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From (m)	ТО (m)		G	eology	Y			Sample	From (m)	(m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
.00 28.70	28.70 62.95	OVERBURDEN DIABASE DIKE												
		Dark green. chloritized d feldspar crys chlorite line and 45 degre as small ble Minor epidote	Dark green. Medium to coarse grained, moderately chloritized diabase dike. Magnetic. Saussuritized feldspar crystals. Generally blocky core due to chlorite lined fractures at 23 degrees, 31 degrees and 45 degrees. 1-2% pyrite, finely disseminated or as small blebs. Minor k-spar alteration in veins. Minor epidote veins.											
		 55.70 62.95 Fi ca	ne to n lcite vej	edium .ns an	grained d d stringers	liabase	e with 3%	5						

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From (m)	To (m)	Geology	Sample	From (m)	То (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
62.95	74.65	SILICIFIED ZONE CRYSTAL TUFF Dark grey to black. Pervasively silicified, intermediate feldspar crystal tuff; crystals average 1mm and are locally eyeshaped; matrix is aphanitic; minor well overprinted lapilli fragments (averaging 1cm). Blocky core due to fracture (at 70.5-71.0 three main fracture sets are at 50, 56 and 32 degrees to core axis). 1% pyrite, finely disseminated or in veins. 1% quartz calcite veinlets +/- chlorite. 72.50 F1=47 degrees to core axis.		71.00	72.50	1.5			
74.65	78.25	SILICIFIED ZONE FELSIC FRAGMENTAL Banded buff, light to medium grey. Moderately silicified rhyolite fragmental; 60% buff coloured, elongated clasts ranging from 1.5cm to larger than core diameter (+/-10cm). Well sheared unit. Magnetic. 1-2% patchy pyrrhotite, up to 5% fine to medium grained disseminated pyrite; +/- dark green chlorite. Minor blocky core.	 241012 241013 241014 	74.65 75.50 76.50	 75.50 76.50 77.50 	.8 1.0 1.0 1.0			
 78.25 	82.75	 77.00 F1=49 degrees to core axis. SULFIDES GRAPHITIC HORIZON 78.25 79.60 Weakly to moderately silicified rhyolite fragmental intercalated with graphitic 	241015 	77.50 	78.25 	.8 			

From (m)	T0 (m)	Geology	Sample	From (m)	ТО (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		 bands 40% buff rhyolite fragments generally exceeding core diameter; minor minute quartz filled fractures. Numerous bands of disseminated or semi-massive pyrite +/- magnetic pyrrhotite patches. 78.25 79.00 Minor pyrrhotite patches. 79.50 F1=42 degrees to core axis. 79.60 82.75 Sulfides 90% botryoidal pyrite with 5-10% quartz calcite sweats in fractures. Also containing graphitic slivers and patches. Recrystallized fine to medium grained pyrite lines graphitic patches and quartz calcite. 	241016	78.25	79.00 80.00	.8 .8 1.0			
		<pre>80.00 81.00 95% pyrite. 81.00 82.00 90% pyrite. 10cm quartz calcite vein at 32 degrees to core axis with fine grained black siliceous stringers; 3% pyrite. 82.00 82.75 95% pyrite.</pre>	241018 241019 241020	80.00 81.00 81.00	81.00 82.00	1.0 1.0 .8			
82.75	86.55	GRAPHITIC HORIZON SULFIDES Black with several sulfide bands and patches. Moderately silicified graphitic horizon with 20% pyrite/pyrrhotite zones. 5-10% quartz and quartz calcite veins and stringers, generally along foliation and a quartz calcite matrix. Magnetic pyrrhotite occurs as medium to large patches with bands and patches of pyrite; the ratio is 1 to 10,							

