

420165W0015 53 SEELEY LAKE

### DIAMOND DRILLING

AREA: SEELEY LAKE

REPORT NO: 53

WORK PERFORMED FOR: St. Joe Canada Inc.

RECORDED HOLDER: Same as Above [xx] : Other []

<u>Claim No.</u>	<u>Hole No.</u>	Footage	Date	Note
864004	G-87-1 G-87-2	125m 118m	Nov/87 Nov/87	(1) (1)
864005	G-87-3 G-87-4	80m 116m	Nov/87 Nov/87	(1) (1)
864022	G-87-6	103m	Dec/87	(1)
864005	G-87-8	47.8m	Dec/87	(1)

st. joe	CANADA	· · · ·	DIAMOND DRILL HO	LE RECORD	***	Page #1 of	· · · · ·
Hole No. G-87-1 Nor Property GEORDIE LAKE Eas Section 16+005 Ele Claim No. Sur Target GABBRO/SYENITE CONT. Sur	hing 16+009 ing 3+40W ation ey N. ey E.	Srid Orient Grid Azim. Length (M) 125.0 Dip-Collar -44.00 Comp Bearing 070	Depth Dip Azimuth Te 50.0 - 39 -	est Depth Dip Azimuth 125.0 - 37	Test ACID	Started NOV. 22, 1987 Finished NOV. 24, 1987 Drill Co. FALCON Drill No. Drill For.	Logged by A.D. MacTAVI5H Checked by Core Comments:
OM TO DESCRIPTI	H A A A A A A A A A A A A A A A A A A A		54	MPLE FROM TO	WIDTH	Au Ag g_tonne g_tonne	

### SUMMARY

- 0.00 1.83 Casing
- 1.83 30.04 Altered hornblende gabbro
- 30.04 53.32 (Hornblende) plagioclase porphyry dyke (possible lamprophyre)
- 53.32 54.00 Highly sheared and altered gabbro
- 54.00 55.10 Potassic alteration zone
- 55.10 59.34 Altered magnetite melagabbro
- 59.34 66.92 Altered magnetite gabbro
- 66.92 71.14 Gabbro

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- 71.60 81.40 Interlayered (?) Sabbro and melagabbro (mineralized)
- 81.40 109.38 Altered gabbro (well mineralized)
- 109.38 119.12 Alkali feldspar quartz syenite
- 119.12 123.37 Amphibole-plagioclase porphyry dyke (lamprophyre ?)

FROM	TO	DESCRIPTION	SAMPLE	FROM	TO	WIDTH	
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123.37 125.00 Alkali-feldspar-quartz syenite

125.00 125.00 End of Hole

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FRUA .	TØ		DESCRIPTION				SAMPLE	FROM	TC	¥IDTH
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1.83	30.04	Altered hornbl	ende oabbro							-
			-green, medium	n to coarse-grained,	sub-ophitic texture, ma	ssive, locally				
			fractured and	occassionaly sheare	d; composed of 40% laths	s, light grey to grey				
			plagioclase wH	nich are sometimes (	5-8%) rimmed by a pinkis	sh potassium feldspar				
			(due to deuter	ric potassic alterat	ion?), 50-52% hornblende	e, now mainly altered				:
			to actimolite,	, 8-10% subhedral to	euhedral magnetite (pos	ssibly titanomagnetite				
			or li∉enite) g	Trains up to Zam in	diameter, and generally	trace to <=0.3% very				
			Tinely dissemi	inates chalcopyrite	(cp) and pyrrnotite (p)	te Antonnum taada ta				
			-putassit alte	dosti ne pizgiulia dosti ned stior (1	se leidspers to putessio 15e ic obsestorized by	sinkich clinhtly				
			rarcor oraine	depth and arter 10. In natrhoc whore his	niorlace has have almost	· fatsliv slightly				
			K-snar: there	is also an increase	in cn/no after 16.15	. Locally alleves to				
			-3.06: marrow	shear at 18 decrees	to core axis					
			-9.40: irregul	ar fracture at 6 de	grees to core axis					
			-11.36: hair t	hin carbonate fille	d fracture containing sm	all blebs and some				
			tiny seams of	ср	-					
			-15.90-16.15:	shear zone (fault ?	) - the gabbro has been	highly sheared to a				
			well foliated,	friable and crumbly	y, limonite stained rock					
			-shear planes	are at approx. 10 d	egrees to the core axis	(C.A); magnetite and				
			some sulphides	are smeared along	the shear planes (10% ma	ig, <2% weathered				
			Sulphides, min	or malachite staini	ng; some sericite observ					
			-15.13-22.00:	Silgntly to well mil	nerallzeo with dissemina :1_ /ilil_ ov, il	ted to coarse blebby				
			CP USUALLY ass	ing comparite arain	lle (llmenile //; lne ma r with the ce - 3-47 ces	g. usually occurs as				
			from 19 80 to	77 00 - 5-47 co	s with the th - 2.0% thi	the Dest fone is				
			-74 85-30 04-	ranid increases in K-	-enar rimmod nlaninrlaco	and notaccir				
			alteration in	general: rock initia	elly exhibits 4 to 10cm	thick matches of				
			coarse to verv	fine-grained pinki	sh altered oabbro. but e	ventually the rock is				
			almost pervasi	vely altered and be	comes pinkish -green in	colour; rimmed grains				
			are very evide	nt; sulphide percen	tage in this zone is les	s than 16.15 - 22.00,				
			usually 1-2% f	inely disseminated (	p (po) with 8-10% grey-	black magnetite.				
			24.77-25.10- s	heared and heavily I	broken zone -some core a	ppears to have been				
			ground up and	lost; remnant fragm	ents are quite limonitiz	ed and very altered.				
			29.49-29.43 -	small portion of ho	rneblende – plagioclase	porphyry (possible				
			edge of dyke).							
0.04	53.32	(Hornblende) -	plagioclase por	phyry dyke - (possil	ble lamprophyre)					
			-orev to dark	orev in colour. mass	sive with a slight to go	derate alignment of				

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HOLE - 6-87-1	PAGE # 3		
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-		ST. JOE	CANADA		PROPI	RTY -	GEORDIE I	LAKE
FROM	70	DESCRIPTION			SAMPLE	FROM	ŤŪ	WIDTH

plagioclase laths (alignment tends to vary down hole from approximately parallel to the C.A to about 25-30 degrees from C.A. near the lower contact. -upper contact is sharp, slightly irregular, appears to be very slightly chilled and is at 1-3 degrees from the C.A. - the contact is present over approximately 90 cm of core: lower contact is also sharp and is at between 50 and 55 degrees to core axis; the dyke is composed of many minerals - the most prominent is the large plagioclase phenocrysts - these phenocrysts are light grey in colour, lath shaped, subhedral to euhedral in form, twinned, locally zoned and between 2mm and 5cm in length- plapioclase comprises 50 - 60% of dyke; amphibole is present in much smaller phenoprysts. 3-7mm in diameter, usually altered, dark creen in colour and subhedral in form- sometimes altered to actinolite: amphibole content 5-7% in phenocryst form: calcite occurs associated with amphibole and as a very fine-grained constituent within pround mass; an emerald green, fractured, relatively hard mineral is commonly observed associated with feldspar crystals - possibly an epidote mineral? - has some characteristics of olivine? -groundmass is a fine-grained to very fine-grained mixture of amphiboles. calcite. biotite (?) altered placioclase: locally very fine-grained K-spar was observed; fractures are commonly filled with calcite stringers and plagioclase (both phenocrysts and in groundmass) are potassically altered near these stringers; calcite stringers are commonly deformed -41.10-41.33: broken rock due to shearing and fracturing, veining and intense potassic alteration of plaqioclase phenocrysts; numerous brecciated fractures are filled with calcite - siderite material - no preferred orientation to fractures -46.80-47.95: highly sheared zone - sheared and altered (hornblende)plaqioclase dkye, very friable and fissile, composed of chlorite and actinolite and some carbonate: faint slickensides observed locally; some of shearing is oriented at about 32 degrees to C.A but majority doesn't seem to have a preferred direction- some shears are parallel to core axis -47.95-50.00: occassional narrow shears at between 12 and 36 degrees to C.A -majority are between 12 and 18 degrees to C.A.; usually guite chloritic and actinolitic -50.43-50.60: broken rock in core -52.75-53.27: broken around -the occassional small bleb of chalcopyrite was observed within this unit; overall, there was << 1% cp. po

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	HOLE - 6-1	87-1	PAGE # 4	ţ	• • •	Ç
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### ST. JOE CANADA PROPERTY - GEORDIE LAKE FROM TC DESCRIPTION SAMPLE FROM 54.00 Highly sheared and altered gabbro 53.32 -dark green to greenish black, much secondary amphibole and chlorite; slickensides common; moderately carbonatized; most shears are conjugate in nature at 29 and 126 degrees to core axis; some are filled with narrow carbonate stringers; no sulphides - 10 -12% magnetite

### 54.00 55.10 Potassic alteration zone

55.10

-gabbro intensely altered, pink in colour, alteration decrease with depth and orades into next unit. 59.34 Altered magnetite pelagabbro

> -dark green to greenish black; fine to medium-grained with 5 to 8mm amphibole cikocryptic: 15 -18% grevish plagioclase: 15-25% fine-grained euhedral magnetite; 60 -70% medium grained mafic minerals, mostly altered greenish to black clinopyroxene; rock is generally massive with a few fractures, does not exhibit the characteristic subophitic texture observed from 1.84 to 30.04. -55.65: a few minor cp blebs and stringers over 3-5cm near narrow carbonaterich shear at 55.70.

### 59.34 66.92 Altered magnetite gabbro

-quite similar to 55.10-59.34, however it is medium to coarse grained; contains about 35% greenish grey, sometimes potassically altered plagioclase -occassional very coarse-grained patches where plagioclase content increases to about 45% plaqioclase laths up to icm in length; plaqioclase content increases gradually with depth to about 45-30% - near lower contact the rock is beginning to develop a sub -ophitic texture

-60.41 - 60.80: very coarse-grained to pegmatitic zone 61.37-62.00: very coarse-grained

62.03-62.11: potassic alteration patches - 4-5cm in diameter

-62.30-62.36: intense potassic alteration

-slight increase in potassic alteration with depth; overall percentage ranges from 10-15% of rock; occassional altered fracture planes with variable angles to C.A - chloritic and amphibolitic alteration runs 3-5mm thick along fractures; nil to trace very finely disseminated cp and po.

66.92 71.14 Gabbro

-fine-grained, dense and massive, slightly altered rock with 50/50 split of light grey to greenish-grey plagioclase and slightly altered clinopyroxene, 8-10% subhedral to euhedral magnetite grains; occassional calcite and dolomite filled fractures at 38 - 49 degrees to C.A.

-vein filled fractures all exhibit 1-2cm wide slightly to moderately potassic alteration halos; some high angle fractures at 5-8 degrees to C.A.: usually

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uncemented: upper and lower contacts with coarse to very coarse-grained rocks is relatively sharp over 2 or 3 grain width - possibly this is a fine-grained layer rather than a separate intrusion; upper contact at roughly 68 degrees to core axis; lower contact at roughly 70 decrees to core axis; more diffuse than upper contact; slightly gradational over 3-5cm.

71.50 81.40 Interlayered (7) Gabbro and melagabbro (mineralized)

-this is an alternating sequence of massive very coarse-grained to pegmatitic, sub-ophitic texture, slightly to moderately altered greyish-green gabbro units (or possibly layers) and massive fine to medium-grained, moderately altered. sometimes oikocryptic dark greenish-black melagabbro- contacts are gradational over 5-10 cm; potassic alteration is guite common within the coarser-grained gabbro layers, but it is relatively scarce within the finer-grained melagabbro layers; where alteration occurs the primary plagioclase laths are usually rimmed in pinkish K-spar and occassionally the plagioclase grains are almost totally consumed by the alteration- increases gradually with depth; pyroxenes. in both rock types are usually partially altered to preen and dark preen fibrous amphiboles; gabbros 40-50% altered plagioclase laths up to Zcm in length, 45 -50 % partially altered mafic minerals (mostly very dark green to black clinopyroxene); 5 to 10% magnetite or titanomagnetite occurring in disseminated, <1-2mm, subhedral to euhedral grains: melagabbro - 15-30% occassionally altered plaquoclase grains; 10-20% magnetite or titanomagnetite grains, sometimes 3-4 mm in diameter; altered pyroxene and amphiboles 50-74%; up to 1% interstitial greenish apatite

-72.85-73.66- melagabbro

74.50-78.88-melagabbro - occassional 10-20cm thick coarse to very coarsegrained, potassically altered patches of gabbro

81.06 to 81.40- gabbro to melagabbro- percentage of plagioclase is close to 35% and the rock could be either variety; narrow fractures are ouite commonmost are cemented by hair thin carbonate stringers; others are uncemented -potassic alteration and uralitization are common as reaction rims along cemented fractures; cemented variety are highly variable in orientation. ranging between 5 degrees to 90 degrees to C.A., with majority between 40 and 70 degrees to C.A.; uncemented fractures generally range between 20 and 28 degrees to core axis; occassional fractures subparallel to core axis. -mineralization - highly variable

-76.16 to 76.68 - initially guite sporadic and consists of <1% to 2% very finely to finely disseminated cp and po with <1% scattered composite blebs composed of cp/po/mag; some blebs are net - textured in appearance and are 1-2

