is at about 45° to	CA and can be seen within 10cm of a 54° to CA											
						orientation. At 264.3 clast co	ntent increases from 50-55% up to 80% with a we	ak										
						contact angle measured at 54°	to CA. M.S. values are generally very low (.26	ຄ										
						with an average of .35 overall	. Autoliths and gneissic clasts still provide spot											
						values up to 10.0 but their ab	undance is low (2%).						1					
						Features of Interest:												
				1		235.4 gneiss, 235.44 nucleate	d autolith, 235.5 nucleated autolith, 235.6 autolith											
						(25mm), 235.85 2x3mm orang	ge garnet fragment, 235.97 autolith, 236.05 gneiss,											
						236.2 autolith, 236.3 garnet p	elletal, 236.49 2mm orange garnet, 236.54 2 gneis	\$										
						fragments, 236.70 garnet gnei	ss, 236.75 autolith, 236.80 4x5mm orange garnet											
						(macro), 236.85 autolith, 236.	93 gneiss with thin kimberlite coating, 236.95 pelle	etal,										
						237.3 gneiss, 237.4 kimberlite	angular, 237.45 gneiss (2), 54° to CA orientation	,										
						237.5 45° to CA orientation,	237.55 gneiss chip, 237.6 54° to CA orientation,											
						237.8 nucleated autolith, garne	et pelletal (orange), 238.0 gneiss chip,			Ι								
						238.15 gneiss, 238.24 autolith	, 238.27 autolith, 238.34 nucleated autolith,			1								
						238.46 phlogophite, garnet gn	eiss, 238.67 calcite (1-2mm) veinlets @ 34° to CA	.,										
						238.8 garnet gneiss, 238.82 gi	arnet pelletal, 238.92 10mm rounded mantle xenoli	ith										
						with 2mm violet garnet and gr	ains of chrome diooside, 239.0 angular kimberlite					1						

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MIR	A-95-03		PAC	)E 26/53
PROPERTY					DIST	RICT	CONTRACTOR	Γ					COLLA	R AZIMI	лн			
COMMENC	ED				TWP	/LAT.LONG.	DATE LOGGED	Γ			200700		COLLA	r dip				
COMPLETE	D				CLAI	M	LOGGED BY						ELEVA	TION				<u> </u>
OBJECTIVE					<b>CO-O</b>	ORDINATES	DDH COMMENTS						LENGT	н				
								·	<del></del>					γ <b></b>				
INTE	VAL						DESCRIPTION				SAMPLE					ASSAN	(S	
		S REC	s RQD	LITHOT	YPE	GEOLOGY: (colo	DESCRIPTION pur, grain size, texture, minerals, alteration, etc)			1	<u> </u>	<b>T</b>	<u> </u>			r		
PROM	то						-		SAMPLE NO.	FROM	то	LENGTH	SUL.	Au ppb				
						fragments (hypabyssal), 239,1 1	0x15 orange garnet macrocryst, 239.42 garnet	gneiss	s.									
						239.47 2mm ilmenite, 239.5 20	x60 sub-angular hypabyssal kimberlite clast,											i
						239.65 mantle xenolith with fine	e garnet, 239.67 gneiss, 239.72 autolith with an	n										
						elongate 2mm orange garnet pel	lletal and an autolith, 239.96 2mm orange garne	et										
						pelletal, 240.12 gneiss, 240.15	small autolith, 240.18 small autolith, fine game	et										
						pelletal, calcite replacing matrix	for 5cmx.5cm, 240.24 small autolith, 240.35 a	and										
						240.43 nucleated autoliths with	angular kimberlite as nucleus, 240.9 nucleated											
						autoliths, 240.95 garnet gneiss,	angular orange garnet 5x5mm macrocryst, gne	eiss,										
						241.0 6mm elongate orange gar	net macro pelletal, 241.13 mantle xenolith,											
						241.6 garnet gneiss, 241.25 1m	m garnet, 241.55 garnet gneiss, 241.64 46° to	CA					1					
						orientation, 241.66 gneiss, 241.7	7 3mm elongate orange garnet pelletal,											
						241.9 nucleated autolith, 241.95	nucleated autolith with garnet gneiss as nucleo	ous										
						and gneiss, 242.0 nucleated auto	olith, 242.02 15x40 dark gneiss with kimberlite	e rind,										
						242.25 gneiss, 242.37 garnet, 24	42.42 gneiss and 2 nucleated autoliths,											
						242.62 elongate orange garnet n	nacrocryst pelletal, 242.7 gneiss, 242.75 2 auto	oliths,										
						elongate orange garnet pelletal,	242.85 kimberlite fragment, 242.96 20mm nucl	leated				<b>_</b>						
				. <u>.</u>		autolith, 243.22 gneiss, 243.25	30x50 mantle xenolith with 15% violet gamets.	. 5%		1	1							
					[	chrome diopside, 30% olivine in	a black core with Smm serpentinized rind.					1						
				<u></u> n == =		243.29 gneiss, 243.33 garnet pe	Iletal, 243.65 nucleated autolith, 243.58 autolith											

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TORONTO, ONTARIO, CANADA

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COMPANY	<u>{</u>				NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAC	je 27/53
PROPERTY					DIST			┢				_						
COMMENC	ED				TWP	/LAT.LONG.	DATE LOGGED						COLLA	K DP			<u> </u>	
COMPLET	ED				CLA	M	LOGGED BY						ELEVA	TION		<u> </u>		
OBJECTIV	E				<u></u> CO-C	RDINATES	DDH COMMENTS						LENGT	н			<u></u>	······
	RVAL Ft 🗆	s	x	LITHOT	YPE		DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD			GEOLOGY: (co)	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						243.9 autolith, gneiss, 244.08	gneiss, 2 autoliths, 244.23 small mantle xenolith,											
						garnet, 244.5 angular kimberlit	te clast, 244.3 garnet gneiss, several small autolit	iths,										
						244.42 gneiss, 244.44 autolith,	, 244.57 gneiss, 244.82 45° to CA orientation,											
						244.7 2mm garnet, 245.06 gne	iss, 245.7 mantle xenolith, 245.13 garnet,	-										
						245.2 nucleated autolith, 245.2	3 mantle xenolith, 245.28 gneiss, 245.4 gneiss c	hips,										
						245.55 gneiss chip, 245.6 oran	ge garnet chip, 245.66 nucleated autolith, 245.7	garnet										
						245.74 gneiss, 245.87 autolith,	245.93 gneiss, 245.95 gneiss (2), autolith,											
						246.05 mantle xenolith, 246.07	gneiss, 246.09 56° to CA orientation,											
						246.1-246.17 3 gneiss, 246.25	orange garnet pelletal, 246.5-246.55 4 gneiss, 1											
						phlogophite (3mm), 246.58 gar	met, 10mm garnet gneiss, 246.85 elongate orang	ie.										
						garnet macro pelletal, 247.0 nu	icleated autolith, 247.15 gneiss (2), 247.27 mantl	le										
						xenolith abundant chrome diop:	side, 247.63 autolith, 247.8 nucleated autolith,											
						248.0 garnet gneiss, 248.1 nuc	leated autolith, 248.2 nucleated autolith, and 56°	,										
						to CA orientation, 248.32 50°	to CA orientation, 248.35 autolith, 248.4 gneiss,											
						248.52 orange garnet macrocry	st, 248.85 nucleated autolith with gneiss,											
						248.9 orange gamet macrocrys	t, and orange garnet elongate pelletal,											
						248.95 garnet chip, 249 2 gnei	ss, 249.03 garnet pelletal, 249.3 nucleated autoli	ith,										
						249.35 garnet pelletal (violet).	249.4 gneiss, 249.57 2 garnet chips, 249.6 garnet	el		1								1

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		Core size	Γ	SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MOR	A-95-03	•	PAC	GE 28/53
PROPERTY	r				DIST	RICT	CONTRACTOR						COLLA	R AZIMI	лн			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY	-					ELEVA	TION			···· ···	
OBJECTTV	E				co-0	RDINATES	DDH COMMENTS				<u> </u>		LENGT	н				
INTE M 🗆	RVAL Ft 🗆	*	5	LITHOT	/DE		DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD	Linor		GEOLOGY: (0	olour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						gneiss (35mm), 250.05 autolit	th, 250.3 2 garnets, 1 gneiss, 250.4 violet garne	et.										
						pelletal, 250.6 25mm nucleate	ed autolith, 250.8 mantle xenolith, 251.03 mantle	e										
						xenolith 25mm, 2% chrome d	liopside, 251.15 autolith, 2 garnet pelletals,											
						251.25 gneiss, 251.27 garnet	chip, 251.45 garnet gneiss, 251.46 garnet pellet	tal,			_							
						251.62 mantle xenolith with c	hrome diopside, 251.95 autolith, 252.03 orange	garnet										
						pelletal, 253.1 garnet pelletal,	autolith, 252.23 nucleated autolith, garnet pelle	stal,										
						252.25 mantle xenolith, 252.2	28 manule xenolith with chrome diopside,											
						252.45 54° to CA orientation	, 252.65 gneiss, 252.67 mantle, 252.72 nucleate	zd										
						autolith with gneiss, 252.9 aut	tolith, 253.0 garnet, 253.1 gneiss, garnet pelleta	d,										
						253.25 garnet gneiss, 2 autoli	ths, 253.35 garnet gneiss, mantle xenolith,											
						253.5 gneiss, 253.62 gneiss, 2	254.0 3 gneiss, 1 garnet chip, 254.13 gneiss,											
						254.22 gneiss, elongate orang	e garnet pelletal, 254.25 54° to CA orientation,	1										
						254.27 garnet, kimberlite frag	ment, 254.37 kimberlite fragment, 254.36 nucle	eated										
						autolith, autolith, 254.43 garn	et, 254.45 autolith, 254.53 gneiss, 254.55 small	mantle,										
						phlogophite, 254.62 nucleated	autolith, small mantle, 254.68 gneiss, garnet gr	neiss,										
						254.7 nculeated autolith with	mantle nucleous, 254.75 nucleated autolith, gnei	iss,			1							
						254.88 orange gamet megacry	yst 23x15mm, 254.95 phlogophite 2mm, 255.02	autolith,			1							
						255.1 garnet, autolith, 255.13	garnet, 255.2 garnet pelletal, mantle xenolith, 2	255.34										

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE	S	urvey Depth	DIP	AZIMUT	н	HOLE N	NO. MR	A-95-03		PAC	E 29/53
PROPERTY	,				DIST	RICT	CONTRACTOR						COLLA	R AZIMI	лн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	Ð				CLAI	м	LOGGED BY						ELEVAT	TION				
OBJECTIVE	3				co-o	RDINATES	DDH COMMENTS						LENGT	н				
INITE			<u> </u>	1	<u> </u>				<u></u>					<u> </u>				
MO	Ft 🗆	x	x		VDE		DESCRIPTION			3	SAMPLE				4	ASSA	ſS	
FROM	то	REC	RQD	LITHOT	IPE	GEOLOGY: (cold	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						nucleated autolith, 255.51 42° (	to CA orientation, mantle xenolith, 255.56 50° to	СА										
						orientation, 255.6 orange garne	t chip, 255.78 orange garnet, 255.85 nucleated											
						autolith, 256.15 angular orange	garnet macrocryst, 256.22 gneiss, 256.27 orange	;										
						garnet macrocryst, 256.3 gneiss	s, 256.45 garnet, 256.53 gneiss, 256.9 small gneis	ss,										
						257.07 garnet pelletal, 257.1 ga	arnet chip, 257.11 gneiss, 257.14 small mantle,											
						257.57 mantle xenolith, 257.68	garnet macrocryst, 257.9 gneiss, 258.18 gneiss,											
						258.3 violet garnet pelletal, 258	5.5 autolith, 258.44 autolith, 258.47 nucleated		ļ									
						autolith, 258.52 gneiss, 258.53	54° to CA orientation, 258.62 gneiss, 258.67 gar	net										
						gneiss, chip, 258.75 mantle?, at	utolith, 258.8 gneiss, 258.84 autolith, garnet, 258.	.9										
						gneiss, 258.98 violet garnet pel	letal, 259.01 gneiss, 259.02 autolith, chrome diope	side,										
						garnet pelletal, 259.1 40mm ma	ntle/kimberlite, 259.15 nucleated autolith,											
						259.2 3mm violet garnet pelleta	I, 259.25 orange garnet pelletal in a kimberlite											
						coating, 259.26 autolith, 259.53	autolith, 259.6 gneiss, 259.6-259.65 mantle xeno	olith										
						(50x40mm), 259.68 garnet pelle	etal, 259.85 mantle xenolith with red garnet,											
						259.9, 259.94 garnets, 260.2-26	50.23 2 garnet gneiss, autolith, 260.4 autolith,											
						260.42 garnet pelletal, 260.46 g	arnet pelletal, 260.55 gneiss, 260.6 gneiss,											
						260.65 garnet, 260.68 garnet gr	neiss, 260.9 gneiss, 261.05 autolith,											]
						261.30-261.38 10 fine to 3mm	violet garnet chips and pelletals, 1 ilmenite,											
						261.4 autolith, 261.46 garnet ch	tip. 261.62 2 gneiss, 261.66-262.2 limestone bould	der.										

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TORONTO, ONTARIO, CANADA

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COMPANY	1				NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAC	JE 30/53
PROPERTY	(				DIST	RICT	CONTRACTOR						COLLA	R AZIMI	лн			
COMMEN	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTIV	E	· · · · · · · · · · · · · · · · · · ·			<u> </u>	RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	<b>x</b>	5	LITHOT	VPE		DESCRIPTION	<u></u>			SAMPLE					ASSA	rs	
FROM	то	REC	RQD	Linior		GEOLOGY: («	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						262.03-262.15 50% kimberli	te breccia, 262.1 autolith, 262.24 small mantle xe	nolith										
						with chrome diopside, 262.4	angular mantle fragment with <1mm red garnet,											
						262.53 elongate garnet pellet	al, 262.6 ilmenite, 262.7 gneiss, 262.77 garnet,											
						262.8 mantle xenolith with cl	hrome diopside and violet garnets, 262.81 mantle											
						xenolith, 262.83 53° to CA of	prientation, 262.85 gneiss, 263.02 violet garnet pe	iletal,										
						263.25 small gneiss, 263.47	2 autoliths, 263.55 violet garnet 4mm, 263.7 <11	nm										
						ilmenite, 263.8 elongate oran	ge garnet pelletal, 263.83 autolith, 263.88 20x30r	nm										
						autolith, 263.98 30mm autoli	th, 264.1 autolith and mantle xenolith both small,											
						264.18 small autolith, gneiss.												
						264.3-267.85 2 clast rich zon	es where clast content is up to 75% (still matrix											
						supported). All clast types p	resent including mantle fragments, autoliths, what											
						looks to be angular fragments	s of hypabyssal kimberlite, gneiss and garnet gnei	ss										
						and various indicators.												
						Note: Hypabyssal kimberlite	is olive green, fine grained, with infrequent calci	te										
						crystals (after olivine). Autol	lith kimberlite is dark grey black with mantle frag	ments										
						or pelletals and other country	rock clasts including hypabyssal clasts.											
(						264.3-264.85 Clast rich 75%	, as described above. Upper contact at approxim	ately			1							
	[					54° to CA, lower contact at (	50° to CA.											

### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY				<u></u>	NTS		CORE SIZE	SU D	RVEY EPTH	DIP	AZIMUT	н	HOLE	10. MR.	<b>A-95-03</b>		PAC	E 31/53
PROPERTY	1				DIST	RICT	CONTRACTOR						COLLA	R AZIMU	тн			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLET	ED				CLAE	м	LOGGED BY						ELEVAT	TION				
OBJECTIVI	E				C0-0	RDINATES	DDH COMMENTS						LENGT	H				
í				1					<u> </u>					<u></u>				
	RVAL Ft 🗆	5	s	LITHOT	YPE		DESCRIPTION			:	SAMPLE					ASSA	rs	
FROM	то	REC	RQD	Ennor		GEOLOGY: (cold	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	SUL.	Au ppb				
						Features Include:												
				-		264.3 30x60 mm autolith with	40% mantle fragments (pelletals), beige coloured											
					]	with abundant fine phlogophite,	5% gneiss, warpped in a thin black kimberlite rin	nd,										
					]	264.35-264.45 4 autoliths, 2 h	ypabyssal kimberlite fragments (<20mm), 1 small	u										
						mantle xenolith, 264.55 30x30	angular hypabyssal kimberlite set with a 3mm part	rtial										
						black kimberlite rind, 264.6 25	x30 angular hypbayssal kimberlite, 264.67 autolith	h,										
						264.72 autoliths (3), 264.8 3 sn	nall nucleated autoliths, 264.82 autolith,											
						264.85-264.98 clast poor sectio	n 40%, like that which was described previous to	,										
						264.3.												
						Features:												
						264.87 autolith, nucleated autol	ith, 264.95 small gneiss.											
						264.98-265.13 clast rich unit w	ith upper and lower contacts at 32° to CA.											
						Features:												
						264.98 gneiss, 2 autolith, 1 hyp	abyssal kimberlite, 265.05 gneiss, autolith,											
						265.1 2 hypabyssal clasts, seve	ral mantie.			ŀ								
						265.13-266.0 50-60% clasts as	before, 264.3 in some instances showing weak											
						orientation @ 56° to CA.											]	
						Features:	······································											
						265.35 hypabyssal kimberlite at	ttolith, gneiss, 266.65 3 gneiss one of which is			1								

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TORONTO, ONTARIO, CANADA

COMPANY PROPERTY COMMENC COMPLETI	ED ED ED				NTS DISTRICT TWP/LAT.LONG. CLAIM CO-ORDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		RVEY EPTH	DIP	AZIMUTT		HOLE N COLLAI COLLAI ELEVAT	NO. MIR R AZIMU R DIP ITON	A-95-03 /TH		PAG	iE 32/53
	RVAL Ft □	x	x	LITHOTY	/DE	DESCRIPTION				SAMPLE					ASSAJ	(S	
FROM	то	REC	ikQD		GEOLO	GY: (colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	\$ SUL	Au ppb				
					25 x 30cm, 265.75 11         266.05 autolith.         267.85-281.65 As before         (<2mm) clast 20% cool	Dr.30mm autolith, small garnet chip, 265.9 autolith, ore clast rich sections, coarse clast content 50-60%, fine untry rock, 10% pelletal mantle fragments, 20% talc serp- eiss and garnet gneiss appear to be more abundant from 3 ents. Autoliths and nucleated autoliths, as well as clasts with partial kimberlite coatings, also appears to be more the in size from 50mm to <2mm. Garnet of various colour and styles (<2mm pelletal spherical to elongate to 20mm throughout at relatively the same abundance as previous. en as 3 or 4 discrete grains as well as with mantle clasts. d. Weak alignment of fragments can be seen in some ins rientation. Clay alteration is minimal, greying out the ive green colouration. A stronger clay alteration occurs a ument is 50° to CA. M.S. readings are still low averaging	entine Bornm urs m stances at g 0.4.										
					Autoliths average 1.4-2 Features of Interest: 268.0 60x30 mm autol	2.5 and gneissic clasts range from 1.0-6.8 as seen before.	net										

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TORONTO, ONTARIO, CANADA

COMPANY	•				NTS		CORE SIZE		SUR DEP	VEY PTH	DIP	AZIMUT	н	HOLE	10. MR	A-95-03		PAC	JE 33/53
PROPERTY	-				DIST	RICT	CONTRACTOR							COLLA	R AZIMU	лн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED							COLLA	r Dip				
COMPLET	ED				CLAI	м	LOGGED BY							ELEVA	TION	-			
OBJECTIVE	8				<u> </u>	RDINATES	DDH COMMENTS							LENGT	H				
	RVAL Ft 🗆	5	s	LITHOT	YPE		DESCRIPTION					SAMPLE					ASSAY		
FROM	70	KBC	KQD			GEOLOGY: (c	olour, grain size, texture, minerals, alteration, etc)			SAMPLE NO.	FROM	то	LENGTH	SUL	A <b>n</b> ppb				
						<2mm, 4mm nucleated auto	ith, 268.48 autolith, 268.6 2 garnet, small gne	iss, smal	<u>n  </u>										
						autolith, 268.66 gneiss with p	artial kimberlite coat, 268.7 40mm autolith wit	th 3mm					<u> </u>						
						limestone nucleus, 268.75 2	nucleated autoliths, 269.0 autoliths, gneiss,												
						269.05 nucleated autolith, pel	lletal violet garnet, 269.1 nucleated autolith,												
						269.25 small gneiss, elongate	pelletal garnet, spherical pelletal garnet, small	autolith	<u>ı,  </u>										
						269.3 nucleated autolith, 269	.35-269.4 autolith, garnet pelletal, gneiss, autol	lith,											
						269.55-269.6 2 nucleated aut	oliths, 2 autoliths, a garnet gneiss, 269.67 gnei	ss,											
						autolith, 269.70-269.8 garnet	gneiss, gneiss, 3 or 4 nucleated autoliths 1 of	which is	5										
						40mm, 269.9 garnet pelletal,	2 gneiss, 270.1 30mm autolith, 270.1-270.2 gr	neiss, 4	or	·									
						5 small autoliths, phlogophite	lath, 270.3 2 garnet pelletals, angular autolith,												
						270.35 nucleated autolith who	ere nucleous is 20mm mantle fragment with abu	undant											
						chrome diopside and some re	d garnet, 3 autoliths nearby, 270.45 elongate g	arnet											
						pelletal, 270.65 nucleated aut	olith, 270.72 garnet gneiss, 270.85 nucleated a	utolith,											
						violet garnet, 270.95 mantle?	271.0 garnet gneiss, 271.1 nucleated autolith,												
		271.15 2 green kimberlite w		h black kimberlite partial coats, violet garnet p	elletal,														
						271.27 3 autoliths, 1 garnet,	271.35 alignment @ 50° to CA, 271.38 mantle	17,											
						271.5-271.7 3 small gneiss, s	everal autoliths and phlogophite pelletal,												
						271.77 autolith, 271.85-271.9	5 3 garnet gneiss, 1 garnet pelletal, 2 autoliths							<u> </u>					L

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TORONTO, ONTARIO, CANADA

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COMPANY PROPERTY COMMENC COMPLETT OBJECTIVI	ED ED 3				NTS DISTI TWP/ CLAI	RICT LAT.LONG. M RDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		URVEY DEPTH	DIP	AZIMUTI		HOLE I COLLAI COLLAI ELEVAT	NO. MR. R AZIMI R DIP TION H	А-95-03 ЛТН		PAG	5E 34/53
	RVAL Ft □	x	x	LITHOT	YPE		DESCRIPTION				SAMPLE	<u> </u>				ASSA	(S	
FROM	70	REC	RQD			GEOLOGY: (	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul_	Au ppb				
						272.0-272.1 5 small gneiss garnet pelletal, 272.2 2 autol liths, 1 gneiss, 2 garnet chip: pelletals (macros), 272.55 au 272.85 2 gneiss, 272.94 auto pelletal, 273.2 gneiss, 273.22 1 gneiss, 273.43 gneiss, 273.23 gneiss, 1 garnet, 273.67 chro clasts with partial kimberlite garnet pelletal, 274.05 alignm autolith, 274.25-274.35 2 gar 274.65 autolith, 274.85 50x2 black kimberlite rind, 275.0 a 275.53 nucleated autolith, 27	some with garnets, 2 small autoliths, 272.13 elong, iths, 1 elongate garnet pelletal, 272.25-272.45 5 au s, alignment @ 55° to CA, 2 large (5 and 7mm) g toliths, 272.63 nucleated autolith, 272.75 small gan lith, 273.07 alignment 50° to CA, elongate garnet 5 autolith, 273.3-273.35 2 large garnet pelletals (4 autolith, 273.3-273.35 2 large garnet pelletals (4 autolith, 273.3-273.35 2 large garnet pelletals (4 autolith, 273.3-273.35 4 autoliths, 2-20x40m coats, several phlogophite laths, 1 chrome diopside nent at 60° to CA, 274.05-274.15 autolith, nucleat met pelletals, several small gneiss fragments, 0mm medium green kimberlite fragment within a 2 autolith, kimberlite partial coat, 275.1 autolith, 5.55-275.63 phlogophite megacryst 70x15mm with 3 2 small autoliths, one with a chrome diopside cry	ate uto- armet mm), , 2 mm ed 3mm a a ystal,										
						275.70-275.85 black gneiss, mantle fragment, 276.12 garr black kimberlite rinds, a nucl	garnet gneiss, 3 garnet pelletals, nucleated autolith net gneiss, 276.15-276.3 2 angular green kimberlitt eated autolith, gneiss, garnet, 276.45-276.5 autolit	, e with h,										

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COMPANY	•				NTS		CORE SIZE		SUR DEI	VEY PTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAC	JE 35/53
PROPERTY	,				DIST	RICT	CONTRACTOR	Ī						COLLA	R AZIMI	лн			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED							COLLA	R DIP				
COMPLET	ED				CLAI	м	LOGGED BY					_		ELEVA	TION				
OBJECTIVI	B				<u> </u>	RDINATES	DDH COMMENTS	ĺ						LENGT	н				
	RVAL Ft 🗆	5	5	LITHOT	VDE		DESCRIPTION			<u></u>		SAMPLE					ASSA'	YS	
FROM	то	REC	RQD			GEOLOGY: (	colour, grain size, texture, minerals, alteration, etc)			SAMPLE NO.	FROM	то	LENGTH	sul	At ppb				
·						nucleated autolith with manti	e fragment nucleous, mantle pelletal with a che	rry red											
						garnet, a sub-angular mantle.	green kimberlite as the nucleous for an autolith	1,											
						276.6 2mm chrome diopside	, 276.7 30mm gneiss, 276.76 nucleated autolith	l,					<u> </u>		ľ				
						277.0 alignment at 50° to Ca	A, 277.15 mantle centered nucleated autolith,										<u> </u>		
						277.3 autolith, 277.35-277.4	garnet pelletal, garnet, 2 gneiss, autolith, 277.0	6-277.7	3										
						small gneiss, several small at	utoliths, 277.8 gneiss, 277.9-277.93 3 garnet pe	elletais,											
						277.95 2 autoliths, 278.02 m	ucleated autolith, 278.02-278.1 autolith,												
						278.2 phlogophite lath, 278.3	3 nucleated autolith, 278.37 autolith, 278.42 chi	rome											
						diopside, 278.48 gneiss, 278	.75 gneiss, garnet pelletal, 278.85-279.0 2 small	ll gneis	s,										
						small garnet pelletal, chrome	diopside, nucleated autolith, large irregular auto	tolith,											
						279.0-279.1 2 autoliths (20x3	0mm), elongate sub-rounded mantle with 2-3m	m											
						kimberlite coating, 279.2 nuc	cleated autolith, 279.25 gneiss 10x15mm garnet	macro,											
						279.63 garnet pelletal, orient	ation at 56° to CA, 280.08 gneiss, garnet,							i					
						280.1 mantle, 280.25-280.3	3 gneiss, 1 garnet gneiss, 1 garnet, 280.55 gnei	iss,											
						280.6 phlogophite, 280.65 au	nolith, 280.7-280.75 4 gneiss fragments,												
						281.0-281.15 2 gneiss, 3 auto	81.15 2 gneiss, 3 autoliths, 3 nucleated autoliths, 1 garnet, 281.2 :												
						281.3-281.4 4 garnet pelletal	81.4 4 garnet pelletais, 1 gneiss, 281.5 garnet pelletai, autolith,												
						281.55-281.65 4 violet garne	t pelletals, one of which with chrome diopside,	3											

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COMPANY	r				NTS		CORE SIZE	SURV DEP	'EY TH	DIP	AZIMUT	н	HOLE	NO. MIR	A-95-03		PA	GE 36/53
PROPERTY	Y				DIST	RICT	CONTRACTOR						COLLA		אדע			
COMMENC	CED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	TION		_		
OBJECTIV	в				co-0	RDINATES	DDH COMMENTS						LENGT	н				
INTE M 🗆	RVAL Ft 🗆	x	5	LITHOT	YPE		DESCRIPTION				SAMPLE					ASSA	YS	
FROM	то		RQO			GEOLOGY: («	olour, grain size, texture, minerals, alteration, etc)		NO.	FROM	то	LENGTH	x SUL	Au ppb				
				I		nucleated autoliths, 1 gneiss,	increased clay content, orientation at 50° to CA.											
						281.65-282.4 As before but a	grey green bleached out colouration, clast content							<u> </u>				
						reduced to 45-50% with up to	40% talc serpentine and clay matrix.							<u> </u>				
						282.33-282.4 90% fine graine	d matrix material with moderate to strong orientation	n						]				
						at 60° to CA, possibly a disso	olution devolitization pathway, not a dyke, contacts a	are						<u> </u>				
						abrupt but not cross cuttings.												
		l				281.9 Nucleated autolith, 282	2.05 50x40 autolith, 282.2 autolith, 282.3 nucleated											
						autolith, M.S. is average .35.									<u> </u>			
		[				Note: The above could be a c	contact scour of another surge event?											
						282,4-295.0 Kimberlite as bef	ore but less clay alteration, darker matrix. Clast											
						content is 55%. Indicator min	erals, autoliths, gneiss, and mantle xenoliths appear									·		
						to be less abundant overall the	in the previous section prior to 281.65.											
						M.S. value ranges from 0.3-0.	8 but average 0.55. Autoliths have M.S. values of											
						1.5-2.0. Orientation or alignn	nent of clasts is seen rarely and too weak for											
						measurement.												
						295.0 Fine grained, matrix ric	h, fairly sharp contact at 65° to CA. Possible event	۱ –										
						contact. Earlier on in the hole	ontact. Earlier on in the hole this was referred to as an ash unit bedded feature											
						long up hole or +/- north					1			4				