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From (m)	То (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		respectively. 82.75 84.00 5-10% pyrite/pyrrhotite. 84.00 84.75 5-10% pyrite/pyrrhotite. 84.75 85.50 5% pyrite/pyrrhotite. 85.00 85.20 Greyish white irregular quartz calcite veins with green tint. Pyrrhotite and pyrite at contacts.	241021 241022 241023	82.75 84.00 84.75	84.00 84.75 85.50	 1.3 .8 .8			
 86.55	97.40	85.50 F1=49 degrees to core axis. 85.50 86.55 55cm semi-massive botryoidal pyrite. SILICIFIED ZONE INTERMEDIATE TO FELSIC LAPILLI TUFF	241024 	85.50	86.55 86.55	1.1			
		<pre>Medium to dark grey. Moderately to pervasively silicified, weakly chloritized felsic to intermediate lapilli tuff; local moderately sericitized bands; local sections are clast supported, mainly rhyolitic and minor cherty clasts. 3% quartz calcite veins and patches. Generally <1-2% finely disseminated pyrite/pyrrhotite, also filling hairline fractures.</pre>							
		<pre>86.55 87.50 60% lapilli fragments. 5% pyrite/pyrrhotite, as bands between fragments and disseminate. 87.50 F1=45 degrees to core axis.</pre>	241025 	 86.55 	87.50 	.9 			
		<pre>87.50 88.50 3% pyrite/pyrrhotite. 88.50 89.50 1-2% pyrite/pyrrhotite, trace chalcopyrite. 91.00 92.40 1-2% pyrite, minor pyrrhotite, trace</pre>	241026 241027 241028 241029	87.50 88.50 89.50 91.00	88.50 89.50 91.00 92.40) 1.0) 1.0) 1.5) 1.4			

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From (m)	To (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		 chalcopyrite. 35cm moderately sericitized zone. 15cm wide, extremely fractured, pinkish green crystal tuff fragment? with quartz calcite chlorite filled fractures. 92.40 94.55 Dark grey to black. Lapilli tuff is overprinted by up to 5% hornblende crystal averaging 1mm or less. Chlorite on fracture surfaces. 92.40 93.60 <1% disseminated pyrite. 93.60 95.00 <1% disseminated pyrite. 95.00 96.10 <1% disseminated pyrite. 95.35 97.40 Moderately blocky core with minor rubble due to fractures. Two main fracture sets are at 8 degrees and at 34 degrees to core axis. Zone is also more sericitized. 96.10 97.40 35cm sericitized zone with silica influx. 10cm wide siliceous band with 30% fine pyrite. 	241030 241031 241032	92.40 93.60 95.00 96.10	93.60 95.00 96.10				
97.40 	98.85	MAFIC INTRUSIVE ROCK Dark grey green. Fine to medium grained moderately chloritized and carbonatized mafic intrusive (gabbro?). Massive unit. Non-magnetic. <1% finely disseminated pyrite. 1-2% quartz calcite fractures. Sharp upper contact is at 30 degrees to core axis, lower contact is irregular.	241034 	" 97.40 	 98.85 	" 1.4 			
 98.85 	 129.10 	INTERMEDIATE TUFF	 241035 	 98.85 	 99.50 	 .7	 		

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From (m)	То (m)	Geology	Sample	From (m)	То (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		Medium to dark grey. Moderately silicified, weakly to moderately chloritized intermediate tuff; lapilli fragments? are well overprinted and stretched out, could possibly be patchy alteration. 2-3% pyrite, finely disseminated or as sheared patches +/- dark green chlorite; minor pyrrhotite wisps. 5-10% quartz calcite fractures and veins. 99.50 101.00 10cm band containing 50% fine to medium grained pyrite in quartz calcite matrix. 101.00 102.50 30cm zone with two quartz carbonate chlorite vein (3% pyrite) zones with pinkish silicified alteration halo. 104.00 114.00 Weakly to moderately blocky core due to fractures. Main fracture sets are at 29 and 42 degrees to core axis.	241036 241037 241037 241038 241040 241040 241041 241042 241043	99.50 101.00 102.50 105.50 107.00 108.50 110.00	101.00 102.50 104.00 105.50 107.00 108.50 110.00 111.50	1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5			
		 114.50 129.10 Matrix is weakly to moderately	241044 241045 241046 	111.50 113.00 114.50 	113.00 114.50 116.00 	1.5 1.5 1.5			
		<pre> 115.50 129.10 Locally moderately to strongly blocky core due to fractures.</pre>	 241047 	 116.00 	 117.50	 1.5 			
		<pre> 117.50 F1=36 degrees to core axis.</pre>	 241048 241049 	 117.50 119.00 	 119.00 120.50 	1.5 1.5 	 		
		119.15 119.85 Moderately sericitized. 10% pyrite stringers with dark green chlorite.							