Au tonne	Ag g_tonne						
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FROM	TO	DESCRIPTION	SAMPLE	FROM	TO WID	rH Au g_tonne	Ag g_tonne	 -	
 		cm in diameter.							
		-/6.68-81.06 - 2 to 4% small to large (ICM) cp-pb-mag blebs; most blebs tend occur within coarser zones (layers)	<b>TO</b>		_ ·	-			· .
		-81.06-81.40 - 3 to 8% composite cp-po-mag blebs with occassional narrow zone	5			- -			
1.40	109.38 Altered gab	with trace to 34 dieds and disseminations. bro (well mineralized)	-				-		
	-	-very similar to gabbro observed between 71.60 to 81.40 except that there are							
		medium-grained rather than coarse-grained to pegmatitic- this is possibly a							
		grain size layering feature similar to that seen in the preceding unit							
		-28.81-37.11 - fine to coarse-grained gaporo -100.15-100.76 - fine to medium-grained very magnetite or ilmenite-rich gabbr	0						
		-also contains an ilmenite, cp vein 1.0 - 1.5 cm in thickness							
		-108.36-108.84- The to medium-grained gaboro -107.71-109.38-potassically altered magnetite or ilmenite rich mineralized							
		gabbro, gradational contact over 2 or 3 cm							
		-subophitic texture quite well developed throughout unit; fracturing is similar to above unit							
		-93.04-93.33- narrow moderately sheared area perpendicular to core axis							
		-magnetite/ilmenite increases with depth to make up 10-20% of rock locally -mineralization: opperally varies throughout upit from <2 to 8-10% and occurs							
		finely disseminated, as coarse to very coarse composite blebs comprised of cp	,						
		po and mag (ilm ?), as narrow op stringers, as op/mag (ilm ?) veinlets, and a irregular small amombold onds of on the and mag (ilm ?); magnetite may be	÷						
		either titanomagnetite or ilmenite; bornite is observed locally as is covelli	te						
		(minor); in most instances, the mafic minerals in contact with or in close provinity to culmhide blobs are beauily altered to green amphibule							
		-93.43 - some small bornite blebs							
		-103.46 to 104.26 - narrow uralitized cp/po/mag stringer 1-2mm in width at							
		-105.13 to 105.20 - very large composite bleb composed of cp, po and magnetit	2						
		-appears zoned with cp in middle, po around cp and then mag on outside							
		-106.61 to 105.80 - zone of small amoeboid pods (large blebs) of chalcopyrite							
		rimmed with magnetite- area surrounding this zone is heavily potassically							
7.38	119.12 Alkali - fel	dspar quartz syenite							
		-reddish to reddish - orange in colour with dark green to greenish black							
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<pre>solites (ugits and webbing quality) reducting the specially (like spating to likely) very fine granues vite (if the sub-quality allel) followers and 30 to 40 der green to premues that (spring very der und very der und very der und very der green very der very der very der und very der green very der very</pre>	FNUN	TO	-	DESCRIPTION				SAMPLE	FROM	TO	WIDTH	Au g_tonne	Âg g_tonne		-	
<ul> <li>Inclute very for present with 50 to 80 for entry inclusive following there are the following of the cost in the following is "values at 0 kinotextile training there are the following the server is the se</li></ul>		. ·	· · · · ·	mottles (augite and ;	amphibole grains); roc'	k is generally fine	-grained to							· · · ·		 
<ul> <li>-the bold of USE and Laport all Green and the object there are accessed as a laport of the second of the</li></ul>				locally very fine gra dark green to greenis	lined with 50 to 60% resh black pyroxenes, an	eddish alkali felds d trace to 10% inte	pars and 35 to 45%							·		
<ul> <li>10% No Mod Agenesis Here we a large master of Marrayles, multiple facilities</li> <li>11.15% No Mod Agenesis Here we a large master of Marrayles, mod Const end Sections California</li> <li>11.15% No Mod Agenesis Here we a large master of Marrayles and Large State (1994)</li> <li>11.15% No Mod Agenesis Here we are forest and Large House California</li> <li>11.15% No Mod Agenesis Here we are forest and Large House California</li> <li>11.15% No Mod Agenesis Here we are forest and Large House California</li> <li>11.15% No Mod Agenesis Here we are forest and Large House California</li> <li>11.15% No Mod Agenesis Here we are master of Marray House House California</li> <li>11.15% No Mod Agenesis Here we are forest and Large House House House Here Here Here Here Here Here Here He</li></ul>				-the whole of this un	nit (within this hole)	is fractured and b	roken; there are		-							
<ul> <li>The specific is consistent to highly according the to book way finally display the fight of the specific is consistent to an effort of the fight of the specific is consistent to a specific the specific the specific is consistent to a specific the specific the specific is consistent to a specific the specific is consistent to a specific the specific is consistent to a specific the specific the specific the specific is consistent to a specific the speci</li></ul>				150 to 160 degrees; t	there are a large numbri ing greenish amphihole	er of irregular, fe s and chlorite and	nitized fractures	· .								
<ul> <li>10 151.55; (15 prives, using to the lattice function of lattice prives of lattice of lattice prives of lattice prives (lattice prives) and lattice prives (lattic</li></ul>				-the syenite is moder	rately to highly magnet	tic due to 5-8% ver	y finely									
<ul> <li>127.37 Pethbole-alspicalizes (about 4.4) theory may and 4.2 for genesic 0.0.4.</li> <li>127.37 Pethbole-alspicalizes (bacaronizer)</li> <li>13.10 Pethbole-alspicalizes (bacaronizer)</li> <li>13.10 Pethbole-alspicalizes (bacaronizer)</li> <li>14.11 Pethodizes (bacaronizer)</li> <li>15.12 Pethodizes (bacaronizer)</li> <li>15.14 Pethodizes (bacaronizer)</li> <li>15.15 Pethodizes (bacaronizer)</li> <li>15.15 Pethodizes (bacaronizer)</li> <li>15.16 Pethodizes (bacaronizer)</li> <li>15.10 Pethodizes (bacaronizer)<td></td><td></td><td></td><td>to 113.55; &lt;1% pyrite</td><td>e, usually along fract</td><td>ures, was observed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></li></ul>				to 113.55; <1% pyrite	e, usually along fract	ures, was observed										
ialiar to 30.46 to 53.32 - assive -feer maintained and another ambibile characress (5-102) at by the constantion - siderniar estimation - characterisation of a langementer asses (90.38 to 19.12 123.00 End of Noie 123.00 End of Noie	9.12	123.37	Amphibole-plaç	-119.12-sharp contact jioclase porphyry dyke (	: with underlying unit (lamprophyre ?)	at 28 degrees to C.										
-rtt by the crossional carbonate - siderile veillet; this dive has some claracteristics of a Laronohyre -are as 109.35 to 119.32 100 125.00 Ext of Hule				-similar to 30.04 to -fewer plagioclase ph	53.32 - massive Tenocrysts (10-20%) and	d more amphibole ph	enocrysts (5-10%)									
				-cut by the occassion characteristics of a	/al carbonate - siderit lamprophyre	te veinlet; this dyl	ke has some									
123.00 EDi of Hole	3.37	125.00	Alkali-feldspa	r-quartz syenite -same as 109.38 to 11	19.12											
	5.00	125.00	End of Hole													
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	ST. J	OE	CANADA	·		······································	DIAMOND	RILL HOLE	RECORD				Page #1	of	• •	
Hole No. 687 Property Geo Section Claim No. Target	7.2 ordie Lake – Joa	Northing Easting Elevation Survey N. Survey E.	L17+00S 3+30N	Grid Orient Grid Azim. Length (M) Dip-Collar Comp Bearing	118.00 -45.00 70.00	Depth 118.0	Dip Azi - 39	muth Test	Depth	Dip	Azimuth :	Test	Started Finished Drill Co Drill No Drill Fo	November 25, 1987 November 28, 1987 Falcon Drilling	Logged by A.D. MacTavish Checked by Core BQ Comments: Mineralized Gabb Symmite Contact	bro/
FROM TO	DESCR	IPTION						SAMPI	E F	ROM	TO	WIDTH	Au oz_ton	Au Ag g_tonne g_tonne		

### SUMMARY

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- 5.54 10.14 ALTERED MAGNETITE MELAGABBRO
- 10.14 16.20 AMPHIBOLE-PLAGIOCLASE PORPHYRY DYKE (Possible Lamprophyre)
- 16.20 43.21 ALTERED GABBRO (Slightly to Moderately Mineralized)
- 43.21 44.05 MAGNETITE MELAGABBRD
- 44.05 49.15 MELAGABBRO TO GABBRO
- 49.15 52.68 ALTERED GABBRO
- 52.68 58.73 ALTERED GABBRO
- 58.73 61.50 ALTERED SABBRO
- 61.50 76.80 MELAGABBRO
- 76.80 93.10 ALTERED GABBRO (Mineralized)
- 93.10 96.94 HORNBLENDE CLINOPYROXENITE (Mineralized)

		ST. JOE CANADA	-	PRO	PERTY -	Seordie	ake - Joa	
FROM	TO	DESCRIPTION		SAMPLE	FROM	TO	WIDTH	02
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70.74	101.07	TATERLHTERED HETERED HABBAD HAD DELHOHBBAD (HIghty Kinetallized)						
101.07	103.05	HIGHLY ALTERED GABBRO (Mixed Zone?) ~ Well Mineralized						
103.05	118.00	ALKALI-FELDSPAR QUARTZ SYENITE						
118.00	118.00	END OF HOLE						

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FROM	TO	DESCRIPTION	· · · · ·	SAMPLE	FROM	TO	WIDTH Au oz_ton	Au Ag g_tonne g_tonne	-	
0.00	5 54 CACING		···· · · · · · · · · · · · · · · · · ·	• .						
5.54	10.14 ALTERED MAGNE	TITE MELAGABBRO							-	
		- fine-grained, massive with localized potassic a	alteration (5-10%) throughout;		-					
	· · ·	<pre>coderately altered subhedral clinopyroxene and so</pre>	ome amphiboles, 15-20%		÷.,					
		subhedral to euhedral magnetite; trace to 1% very	/ finely disseminated							
		at 28 deg. to CA; 7.96-8.85m - fractured and brok	en rock; fracture runs							
		subparallel to CA; contact with underlying unit a slightly irregular but sharps 9,40-10,14m - 50-75	it approx. 16 deg. to CA; W notestic alteration of							
		gabbro	" poursie alle alle of							
10.14	16.20 AMPHIBOLE-PLA	GIOCLASE PORPHYRY DYKE (Possible Lamprophyre) - dark grev rock composed of 0.5-2cm light grev	carlsbad twinned euhedral							
		laths of plagioclase, 3-7m, subhedral to locally	euhedral prismatic grains of							
		amphibole (hornblende?), within an extremely fine matrix of planiorlase, k-spar, amphibole, manosti	-grained to fine-grained to and ovrovens - planinglace							
		phenocrysts are sometimes host to a fractured, an	hedral, glassy, emerald green							
		mineral; upper and lower contacts are sharp and s chilled: lower contact at approx. 37 deg. to CA:	lightly irregular and slightly trace chalconvrite							
				2062	14.20	15.20	1.00			
16.70	43.21 ALTERED GABER	0 (Slightly to Moderately Mineralized)		2063	15.20	16.20	1.00			
		- medium to very coarse-grained with 20-40% patch	es of potassic alteration							
		which all tend to be coarser-grained than surroun cabbro - placioclase within altered patches is pa	ding relatively unaltered rtly to completely rimmed by							
		k-spar and some grains have been totally replaced	- rock subaphitic in texture;							
		subhedral to euhedral magnetite (maybe titanomagn	een plagloclase laths, 5-8% etite or ilmenite), 55-58%							
		black clinopyroxene with variable amounts of green	nish hornblende and fibrous							
		there may be a few diffuse layers of slightly alt	to possibly weakly layered; ered melagabbro to magnetite							
		melagabbro; those more mafic zones occur at: 21.4	41-21.84m; 21.99-22.58m;							
		between 10 and 14 deg. to CA and 30 to 35 deg. to	CA: mineralization - quite							
		variable, but is composed of 1-3% disseminated to	blebby chalcopyrite,							
		dies out down hole to about 1% disseminated to sma	all blebs of chalcopyrite							
		generally associated with patches of potassic alte	eration; best mineralization							
	ν.									