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COMPANY	r				NTS		CORE SIZE	51	URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MIR	A-95-03		PAC	3E 37/53
PROPERTY	r				DIST	RICT	CONTRACTOR						COLLA	R AZIMU	тн			
COMMEN	CED		•••••		TWP	/LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLA	 M	LOGGED BY						ELEVA	TION				
OBJECTIV	E					RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	x	\$		VDE		DESCRIPTION				SAMPLE					ASSA	YS	
FROM	то	REC	RQD	LIIHOI	IL	GEOLOGY: («	lour, grain size, texture, minerals, alteration, etc.)		SAMPLE NO.	FROM	то	LENGTH	% SUL	Au ppb				
						Features of Interest:												
						282.4 autolith, 282.6 autolith,	gneiss, 282.67 large orange garnet pelletal (4mm	),										
						282.7 chrome diopside, 282.7	5-282.8 2 nucleated autoliths, 283.0 gneiss,											
						283.05 autolith (mantle kernel	), 283.1 3 elipsoidal mantle fragments set in black	<u> </u>										
						kimberlite (segregation globua	17), 283.15 40x60 mantle xenolith with abundant											
<u> </u>						violet garnets and minor chron	ne diopside, 283.3 40x60 autolith, 283.55 elongat	te	<u> </u>									
						garnet pelletal, 283.6 garnet p	elletal, 283.65 2 autoliths, 1 garnet gneiss fragme	nt,	<u> </u>									
						283.9 small gneiss, 283.96 2 a	autoliths, garnet, 284.15-284.2 garnet gneiss, gne	iss,		<u> </u>								
						284.28 nucleated autolith, 284	.5-284.55 large mantle pelletal, 30x30 autolith,											
						284.63 small gneiss, 284.73 a	utolith, 284.83 autolith, 284.94 pelletal violet gam	net,										
						285.05 gneiss, 285.2-285.35 2	small autoliths, 1 elongate violet garnet pelletal,											
						1 orange pelletal, 1 orange ma	cro garnet, 1 small nucleated autolith, an autolith	of										
						other kimberlite coated by the	fresher black kimberlite, 1 fine < 1mm ilmenite,											
						285.5 small garnet gneiss, sma	all red garnet, 285.4 < 30mm gneiss, 285.73 15m	m										
						mantle pelletal, 285.8 nucleate	d autolith, 285.85 small gneiss, 285.9 3mm black											
						kimberlite rind around an earli	er kimberlite, 286.12 orange pelletal, 286.72 sma	ull .										
						gneiss, 286.95 50x60 garnet g	neiss (60% red garnet), 287.02 violet garnet pelle	tal,										
						287.18 small autolith, 4mm ph	logophite pelletal, 287.35 gneiss, 287.63 autolith,											

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE	ST I	URVEY DEPTH	DIP	AZIMUTI	н	HOLE	10. MRA	-95-03		PAG	E 38/53
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	r azimut	пн			
COMMENC	ED				TWP	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	Ð				CLA	M	LOGGED BY						ELEVA'	TION				
OBJECTIVE	1				co-c	PRDINATES	DDH COMMENTS						LENGT	H				
	RVAL Ft 🗆	x	x	LITHOT	VDE		DESCRIPTION			<u>, , , , , , , , , , , , , , , , , , , </u>	SAMPLE		<u> </u>		A	SSAY	ΓS	
FROM	το	REC	RQD	LIIIIOI		GEOLOGY: (colo	ur, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	SUL	Au ppb				
·						287.78 orange garnet pelletal, 2	87.95 autolith, 287.98 gneiss, 286.13 autolith,											
L						288.2 10mm elongate orange ga	rnet pelletal, 288.27 autolith, 288.33 nucleated											
						autolith, 288.43 small gneiss, 28	38.48-288.52 gneiss, autolith, garnet pelletal,											
						288.65 nucleated autolith, 288.7	gneiss, 288.75 nucleated autolith, 288.8 nucleate	zd	l									
						autolith, small autolith, 289.15 s	small autolith, garnet, 289.35 15mm mantle pellet	al,										
						289.5 small gneiss, 289.75 gnei	ss, 290.2 gneiss, 290.42 garnet gneiss (3mm), 10	mm										
						orange garnet macro, 290.53 ga	rnet pelletal, 290.65 gneiss, 290.8-290.92 7 smal	I										
						gneiss fragments, 291.22 angula	r mantle? xenolith, 291.4 gneiss, 2 garnet pelleta	ls,										
						291.72 nucleated autolith, gneiss	s, 291.77 violet garnet pelletal, 291.86 nucleated											
						autolith, 291.9 garnet pelletal, 2	92.2 gneiss, 292.6 2 garnet pelletals, 292.8 autoli	ith,										
						292.85-292.9 2 autoliths, 292.95	5 gneiss, 292.98 garnet pelletal, 293.0 2 gneiss,											
						293.33 gneiss, 293.6 gneiss, 293	3.65 autolith, 293.68-293.76 1 large dark gneiss,											
						(100x40mm), 1 garnet gneiss, 2	93.85 orange garnet macrocryst, 294.13 autolith,											
			_			294.33 2 gneiss, 294.4 gneiss, 2	294.6-294.8 3 small gneiss, 7 country rock clasts											
						with partial kimberlite coats.												-
						295.0-295.06 fine grained beige,	, 80%, with minor country rock and kimberlite											
						(normal) matrix, orientation 65*	to CA.			ľ								
				· · · · · · · · · · · · · · · · · · ·		295.06-295.15 gradational from	80% fines to normal matrix oriented at 60° to C	<b>A</b> .										
						295.15-295.3 kimberlite as befor	re, no indicators or features of interest.											

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COMPANY	¢				NTS		CORE SIZE	S 1	URVEY DEPTH	DIP	AZIMUTI	•	HOLE	NO. MR	A-95-03		PAC	BE 39/53
PROPERTY	r				DISTR	RICT	CONTRACTOR						COLLA	R AZIMI	лтн			
COMMEN	CED				тwр/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAD	M	LOGGED BY						ELEVA	אסח			<u> </u>	
OBJECTIV	E				CO-01	RDINATES	DDH COMMENTS						LENGT	H				
	RVAL Ft  Ft  To  REC  S  REC  S  C  ROD  LITH			DE		DESCRIPTION			ļ	SAMPLE	<u> </u>				ASSA'	YS		
FROM	то	REC	RQD			GEOLOGY: (co	Nour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	r SUL	Au ppb				
						295.3-295.4 15 to 50mm band	of fine grained beige material, cross cuts at 30°											
						swinging through 40° to 52° t	o CA dissolution/devolitization pathway? and/or											
						infilling of a parting fracture.												
						295.3-317.5 As before but gr	eissic fragments and clast are more abundant. La	irger							•			
						mantle xenoliths are also more	abundant as are indicators. Autoliths and nuclea	ited										
						autoliths appear to be about th	e same. The matrix is far less altered and by 300	) has										
						changed from a grey olive gre	en to a black olive green. The later colouration i	s										
						similar to the majority of the p	previous autoliths and therefore are harded to pick	out.								1		
						M.S. reading values gradually	increase from an average of .6 to 1.2 or so by 3	17.5										
						reflecting the loss of magnitite	destruction through talc serpentine clay alteration	ı <b>.</b>			1							
					Ĩ	Clast orientation was not obser	rved.				1							
						Features of Interest:					1							
					295.35 pelletal garnet, ilmenite, 295.4-295.55 2 small garnets, 5 gneiss fragme													
						1 ilmenite 1 autolith and 1 m	cleated autolith 295 6 gneise autolith 295 74 gn	eicc										

295.79 gneiss, garnet gneiss, garnet, 295.8-295.85 2 small gneiss, 1 large gneiss,

296.0-296.15 4 gneiss, 296.25 small garnet pelletal, 296.3-296.4 2 black gneiss, 296.55 20mm mantle xenolith, chrome diopside (free), 296.6-296.7 3 small gneiss,

autolith, nucleated autolith, 295.9 50mm green autolith, 295.95 gneiss,

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COMPANY	r			<u> </u>	NTS		CORE SIZE		URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAC	E 40/53
PROPERTY	( 				DISTRIC	СТ	CONTRACTOR	-					COLLA	R AZIMI	лтн		<u> </u>	
COMMEN	CED				TWP/LA	AT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAIM	l <u> </u>	LOGGED BY						ELEVA	TION				
OBJECTIV	<u>e</u>				CO-ORE	DINATES	DDH COMMENTS	Ĺ	[	<u> </u>			LENGT	H				
	RVAL Ft 🗆	z	5	LITHOT	YPE		DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD			GEOLOGY:	(colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						1-60mm gneiss, 297.0-297.	05 2 gneiss, 297,2 autolith, 297,3-297,4 6 gneiss,											
					2	297.5-297.6 2 garnet pellet	als, 1 gneiss, angular clast (green kimberlite?/mantle	e) with										
						a 3-4mm rim of black kimb	erlite which also contains a violet garnet pelletal, 29	98.15									Í	
					r	nucleated autolith, 298.22 g	gneiss, 298.4 50mm mantle xenolith with chrome die	opside										
						and garnets (violet), small	garnet pelletal, orange garnet macrocryst (2mm),											
					2	298.53 orange garnet, 298.	6 autolith, 298.65 garnet gneiss, 298.73 gneiss,											
					2	298.82 garnet pelletal, 298.	.95 garnet pelletal, 299.05-299.1 2 gneiss,											
					2	299.25 phlogophite concent	tration, 299.4 autolith, 299.45 small garnet gneiss,											
					2	299.65 autolith (30x30mm)	, 299.75 30x40 gneiss, 299.9 mantle sub-angular and	da										
					s	small gneiss, 300.05 small	gneiss, kimberlite coated country rock, 300.1 25x30	mm										
					r	mantle xenolith black core	3-5mm alteration rim and a 2-3mm kimberlite rind,											
					3	300.15 nucleated autolith, 3	00.23 sub-angular mantle/green kimberlite clast with	h										
					ь	black kimberlite rind, 300.3	3-300.4 2 autoliths, 2 nucleated autoliths, gneiss, gar	met										
					8	gneiss, 300.45 autolith, 300	).5 nucleated autolith (25x25mm), 300.65 gneiss, elo	ongate										
					8	garnet pelletal, 300.9 nucle	ated autolith, 300.98 autolith, 2 gneiss, 301.1 gneiss											
					3	301.3 elongate orange garm	et pelletal, 301.75 autolith, 301.85 garnet pelletal,											
					3	301.9 autolith, 302.0 autoli	th, gneiss, garnet pelletal, 302.25 autolith, 2 gneiss,											
					3	302.55 nucleated autolith, 3	02.65 nucleated autolith, 2 gneiss, garnet pelletal,											

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COMPANY					NTS		CORE SIZE	SI I	URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MIR	<b>A-95-03</b>		PAC	E 41/53
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIMU	тн			
COMMENC	ED				TWP	LAT.LONG.	DATE LOGGED				_		COLLA	R DIP				
COMPLETE	ED.				CLAI	M	LOGGED BY				-		ELEVA	אסוד	·			
OBJECTIVE	3				CO-0	RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	\$	5	LITHOT	YPE		DESCRIPTION	<u> </u>			SAMPLE				1	ASSAN	/S	
FROM	то	KEC.	RQD				our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul.	As ppb				
						302,75 autolith, 302,98 autolith	. 303.0 30x25mm mantle xenolith, gneiss, 303.08	8	]									
						autolith,			Į		_		<u> </u>					
						303.10-303.25 large gneiss, 303	3.35 red garnet macrocryst, autolith, 303.48 nucle	eated			_							ı
						autolith, 303.6 small mantle (15	5mm), 303.75-303.8 2 elongate garnet pelletais, 2	2										
						gneiss, 303.85 garnet gneiss, 30	03.9-303.95 3 autoliths, 304.12 gneiss, 304.3 gar	met										
						macrocryst, 304.35 elongate ga	met pelletal, 304.6 gneiss, 304.65 garnet, 304.9	small										
						304.gneiss, 305.0-305.05 2 gne	iss, 1 garnet, 305.1 autolith (40x30mm), 305.33											
						autolith, 305.4 40x40mm mantle	e xenolith with violet garnet and chrome diopside	<b>;</b> ,			_							
						305.44 gneiss, 305.6 small gnei	iss, 305.75 nucleated autolith, 305.9 phlogophite,	,										
						306.0 phlogophite pelletal, 306.	14 20x30mm gneiss, black gneiss, 306.25 garnet,	t.										
						garnet macrocryst, gneiss, 306.	34 garnet pelletal, 306.5 gneiss, 307.05 gneiss,											
						307.18 small garnet gneiss, 307	.22 nucleated autolith, 307.3-307.4 gneiss, 2 larg	ge										
						nucleated autoliths, garnet pelle	tal, 307.45 gneiss, 307.52 garnet macrocryst,											
						307.6 clongate garnet pelletal (4	mm), small garnet chip, 308.05 garnet macrocry.	vst,			-							
						308.15-308.25 2 autoliths, gneis	ss, elongate garnet pelletal, 308.45-308.6 gneiss,	2										
						garnet gneiss, 308.65-308.82 17	70x30mm autolith with 2 chrome diopside at outer	r										]
						edge, 308.85 gneiss, 308.97 gas	rnet gneiss, 309.0 gneiss, phlogophite, 309.05 gan	met,										
						309.2 elongate garnet pelletal, 3	309.3 mantle xenolith, 309.35 autolith, 309.4 (3)											
						gneiss, nucleated autolith, green	kimberlite nucleous, 309.5 green kimberlite with	h			1							

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TORONTO, ONTARIO, CANADA

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COMPANY	·				NTS		CORE SIZE	I	epth	DIP	AZIMUT		HOLE	NO. MR.	A-95-03		PAG	E 42/53
PROPERTY	!				DISTR	TOL	CONTRACTOR						COLLA	r azimu	THSI			·
COMMEN	CED				TWP/I	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAD	м	LOGGED BY						ELEVA	TION				
OBJECTIV	B				CO-01	RDINATES	DDH COMMENTS						LENGT	н				
<u></u>	· · · · · · · · · · · · · · · · · · ·	1	<u> </u>	T	)r				1					1				
INTE M 🗆	RVAL Ft 🗆	×	x	   lithoty	PF		DESCRIPTION				SAMPLE				1	ASSA	/S	
FROM	то	REC	RQD			GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
						black kimberlite rim, 309.65 a	and 309.72 garnet gneiss chips, 309.85 3 gneiss,											
						310.05 garnet pelletal, 310.54	mantle xenolith (10x20mm), 310.6 garnet pellet	al,										
						310.7 and 310.8 gneiss, 310.8	5-310.95 20 to 30mm wide calcite vein at 30° to	o CA,										
						311.08 garnet pelletal, 311.2 g	garnet pelletal, 311.33 gneiss, 311.45 gneiss,											
						autolith, 311.65 autolith (20x3	0mm) and mantle xenolith (25x25mm), 311.85 a	utolith,										
						311.9 autolith, 311.95 2 game	et pelletals, 312.05 gneiss, 312.3 2 small gneiss,											
						312.4 gneiss, 312.5-312.6 20x	20mm autolith, 10x20 mantle xenolith with chro	me										
						diopside, small gneiss, green h	kimberlite 20x50mm with a 3-5mm rind of black											
						kimberlite, 312.65-312.15 7 sr	nall gneiss chips, 313.2 autolith, 313.4-313.45 2	2										
						nucleated autoliths, 313.64 aut	olith, 313.95 small gneiss, 314.05 autolith,											
						314.2 gneiss, 314.4 gneiss, 31	4.65 gneiss, 314.7 2 mantle xenoliths, 314.74 gr	neiss,										
						314.75-314.9 4 gneiss, 3 autol	iths, 314.95 30x40mm gneiss, autolith, 315.3 2	garnets,										
						315.35 small gneiss, 315.4 gas	met pelletal, 315.4-315.47 3 autoliths, 1 gneiss,											
						315.52-315.6 5 gneiss, 1 pelle	tal garnet,		·									
						315.7-315.85 2 gneiss, 2 garne	et gneiss, 1 autolith, 315.96 garnet macrocryst,											
						316.1 2 garnet gneiss, 316.3-3	16.85 6 small gneiss chips, 1 phlogophite lath,					 	<u> </u>			<u> </u>		
						316.95 4 gneiss, 1 garnet pelle	etal, 317.15 2 garnet gneiss, small mantle xenolit	th,										
						317.3 garnet pelletal, 317.5 gn	7.3 garnet pelletal, 317.5 gneiss.											
						317.5-336.5 Random break at	317.5, by 336.5 a step up increase in M.S. valu	ues, and			1						i	

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TORONTO, ONTARIO, CANADA

COMPANY PROPERTY COMMENC COMPLET OBJECTIVI	? CED ED E				NTS DISTRICT TWP/LAT.LONG. CLAIM CO-ORDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		IRVEY EPTH	DIP		H	HOLE COLLA COLLA ELEVA LENGT	NO. MRA R AZIMU R DIP TION H	1-95-03 TH		PAGE 43/53
			5	LITHOTY	PE	DESCRIPTION				SAMPLE				A	SSAYS	
FROM	то	REC	RQD		GEOLOGY	: (colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	X SUL	Au ppb			
					increased lack of alteration	of the matrix. For the most part this section is very										
					similar to the previous bot	h in clast content and abundance as well as indicators.	•			<u> </u>						
					Except for one section the	matrix is darker black green reflecting a decrease in			<u> </u>							
					alteration to talc and serpe	ntine. Autoliths are more difficult to see as they are			ļ			ļ				
					the same colour as the ma	trix. Larger ones are seen due to their lack of clasts			ļ		<u> </u>	ļ			-+	
					primarily.						ļ	ļ				
					320.1-320.4 Darker black	matrix with calcite filled orientation at 56° to CA upp	per						<b> </b>			
					contact and 40° to CA low	ver contact. Possibly just a preservation zone (alteration	on									
					window).	· · · · · · · · · · · · · · · · · · ·										
					330.4-332.5 Grey beige a	lteration of matrix (clay). Clasts show a preferred										
					orientation at 40-46° to C/	A. Alteration boundaries are reasonably sharp over 10	)mm.									
					No sign of orientation on e	ther side. 330.6-331.55 M.S. at 0.4-0.7, averaging (	0.5.									
					M.S. otherwise 317.5-326,	0.5 to 1.4, averaging 1.0, 326-336.5 1.2-3.5, averaging	ing									
					1.8. There is really no vis	sual difference between pre 326 and post 326. Perhap	s an			<u> </u>						
					alteration threshold exists	where magnetite is no longer destroyed from the matri	x.			L	ļ					
					Features of Interest:											
					317.5 gneiss, 317.6 small	garnet gneiss, gneiss 20x30, 317.87 autolith, 317.97						<u> </u>				
				autolith, 318.05 small garm	et gneiss, 318.13 garnet gneiss, 318.15 mantle pelletal	1,										

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUTI	н	HOLE	NO. MR	A-95-03		PAG	JE 44/53
PROPERTY					DIST	RICT	CONTRACTOR	Γ					COLLA	R AZIMI	лн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	Ð				CLAI	M	LOGGED BY					7.	ELEVA	TION				
OBJECTIVE	I				co-o	DRDINATES	DDH COMMENTS						LENGT	H				
							DESCRIPTION				SAMPLE				4	ASSAY	ſS	
FROM	то	REC	RQD	LITHOT	YPE	GEOLOGY: (colo	our, grain size, texture, minerals, alteration, etc)		SAMPLE	FROM	то	LENGTH	¥ SIN	<u>^</u>				
														<u> </u>		╞╼╾┽		
						318 3-318 35 3 gamet pelletals	regation, 516.25 gness,	1										
f					{	earnet gneice 318 4 3 garnet en	neise 318 46-318 56 large gneise 318 75-318			1				[				
						ganice giteiss, 510.4 5 gannet gi	n up mantle fragment sutolith and 11x10mm	mantle			1	<u> </u>				├ <b>-</b> †		
						repolith with a 4x3 ourple game	at 319.0 gamet macrocryst 319.04 gneiss	manne		+	1							
					{	319 22 gneiss (garnet) 319 3 30	Ox15mm mantle venolith 319.4 gneise 319.65	5 02500			+							
						celletal 319.7 mantle renolith a	with abundant gamet and chrome dionside game	met	<u> </u>	1		<u> </u>		[				
						anciss 319.84 garnet macmorry	st 319 93 garnet macrocryst 320 07 violet ga	amet		1	-	<u> </u>						
						pelletal 320.2 garnet 320.25 p	arnet eneite 320 37 2 garnet macrocryste en	eise		+	+			1		[]		
						320 5 garnet nelletat 320 55-32	0 64 3 earnet enersts 320 7 2 enersts 320 75 1	nucleate	м I	†	1							
						autolith, 320.8-320.86 3 gneiss.	samet, 321.0 nucleated autolith.			1	1					<b> </b>		
						321.1-3231.2.3 gpeiss. 1 garnet	nelletal. 321.4-321.45 2 garnet gneiss, autolit	th.		1	1	<u> </u>						
						nucleated autolith, 321,5 nucleat	red autolith, garnet, 321,55 violet garnet.				1							
					[	321.6-321.7 chrome dionside, su	mall gneiss, garnet pelletal, mantle xenolith wi	ith		1	1							
					{	garnets and chrome diopside, 32	21,78 gneiss, garnet pelletal, 321,93 autolith.				1							
						321.95 2 gneiss, 322.04 garnet	pelletal, 322.08 garnet pelletal, 322.12 garnet	pelletal	_	1						[ <b></b> ]		
						322,25-322,3 2 gamet pelletals	autolith 322.33-322.4 3 gneiss autolith 2 ga	arnet		1	1							
						pelletals, megacryst of garnet, 3	22.47 autolith, 322.6-322.67 gneiss, 322.7 ma	antle	-1	1	1							
						xenolith, 3 garnet pelletals, 322,	78 3 garnet gneiss fragments, 322.84 autolith,			1	1							
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COMPANY	ć				NTS		CORE SIZE	S 1	URVEY DEPTH	DIP	AZIMUTI		HOLE	10. MR/	A-95-03		PAC	E 45/53
PROPERTY	ł –				DIST	RICT	CONTRACTOR						COLLA	R AZIMU	лн			
COMMEN	CED		_		TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	м	LOGGED BY						ELEVA	NON				
OBJECTIV	E				co-0	RDINATES	DDH COMMENTS						LENGT	H				
	RVAL Ft 🗆	5	x	LITHOTY	PE	· · · · · · · · · · · · · · · · · · ·	DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD	Dimori		GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Ан ррб	i			
						322.87 small gneiss, 323.05 il	menite, calcite infilling, 323.1-323.25 5 small gne	eiss,										
						2 larger gneiss, garnet pelletal	, 323.25-323.4 2 nucleated autoliths, autolith, sma	all	<u> </u>									
						gneiss, nucleated autolith with	gneiss nucleous, garnet pelletal, mantle xenolith,											
					_	323.42-323.45 garnet gneiss, t	black gneiss, 2 garnet pelletals, 323.54 autolith,											
						323.67-323.77 garnet, 2 garne	et gneiss, nucleated autolith, garnet pelletal, 323.8	4x6										
	_					mantle xenolith with garnet, 32	23.9 mantle xenolith, garnet, 324.0 garnet gneiss,											
						autolith, 324.05-324.15 2 garn	et chips, 1 gneiss chip, 324.23 autolith, garnet,											
						324.27 garnet gneiss, 324.32 i	mantle xenolith with garnets, 324.4-324.47 2 gnei	ss,										
						324.55 autolith, 324.65 autolith	h, 2 garnets, 324.85-324.92 ilmenite, mantle xeno	olith,										
						2 pelletal garnets, 325.1-325.2	2 gneiss, 2 garnet gneiss, 325.35 gneiss,											
						325 55-325 6 gamet nelletal	armet 325.65 gneiss (garnet) 325.82 ilmenite in										$\square$	

kimberlite coating, 325.86 black gneiss, 326.15 gneiss, 326.23 ilmenite, 326.3 garnet gneiss, 326.38 3x4mm mantle xenolith with garnet, 326.42 gneiss, 326.53 garnet macrocyrst, 326.66 small gneiss, 326.88 garnet gneiss, 326.93 2 ilmenite, 326.96 2

small gneiss, 327.05-327.16 large gneiss and gneiss, 327.23 small gneiss, 327.7 garnet pelletal, 327.82 garnet, 327.85-327.92 2 gneiss, black gneiss, garnet macrocryst, 328.05 gneiss, 328.5 garnet pelletal, 328.8 gneiss, 328.9-328.95 garnet gneiss, clongate garnet pelletal, 329.05-329.12 70x40mm gneiss, small gneiss,

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TORONTO, ONTARIO, CANADA

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COMPANY	,				NTS		CORE SIZE	St D	JRVEY DEPTH	DIP	AZIMUT	н	HOLE	io. Mr/	-95-03		PA(	)E 46/53
PROPERTY	·				DISTRICT		CONTRACTOR						COLLA	R AZIMU	ТН			
COMMENC	ED				TWP/LAT.LC	DNG.	DATE LOGGED						COLLA	R DIP	_			
COMPLET	ED				CLAIM		LOGGED BY						ELEVA	TION				
OBJECTIVI	B				CO-ORDINA	res	DDH COMMENTS						LENGT	4				
INTE M 🗆	RVAL. Ft 🗆	5	5	LITHOTY	PE		DESCRIPTION				SAMPLE				l	ASSA	/S	
FROM	то	ROC	KQD			GEOLOGY:	(colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
					329.2	-329,25 2 gneiss, 329	.26 calcite infilling, 329.43 autolith, 329,45 2 gneiss											
					329.5	20x30 garnet gneiss,	329.7-329.9 garnet, 4 garnet gneiss, 2 small gneiss,											
					329.9	5 autolith, 330.05 bla	ck gneiss, 330.15 garnet 3x4mm angular, 330.2 blac	k										
					gneiss	s, garnet pelletal, phlo	gophite lath, 330.25-330.3 chrome diopside, 2 gneiss	5,										
					garne	t pelletal, 330.35 gnei	ss, 330.45 gneiss, 330.5 and 330.55 gneiss,											
					331.5	5 phlogophite, 331.65	phlogophite, 331.83 autolith, 332.15 phlogophite,	_										
					332.3	-332.4 2 small autolith	hs, 2 small gneiss, 332.5 autolith, 332.6 garnet pellet	al,										
					332.9	5 phlogophite, 333.0	mantle xenolith, 333.15 phlogophite macrocryst,											
					333.2	5-333.3 garnet gneiss,	2 garnet pelletals, autolith, 333.38 autolith,											
					333.4	-333.5 garnet gneiss,	2 gneiss, mantle, small autolith, 333.65 gneiss,											
					333.6	8 garnet macrocryst, 2	333.75 gneiss, 334.0-334.1 2 gneiss, garnet gneiss,											
					334.2	garnet pelletal, gneiss	s chip, 334.48 elongate garent pelletal, small gneiss,											
					334.5	5 elongate garnet pelle	etal, 334.6 garnet pelletal, 334.7 garnet gneiss,											
					334.8	gneiss, 335.1 40x40n	nm gneiss, 335.15 elongate garnet pelletal, 335.2 gar	met										
					gneiss	, 335.3 2 garnet gneis	ss, 335.37 30x30mm garnet gneiss, 335.5 40x50mm	garnet										
					gneiss	, garnet, 335.58 oranj	ge garnet with pyroxene (eclogite?), 335.8 black gne	iss,										
					335.9	garnet macrocryst, 33	35.95 violet garnet pelletal, ilmenite and several					ļ						
					micro	scopic free ilmenite, 3	36.0-336.1 2 autoliths, nucleated autolith, 336.2											
					20x40	mm autolith, 336.35 r	nucleated autolith, 336.4-336.5 8 small gneiss,											