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From (m)	ТО (m)	Geology	Sample	From (m)	То (m)	Lngt	CU PPM	ZN PPM	AU PPB
		<pre>120.50 122.00 Minor chalcopyrite in quartz calcite veins and sweats. 125.00 126.50 Two 2mm wide dark green chlorite filled fracture at 17 degrees to core axis, minor pyrite. 5% pyrite stringers generally with dark green chlorite envelop. 126.50 128.00 Minor pyrrhotite blebs. 20cm with quartz calcite chlorite veins and sericite alteration halo, 5-10% fine to medium grained pyrite with dark green chlorite envelop. 128.00 Fl=45 degrees to core axis. SILICIFIED ZONE CRYSTAL TUFF FAULT ZONE Mottled buff and grey (mottling may be due to patchy albitization). Moderately silicified, weakly chloritized felsic to intermediate porphyritic tuff. 30% quartz and feldspar phenocrysts average <2-3mm (sharp or poorly distinct). Locally weakly sericitized bands. Possible minor well overprinted and sheared rhyolitic fragements. Weakly to moderately blocky and locally rubble core due to fractures. Chlorite in fractures. 2-3% smokey grey to white or bluish grey (molybdenite or galena bearing) quartz and quartz calcite veins (<1cm wide). 3-5% pyrite, disseminated and as blebs; <1% pyrnhotite as semi-massive patches. Some veins contain fine to medium grained black tourmaline needles.</pre>	241050 241051 241052 241053 241054 241054 241055 241055 1 241055 1 1 1 1 1 1 1 1 1 1 1 1 1	 120.50 122.00 123.50 125.00 126.50 128.00 128.00 128.00 128.00	122.00 123.50 125.00 126.50 126.50 128.00				

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From (m)	То (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		129.10 130.00 10cm siliceous band with 40% blueis quartz eyes and blebs. Numerou sericite stringers. Minor pyrite an pyrrhotite. 133.00 Two main fracture zones at 37 and 3	h 241056 s 241057 d 241058 241059 5	 129.10 130.00 131.00 132.50	130.00 131.00 132.50 134.00	.9 1.0 1.5 1.5			
		134.00 F1=46 degrees to core axis in opposite sense	. 241060 241061 241063 241063 241064 241065	134.00 135.50 137.00 138.50 140.00	135.50 137.00 138.50 140.00 141.50 143.00	$\begin{array}{c} \\ \ & 1.5 \\ \ & 1.5 \\ \ & 1.5 \\ \ & 1.5 \\ \ & 1.5 \\ \ & 1.5 \\ \ & 1.5 \end{array}$			
		143.00 F1=40 degrees to core axis. 	241066 241067 241067	 5 143.00 7 144.50 3 145.50	 144.50 145.00 146.50	1.5 .5 1.0			
		146.50 147.50 Semi-massive red sphalerite in veir at 10 degrees to core axis, als disseminated. Galena veneer of fracture surfaces. 10cm zone with 50 quartz veins; galena and sphalerite adjacent fractures. 148.50 149.50 25cm zone with <1% red to hone coloured sphalerite, disseminated at filling hairline fractures +/- galena	IS 24106 00 24107 00 08 08 08 09 09 09 09 09 00 00	9 146.50) 147.50 1 148.50 	147.50 148.50 149.50 	1.0 1.0 1.0 			
		with chlorite. 149.50 150.50 1cm wide quartz vein at 67 degrees core axis containing 1-2% red to hon coloured sphalerite specks, min	co 24107 ey 24107 or 24107 	 2 149.50 3 150.50 4 152.00) 150.50) 152.00) 153.50 	1.0 1.5 1.5	 		