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	•			st.	JOE	CANA	DA				PRO	PERTY -	Geordie L	ake - Joa	-	HOLE	- 687.2	PAGE #	<b>4</b>	
		FROM	ĩō		DESCRIPTION		-				SAMPLE	FROM	TO	WIDTH	Au oz_ton	Au g_tonne	Ag g_tonne			
		·						- 				<u> </u>		······································				- <u></u>		· ·
· · ·					occurs betwe chalcopyrite alteration; increases to	en contact at 16 , pyrrhotite vei sulphide content > 2-3% locally	5.20m and ab inlet associ t increases	out 25.00m; 21 ated with edge slightly after	.54m — 1cm thi of patch of p 34m to about	ck otassic 44.70m -	2064 2065	16.20 17.20	17.20 18.20	1.00	•				·	
											2066 2067 2068 2069 2070 2071	18.20 19.20 20.20 21.20 22.20 23.20	17.20 20.20 21.20 22.20 23.20 24.20	1.00 1.00 1.00 1.00 1.00						
	(										2072 2073 2074 2075 2076 2077	24.20 25.20 26.20 27.20 28.20 29.20	25.20 26.20 27.20 28.20 29.20 30.20	1.00 1.00 1.00 1.00 1.00						
	(										2078 2079 2080 2081 2082 2083	30.20 31.20 32.20 33.20 34.20	31.20 32.20 33.20 34.20 35.20	1.00 1.00 1.00 1.00 1.00						
	(										2083 2084 2085 2086 2087 2088 2088 2089	33.20 36.20 37.20 38.20 39.20 40.20 41.20	38.20 37.20 38.20 39.20 40.20 41.20 42.20	1.00 1.00 1.00 1.00 1.00 1.00						
	(	43.21	44.05 MAGN	ETITE MELAG	ABBRO - unmineraliz	red. fine-grained	d. almost u	ltramafir in ch	aracter, rock	containing	2090	42.20	43.21	1.01						
	(				10-15% dark g 55-65% pyroxe observed	preenish-grey pla ene; massive, irr	agioclase, 2 regular rel:	25-30% finely d atively sharp c	isseminated ma ontacts; no su	ignetite and ilphides										
	<i>.</i>	44.05	49.15 MELA	SARBRO TO G	NRREN						2091	43.21	44.05	0.84						
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AND     AND TO     AND TO     AND TO     AND TO     AND TO     AND TO       1     - In Any participant of the service of a plate of the service is a preliable of the service as preliable of the service of				ST.	JOE	CANADA		• 	PR	OPERTY -	Geordie L	.ake - Joa	á 	HOLE	<u>:</u> <b>687.2</b>	PAGE # 5		
<ul> <li>The teginning of bis unit a military continents 4407-4405 - dismeticing percentage (no types)</li> <li>Status and a military and a military and a second by the second to the second a s</li></ul>	•	FROM	TO		DESCRIPTION				SAMPLE	FROM	TO	WIDTR	Au oz_ton	Au g_tonne	Ag o_tonne		-	
<ul> <li>4.1.8 4.1.8 4.1.8 4.1.8 4.0.8 1.00 201         <ul> <li>4.1.8 4.1.8 4.1.8 4.1.8 4.0.8 1.00 201             </li> <li>4.1.8 4.</li></ul></li></ul>					- the beginnin mineralized p 1-3% blebs ch melagabbro si variably text medium to ver greenish play magnetite or dark green to	ng of this unit is rela otassically altered gat alcopyrite and pyrrhoti milar to 43.21-44.05m; ured gabbro which at t ry coarse-grained (loca gioclase laths up to 1c ilmenite grains (prism o black clinopyroxene a	atively complicated; bbro, medium to coars ite; 44.55-44.80m - 1 44.80-47.25m - is a imes could be termed ally pegmatitic) and im in length, 8-15% p matic grains may be i and amphibole	44.05-44.55m - se-grained in nature; fine-grained magnetite relatively unaltered, as melagabbro - it is is comprised of 30-40% rismatic and cubic .Imenite), and 50-60%									-	-
<ul> <li>4.13 52.45 ALTERS 544600</li> <li>sittlar to 15.30-43.21a relatively unsimulari - (11 saul) bloks and frashyldisseniated chickopyris and gyrobilit upper at 75 deg. 1: CA laser at 75 deg. to 0.4</li> <li>57.49 59.73 ALTERS 64800</li> <li>- Incrysing distribution to deviately altered about their grades are probably into a wolk-spring distribution to addressity altered about their grades are probably into a wolk-spring distribution to addressity altered about their grades are probably into a wolk-spring distribution to addressity altered about their grades are probably into a wolk-spring distribution to addressity altered about their grades are probably into a wolk-spring distribution to addressity altered about their grades are probably into a wolk-spring distribution to addressity altered about their wolks (intered about 6.6 deg. 1: GA fractures are accesson, however theore spring the will exhibit a warren polasie alteration in 2-26 to 1: GA 1:</li></ul>									2092 2093 2094	44,00 44,55 45,55	44.00 45.66 44.55	0.50 1.00 1.00						
<ul> <li>field disseminated chalogoriths and pyrothility oper and lever contacts relatively sharp, but irregulary agers 170 deg. to En Joure at 30 deg. To 20 deg. to 20 deg. The second at 30 deg. To 20 deg.</li></ul>		49.15	52.68 ALTE	IRED GABBRO	i - similar to	16.20-43.21m; relative	xly unmineralized - <	1% small blebs and	2071	70.00	40.00	1.00						
<ul> <li>95.75 ALTERE 988800 <ul> <li>fine-grained sliphtly to moderately altered gabro that grades very gradually into a edium-grained gabro at lower contact; restive to very westy layered</li> <li>- possible usering influences are uncoment. Low this is about 45 does in the contral portions of the unit primets at about 45 does into the same response they will exhibit a marre polarisic reaction rise 34 bits three very fitely dissentiated takinopyrise of 27,0-50,05 = 10,00,05 = 10,00,0</li></ul></li></ul>		15	·		finely dissem relatively st	inated chalcopyrite and marp, but irregular; up	j pyrrhotite; upper a /per at 70 deg. to CA	and lower contacts ; lower at 75 deg. to CA	ł									
spaced about 10-10c apart on the central portions of the unity creates at about 50 dos, to CA fractures are uncased, however when present they will eshibit a narrow potassic reaction ria 2-See thick; frace very finely dissesticated chalcopyris - 1X sail theory rise public oper contact relatively diffuse over 1-Scn; can't essure orientation; lower contact shaper at 37 dog, to CA 52.73 & 0.00 MITERED BABBED - 40-50% patches of notasic alteration within a medium to coarse-grained gabbro; much coarser and sore highly altered than 52.80-58.75m; scient percentages of minerals at 22.40-58.07.30 except with 51 incely dissectively aspetite; trace finely dissectively grades into a hornlinde altorplated aspetite; trace finely dissectively grades into a hornlinde altorplated aspetite; trace finely dissectively distributed that is mellogabbro; at about 61.00; patches of software, dispedie of fan grades 61.50 76.80 MELABBERED - this unit is nostly a sassive hornberde oldercrystic melagabbro that is mediam-patches of where potassically altered plagicolase increases to		52.68	58.73 ALIE	RED GABBRU	- fine-grainer into a medium - possible la	d slightly to moderatel -grained gabbro at low ivering indicated by a	ly altered gabbro tha er contact; massive ' slightly darker zone	it grades very gradually to very weakly layered approx. icm thick										
Contact relatively outfues of potassic alteration within a sectum tower contact sharper et 37 deg. to CA - 40-500 patches of potassic alteration within a sectum to coarse-grained gabro; euch coarser and wore highly altered than 32.48-98.738 sailar percentages of minerals at 52.48-58.738 except with 53 finely dissentated magnetite; trace finely dissentated chalcopyrite; potassic alteration decreases down hole and eventually grades into a horablendo cikcorystic melagabbro at about 61.502 piglocialse content dropped off and pyrates, asphibole and magnetite content increased 51.50 76.80 MELARMESED - this unit is nestly a massive horablende olicorystic relagabbro that is medium-grained, greyish-black in colour - throughout the unit are numerous 5-10e thick patches of where potassically altered plagicolase increases to					spaced about a about 45 deg. exhibit a nar disseminated	.0-15cm apart in the centre to CA; fractures are un row potassic reaction r chalcopyrite - 52.78-5	ntral portions or un incommon, however whe rim 2-5mm thick; trac 3.05m - 1% small cha	e unit; oriented at in present they will ie very finely lcopyrite blebs; upper	L									
<ul> <li>40-50 milling milling of potassic alteration within a medium to coarse-grained gabbro; much coarser and sore highly altered than 52.83-86.73x; siallar percentages of minerals at 52.045-80.73x; siallar acgnetite; trace finely disseminated chicopyrite; potassic alteration decreases dum hole and evolutally grades into a horoblende objectyric melagabbro at about 61.50x; plagioclase content dropped off and pyroxmen, aephiloble and segmetite; content increased</li> <li>51.50 76.80 MELAGABBRD - this unit is ansily a assive horoblende objectyrite meases to book 51.50 requised back plagioclase increases to book 51.50x; plagioclase increases to 51.5</li></ul>		58.73	A1.50 ALTI	ERFD GABBRO	contact relation sharper at 39 a	deg. to CA	,∰; Can t measure or in	entation; lower contact										
agnetite; trace finely disSevenited Chalcopyrite; polassic alteration decreases down hole and evenitally grades into a hornblende olkocrystic aelagabbro at about 61.50e; plagioclase content dropped off and pyrozene, aephilole and segmetite content increased 61.50 76.80 MELAGASERO - this unit is ensity a massive hornblende olkocrystic selagabbro that is medium-grained, greyish-black in colour - throughout the unit are numerous 5-loce thick patches of where potassically altered plagioclase increases to		Joint	01700		- 40-50% patch gabbro; much r percentages o	mes of potassic alterat coarser and more highly f minerals at 52.68-58.	ion within a medium / altered than 52.68- .73m except with 5% /	to coarse-grained -58.73m; similar finely disseminated										
51.50 76.80 MELAGABBERO - this unit is mostly a massive hornblende oikocrystic melagabbro that is medium-grained, greyish-black in colour - throughout the unit are numerous 5-10cm thick patches of where potassically altered plagioclase increases to					Magnetice; cra decreases down melagabbro at amphibole and	the finely disseminated the hole and eventually gr about 61.50m; plagiccl magnetite content incr	Chalcopyrite; polas: grades into a hornble lase content dropped reased	sic alteration nde oikocrystic off and pyroxene,										
J'IVEW CHIER PARENES DI WHETE POLASSICAITY ALLELES PLAYIOLISSE INCLESSES LU		61.50	76.80 MELAG	JABBRO	- this unit is medium-graine 5-10cm thick	; mostly a massive horn' d, greyish-black in col	blende oikocrystic m lour - throughout the	elagabbro that is a unit are numerous		:								
					371VC# (nick y	alenes un mnere pocossa	iCBIIY diceneu progra	JCId59 INLIERSES LU										
		·	-					<del>.</del>										
									-					•				

ST. JOE CANADA TO DESCRIPTION

> about 50-60% of rock; these patches are also coarse to very coarse-grained possible layers?; 5-8% disseminated magnetite: fractures are occasionally observed at no particular orientation; oikocrysts are subhedral to euhedral in form and up to 7mm in diameter; 69.75-71.61m - potassic alteration increases to 25% of core - in coarse-grained irregular patches - drops off again after 71.61m; 71.61-75.35m - rock could be either a gabbro or a melagabbro because plagioclase content is roughtly 35%; mineralization - trace chalcopyrite throughout most of unit; 76.00-76.80m - 5-8% coarse composite blebs of bornite, rimmed with chalcopyrite, pyrrhotite and ilmenite(?) - some blebs greater than lcm in diameter; mostly within a coarse-grained melagabbro portion of unit; lower contact is sharp, but irregular, and at roughtly 90 deg. to CA

### 76.80 93.10 ALTERED GABBRO (Mineralized)

- similar to 16.20-43.21m - slightly more plagioclase - 35-50%; alteration is variable; subophitic texture - usually eassive, locally fractured at variable orientations; mineralization - quite variable throughout unit from 1% very finely disseminated chalcopyrite and pyrrhotite to 5% coarse composite chalcopyrite and pyrrhotite blebs usually associated with ilmenite(?); very difficult to quantify for any given area due to sporadic texture of sulphide concentrations; 86.20m - narrow chalcopyrite stringer - <2mm; 86.50-93.10m highly altered gabbro - potassic alteration of plagioclase ranges from 30-60% of rock - many grains completely altered to k-spar; sulphide content drops somewhat to 1-3% blebby chalcopyrite, pyrrhotite; contact with underlying unit is diffuse with a gradual increase in pyroxene and amphibole content and a drop in potassic alteration; 86.73-86.95m - fractured and broken core; fracture at about 5 deg. to CA; 87.17-87.27# - sheared zone at about 88 deg. to CA; 87.80-87.90 - highly sheared zone; very friable and crumbly - shear roughly subparallel to CA; 86.73-86.95m - fractured and broken core; fracture at about 5 deg. to CA

2098	76.80	77.80	1.00
2099	77.80	78.80	1.00
2100	78.80	79.80	1.00
2101	79.80	80.80	1.00
2102	80.80	81.80	1.00
2103	81.80	82.80	1.00
2104	82.80	83.80	1.00