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TORONTO, ONTARIO, CANADA

COMPANY	r				NTS		CORE SIZE		SURVI	EY H	DIP	AZIMUT	н	HOLE	NO. MR	A-95-03		PAG	E 47/53
PROPERTY	r				DIST	RICT	CONTRACTOR	Γ						COLLA	R AZIMI	лтн	_		
COMMEN	CED				TWP	/LAT.LONG.	DATE LOGGED	[				_		COLLA	r dip				
COMPLET	ED				CLAI	M	LOGGED BY	Ľ						ELEVA	TION				
OBJECTIV	B				co-0	ORDINATES	DDH COMMENTS	Ľ						LENGT	H				
	RVAL Ft 🗆	x	 x	LITHOT	VPE		DESCRIPTION				S	SAMPLE					ASSAY	'S	
FROM	то	REC	RQD			GEOLOGY: («	colour, grain size, texture, minerals, alteration, etc)		s	NO.	FROM	то	LENGTH	sul	An ppb				
						chrome diopside.													
 						336.5-348.7 Sharp increase	in M. S. values. 326.5-346.0 range of M.S. rea	adings	is			<u> </u>							
						2.0-3.4, averaging 2.6 and fr	om 346.0-348.7 the range is 3.2-4.4, averaging	3.8.											
						There is no visible difference	between the two levels. The matrix is generally	y dark							L				
						grey black green reflecting as	nother drop in the degree of talc serpentine alter	ation.											
						The abundance of indicators	seems to have decreased significantly. Pelletal r	mantle							<u> </u>				
						fragments (serpentine after ol	ivine) are still similar in abundance to before. (	Gneiss							<u> </u>				
						clast are perhaps slightly redu	uced, in particular garnet gneiss. Overall countr	ry rock											
						clast type and abundance are	still similar to before. Autolith and nucleated a	utoliths							<b> </b>				
						are reduced but in many case	as are hard to see unless they are greater than 30	Jmm							<u> </u>				
						because they blend so well w	ith the background matrix.							L					
						341.9-342.4 area of moderate	clay alteration giving a buff grey discolouration	n and											
						bounded by low angle black	coated fractures at $\pm$ 30° to CA.												
						345.8-346.2 Moderate clay al	teration with 50mm gradational contacts on eithe	er side.	<u>.                                    </u>										
						348.7 Sharp colour change t	o dark black and increase in M.S. readings. Co	ontact											
						is at +/- 64* to CA (alteratio	n window). Overall increase in phlogophite con	ntent as											
						pelletal laths and spheroids as	s well as macrocrysts and as fine grained matrix	size											
						up to 2%. An increase in the	e appearance of ilmenite is also worthy of note.								<b> </b>				
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TORONTO, ONTARIO, CANADA

COMPANY			 	NTS	<u></u>	CORE SIZE	S	urvey Depth	DIP	AZIMUTI	н -	HOLE	10. MR	A-95-03		PAC	E 48/53
PROPERTY			 <u> </u>	DIST	RICT	CONTRACTOR						COLLA	R AZIMI	лн			<u> </u>
COMMENC	ED			TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	D			CLAI	м	LOGGED BY						ELEVA	TION	_			
OBJECTIVE			 	<u> </u>	RDINATES	DDH COMMENTS						LENGT	H				
	RVAL Ft []	3	\$ LITHOT	YPE		DESCRIPTION				SAMPLE	<u> </u>				ASSA'	/S	
FROM	то				GEOLOGY: (∞)	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb				
					Features of Interest:	· · · · · · · · · · · · · · · · · · ·											
					336.52 gneiss, 336.55 nucleate	d autolith, gneiss, 336.7 ilmenite, 336.8-336.9 2	small										
					gneiss, autolith, ilmenite, 336.9	07 orange garnet, 337.1 ilmenite macrocryst (bar	ely),										
					337.25 small gneiss, 337.4 vio	let garnet macrocryst, 337.65 elongate garnet pel	lietal,										
					small gneiss chip, 337.7 autolit	h, 337.78 autolith, small gneiss chip, 338.05 2 g	neiss,										
					338.15 phlogophite macrocryst	, 338.18 small mantle xenolith with garnet (viole	t) and										
					chrome diopside, 338.2-338.25	garnet gneiss, 2 gneiss, 338.4 2 phlogophite pel	lictal										
					laths, gneiss, 338.45 gneiss, 33	8.55 nucleated autolith, 338.65-338.8 2 autoliths	s, 2										
					nucleated autoliths of which on	e has gneiss as its nucleous, 2 gneiss, garnet me	ga-									Ĺ	
					cryst or large macrocryst (from	garnet gneiss), phlogophite pelletal, 338.9 viole	x.										
					garnet pelletal, 338.95 violet ga	arnet pelletal, 339.0-339.5 2 nucleated autolith,											
					339.1 garnet gneiss, phlogophit	te, 339.23 garnet gneiss, 339.25-339.35 3 gneiss											
					2 elongate garnet pelletals, auto	olith, 2 nucleated autolith, garnet gneiss, 339.45	gneiss,										
					339.5-339.55 garnet pelletal, gr	neiss, garnet gneiss, 339.6-339.7 5 gneiss fragme	ents,										
					339.8 small gneiss, 339.9 garne	et pelletal, 340.05 orange garnet pelletal, 340.1											
					autolith, 340.15 small gneiss, 3	40.35-340.45 3 gneiss, mantle, garnet pelletal, 3	40.5										
					phlogophite, 340.6 3 small gnei	iss chips, 340.7-340.8 2 nucleated autoliths, 2 sn	nali										
					gneiss chips, garnet pelletal, ph	logophite pelletal, 340.85, 340.98 gneiss, 341.02	52										
					gneiss, 341.3 small gneiss, 341	.35-341.4 3 gneiss (small), garnet pelletal, 341.7	5										

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TORONTO, ONTARIO, CANADA

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COMPANY	,			NTS		CORE SIZE	SU	URVEY DEPTH	DIP	AZIMUT	н	HOLEN	10. MR	A-95-03		PAC	E 49/53
PROPERTY			_	DIS	TRICT	CONTRACTOR						COLLA	r azımı	лтн			
COMMENC	ED			TWI	/LAT.LONG.	DATE LOGGED						COLLAI	r dip				
COMPLET	ED			CLA	м	LOGGED BY						ELEVAT	NON				
OBJECTIVI	3			CO-	ORDINATES	DDH COMMENTS						LENGT	4				
	RVAL Ft 🗆	5	5	LITHOTYPE		DESCRIPTION				SAMPLE					ASSAY	/S	
FROM	то	REC	RQD	Liniorite	GEOLOGY:	(colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	% SUL	An ppb				
					mantle, 341.8 gneiss 30x40	mm with 2-5mm rim of kimberlite, 342.1 gneiss	garnet										
N I					н.				1		1				1 1		

				I LITHOTYPE							L	 		
FROM	то	KBC	KQD		GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	% SVI.	∧≡ pp8			
					mantle, 341.8 gneiss 30x40mm with 2-5mm rim of kimberlite, 342.1 gneiss, garnet									
					gneiss, garnet macrocryst, 342.2 autolith, gneiss, 342.35 2 nucleated autoliths, 342.4									
					garnet pelletal, 342.6 2 gneiss, 342.65 phlogophite macro, 342.7 mantle, 342.9									
					gneiss, 343.18 gneiss, 343.3 gneiss, 343.45 mantle, 343.5-343.8 2 autoliths, 2								_	
					nucleated autoliths, 3 gneiss, 343.95 phlogophite pelletal, 344.35 mantle, 345-345.05									
					gneiss, nucleated autolith, 345.15 gneiss, 345.3 elongate garnet pelletal, 345.4									
					elongate garnet pelletal, gneiss chip, 345.6 30x40 gneiss, small autolith, 345.75									
					mantle, 345.85 nucleated autolith, gneiss, 345.95 nucleated autolith with gneiss,									
					346.05 garnet pelletal, 346.23 2 gneiss fragments, 346.55 gneiss, 346.63 small									
					autolith, 346.65 20x50 gneiss, garnet pelletal, 346.8 phlogophite pelletal,									
					346.9 mantle, 346.98-347.2 4 autoliths, nucleated autolith and 2 gneiss,									
					347.25-347.35 4 gneiss, 347.7 garnet gneiss in a nucleated autolith, phlogophite sub-									
					macrocryst, 347.9 small gneiss chip, 348.0 gneiss, 348.15 garnet pelletal, 348.2									
					mantle, 348.25 garnet pelletal, 348.35 2 garnet pelletals, 348.45 mantle, 348.5									
					phlogophite pelletal, 348.55-348.65 4 ilmenite pelletals plus fine bits < 1mm, gneiss.									
					348.7-349.35 Even darker grey black matrix than before. M.S. values range from									
					5.1-8.1, averaging 7.0m. Clast types and contents stay relatively the same and									
					indicators drop off. Boundaries seem to be alteration contacts. Rock is slighly									
					harder to scratch. Matrix is mostly non-altered. Loss of talc and serpentine. Seems									

#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY				1	TS	CORE SIZE	SURVEY DEPTH	DIP	AZIMUT	H	HOLE	10. MR	A-95-03		PAG	E 50/53
PROPERTY	7			<u> </u>	ISTRICT	CONTRACTOR					COLLA	r azimi	лн			
COMMENC	CED				WP/LAT.LONG.	DATE LOGGED					COLLA	R DIP				
COMPLET	ED				LAIM	LOGGED BY					ELEVA	TION				
OBJECTIVI	B				O-ORDINATES	DDH COMMENTS					LENGT	H				
INTE M 🗆	RVAL Ft 🗆	8	8	LITHOTYP	E	DESCRIPTION			SAMPLE				1	ASSAY	rs	
FROM	то	REC	RQU		GEOLOGY: (co	lour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	sur.	Au ppb				
					to be a calcite component to th	he matrix (acid reaction).										
					Features of Interest:											
					348.8 ilmenite, 349.05 phlogo	phite macrocryst, 349.24 garnet gneiss, ilmenite,						<u> </u>				
					349,35-352.8 Matrix back to	previous dark grey olive colouration due to						<u> </u>				
					serpentinization. Core is again	n softer to scratch. Back to previous indicators.										
					Loss of acid reaction to matrix	۲.				<u> </u>						
					351.6-351.9 Darker colouratio	n, return of calcite to matrix, again probably due to										
					lack of alteration to serpentine											
					Features of Interest:											
					349.37 garnet pelletal, gneiss,	349.45 small garnet gneiss fragment,										
					349.5-349.65 2 autoliths, nucle	eated autoliths, small gneiss, small garnet gneiss,										
					garnet, garnet pelletal, 349.7 g	gneiss, 349.72 mantle xenolith 20x20 with violet										
					garnet and chrome diopside, 3	49.75 nucleated autolith, 349.8-349.9 small gneiss,										
					small garnet gneiss, small gree	en gneiss, phlogophite, 349.97 garnet pelletal,										
					350.0 small gneiss, 350.1 bree	ciated garnet gneiss, 350.15 elongate garnet pelletal,										
					nucleated autolith, 350.3 nucle	ated autolith, 350.4 gneiss, 350.5 small gneiss, small										
					garnet gneiss chip, 350.54 nuc	leated autolith, 350.76 small gneiss chip, 350.8 chron	ne									
					diopside, 350.85-351.0 garnet	gneiss, 4 gneiss, violet garnet pelletal, 351.05 garnet										]
					gneiss, 20x30mm mantle xeno	lith, 351,25-351,32 2 garnet gneiss, 2 gneiss,								i 1		

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE	S I	URVEY DEPTH	DIP	AZIMUT	н	HOLE	10. MR	<b>1-95-03</b>		PAG	E 51/53
PROPERTY					DISTI	RICT	CONTRACTOR						COLLAI	R AZIMU	тн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLAI	r dep				
COMPLETE	D				CLAI	M	LOGGED BY						ELEVAT	TION				
OBJECTIVE					<u> </u>	RDINATES	DDH COMMENTS				_		LENGT	H				
ſ		_	1						¥	·				<u> </u>	<u></u>			
	RVAL Ft 🗌	x	x	LITHOT	VPE		DESCRIPTION			:	SAMPLE				1	ASSAY	ſS	
FROM	то	REC	RQD	Diffict		GEOLOGY: (cold	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	SUL	Au ppb				
						351.4 garnet megacryst, gneiss	. 351.6 mantle, gneiss, 351.65 garnet gneiss,											
						351.7 garnet pelletal, 351.8 sm	all gneiss, 351.85 gneiss, 352.0 mantle,		Į									
		_				352.05 nucleated autolith, autol	ith, violet garnet pelletal, garnet gneiss, 352.2 c	chrome	ļ									
						diopside, small gneiss, 352.34	nucleated autolith, 352.37 gneiss,		<u> </u>									
		_				352.5-352.65 2 garnet gneiss, 2	2 small gneiss, garnet pelletal, nucleated autolith		l		<u> </u>							
						352.8 gneiss, elongate garnet p	elletal.											
						352.80-353.85 Black matrix, lo	oss of serpentinization in matrix, as well, mantle	•										
						pelletals are now clear glassy o	livine, fresh non-serpentinized. Calcite content											
						to matrix present. Clast percen	stage is reduced to 40% and the fine component											
						(<2mm) of country rock is for	the most part absent. Indicators and gneiss fra	gments										
						are decreased. Very sharp alte	ration front at 40° to CA.											
						M.S. 3.2-6.0, average 5.2.												
						Features:												
						352.2 3mm garnet gneiss chip,	353.35-353.4 2 gneiss, 353.74 violet garnet pel	letal.										
						353.85-354.2 Abrupt loss of cl	lasts, 85% matrix with fine <3mm olivine at 10	%										
						and <4mm country rock fragm	ents, no indicators seen. Matrix is asphalt blac	k.										
						Upper contact is gradational plu	is is broken up, lower contact is sharp at 30° to	CA.										
						M.S. range is 8.0-11.3, averagi	ing 9.5.											

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TORONTO, ONTARIO, CANADA

COMPANY	NTS	CORE SIZE	SURVEY DEPTH	DIP	AZIMUTH	HOLE NO.	MRA-95-03	PAGE 52/53
PROPERTY	DISTRICT	CONTRACTOR				COLLAR AZ	MUTH	
COMMENCED	TWP/LAT.LONG.	DATE LOGGED				COLLAR DI		
COMPLETED	CLAIM	LOGGED BY				ELEVATION		
OBJECTIVE	CO-ORDINATES	DDH COMMENTS				LENGTH		
INTERVAL					SAMDI E		A 22 A	vs

	RVAL Ft 🗆	*	3	LITHOTYPE	DESCRIPTION		S	AMPLE				1	ASSA	rs	
FROM	70	REC	RQD		GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	% SUL	Au ppb				
354.2	375.0			10 F	Huronian Coleman Member Metasediments (Diamictite)										
					5 to 6 repeating fining upwards diamictite units from clast supported pebble										
					conglomerate topping through medium wacke sandstone to coarse siltstone and finally										
					fine grained silstone with periodic drop stones.										
					354.2-356.05 Fining upwards unit. The upper 30cm has 2-3% calcite fracture filling										
					parallel to sub-parallel to kimberlite contact angle.										_
					354.2-355.25 Fine to medium grained siltstone, lower contact 52° to CA.										
					355.25-356.0 Coarse pebble greywacke, lower contact at 46° to CA.										
					356.0-356.05 Thin conglomerate, 70° to CA lower contact.										
					356.05-358.65 Primarily fine grained dark grey silstone with periodic dropstone and										
					sandy buff areas. Lower contact at 50° to CA.										
					358.65-359.7 Conglomerate with matrix supported upper, clast supported lower.										
		-			Sharp lower contact 46° to CA.										
					359.7-359.9 Medium to coarse grained wacke sandstone. Sharp lower contact at										
					45° to CA.										
					359.9-360.05 Coarse wacke, 45° lower contact.										
					360.05-364.0 Conglomerate again matrix supported to 362.0 than clast supported										
					base.										

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#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

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COMPANY PROPERTY COMMENC COMPLETI OBJECTIVE	ED ED				NTS DISTI TWP/ CLAI	RICT LAT.LONG. M RDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		RVEY EPTH	DIP	AZIMUT		HOLE P COLLAN COLLAN ELEVAT	NO. MR R AZIMU R DIP NON	A-95-03		PAG	E 53/53
	RVAL Ft 🗆	e	g				DESCRIPTION			:	SAMPLE					ASSAN	rs	
FROM	то	REC	RQD		YPE	GEOLOGY: (cold	our, grain size, texture, minerals, alteration, etc)		SAMPLE NO,	FROM	то	LENGTH	sur.	 Ан ррб				
						363.0 Minor quartz vein. 364.0-364.8 10cm black dark	grey siltstone, followed by buff medium grained											
						arenite.	g j			1								
						364.8-365.0 Greywacke to peb	ble conglomerate.											
						365.0-365.55 Dark grey siltsto	ne with 5% dropstones and granuals.											
						365.55-366.97 Medium to coar	rse grained buff wacke arenite with gradational			1	<u> </u>			L				
						upper contact and sharp lower of	contact at 65° to CA.											
						366.97-367.05 Dark grey siltst	one with 10% dropstones and granuals. Sharp low	wer				<u> </u>						
						contact (broken).												
						367.05-367.45 Buff medium to	coarse wacke arenite. Sharp lower contact at 70*						ļ					
						to CA.												
						367.45-367.53 Dark grey siltst	one with 3% granuals, 15% calcite veins. Lower											
						contact at 70° to CA.												
						367.53-367.9 Buff grey fine gr	ained arenite (wacke), irregular lower contact.											
						367.9-375.0 Dark grey siltstone	e with 5% (2-5mm) grey buff bands, infrequent								_			
						occurance and more periodic 2-	3mm black bands every 4-20mm. Bedding at +/-				ļ	ļ		<u> </u>				
						65° to CA throughout.												
375	375			ЕОН		End of Hole.												

Core Storage Cobalt Ont Agnico Engle Property Block House

	1		DOWNHO	LE SURVE	YING	l 
	·			1	<u> </u>	<u> </u>
HOLE NUN	MBER: MRA - 95-03		1		:	•
	1		•	·····	!	•
Le premier	r test commence a du	casing apr	es dix metre	es:	Sperry-Su	<u>n</u>
	·				÷	1
Metres	Test	Azimuth	Dip			<u>!</u>
45 m	And test		56° 45'			[
50m'	Sperry-Sun	209	560		<u> </u>	
105	Ac.d text		: 58° 30		<u>i</u>	
75m 156m	Acid test		56 45	58 9	<u>!</u>	
100m	Sperry-Sun	211.5	57°45'	<u>)57</u>	· · · · · · · · · · · · · · · · · · ·	!
150m	Sperry-Sun	211	57 30'	~	· · · · · · · · · · · · · · · · · · ·	1
175m200	Acid test		56°45'	3-775		!
20 <b>0</b> m	Sperry-Sun	210.5	57 45		:	· · · · · · · · · · · · · · · · · · ·
250m	Sperry-Sun	214	57 15	:	•	l
275m <sup>.</sup>	Acid test	Squi-	: 56°45'	•	i	1
300m	Sperry-Sun	212	: 57.	1	1	:
350m	Sperry-Sun	213	56° 45			1
375m .	Acid test		56°15'	:	•	•
400m	Sperry-Sun i		!	:	1	İ
450m	Sperry-Sun		:	•	1	!
475m	Acid test		!		:	i
500m	Sperry-Sun		:	÷	:	1
550m	Sperry-Sun			•	•	•
575m	Acid test		•	•		
600m	Sperry-Sun			·		1
650m	Sperry-Sun		3	1	i	1
675m	Acid test		•		:	1
700m	Sperry-Sun				•	•
750m	Sperry-Sun		:		:	:
775m	Acid test		:	1	!	
300m	Sperry-Sun				•	1
850m	Sperry-Sun				1	:
375m	Acid test		:	·	•	!
900m	Sperry-Sun				•	
950m	Sperry-Sun				·	: i
975m I	Acid test		;		1	4
			i	· · · · · · · · · · · · · · · · · · ·	1	1

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### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

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COMPANY	Sudbury Contact Mines	NTS	31 M/12, SW	CORE SIZE 53	-141(H), 141-198.8 (NQ)	SURVEY DEPTH	DIP	AZIMUTH	HOLE NO. MRA-95-04	PAGE 1/17
PROPERTY	216	DISTRICT	Cobalt	CONTRACTOR	Benoit Drilling	57	89*30'	-	COLLAR AZIMUTH	N/A
COMMENCED	Nov. 26, 1995	TWP/LAT.LONGL	andy S-1/2 Lot 1/Con.III	DATE LOGGED	Dec. 7, 15-18/95 /	96	90°	*	COLLAR DIP	-90*
COMPLETED	Dec. 1, 1995	CLAIM	1202724	LOGGED BY	Ray Knowles	160	88*30'	-	ELEVATION	298m
OBJECTIVE	Test Kimberlite Geology	CO-ORD. Grid	1 3, 3+95W/0+48S	DDH COMMENT	S Expanding clay	198.8	89*15'		LENGTH	198.8

#### alteration jamming rods/downsize to NQ, all casing left in hole.

Acid

	RVAL Ft 🗆	x	x	LITHOTYPE	DESCRIPTION		S	AMPLE					ASSA	YS	
PROM	то	REC	RQD		GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)	SAMPLE NO.	FROM	то	LENGTH	501.	Au ppb				
	53			OVER	Overburden 0-40 outwash fine to coarse sands, 40-54 till.			ŀ			[				
<u> </u>											<u> </u>				L
53	198.8			Kml	Heterolithic Volcaniclastic Kimberlite Breccia					<u> </u>					
l					Medium grey olive green, spottled with white and dark grey clasts.			<u> </u>					1		
					Primarily matrix supported, overall homogeneous with no preferred orientation or										
					alignment of clasts.										
					Clasts - 50-65%, generally angular to subangular. Range in size from <2mm -										
					300mm with rare, mostly limestone, clasts > 300mm.										
					45% are country rock, none appear to be lapilli (no kimberlite adhered as coats										
					on even the finest clasts).										
			[		27% limestone, <2-300mm up to several meters, of which; in general most larger	L									
					clasts are limestone, 10% of which (mostly >3cm size) are zoned, the rest with										
					minor to trace alteration rims.										
					18% Huronian siltstone (Firstbrook Member) <2-100mm but most <30mm, a small										
					portion of the <20mm fraction may have kimberlite coats. Generally medium grey							<u>_</u>	<u> </u>		
					green, and dark grey siltstone.										
					15% Gneissic clasts, subrounded to subangular with some rounded and some angular.										
					<2-40mm. Generally well preserved. 10% of which are leucogneiss (<20% matic										

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TORONTO, ONTARIO, CANADA

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COMPANY	•				NTS		CORE SIZE	s	URVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MR	A-95-04		PA	GE 2/17
PROPERTY	•				DIST	RICT	CONTRACTOR						COLLA	R AZIM	UTH			
COMMENC	ED				TWP	/LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLETI	ED				CLAI	ÎM	LOGGED BY						ELEVA	NOIT				
OBJECTIVE	8				<u>co-o</u>	ORDINATES	DDH COMMENTS				. <u> </u>		LENGI	н				
INTE M C	RVAL Ft 🗆	x	x	LITHOT	VPF	· · ·	DESCRIPTION			4	SAMPLE					ASSA	YS	
FROM	то	REC	RQD	Limor		GEOLOGY: (col	lour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	s SUL	Au ppb				
						minerals amphiboles minor pyr	roxene) and 5% of which are garnet gneiss >209	κ										
						amphibole, pyroxene and signi	ficant garnet contnet, 1%-30% orange and in mar	ay	_									
						caes rose to cherty red. 5%-1	0% mantle xenoliths, rounded to subrounded, <4	4mm							L			
						as pelletal spherical to elongate	e fragments to up to 100mm, almost all with a thi	n								<u> </u>		
						<.25mm reaction rim of serpe	ntine (black) and except for larger clasts, a grass	green	_					<u> </u>				
						colouration serpentine after oli-	vine generally bladed, medium grained crystals, n	nost										
						larger xenoliths (>10mm) have	e dark black cores and violet to lilac garnets as w	rell										
						as chrome diopside.			<u>  </u>						 			
						3-4% autoliths, rounded to sub	rounded hypabyssal kimberlite clasts (5-20mm) as	nd										
						nucleated kimberlite globuals (i	fragments of mantle or country rock surrounded t	by a										
						2-10mm rind of kimberlite). S	ize can be up to 40mm, nuclei tend to be angular											
						(4-20mm). Both tend to be sph	herical to eggshaped and have a dark grey to grey	Y										
		·				beige colouration.			<u> </u>									
						1-2% dissassociated minerals s	uch as orange garnet, red garnet, chrome diopsid	e,										
						olivine and white to smoky soft	t garnet and in rare cases ilmenite as either free											
						floating or as pelletal (sphere o	r elongate). Orange garnets range in size from											
						< 2mm up to mega crysts of 20	Omm all others are generally <3mm.											
						1% micas black, brown to clea	r mostly phlogophite, disseminated throughout as											
						both free floating crystals and f	lakes to elongate and spheroidal pellets. Size <	2 to									1 7	i

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TORONTO, ONTARIO, CANADA

COMPANY				N	тѕ	CORE SIZE	SURVEY DEPTH	DI	P	AZIMUTH		HOLE N	Ю. MRA-5	5-04		PAGE 3	17
PROPERTY				D	ISTRICT	CONTRACTOR						COLLAI	R AZIMUTT	ι			
COMMENC	ED				WP/LAT.LONG.	DATE LOGGED						COLLAI	R DIP				
COMPLET	3D			c		LOGGED BY						ELEVAT	TON				
OBJECTIVE	3				O-ORDINATES	DDH COMMENTS				· ·		LENGT	ł				
	RVAL Ft 🗆	я	5	LITHOTYP	R	DESCRIPTION			S	AMPLE				AS	SAYS		
FROM	10	REC	RQD		GEOLOGY: (∞	olour, grain size, texture, minerals, alteration, etc)	SAMP NO.	E F	ROM	то	LENGTH						
					Smm overall,	all. -50% of rock (<2mm) comprised of 30% serpentine/talc after olivine											
					Matrix 35-50% of rock (<2m	50% of rock (<2mm) comprised of 30% serpentine/talc after oliving dark olive grey.											
					medium to dark olive grey.	to dark olive grey.											
					6-10% fine <2mm country ro	to dark olive grey.											
					3-5% < 2mm spherical and ele	ongate pelletals, mostly serpentine after olivine as											
					nuclei.												
					Discrete <2mm accessory mit	nerals such as garnet, phlogophite, micas, selenite?.											
					Calcite level is low, acid react	tion is related to fine limestone fragments.											
					53-66.5 As previously descrit	bed matrix is consistent (serpentine/talc alteration)	Ci	ustic Di	ssoluti	on for Dian	onds	-	Micro	Mart			
					at 30% with an added 5-10%	fine <2mm country rock and 3-5% spherical to	3510	9 5	3.0	66.5	13.5	49.4	1	1			
					elongate pelletals with mostly	mantle kernals (serpentine after olivine) distributed										i	
					throughout. Fine to medium g	grained mica phlogophite mostly, is disseminated											
					throughout at 1-2%.												
					Features of Interest:	bughout at 1-2%.			_								
					54.0 Nucleated autolith 1 x 24	.0 Nucleated autolith 1 x 2cm, 54.9 Neucleated autolith (kimberlite globual).											
					40 x 50mm. 55.0 Chrome di	0 x 50mm. 55.0 Chrome diopside, 55.9 Mantle xenolith 30 x 20mm.											
					59.0 Red garnet 2mm pelletal	9.0 Red garnet 2mm pelletal sphere, 59.25 Nucleated kimberlite globual.											
					60.5 Large, 80 x 50mm gneis												

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TORONTO, ONTARIO, CANADA

														•	01(01)1	0, 01	i ARIO,	CAIL
COMPANY	r				NTS		CORE SIZE	SU D	RVEY EPTH	DIP	AZIMUT	н	HOLE	10. MR/	-95-04		PAGI	E 4/17
PROPERTY	(				DISTRICT		CONTRACTOR						COLLAI	R AZIMU	ТН			
COMMEN	CED			••	TWP/LAT.L	LONG.	DATE LOGGED						COLLAI	RDIP				
COMPLET	ED				CLAIM		LOGGED BY						ELEVAT	TION				
OBJECTIV	E			-	CO-ORDIN	ATES	DDH COMMENTS		_				LENGTI	ł				
												······································		· · · · · · · · · · · · · · · · · · ·				
INTE M 🗆	RVAL Ft 🗆	5	5	LITHOTY	DE		DESCRIPTION			;	SAMPLE					ASSAY	s	
FROM	то	REC	RQD	LIINOIT	r E	GEOLOGY: (e	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
					63.8	.85 Chrome diopside and	a violet gamet, free floating,											
					64.2	2 Large 70 x 40mm auto	olith with 30% mantle pelletals.											
					64.5	.5 100 x 50 mantle xenoli	th with black core and +/- 5 violet garnets.											
					At le	least 10 significant leucog	neiss >20mm.											
					At k	least 13 significant orange	garnets 2mm-20mm as discrete grains, elongated											
					pelle	lets and pelletal spheres.												
					M.S	S 0.6 - 2.6, avg. 1.4 wi	th autoliths up to 3 or 4.											
					<u>66.5</u>	5-80.0 As previously des	cribed. True pelletals are minor at 1-2% mostly g	arnet										
					and	i phlogophite kernals. Man	ntle fragments, <1mm - 30mm, are spherical to el	ongate										
					som	ne with thin reaction rims	and could be classed as pelletal in texture (add 5%	5).	Caust	ic Dissolu	tion for Dia	monds	×. 13	Micro	Macro			
					Auto	toliths both massive and m	ucleated appear infrequently, however, kimberlite	partial	35113	66.5	80.0	13.5	55.3	1	2			
					coat	itings are more common of	n all clast types <20mm in size.											
					66.7	7 Neucleated autolith, 67.	.07 Chrome diopside.											
					67.3	3 Large gneiss, 68.2-68.3	05 Calcite infilling.											
					68.3	3 Garnet gneiss, 68.35 2	15 x 25mm orange gt mega cryst.		Indicator					GP Par	GP 1	G. Org	DC	n
					68.4	4 Autolith, 68.75 Elongat	te orange garnet pelletal.		35056	53.0	80.0		23.6	>47	>48	>63	>95	>80
					69.8	8 Chrome diopside, 69.9	Autolith, 70.1 Gneiss, 70.2 Gneiss.											
					70.4	4 2 garnet (0) pellets, 10	x 4 mantle xenolith.											