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From (m)	T0 (m)	Geology	Sample	From (m)	То (m)	Lngt (m)	CU PPM	ZN PPM	AU
<u></u>									
ļ		galena.	241075	$\ 153.50\ $	155.00	1.5			
		156.50 F1=47 degrees to core axis.	241070 241077	156.50 	158.00	1.5			
		158 00 159 50 Robbin egg coloured 2mm guartz eye.	∥ ∥241078	∥ 158.00	159.50	1.5			
1)]			∥241079	159.50	161.00	1.5	ļ		
			241080	∥161.00	162.50	1.5	1		
			241081	162.50	164.00	1.5			
		163.70 164.30 2-5mm chloritic and white crea coloured laminae.	n 						
		l	 r 2/1082	 164_00	 165-50	∥ ∥ 1.5			
1		164.00 165.50 10cm zone containing several integuia	k ∥241083	165.55	167.00	1.4		Ï	
		pyrrhotite chalcopyrite and pyrite	. 241084	167.00	∥ 168.50	∥ 1.5		ii	i i
	1	Blue tint due to molvbdenite?.		Ï	ii	Ï		Ï	Î Î
1		167.90 168.00 Sample for whole rock.		II N	 				
		 168.50 F1=56 degrees to core axis.							
		 169 50 170 00 2 5cm quartz chlorite vein at 3	2 241085	¦ ∎168.50	170.00	1.5			
	11 	degrees to core axis, trace sulfide.	241086	; 170.00	171.50	₿ 1.5	Ï	Í.	
			241087	/∥171.50	173.00	1.5			
		172.20 172.30 Sample for thin section. What is buf coloured alteration?.	f 						
		Image: 173.00 174.50 1-2cm quartz calcite vein at 2 degrees to core axis containing 5 model pyrrhotite and minor chalcopyrite section has light greenish greenish alteration. containing 5 containing 5	0 241088 % . Y	3 173.00 	174.50 	1.5 			
		174.50 176.00 1% pyrrhotite as small blebs, 1 disseminated pyrite.	% ∥241089 ∥	9∥174.50 ∥	176.00 	0 1.5 			
		176.00 177.50 Locally up to 3% pyrrhotite and pyrit	e 24109 	0∥176.00 ∥	0∥177.50 ∥) 1.5 	; 		

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From (m)	T0 (m)	Geology	Sample	From (m)	ТО (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		with minor chalcopyrite in chloritic fractures. 177.50 179.00 15cm section with albitized? subangular rhyolitic fragments up to 5cm. 180.25 181.40 1cm with light greenish calcite vein. SILICIFIED ZONE INTERMEDIATE TUFF INTERMEDIATE TO	241091 241092 241093	177.50 179.00 180.25	179.00 180.25 181.40	1.5 1.3 1.1			
		FELSIC LAPILLI TUFF Medium to dark grey and black. Moderately to pervasively silicified, weakly chloritized, sheared intermediate tuff mixed with intermediate to felsic lapilli tuff. Minor albitized? patches. Fine grained intermediate tuff locally contains up to 7% black tabular crystals averaging <1mm in size. 3% quartz calcite fractures +/- chalcopyrite blebs; fracture surfaces are also lined with chlorite; consistent calcite filled fractures are at 16 and 49 degrees to core axis. Generally minor blocky core. 1-2% pyrrhotite, disseminated as blebs or semi-massive in veins. Trace pyrite as veneer on fracture surfaces.							
		<pre>181.40 182.00 Blocky and rubble core due to fractures. 182.40 183.10 40% elongated felsic lapilli fragments averaging 2-3cm; overprinted matrix and fragments with small black crystals.</pre>	241094 241095 241096 	181.40 182.40 183.10 	182.40 183.10 184.00 	1.0 .7 .9 			
		184.00 185.00 5cm section with 2% red disseminated sphalerite specks.	241097 241098 	 184.00 185.00	185.00 186.00) 1.0) 1.0	 		

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From (m)	T0 (m)	Geology	Sample	From (m)	То (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		186.00 187.00 2-3% pyrrhotite blebs. 186.50 F1=59 degrees to core axis.	241099	 186.00	187.00	1.0			
		 187.00 188.00 20cm zone with with 5% semi-massive pyrrhotite veins in a dark siliceous and calcareous matrix. 190.00 190.75 Mottled due to alteration? or lapilli fragments? the last 30cm are ash grain size in composition. 	 241100 241101 241102 241103 	 187.00 188.00 189.00 190.00 	188.00 189.00 190.00 190.75 	1.0 1.0 1.0 .8 			
 190.75 	193.80	SULFIDES ARGILLITE 85% Botryoidal and fractured pyrite with 5% quartz calcite sweats and veinlets. Trace pyrrhotite. Local small black crystals in semi-massive pyrite. 10% graphitic slips, also minor graphitic argillite. Trace k-spar alteration.	241104 241105 241106	 190.75 191.50 192.50 	 191.50 192.50 193.25 	.8 1.0 .8 			
		193.25193.80Graphitic argillite with 5% pyrrhotiteand pyrite bands.193.50S0=55degrees to core axis, fissilecore.	 241107 	193.25 	193.80 	.6			
 193.80 	196.50 196.50 	EXHALITE Medium to dark grey with local green tint, somewhat mottled appearance. Moderately carbonatized, well overprinted exhalite?, local weak crenulated bedding, weakly folded at 195.5m with fold axial trace at 77 degrees to core axis, generally bedding is at 45 degrees to core axis. Minor weakly chloritized patches. 5% irregular quartz calcite	 241108 241109 241110 	 193.80 194.50 195.50 	 194.50 195.50 196.50 	.7 1.0 1.0			