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76.00

76.80

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4 	FROM TO	DESCRIPTION	· · · · · · · · · · · · · · · · · · ·	SAMPLE	FROM	ŤŪ	WIDTH	Au oz_ton	Au g_tonne	Ag g_tonne		
	· · · · · · · · · · · · · · · · · · ·			2105 2105 2107 2108 2109 2110 2111 2111 2112 2113 2114	83.80 84.80 85.80 86.80 87.80 88.80 89.80 90.80 91.80 92.44	24.80 85.80 86.80 87.80 88.80 87.80 90.80 91.80 92.44 93.10	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00					
( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	93.10 96.94 HORNBLENDE C	LINOPYROXENITE (Mineralized) - coarse to very coarse-grained, m ultramafic rock containing 5-8% ma black hornblende and 77-85% black to 0.5cm in diameter are composed some slight potassic alteration ne gradational over 30cm with potassi totally disappearing - locally fel very finely disseminated chalcopyr to blebby, chalcopyrite, bornite a disseminated to small blebs chalco 95.86-96.94m - well mineralized wi blebby chalcopyrite, pyrrhotite, b thin 1-2m chalcopyrite stringer at chalcopyrite/pyrrhotite veinlet at pyrrhotite stringer at 64 deg. to over 5-10cm	Passive, oikocrystic dark grey to black agnetite (ilmenite), 10-15% dark green to clinopyroxene (augite?); oikocrysts (10%) up of hornblende and are subhedral in form; ear upper contact; upper contact is ically altered plagioclase content almost dspathic near fractures; mineralization - 1% rite and pyrrhotite to locally 5% disseminated and pyrrhotite; 93.10-95.85m - 1-2% apyrite, pyrrhotite and occasional bornite; th 2 to locally 10-12% disseminated to coarse bornite - locally almost net textured; 96.11m- 36 deg. to CA; 96.32m - 1cm thick 23 deg. to CA; 96.95m - 2mm chalcopyrite/ CA; lower contact is diffuse and gradational	2115 2114	93.10 94.10	<b>74.10</b>	1.00					
<t< td=""><td>96.94 101.07 INTERLAYERED</td><td>ALTERED GABBRO AND MELAGABBRO (Highly - this unit is a series of alterna potassically altered medium to ver gabbro and medium to coarse-grained feldspathic hornblende clinopyroxed in diameter; some of the gabbroic :</td><td>Mineralized) ting layers(?) of moderately to highly y coarse-grained pinkish to greyish-green d, pikpcrystic melagabbro (locally nite); pikocrysts are hornblende and 3-6mm zones contain 60% altered plagioclase;</td><td>2118 2117 2118 2119</td><td>95.10 95.85 96.40</td><td>95.85 96.40 96.94</td><td>0.75 0.55 0.54</td><td></td><td></td><td></td><td></td><td></td></t<>	96.94 101.07 INTERLAYERED	ALTERED GABBRO AND MELAGABBRO (Highly - this unit is a series of alterna potassically altered medium to ver gabbro and medium to coarse-grained feldspathic hornblende clinopyroxed in diameter; some of the gabbroic :	Mineralized) ting layers(?) of moderately to highly y coarse-grained pinkish to greyish-green d, pikpcrystic melagabbro (locally nite); pikocrysts are hornblende and 3-6mm zones contain 60% altered plagioclase;	2118 2117 2118 2119	95.10 95.85 96.40	95.85 96.40 96.94	0.75 0.55 0.54					
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ROM	TO	DESCRIPTION			SAMPLE	FROM	TO	KIDTH	Au oz_ton	Au g_tonne	Ag g_tonne		· · ·
	-	texture is occasionally su	bophitic; rock tends	to be massive; occasional		<u> </u>	-	-	-	, , , , , , , , , , , , , , , , , , ,		· · · · · · · · · · · · · · · · · · ·	
		fracturing observed at between the second se	ween 39 and 49 deg.	to CA; mineralization - very				ъ. г	-				
		chalcopyrite, pyrrhotite (	bornite) to small 3-	Sca diameter patches containing						-			
		10-20% blebs chalcopyrite, diameter; overall average :	pyrrhotite (bornite 7–127. disseminated t	); some blebs are 203cm in 9 coarse blebby chalcopyrite,				-	-				
		pyrrhotite, bornite			2120	96.94	97.94	1.00					
					2121	97.94	78.94	1.00					
					2122	78.94	99.94	i.00					
					2123	99.94	100.51	0.57					
07 1	103.05 HIGHLY ALTER	ED SABBRO (Mixed Zone?) - Well	Mineralized		<i>111</i> 4	100.31	101.07	v.36					
		- fine to coarse-grained, H	nighly altered potas	ically rock that was once a									
		gabbro - pinkish-grey to gr	ey in colour; compo	ed of 20-70% k-spar with remnan	t								
		plagloclase locally; 8-107.	disseminated major :	Imenite; 20-80% pyroxene (and									
		<pre>#ineralization - ranges from</pre>	mile; increases to i m narrow zones of j-	22 disseminated chalconvrite.									
		pyrrhotite to areas of 8-15	% disseminated and l	lebby chalcopyrite, pyrrhotite									
		(bornite) - some blebs of c	halcopyrite, pyrrhot	ite, ilmenite are 3-4cm in									
		diameter; 101.71m - 5cm x 1	.5cm chalcopyrite, p	yrrhotite, ilmenite bleb or pod	4 <del>4</del>								
		hv 20% disseminated sulnhid	vrite, pyrrnotite, i oc and ilmonito: com	imenite died or pod surrounded a fractures throughout at 38 to									
		52 deg. to CA; lower contac	t relatively sharp a	t 67 deg. to CA									
				•	2125	101.07	102.07	1.00					
<b>Λ</b> Ε (		545 AUADIT CYCNIIC			2126	102.07	103.05	0.98					
VJ I	IIGIVV HERHEI-FELVO	- fine to medina-orained. n	inkish in rolour. ma	ssive, slightly to enderstely									
		altered rock; contains 50-7	0% k-spar, 5-6% very	finely disseminated magnetite,									
		25-35% augite (clinopyroxen	e), trace to 10% int	erstitial quartz; conjugate									
		tractures at between 35 and	45 deg. to CA are d	ommon; fractures usually contain inuitous and best einer	1								
		feritization: some fracture	s are subparallel to	CA: some chalcopyrite (<1%)									
		present near fractures for	2-3m past the contac	t at 103.05m									
					2127	103.05	104.05	1.00					
					2128	104.05	105.05	1.00					
					2130	106.05	107.05	1.00					
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FROM.	TO	DESCRIPTION			SAMPLE	FROM	TO	WIDTH	Au oz_ton	Au g_tonne	Ag g_tonne		
		- <u></u>	 	 - 					<u> </u>			···	
118.00	118.00 END UF HULE								-				
		· .						-			•		
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ST. JOE CANADA		DIAMOND DRILL HOLE RECORD	-	Page #1 of	2
Hole No. 887.3 Northing 5 Property Geordis Lake - Joa Easting 6 Section Elevation Li Claim No. Survey N. L19+00S D Target Survey E. 3+01W Ci	d Grient Depth d Azin. 50.0 gth (M) 80.00 Collar -45.00 p Bearing 90.00	Dip Azimuth Test Dept - 38 80.	h Dip Azimuth Test 0 - 39	Started November 27, 1987 Finished November 28, 1987 Drill Co. Falcon Drilling Drill No. Drill For.	Logged by A.D. MacTavish Checked by Core BQ Comments: Mineralized Gabbro/ Syenite Contact
FROM TO DESCRIPTION		SAMPLE	FROM TO WIDTH	Au Au Ag oz_ton g_tonne g_tonne	

### SUMMARY

- 0.00 1.61 CASING
- 1.61 18.26 GABBRO TO MAGNETITE GABBRO
- 18.26 26.14 ALTERED GABBRO (Slightly to Moderately Mineralized)
- 26.14 32.03 FELDSPATHIC MAGNETITE CLINOPYROXENITE TO MAGNETITE MELAGABBRO (Mineralized)
- 32.03 40.80 GABBRO TO MAGNETITE GABBRO
- 40.80 54.08 GABBRC

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- 54.08 64.23 MAGNETITE MELAGABBRO TO GABBRO (Mineralized)
- 64.23 64.84 MIXED ZONE (Mineralized)
- 64.84 65.25 MUD SEAM
- 65.25 80.16 ALKALI-FELDSPAR QUARTZ SYENITE
- 80.16 B0.16 END OF HOLE

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OM TO	DESCRIPTION	SAMPLE	FROM	T0	¥IDTH	Au oz_ton	Au g_tonne	Ag g_tonne		
	1 A1 FASING						-			·····
1.41 -	18.76 GABBRO TO MARNETITE GABBRO	2131	10.60	11.60	1.00			-		-
	- initially <12 very finely disseminated chalcopyrite but increases with depth	2132	11.60	12.60	1.00					
		2133	17.60	13.60	1.00					
		2134	13.60	14:60	1.00	-				
14.60 -	18.26 - 1-2% (occasionally 3%) chalcopyrite (pyrrhotite) disseminated to local small	7135	14.60	15.60	1.00					
1	blebs	2136	15.60	16.60	1.00					
		2137	16.60	17.60	1.00					
		2138	17.60	18.26	0.66					
18.26 -	26.14 ALTERED GABBRO	2139	18.25	19.26	1.00					
	- slightly to moderately mineralized: 1-3% disseminated to blebby chalconvrite.	2140	17.26	20.26	1.00					
	pyrrhotite throughout: nowhere particularly concentrated	2141	20.74	21.76	1.00					
		2147	21.76	22.26	1.00					
		2143	27.76	23.26	1.00					
		2144	23.24	24.26	1.00					
		7145	74 74	25.74	1 00					
		2146	25.24	26.14	0.90					
76.14 -	32.03 FEI DSPATHIC MARNETITE (LINDPYROYENITE IN MARNETITE MELARARRO	7147	74 1A	74 85	A 71					
	- some areas (1% disseminated chalconvrite and overhotite, others have 3-5%	2148	26.85	27.35	0.50					
	large composite blebs of chalcopyrite, pyrchotite	2149	27.35	28.35	1.00					
26.85 - 28.00 -	27.20 - 3-5% coarse chalcopyrite, pyrrhotite blebs 28.15 - 3-5% coarse chalcopyrite, pyrrhotite blebs	<b>L L I</b> <i>I</i>	2,100	20100						
28.60 -	28.90 - 1-4% blebs chalcopyrite, pyrrhotite, bornite	2150	28.35	29.26	0.91					
29.26 -	30.95 - 1-2% small blebs and disseminated chalcopyrite, pyrrhotite	2151 2152	29.26 30.26	30.26 30.95	1.00					
70 05 -	77 A7 _ /19 yery first, discreted statements, successing	0+E7	70.05	70.67	1.00					
32.03 -	40.80 GABBRO TO MAGNETITE GABBRO - trace very finely disseminated chalcopyrite, pyrhotite	2100	30.73	32.03	1.06					
39.07 -	39.15 - 1-27 coarse blebs chalcopyrite									
40.80 -	54.08 GABBRO									
<b>-</b>	- trace very finely disseminated sulphides									
54.08 -	64.Z3 RRENETTE RELAGABERU TU GABBRO	2154	54.08	55.00	0.92					
<b></b>	- mineralization increases with depth	2155	55.00	56.00	1.00					
54.08 -	38.00 - 1-37 disseminated and blebby chalcopyrite, pyrrhotite, bornite; 56.70 - 3%	2156	56.00	57.00	1.00					
E	DORNITE	2157	57.00	58.00	1.00					
58.00 -	64.23 - 2-82 disseminated, coarse blebby and stringer chalcopyrite, pyrrhotite,	2158	58.00	57.00	1.00					
	DOTRICE	2159 2160	59.00 60.00	60.00 61.00	1.00 1.00					
61.70 -	61.74 - massive pod of chalcopyrite, pyrrhotite; some blebs 2-3cm in diameter - almost net textured	. = -								
		2161	61.00	62.00	1.00					
		2162	62.00	63.00	1.00					
		2163	63.00	63.60	0.60					
		2164	63.60	64.23	0.63					

## ST. JOE CANADA

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PROPERTY - Geordie Lake - Joa

FROM	70	DESCRIPTION	SAMPLE	FROM	T8	WIDTH	02
		- 5-20% chalcopyrite, pyrrhotite in disseminations, coarse blebs, small pods				-	
		and narrow stringers					
		64.23 - 64.37 - mostly small pods and large blebs of chalcopyrite					
		64.84 - 65.25 MUD SEAM					
		65.25 - 80.16 ALKALI FELDSPAR QUARTZ SYENITE	2166	<b>65.</b> 25	66.25	1.00	
		- trace pyrite and chalcopyrite occasionally	2167	66.25	67.25	1.00	
			2169	67.25	68.25	1.00	
0 00	1 41	PAGINE					
1.41	18.74	GARBRO IÚ MAGNETITE GARBRO					
2101	10125	- massive, fine to medium-grained, sub-cohitic textured, nikorrystic dark					
		preenish-prev rock composed of 35-47% greenish laths of planinclase (usually					
		twinned): 5-15% finely disseminated to disseminated mannetite and 50-60% dark					
		oreen to black clinopyroxene: initially very little potassic alteration of					
		placioclase, however with depth patches of alteration start to appear and					
		become more abundant: patches are initially (Icm in diameter and medium to					
		coarse-grained, oradually become bigger in size to about 3cm in diameter:					
		placioclase rimmed by ovroxene within these patches is very common: 8.54 - icm					
		thick altered veinlet? at 27 deg. to CA: potassic alteration rims vein for					
		0.5cm: 11.66 - 1cm thick svenite veinlet at between Z and 10 dec. to CA:					
		mineralization - initially <1% very finely disseminated chalcopyrite. however					
		it increases with depth					
		14.60 - 18.26 - 1-2% (occasionally 3%) chalcopyrite (pyrrhotite) - disseminated to local					
		small blebs; magnetite content varies considerably throughout unit and in some					
		places reaches 10 - 15 deo.					
		16.92 - 17.00 - series of fractures; one subparallel to CA; others at 27 deg. to CA; contact					
		at 18.26m is irregular and somewhat diffuse over 1 or 2cm					
18.26	26.14	ALTERED GABBRO (Slightly to Moderately Mineralized)					
		- coarse to very coarse-grained dark grey to pinkish-green (where altered);					
		sigilar mineral percentages to finer-grained gabbro observed between 1.61 and					
		18.26m; patches of potassic alteration are coarser than rest of gabbro and					
		k-spar commonly rims plagioclase; 5-7% disseminated magnetite; mineralization -					
		1-37 disseminated to blebby chalcopyrite, pyrrhotite throughout unit; nowhere					
		is it particularly concentrated; lower contact 26.14m is diffuse; grades into a					
		magnetite melagabbro over about a meter; 26.14m is where patches of alteration					
		stop					
26.14	32.03	FELDSPATHIC MAGNETITE CLINOPYROXENITE TO MAGNETITE MELAGABBRO (Mineralized)					
		- dark green to black; medium to locally very coarse-grained; oikocrystic					
		massive rock containing between 3-15% greenish plagioclase; 10-25% disseminated					
		<pre>magnetite; 10-15% secondary greenish amphibole and 45-77% clinopyroxenite</pre>					
		(potassic augite); grades from pyroxenite into melagabbro without contacts;					
		potassic alteration of plagioclase observed only in a few small zones at 28.42m					
		- alteration around thin fractures; 29.31-29.43m, 29.68-29.71m - alteration					
		patches; 30.54-30.61m - alteration patch; 31.61-31.64m - alteration around					
		fracture; mineralization - some areas have <1% disseminated chalcopyrite,					
		pyrrhotite; others have 3-5% large composite blebs of chalcopyrite, pyrrhotite;					
		26.85-27.20m - 3-5% coarse chalcopyrite/pyrrhotite blebs; 28.00-28.15m - 3-5%					
		coarse chalcopyrite/pyrrhotite blebs; 28.60-28.90m - 1-4% blebs chalcopyrite,					
		pyrrhotite, bornite; 29.26-30.95m - 1-2% small blebs and disseminations					
		chalcopyrite, pyrrhotite; 30.95-32.03m - <1% very finely disseminated					
		chalcopyrite and pyrrhotite; contact at 32.03m relatively sharp at 33 deg. to					
		ra .					