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TORONTO, ONTARIO, CANADA

								s	URVEY	DIB	A7D/077	,						
COMPANY	•				NTS		CORE SIZE		DEPTH			<u></u>	HOLE	NO. MR	A-95-04		PA	GE 5/17
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIMI	JTH			
COMMENC					TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	TION		_		
OBJECTIVI	B				c0-0	RDINATES	DDH COMMENTS						LENGT	н				
						r								v				
	RVAL Ft 🗆	x	x	LITUOT	VDE		DESCRIPTION				SAMPLE					ASSA	YS	
FROM	то	REC	RQD	LIIHUI	IFE	GEOLOGY:	(colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	Γ					
					í	70.8 25 x 35mm mantle xe	nolith in chrome diopside.		Î	Ì			Ť	Ì	Ī	Ì		
						72.6 Chrome diopside $+ v$	iolet garnet, 72.7 Nucleated autolith.		1									
						73.3 Autolith, 73.5 Gneiss,	73.7 Phlogophite pellet.		1									
						73.85 5 x 10 mantle xepoli	ith. 74.5 Gneiss. 74.85 2 macrocrysts garnet.						†	1				
						75.4 Small mantle xenolith.	. 75.75 Autolith.		1		1		<u> </u>	1	<u> </u>			
						75.8-76.1 7 or 8 small pell	etal garnets, possible ilmenite.			1								
						76.3 Mantle xenolith, 76.6	Garnet gneiss. 77.2 Violet garnet plus.			1			1		1	1		
						78.0 Ilmenite 78.5 Violet a	parnet 78.55 Autolith, 78.8 Chrome dionside.							<b> </b>	<b></b>			
						79.8 Nucleated autolith - n			1					¶				
						79.9 Nucleted autolith 79.1	15 25 x 35 months venolith				_		+	<b> </b>				
						M.S. 0.6. 1.6 aug. 1.0 bu							<u> </u>			<u> </u>	<u> </u>	
					{	M.S. 0.5 - 1.0, 2vg. 1.0 00	n 00.0-71.0, 1.4 - 1.0, avg. 1.3, automus nave a										<u>├</u>	
						>2 reading usually.									<u> </u>		'	
						80.0-93.5 As before descrit	bed matrix and clast type and content.			<u> </u>	<u> </u>	<u> </u>			<u> </u>			
						Autoliths and particularly nu	icleated autoliths appear to be more abundant from		Caust	ic Dissolu	tion for Dia	nonds	wr. (hg)	Micro	Macro			
						10mm size spheroids to 70m	am with nucleus of Huronian, mantle, small gneiss		35114	80.0	93.5	13.5	54.0	1				
						fragments and in rare cases	limestone.	•									<sup> </sup>	
						Both elongate spherical pelle	ets are present in low percentages mostly mantle key	rnais		ļ			ļ		<u> </u>	<b> </b>		
						but some violet garnets some	e orange garnets. Violet garnets, where present, ar	re most			1							

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TORONTO, ONTARIO, CANADA

COMPANY	¢				NTS		CORE SIZE	SUF DE	VEY PTH	DIP	AZIMUTH	t I	HOLE	NO. MR	A-95-04		PA	GE 6/17	
PROPERTY	r				DISTRICT		CONTRACTOR						COLLA	r azimi	лн				-
COMMEN	CED				TWP/LAT.LONG.		DATE LOGGED						COLLA	r dip					-
COMPLET	ED				CLAIM		LOGGED BY						ELEVAT	TION					_
OBJECTIV	Ë				CO-ORDINATES		DDH COMMENTS						LENGT	н					_
	RVAL Ft 🗆	5	*	LITHOTY	DE		DESCRIPTION			<u> </u>	SAMPLE					ASSA	YS		1
FROM	το	REC	RQD		GE	OLOGY: («	colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Au ppb					
					always with a sp	herical pelle	tal rim.												
					Chrome diopside	and ilmenit	e are free floating as are 50% of orange garnets.												
					Major features:														
					80.75 2 nucleat	d autoliths,	80.9 15 x 7mm mantle, 81.1 orange garnet macro.												
					81.5 mantle? 30	x 40mm, 8	2.1 10 x 5 congregation of chrome diopside and vio	olet											
					garnet.														j
					82.3 Chrome di	opside and a	cranberry garnet, 82.5 micaceous mantle? xenolith	1											]
					40 x 20.														]
					83.35 5mm viol	et garnet, 83	.95 garnet gneiss, 85.05 orange garnet elongate												
					pelletal 3 x 6mm	•													
					81.5 Gneiss, 85	71x5phk	ogophite, 85.95 Large nucleated autolith.												
					86.7 Autolith, 8	6.85 nucleat	ed autolith, 87.25 mantle xenolith 5 x 7mm, and												
					.25mm ilmenite,	87.35 small	autolith with violet garnet and mantle.												]
					88.0 Orange ga	net macro,	88.3 small garnet gneiss, 88.35 large gneiss, 88.6 n	nantle											
					xenolith with vio	et purple ga	mets, 88.8 violet garnets.												
					89.25 Ilmenite	elletal, 89.3	5 garnet gneiss + gneiss.												
					89.95 Neucleate	d autoliths +	- chrome diopside mass.												
					90.0 Mantie xer	oliths, 90.1	chrome diopside with phlogophite.												]

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COMPANY PROPERTY COMMENC COMPLETE OBJECTIVE	ED D		· · · · · · · · · · · · · · · · · · ·		NTS DIST TWP/ CLAI	RICT LAT.LONG. M INDINATES	CORE SIZE CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS	SURVEY DEPTH		AZIMUT	тн 	HOLE I COLLA COLLA ELEVA LENGT	NO. MR/ R AZIMU R DIP TION H	A-95-04 TTH		PAGE	. 7/17
	RVAL Ft 🗋						DESCRIPTION			SAMPLE	;				ASSAY	s	
FROM	10	REC	RQD	LITHOT	YPE	GEOLOGY: (00k	pur, grain size, texture, minerals, alteration, etc)	SAMP	E FROM	то	LENGTH						
						90.55 Orange garnet macro, 90	0.7 orange garnet macro.				-						
	·					90.85 Cranberry garnet, 90.88	small violet (lilac) garnet.					<b> </b> _		<u> </u>			ļ
j						91.4 15 x 15mm nucleated auto	olith, 91.85 gneiss, 91.88 elongate orange garnet		_								
						pelletal.							ļ				
						92.0 Nucleated autolith 10 x 20	)mm										
						92.37 Autolith, 92.5-92.6 abun	dant mantle pelletals.										
						92.7 Large violet garnet pelleta	I, 92.8 chrome diopside.										
						93.1 Large nucleated autolith, 4	40 x 60 with mantle xenolith nucleus and abundant										
						small spherical to elongate and i	irregular mantle fragments in matrix of kimberlite.										
						93.2 Nucleated autolith.											
						M.S 80.0-91.7 Range of 0.5-	-1.2 averaing 0.6.										
						91.7-93.5 Range 1.3-1.8 average	ging 1.65 with autolith spikes of up to 2.5 (no										
						obvious severe increase in % au	toliths or other changes to warrant increase M.S.).										
						93.5-107.0 As previously descri	bed, except serpentine/talc alteration of matrix	Ca	istic Dissol	tion for Dia	umonds	wL(hg)	Micro	Масто			
						giving way gradationally to clay	/talc alteration by 99.5 and intermediate to advance	ed 3511	93.5	107.0	13.5	52.1	2	1			
						by 107.0 (base rock ground mas	ss (matrix) becomes lighter grey, green blue and										
						becomes dryer feel vs. soapy sn	nooth). Serpentine rich patches smaller and less	Indicas					GP Nvr	GP Red	G. Org	DC	в
						frequent by 106.5.		3505	80.0	107.0		23.6	>34	>36	>59	>84	>75

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COMPANY PROPERTY COMMENC	ED	· · · ·			NTS DISTI	RICT LAT.LONG.	CORE SIZE CONTRACTOR DATE LOGGED	SUF	RVEY IPTH	DIP	AZIMUTI	#	HOLE N COLLAI	NO. MIR. R AZIMU R DIP	<b>л-95-04</b> ЛТН		PA	GE 8/17
COMPLETE	Ð				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTIVE					co-0	RDINATES	DDH COMMENTS						LENGT	H				<u> </u>
	RVAL Ft 🗆	5	5	LITHOT	VPF		DESCRIPTION			:	SAMPLE					ASSA	íS	
FROM	70	REC	RQD			GEOLOGY: (cold	sur, grain size, texture, minerals, alteration, etc.)		SAMPLE NO.	FROM	то	LENGTH	sul.	Au ppb				
						Seems to be an increased abund	lance of autoliths and nucleated autoliths as well,											
						93.5-102.7 up to 10% mantle x	enoliths 1-50mm.											
						103.75, 103.95 0-104.4 thin sel	enite veins @ 55° to CA.											
						Features of interest:												
						93.6 Autoliths and nucleated au	toliths one with zoned limestone as well as pelletal											
						(elongate) mantle fragments, 94	.0 autoliths.											
						94.25 Mantle xenolith with chr	ome diopside and violet garnets 10 x 10mm and											
						autolith.												
						94.7 Phlogophite, 94.80 chrom	e diopside mass, 94.85 orange garnet macro.											
						94.9 2 violet garnets and a chr	ome diopside, 94.95 ilmenite.											
						95.05 40 x 30mm mantle xeno	lith with black unaltered core, 95.15 autolith, garned	ets										
						and chrome diopside.												
						95.45 Violet garnet, 97.95 auto	lith and 3 nucleated autoliths with mantle xenoliths	5										
						as nuclei or large pelletals.												
						98.2 7 x 8mm mantle, 98.45 cl	2 7 x 8mm mantle, 98.45 chrome diopside, 98.5 autolith, 99.0 clast with											
						selenite veinlets.												
						99.54 Mantle xenoliths one with	.54 Mantle xenoliths one with a 2mm thick kimberlite rim (spherical) one with											
						thin serpentine ring, contains vie	olet garnets.											

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TORONTO, ONTARIO, CANADA

COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUTI	ł	HOLE	NO. MR	A-95-04		PA	GE 9/17
PROPERTY	•				DISTI	RICT	CONTRACTOR						COLLA	R AZIMI	JTH			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLET	ED				CLAI	м	LOGGED BY						ELEVA	TION	_			
OBJECTIVI	8				<u> </u>	RDINATES	DDH COMMENTS						LENGT	H				
				T										<u></u>				
INTE M 🗆	RVAL Ft 🗆	×	x	LITHOT	YPE		DESCRIPTION				SAMPLE					ASSA	rs	
FROM	то	REC	RQD			GEOLOGY: (ca	plour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						99.65 Large autolith, small n	nantie pelletals and garnets, 99.6-100.6 20% autolit	ths										
						nucleated autoliths and clasts	with partial kimberlite coats, 1% garnets, 2% mant	tle										
						pelletals, 100.8-100.9 preserv	ved serpentine section with an elongated clast											
						containing a 2mm wide seleni	te vein, 101.15 2mm violet garnet, 101.58 20 x 30	Dmm										
						mantle xenolith, 102.5 40 x 4	40mm mantle xenolith, black core.											
						102.8 Orange garnet macro,	102.9 orange garnet elongate, pelletal, 103.7 1.5m	บท										
						chrome diopside, 104.5 chron	ne diopside, 105.5 ilmenite.											
						104.3-107 Blue green coloura	ation present but weak.											
						105.8 Garnet macro, 106.05	Chrome diopside, 106.75 orange garnet macro.											
						M.S. 1.2 - 2.4, avg. 1.5, aut	oliths as high as 7.2.		Caus	tic Dissolu	tion for Diar	nonds	wi.(bg)	Micro	Macro		L	
·						107-119.5 As previous, except	pt more intense clay talc alteration in grey apple gr	reen	35116	107.0	119.5	12.5	47.7	0	1			
						hue.												
						Still abundant autoliths and nu	cleated autoliths throughout but most under 20mm.	•										
						113.25-113.45 Large autolith	or kimberlite dyke, dark black, unaltered, random	1										
						edges, not dyke like, contains	40% country rock clasts <2-20mm of which 10%	are										
						mantle pelletal and one clonga	te orange garnet pelletal.											
						117 Brown carbonaceous alte	ration, invasive.											
						117.45-117.7 Again brown ca	arbonaceous part alteration, part breccia fragments.											

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COMPANY					NTS		CORE SIZE		SURVEY DEPTH	DIP	AZIMUT	н	HOLE	NO. MIR	A-95-04		PAG	3E 10/17
PROPERTY					DIST	RICT	CONTRACTOR	Γ					COLLA	R AZIMI	лн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLETE	Ð				CLAI	м	LOGGED BY						ELEVA	TION				·····
OBJECTIVE	3				_C0-0	RDINATES	DDH COMMENTS						LENGT	H				
INTE	RVAL										SAMPLE				<u> </u>	ASSAT		]
	Ft 🗆	S REC	5 800	LITHOT	YPE	CEOLOGY. (			<u> </u>									
PROM	to					GEOLOGI: (a	biour, grain size, texaire, minerais, atteration, etc)		SAMPLE NO,	FROM	то	LENGTH	sul	Au ppb				
						118.5 As above, 118.65-119.	.0 25% brown carbonaceous material along with v	white										
						calcite alteration breccia infilli	ing at 10% to CA irregular.											
						119.0-119.5 Begin to see a b	lue tinge to the colour of the rock (talc?).											
						Features of interest:												
						107.5, 107.75-107.85 4 nucle	cated autoliths, 1 autolith.											
						108.55 Macro/mega orange	garnet, 109 autolith, 109.4 violet garnet pelletal.											
_						110.65-110.75 3 autoliths, 11	10.9 autoliths.											
						111.3-111.9 13 plus, <7mm	spherical autoliths and nucleated autoliths exposed	d in_										
						one face of core.												
						112.5 Large nucleated autolit	h, coarse amphibole/pyroxene clasts.											
						112.35 Orange garnet elonga	te pelletal, 112.45 5 x 10 mantle xenolith cranberr	ry										
						garnet, multiple pelletal mantle	e fragments, 112.9 cressent orange garnet 3 x 20m	nm.	_									
						113.0 Mantle xenolith, 113.2	5-113.45 Large autolith with orange garnet as we	-11										
						as phlogophite and mantle pel	ictais.											
						114.19 Orange garnet macro,	116.35 Violet garnet free floating.											
						117.2 Mantle xenolith, 118.0	Micaceous mantle? xenoliths.											
						118.15 4 x 15 orange garnet	macro, 3 or 4 autoliths.											
						118.3 Mantle xenolith in 3 or	3 Mantle xenolith in 3 or 4 violet garnets and chrome diopside.											

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COMPANY	¢				NTS		CORE SIZE	S 1	URVEY DEPTH	DIP	AZIMUTI	ł	HOLE	NO. MR	A-95-04		PA	GE 11/17
PROPERTY	2				DIST	RICT	CONTRACTOR						COLLA	R AZIM	UTH			
COMMEN	CED				TWP	LAT.LONG.	DATE LOGGED					·	COLLA	R DIP				
COMPLET	ED				CLAI	M	LOGGED BY						ELEVA	TION				
OBJECTTV	E				<b>CO-O</b>	RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	x	x	LITHOT	VDE		DESCRIPTION	<u> </u>		S	AMPLE					ASSA'	YS	
FROM	то	REC	RQD	LIIHOI	IFE	GEOLOGY: (	colour, grain size, texture, minerals, alteration, etc.)		SAMPLE NO.	FROM	то	LENGTH						
	·					118,4 Ilmenite, 119.25 oran	ige gamet macro.						·					
						M.S. 107-117 average 1.8, 1	117-118.5 average 45, 118.5-119.5 avg. 3.											
						High area due to abundance	of 2-10mm autoliths? Low due to alteration effect	cts										
						and absence of autoliths.			ļ	<u> </u>								
						119.5-120.85 Kimberlite as	before but intense alteration, clay with talc serper	ntine										
						alteration gives way to talc w	with clay and minor serpentine? Apple green color	ur	<u> </u>	L	L							
						changes to turquoise relative	ly fast. Upper contact gradational change @ 119.	5, sharp										
						lower contact with limestone	megablock.											
						Indicators visible throughout,	, 7 plus orange garnets pelletal and free.											
						120.8 80mm either mantle x	cenolith or hypabyssal autolith (micaceous black).											
						M.S 0.3 - 0.6 average 0.4	•											
						120,85-124,4 Limestone me	gablock. Massive to prekimberlite, brecciated ca	lcareous										
						with 20% gypsum as massive	e white to selente fragments and fine veining.											
						123.05-123.1 Arc of kimber	rlite breccia (indentation into the block?).											
						M.S average 0.11.												
						124.4-125.7 30-40% limesto	one as large breccia and mixing into matrix of kin	nberlite	Caust	ic Dissoluti	on for Diar	nonds	wi. (bg)	Micro	Масто			
						to give a bleached look, 5%	pale blue crystaline calcedoney and banding at 40	)•	35117	119.5	134.0	14.5	48.6	7	1			
						to CA (flow around block) ki	imberlite is bleached as described or dark grey bl	ack										

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TORONTO, ONTARIO, CANADA

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COMPANY	•				NTS		CORE SIZE	SUI DE	RVEY PTH	DIP	AZIMUT	н	HOLE	io. Mra	-95-04		PAGE	12/17
PROPERTY	?				DIST	RICT	CONTRACTOR						COLLA	R AZIMU	гн			
COMMENC	CED				TWP/I	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
COMPLET	ED				CLAD	м	LOGGED BY						ELEVA	TION				
OBJECTIVI	E			<u> </u>	CO-01	RDINATES	DDH COMMENTS						LENGT	н				
ſ				 										1				
	RVAL Ft 🗆	×	x	LITHOT	/06		DESCRIPTION				SAMPLE					ASSAYS	\$	
FROM	то	REC	RQD	Limor	12	GEOLOGY: (colo	GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH						
						green with pelletals.												
						M.S 0.2 average with local .4	46.											
						125.7-134.0 Kimberlite breccia	5.7-134.0 Kimberlite breccia as described previously except colouration pale		indicator				wi. (ta)	an na		G. Org	DC	n
						turquoise with apple green over	tones giving way to apple green alone by 134.0		35058	107	134.0	27.0	23.6	>58	>33	>54	> 69	>75
						Gradational change 131.4-134.0	<b>.</b>											
						M.S 0.4 - 0.6, average 0.5.												
						Features of Interest:												
						125.78 Garnet gneiss 15 x 15m	nm, 126.5 autolith.											
						127.0 2.3mm mass of chrome of	diopside.											
						127.5-128.0 10% autoliths, 4m	m - 15mm.											
						128.3 Orange garnet megacryst	is, 129.0 garnet gneiss.											
						130.1 Orange garnet macro, 13	0.9 mantle xenolith.											
						131.07 Orange garnet macro/el	ongate pelletal, 131.15 autolith.											
						131.2-132.5 Scattered (5 or so)	2-4mm orange garnet pelletals and 5-10% autolith:	is										
						(all kinds).												
						132.75 Possible mantle xenolith	h, 133.15 gneiss, 133.3 large nucleated autolith.											
						134.0-153.0 Lessening degree of	of clay alteration, more serpentine rich matrix, loos	se										
						the apple green colouration to a	medium olive green grey, still abundant autoliths.											

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TORONTO, ONTARIO, CANADA

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COMPANY     NTS     CORE SIZE     DIVENTION     DIV     AZAVITY     BOLE NO. MRA-664     MORE 13/1       FROPERIV     DISTRET     CONTACTOR     I     I     I     I     I     ICLLA 200000000000000000000000000000000000									r	- <u>-</u>	-					IUKUN	10, 0	DIARI	U, CAN
PROPERTY         DISTRUCT         CONTRACTOR         CONTRACTOR<	COMPANY					NTS		CORE SIZE	SURVEY DEPTH	DIP	<b>^</b>	ZIMUTH		HOLE	10. MR	A-95-04		PAG	GE 13/17
COMMENCED     TYP/ATLONG.     DATE LOGGED     Image: Commence of the commence of t	PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIM	лн			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	R DIP				
OBJECTIVE         CO-ORDINATES         DDH COMMENTS         DESCRIPTION GEOLOGY: (colour, gain size, stature, minerals, alteration, etc)         SAMPLE         ASSAYS           PROM         TO         A         A Afer 139. 1-5run nelizal mande framents become more abundant.         DESCRIPTION GEOLOGY: (colour, gain size, stature, minerals, alteration, etc)         James A         rook         TO         LENGTH           Image: A Colour	COMPLETE	Ð				CLAD	M	LOGGED BY						ELEVAT	אסח				
INTERVAL M□ P:□     s. bo     LITHOTYPE     DESCRIPTION GEOLOGY: (color, guis site, txture, substals, alterision, etc.)     SAMPLE     SAMPLE     ASSAYS       mox     vo     a     After 139, 1-5mm collectal manufe frameworks become more abundant up to 10%. Genisic framework to become more abundant.     a	OBJECTIVE	3				CO-01	RDINATES	DDH COMMENTS					$\Box$ .	LENGT	ł			_	
INTERVAL m         n         n         n         n         DESCRIPTION GEOLOGY: (colour, guin size, taxare, minerah, sheraien, sc)         SAMPLE         SAMPLE         ASSAYS           reod         no	r		r			ار	· · · · · · · · · · · · · · · · · · ·		<u> </u>	<u> </u>					I <b></b> -				
PROM         TO         REC         ROO         L11ROT IFE         GEOLOGY: (colour, grin size, strater, minerals, stratenion, etc.)         Junct at mode         TO         LDSOTH         L <thl< th="">         L         L         L</thl<>		IRTY           IBNCED           LETED           TTERVAL           Ft           IN           TO	x	x		DE		DESCRIPTION			SAN	MPLE					ASSA	YS	
Image: Control of the second state state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state second state of the second state of the second state o	PROM	τo	REC	RQÐ		re	GEOLOGY: (c	olour, grain size, texture, minerals, alteration, etc)	SAMI NO	LE FRO		TO LENG							
Image: Consist: fragments also become more abundant.       Ctust:: Discolution for Diamonds       w. 00       item       item <t< td=""><td></td><td></td><td></td><td></td><td><u> </u></td><td>ï</td><td>After 139, 1-Smm pelletal ma</td><td>intle fragments become more abundant up to 10%.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Î</td><td></td><td></td></t<>					<u> </u>	ï	After 139, 1-Smm pelletal ma	intle fragments become more abundant up to 10%.									Î		
After 141.0 convert to NQ.       35118       134.0       133.0       19.0       48.4       4       1					ĺ	Ĩ	Gneissic fragments also becom	me more abundant.	c	ustic Diss	lution	for Diamo	onds	wi. (lap)	Miero	Macro			
Image: Contract Contend Contract Contract Contract Contract Co							After 141.0 convert to NQ.		351	8 134	0	153.0	19.0	48.4	4	1			
134.3 Orange garnet macro (small), 134.4 orange garnet macro.       134.80 Orange garnet elongate, pelletal, 135.0 gneiss, 135.1 40mm autolith with       1							Features of Interest:												
Image: Solution of the second seco							134.3 Orange garnet macro	(small), 134.4 orange garnet macro.											
Image: Section of the section of th							134.85 Orange garnet elonga	tte, pelletal, 135.0 gneiss, 135.1 40mm autolith with											
Image: Section of the section of th							pelletal mantle.												
135.8 Orange garnet pelletal, 135.85 violet garnet pelletal, nucleated autoliths.       136.25 Large nucleated autolith, 136.5 gneiss, 137.5 mande xenolith, autolith.         136.0 Mantle xenolith, 139.1 70mm mantle xenolith with black core and containing       12000000000000000000000000000000000000							135.35 Autolith, 135.55 garr	net gneiss, 135.6 2 gneiss.											
136.25 Large nucleated autolith, 136.5 gneiss, 137.5 mantle xenolith, autolith.       1 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>135.8 Orange garnet pelletal</td><td>, 135.85 violet garnet pelletal, nucleated autoliths.</td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							135.8 Orange garnet pelletal	, 135.85 violet garnet pelletal, nucleated autoliths.		_									
Image: State in the second state in							136.25 Large nucleated auto	lith, 136.5 gneiss, 137.5 mantle xenolith, autolith.											
S% violet garnets, 1% chrome diopside, olivine, etc [piece for thin section].       Image: Signature of the section of the second of the section of the section of the section of the section o							138.0 Mantle xenolith, 139.1	70mm mantle xenolith with black core and containing	ıg										
139.35 3 cranberry garnets (free), 139.5 gneiss, orange garnet macro and autoliths.       139.5-141.0 7 orange garnets, 141.3 2 wine garnets.         139.5-141.0 7 orange garnets, 141.3 2 wine garnets.       141.45 Small wine garnet, small gneiss.         141.45 Small wine garnet, small gneiss.       141.45 Small wine garnet, small gneiss.         141.45 Small wine garnet, small gneiss.       141.45 Small wine garnet, small gneiss.         141.45 Small wine garnet, small gneiss.       141.45 Small wine garnet, small gneiss.         141.45 Small wine garnet, 147.8-144 6 red garnets.       141.45 Small wine garnet, 147.8-144 6 red garnets.         141.7 4mm red garnet, 147.8-144 6 red garnets.       141.45 Small wine garnet, 147.8-144 6 red garnets.         142.0-143.0 Lost core, 144.25 2 red garnets, 144.8 gneiss.       141.45 Small red garnet, 145.4 orange garnet, 145.5 (2) mantle xenoliths,         145.25 Small red garnet, 145.4 orange garnet, 145.5 (2) mantle xenoliths,       141.45 Small wine garnet, 145.4 orange garnet, 145.5 (2) mantle xenoliths,							5% violet garnets, 1% chrom	e diopside, olivine, etc [piece for thin section].											
Image: Second state of the second s							139.35 3 cranberry garnets (	free), 139.5 gneiss, orange garnet macro and autolith	15.										
Image: Instant series of the series of th							139.5-141.0 7 orange garnet	s, 141.3 2 wine garnets.											
Image: Interstation of the second							141.45 Small wine garnet, sr	nall gneiss.											
141.7 4mm red garnet, 147.8-144 6 red garnets.           142.0-143.0 Lost core, 144.25 2 red garnets, 144.8 gneiss.           145.25 Small red garnet, 145.4 orange garnet, 145.5 (2) mantle xenoliths,							141.65 Elongate orange garm	et mass pelletal macro.											
142.0-143.0         Lost core, 144.25 2 red garnets, 144.8 gneiss.							141.7 4mm red garnet, 147.8	8-144 6 red garnets.											
145.25 Small red garnet, 145.4 orange garnet, 145.5 (2) mantle xenoliths,						]	142.0-143.0 Lost core, 144.2	25 2 red garnets, 144.8 gneiss.											
							145.25 Small red garnet, 145	5.4 orange garnet, 145.5 (2) mantle xenoliths,											

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#### W.A. HUBACHECK CONSULTANTS LTD.