From (m)	To (m)	Geology	Sample	From (m)	TO (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		fractures and veins. 5% pyrrhotite and pyrite, finely disseminated and as semi-massive bands and patches, locally associated with deep red sphalerite.							
 196.50 	197.10 	PYRRHOTITE 95% Pyrrhotite with 3% calcite sweats, minor sericitized volcanic fragment. Trace sphalerite.	 241111 	196.50 	 197.10 	.6			
 197.10 	201.45	EXHALITE FELSIC FRAGMENTAL PYRRHOTITE Banded buff, dark green and greenish grey. Well sheared, moderately to pervasively silicified exhalite and felsic fragmental with 20% albitized and 10% chloritized sections. Numerous (15%) pyrrhotite and pyrite bands up to 15cm wide mineralized bands, also fine to coarse grained pyrite in veinlets and disseminated, +/- dark green chlorite. Chlorite also occurs in stringers. Rhyolite lapilli fragments are very indistinct with numerous 1-2mm quartz eyes. 198.20 198.40 Folded section, off-set along fracture at 43 degrees to core axis.	 241112 241113 	 197.10 198.00 	 198.00 199.00 	.9 1.0 			
		<pre>198.50 F1=69 degrees to core axis. 199.40 199.65 75% pyrrhotite and pyrite with calcite and minor chlorite. Pyrite is fine to very coarse grained.</pre>	 244114 241115 	 199.00 199.80 	 199.80 200.60 	8. 			

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From (m)	T0 (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		199.95 200.05 Semi-massive pyrrhotite with quartz calcite filling interstices.	241116	200.60	201.45	.8			
 201.45 	205.10	SILICIFIED ZONE SERICITIZED EXHALITE PYRRHOTITE							
		Mottled greyish and light to dark green. Moderately to pervasively silicified, moderately sericitized, weakly to moderately chloritized cherty exhalite? 20-25% quartz calcite blobs and veins. Rock is well overprinted. 15% semi-massive pyrrhotite/pyrite bands and also disseminated as fine grains and small blebs. Locally up to 7% red sphalerite along fractures and disseminated, trace galena.							
		201.45 201.80 80% semi-massive pyrrhotite/pyrite (ratio 1:1).	 241117 241118	201.45 202.30	 202.30 203.00	 .9 .7			
		202.35 202.80 95% semi-massive pyrrhotite/pyrite (ratio 1:1) with several up to 1.5cm red shpalerite veins at 15 degrees to core axis.	 241119 	 203.00 	 203.65 	.6 			
		203.10 203.25 5-7% red sphalerite with trace galena in veins and disseminated.							
		203.65 203.70 2cm semi-massive pyrrhotite band at 40 degrees to core axis.	 241120 	 203.65 	 204.50 	.9 			
		203.70 205.10 Moderately to strongly sericitized. 5-10% disseminated pyrrhotite and pyrite blebs, blebs are elongated up							

From (m)	T0 (m)	Geology	Sample	From (m)	ТО (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		to 3cm. 204.50 F1=48 degrees to core axis. FAULT ZONE ARGULUTE GRAPHITIC HORIZON	 241121 	204.50	205.10	.6			
		 Blocky rubble faultzone in graphitic argillite. 5% grey siliceous wisps along argillite bedding planes. 3-5% wispy pyrite patches. Minor sphalerite in fracture. 2cm greyish white barren quartz vein at 207.1m with 10cm sericitized cherty band. 205.10 205.90 Several up to 2cm siliceous nodules containing pyrrhotite. 205.45 205.90 Moderately to pervasively sericitized tuffaceous metasedimentary unit containg a 5cm quartz calcite vein. Trace sphalerite. 	 241122 	 	 206.00 	.9			
		206.00 SO=53 degrees to core axis.	 241123 	206.00 	 207.40 	1.4 			
207.40		ARGILLITE GRAPHITIC HORIZON Black with several medium grey bands. Graphitic argillite intercalated with moderately sericitized, well overprinted, fine grained tuffaceous metasedimentary? exhalite? sections. 10% quartz and quartz calcite veins also as bed replacement in argillite. 5% pyrite, fracture filling or as blebs. 1% finely disseminated pyrrhotite; pyrite and	 241124 	 207.40 	 208.50 	 			