Au	Ag	
g_tonne	g_tonne	 
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	ST	JOE CANADA	PROPERTY	- Geordie L	.ake - Joa		HOLE - 687.3	PAGE # 4	
-	FROM TO	DESCRIPTION	SAMPLE FRO	IM TO	NIDTH	Au z top -	Au Ag	· · · · · · · · · · · · · · · · · · ·	
-	· .		<u> </u>				u		
	32.03 40.80 GABBRD TO MA	SNETITE SABBRO							
		- coarse to very coarse-grained, locally pegmatitic, massive rock; similar to 1 A1-18 7km event that it is much coarser-prained and there is usually no more				. •	- -		
		than trace very finely disseminated chalcopyrite and pyrrhotite; magnetite			-				
		content is highly variable ranging from 8 to locally 25% and ranges in grain				-			
	39.07 - 39	.15 - 1-2% coarse blebs chalcopyrite; few fractures							
	40.80 54.09 GABBRO	- initially fina-arginal desce and eserius with 40-45% pressich planicriscs.							
		5-10% finely disseminated magnetite and 45-55% dark green to black clino-							
		pyroxene; upper contact is gradational over 5-10cm centered around 40-80m;							
		occasional fractures filled with pinkish cardonate ((1-10mm thick) at highly variable orientations, some are ouite irredular: some are associated with							
4		hairline shears (?); the most constant orientation (30%) is about 25 deg. to							
		CA; trace very, very finely disseminated sulphides; with depth the grain size pradually increases to medium-prained near the hottom of the unit: lower							
í		contact is gradational over 3-5cm; quite diffuse							
(	49.50 - 50.	.15 - slightly sheared, fractured and moderately brecciated alteration zone							
,		wainly oriented at between 45 and 62 deg. to CA; zone is green in centre and							
Ę		pinkish to outside at edges; there is a slight decrease in plagioclase content							
	54.08 64.23 MAGNETITE MEL	near lower contact LAGABBRC TO GABBRC (Mineralized)							
		- similar to rocks observed between 1.61 - 18.26m except that range in grain							
		size is fine to coarse-grained and there is a decrease in the magnetite							
(		also hornblende oikocrystic in first 5 or 6m of unit; a few fractures observed							
		at about 22 deg. to Ca; both upper and lower contacts are gradational; as							
C		occurs betwen 53.23 and 64.23m; rock is gabbroic from near 60m onwards;							
		mineralization - increases with depth; 54.08m to about 58.00m - 1-3%							
		disseminated and blebby chalcopyrite, pyrrhotite, bornite; some zones such as 56.70m contain 3% bornite							
	58.00 - 54.	.23 - 2-8% disseminated, coarse blebby and stringer chalcopyrite, pyrrhotite,							
	61 70 - 61	bornite 74 - machive and of chalcopyrite ovyrhotite ilmenite, come hlebs are 7-3rm in							
		diameter and almost not textured; lower contact gradational over 3-4cm							
	64.23 64.84 MIXED ZONE (M	fineralized)							
	х.	by the syenite; 40% k-spar, 10% plagioclase, 10% magnetite (or ilmenite), 40%							
		clinopyroxene and minor secondary amphiboles; mineralization - 5-20%							
		chalcopyrite, pyrrhotite in disseminations, coarse blebs, small pods and narrow stringers							
	64.23 - 64.	.37 - mostly small pods and large blebs of chalcopyrite							
Let Ma	54.84 55.25 NUD SEAM	AD DHADTT SVENTE							
2 7	00.10 OV.10 HEAHLIFFELVOP	- fine to medium-grained, massive, locally well-fractured rock containing							
( <sub>1</sub>		trace to 10% quartz; 20-25% clinopyroxene and 65-75% alkali-feldspar; trace							
		pyrite and chalcopyrite occasionally; amphibole and chloritic alteration along many fractures (fenitization): thin carbonate stringers common							
	73.52 - 73.	80 - broken ground							
í l									

## ST. JOE CANADA

PROPERTY - Geordie Lake - Joa \_ :

FROM	TO	DESCRIPTION	· ·	SAMPLE	FROM	TO	WIDTX	οz
	74.08	+ 74.78 - broken ground - - 79.73 - broken ground	 	ŝ.				
R0 14	77.03 80.16 END 08	- 77776 Breken ground F HOLF				÷		

80.16 80.16 END UP HULE

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	HOLE	- G87.3	PASE #	5	
Au ton	Au g_tonne	Ag g_tonne			
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Hole No. Property Section Claim No. Target	987.4 Geordie Lake: Joa	Northing Easting Elevation Survey N. Survey E.	L19+005 3+50₩	Brid Orient Brid Azim. Length (M) Dip-Collar Comp Bearing	116.00 ~45.00 ~90.00	Depth Dip Azimuth 50.0 - 38	n Test	Depth Dip Azimuth Tr 116.0 - 0	est Started Finished Drill Co. Drill No. Drill For	November 28, 1987 November 29, 1987 Falcon Drilling	Logged by A.D. MacTavish Checked by Core Comments: Mineralized Gabbro Syenite Contact
					• • •						

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### SUMMARY

0.00 1.71 CASING

1.71 14.20 HORNBLENDE MELAGABBRO

14.20 17.44 ALTERED GABBRO TO HORNBLENDE GABBRO

17.44 19.50 HORNBLENDE MELAGABBRO

19.50 45.60 HORNBLENDE GABBRO TO GABBRO

45.50 48.60 MELAGABBRO TO MAGNETITE MELAGABBRO (Slightly Mineralized)

48.60 55.45 MAGNETITE MELAGABBRO TO ALTERED GABBRO (Mineralized)

55.45 65.38 ALTERED GABBRO TO MAGNETITE GABBRO

65.38 67.20 MAGNETITE MELAGABBRO

57.20 75.67 INTERLAYERED MAGNETITE MELAGABBRO AND ALTERED GABBRO (Mineralized)

75.67 77.64 GABBRO

77.54 94.14 GABBRO

94.14 102.86 MAGNETITE MELAGABBRO (Mineralized)

102.86 116.00 ALKALI FELDSPAR QUARTZ SYENITE

116.00 116.00 END OF HOLD

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		51.			· . :									- 007.4	. : HUL	·····	 
(OM	TO		DESCRIPTION					SAMPLE	FROM	ŤŨ	NIDTH	Au oz_ton	Au g_tonne	Ag g_tonne	-		
00	1 71	PAGING		- <u> </u>				<u>.</u>		<u></u>			-				
71	14.20	HORNBLENDE MEI	LAGABBRO	1.				•									
			- fine to coarse-grain	ed, dark gree	n, subochitic-te	xtured, massive roc	k with							_ · ·	- -		
			about 30-40% hornblend	e, 25-30% gre	enish plaglocias V dull luctered	e, 5 to locally 10% Pliceouroupon (cupi	fineiy . +-7):										
•			trace very finely diss	eminated chal	coovrite (ovrrho	titel: hornblende u	sually										
			is slightly altered to	a lighter gr	een actinolite;	after 7m the rocks	become										
			slightly potassically	altered; 3-5%	of rock; altera	tion increases gradu	ually										
		9.26 - 91	With Depth; near base 45 - pround, broken and s	ot unit pisği beared rore:	ociase content i sbear znne?: no :	Creases as well preforred prieptatio	nn: verv										
		/ <b></b>	chloritic	ncurce corry	andar <b>ko</b> ndiş na .	reterious erachious	ong reny										
		9.83 - 10.3	36 - ground, broken, frac	tured and she	ared core; some :	shears at 5 deg. to	CA;										
		10 7/ 18/	others subparallel - v	ery chloritic	- shear zone		7 L <i>i</i>										
		10.30 - 14.1	at 60 dec. to CA: band	ur idyers; cu s are androxi	aracterizeo oy a matelv 10−15cm a	silynci¥ uerker i≃. ∖art	3C0 0800										
20	17.44	ALTERED GABBRO	J TO HORNBLENDE GABBRO	2 212 GPP: 0/2	ater, is iten a												
			- 20-40% potassic alte	ration of pla	gioclase grains ·	<ul> <li>relatively uniform</li> </ul>	aly										
			spread throughout unit	rather than	in irregular pate	hes; decreases at a	either										
			- 35-45% nartially alt	content vari ered planiorl	25 1700 XIVA (0 : 856. 35-60% clin	lucally ZVA; J-1VA 1 Novroxene: trace ver	LA NGÂUALILA										
			finely to finely disse	minated chalc	opyrite (pyrrhoti	te); banding simila	ar to										
			that observed from 10.	36 - 14.20e e	bserved throughou	it unit; both upper	and										
	40 FA	Notific Fine Mer	lower contacts are grad	dational													
44	17.50	HUKNBLENDE MEL	_ADABBKU - verv cimilar to 1.71	- 14 70at or.	adoc unnorrantshi	v into a bornhlendo	a aabhra	~									
			to gabbro at about 19.	50m; contact	over 20-30cm when	re plagioclase incre	22565										
			and hornblende decrease	es slightly													
j0	45.60	HORNBLENDE GAE	BRC TO GABBRO			end averive each s											
			of 35-40% creenish plac	eioclase loca	llv potassicallv	altered (rimmed). 5	j to										
			locally 10% finely dis	seminated mag	vetite; amphibole	content varies fro	or (5%										
			to about 10% locally; (	pyroxenes, wh	ich are slightly	altered to actinoli	ite,										
			locally make up 40-55%	of rock; trai	te to 0.5% very 1	inely disseminated	sibala										
			and chlorite-filled fra	actures scatti	ered throughout t	his unit: no prefer	red										
			orientation observed; (	potassic alte	ration is quite v	ariable ranging fro	a nil to										
			affecting 40% of the ro	ock locally (	usually near a fr	acture); plagioclas	ie 										
			content and accompanyin about 41 50m theo start	ng potassic a. H to decrease	teration increas	e slightly with dep	ith to										
			where they occur there	is no discer	again, maccures hible preferred c	rientation; some fr	actures										
			contain narrow (1.4mm t	thick carbona	e veinlets; thic	ker carbonate strin	igers										
			exhibit a narrow altera	ation halo up	to 2cm in thickn	ess; faint, slight!	¥										
			<pre>darker Dands are spaced similar to those observ</pre>	) relatively ( and from 10 V	iveniy throughout - 14 20æ• chari	no is locally such	rlacor										
			together; 2-3cm apart;	subophitic te	xture becomes be	tter developed with	depth										
		·	until about 41.50m then	n starts to fa	ide with the drop	in plagioclase con	itent;										
			alteration of hornblend	de (where pres	ent) and pyroxen	es to actinolite in											
			Siightiy with depth aft	ter 41.300; FC	ock eventually gr	ades into a melagab	ioro;										
0	48.60	MELAGABBRO TO	MAGNETITE MELAGABBRO (Sli	ightly Mineral	ized)		•		7			•					
			- similar to 1.71 - 14.	.20m except th	ere is much less	hornblende (<5%) a	nd the										

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## ST. JOE CANADA

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PRÓPERTY - Geordie Lake: Joa

FROM	TO	DESCRIPTION	SAMPLE	FROM	TO	WIDTH	Au oz_to
	-	finely disseminated to disseminated and irregular in occurrence although the magnetite content does tend to increase downhole; locally minor patches of potassic alteration occur					
		47.17 - 47.35 - 3-5cm thick, medium to coarse-grained symmite vein; mineralization - majority	2169	45.60	46.60	1.00	
		of unit hosts trace to <1% very finely disseminated chalcopyrite (pyrrhotite)	<b>Z1</b> 70	46.60	47.60	1.00	
		47.85 - 48.60 - a sudden increase in sulphide content to 1-3% disseminated to blebby sulphides	2171	47.60	48.60	1.00	
49.60	55.45	MAGNETITE MELAGABBRO TO ALTERED GABBRO (Mineralized) - the oikocrystic magnetite melagabbro is almost identical to that observed between 45.60 - 48.60m; within the melagabbro are a large number of irregular potassically altered gabbroic patches or zones which range from medium to very coarse-grained; these zones tend to increase in number with depth until the melagabbro disappears at about 55.45m; fractures occur occasionally with no apparent preferred orientation; mineralization - quite variable from about 1% very finely disseminated chalcopyrite (pyrrhotite) to 2-4% blebs to coarse blebs of chalcopyrite and pyrrhotite with some bornite; slightly concentrated patches many times are associated with or within altered gabbroic patches					
			2172 2173 2174 2175 2176 2177 2177	48.60 49.60 50.60 51.60 52.60 53.60	49.60 50.60 51.60 52.60 53.60 54.60	1.00 1.00 1.00 1.00 1.00 1.00	
55.45	65.38	ALTERED GABBRO TO MAGNETITE GABBRO	2178	54.60	53.43	0.85	
		- medium to very coarse-grained, massive, greenish-black to pinkish in colour with a large number of irregular, variably-sized coarse to very coarse-grained patches of potassic alteration; within these patches k-spar rims most of the plagioclase grains and a few have been totally replaced; unaltered portions removed of subobitic textured plagioclase (35-457) and pyroyene (40-457)					
		with 10-25% disseminated magnetite; only a few fractures observed at about 21 deg. to CA; upper and lower contacts gradational over 3-5cm; mineralization ~ initially there is 2-4% disseminated to coarse blebby chalcopyrite and pyrrhotite (born) but this drops very quickly to trace to 1% finely disseminated chalcopyrite (pyrchotite) after 56 75m					
			2179	55.45	56.45	1.00	
			2180 2181	56.45 57.45	57.45 58.45	1.00 1.00	
65.38	67 <b>.</b> 20	MAGNETITE MELAGABBRO - fine to medium-grained, oikocrystic, massive, dark grey in colour with occasional coarse-grained feldspathic zones which are slightly to moderately potassically altered; slight subophitic texture; composed of 20-35% greenish					
:		plagioclase, 15-25% disseminated magnetite; and 45-65% slightly altered blackish clinopyroxene (augite); trace very finely disseminated chalcopyrite; contact at 67.20m irregular but relatively sharp; upper contact is diffuse					
			2182	65.38	66.38	1.00	
67.20	75.67	INTERLAYERED MAGNETITE MELAGABBRO AND ALTERED GABBRO (Mineralized)	2100	00.38	0/.ZV	V.8Z	