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE	SUI DE	rvey PTH	DIP	AZIMUTI	1	HOLE	NO. MRA	-95-04		PAGE 1	4/17
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	R AZIMU	пн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r DIP				
COMPLETE	- 90				CLAI	M	LOGGED BY						ELEVA:	TION				
OBJECTIVE	1				<u> </u>	RDINATES	DDH COMMENTS						LENGT	H				
	r				<u> </u>			۱						¥				
			_			DESCRIPTION SAMPLE					ASSAY	3						
	<u></u>	REC	RQD	LITHOT	YPE	GEOLOGY: (colo	GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)		EALAN P	1	· · · · · · · · · · · · · · · · · · ·	· ·	T	<b> </b>	I		<b></b>	
PROM									NO.	FROM	то	LENGTH		<u>[</u>				
						nucleated autolith, orange game	t		- <u></u>									
						145.7 Chrome diopside with ph	logophite pelletal, chrome diopside 1mm free.			<u> </u>				ļ				
						145.8 Mantle xenolith, garnet g	neiss, 145.9 chrome diopside with violet garnet											
						in egg shaped autolith.												·
						146 Micaceous gneiss, chrome	diopside, 146.1 orange garnet pelletal sphere.			1	<u> </u>							
						146.5 80mm garnet gneiss (thin	section), 146.8 25 x 25 phlogophite megacryst.											
						147.1 Small mantle with violet	garnet, 148.2-148.4 3 red garnets pelletal, 2 gneis	s										
						and 1 garnet gneiss.												
						148.85 Red garnet macro, 149.	7 20mm mantle xenolith with garnets, separate m	ass										
						of chrome diopside in an autolith	h.											
						149.75 Violet garnet spherical p	pelletal, 149.8-150 (3) spherical garnet pelletals.											
						150.25 Gneiss, 150.9 25mm au	tolith, 151.55 orange garnet, elongate, macro.											
						152.0 25mm autolith, 152.7-152	2.9 (4) neucleated autoliths.											
						M.S 0.4-1.1, average .6, auto	liths up to 1.2.											
						153.0-177.5 As before describe	d but much less altered, matrix is primarily a		Caus	tic Dissolut	ion for Diar	nonds	wi. (kg)	Micro	Марто			
						serpentine talc with minor clay v	vith clay content decreasing with depth.		35119	153.0	177.5	25.5	51.8	2	0			
						Still abundant pelletal mantle xer	coliths <2-15mm both spherical and elongate											
						irregular.			Indicator					OP Nr	GP Rel	G. Org	DC	п
	_					Autoliths all types still also abun	dant.		35059	134	177.5	43.5	24.0	>67	>59	>59	>89	> 80

#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

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COMPANY				NTS CORE SIZE SURVEY DEPTH	JRVEY EPTH	DIP	AZIMUT	н	HOLE !	NO. MR	A-95-04		PAC	E 15/17				
PROPERTY					DIST	RICT	CONTRACTOR						COLLA	r azimi	тн			
COMMENC	ÊD				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	D				CLAI	м	LOGGED BY						ELEVA'	TION				
OBJECTIVE		_			co-0	RDINATES	DDH COMMENTS						LENGT	н				
	RVAL Ft 🗆	X	5	LITHOT	YPE		DESCRIPTION				SAMPLE	<u> </u>				ASSA	rs	
FROM	то	REC	KQD				GEOLOGY: (colour, grain size, texture, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	% SUL	Ан р <del>р</del> о				
						Features of Interest:												
						154.1 Red (free) garnet, 154.2	autoliths nucleated, 154.7 orange garnet macro.			ļ								
						154.9 50 x 50mm nucleated au	nolith, 155.05 pelletal garnet.				_							
						155.15 Nucleated autoliths, 15	6.6 garnet orange.					ļ						
						157.2 Elongate orange garnet	pelletal, 157.3 violet garnet pelletal.					_						
						157.6 Orange garnet macro, 1.	58.5 orange garnets, 158.9 orange garnet.											
						159.0-161.0 9 orange garnets,	160.9 gneiss, 161.55 orange garnet, mantle xenol	lith.										
						161.95 7 x 10 mantle pelletal	with garnet (pink) and chrome diopside.											
						163.35 Gneiss, autolith, 163.5	164.5 7 orange garnets, 164.6 chrome diopside.											
						165.23 Chrome diopside, 165.	0 possible mantle xenolith, 166.15 autolith.											
						166.3 40 x 60 mantle xenolith,	166.5 60 x 80 garnet gneiss, 167.75 gneiss.											
						168.45 Gneiss, 168.6 violet gar	net, 165.8 orange garnet macro, 169.35 orange											
						garnet macro.												
						169.65 Mantle xenolith, 169.7	garnet gneiss, 170.25 mantle xenolith.											
						170.5 60 x 80 autolith.												
						171.3 Chrome diopside, 172.05	garnet gneiss, also 172.25, 172.2 violet garnet,											
						173.65 possible mantle xenolith	•											
						174.15 Orange garnet macro/e	longate pelletal, 174.6 possible mantle xenolith,											

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TORONTO, ONTARIO, CANADA

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COMPANY					NTS		CORE SIZE	S I	URVEY DEPTH	DIP	AZIMUTH	r I	HOLE	10. MR	-95-04		PA	GE 16/17
PROPERTY					DISTI	RICT	CONTRACTOR						COLLA	r azimu	лн			
COMMENC	ED				TWP/	LAT.LONG.	DATE LOGGED						COLLA	r dip				
COMPLETE	D				CLAI	м	LOGGED BY						ELEVA:	TION				
OBJECTIVE					CO-0	RDINATES	DDH COMMENTS						LENGT	H				
r		<b>1</b>		<u>г</u>		······································			<u>)</u>			<u> </u>		<u></u>				<u> </u>
	RVAL Ft 🗆	5	g	t ITHOT	70G		DESCRIPTION				SAMPLE					ASSA	rs.	
FROM	то	REC	RQD	LITTOT		GEOLOGY: (co)	GEOLOGY: (colour, grain size, texmre, minerals, alteration, etc)		SAMPLE NO.	FROM	то	LENGTH	sul	Ан 1976				
						174.7-175.5 (6) orange garnets	4.7-175.5 (6) orange garnets, 175.5 mantle xenolith with violet garnets and c											
						diopside, 175.5-177.5 (7) oranj	pside, 175.5-177.5 (7) orange garnets, 1 macro.		L							L		
						M.S. readings 0.5-1.1 avg. 0.7	, some autoliths up to 4.5.		<u> </u>									
						<u>177.5-198.8</u>					_							
						As before but far less unaltered	I, matric takes on a dark grey green colouration											
						(serpentine/talc). Autoliths see	m less abundant but are harder to see against matr	rix										
						background.												
	_					Pelletal mantle fragments are a	bundant 10-15% of rock.											
						Features of interest:												
						177.8-178.15 Limestone, 179.	9 large autolith, 179.95 macro orange garnet elong	gate										
						pelletal.												
						180.1 Garnet gneiss, 181.5 auto	olith, 183.0 autolith, 183.5 mantle xenolith with									L		
						violet garnets and chrome diop	side.										L'	
						184.5 Nucleated autolith, 186.	15 autolith or mantle xenolith.											
						187.0 Mantle xenolith, 187.15	mantle xenolith, 188.2 violet garent macro.											
						189.0 10mm mantle xenolith,	190.85 garnet gneiss, 191.0 gneiss.											
						193.0 Mantle xenolith with ga	mets and chrome diopside (example sample).											
						197.0 60mm autolith.											l	

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#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY PROPERTY COMMENCED COMPLETED OBJECTIVE INTERVAL M □ Ft □ s REC s RQD LITT					NTS DISTRICT TWP/LAT.LONG. CLAIM CO-ORDINATES		CORE SIZE SUR DEF CONTRACTOR DATE LOGGED LOGGED BY DDH COMMENTS		SURVEY DEPTH	DIP	AZIMUTT	H	HOLE I COLLAI COLLAI ELEVAT LENGTI	NO. MR R AZIMU R DIP ITON H	А-95-04 ЛТН		PAG	E 17/17
	RVAL Ft	S REC	s RQD	LITHOT	YPE	GEOLOGY: (c	DESCRIPTION			·	SAMPLE	1	<u>,                                    </u>			ASSA	/S	
FROM	то								SAMPLE NO.	FROM	то	LENGTH	SUL	Au ppb				
						M.S. 0.55 - 0.9, avg. 0.6.												
198.8	198.8			E.O.H	·	END OF HOLE.			-		<u> </u>							
						Note: H Rod (used as casing	for N) jammed in hole, not removed, overburde	en casin	B									
						Note: No sample taken 177.	5-198.8.		-									
						Core Sturage Cobult	Ont Agnico Engla Property -Bloc	k Hous	۹ 									
									-									
									-									

# MS Readings MRA- 95-01 (x10 <sup>-3</sup>)

From	То	Range	Average	Comments
47.5	50.8	.9195		
50.8	51.2	1.25		
51.2	51.3	2.2		
51.3	54.8	1.09 - 1.2		
54.8	62.5	1.1 - 0.9		
62.5	64.5	0.9 - 0.75		
64.5	65.5	1.1 - 1.01		
65.5	73.0	0.5 - 0.7		
73.0	78.65	0.9 - 1.2		76.0 harz clast 1.8 (1 cm), 77.9m 1.32 harz
78.65	79.7	1.2 - 1.9		
79.7	80.9	0.9 - 1.4		
80.9	81.7	1.6 - 2.7		
81.7	83	1.3		
83	85.55	0.9 - 1.05		
85.55	85.85	0.71		siltstone
85.85	87	0.54 - 0.95		

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# MS Readings MRA- 95-02 (x10 <sup>3</sup>)

From	То	Range	Average	Comment
48	61.5	1.0 - 1.3		mantle 3-7.7 lower crustals 3- 28.3
01.5	01.8	1.07		
61.8	66.7	1.4 - 2.5	1.8	
66.7	69.5	1.0 - 4.4	1.5	kim autoliths 4-5
69.5	84.6	1.4 - 2.5	1.9	gt pelletal lapilla 1.5-1.9
84.6	89.5	2.5 - 3.0	2.7	
89.5	102	3.4 -4.07	3.8	102.9 spike at 7.2
102	105.0	3.4 - 4.07	3.8	105-105.6 4.18- 6.67 avg. 5.5
105.6	106.8	3.5 - 5.7	5.4	
109.8	112.0	5.5	6.2	5.9
112.2	112.6	4.7 - 5.2	5.0	
112.6	113.25	5.7 - 6.8	6.4	spike of 10.0
113.25	115.5	3.68 - 4.68	4.0	
115.5	116.5	3.01 - 4.01	3.5	
116.5	117.8	3.8 - 4.35		
117.8	119.15	3.0 - 3.5		
119.15	120.2	3.9 - 4.3		
120.2	124.6	3.0 - 4.5	3.6	
124.6	125.3	1.3		
125.3	126.55	2.5 - 3.6	3.2	
126.55	128.0	2.0 - 3.0	3.8	
128.0	129.4	1.5 - 2.0	1.7	
129.4	132.5	2.2 - 2.6	2.4	
132.5	134.0	1.6 - 2	1.8	
134.0	142.5	1.9 - 2.6	2.3	spikes of 7,10 clast specific

From	То	Range	Average	Comment
142.5	146.0	1.0 - 3.0	2.5	variable
146.0	147.6	.46 - 1.8	1.2	
147.6	148.8	1.8 - 2.8	2.2	
148.8	149.8	1.0 - 1.6	1.4	spke 5.1 (gt 6)
149.8	159.0	1.7	2.7	2.1
159	159	EOH		

# MS Readings MRA-95-03 (x10-3)

From	То	Range	Average	Comments
125.72	126.4	.49	.6	
126.4	128.5	2.0 - 2.65	2.5	
129.5	132.5	1.1 - 1.4	1.3	3.4 gtG
132.5	133,75	0.4 - 1.0	.6	
133.75	136.05	0.9 - 1.8	1.5	
136.05	137.05	1.8 - 2.4	2.2	3.6 nucleated autolith
137.05	138.04	1.0 - 1.8	1.3	
138.04	144.5	.38	.5	143.4-243.55 0 ash zone
144.5	149.2	.9 - 1.7	1.3	same 1.9 spikes
149.2	151.4	1.8 - 2.7	2.2	
151.4	154.5	1.1 - 1.8	1.4	
154.5	155.7	2.0 - 2.8	2.4	
155.7	161.6	1.1 - 1.8	1.5	
161.6	164.55	1.8 - 2.6	2.2	nucleated autolith 2.9 increased autoliths?
164.55	166.3	1.1 - 1.5	1.4	
166.3	177.5	1.9 - 2.6	2.3	
166.3	184.1	1.3 - 1.7	1.5	autolith 3.1, gtG 9.0-3.5 179.1- 179.7 .348 clay alt.
184.1	185.9	2.2 - 3.5	2.6	autolith 5
185.9	188.8	1.4 - 2.8	2.0	variable
188,8	190.4	1.3 - 1.8	1.4	
190.4	197.5	0.5 - 1.0	0.7	gneiss 2.6 loss if gneiss and autolith?
197.5	200.4	1.4 - 1.9	1.6	autolith 6.1
200.4	202.5	1.8 - 2.3	2.1	

From	То	Range	Average	Comment
202.5	207.4	1.4 - 1.9	1.6	
207.4	211.2	1.1 - 1.8	1.4	
211.2	225.8	0.4 - 1.2	0.6	minor spot highs 1.5
225.8	238.25	.5 - 1.1	0.6	
238.25	281.65	.25	0.34	
281.65	282.4	.344	.35	autolith are 1.5
282.4	295.3	.38	.55	autolith 1-2.5
295.3	303.9	.49	.7	
303.9	312.5	.5 - 1.1	.8	
312.5	315.0	.7 - 1.4	.9	
315.0	318.0	.5 - 1.1	.70	
318.0	326	.5 - 1.4	1.0	
326	336.5	1.2 - 3.5	1.8	
330.6	331.55	0.4 - 0.7	0.6	clay alteration
336.5	246	2.0 - 3.4	2.6	
346.0	348.7	3.2 - 4.4	3.8	
348.7	349.35	5.1 - 8.1	7.0	blackened matrix
349.35	352.8	2.5 - 3.4	3.0	lighter
352.8	353.85	3.2 - 6.0	5.2	blackened
353.85	354.2	8.0 - 11.3	9.5	mostly massive km lava(no clasts)
354.2	375.0	0.1 - 0.36	0.18	
375.0	EOH	_		

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# MS Readings MRA-95-04 (x10 <sup>-3</sup>)

From	То	Range	Average	Comments
53	55.5	1.5 - 2.2	avg. 1.9	
55.5	60.5	.6 - 1.2	avg. 0.8	
60.5	700.5	1.5 - 2.6	avg. 1.9	autoliths 4-5, gniess 3-4 (at 66.5 1.5)
80.5	68.6	0.6 - 1.1	avg. 75	
63.8	71	1.4 - 1.6	avg. 1.5	
71	91.9	0.5 - 1.2	avg6	
91.7	94.5	1-3 - 1.8	avg. 1.65	autolith spikes 2.5
94.5	98.5	0.4 - 1.1	avg. 0.6	
98.5	107	1.2 - 2.4	avg. 1.5	Autoliths 7.92, 6.52
107	112.0	1.3 - 2.2	avg. 1.7	(low . 8, high 2.4) large autolith 5.96
112	112.6	2.0 - 2.4	avg. 2.2	
112.6	117	1.05 - 1.95	avg. 1.52	
117.0	118.5	0.40 - 0.65	avg45	
118.5	120.0	0.2 - 0.35	avg3	
120.0	120.8	0.3866	avg4	
120.8	127.35	0.05 - 0.2	avg11	
124.35	125.6	.04 - ,2	with kim section	.4-6 local 10-20 cm
125.6	135.5	0.4 - 0.6	avg. 0.5	
135.5	1.40	0.6 - 1.1	avg. 0.5	
140	141	0.4 - 0.6	avg 0.5	spike 1.2 autolith HQ
141	153.0	0.3 - 0.75	avg. 0.4	NQ
153	172.0	0.5 - 0.9	avg. 0.7	
172	177.95	.75 - 1.1	avg. 0.9	
172.95	198.8 EOH	.559	avg. 0.6	

#### **TABLE OF CODES**

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Km, Km1	Kimberlite
Li	Limestone
Н	Huronian sediments
G	Gneiss
gtG	garnet Gneiss
LG	Leuco Gneiss
CR	Country Rock
Μ	Mantle
sp	serpentine
ta	talc
se	selinite, gypsum
cd	chrome diopside
ol	olivine
il	ilmenite
ph	phlogophite
са	calcite
gt o	garnet orange
gt r	garnet red
gt v	garnet violet
gt c	garnet clear
H2O	altered by ground water
FF	Fracture fill
V	vein
pel	pellets, pelletal
Α	autolith
NA, N	nucleated autolith
ind.	Indicators
acs	accessory minerals

#### DIAMOND DRILL LOG - KIMBERLITE LOGGING TABLE

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY: Sudbury Contact Mines Ltd.	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-01	PAGE: 1/2	
PROPERTY:	CLAIM: 1202724	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH: N/A	
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP: -90°	
		- Jacob -			

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca_	MS x10 <sup>-3</sup>
47.5	66.0	Km1	sp, ta	FF,.25 mm se	<1mm tr ol		1-3, 2- 3%Kim	1-3, 0.5%G	1-40,30%Li	1-3, tr-1%gt	40 tr			15% sp/ta	1.0
			H₂O	& 2mm se			1-3,5% CR		1-40,40%H	1-3,2%ph	<1-4,3-5%			5% CR	
								1-3, 3%kim		<1-2, 10%sp/ta (ol)					
66.0	79.5	Km 1	sp/ta	FF- se .25mm	NS	2mm, tr ol	2, tr ol		2-40 20%Li	0.5-1, tr cd	1-60, 3%	0.5-1,tr gt		15% sp/ta	1.5
			H₂O	se			2-15,1%gt	1, tr gt	2-4 40%H	0.5-2,1%ph				10% CR	
				V 2mm, se			1-3,2%Kim	1-3,1%Kim	1-80, 5% gt G	0.5-50, 2% gt					
									80, 1%L,G						
									80, tr M						
												i		i	
												,		i	
														,	
						_									

#### **DIAMOND DRILL LOG - KIMBERLITE LOGGING TABLE**

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-01	PAGE: 2/2	
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH: N/A	
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP: -90°	

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
79.5	87.0	Km 1	sp				1-6, 10-15% kim		2-20, 30%Li	<1mr, 1%ph	1-6, 10%			sp 15%	1.4
			H₂O				>2,2% CR		2-20,35%H					CR 10%	
									50-90, tr(3)LG					Kim 5%	
									50,(1)M						
· ·															

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#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY:Sudbury Contact Mines Ltd.	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA95-02	PAGE: 1/4
PROPERTY:	CLAIM:1202724	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:
			)	

1000 C				_											_
from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletai elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
48.4	61.5	Km 1	sp				1-5-mm, 2% ol	1-6mm, 3%ol	<2-80, 25%Li	1-2mm, tr il	4-30, 2-5%			6-10% CR	1.5
							1-2mm tr cd	1-2mm, tr cd	<2-80, 20%H	1-2, tr cd				1% ph	
							1-2, tr ph	1-2, tr ph	3-50,4% LG					3-5% pel	
							1-2 2% gt	1-2, 2% gt	2-10, 1% gt G					25-30 Kim	
														2% acs	
61.5	75.0	Km 1	sp,ta				1-5mm,3% ol(sp)	2-5,3% ol(sp)	<2-40, 25% Li	1-3, tr il (4)	4-30, 5%	5-9, 25% ph	30,1 gt	6-10%CR	1.7
							1-2mm, tr cd	3-5, 1% ph	<2-40, 20%H					3-5% pel	
							1-5, 2% gt	3-4, 2%gt	3-20,1% gtG	<1, 1% gt				30 Kim	
									3-40, 1%G	<1-3, 3% ph				2% acs	
									2-40, 1%M					gt,	
75.0	88.5	Km1	sp, ta				1-5, 2%sp(ol)	2-5, 2% ph	Li & H as before		1-2, 3 grains cd	4-40, 3%		5% CR	2.2

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#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

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COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA95-02	PAGE: 2/4
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
							1, tr cd	1-6, 4%sp(ol)	4-20, 3% LG	1-6, 1% gt		5, tr gt		30% Kim	
							1-3 ,1% gt	2-4, 2%gt	4-20 ,1% gt G	1-3, 3% ph				2% mica	
									30, tr M	1-2, tr il				5% fine pel	
88.5	102	Km 1	sp, Cby				<2-4, 2%M	<2-6,2%M	5-40, 30%Li	1-2, 0.25% cd	5-30, 3%	5-10, tr gt	25, tr gt	30% sp,ta after ol	3.4
			ta, H <sub>2</sub> O				<2-4, tr gt	<2-5, tr gt	5-30, 20%H	<1-6, 3%ph				10% CR	
							<2-4, 1%sp (ol)	<2-15, tr ph	<4-50, 2% gtG					2%M	
									<4-60, 5%LG						
									<2-60, 4%M						
102	115.5	Km 1	sp, clay				<2-3, tr M	<2-6,2%M	<2-70, 30%Li	1-2,tr cd	5-50,4%	5-10, tr g	25, tr gt	30-40% sp, ta	5.2

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

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COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA95-02	PAGE: 3/4
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
			ta, H₂O				<2-3, 2% ph	<2-4,tr gt	<2-30, 20%H	1-7,3% ph				After ol clay alt.30- 50%	
								<2, tr cd	2-20, 2%gt G					5% CR	
									4-70 2%LG					1%M	
									2-25 1%M						
115.5	129	Km 1	sp, ta				<1-4, tr M	<1-4, tr M ₊	<1-60, 30%Li	<1-2, 1-2%ph	5-30, 2%	3-5, tr gt		30 sp, ta, clay	3.5
			clay					<1-6, tr gt	2-70, 20%H	1-2, tr cd				after kim 10%sp, 5% ta, 15%clay	
							2, trod	<1-2, tr cd	5-30, 5% gt G	1-5, 1% gt				5% CR	
									5-40, 2%LG					2% ph	
129.0	142.5	Km 1	clay,sp ,ta				2-3, tr gt	2-4, tr gt	<2-50, 30%Li	<1-2, 1% gt o	5-10, 1%			20% clay	2.1

# W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA95-02	PAGE: 4/4
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
							<1, 3%sp	<1 3% sp	<2-30, 20%H	<1-2, tr cd				10% sp,ta	
									<2-50, 7%LG	<1-2., tr gt v				5% CR	
									<2-40, 3% gt G	<1, tr ph				3.5% pellets	
									<1.5, tr M						
142.5	159	Km 1	clay				<1, 3% sp	<1, 3% sp	<2-400, 30%Li	<1-3, tr gt o	5-10, 3%			5-10% clay	1.8
	(16.5)		sp, ta				1-3, tr gt v		<2-30, 20% H	<1-2, tr gt v				5-20% sp,ta	
							1-6, tr gt o	1-6, tr gt o	5-30, 2 gtG <2-50, 3%LG	1-3, tr cd <1-5, 3%ph				6% pei	
							1-2, tr gt c			2, tr il				5% CR	
		_													

# DIAMOND DRILL LOG - KIMBERLITE LOGGING TABLE W.A. HUBACHECK CONSULTANTS LTD.

									TOR	ONTO, ONTA	ARIO, CANAI	AC			
COMP	ANY: Su	dbary Co	ntact M	<u>سی</u> <u>C</u>	ORE SIZE:	NQ	DA		D:		HOLE N	D: MRA-95-0	<u> </u>	AGE:   /	10
PROPE	RTY:	216		С	LAIM: 120	12724	CO	-ORDINATE	S:		TWP/LA	T.LONG:	A	ZIMUTH:	
COMM	ENCED:				OMPLETED		LO	LOGGED BY:			ELEVATION:			IP:	
									Kynt	5/~~					
from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
125.72	1325	Km1	sp.ta	-	-		1-5mm. 20 sp/01	2-10mm, 12 5 plo1	42-30,25861	62mm tr ep (5)	5-20 36 kim	5-10, 12 500		222 spla	1.6
							2-3mm, tr gtti	2-5, t-gt(0)	42-60,2081	12-3, trativ	5-20, 28NA	5 , Lr (t)		102 CR	
									2-60 3% Git	2-3 trg2(0)				52 pel	
				_					2-30,286	62, 18 mase.				28 ph	
	j.													trind.	
132.5	13605	1cm1													
			taschy				2-5,585001	3, tr gt(6)	22-100 25ELi	2, tr cd	5-20, 32NA			358 tu/clay	1.1
					-		2 tred		LZ-30, 15% 11	1, 211				5% sp	
							3 tr gt/o)		59066	2-3, gt(0)				108 CR	
			L											32 pel	
														2% ph	

#### W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 2 / 10
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
136.05	143.4	Km1	sp.ta	_			1-15 8% \$0/01	1-3, trato	2-6,35%	1-3,6-CD	2-30 23 A	.5 trato		30.5p/at	1.5
							1-3 tr at(0)		(2-30, 209H	2-5 , tr 6, the	2-30, 3/, NA	, ,		IOL CR	
						_	1-3 trat		42-10,126	2.3 to gt(v)	,			12 indi.	
							, ,							vi oh	
143.4	143.55	Km 1	Sipta				LZ 18	L2. t- 16	L2 10821	42, 1% ph	-			408 5p Au	0
			clay				,	, J	42, 10% H					201 CR	
									, ,					10% shands	
														102 clay	
														it i	
143.55	165.05	Kni	So tu				1-3 tratfol	1-5 tratto	L2-50,259L:	5-3 30	2-20,27A	s. 10 trato	(2) ct6	30% 50/01	1.8
							1-3 trat(v)	1-10, 2%5061	12-40,20H	42.5 t- gt(0)	2-30 \$NA	5 Jur2 wh	J	104 CR	
							, , , , , , , , , , , , , , , , , , ,		42- 40,22M	42-2 tr 94(0)	, , , , , , , , , , , , , , , , , , , ,	, , ,		5% acs	
							, <b>, , , , , ,</b> , , , , , , , , , , , ,		42-20,18G	c2-3,28,2h				TR,	
										42-3 6,08				,	

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TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 3 1 10
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

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from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
165,2	165.65	Km1	5pha				42-3 38 splot	12-4 1950	42-20 , 30/L:	2-3, Lreto	-			3025p/La	1.4
								2-3 tratio	42-15 29 H.	· 5				10% CR	
								· .	20 mg, 6 6 h						
									, 						
165.65	190.4	Km 1	5 da	6			22-463 50/01	12-6 325	12-90, 302 Li	12-5 trated	45-60, 28 A	5-20 trato	20-25, 64t6)	302 spta	2.0
	· 		1	<u></u> _			2-4, tr at	2-3 , brat(0)	22. 252H	12-4 , brgt()	45-70,32NA	- toph	20 trph	10%, CR	
								- 0	12-60, 166	12-3 bed					
									12-30 tr gt6	LI tril					
									12-50 1/m	L1-5 28ph					

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#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

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COMPANY:CORE SIZE:DATE LOGGED:HOLE NO: MRA -95-03PAGE:// IPAGE:// IPROPERTY:CLAIM:CO-ORDINATES:TWP/LAT.LONG:AZIMUTH:COMMENCED:COMPLETED:LOGGED BY:ELEVATION:DIP:

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
190.4	202.7	km 1	spten			·	a-5, 7% sph	1-5 , Lrat(0	42-50,25,2;	42-5, 1-gt(6)	42-40 BNA	5 trate		20% 50/01	1.6
			clay				12-3 tritio)	42-5 3%=06	62-30, 20AH	22.3 tr gt(v)	42-60 11A			10% CR	
							LZ-3 Light		12-30,126	Z LCD				12 ph	
									12-20 trgt6	42 1/1ph				5% clay	
									2-25 .5/M						
202.7	202.9	Km1	Sp/La	_			42-3 5250/1		42-3, 1522;	41 tratle	15mm 18NA			30 8 50 01	1.6
			clay						12-4 15% H	, ,	42-4 12A			10% day	
									LZ Ligt6	LI IEph				30% CR	
									, , ,					150 ph	
202.9	209.3	Km 1	spla				LZ-4, 7%50/0	42-5 37,500	12-110, BOLI	42-4 , Ligt(0)	12-30 JENA			209. 50/01	1.5
			clay				1 2-3, trat(0)	, , ,	12-30, 20% H	(2-3, bugt()	12-20 13A		_	109 CR	
							L2-3, Er ,44)		2-20, 16 G 2-15, 4at6	LZ-Z, Eratk	,			5%-7%	
									2-20 tr M	12, L- CD				12, ph	

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# W.A. HUBACHECK CONSULTANTS LTD.

TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 5 110
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
209.3	223.0	Km1	Sp. bu				42-15, 1025061	12-20 3% spol	42-50, 30%L:	62-4, L-CD	0-40 2% NA	0.6 Jtr st(6)		208 50/01	0.6
			clay		-		42-3 brette	12-10 tration	62-20,257H	42-5 trg+6	0-30 1% A			10% CR	
			د 				12-3 trativ		12-15, 13 G	22-3. 6-9t(v)				5-10% chan	
									12-10 tr gt6	12 41				17. ph	
									62-25 L. M	42-3 22 ph					
225.0	235.3	Km1	spta				4215, 10, 50/01	(2-20, 3/ 500)	12-90 3021:	12 trip	0-40 12 NA			25250/01	0,6
			clay				Lz- tr do	12-4 .t- attol	42-30 25/H	12-4 trat(0)	0-30 12 A			JOE CR	
							12-3. tr 944	62-3 trath	12-15, 5-6	(2-3 tratu	,			58 clay	
							Ĵ	3 3	62-40, tr gtt	12 24 ph				1% ph	
									42-40,19,M						

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA - 95-03	PAGE: 6 110
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletai elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
235.3	264.3	Km 1	5p/tu	ct (tr		-	42-10,78 50/01	12-15 725p/01	12-500,357,1;	22-10 q 40	12-40 12NA	.5-10 trat()	15-20 6-446	302,5p	0.4
			_				12-3 Lr 96(1)	12-5, tr gt(0)	12-30 202H	62-4 trat(v	22-4018A			10% tu	
							12-2, tr gt()	12-3, trativ)	12-25 ,5%6	LZ, tr cd	,			tr clay	
			_				LZ, Lrph		42-20trg16	62 tril				102 CR	
									22-60, 18 M	12-4, ph					

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 7 / 10
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletai elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
267.85	281.65	Km1	sp,ta				42-4, 72m	2-5 tretto	12-120,30Li	12-7 tato	12-50, 3/A	H-7 tratto	70. p.h	202 CR	0.4
			Clay				22-7 tr 5t(0)	22-5,38m	12-30 20H	124 trath	LZ-30, 31NA		15 to ato	102 m	
			5				12-3 tr gt(v)	,	12-30, 246	12-34gtw)	5-30, trGK			20% ta/sp	
							42-4, trph		42-15 RatG	22-2 ticd				to clay	
									12-15 trm	12-5 17.0h					
										,,					
281.65	282.4	kms	5p,ta		-	-	62-4 75m	12-5 32m	42-1525Li		20-40 32 A	-	-	ZUECR	0.4
		_	clay					-	42-10,20 H		26-30 28NA			109, M	
									L2-3 br 6		,			15to Eusp	
									,					10/2 clay	
282.4	285.0	Icm 1	5p,tu	-	ł	1	12.16 .7 8m	L2-20, 38M	L2-100 ,30%L:	22-15, Er atlo	3-40 18A	LIO , tratle		20% CR	.55
			tr cly				KZ-5 , Eration	12-15 trato	12-30,208H	L2 , tr giv	3-40 12 NA			10% m	
							17-3 brakul	3. bet	42-20, E-gt6	42-4 , 12 ph				20% tu/sp	
		-					12-3 tron	<b>,</b>							

# W.A. HUBACHECK CONSULTANTS LTD.

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TORONTO, ONTARIO, CANADA

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COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 8 / 10
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletai elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
295.3	317.5	kmi	Tussp	tr ct		-	LZ- 4, 68m	42-7 3km	LZ-150 302Li	K2-8, tr at61	12-200 12 A	\$5-10, tr et(0)		208 CR	.9
							12-14 to gt(0)	42-6, trgt(0)	12-30 20H	12-3 21 gt()	12-40 6-NA			8% m	
							22-3, ++ gt(v)		42-150,226	42-4, 22ph				20% ta/sold	
									12-20 trate	12 tri)					
									5.0	12, Ercd					
317.5	336.5	Km A	ta, 5p	tr ct			L2-4 62m	12-10 32.	1-12-100,30%-1	12.10, traffe	L2-30 ,5% A	5-10 , b- gtb)		202 CR	
							12-5, tratio)	12-7, trat6)	12-60 253H	22-3 tratul	KZ-40 SINA			82 m	1 and 1
							K1-3 , tr gt(v)		42-100,236	LZ tred	30 ,6 56			2000 tu/sp/	1
									12-50, 12+6	22 , tril					
										42-3 24ph					
										,					
										}					

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 9 / 10
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	ait	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
336.5	348.7	Kma	tu/sp				LZ-10, 78m	42-15 38M	12-40.31Li	12-15, 12 gKol	4- 40 Er NA	45 , tr attal	15, tralla	roto C.R.	3.0
			tr clay				LZ- 10, t- \$	L2-15, tr ette	LZ-50 24H	12-5 trat(M	12-40, t-A		/ 5	10% m	
							LZ.5 broth	) ].	K2-50, tr G	22-3 t- iil		125, troh		20% to 500	
							12-6 to (p)		(2-30, trat6	42-6 36 ph					
							13 br(i)		L2-30, 22 M						
							<b>,</b>								
348.7	349.35	Km 1	to sale		-	-	12-5 ,7650	12-7 3,50	L2-30, 30%L;	42-3. tr 94(0)				202 CR	7.0
							L2- trate	12-3 , brgtg	12-20 207H	K2-3. 260h				10% spalled	
							, , ,	, , ,	62-3, tr.6	12 (.1)				208 km	
									62-30 1/ at6	,				Ca	
349.35	352.8	Kma	Spla				K2-5,7850	LZ-10 3950	42-30, 3052;	12-3, Er atta	4-30 .5% MA	5 troh	10×25 ++(0)	ZOZICR	3.0
			tr clay				LZ trato	12-4 t-gto	12-30,202 H	42-4 25,0h	4-30 . St A	, <u>,</u>	, , , ,	10% M (50)	
							KZ-3 trath		42-30, tr G	12 strep				209, tasp.01	
							, ,		LZ -20,16m						

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TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-03	PAGE: 10 / 10
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1ст 1mm-2%6А	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
352-8	353.85	KMI	1				4-4 780	12-5 3001	12-15, zdili					10% CR	5.2
							,		12-15, 2d H					102 0	
									42-30, tr6					40% km	
									LZ-3 lbytG						
353.85	354.2	km 1					K2-3 39.01	22-3 280	12-9 ,52L:				-	10% CR	9.5
									12-4, 5811					15801	
														758 Km	

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COMPANY: Sudbury Contact Mines Ltd.	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-04	PAGE: 1/6
PROPERTY:	CLAIM: 1202724	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletai sphericai 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
53.0	66.5	Km 1	sp,ta				<1-4, tr gt	<1-10, 5% gt	<2-130, 30% Li	4-5, 0.5% gt 0	5-80, 3%			30% sp,ta	1.4
							<1-3, tr ph		<2-30, 25% H	1-2, tr gt v	5-40, 1% N			10% CR	
							<1-5, 1% M	<1-5, 2%M	<2-80, 3% G	1-2, tr cd				% ph	
									<2-20, 1% gt G	<1-3, 3% ph					
									<2-70, 3%M						
66.5	80.0	Km 1	sp ta				1-3, tr gt	1-7, tr gt	<2-130, 35% Li	1-5, 3% gt o	5-35, 3%	50-70, 3 gt o	30, 1 gt o	30% sp ta	1.0
							1-3, tr ph	1-5, 2% M	<2-40, 20% H	1-3, tr gt v	10-30, 2%N			10% CR	
							1-5, 2%M		<2-60, 32% G	1-2, tr cd				2% ph	
									<2-65, % gt G	<1-3, 2% ph					
									<2-20, 1%M			_			

#### W.A. HUBACHECK CONSULTANTS LTD. TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA-95-04	PAGE: 2/6
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
80.0	93.5	Km 1	sp, ta				<1-3, tr gt v	2 tr gt v	<2-130, 30% Li	<1-1, tr cd	3-60, 4% A	15, 3 gt o		tr ca	1.2
							<1-2, tr gt c	2-5, tr gt o	<2-40, 20% H	<1-2, tr gt v	<3-70, 3% NA			30% sp/ta	
							<1-3, tr gt o	<2-5 3%M	<2-80, 5% G	<1-2, tr gt o				10% CR	
							<1, tril		<2-35, 2% gt G	<1, tr il				5% M	
							<1-4, 3%M		<2-30, 5%M	<1-4, 2% ph				3% A	
										<1-15, 1% gt o					
93.5	10.70	Km 1	sp ta	Se			<1-5, 3% M	<2-5, 3%M	<1-205, 30%Li	1-2 , tr cd	<2-35, A	0.5-10, 4 gt o	10-30, 3gt o	0% sp/ta	1.5
			clay				1-2, tr gt v	<2-4, .25% gt o	<1-30,20% H	1-2, tr gt v	<2-40, NA			20% clay	
							1,trgtc		<2-20, 2% G	1, trgt c				5% ta	

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1

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO:MRA-95-04	PAGE: 3/6
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1 <i>mm-</i> 2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
							<1-3, tr gt o		<2-10, tr gt G	<1, tr í				10% CR	
							1, tr il		<2-45, 3%M	<1-3, 1% gt o				3% M	
										<1-2, 2% ph				3% A	
107	119.5	Km 1	clay sp ta	Ca			2-3, tr gt v	3-10, gt o	<2-50, 30% Li	2-5, 1% gt o	3-200, 3% A	5-15, tr gt o	20, tr gt	20% clay	1.8
							2-5 tr gt o		<2-100, 20% H	<1-4, 3% ph	3-30, 2% NA			10% sp, ta	0.4
							<2-6, 2%M	<2-15, 3% M	2-10, 1% gt G	1-2, tr cd				5% CR	
									2-30, 2%G	2, tr 1					
									2-10, 2%M	2, tr gt v					
119.5	134.0	Km 1	clay	Ca, Se			2 tr gt v	3-10, gt o	<2mm- 4.5m, 40% Li	2-5, 0.5% gt o	3-40, % A	5-15, tr gt o		20% clay	0.5
			ta, sp				2-5 tr gt o	<2-15, 3%M	<2-20, 10%H	2, tr gt v	4-30, 2%NA			10% ta, sp	

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TORONTO, ONTARIO, CANADA

COMPANY:	CORE SIZE:	DATE LOGGED:	HOLE NO: MRA95-04	PAGE: 4/6
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletai spherical 1mm-2%cr	pelietai elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
							1-6. 2%M		3-10, tr gt G	2, tr gt c				5% CR	
									2-20, 1%G						
									<2-40, 2%M						
		_													
134	153	Km 1	sp ta				1-5, tr gt o	2-15, tr gt o	<2-140, 30% Li	2-15, 1% gt o	<2-40, 4% A	.5-15, tr gt o	25, tr ph	25 sp	0.6
			clay				1-2, tr gt r	2-15, 4% M	<2-40, 20%Н	2-4, .5% gt r	<2-40, 3% NA			5 ta	
							1-2, tr gt v		5-30,1%gtG	2, tr gt v				10 clay	
							<1-5, 7%M		5-30, 1%G	2-3, tr cd				10 CR	
									<2-60, 10% M	2-5, 3% ph					

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TORONTO, ONTARIO, CANADA

COMPANY:	MPANY: CORE SIZE:		HOLE NO: MRA-94-04	PAGE: 5/6
PROPERTY:	CLAIM:	CO-ORDINATES:	TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0,5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
153.0	177.5	Km 1	sp ta				1-5, tr gto	2-15, tr gto	<2-400, 35%L	1-15 1% gt o	<2-80, 3%A	-5-15 tr gt o		25% sp	0.7
			tr clay				1-2, tr gt r	2-15, 1%M	<2-20, 15%Н	1-3 tr gt v	<2-35, 4% NA			10% tr	
							1-2, tr gt v		>2-80, 1% gt G	1-2, tr gt v				2% clay	
							<1-5, 5%M		<2-30, 2%G	1-2, tr cd				10% CR	
									<1-60, 10%M	<1-3, 3%ph					
177.5	198.8	Km 2	sp, ta				<2-5, 7%M	<2-5, 8%M	<2-400, 35%Li	<2-15, 1% gt o	<1-60, 5%A	15, gt o		35% sp	0.6
							<2-5,tr gt o	<2-15,tr gt o	<2- 40, 10%H	2-7, tr gt v	<1-35, 1% NA	9mm, tr gt v		5% ta	
							1-2, tr gt v		<2-60, 10%M	1, tr cd				6% M	
									<2-50 3% gt G					10% CR	

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COMPANY:	CORE SIZE:	DATE LOGGED:MRA-95-04	HOLE NO:	PAGE: 6/6
PROPERTY:	Y: CLAIM: CO-ORDINATES: TWP/LAT.LC		TWP/LAT.LONG:	AZIMUTH:
COMMENCED:	COMPLETED:	LOGGED BY:	ELEVATION:	DIP:

from	to	lith	alt	veins	vesicles 1mm-2%cr	amyg 1mm-2%cr	pelletal spherical 1mm-2%cr	pelletal elongate 1mm-2%cr	country rk clasts 1mm-2%cr	accessory minerals 1mm-2%cr	autoliths kimb clasts 1mm-2%	macro 0.5-1cm 1mm-2%6A	mega 2-5 cm 1mm-2%6A	matrix <2mm 1%Ca	MS x10 <sup>-3</sup>
									<2-40, 1%G						
							_								
198.8	EoH														
													-		
							{								
															[

# APPENDIX C: LAKEFIELD RESEARCH ANALYSIS REPORT

W. A. HUBACHECK CONSULTANTS LTD.



185 Concession Street, Postal Bag 4300 Lakefield, Ontario, Canada K0L 2H0 Tel: (705) 652-2000 Fax: (705) 652-6365

WA Hubacheck Consultants Ltd. Suite 1401, 141 Adelaide Street W Toronto, Ontario CANADA M5H 3L5 June 30, 1996

Attention: Dave Christie

#### Re: Lakefield Research Project No. 8900-955 (Jan3019.R96)

Dear Dave:

Lakefield Research has completed the caustic dissolution treatment of the nineteen samples identified as follows:

• 35101 through 35119

and the attrition milling treatment and indicator mineral identification from the following nine samples:

• 35051 through 35059

A total of forty-three diamonds were recovered from the fourteen of the nineteen caustic dissolution residues; the maximum number of eight diamonds was identified in sample 35117. The diamonds occurred as clear white and lesser clear brown fragments, fragmented dodecahedrons, fragmented complex crystals, fragmented octahedrons, and fragmented twinned octahedrons and ranged in size up to 13897619 octacarats (0.14 carats), a clear white diamond fragment in sample 35116. The caustic dissolution residues contained rock fragments (exotic clasts and undissolved kimberlite), oxides, garnets, sulphides, corundum, kyanite, graphite, chrome diopside, moissanite (SiC), and accessory silicates such as zircon.

An extensive suite of potential indicator minerals was selected from the attrition mill residues; pyrope garnet, chrome diopside, and orange garnet (possibly eclogitic almandine-pyrope) were identified. Numerous grains of chromite and ilmenite were selected from the 0.5Amp nonmagnetic fractions; this fraction typically contains the magnesian varieties of the oxide minerals (picrochromite, picroilmenite).

Four synthetic diamonds were recovered from three of the caustic dissolution residues.

The summary data sheets are attached.

#### Procedures

#### **Attrition Milling**

The nine samples were crushed to pass a nominal 5mm and were submitted for gentle attrition milling using the polyurethane cement mixers. The mixers were charged with a package of ceramic balls (3/4", 1", and 1 1/2" diameter in equal proportions). A high solids percentage was maintained to minimize impact of the ceramic charge. The attrition milling was allowed to continue for a period of four to eight hours after which the mill was emptied onto the 20 mesh Kason 24 inch diameter vibratory screens. The milling and screening operation was carried out in short stages to optimize fines removal and to minimize overall milling residence time. Milling durations of six to fifteen hours were required.

The milling typically is continued until the development of a fines fraction was at a minimum (oversize fraction typically 5-10wt% of original sample weight). The attrition milling residue was screened at 20 and 100 mesh, dried and weighed. The -20+100 mesh fraction was submitted for heavy liquid separation at SG 3.1 using a medium of acetone tuned methylene iodide.

The -20+100 mesh heavy liquid concentrate and the +20 mesh oversize fractions are submitted for microscopy to identify the presence of indicator minerals (pyrope, almandine-pyrope, chrome diopside, picroilmenite, picrochromite, olivine) and to select a representative suite of the indicator minerals. Microscopy is carried out on several magnetic, paramagnetic and nonmagnetic fractions of the HLS concentrate.

Diamonds may be observed in the nonmagnetic portion of the HLS concentrate; however, the diamonds may exhibit evidence of breakage during the milling procedure. In-house tests have indicated a shift in the frequency and size distribution of the contained diamonds as compared to parallel caustic dissolution tests.

#### **Caustic Dissolution**

The caustic dissolution treatment, directly uses diamond's property of high resistance to chemical attack. The procedure was developed, and refined to improve and streamline the process for routine diamond exploration samples, in response to the microdiamond losses attributed to standard attrition milling and also to reduce the weight of final concentrate.

The major advantage of the caustic dissolution process is the ability to recover, without breakage, all of the diamonds contained within the sample regardless of their particle size (+100 mesh), liberation size, quality or origin. The latter may account for actual diamond xenocrysts from the 'kimberlitic' material, and / or quality control stones added by Lakefield Research or by the client, and / or diamonds attributed to the exploratory core drilling equipment.

Diamond losses and modifications to the size distribution profile due to stone breakage are eliminated. A comparison of the efficiency of the caustic dissolution treatment and attrition milling flowsheets was undertaken using 'seeded' kimberlite samples. The results clearly indicated breakage and losses of microdiamonds from the milled samples; the normalized stone frequency (SPFK) and octacarat weights (OCPFK) typically were reduced by a factor of two to ten times.

Anomalously high stone frequency data indicating breakage was reported; corresponding stone weights and microdiamond grades were invariably low.

Routine quality control tests are utilized to evaluate the efficiency of the caustic dissolution technique. As such, the samples are *blind* spiked, prior to the fusion step, with green diamonds typically measuring from 10 to 80 mesh; these stones have been neutron irradiated to produce the distinctive coloration.

# Lakefield Research is not responsible for determination of the origin, quality or valuation of any diamonds recovered.

Flowsheet 1 outlines the typical program for microdiamond recovery from exploration samples. The caustic dissolution followed by water and acid leaching, and magnetic separations will produce several fractions commonly containing relict indicator minerals and a non-magnetic fraction possibly containing microdiamonds.

The Lakefield Research facility has sixteen pottery kilns which can treat up to 8 kg each (using uncrushed drill core) and are run in a 24 hour cycle. The use of smaller sample charges may be dictated by the abundance of carbonate minerals. Prior to the dissolution stage, a cursory mineralogical examination, by XRD and / or acid leach test (note effervescence), is carried out to identify any potentially deleterious phases. The carbonates, in particular, may exhibit a vigorous reaction to the hot caustic soda. Therefore, 1) the sample charge must be reduced to accommodate the relative volume increase or 2) the sample may be subjected to an acid digestion step. The former is recommended as the latter requires a similar time frame and additional material handling (leaching, filtering, rinsing, drying, weighing, etc.) which could contribute to potential losses of microdiamonds.

At the appropriate sodium hydroxide to sample ratio and optimum temperatures, the reaction is allowed to continue overnight. As depicted in the flowsheet, the process consists of dissolving the entire sample in a molten sodium hydroxide bath and typically recovering the +100 mesh residue.

An important feature of the recovery system is the pouring of the melt through a large diameter, stainless steel screen to collect the residue. The screening procedure significantly reduces the material handling and simplifies the subsequent leaching process. The screen and pot are leached sequentially with water and then acid to dissolve the residual sodium hydroxide. Collection of the final dissolution residue from the leaching tub is also made on a stainless steel screen. Of note, all screens are dedicated to only the diamond programs; each of the screens is examined thoroughly before and after usage. Any flaws require immediate replacement of the screen.

The spent caustic is allowed to cool for 24 hours, is removed from the recovery vessel and drummed for recycling for outside industrial applications.

After drying, the dissolution residue is split into three magnetic and non-magnetic fractions using the permanent magnet followed by the Frantz Isodynamic Separator. Extreme care is required as the non-magnetic, diamondiferous, portion of the residue commonly amounts to no more than a few milligrams. The concentrate products are then submitted for microscopy. Very few minerals survive the harsh attack; therefore weight reductions commonly exceed 99% of the initial sample weight. The high weight loss with optimum stone recovery is another major advantage of the caustic dissolution technique.

Only highly resistant minerals such as diamond, graphite, moissanite, zircon, chromite, kyanite, etc. survive the caustic attack. Of note, partially dissolved indicator minerals including colorless to opaque spinel, garnet, and ilmenite, as rounded relicts of original coarse grains, may occur in the dissolution residue.

The selected diamonds are measured using the petrographic microscope and the data are transferred to octacarat weights using an in-house software package. Diamonds may be weighed individually or in groups using the Sartorius balance to 0.xxx mg. Graphic representation of the diamond size and frequency distribution may be provided upon request.

#### Results

#### **Attrition Milling**

The sample weights for the attrition milling testwork are summarized as follows:

٠	35051	22.9kg
•	35052	23.7kg
•	35053	25.8kg
٠	35054	25.7kg
•	35055	28.0kg
٠	35056	23.4kg
•	35057	23.9kg
•	35058	23.6kg
٠	35059	23.8kg

The attrition milling and heavy liquid product weights are summarized below:

		· · · ·	
٠	35051	+20 Mesh	1500g
		-20+100 Mesh Float	3549g
		-20+100 Mesh Sink	57.7g
٠	35052	+20 Mesh	1800g
		-20+100 Mesh Float	3434g
		-20+100 Mesh Sink	21g
•	35053	+20 Mesh	3300g
		-20+100 Mesh Float	1 <b>889g</b>
		-20+100 Mesh Sink	29.7g
٠	35054	+20 Mesh	2700g
		-20+100 Mesh Float	1813g
		-20+100 Mesh Sink	72.9g
٠	35055	+20 Mesh	2500g
		-20+100 Mesh Float	2375g
		-20+100 Mesh Sink	38.3g
•	35056	+20 Mesh	1800g
		-20+100 Mesh Float	2509g
		-20+100 Mesh Sink	14.3g
•	35057	+20 Mesh	900g
		-20+100 Mesh Float	1558g
		-20+100 Mesh Sink	10.8g

•	35058	+20 Mesh	2200g
		-20+100 Mesh Float	1069g
		-20+100 Mesh Sink	14.3g
•	35059	+20 Mesh	1400g
		-20+100 Mesh Float	1343g
		-20+100 Mesh Sink	23.8g

Note: due to the large number of indicator minerals, only a portion of the magnetic and paramagnetic fractions were subjected to detailed microscopy. The entire nonmagnetic fraction was examined for all samples.

The attrition mill oversize products ranged from 3.8 - 12.8 wt% of the original feed weight.

An extensive suite of potential indicator minerals was selected from the attrition mill residues; pyrope garnet, chrome diopside, and orange garnet (possibly eclogitic almandine-pyrope) were identified. Numerous grains of chromite and ilmenite were selected from the 0.5Amp nonmagnetic fractions; this fraction typically contains the magnesian varieties of the oxide minerals (picrochromite, picroilmenite).

The indicator minerals recovered from the attrition milling residues are summarized below. The complete data sheets are attached.

		Purple Py	Alm-Py(?)	Cr Cpx	Cr Chr / Cr Ilm
•	35051	>50	>100	>50	>100
•	35052	>50	>100	>50	>100
•	35053	>50	>50	>50	>100
•	35054	>50	>50	>50	>100
•	35055	>50	>100	>50	>100
•	35056	>30	>50	>50	>100
٠	35057	>30	>50	>50	>100
•	35058	>50	>50	>50	>75
•	35059	>50	>50	>50	>75

The concentrates contained abundant exotic rock fragments (typically metasedimentary lithologies) and ferromagnetic to strongly paramagnetic oxide minerals.

The indicator minerals are in storage and may be mounted for electron microprobe analysis at your convenience.

#### **Caustic Dissolution**

The sample weights for the nineteen samples are as follows (total weight - 1026.3kg):

٠	35101	44.5kg
٠	35102	52.0kg
٠	35103	56.6kg
٠	35104	54.5kg

Hubacheck 8900-955

Lakefield Research Mineralogy - Diamonds

٠	35105	56.3kg
٠	35106	54.4kg
٠	35107	63.5kg
٠	35108	76.2kg
٠	35109	54.9kg
٠	35110	63.0kg
٠	35111	54.8kg
٠	35112	26.3kg
٠	35113	61.2kg
٠	35114	59.5kg
٠	35115	52.1kg
٠	35116	47.7kg
٠	35117	48.6kg
•	35118	48.4kg
٠	35119	51.8kg

A total of forty-three diamonds were recovered from the fourteen of the nineteen caustic dissolution residues; the maximum number of eight diamonds was identified in sample 35117. The diamonds occurred as clear white and lesser clear brown fragments, fragmented dodecahedrons, fragmented complex crystals, fragmented octahedrons, and fragmented twinned octahedrons and ranged in size up to 13897619 octacarats (0.14 carats), a clear white diamond fragment in sample 35116.

The caustic dissolution residues contained rock fragments (exotic clasts and undissolved kimberlite), oxides, garnets, sulphides, corundum, kyanite, graphite, chrome diopside, moissanite (SiC), and accessory silicates such as zircon.

Four synthetic diamonds were recovered from three of the caustic dissolution residues.

The caustic dissolution data sheets for the nineteen samples are attached.

The invoice was forwarded under separate cover.

The selected diamonds, indicator minerals, attrition mill products and caustic dissolution residues will be stored at Lakefield Research. Please advise when shipment is required.

If there are any questions regarding the results, please do not hesitate to call me.

Best regards, LAKEFIELD RESEARCH

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J.G. Davison, M.Sc. Senior Mineralogist PH# 705-652-2019





#### Project: 8900-955 Batch 2

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#### Indicator Minerals

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	Indicator Minerals					Comments	
Sample	Chrom	ne Pyropes	Orange Garnet	Chrome	Ilmenite	Cr spinel/	
#	Purple	Red	(poss. eclogitic)	Diopside		Chromite	
35051 (0.5Non Mag)	5	(8 present)	(5 present)	20 (>100)	20 (>30)	2	
35051 (0.5 Mag)	20 (>50)	(>100 present)	(>100 present)	20 (>50) *	(>100 present)	(>20 present)	*various shades of CD's
35051 (0.1 Mag)	5	(>10 present)	(<5 present)	(<10 frosty)	-	-	
35052 (0.5 Non Mag)	1(kely-rim)	(2 present)	(>5 present)	20 (>50)	20 (>30)	-	
35052 (0.5 Mag)	20 (>50)	(>50 present)	(>100 present)	20 (>50) *	(>100 present)	(>10 present)	*various shades of CD's
35052 (0.1 Mag)	20	(<5 present)		(>10 frosty) *	-	-	*CD's frosty-not picked
					: 		
35053 (0.5 Non Mag)	3	-	(<10 present)	20 (>30)	20 (>30)	1	
35053 (0.5 Mag)	20 (>50)	(>50 present)	(>50 present)	20 (>40)	(>100 present)	(>30 present)	
35053 (0.1 Mag)	20 (>25)	(>20 present)	(>20 present)	(>10)**		-	* *pale and frosty CD's
35054 (0.5 Non Mag)	•	-	(>20 present)	20 (>40)	20 (>30)	-	
35054 (0.5 Mag)	20 (>50)	(>50 present)	(>50 present)	20 (>50)	(>50 present)	(>20 present)	
35054 (0.1 Mag)	20 (>30)	(>20 present)	(>10 present)	(>10 present)		-	
35055 (0.5 Non Mag)	20 (small)	(<10 present)	(>10 present)	20 (>30)	20 (>25)	4	
35055 (0.5 Mag)	20 (>50)	(>50 present)	(>100 present)	20 (>50)	(>50 present)	(>20 present)	
35055 (0.1 Mag)	15	-	-	-	-	_	
35056 (0.5 Non Mag)	12 **	(<10 present)	(<10 present)	20 (>30 small)	20 (>30 small)	-	* *Pyropes small & pale
35056 (0.5 Mag)	20 (>35)	(>30 present)	(>50 present)	20 (>50)	(>50 present)	(>20present)	
35056 (0.1 Mag)	-	(<10 present)	(<5 present)	(>15 present)	-	-	

Note: 20 (>100) - indicates 20 grains were selected, but >100 were present in sample.

#### Project: 8900-955 Batch 2

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#### **Indicator Minerals**

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	Indicator Minerals						Comments
Sample	Chron	ne Pyropes	Orange Garnet	Chrome	Ilmenite	Cr spinel/	
#	Purple	Red	(poss. eclogitic)	Diopside		Chromite	
35057 (0.5 Non Mag)	2	(<5 present)	(<10 present)	20(>30)	20 (>25 small)	-	
35057 (0.5 Mag)	20 (>30)	(>30 present)	(>50 present)	20 (>50)	(>50present)	(>20 present)	
35057 (0.1 Mag)	2	(2 present)	-	(<5 present)	-	-	
35058 (0.5 Non Mag)	2	-	(<5 present)	20 (>25)	20 (>25)	1	
<b>35058</b> (0.5 Mag)	20 (>50)	(>30 present)	(>50 pressent)	20 (40)	(>50 present)	(>10 present)	
35058 (0.1 Mag)	6	(3 present)	-	(<5 present)	-	-	
35059 (0.5 Non Mag)	8	(>5 present)	(<10 present)	20(>30)	20 (>30 small)	1	
35059 (0.5 Mag)	20 (>50)	(>50 present)	(>50 present)	20 (>50)	(>50 present)	(>20present)	
35059 (0.1 Mag)	9	(<5 present)	-	(<10 present)	-		

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Note: 20 (>100) - indicates 20 grains were selected, but >100 were present in sample.