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From (m)	T0 (m)	Geology	Sample	From (m)	То (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		pyrrhotite also occur in siliceous nodules. Weakly fissile.							
		208.50 S0=50 degrees to core axis.	241125 241126 241127 	208.50 209.50 210.50	209.50 210.50 211.50	1.0 1.0 1.0			
		211.30 212.10 Several folded sections of argillite with fold axial trace at 47-58 degrees to core axis.	241128 	211.50	212.10 	.6 			
 212.10 	228.45	 TUFFACEOUS METASEDIMENTS CHERT 							
		Banded and patchy medium to dark grey locally with buff tint and minor black. Fine to medium grained tuffaceous and cherty metasediments, minor argillaceous sediments; local sericitized patches. Rock is mottled with 10% quartz calcite veins and fractures. Numerous red sphalerite bearing veins and fractures. Frequently bedding planes are weakly folded. 3% pyrite, finely disseminated or in siliceous veinlets. Minor pyrrhotite blebs. Several sections of rubble and blocky core.							
		212.10 213.00 Several <1-2mm	241129 	212.10 	213.00 	.9 			
		213.00 214.00 Numerous sphalerite veinlets. Sphalerite is also finely disseminated. 10cm quartz calcite band	 241130 	213.00 	 214.00 	 1.0 			

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From (m)	То (m)	Geology		From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		<pre>with buff cherty bands and 5% disseminated fine sphalerite blebs. 214.00 215.00 10% quartz calcite patches with minor sphalerite and 1-2% pyrite and pyrrhotite. 215.00 216.00 Several irregular veinlets filled with semi-massive red to honey coloured sphalerite, minor galena at 215.3-215.5m; sphalerite is also finely disseminated. 216.00 217.00 3mm quartz calcite vein at 45 degrees to core axis containing 3% red sphalerite, minor galena, chalcopyrite, pyrrhotite and 1% pyrite at 216.05m; finely disseminated sphalerite in alteration halo Graphitic argillite at 216.55-216.9m.</pre>	241131 241132 241132 241133	214.00 215.00 216.00	215.00	1.0			
		<pre>218.50 S0=55 degrees to core data. 217.00 218.00 20cm donut fold section containing 3-5% patchy pyrrhotite. 218.00 219.00 Several sphalerite filled hairling fractures and veinlets with minor galena at 218.3-218.45m. 219.40 219.45 Sample for whole rock. 220.00 F1=49 degrees to core axis; weak foliation. 220.00 221.00 Minor finely disseminated pyrite. 10cm of core with weak crenulated bedding planes subparallel to core axis. Minor 1mm wide quartz calcite vein at 4</pre>	<pre>1 241134 2 241135 2 241136 2 241136 2 4 1 241137 3 4 2 4 1 241137 3 4 2 4 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</pre>	217.00 218.00 219.00	218.00 219.00 220.00 221.00	1.0 1.0 1.0 1.0 1.0			

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From (m)	T0 (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		degrees to core axis containing 5 sphalerite. 220.15 220.40 90% quartz calcite vein with 5% ligh green sericitic patches and mino pyrrhotite in secondary fractures.							
		221.00 222.00 Mainly silicified and cherty rock Several up to 20cm wide sections wit minor quartz calcite veins an fractures containing 1-2% re sphalerite and trace chalcopyrite	. 241138 1 1 1	221.00 	222.00 	1.0 			
		222.00 223.00 Several sphalerite bearing, irregula quartz calcite veins and fracture with local minor chalcopyrite. Mai quartz calcite veins are perpendicula	r 241139 s n r	222.00 	223.00	1.0 			
		223.00 224.00 Chlorite filled fracture at 30 degree to core axis with pyrite veneer. Wel preserved bedding planes at 20 degree to core axis over a 10cm area, bed are 1-10mm thick.	s 241140 1 3 5 1) 223.00 	224.00 	1.0 			
		224.00 225.00 Several 1-5cm quartz calcite veins ar perpendicular to core axis, trac pyrite. 10cm quartz calcite veinlet in net pattern.	e 241141 e s 	. 224.00 	225.00 	1.0 			
		225.00 S0=32 degrees to core axis.							
		225.00 226.00 2mm-5cm wide beds at 26 degrees t core axis.	o ∥241142 ∥	225.00 	226.00 	1.0 			
		226.00 227.00 20cm quartz calcite flooded section Several up to 3cm quartz calcite veir with green tint and trace pyrite ar pyrrhotite.	. 24114: s d 	3 226.00 	227.00 	1.0 			