- this unit is a highly variable mixture of coarse to very coarse-grained

	HOLE	- 687.4	-	PAGE # 3.			ť
lu :on	Au g_tonne	Ag g_tonne					(
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	ST. JOE CANADA	Pro	PERTY -	Secrdie L	ake: Joa		HOLE	- 587.4	Page ≠ 4	, i
	FROM TO DESCRIPTION	- SAMPLE	FROM	TO	WIDTH	Au	Au	 Aa		
			-			oz_ton	g_tonne	g_tonne		
	massive magnetite melagabbro composed of 10-30% greenish plagioclase 10-30%									(• •
	coarsely disseminated magnetite and 40-80% dark greenish-black to black clinopyroxene, and a corase-grained to locally pegmatitic potassically			·	-					
	magnetite and 35-50% clinopyroxene; the melagabbro is usually oikocrystic			10.00	1 44					
		2184 2185 2184	67.20 68.20 68.20	69.20 69.20 70.20	1.00	-				
	70.33 - 70.39 - broken and fractured zone 70.55 - 70.66 - broken and fractured zone; portions of this unit are slightly to moderately fractured at between 30 and 62 dec. to CA: mineralization - unit is well	LIUU	67829	, , , , , , , , , , , , , , , , , , , ,						
i i	mineralized initially but gradually drops off until only trace finely disseminated chalcopyrite is present									· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·	67.20 - 70.70 - 3-15% disseminated to large composite blebs of chalcopyrite, pyrrhotite 70.20 - 70.50 - 15% large composite chalcopyrite blebs	2187	70.20	70.70	0.50					
. (	70.70 - 75.67 - trace to <1% finely disseminated chalcopyrite (pyrrhotite)	2188 2189	70.70 71.70	71.70 72.70	1.00 1.00					
-	/5.6/ 77.64 GABBRO - medium to coarse-grained, massive, subophitic textured, greyish to dark grey, occasionally potassically altered rock, composed of 5-10% disseminated									(
, ,	magnetite; 40-45% plagioclase, 45-55% clinopyroxene; trace to <1% finely disseminated chalcopyrite (pyrrhotite); numerous calcite-filled fractures - veinlets range between <1mm to 5mm in diameter; orientations are variable but									
	many range between 42 and 53 deg. to CA; both upper and lower contacts are gradational over 2-3cm									
	77.64 94.14 GABBRO - fine-grained, massive, grevish gabbro; very similar to 75.67-77.64m except									(
(	about medium-grained; 70.0/-74.14m becomes slightly coarser-grained to about medium-grained overall and begins to become slightly more mafic; less plagioclase; more pyroxene; gradually begins to grade into a melagabbro; lower									(
	contact gradational over 2-3cm with underlying melagabbro; trace very finely disseminated chalcopyrite (minor pyrrhotite); also a slight increase in alteration of pyroxenes to actinolite									(
	94.14 102.86 MAGNETITE MELASABBRO (Mineralized) - similar to 65.38 - 67.20m; fine to coarse-grained; occasional very coarse-									(
	pyroxenes; plagioclase increases slightly from 101.40m to contact; magnetite ranges from 10% to some localized zones of 30-35% coarse-grained magnetite;									, , , , , , , , , , , , , , , , , , ,
	mineralization - 97.06-102.86m - 2-10% disseminated, coarse composite blebs, irregular net-textured patches and a few narrow stringers; very difficult to nail down percentages due to sporadic nature of mineralization - chalcopyrite.									(
	pyrrhotite (born); 101.21-101.62m - 5-8% blebs of bornite; contact at 102.86m is sharp at about 37 deg. to CA									(
		2190 2191	94.14 95.14	95.14 96.14	1.00					Ĩ
		2192 2193	96.14 97.06	97.06 98.06	0.92					
•		2194 2195	98.06 99.05	99.06 100.03	1.00					
•		2196 2197 2182	100.06	101.06	1.00					(
(		Z148	102.06	102.86	0.80	_				ſ
				· -			• •			$\frac{1}{2} \sum_{i=1}^{n} \frac{1}{i} \sum_{i=1}^{n} \frac{1}$

### ST. JOE CANADA

PROPERTY - Geordie Lake: Joa

	FROM TO		DESCRIPTION		SAMPLE	FROM	ŦŪ	¥IDTH	A oz_t
	102.86 116.0(	) ALKALI FELDSPA	R-GUARTZ SYÉNITE - reddish to pinkish in colour, fine fractured locally, and fenitized alc 50-60% pyroxene - this drops off dow 10% quartz; 30-70% k-spar; many conj	e to medium-grained, massive, heavily ong most fractures - near contact contains whole to average about 20-30%; trace to lugate fractures ranging from 12 to 16 deg.					
			to ca; syenice is mineralized near c chalcopyrite and pyrite; this gradua thick chalcopyrite, pyrrhotite vein; pyrrhotite, magnetite vein; only tra this point	ontact with 1-57 bisseminated to bleoby ally drops off downhole until: 108.59 - 3cm 107.12m - 2cm thick chalcopyrite, nee chalcopyrite, pyrrhotite, pyrite past					
					Z199	102.86	103.86	1.00	
					2200	103.60	104.86	1.26	
					2201	104.86	105.86	1.00	
C					2202	105.86	105.86	1.00	
1					2203	106.86	107.86	1.00	
					2204	107.85	108.86	1.00	
i					2205	108.86	109.86	1.00	
7					2206	107.86	110.86	1.00	
					2207	110.86	111.86	1.00	

115.00 115.00 END UP HULD

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n	g_tonne	g_tonne		
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	ST.	JOE	CANA	DA				DIAMOND	DRILL	HOLE RE	CORD				Fage #1 of					
Hole No. Property Section Claim No. Target	687.6 Geordie Lake - Jo	Northing Easting Elevation Survey N. Survey E.	L12+005 2+25W		Grid Orient Grid Azim. Length (M) Dip-Collar Comp Bearing	103.00 -45.00 90.00	Depth 50.0	Dip A: - 38	zimuth	Test	Depth	Dip A	lzimuth	Test	Started Finished Drill Co. Drill No. Drill For.	Dece Dece Falc	mber 2, 1987 mber 4, 1987 on Drilling	Looged by Checked by Core Comments:	A.D. MacTavish BQ	
FROM TO	DE	SCRIPTION		-						SAMPLE	FRO		7 <b>0</b>	WIDTH	Au oz_ton g_	Au tonne	Ag g_tonne			

### SUMMARY

- 0.00 1.00 CASING
- 1.00 10.09 INTERLAYERED ALTERED VARI-TEXTURED GABBRO AND MELAGABBRO
- 11.09 28.56 ALTERED VARI-TEXTURED GABBRO
- 28.56 35.36 GABBRO TO MELAGABBRO (Mineralized)
- 35.36 43.58 ALTERED GABBRO

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- 43.58 44.40 MELAGABBRO (Mineralized)
- 44.40 54.40 ALTERED VARI-TEXTURED GABBRO
- 54.40 58.66 GABBRO TO MAGNETITE MELAGABBRO
- 58.66 67.96 ALTERED VARI-TEXTURED GABBRO
- 67.96 69.72 MELAGABBRD (Mineralized)
- 69.72 79.91 ALTERED GABBRO TO MELAGABBRO
- 79.91 89.79 MELAGABBRO (Mineralized)
- 89.79 90.31 HYBRIDIZED ALKALI-FELDSPAR QUARTZ SYENITE
- 90.31 90.98 ALTERED MELAGABBRD (Mineralized)
- 90.98 103.85 ALKALI-FELDSPAR QUARTZ SYENITE
- 103.85 103.85 END OF HOLE

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	FROM	TO	DESCRII	TION				SAMPLE	FROM	TO	NIDTH	- Au oz_ton	Au g_tonne	Ag g_tonne		
	0 00	( āā . P.								-						 -
	1.00	10.07 I	NTERLAYERED ALTERED	ARI-TEXTURED GABBS	RO AND MELAGAE	3BRO						•			-	
			- an : coarse	ntimate, gradation -orained massive.	al alternation potassically-	on between grey -altered (patch	to pinkish, medium to very ) cabbro and a slichtly								-	
í			to more	erately altered da	irk grey, medi	ium to very coa	se-grained melagabbro; all									÷
		-	CONTAC	ts are gradational ed of 35 - 45 dec.	i over 10-15cm . usually k-sp	a; the altered ∵ par-rimmed plag.	oclase crystals, 5-10%									
e A			disser is low	inated magnetite,	and 45 - 60%	black clinopyr	xene (augite?); the augite									
			15 100 35% sc	metimes k-spar-rim	med plagiccla	nse; 5 - 10% di	seminated magnetite and									
			55 - 7 Interes	0% occasionally al	tered clinopy	/roxene; potass:	c alteration is much less									
			modera	tely well minerali	zed; <b>n</b> elagabb	pro units occur	at 4.35-5.15m; 5.39-6.06m;									
$\mathcal{L}_{\mathcal{L}} = \mathcal{L}_{\mathcal{L}}$			7.75-9	.00m; 9.57-10.09m;	mineralizati s as discemin	ion - best miner	alization occurs within or									
			along	thin shears; 1.00	- 4.35m - tra	ice very finely	disseminated chalcopyrite									
(			(@inor chalco	pyrrhotite); 4.35 pyrite. some borni	i-5.39a - <1 t .te: 5.39-6.06	to locally 2-3% Am - 2-4% disser	disseminated to blebby inated to blebby									
			chalco	pyrite, bornite an	d some hair t	hin chalcopyri	e stringers; 6.06-7.75m -									
(			t <i>race</i> disser	to (1% disseminate inated. blebby and	nd chalcopyrit I stringer cha	e (pyrrhotite); lcopyrite.born	7.75-9.00m - 1-5% ite: narrow 1-3mm thick									
			chalco	pyrite, bornite st	ringer, irreg	ular but rough)	y subparallel to CA for									
(			nost c chalco	t this unit; 9.00- pyrite (minor pyrr	·10.09m - trac hotite)	e to 1% finely	disseminated to small bleb	5								
								2256	3.35	4.35	1.00					
(								2258	5.39	6.06	0.67					
								2259 2760	6.06 7.00	7.00 7.75	0.94 0 75					
(								2261	7.75	8.40	0.65					
								2262 2263	8.40 9.00	9.00 10.09	0.60 1.09					
								2264	10.09	11.09	1.00					
	11.09	28.56 AL	LTERED VARI-TEXTURED - simi	GABBRO lar to altered var	i-textured ca	bbro described	in the unit located at 1.00	}								
			-10.09	except that ther	e are no dist	inctly separate	melagabbro units enclosed									
			within greate	it; alteration is r than 50% potassi	quite variab c alteration	le throughout u of plagioclase	nit - ranging from (3% to feldspars - major portion									
			>30% a	Iteration; fractur	ing occurs oc	casionally with	one set ranging between									
,			s and fractu	res occur but are	anotner set a irregular in s	t between 32 an nature; fractur	es at 3 to 16 deg. to CA									
			tend t	o contain hair thi	n carbonate s	tringers and ar	e quite chloritic, possibly	r 1								
			chalco	pyrite and some py	; sulphides r rrhotite; pla	gioclase conten	t decreases gradually with									
			depth 5-10cm	as does potassic a	Iteration; up	per contact rel	atively gradational - over	, ,								
			, J 100#	, iower concect gr	dualional uve	: <u>X</u> -JUE	. •	2265	26.56	27.56	1.00					
(	20 SA	75 74 GA	SEREN TO MELAGARREN (	fineralized)				2266	27.56	28.56	1.00					
ŕ	20.00	00.00 OH	- dark	greenish-grey to	dark grey, me	dium to locally	very coarse-grained,									
Υ.			@assiv	e, unaltered to sl	ightly altere	d rock composed	of 20 - 40% greenish to									

			· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	·····-						 
	TO		DESCRIPTION			SAMPLE	FRUM		WIDIK	Au oz_ton	Au o_tonne	Ag g_tonne		
			clinopyroxene - pyrox plagioclase content v varies considerably t disseminated chalcopy chalcopyrite with som blebby chalcopyrite; disseminated to blebb disseminated to small	enes are skeletal, dendriti aries considerably over sho hroughout unit; 28.56-29.39 rite; 29.39-30.86m - 1-3% d e bornite; 30.86-33.62m - u 33.62-34.38m - 1-4% bornite y; 34.38-35.36m - <1% to lo blebs	c and radial in crystal form; rt distances; mineralization - m - trace to (1% very finely isseminated to blebby p to 1% disseminated to locally and chalcopyrite - finely cally 2% chalcopyrite -					· · ·		-		
						2267 2268 2269 2270 2271 2272 2272 2273 2274	28.56 29.37 30.10 30.86 31.86 32.86 33.62 34.38	29.39 30.10 30.86 31.86 32.86 33.62 34.38 35.36	0.83 0.71 0.76 1.00 1.00 0.76 0.76 0.98					
1	43.58	ALTERED GABBRO	- coarse to very coars colour; plagioclase is placioclase altered is	se-grained, locally pegmati s rimmed by k-spar due to p n this way: composed of 40-	tic, massive, pinkish-grey in otassic alteration - 20-40% of 55% orevish to oreenish rimmed									
			plagioclase, 5-10% dis fractures throughout a narrow shear, or shear slickensides are read 39.46-40.12m - a margi surrounding gabbro - 2 mineralization - most chalcopyrite (pyrrhoti approx. 1% blebby chal chalcopyrite with a co slightly sheared and o stringers	sseminated magnetite, 45-55 most of unit, however at 42 r fracture cuts through the ily observable within the cl inally melagabbro unit which 20-30% alteration of pyroxes of unit has trace to <1% ve ite); a few areas had some of loopyrite; 39.46-40.12m - < ouple of hair thin chalcopyrichloritic gabbro with 1-2% b	<pre>% black clinopyroxene; few .73-43.29m an irregular vein, core subparallel to CA - nloritic sides of the feature; n is gradational with ee to actinolite; ery finely disseminated enrichment; 35.36-35.75m - l to 1% disseminated tite stringers; 40.20-40.50m - mair thin chalcopyrite</pre>									
						2275 2276 2277 2278 2279 2280 2281 2281 2282 2282	35.36 36.36 37.36 38.36 39.36 40.20 40.70 41.70	36.36 37.36 38.36 39.36 40.20 40.70 41.70 42.70	1.00 1.00 1.00 0.84 0.50 1.00 1.00		:			
4	44.40	MELAGABBRO (Min	eralized)			2263	42./V	43.38	V.68					
			- similar to 28.56-35. gradational contacts o disseminated to blebby (bornite)	.36m - rock is variable in p on either end of unit; miner , very locally hairline str	lagioclase content; alization - <1 to locally 3% ingers of chalcopyrite									
5	54.40	ALTERED VARI-TE	(TURED GABBRO			2284	43.58	44.40	0.82					
			- similar to 11.09-28. to CA and other times some irregular fractur	56m; occasionally fractured at between 15 - 30 deg. to es near 53.00m: trace verv	, sometimes at about 90 deg. CA; quite chloritic along finely disseminated								:	

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OM TO DESCRIPTION										
	SAMPLE	FROM	TO	*IDTH	Au oz_ton	Au g_tonne	Ag g_tanne			
		A.A. A.A.	<b>45</b> 40	4- <sup>1</sup> /1/1		<b></b>	,,	 		
	2286	45.40	46.40	1.00						
	2287	53.40	54.40	1.00-	-					
40. 58.66 GABBRO TO MAGNETITE MELAGABBRO				-						
lower contact quite gradational – grades into an altered unit; plagioclase content and amount of potassic alteration increase with depth; mineralizati sporadic mineralization throughout unit – the only significant mineralizati	n n								· .	
observed at: 54.50-54.91m - 1-4% disseminated to blebby chalcopyrite and bornite - most are composite grains; rest of unit ranges from trace to 1% chalcopyrite (bornite)										
	2288	54.40	55.40	i.00						
	2289	55.40	56.40	1.00						
	2290	56.40	57.40	1.00						
66 67.96 ALTERED VARI-TEXTURED GABBRO	2271	37.49	J0.4V	1.00						
- similar to 44.40-54.40m; <1% finely disseminated sulphides until near low contact; 67.60-67.96m - 1-3% disseminated to blebbly chalcopyrite	<b>3</b> 1									
	2292	58.40	59.40	1.00						
	2293 2298	63.95 11 ol	66.95 17 DL	1.00						
76 69.72 MELAGABBRO (Mineralized)	2274	00.70	07.70	1.00						
- locally becomes a magnetite melagabbro with 10-20% disseminated magnetite; similar to 43.58-44.40m - fewer altered plagioclase-rich patches; mineralization - 1-3% disseminated to blebby composite grains of bornite and										
Chalcopyrite; upper and lower contacts are both diffuse	7705	L7 QL	10 QL	1 00						
	2296	68.96	69.72	0.76						
/2 79.91 ALTERED GABBRO TO MELAGABBRO										
- similar to 28.56-35.36m; plagioclase content and potassic alteration decre with depth; rock grades in and out of gabbro and melagabbro with very araditional contacts - locally a submittic texture is wisible, conserving t	358									
to <1% disseminated chalcopyrite, however there are a few minor concentratio near 1% chalcopyrite, specifically near melagabbro zones; sulphides increase	15 15									
after 77.70m; mineralization - 77.70-79.91m - <1 to locally 2% chalcopyrite, bornite as disseminations, blebs and locally along fractures as thin discontinuous second										
VISCONTINUUUS SWEG(S	2297	69.72	70.72	1.00						
	2298	70.72	71.72	1.00						
	2299	71.72	72.72	1.00						
	2300 2301	/2.72 · 73 72	/3.72. 74 77	1.00						
	2302	74.72	75.72	1.00						
	2303	75.72	76.70	0.98						
	2304	76.70	77.70	1.00						
	2505	//.70 79 70	78.70 70 TO	0 40						
	2307	79.30	79.91	0.61						
1 89.79 MELAGABBRO (Mineralized)										
- similar to 67.96-69.72m - more mineralization; localized feldspathic patch that exhibit potassic alteration; clinopyroxenes exhibit good skeletal, departies and radial textures - insertion - unristly but see the	· _							·		

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	TO	-	DESCRIPTION		SAMPL	FROM	TQ .	WIDTH	Au oz_ton	Au g_tonne	Ag g_tonne		
			· · · · · · · · · · · · · · · · · · ·	Lahaan d 6 79 113		<u></u>					-	 	
			aiways a tinely oissewinated	Dackground of 1-24 Chaicopyrice and	00f0102; 2744, -7-1 2								- "
-		-	_ IOUAITY 64 DUTHILE AND CHAIL	opyrite in small to large composite i	JIEUS: IUWET	•							
			contact is gradational over	4-3cm; altered plaglociase concent in	ILTERSES								-
			rapioly near contact		5740	70.04	50 51	• AA					
			•		2308	. /9.91	20.91 80.91	1.00					
					2307	80.91	81.91	1.00					
					2310	81.91	82.91	1.00					
					- 2311	82.91	83.91	1.00					
					2312	83.91	84.91	1.00					
					2313	84.9i	85.91	1.00					
					2314	85.91	86.91	1.00					
					2315	86.91	87.91	1.00					
					2316	87.91	88.91	1.00					
					2317	88.91	89.79	0.88					
	/V.UI		- 40-50% pink to grange k-sp	ar and 50% black clinopyroxene - mass	sive fine to								
	/0.01		- 40-50% pink to grange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite	vive fine to hlorite- zed along								
	/0.01		- 40-50% pink to grange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite	vive fine to hlorite- zed along 2318	87.77	90.31	0.52					
70.31	90.98	ALTERED ME	- 40-50% pink to grange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch LAGABBRO (Mineralized)	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite	vive fine to hlorite- zed along 2318	89.79	90.31	0.52					
0.31	90.98	ALTERED ME	<ul> <li>ACARLI-FELDEFRE GORALI SIGNIC</li> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>LAGABBRO (Mineralized)         <ul> <li>similar to 79.91-89.79m ex potassic alteration; 3-6% di chalcopyrite; upper and lowe</li> </ul> </li> </ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi	vive fine to hlorite- zed along 2318 n altered by ringers of ble xenolith?	89.79	90.31	0.52					
0.31	90.98	ALTERED ME	<ul> <li>ACARLI-FELDEFRE WORK12 STEWITE</li> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>LAGABBRO (Mineralized)</li> <li>similar to 79.91-89.79m ex potassic alteration; 3-6% di chalcopyrite; upper and lowe</li> </ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi	vive fine to hlorite- zed along 2318 m altered by ringers of ble xenolith? 2319	87.79 90.31	90.31	0.52					
0.31	90.98 103.85	ALTERED ME	<ul> <li>HERHELFFELDSFRR UDARTZ STEWITE         <ul> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>LAGABBRO (Mineralized)                 <ul></ul></li></ul></li></ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi	vive fine to hlorite- zed along 2318 m altered by ringers of ble xenolith? 2319	89.79 90.31	90.31 90.98	0.52 0.67					
0.31	90.98 103.85	ALTERED ME	<ul> <li>HERHELFFELDSFRR überit sterife</li> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>LAGABBRO (Mineralized)</li> <li>similar to 79.91-89.79m ex potassic alteration; 3-6% di chalcopyrite; upper and lowe</li> <li>DSPAR QUARTZ SYENITE         <ul> <li>fine to medium-grained, pi numerous irregular fenitized</li> <li>anticed</li> </ul> </li> </ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi nk in colour, massive to locally frac fractures (1-3mm in thickness) exhib	sive fine to hlorite- zed along 2318 m altered by ringers of ble xenolith? 2319 tured; iting tured;	87.79 90.31	90.31 90.98	0.52					
0.31	90.98 103.85	ALTERED ME	<ul> <li>HERHELFFELDSFRR UDERT2 STERTE         <ul> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>similar to 79.91-89.79m ex potassic alteration; 3-6% di chalcopyrite; upper and lowe</li> </ul> </li> <li>DSPAR QUARTZ SYENITE         <ul> <li>fine to medium-grained, pi numerous irregular fenitized amphibole and chlorite; conj composed of 60-80% k-spar, 0 chalcopyrite and pyrrhotite</li> </ul> </li> </ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi nk in colour, massive to locally frac fractures (1-3mm in thickness) exhib ugate fractures common at 30-40 deg. -5% magnetite, 15-40% clinopyroxene a	vive fine to hlorite- zed along 2318 m altered by ringers of ble xenolith? 2319 tured; iting to CA; nd trace	89.79 90.31	90.31 90.98	0.52 0.67					
0.31	90.98 103.85	ALTERED ME	<ul> <li>HCKHEI-FECDJFRK WORKTZ STEWTE         <ul> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>Similar to 79.91-89.79m ex potassic alteration; 3-6% di chalcopyrite; upper and lowe</li> </ul> </li> <li>DSPAR QUARTZ SYENITE         <ul> <li>fine to medium-grained, pi numerous irregular fenitized amphibole and chlorite; conj composed of 60-80% k-spar, 0 chalcopyrite and pyrrhotite</li> </ul> </li> </ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi nk in colour, massive to locally frac fractures (1-3mm in thickness) exhib ugate fractures common at 30-40 deg. -5% magnetite, 15-40% clinopyroxene a	sive fine to hlorite- zed along 2318 m altered by ringers of ble xenolith? 2319 tured; iting to CA; nd trace 2320	89.79 90.31 90.98	90.31 90.98 91.98	0.52					
0.31	90.98	ALTERED ME	<ul> <li>HCKHEI-FECDJFRK WORK12 SIGNITE         <ul> <li>40-50% pink to orange k-sp locally medium-grained; larg bearing fractures - fenitiza fractures; 1-2% localized ch</li> <li>LAGABBRO (Mineralized)                 <ul></ul></li></ul></li></ul>	ar and 50% black clinopyroxene - mass e number of irregular amphibole and c tion - 0-10% quartz; locally minerali alcopyrite cept that plagioclase has locally bee sseminated to blebby, locally thin st r contacts irregular but sharp; possi nk in colour, massive to locally frac fractures (1-3mm in thickness) exhib ugate fractures common at 30-40 deg. -5% magnetite, 15-40% clinopyroxene a	sive fine to hlorite- zed along n altered by ringers of ble xenolith? tured; iting to CA; nd trace 2320 2321	89.79 90.31 90.98 91.98	90.31 90.98 91.98 92.98	0.52 0.67 1.00 1.00					

HOLE	-	587.6	PASE 🛔	5

ST. JOE       CANADA       DIAMOND DRILL HOLE RECORD       Page #1 of         Hole No. 687.8       Northing       Grid Drient       Depth Dip Azimuth Test       Depth Dip Azimuth Test       Started       06/12/87       Logged by J. Paul	DIAMOND DRILL HOLE RECORD Page #1 of th Dip Azimuth Test Depth Dip Azimuth Test Started 06/12/87 Logged by J. Paul	Hole No. 65	ST. JOE	Grid Drien	DIA nt Depth Dip	MOND DRILL HOLE RECORD	h Dip Azimuth Te	Page #1 of st Started 06/12/87	Logged by J. Paul

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- 3.82 10.21 MELAGABBRO
- 10.21 20.10 GABBRD
- 20.10 28.64 MELAGABBRO (Mineralized)
- 28.64 30.61 SABBRO (Mineralized)
- 30.61 37.56 ALKALI-FELDSPAR QUARTZ SYENITE AND ALTERED GABBRO
- 37.56 47.80 ALKALI FELDSPAR QUARTZ SYENITE
- 47.80 47.80 END OF HOLE