LAKEFIELD RESEARCH LIMITED P.O. Box 4300, 185 Concession St., Lakefield, Ontario, KOL 2HO Phone : 705-652-2038 - FAX : 705-652-6441

Hubacheck W. A. Consultants 141 Adelaide St. W. Suite 1401 Toronto, Ontario, M5H 3L5

Attn : Dave Christie Fax : 416 364-5384 Lakefield, June 10, 1996

Date Rec.	:	January 24, 1996
LR. Ref.	:	JAN3019.R96
Reference	:	LR9551745
Project	:	8900-955B#1

No.	Sample ID	Batch	Wt kg	# Pours	#Diamonds
1	35101	1	44.5	7	1
2	35102	1	52.0	8	5
3	35103	1	56.6	9	0
4	35104	1	54.5	9	4
5	35105	1	56.3	9	2
6	35106	1	54.4	. 9	4
7	35107	1	63.5	10	0
8	35108	1	76.2	12	1
9	35109	1	54.9	9	2
10	35110	1 -	63.0	10 <sup>.</sup>	0
11	35111	1	54.8	9	0
12	35112	1	26.3	4	0
13	35113	1	61.2	10	3
14	35114	1	59.5	9	2
15	35115	1	52.1	8	3
16	35116	1	47.7	8	1
17	35117	1	48.6	9	8
18	35118	1	48.4	8	5
19	35119	1	51.8	8	2

# SUMMARY INFORMATION

1.S.L Greg Davison

#### LAKEFIELD RESEARCH LTD.

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario, KOL 2H0 Phone: 705-652-2000 FAX: 705-652-6365

### DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client	8900-955 W A Hubacheck Consultants	Sample # :	35101	Batch # : Weight :	1 44 5
onenti	W.A Hubacheok Consultants			Weight .	44.3

 Stone Dimension, mm			Weight		Stone Descri	ption
X	Y	Z	(octacarats)	Colour	Clarity	Morphology
0.65	0.31	0.42	152483	White	Clear	Fragment

#### Caustic Residue:

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 Mesh	Fraction	Description
+ 20	Oversize	Garnets and oxides, with trace rock fragments.
 - 20 + 100	Magnetic	Oxides and garnets, with minor rock fragments.
- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, garnets), with trace sulphides.

	Total Weight (octacarats):	152483	Number of Syndites:	0
-	Number of Diamonds:	1		
_	CPHT (Total sample Grade):	3		
	SPFK ( + 100 mesh):	1		
_	OCPFK ( + 100 mesh):	171329		69
			Authorizing Signatur	e

Notes: 1 carat = 10 octacarats.
Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

Monday, February 12, 1996

# LAKEFIELD RESEARCH LTD.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35102	Batch # : Weight :	1 52.0

- [	Stone Dimension, mm		Weight	Stone Description			
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
Ì	0.42	0.22	0.14	24108	White	Clear	Fragment
	0.37	0.17	0.07	7835	White	Clear	Fragment
	0.19	0.14	0.07	3515	White	Clear	Fragment
	0.74	0.34	0.16	71635	Brown	Clear	Fragmented dodecahedron
-	0.42	0.22	0.22	37884	Brown	Clear	Fragment

Monday, February 12, 1996

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35102	Bat	:ch # :	1
Client :	W.A. Hubacheck Consultants			We	ight :	52.0

#### <u>Caustic Residue:</u>

	Mesh	Fraction	Description
_	+ 20	Oversize	Rock fragments, gamets, and oxides.
	- 20 + 100	Magnetic	Oxides and garnets, with minor rock fragments.
-	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, garnets), minor oxides, with trace graphite and corundum.

 Total Weight (octacarats):	144978	Number of Syndites:	0
 Number of Diamonds:	5		
CPHT (Total sample Grade):	2		
 SPFK ( + 100 mesh):	4		
OCPFK ( + 100 mesh):	139401		
			~

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Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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Monday, February 12, 1996
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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

	Project: Client :	8900-955 W.A. Huba	check Cons	Sampl ultants	le#: 3510	3	Batch # : Weight :	1 56.6
~	Sto	one Dimensio	n, mm	Weight		Stone Descriptio	n	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	
			-1					

#### Caustic Residue:

Page 1

	Mesh	Fraction	Description
	+ 20	Oversize	Oxides, rock fragments, and gamets.
_	- 20 + 100	Magnetic	Rock fragments, oxides, and gamets.
	- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, green, garnets), with trace corundum.

	Total Weight (octacarats):	0	Number of Syndites:	0
~~	Number of Diamonds:	0		
-	CPHT (Total sample Grade):	0		
	SPFK ( + 100 mesh):	0		
_	OCPFK ( + 100 mesh):	0	(	50

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Notes: 1 carat = 10 octacarats.
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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8900-955 Client : W.A. Hubacheck Consultants

Sample # : 35104

Batch # : Weight : 1

54.5

- [	Stone Dimension, mm		Weight	Stone Description			
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
[	0.96	0.62	0.11	118071	White	Clear	Fragmented dodecahedron
	0.62	0.54	0.29	173950	White	Clear	Fragmented dodecahedron
	0.42	0.22	0.16	27552	White	Clear	Fragment
	0.39	0.19	0.28	39376	Brown	Clear	Fragmented complex crystal

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35104	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	54.5

#### <u>Caustic Residue:</u>

	Mesh	Fraction	Description
1	+ 20	Oversize	Rock fragments, garnets, and oxides.
	- 20 + 100	Magnetic	Rock fragments, oxides, and garnets.
-	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, trace green, garnets), minor oxides, with trace corundum and rock fragments.

Total Weight (octacarats):	358950	Number of Syndites:	0	
 Number of Diamonds:	4			
CPHT (Total sample Grade):	6			
 SPFK ( + 100 mesh):	3			
OCPFK ( + 100 mesh):	329312			
		(5	Q	

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Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35105	Batch # :	1
Client :	W.A. Hubacheck Consultants	•		Weight :	56.3

Stone I	Dimension, I	mm	Weight		Stone Descr	iption
X	Y	Ζ	(octacarats)	Colour	Clarity	Morphology
0.68	0.51	0.34	210772	Brown	Clear	Fragmented dodecahedron
0.28	0.25	0.13	16789	Brown	Clear	Fragment

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35105	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	56.3

#### <u>Caustic Residue:</u>

	Mesh	Fraction	Description
_	+ 20	Oversize	Rock fragments, oxides, and garnets.
	- 20 + 100	Magnetic	Oxides and garnets, with minor rock fragments.
-	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, trace green, garnets), minor oxides, with trace corundum and rock fragments.
_	Total Weight (octacar	ats): 227	562 Number of Syndites: 0
_	Number of Diamonds:		2
	CPHT (Total sample (	Grade):	4
-	SPFK ( + 100 mesh):		1
_	OCPFK ( + 100 mesh	): 202	097
			(L)
-			Authorizing Signature
	8		
-	Notes: 1 carat = 10 Lakefield Res of the origin, c	octacarats. earch is not responsibl juality or valuation of a	e for the determination ny diamonds recovered.
_			
	Page 2		Monday, February 12, 1996

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35106	Batch # : Weight :	1 54.4

	Ston	Stone Dimension, mm		Weight		iption	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
	1.08	0.68	0.36	471139	White	Clear	Fragmented complex crystal
-	0.37	0.31	0.07	14364	White	Clear	Fragment
	0.54	0.31	0.17	50985	White	Clear	Fragment
	0.39	0.37	0.13	33952	White	Clear	Fragment

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35106	Batch # : Weight :	1 54.4

#### <u>Caustic Residue:</u>

	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments, with minor garnets and oxides.
•	- 20 + 100	Magnetic	Oxides, rock fragments, and garnets.
	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, kyanite, garnets), minor oxides, with trace

Total Weight (octacarats):	570441	Number of Syndites:	0	
 Number of Diamonds:	4			
CPHT (Total sample Grade):	10			
 SPFK ( + 100 mesh):	3			
OCPFK ( + 100 mesh):	524302			
		(	50	

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8 Notes: 1 carat = 10 octacarats.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

	Project: Client :	8900-955 W.A. Hubachuck Consultants	Sample # :	35107	Batch # : Weight :	1 63.5
_	Ston	o Dimonsion mm		Stone Description		

	Stone Dimension, mm		weight		Stone Descrip	Juon	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
							· ·
- 1		· · · · · · · · · · · · · · · · · · ·		·		A	

#### Caustic Residue:

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_	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments, garnets, and oxides.
-	- 20 + 100	Magnetic	Garnets, oxides, and rock fragments.
	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, garnets), minor oxides and corundum, with trace graphite and sulphides.

	Total Weight (octacarats):	0	Number of Syndites:	0
_	Number of Diamonds:	0		
	CPHT (Total sample Grade):	0		
	SPFK ( + 100 mesh):	0		
-	OCPFK ( + 100 mesh):	0	(	50

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Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

Wednesday, February 07, 1996

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35108	Batch # : Weight :	1 76.2

-	Stone Dimension, mm		Weight		Stone Descri	ption	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
	0.99	0.68	0.20	241080	White	Clear	Fragment

#### Caustic Residue:

_	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments and garnets, with minor oxides.
_	- 20 + 100	Magnetic	Oxides, garnets, and rock fragments.
	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, garnets), minor corundum and oxides, with trace rock fragments.

٦	otal Weight (octacarats):	241080	Number of Syndites:	0
- 1	lumber of Diamonds:	1		
C	CPHT (Total sample Grade):	3		
S	SPFK ( + 100 mesh):	0		
- (	DCPFK ( + 100 mesh):	158188		

#### Authorizing Signature

<sup>8</sup> \_\_ Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

Thursday, February 22, 1996

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35109	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	54.9

	Stone Dimension, mm		Weight		Stone Descr	iption	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
	0.22	0.22	0.07	6428	White	Clear	Fragment
-	2.36	0.65	0.91	2517522	Yellow	Clear	Frosted fragment

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Monday, February 12, 1996

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P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario, KOL 2H0 Phone: 705-652-2000 FAX: 705-652-6365

# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35109	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	54.9

#### <u>— Caustic Residue:</u>

Г	Mesh	Fraction	Description
- [	+ 20	Oversize	Garnets, oxides, and rock fragments.
ł	- 20 + 100	Magnetic	Oxides and garnets, with minor rock fragments.
-	- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, gamets), with minor corundum.

	Total Weight (octacarats):	2523951	Number of Syndites:	0
	Number of Diamonds:	2		
	CPHT (Total sample Grade):	45		
	SPFK ( + 100 mesh):	1		
-	OCPFK ( + 100 mesh):	2298680		

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Notes: 1 carat = 10 octacarats.
Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35110	Batch # : Weight :	1 63.0
				· · · · · · · · · · · · · · · · · · ·	·

_	Stone Dimension, mm			weight		Stone Descri	ption	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	

#### **Caustic Residue:**

F	Mesh	Fraction	Description
ſ	+ 20	Oversize	Rock fragments, oxides, and garnets.
	- 20 + 100	Magnetic	Rock fragments, oxides, and garnets.
-	- 20 + 100	Non-Magnetic	Oxides, and silicates (clear, white, brown, garnets), minor graphite, with trace moissanite and corundum.

	Total Weight (octacarats):	0	Number of Syndites:	2
	Number of Diamonds:	0		
_	CPHT (Total sample Grade):	0		
	SPFK ( + 100 mesh):	0		
-	OCPFK ( + 100 mesh):	0		

Authorizing Signature 8 Notes: 1 carat = 10 octacarats.

Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

Thursday, February 22, 1996

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :

8900-955 W.A. Hubacheck Consultants Sample # : 35111

Batch #: 1 Weight: 54.8

-	Stone Dimension, mm			Weight		Stone Descrip	otion
	Х	Υ	Z	(octacarats)	Colour	Clarity	Morphology
				1			
				<u> </u>			

#### Caustic Residue:

_ [	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments and garnets, with minor oxides.
	- 20 + 100	Magnetic	Rock fragments and oxides, with minor garnets.
	- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, garnets), minor rock fragments, with trace corundum and graphite.

Total Weight (octacarats):	0	Number of Syndites:	0	
Number of Diamonds:	0			
_ CPHT (Total sample Grade):	0			
SPFK ( + 100 mesh):	0			
OCPFK ( + 100 mesh):	0			
			$\bigcirc$	

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#### Authorizing Signature

Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

**Project:** Client :

8900-955 W.A. Hubacheck Consultants Sample # : 35112 Batch # : Weight : 26.3

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_	Stone Dimension, mm		Weight		Stone Description		
	X	Ŷ	Z	(octacarats)	Colour	Clarity	Morphology

#### **Caustic Residue:**

-	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments and oxides, with minor garnets.
-	- 20 + 100	Magnetic	Oxides, rock fragments, and garnets.
	- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, chrome diopside, garnets), with trace corundum and rock fragments.

Total Weight (octacarats):	0	Number of Syndites:	1	
Number of Diamonds:	0			
_ CPHT (Total sample Grade):	0			
SPFK ( + 100 mesh):	0			
OCPFK ( + 100 mesh):	0			
		$\langle \cap$		

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Authorizing Signature

8 Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario, KOL 2H0 Phone: 705-652-2000 FAX: 705-652-6365

# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

- Project:	8900-955	Sample # :	35113	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	61.2

~	Stone Dimension, mm We		Weight	Stone Description				
ĺ	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	
	0.51	0.34	0.21	65091	White	Clear	Fragment	
-	0.37	0.17	0.10	11193	White	Clear	Fragment	
	0.74	0.45	0.31	185057	Brown	Clear	Fragmented complex crystal	

Page 1

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35113	Batch # : Weight : 6	1 1.2

#### \_ Caustic Residue:

	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments, oxides, and garnets.
	- 20 + 100	Magnetic	Rock fragments, oxides, and garnets.
	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, green, garnets), minor oxides, with trace sulphides and corundum.
	Total Weight (octacarat	s): 261	342 Number of Syndites: 0
_	Number of Diamonds:		3

4

2

CPHT (Total sample Grade):

SPFK ( + 100 mesh):

OCPFK ( + 100 mesh): 213514

60

Authorizing Signature

Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

Page 2

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

**Project:** Client :

8900-955 W.A. Hubacheck Consultants Sample # : 35114

Batch # : Weight : 59.5

1

-	Ston	e Dimension	, mm	Weight		Stone Descr	ription	
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	
	0.71	0.39	0.51	256147	White	Clear	Fragment	
_	0.25	0.14	0.10	6457	White	Clear	Fragment	

Page 1

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35114	Batch # :	1
Client :	W.A. Hubacheck Consultants			 Weight :	59.5

#### <u>Caustic Residue:</u>

Г	Mesh	Fraction	Description
~ [	+ 20	Oversize	Rock fragments, oxides, and garnets.
F	- 20 + 100	Magnetic	Oxides, garnets, and rock fragments.
-  -	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, chrome diopside, garnets), minor oxides, with trace graphite and corundum.

Total Weight (octacarats):	262605	Number of Syndites:	1	
_ Number of Diamonds:	2			
CPHT (Total sample Grade):	4			
SPFK ( + 100 mesh):	1			
OCPFK ( + 100 mesh):	220676			
~		$\langle \cap \rangle$		

Authorizing Signature

5

8 Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

Page 2

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35115		Batch # : Weight :	1 52.1
				·		· ·

-	Stone Dimension, mm		Weight	Stone Description				
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	
	0.25	0.25	0.14	16272	White	Clear	Fragment	
-	0.59	0.39	0.36	151880	White	Clear	Fragment, with inclusions	
	0.48	0.31	0.13	34884	White	Clear	Fragment	

Page 1

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35115	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	52.1

#### **Caustic Residue:**

Γ	Mesh	Fraction	Description
-[	+ 20	Oversize	Garnet, oxides, and rock fragments.
ł	- 20 + 100	Magnetic	Oxides and gamets, with minor rock fragments.
-	- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, garnets), minor corundum, with trace graphite.

Total Weight (octacarats):	203038	Number of Syndites: 0
Number of Diamonds:	3	
CPHT (Total sample Grade):	3	
SPFK ( + 100 mesh):	2	
OCPFK ( + 100 mesh):	194854	TRSC D.

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Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35116	Batch # : Weight :	1 47.7

- 1	Stone Dimension, mm			Weight		Stone Description		
	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	
	2.79	2.50	1.12	13897619	White	Clear	Fragment	

#### Caustic Residue:

Page 1

[	Mesh	Fraction	Description	
	+ 20	Oversize	Rock fragments, garnets, and oxides.	~~~
_	- 20 + 100	Magnetic	Oxides, rock fragments, and garnets.	
	- 20 + 100	Non-Magnetic	Oxides and silicates (clear, white, brown, garnets), with trace rock fragments.	

	Total Weight (octacarats):	13897619	Number of Syndites:	0
	Number of Diamonds:	1		
-	CPHT (Total sample Grade):	291		
	SPFK ( + 100 mesh):	1		
-	OCPFK ( + 100 mesh):	14567734	(	
_			( '	Mae !!

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Notes: 1 carat = 10 octacarats.
Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

**Project:** Client :

8900-955 W.A. Hubacheck Consultants Sample # : 35117 Batch # : Weight : 48.6

1

~ [	Stone	Dimension, I	mm	Weight		Stone Desci	ription
F	X	Y	Z	(octacarats)	Colour	Clarity	Morphology
Γ	0.45	0.37	0.21	62680	White	Clear	Fragmented complex crystal
	0.42	0.39	0.20	60270	White	Clear	Fragmented complex crystal
	0.37	0.22	0.08	11939	White	Clear	Fragment
	0.22	0.22	0.10	9184	White	Clear	Fragmented octahedron
_	0.34	0.28	0.10	17220	White	Clear	Fragmented octahedron
	0.25	0.17	0.14	10848	White	Clear	Fragment
	0.25	0.14	0.10	6457	White	Clear	Fragment
	0.57	0.22	0.22	50512	Brown	Clear	Fragment

Page 1

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35117	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	48.6

#### \_ Caustic Residue:

	Mesh	Fraction	Description
	+ 20	Oversize	Rock fragments, garnets, and oxides.
	- 20 + 100	Magnetic	Oxides, garnets, and rock fragments, with minor mica.
•	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, trace garnets), minor oxides, with graphite, corundum, and sulphides.
~			
	Total Weight (octacara	ts): 22911	2 Number of Syndites: 0
	Number of Diamonds:		8
	CPHT (Total sample G	rade):	4
-	SPFK ( + 100 mesh):		8
	OCPFK (+ 100 mesh):	23571	2
			$\mathbb{C}$

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Notes: 1 carat = 10 octacarats.

Page 2

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35118	Batch # : Weight :	1 48.4
	·				

-	Stone	Stone Dimension, mm			Stone Description			
l	X	Y	Z	(octacarats)	Colour	Clarity	Morphology	
Ĩ	0.59	0.42	0.15	67803	White	Clear	Fragmented dodecahedron	
-	0.37	0.22	0.16	23878	White	Clear	Fragmented twinned octahedron	
	0.28	0.25	0.19	24538	White	Clear	Fragment	
	0.28	0.22	0.13	14924	White	Clear	Fragment	
-	0.48	0.37	0.31	98311	Brown	Clear	Fragmented complex crystal	

Thursday, February 22, 1996

Page 1

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: Client :	8900-955 W.A. Hubacheck Consultants	Sample # :	35118	Batch # : Weight :	1 48.4
	· · ·				• • • • • • - • - • - • - • • - •

#### Caustic Residue:

	Mesh	Fraction	Description
-	+ 20	Oversize	Rock fragments, garnets, and oxides.
	- 20 + 100	Magnetic	Oxides, garnets, and rock fragments.
_	- 20 + 100	Non-Magnetic	Silicates (clear, white, brown, gamets), minor oxides, with trace graphite and corundum.
_			
	Total Weight (octacara	its): 2294	156 Number of Syndites: 0
-	Number of Diamonds:		5
	CPHT (Total sample G	Grade):	4
-	SPFK (+ 100 mesh):		5
	OCPFK ( + 100 mesh)	: 2370	041

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Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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Page 2

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

-					
Project:	8900-955	Sample # :	35119	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	51.8

-	Stone	Stone Dimension, mm		Weight	Stone Description			
	X	Ŷ	Z	(octacarats)	Colour	Clarity	Morphology	······································
	0.37	0.22	0.10	14924	White	Clear	Fragment	· · ·
-	0.19	0.11	0.10	4018	White	Clear	Fragment	

Page 1

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario, KOL 2H0 Phone: 705-652-2000 FAX: 705-652-6365

# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project:	8900-955	Sample # :	35119	Batch # :	1
Client :	W.A. Hubacheck Consultants			Weight :	51.8

#### Caustic Residue:

	Mesh	Fraction	T	Description
	+ 20	Oversize	Oxides,	rock fragments, and garnets.
	- 20 + 100	Magnetic	Oxides,	garnets, and rock fragments.
	- 20 + 100	Non-Magnetic	Oxides, corundum	and silicates (clear, white, brown, garnets), with trace graphite and n.
	Total Weight (octacara	its): 18	942	Number of Syndites: 0
	Number of Diamonds:		2	
	CPHT (Total sample G	Frade):	0	
—	SPFK ( + 100 mesh):		1	
	OCPFK ( + 100 mesh)	: 18	283	
				(  )
				Authorizing Signature
	-			
	Notes: 1 carat = 10 Lakefield Rese	octacarats. arch is not responsib	e for the de	etermination

of the origin, quality or valuation of any diamonds recovered.

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185 Concession Street, Postal Bag 4300 Lakefield, Ontario, Canada, K0L 2H0 Tel: (705) 652-2000 Fax: (705) 652-6365

September 5, 1997

Dave Christie WA Hubacheck Consultants Ltd. 141 Adelaide Street W. Suite 1401 Toronto, Ontario M5H 3L5

#### RE: Project No. 8900-955, LIMS # Jan3019.R96

Dear Mr. Christie:

Lakefield Research Limited has completed the QC work on samples 35101 - 35119. The original data was accurate except that one (1) additional diamond was found in sample 35105. The revised Certificate of Analysis and data sheet for sample 35105 are attached. Also attached is a copy of the original report from Greg Davison.

This will conclude the QC work that we were doing on your samples. Please advise us as to what you would like done with your samples.

Please call if you have any questions.

Sincerely, LAKEFIELD RESEARCH LIMITED

Edward Whelle

Edward C. Walker, Ph.D. Assistant Manager Mineralogical Services

Attach.

P.O. Box 4300, 185 Concession St., Lakefield, Ontario, KOL 2HO Phone : 705-652-2038 - FAX : 705-652-6441

Hubacheck W. A. Consultants 141 Adelaide St. W. Suite 1401 ~ Toronto, Ontario, M5H 3L5

Attn : Dave Christie \_\_\_\_\_\_Fax : 416 364-5384

#### Lakefield, September 5, 1997

Date Rec.	:	January 24, 1996
LR. Ref.	:	JAN3019.R96
Reference	:	LR9551745
Project	:	8900-955B#1

# SUMMARY INFORMATION

# **Revised Results**

No.	Sample ID	Batch	Wt kg	# Pours	#Diamonds
1	35101	1	44.5	7	1
2	35102	1	52.0	8	5
3	35103	1	56.6	. 9	0
4	35104	1	54.5	9	4
5	35105	1	56.3	9	* 3
6	35106	1	54.4	9	4
7	35107	1	63.5	10	. 0
8	35108	1	76.2	12	1
9	35109	1	54.9	9	2
10	35110	1	63.0	10	0
11	35111	1	54.8	9	• 0
12	35112	1	26.3	4	0
13	35113	1	61.2	10	3
14	35114	1	59.5	9	2
15	35115	1	52.1	8	3
16	35116	1	47.7	8	1
17	35117	1	48.6	9	8
18	35118	1	48.4	8	5
19	35119	1	51.8	8	2

Edward Walker, Ph.D.

P.O. Bag 4300, 185 Concession Street, Lakefield, Ontario, KOL 2H0 Phone: 705-652-2000 FAX: 705-652-6365

# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

Project: 8900-955 Sai
Client: WA Hubacheck Consultants Ltd.

**Sample # :** 35105

Jan3019 56.3

 Stone	Stone Dimension, mm			Stone Description		
Х	Y	Z	(octacarats)	Colour	Morphology	
0.68	0.51	0.34	210772	Brown	Dodecahedral surfaces fragment	
 0.28	0.25	0.13	16789	Brown	Fragment on which crystal faces cannot be recognized	
0.68	0.34	0.30	123984	Yellow	Fragment on which crystal faces cannot be recognized	

Page 1

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# DIAMOND RECOVERY BY CAUSTIC DISSOLUTION

- Project:	8900-955	Sample # :	35105	Batch # :	Jan3019
Client :	WA Hubacheck Consultants Ltd.			Weight :	56.3

#### \_ Caustic Residue:

	Mesh	Fraction	Description	
-	+ 20	Oversize	Rock fragments, oxides, and garnets.	
	- 20 + 100	Magnetic	Oxides and garnets, with minor rock fragments.	
-	- 20 + 100	Non-Magnetic	Silicates, with minor oxides, trace corundum and rock fragments.	

Total Weight (octacarats):	351546	Number of Syndites:	0	
_ Number of Diamonds:	3			
CPHT (Total sample Grade):	6			
- SPFK ( + 100 mesh):	2			
OCPFK ( + 100 mesh):	312208			

Maniels.

Authorizing Signature

Notes: 1 carat = 10 octacarats. Lakefield Research is not responsible for the determination of the origin, quality or valuation of any diamonds recovered.

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Page 2

Friday, September 05, 1997

185 Concession Street, Postal Bag 4300 Lakefield, Ontario, Canada, KOL 2H0 Tel: (705) 652-2000 Fax: (705) 652-6365

# MINERALOGY DEPARTMENT FAX

То:	Dave Christie	Company:	W.A. Hubacheck Consultants Ltd.
From:	Delene Daniels	Fax. No.:	(416) 364-5384
Date:	August 25, 1997	Reference:	8900-955 Batch 2

#### This transmission consists of (3) pages including this one.

Dear Mr. Christie:

Lakefield Research Limited has implemented a number of new services in the Mineralogical Services Department to meet client demand. As part of our new quality control procedure in the diamond extraction and diamond indicator mineral processing areas, we are checking selected work which was previously completed and reported to our clients.

Attached please find a preliminary revised report for diamond indicator QC work done on samples 35051 to 35059. Three fractions of each sample were picked; both magnetic fractions, and the non-magnetic fraction. There will be no charge for the updated report.

Please advise us if you require any of the indicator grains to be sent for microprobe analysis.

The samples sent to us for diamond extraction and selection are currently being reviewed. A preliminary report will be sent to you by August 29, 1997. This will be followed by an updated final report.

I will be happy to answer any questions you may have.

Sincerely, LAKEFIELD RESEARCH LIMITED

Daniels

Delene Daniels Rare and Precious Gem Mineralogist

This transmission is intended only for the addresses. It may contain privileged or confidential information. Any unauthorized disclosure is strictly prohibited. If this transmission is received in error, please notify Lakefield Research Limited immediately so that we may correct our transmission. Please then destroy the transmitted document.

LAKEFTELD RESEARCH CHILE S.A., Los Ebanistas 8585, Parque Industrial La Reina, Santiago, Chilo Fono 56-2-273-0487 Facsimil 56-2-273-0250

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P.O. Box 4300, 185 Concession St., Lakefield, Ontario, K0L 2H0 Fax: 705-652-6441 Phone: 705-652-2038

W.A. Hubacheck Consultants Ltd.