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	ടി	JOE CANADA	PR	OPERTY -	Seordie	Lake - Jo	a	HOLE	- 687.8	PASE # 2
FROM	TO	DESCRIPTION	SAMPLE	FROM	TC	WIDTH	Au oz_ton	Au g_tonne	Ag g_tonne	
0.00 7 82	3.82 CASING									
	IVIZI NELBENEDAU	-coarse-grained, dark grey in colour, massive, some fractures; composed of								
		30-35% crevish placioclase laths. 3-5% fine-orained magnetite. 0-5% black								
		amphiboles, 50-67% clinopyroxene, often altered to actinolite; very minor								
		patches of potassic alteration of plagioclase-tends to occur in slightly								
		Coarser areas								
		-mineralization: ranges from trace to <=0.5%- predominantly disseminated								
		chalcopyrite; up to 3% along some fractures - cp and po								
		-grain size decreases towards end of interval into medium-grained.								
0.21	20.10 GABPRU	fine to leadly adding arrived provide along announce with even included.								
		nriented fractures: composed of 35-457 planinglase, orracsionally altered to								
		potassium feldsnar. 0-5% finely disseminated mannetite. 50-65% black nyroxene.								
		-fractures show no preferred orientation- often filled with with chlorite and								
		have more potassic alteration								
		-17.30- fracture at 48 degrees to core axis, filled with up to 10% cpy								
		-18.58-18.80 - up to 0.5% disseminated cpy surrounded by green alteration								
		haloes								
		-19.47-19.69 - extremely highly altered - chlorite, potassically altered and								
		Calcareous along fractures								
0 10		-19.69-20.10 - grades into medium to coarse-grained								
.0.10	20.04 HELHOHSENU	(Historius to coarce-orginal dark provin colour eactive compared of 15-009								
		mealaw to coarse grained, berk grey in corolly massive, composed of 13-20% planinglass, 7-37 finaly disceminated gammatite, 77-837 clinonyroyang								
		componly altered to oreen actinolite: potassic alteration absent except along								
		some fractures; fractures uncommon - no preferred orientation - calcareous or								
		chloritic								
		-mineralization:								
		-20.53-20.89- trace to 0.5% disseminated cpy								
		-20.89-23.00 - nil to trace sulphides, disseminated bornite and cpy along one								
		chlorite fracture (48 degrees to core axis) at 21.57								
		-20.70-26.50 - trace -0.07 disseminated cpy								
		TIC.OV TIC.OH T GTG4 CDY T COARSELY AND TINELY CISSEMINATED, DIEDby and stringers								
		arr veder a	7347	71 00	22 QA	1.61				
			1.001	L L . 0 7	44.75					

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22.90 23.90 1.00

### ST. JOE CANADA

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PROPERTY - Geordie Lake - Joa

FROM	TD	DESCRIPTION	SAMPLE	FROM	TO	WIDTH	Au oz_ton
			2369	23.90	24.90	1.00	
			2370	24.90	25.90	1.00	
			2371	25.90	26.60	0.70	
			2372	26.60	27.50	1.00	
			2373	27.60	28.64	1.04	
8.64	30.61 5	GABBRD (Mineralized) -medium-grained, grevish in colour, massive (few fractures), composed of 45-60% plagioclase laths, 40-55% pyroxenes; fractures randomly oriented and slightly to non-calcareous; some potassic alteration towards base of interval					
		-mineralization: 28.64-30.61 - same as interval 26.60 to 29.64					
			2374	28.64	29.64	1.00	
			2375	29.64	30.61	0.97	
0.61	37.56 A	ALKALI-FELDSPAR QUARTZ SYENITE AND ALTERED GABBRO					
		-core alternates between syenite and gabbroic and altered gabbroic rocks; syenite generally orangy in colour, fine to medium-grained, composed of 50-60% reddish - orange alkali feldspar. 35-45 mafics and 5-10% quartz					
		-large number of fractures- prominent set at approx. 12 to 24 degrees to C.A fractures are commonly fenitized or calcareous					
		<ul> <li>contacts beetween gabbroic and sygnitic rock are gradational</li> <li>gabbroic material is roughly 50% plagioclase or potassically altered</li> </ul>					
		plagloclase and 50% matics (pyroxenes)					
		- approximate intervals are: 30.61-32.71m - syenitic; 32.71-32.85m - gabbroic; 32.85-33.12m - syenitic; 33.12-34.04m - gabbroic; 34.04-34.58m - syenitic;					
		gabbro; 37.79-39.71m - only has 0.63m of core and lots of rubble from 38.24 - 39.54m					
		- mineralization only occurs approximately 10cm into syenite - 30.61-30.71m - 0.5% chalcopyrite					
		- also trace - 0.5% chalcopyrite - finely disseminated in gabbroic areas					
			2376	30.61	31.61	1.00	
			2377	31.61	32.71	1.10	
			2378	32.71	33.71	1.00	
			2379	33.71	34.71	1.00	
			2380	34.71	35.71	1.00	
			2381	35.71	36.71	1.00	
			2382	36.71	37.56	0.85	

### 37.56 47.80 ALKALI FELDSPAR QUARTZ SYENITE

			C.
HOLE	- 687.8	PAGE # 3	(
Au q_tonne	Ag g_tonne		(

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,			ST	JOE CANADA	PROPERTY - Geordie Lake -			ake - Joa	oa
	ł	FROM	TD	DESCRIPTION	SANPLE	FROM	TO	WIDTH	Au oz_ton
	2 4			<ul> <li>similar to interval 30.61-32.71m with locally very fine-grained patches</li> <li>extremely fractured with prominent set at 15 - 20 deg. and secondary set at</li> <li>50 - 65 deg.</li> </ul>					
	(	47.80	47.80 END OF HOLE		2383 2384	37.56 39.56	39.56 40.56	2.00 1.00	
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HOLE	- 587.8	PA5E # 4	(
Au g_tonne	Ag g_tonne		(
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Hole #:	G-87-1	Hole #:	G-87-2
Bearing:	090	Bearing:	090
Dip-Collar:	-44	Dip-Collar:	-45
Latitude:	16+00S	Latitude:	17+005
Length:	125.Om	Length:	118.Om

## COLLAR LOCATION SKETCH



Hole #:	G-87-1	Hole #:	G-87-2
Bearing:	090	Bearing:	090
Dip-Collar:	-44	Dip-Collar:	-45
Latitude:	16+005	Latitude:	17+005
Length:	125.Om	Length:	118.Om





Hole #:	G-87-3
Bearing:	090
Dip-Collar:	-45
Length:	80.00m

# GEORDIE LAKE COLLAR LOCATION SKETCH



G-87-4
090
-45
116.Om

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COLLAR LOCATION SKETCH

Hole #:	G-87-8
Bearing:	090
Dip-Collar:	-45
Length:	47.80m







Hole #:	G-87-5	Hole #:	G-87-6
Bearing:	090	Bearing:	090
Dip-Collar:	-45	Dip-Collar:	-45
Length:	106.39m	Length:	103.00m

and Miless	nent of W	ort D Jork	N8804	T NO.	5 Instructions -	Supply re	quired dat	ta on a separate fo	orm for each
Name and Address of I St. JOE C	Recorded Holde anada Inc	r •	Min	nin					
1116-111	Richmond	St. W. To	ronto, O	ntario	MDH 204				900
Total Work Days Cr. claimed		fribution of Cre lining Claim	Work	N	Aining Claim	Work	•	fining Claim	Work
1934	Prefix	Number	Days Cr.	Prefix TD	Number 040105	Days Cr.	Prefix TD	Number 040102	Days Cr.
ork. (Check one only)		949174	20	ID	040196	20	ID	949195	20
Manual Work		949175	20		040107	20		949194	20
Shaft Sinking Drifting c other Lateral Work.	or and states	949176	20		040100	20		949195	20
Compressed Air, other Power driven or mechanical equip	Sarah Baran	040170	20		949100	20	a territoria. A composition	949190	20
Power Stripping		0491/0	20		0/0100	20		040100	20
Diamond or other Core	199 B. 19	949102	20		949190	20		949190	20
Land Survey		949103	20		040102	20		<b>60</b> 0200	20
All the work was performed a	n Minina Claim	949104 (d) TRR6/10	0/ TR8/	54005	949192 TRR6/1022 /	$con^{1}t$	on Sch	949200	20
an the work was performed o	tupo of equi	ment Namer	Addresses of		Table Below)				R
equired information eg.	type of equi	pineint, Hames,	Addi 03303, 1					C C C	m
Machine:JKS Super 300 Diamond Dr 11JAN 26 1988Dates of Work:Nov. 22-29, 1987 ( $G87-1-G87R^4$ ) = CEIVED Dec. 2-4, 1987 ( $G87-6$ ) Dec. 6-7, 1987 ( $G87-8$ )Output to the sector of									
		Dec. 6	-4, 1987 -7, 1987	(G87- (G87-	-6) -8)	CEI	VED meet		
Chraits and Chraits Use Loheart Bel	ilable d	Dec. 6 J - 1934 - 1760 - 174	-4, 1987 -7, 1987 <b>4</b>	(G87- (G87-	-6) -8) 7684400 7884400 7886400 Date of Report Jan. 14/8	CEI ssign 04- 2 5- 26 2- 30 8	VED mest 59 day 0 day xo day	- Bellon - Bellon - Bellon - Bellon - Bellone Holder or Agent ()	ee 32/ e - 3040 3357 Signature)
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Schedule "A"

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TB	<u>Claim No.</u>	Work Days Cr.	TB	<u>Claim No.</u>	Work Days Cr.
	949201	20		961930	20
	949218	20		961931	20
	961902	20		961932	20
	961903	20		961933	20
	961904	20		961934	20
	961905	20		961935	20
	961906	20		961936	20
	961907	20		961937	20
	961908	20		961938	20
	961909	20		961939	20
	961910	20		961940	20
	961911	20		961941	20
	961912	20		864156	20
	961913	20		864073	20
	961914	20		864004	40
	961915	20		864005	40
	961916	20		864022	40
	961917	20		864131	20
	961918	20		864133	40
	961922	20		864100	40
	961923	20		864072	40
	961924	20		864071	40
	961925	20		864069	40
	961926	20		929253	40
	961927	20		929252	40
	961928	20		864132	40
	961929	20			
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DIGSWOOIS 53 SEELEY LAKE

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# MARTINET LAKE G-601

REFERENCES AREA SHOWN THUS COMMENDED IS WITHDRAWN FROM STAKING PURSUANT TO PROVISIONS OF SECTION 32 OF THE MIMING ACT, R.S.C. 1980, CHAPTER 268. DISPOSITION BY EXPLORATORY LICENCE OF 48°52'30" OCCUPATION ONLY. LAND UNDER WATER IN LAKE SUPERIOR IS WITHDRAWN FROM STAKING BY ORDER IN COUNCIL, DATED APRIL 30, 1912. LEGEND PARLEL HURST BAR MINING CLASSER HALLWAL ML. a Fill (Fit Liffa) NON PERENNIAL STREAM HE CICIDIALS CHER STRUCTURE SUBULVISION OCCOMPOSITE PLACE RESERVATIONS URIGINAL SPOKELINE MARSH OR MUSKEG MINES TRAVERSE MUNUMENT ω DISPOSITION OF CROWN LANDS G Ś TYPE OF DOCUMENT SYMEO G PATES FSORESCE & MINING BORT Ľ SURFACE RIGHTS ONLY  $\geq$ MINING RIGHTS ONLY < LEASE SURFACE & MINING RIGHTS SURFACE RIGHTS UNLY MINING CIGHTS ONLY LIGENCE OF ON DRATION. ORDER IN CELLAR HE RESENTATION CANCELLO SAND & GRAVE NOTE MINING HE MIS IN PARCELS CATEGORE PROVIDED MAY 6 1913 VESTO IN ORIGINAL PATENTEC BY THE STREET LANDS ALL HESS 1910 CHAP HD, SE 53 SUB -----SCALL FINCH - 40 CHAINS F M . . . AREA SEELEY LAKE MINIS ADMENISTRATIVE DISTRICT TERRACE DAY MINENG DIVISION THUNDER BAY LAND THEES / REGISTRY DIVISION THUNDER BAY Ministry of Land V Natural Management Hesources Branch Ontario 48°45 APRIL 9, 10 37 DalaFEDRUARY 1982 Number 86°15 G-613 4





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REFER 9 M TOPOGRAPH -LAKES, RIVERS ETC. 60 RESOURCES INVENTORY Ġ SURVEYS SURVEY OF THE EAST BOUNDARIES OF Ш Y TOWNSHIP 79 BY. E.STEWART O.L.S. 1894 ∢ FIELD NOTE BOOK No. 2544. SURVEY OF MERIDIAN LINE BEING THE EAST BOUNDARY OF TOWNSHIP 79 BY, C.R. MORGAN --ARTINE 0.L.S. 1956 FIELD NOTE BOOK No.2843 ROADS HIGHWAY No 17 THROUGH CROWN LANDS FROM DEPARTMENT OF HIGHWAYS PLANS Σ вм' 🔨 AS NOTED ON FACE OF THIS PLAN. 7 M My Quer Э -9 LEGEND \_\_6M വ HIGHWAY AND ROUTE No. OTHER ROADS TRAILS \_\_\_\_\_ ш SURVEYED LINES: AK TOWNSHIPS, BASE LINES, ETC. LOTS, MINING CLAIMS, PARCELS, ETC \_ UNSURVEYED LINES. LOT LINES  $\succ$ PARCEL BOUNDARY ш MINING CLAIMS ETC ------EEL RAILWAY AND RIGHT OF WAY +--+ UTILITY LINES NON-PERENNIAL STREAM S FLOODING OR FLOODING RIGHTS SUBDIVISION OR COMPOSITE PLAN Thinnhhill RESERVICIONS ORIGINAL SHORE MARSH OR MUSK G MINES TRAVERSE MONUMENT \_ 5M **DISPOSITION OF CROWN LANDS** TYPE OF DOCUMENT SYMBOL PATENT, SURFACE & MINING RIGHTS . " , SURFACE RIGHTS ONLY... ...., MINING RIGHTS ONLY. LEASE, SURFACE & MINING RIGHTS ", SURFACE RIGHTS ONLY ", MINING RIGHTS ONLY LICENCE OF OCCUPATION . ORDER-IN-COUNCIL RESERVATION CANCELLED SAND & GRAVEL NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1 . 4 M SCALE 1:20,000 TOWNSHIP 50 GRAIN M.N.R. ADMINISTRATIVE DISTRICT TERRACE BAY MINING DIVISION THUNDER BAY LAND TITLES / REGISTRY DIVISION .3M THUNDER BAY Ministry of Land Ø Management Natural Resources Branch Ontario APRIL \$ 26,1982 (Bata