Lakefield, August 21, 1997

Mineralogical Services

j j j

# **CERTIFICATE OF ANALYSIS**

Reference : Batch 2 LRL Project : 8900-955

Attn : Dave Christie

)

}

Fax : (416) 364-5384

		Diamond Indicator Minerals (-20+60mesh)									
Sample QC #	Fraction wt (g)			Chrome		Oxie	es	Olivine	Орх	Comments	
		Pyropes	Eclogitic	Diopside	Jadeite	Ilmenites	Chromites				
35051 (0.5NM)	**		13	5	100+	-	30+	2	-	-	3 Diamonds
35051 (0.5M)	**		100+	100+	50+	-	100+	20+	-	-	
35051 (0.1M)	••		15+	<5	<10	-	-	-	-		
35052 (0.5NM)			3	5+	50+		30+	-	_	-	1 Diamond, Pyr Kelyphitic Rin
35052 (0.5M)	10		100+	100+	50+	-	100+	10+	-	-	
35052 (0.1M)	**		20	-	10+	-		-	-	-	
35053 (0.5NM)			3	<10	30+	-	30+	1	-		
35053 (0.5M)	-		100+	50+	40+	-	100+	30+		~	
35053 (0.1M)	**		45+	20+	10+	-		-	-		
35054 (0 5NM)		<b> </b>	<u> </u>	20+	40+	· · ·	30+		-		Ruby conjundum
35054 (0.5M)	•••		100+	50+	50+		50+	20+			
35054 (0.1M)	**		50+	10+	10+	-	-	-	-	-	
35055 (0.5NM)	<b>s</b> t		<30	10+	30+	-	25+	4	-	_	
35055 (0.5M)	<b>**</b>		100+	100+	50+	-	50+	20+	-	-	
35055 (0.1M)	**		15	-			-	-	-	-	
							1				

P.O. Box 4300, 185 Concession St., Lakefield, Ontario, K0L 2H0 Phone: 705-652-2038 Fax: 705-652-6441

W.A. Hubacheck Consultants Ltd.

# **CERTIFICATE OF ANALYSIS**

Reference : Batch 2 LRL Project : 8900-955

			Diamond Indicator Minerals (-20+60mesh)								
Sample	QC	Fraction			Chrome		Oxi	des			Comments
#		wt (g)	Pyropes	Eclogitic	Diopside	Jadeite	limenitas	Chromites	Olivine	Орх	
· · · · · · · · · · · · · · · · · · ·											
35056 (0.5NM)	**		<20	<10	30+	-	30+		÷		
35056 (0.5M)	**		65+	50+	50+	-	50+	20+	-	-	
35056 (0.1M)	**		<10	<5	15+	-	-	-	-	-	
35057 (0.5NM)	-		<7	<10	30+	-	25+	-	-	-	· · ·
35057 (0.5M)	**		60+	50+	50+	-	50+	20+	-	-	
35057 (0.1M)			4	-	<হ	-	-	-	-	-	
		·									
35058 (0.5NM)	**		2	<5	25+	-	25+	1	-	-	
35058 (0.5M)	**		80+	50+	40	-	50+	10+	_	-	
35058 (0.1M)	-		8	-	<5	-	-	-	-	-	· · · · · · · · · · · · · · · · · · ·
35059 (0.5NM)			13+	<10	30+	-	30+	1	-	-	
35059 (0.5M)			100+	50+	50+		50+	20+	-	-	
35059 (0.1M)	**		<14	-	<10	-	-	-	-	-	
											· · ·

Note: "+" indicates more grains are present in sample.

Note: \*\* These samples have been repicked as part of our Quality Control program.

The selected grains must be chemically analyzed to classify the minerals as diamond indicators.

Delene Daniels

# APPENDIX D:

# PETROGRAPHIC REPORT

ON

# DRILL CORES MRA-95-03 AND MRA-95-04 BY ROGER H. MITCHELL

W. A. HUBACHECK CONSULTANTS LTD.

# **PROJECT 216**

# PETROGRAPHIC REPORT ON DRILL CORES MRA-95-03 AND MRA-95-04

**ROGER H. MITCHELL CONSULTANT PETROLOGIST**
### **PROJECT 216 - W.A. HUBACHECK CONSULTANTS**

Samples from drill cores DDH MRA-95-03 and 04 consist of 5 individual types or groups of rocks:

Pelletal-textured diatreme facies volcaniclastic kimberlite breccias - type 1: Sample numbers 2, 3, 4, 5, 9, 10, 11, 13, 14

Diatreme facies volcaniclastic kimberlite breccias - type 2: Sample numbers 12,15, 16, 17

Hypabyssal facies kimberlites: Sample numbers 7, 18

Mantle-derived ultramafic xenoliths: Sample numbers 1, 6

Lower crustal xenolith Sample number 8

### Pelletal-textured volcaniclastic kimberlite heterolithic breccias (type 1)

One petrographic description suffices for all of these volcaniclastic heterolithic breccias as they are essentially similar with respect to their clast content and petrography. Samples differ in that those from the lower parts of the drill core are relatively fresh. Photomicrographs illustrating the overall textures and colour of the rocks are included in this report, although all of these kimberlites are most unsuitable for petrographic studies due to the intense alteration.

Sample # 2 (108.0) is typical of the group. It contains diverse angular clasts of country rock, elongate clasts of country rock black shale, pelletal lapilli set in fine grained matrix consisting of serpentine and comminuted clasts.

Country rock clasts (<10mm) are angular-to-subrounded gneisses, carbonate and quartz-carbonate rocks (Figs. 1-3). Many appear to have been strongly altered and carbonated. However, none exhibit significant reaction rims which suggest alteration was not related to incorporation in their current host. The majority of these clasts are not mantled by kimberlite, although rare thin "skins" may be noted around some examples. These mantles are commonly discontinuous. Some clasts appear to be microxenoliths in autoliths of hypabyssal kimberlite.

Elongate near-opaque clasts (<5mm) of a black shale-like rock in contrast to the above commonly exhibit thin discontinuous mantles of hypabyssal-like kimberlite. The latter consists of flow-aligned macrocrystal micas, large rounded perovskites, and spinels set in a very fine grained matrix of serpentine and calcite.

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Pelletal lapilli (figs. 1-3) exhibit a very wide range in size (<10mm). Typically, they consist of serpentinized macrocrystal olivine cores mantled by hypabyssal-like kimberlite. The latter is similar to the kimberlite forming mantles on the shale clasts. It consists of flow aligned microphenocrystal/macrocrystal phlogopite, large brownish rounded perovskite and subhedral-to-euhedral spinel set in matrix of calcite and serpentine. Some of the euhedral microphenocrystal olivines in these lapilli exhibit necklace textures of spinel and perovskite.

Smaller rounded clasts which are petrographically similar to the cored-pelletal lapilli are common (Figs.2 & 4). The differ in that they lack macrocryst kernels and do not have well-developed flow alignment of micas. None of these lapilli-like clasts appear to be autoliths. Elongation of some examples (especially in sample #10) suggests that they were relatively plastic at the time of incorporation in their current host, hence they may be thought of as a type of juvenile lapilli. Individual lapilli differ with respect to the number of macrocrystal olivines and phlogopites they contain, but overall they may be considered to be petrographically-similar.

Single crystals of serpentinized (retrograde lizardite plus amorphous dark brown iron oxide/hydroxides) macrocrystal olivine are common (Figs. 2-4). These are identical to the olivine pseudomorphs comprising the cores of pelletal lapilli. Although they lack kimberlite mantles they do typically possess dark coloured reaction fringes of very fine grained diopside.

Macrocrysts of colourless-to-pale orange phlogopite comprise the least abundant (<1 vol.%) members of the clast/macrocryst assemblage. These are typically not altered but may be distorted. The macrocrysts are similar to mica macrocrysts found within pelletal lapilli.

The matrix (Figs. 4-6) in which all of the above are set consists primarily of very fine grained colourless serpophitic serpentine which is intimately intergrown with dark-coloured very small crystals of diopside and its alteration products. Set in this matrix are the products of comminution and disaggregation of lapilli and xenoliths. Hence, it is possible to find single crystals of perovskite and spinel which have been liberated from their parent lapilli. Many of the smaller juvenile-like lapilli appear to grade continuously into the groundmass (Fig 4). Reaction fringes of diopside have been formed upon many of the olivine macrocrysts and pelletal lapilli (Fig. 7).

Sample # 3 (117.13)

This is similar to the above excepting in that in the thin section no large pelletal lapilli are present. Many of the small pelletal lapilli have eccentric kernels. Alteration is more intense and the volume of interclast matrix is smaller. Essentially this is clast supported breccia.

Sample # 4 (120.5)

This is identical to sample #3.

### Sample # 5 (120.8)

Contains a large autolithic clasts of perovskite-rich hypabyssal kimberlite



Fig. 1 Pelletal lapillus, angular xenolith and macrocrystal olivines. Sample # 14 Volcaniclastic heterolithic kimberlite breccia. (FOV 7 mm PPL)



Fig. 2. Pelletal lapillus, juvenile lapillus, crustal microxenoliths and macrocrystal olivines. Sample # 2 Volcaniclastic heterolithic kimberlite breccia. (FOV 7 mm PPL)



Fig. 3 Pelletal lapillus, angular xenolith and macrocrystal olivines. Sample # 14 Volcaniclastic heterolithic kimberlite breccia. (FOV 4 mm PPL)



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Fig. 4. Pelletal lapillus, juvenile lapilli, and macrocrystal olivines. Sample # 11Volcaniclastic heterolithic kimberlite breccia. (FOV 7 mm PPL)



Fig. 5 Angular microxenolith and macrocrystal olivines set in the characteristic matrix of these volcaniclastic heterolithic kimberlite breccias. Sample # 5 (FOV 4 mm PPL)



Fig. 6. Typical matrix of these volcaniclastic heterolithic kimberlite breccias. Sample # 11 (FOV 4 mm PPL)



Fig. 7 Interclast matrix consisting of colourless serpophitic serpentine and fine grained diopside (dark grey). Note the diopside fringes on the macrocrystal olivines. Sample # 14 (FOV 1 mm PPL).



Fig.8. Type 2 volcaniclastic heterolithic kimberlite breccia with ovoid juvenile lapillus and macrocrystal olivine set in a fine grained serpophite-diopside matrix. Sample # 15 (FOV 7 mm PPL)



Fig. 9. Type 2 volcaniclastic heterolithic kimberlite breccia with macrocrystal olivine set in a fine grained serpophite-diopside matrix. Sample # 16 (FOV 7 mm PPL).



Fig.10. Type 2 volcaniclastic heterolithic kimberlite breccia pelletal lapillus and macrocrystal olivine set in a fine grained serpophite-diopside matrix. Sample # 15 (FOV 7 mm PPL)



Fig. 11. Serpentinized macrocrystal olivines (OI) with fringes of fine grained diopside (white) set in a matrix which consists predominanty of serpophitic serpentine (S). Sample # 15 (Back scattered electron image - FOV 180 microns).

Sample # 9 (150.2)

Similar to sample # 2 but contains some patches of coarse calcite (secondary) in the inter-clast matrix.

Samples #10 (180.1) and # 11 (189.9) Similar to sample #2

Sample # 13 (206)

Similar to sample #2 but relatively fresh as diopside fringes are better preserved. Contains a large autolith (10mm) of hypabyssal kimberlite. This autolith is relatively-poor in macrocrystal mica compared to the pelletal lapilli but is otherwise fairly similar.

### Sample # 14 (237.9)

Similar to sample 2 but fresher. Diopside fringes around clasts and macrocrysts are well preserved (Fig. 7 & 11).

Samples 13 and 14 mark the transition to type 2 volcaniclastic breccias.

### Volcaniclastic heterolithic kimberlite breccias (type 2)

Samples #'s 12 (197.5), 15 (255.8), 16 (317.0), 17 (317.0).

These rocks are very similar to the volcaniclastic breccias described above. They contain similar country rocks clasts but I consider that they differ in containing more olivine macrocrysts and fewer pelletal lapilli. They are definitely better preserved than the breccias in the upper portion of the core. A significant feature of the rocks is the preservation of a diopside-rich interclast matrix - the hall mark of diatreme-facies rocks. Because of the similarities with type 1 breccias detailed descriptions are not required. Figures 8-10 are representative of their textures.

Figure 7 shows a well-developed dark fine grained diopside fringes in transmitted light while figure 11 (BSE-image) clearly illustrates the presence of many small prismatic diopside crystals in a serpentine matrix. These diopsides are essentially pure diopside that exhibit very little solid solution towards other pyroxene components (Table 1).

### Hypabyssal kimberlites

Sample #7 (139.25)

Contains (1) angular small xenoliths of near-opaque shale-like material (<2%) which lack kimberlite mantles (2) serpentinized macrocrystal olivines (3) macrocrystal phlogopite.

Rounded olivine macrocrysts are pseudomorphed by a mixture of lizardite and brown serpophite (Fig. 12). Very small relicts of fresh olivine are rarely preserved.

Macrocrystal micas are colourless-to-pale yellow orange plates which are typically distorted and deformed. They range in size from typical macrocrysts (mm) to very small prisms and plates scattered throughout the matrix. The groundmass (Fig. 13) contains subhedral-to-euhedral completely pseudomorphed olivine microphenocrysts. These have ben replaced by a mixture of serpentine and calcite. The pseudomorphs are mantled by pale yellow oxide-free serpophite.

Perovskite is present as relatively large dark brown rounded crystals together with smaller subhedral-to-euhedral crystals of opaque spinels. Atoll spinels are not present.

Macrocrysts and oxides are set in in very fine grained intimate intergrowth of serpophitic serpentine and lesser calcite. The texture is essentially uniform, although there are portions of the mesostasis which consist primarily of oxide-free serpophite. Some small irregular calcite segregations are also present. The degree of segregation is insufficient to state that this rock has a segregation texture.

This sample is a hypabyssal macrocrystal serpentine kimberlite. It is similar in character to the kimberlites which form the mantles of pelletal lapilli in the volcaniclastic breccias.

### Sample #18 (353.5)

Contains large (<5mm) rounded olivine macrocrysts (Fig. 14). These are fresh and serpentinization is confined to the formation of minor lizardite along fractures. The olivines do not exhibit deformation features. Macrocrystal mica is present as colourless-to-pale yellow orange laths.

The groundmass (Fig. 15)contains relatively few microphenocrystal olivines. These are for the most part completely pseudomorphed by serpentine. The characteristic feature of the groundmass is the presence of abundant small laths of phlogopite. These do not exhibit deformation features and are commonly flow-aligned around the olivine macrocrysts. Their pleochroism is similar to that of the larger macrocrystal micas. It is highly probable that these groundmass micas are primary microphenocrysts.

The remainder of the groundmass contains subhedral dark reddish brown perovskites and subhedral opaque spinels set in pale yellow brown intimate intergrowth of serpophite and calcite. Numerous amoeboid-to-irregular segregations are present (Fig. 14). These grade into the serpentine-oxide groundmass and are characterized by enrichment in calcite at their margins. The bulk of the segregation consists of oxide and calcite-free serpophite which may contain laths of chloritized/vermiculitized mica.

This sample is a hypabyssal segregation textured macrocrystal serpentine kimberlite. It differs from other hypabyssal-like kimberlites (sample # 7 and lapilli in the volcaniclastic rocks), by the preservation of fresh macrocrystal olivine and in enrichment in phlogopite but is otherwise similar.

### Mantle-derived ultramafic xenoliths

Samples #1 and 6 are coarse-grained or granular garnet lherzolites, consisting primarily of olivine together with minor orthopyroxene and diopside. The olivines are undeformed and in part replaced by pale yellow-brown lizardite (mesh-veining) together with an opaque material (probably iron oxides). Rounded garnets are in some instances mantled by a thin rim of phlogopite and subhedral opaque spinels. Similar micas occur adjacent to pyroxenes. This is a common texture in mantle-derived ultramafic xenoliths and is known as a "mica-pool". The origins are much debated but



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Fig. 12. Hypabyssal macrocrystal serpentine kimberlite. Sample # 7 (FOV 7 mm PPL).



Fig.13. Groundmass of hypabyssal macrocrystal serpentine kimberlite. Sample # 7 (FOV 1 mm PPL).



Fig. 14. Segregation-textured hypabyssal macrocrystal serpentine kimberlite. Sample # 18 (FOV 7 mm PPL).



Fig.15 Silicate-oxide groundmass of segregation-textured hypabyssal macrocrystal serpentine kimberlite with abundant mica "microphenocrysts". Sample # 18 (FOV 1 mm PPL).

the general consensus is that the micas are probably secondary.

Sample 6 is more intensely altered than sample 1.

### Lower crustal xenolith

Sample # 8 (146.5) is a coarse grained allotriomorphic granular metamorphic rock. It consists of large crystals of pale green clinopyroxene with mantles of garnet, amoeboid opaque ilmenite, calcite and altered plagioclase (Fig. 16).

The clinopyroxene shows a weak pleochroism in shades of pale green. All crystals contain orientated rods of opaque to dark brown material of exsolution origin. Table 1 shows that the pyroxene is an aluminian sodic diopside. The exsolved phase is predominantly ilmenite which is very poor in Mg, Mn and Nb <1 wt% oxide each) together with minor rounded opaque magnetite.

Garnets mantling the pyroxenes are colourless-to-pink and characterized by the presence of large numbers of vermiform fluid inclusions (Fig. 17). The mantles consist of chains of single crystals of garnet. They are irregular and discontinuous. The portions of the mantle away from the pyroxene are subhedral. Table 1 demonstrates that the garnets are almandine-grossular-pyrope solid solutions. Their composition is unlike that of pyrope garnets found in typical mantle-derived lherzolites and eclogites. The garnets have on the basis of their texture formed by fluid assisted subsolidus reactions between pyroxene and plagioclase.

Plagioclase forms highly altered granular crystals and is commonly replaced by patches of coarse calcite. Anhedral-to-amoeboid ilmenites are enclosed in pyroxene, garnet and plagioclase.

This rock was probably originally a lower crustal granulite that had been subjected to retrograde metamorphism in the lower crust prior to its incorporation in this kimberlite. It is not possible to determined whether or not the alteration of plagioclase and introduction of carbonate occurred during transport in the kimberlite.



Fig. 16. Highly altered, pyroxene (light green) - plagioclase (dark brown) rock with subsolidus reaction garnet (pinkish). Sample #8 (FOV 7 mm PPL).



Fig.17. Light green diopside mantled by, and intergrown with, colourless-to-pinkish, fluid inclusion filled-garnet. Sample #8. (FOV 4 mm PPL).

Table 1. Compositions of pyroxenes and garnets.

	1	2	3	4	5	
SiO <sub>2</sub>	51.08	51.31	37.58	37.67	55.10	
TiO <sub>2</sub>	0.22	0.21	0.0	0.0	0.16	
$Al_2O_3$	3.96	3.56	21.17	20.82	0.91	
$Cr_2O_3$	0.07	0.06	n.d.	n.d.	n.d.	
FeO	9.76	10.03	26.57	27.16	3.51	
MnO	0.04	0.07	0.69	0.83	0.12	
MgO	11.37	11.13	5.08	5.45	18.01	
CaO	19.68	20.35	7.28	5.78	20.74	
Na <sub>2</sub> O	1.66	1.68	n.d.	n.d.	0.76	
Total	97.84	98.40	98.37	97.71	99.31	
Structural	formulae					
Si	1.945	1.954	2.992	3.016	2.005	
Ti	0.006	0.006	-	-	-	
Al	0.178	0.159	1.986	1.905	0.039	
Cr	0.006	0.006	-	-	-	
Fe	0.311	0.319	1.768	1.819	0.107	
Mn	0.001	0.002	0.046	0.056	0.004	
Mg	0.645	0.631	0.603	0.651	0.977	
Ca	0.803	0.829	0.618	0.496	0.809	
Na	0.123	0.124	-	-	0.054	
Pyroxene	end-members					
Tipx	0.65	0.61	Garnet 3 is	X3 036 Al 1 986 Si 2 99	37	
CATS	6.46	5.82	Garnet 4 is	$X_{3,022}Al_{1,965}Si_{3,02}$	2 )	
Ae	12.56	12.6	where $X = N$	Ag, Fe,Mn	-	
Wo	37.6	38.95		0.		
En	9.65	9.95				
Fs	33.08	32.09				
Recalculat	ed in to Ae-Di-	Hd				
Ae	14.31	13.92			6.23	
Di	19.35	20.33			4.84	
Hd	66.34	66.75			88.93	
******	~~~~*	~ ~ ~ * * * * * * * *	~~~~~~~~~	~~~~~~~~~~	~~~~~~~~~~~~	* * * *

FeO<sub>t</sub> is total Fe expressed as FeO, as these minerals contain  $Fe^{3+}$  totals are less than 100wt%.

1-2 Diopsides in sample # 8; 3-4 subsolidus reaction garnet, sample # 8; 5 diopside in fringe on macrocrystal olivine, sample # 15. All data Cameca SX-50 WDS microprobe.

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Personal information collected on this

Mining Act, the information is a public

Questions about this collection sho

933 Ramsey Lake Road, Sudbury, Or

Ministry of Northern Development and Mines

## **Declaration of Assessment Work Performed on Mining Land**

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990



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ning Act. Under section 8 of the ond with the mining land holder. opment and Mines, 6th Floor,

Instructions:	- For work performed on Crown Lands before recor	r <b>ding</b> a claim, u	ng a claim, use form 0240.		
	- Please type or print in ink.				0
		· •	178	5	h

1. Recorded holder(s) (Attach a list if necessary)	2.1.000
Name Sudbury Contact Minies Ltd.	Client Number 198617
Suite 2302, 401 Bay Street,	Telephone Number (416) - 947 - 1212
Toronto, Ontario, M5H 244	Fax Number (416)-367-4681
Name	Client Number
Address	Telephone Number
	Fax Number

#### **Type of work performed:** Check ( $\checkmark$ ) and report on only ONE of the following groups for this declaration. 2.

Geotechnical: prospecting, surve assays and work under section	eys, Phys 18 (regs) V trend	sical: drilling, stripping, ching and associated assays	Rehabilitation
Work Type	· 10. 1	C	Office Use
Diamond Drilli Dracessing and	ng, Mineral	Den 1 Commodity	
Frocessing une	renographic	Total \$ Value of Work Claimed	
Dates Work Performed From 15 11 99 Day Month Year	5 To 30 04 Day Month	96 NTS Reference	
Global Positioning System Data (if available)	Township/Area Lundy Twp.	Mining Division	Lander
	M or G-Pian Number G-3439	Resident Geologist District	

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required; provide proper notice to surface rights holders before starting work; PROVINCIAL RECORDING
complete and attach a Statement of Costs, form 0212; OFFICE - SUCCE
provide a map showing contiguous mining lands that are linked for absigning work; of include two copies of your technical report.

- include two copies of your technical report.	

# NOV 1 2 1997 A.M. 10:50 Nr. 71819101112112121212121216

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name R.T. KNOWLES		i elephone Number
W.A. Hubacheck Cons	ultands Ldd.	(416)-364-2895
Address		Fax Number
#807-365 Bay Street	Toronto Ont. MSH2	(416)-364-5384
Name	·····	Telephone Number
Address	RECEIVED	Fax Number
Name	DK 13	Telephone Number
,	NOV 12 1007	
Address		Fax Number
	GEOSCIENCE ASSESSMENT	
	United	

#### Certification by Recorded Holder or Agent 4.

1. Raymond J. Knowles, do hereby certify that I have personal knowledge of the facts s	et
(Print Name)	
forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during	g
or after its completion and, to the best of my knowledge, the annexed report is true.	

Signature of Recorded Holder or Agent	Date Nev 6, 1997
Agent's Agences W.A. Hubachack Consultantild, Telephone Number #807-365 Bay St. Toronto Ontario Mit 416-364-2895	Fax Number 4/6-364-5384
0241 (02100) Dremed Fieb 10198	

	accompany this form.					
Mining work wa mining column indicate	<b>Claim Number.</b> Or if as done on other eligible land, show in this the location number d on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg	TB 7827	16 ha	\$26, 825	N/A	\$24,000	\$2,825
eg	1234567	12	0 · · ·	\$24,000	0	0
eg	1234568	2	\$ 8, 892	\$ 4,000	0	\$4,892
1	1202724	4	208,969	D	D	208969
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		Column Totals	208,969	0	D	208969

Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to 5. the mining land where work was performed, at the time work was performed. A map showing the contiguous link

, do hereby certify that the above work credits are eligible under 1. (Print Full Name) subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

1997

251 No. 1

Signature of Recarded Holder or Agent Authorized in Writing

#### Instructions for cutting back credits that are not approved. 6.

Some of the credits claimed in this declaration may be cut back. Please check ( ~ ) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or

4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only			
Received Stamp		Deemed Approved Date	Date Notification Sent
	· .		
		Date Approved	Total Value of Credit Approved
			Star in
		Approved for Recording by Mining R	ecorder (Signature)
0041 (0000)			
U241 (U2/96)	L		

Ministry of Northern Development and Mines

> Ministère du Développement du Nord et des mines



Statement of Costs for Assessment Credit

## État des coûts aux fins du crédit d'évaluation

Mining Act/Lol sur les mines

Transaction	No./Nº	de	trai	nsaction
W978	0.0	<u>)</u>	11	5

RECEIVED

Les renseignements personnels contenus dapava présente formule sor recueillis en veru de la Loi sur les mines et servirentia tenir à jour un registri des concessions?mineres. Actessen putal dutastod sur la collece de ce: renseignements au chet provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

### 2. Indirect Costs/Coûts indirects

\* Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work. Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux

d'évalua	tion.			
Туре	Descript	lion	Amount Montant	Totais Total global
Transportation Transport	Type Truck Ren	tal	1899.49	
	Fuel		911.50	
	Shippin	٩	482.17	
	Courier	- -	20.50	
				3313.66
Food and Lodging Nourriture et hébergement	Food		346.91	346.91
Mobilization and Demobilization Mobilisation et démobilisation	Travel		499.83	499.83
	Sub Tot Total partiel	tal of India des coûte	rect Costs s indirects	4160,40
Amount Allowable (not greater than 20% of Direct Costs) Nontant admissible (n'excédant pas 20 % des coûts directs)				4160.40
Total Value of Asse (Total of Direct and a indirect costs)	208,968.89			

Note : Le titulaire enregistré serà tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

### Remises pour dépôt

- 1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
- Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation		Evaluation totale demandée
× 0	0,50 =	

### Attestation de l'état des coûts

J'atteste par la présente :

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que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de \_\_\_\_\_je suis autorisé (titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Date Signature Nov 6, 1997

Person the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

### 1. Direct Costs/Coûts directs

			the second second second second second second second second second second second second second second second s
Туре	Description	Amount Montant	Totais Total global
Wages Salaires	Labour Main-d'oeuvre	8045.00	
	Field Supervision Supervision sur le terrain	13,090.50	15,165,5
Contractor's and Consultant's	Type Diamond Drilling Site Proposition	88,918.18	•
Fees Droits de	Sample Processing	80,823.75	
et de l'expert- conseil	Management Fees	11,828.43	
Supplies Used Fournitures	Type Supplies	424.88	en jui e este stant jurat.
UT111 <b>3008</b>	Reproduction	21.50	
	Telephone	20.83	
	Typing Logs	329.97	797.18
Equipment Rentai	Expenses	882,60	
Location de matériel	-		
			882.60
	Total Di Total des col	rect Costs Its directs	204,808,4

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

### **Filing Discounts**

- 1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
- 2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit × 0.50 = RECEIVED Certification Verifying Statement of Costs: 2 1507 I hereby certify: that the amounts shown are as accurate as possible and these costs. were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form. hat as <u>Contract</u> Gcoloaist I am authorized (Recorded Holder, Agent, Position in Conpany)

o make this certification

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre

Ministry of Northern Development and Mines Ministère du Développement du Nord et des Mines

April 24, 1998

SUDBURY CONTACT MINES LIMITED 2302-401 BAY ST. BOX 102 TORONTO, Ontario M5H-2Y4



Geoscience Assessment Office 933 Ramsey Lake Road 6th Floor Sudbury, Ontario P3E 6B5

Telephone: (888) 415-9846 Fax: (705) 670-5881

Dear Sir or Madam:

Submission Number: 2.17856

		Status
Subject: Transaction Number(s):	W9780.01115	Approval After Notice

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Lucille Jerome by e-mail at jeromel2@epo.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

a the

ORIGINAL SIGNED BY Blair Kite Supervisor, Geoscience Assessment Office Mining Lands Section

Correspondence ID: 12053 Copy for: Assessment Library

# **Work Report Assessment Results**

2.17856 Submission Number: Assessor:Lucille Jerome Date Correspondence Sent: April 24, 1998 First Claim Transaction **Approval Date** Number Township(s) / Area(s) Number Status March 24, 1998 W9780.01115 1202724 LUNDY Approval After Notice Section: 16 Drilling PDRILL 17 Assays ASSAY The 45 days outlined in the Notice dated February 05, 1998 have passed. Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet. **Correspondence to:** Recorded Holder(s) and/or Agent(s): **Resident Geologist Raymond J. Knowles** Kirkland Lake, ON TORONTO, ONTARIO, CANADA Assessment Files Library SUDBURY CONTACT MINES LIMITED Sudbury, ON TORONTO, Ontario

# **Distribution of Assessment Work Credit**

The following credit distribution reflects the value of assessment work performed on the mining land(s).

Date: April 24, 1998

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Submission Number: 2.17856

Transaction Number: W9780.01115			
Claim Number	Value	Of Work Performed	
1202724		197,141.00	
	Total: \$	197,141.00	



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