From (m)	T0 (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU
		227.00 228.45 2% pyrite mainly as small blebs and in veins. Trace pyrrhotite.	 241144 	227.00	228.45	1.4			
228.45 	232.90	ARGILLITE Black with minor dark grey sections. Graphitic argillite intercalated with minor sections of siltstone. 3% quartz calcite veins and fractures; fractures locally contain pyrrhotite, chalcopyrite, pyrite and trace sphalerite. Graded bedding with tops uphole.	 241145 	228.45	230.00	 1.6 			
		228.50 S0=56 degrees to core axis. 232.00 232.50 Two main fractures are at 45 and 60	 241146 241147 	230.00 231.50	231.50 232.90	1.5 1.4 			
 232.90 	233.95	degrees to core axis. FELSIC DIKE Medium grey with green tint. Moderately calcified, weakly to moderately chloritized, fine grained felsic dike? greywacke?; 60% quartz and feldspar matrix? 10% fine to medium grained pyrite. 5% irregular calcite veinlets and fractures. Massive unit.	 241148 	 232.90 	 233.95 	 			
 233.95 	237.00	FAULT ZONE ARGILLITE Similar to 228.45-232.9m unit above except that the core is blocky with 40% rubble.	 241149 241150 	 233.95 235.50 	 235.50 236.90 	 1.6 1.4 			

Page: 19 of 19

From (m)	То (m)	Geology	Sample	From (m)	T0 (m)	Lngt (m)	CU PPM	ZN PPM	AU PPB
		236.50 S0=56 degrees to core axis, moderately							
		237.00 End of hole. Sample sequence 241011-241150.							
	{ 3			 	 		" _1		





Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

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

900

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Transaction Number (office use) W.9760. 00/37 Files Re arch Imaging



the Mining Act. Under section 8 of the correspond with the mining land holder. Development and Mines, 6th Floor,

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X.

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240. - Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)	2.16424
Name CROSS LAKE MUNERALS LTD.	Client Number 122562
Address ID18-475 HAWE STREET	Telephone Number 604-688-5448
VENCOUVER R.C. VEC 2B3	Fax Number
Name	Client Number
Address	Telephone Number
	Fax Number

Type of work performed: Check (~) and report on only ONE of the following groups for this declaration. 2.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs)	, stripping, Rehabilitation
Work Type	Office Use
DIAMOND DRILLING	Commodity
	Total \$ Value of 5 2,875.
Dates Work Performed From 12 04 97 To 30 04 97 Day Month Year Day Month Year	NTS Reference
Global Positioning System Data (if available) Township/Area	Mining Division Porcupacie
Mor G-Plan Number 6-3929/6-3971	Resident Geologist District

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required; - provide proper notice to surface rights holders before starting work;

complete and attach a Statement of Costs, form 0212;
 provide a map showing contiguous mining lands that are linked for assigning work;

- include two copies of your technical report.

• •••

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

Name	· · · · · · · · · · · · · · · · · · ·	Telephone Nu	mber			
STEFANIE SCHWERDFEG	ER	1705-3	360-105	10	tan se	
Address #307-630 LONERGAN BLVD. T	IMMINS PAPIH3	Fax Number				
Name		Telephone Nu	mber			
Address	· · · · · · · · · · · · · · · · · · ·	Fax Number				
		1.111.200				
Name		Telephone Nu	DEC	EUV)	FM	
Address	RECEIVED	Fax Number		(c)	नाग	
4. Certification by Recorded Holder or Agent	JUN 2 3 1007		TA PORCUPIN'E	J.	20	
A. D. al	MINING LANDS BRANCH			· · · · · · · · · · · · · · · · · · ·		
I,(Print Name)	, do hereby certify that	t I have per	sonal knowle	edge of the	facts set	
forth in this Declaration of Assessment Work hav	ing caused the work to t	pe performe	d or witness	ed the sam	e during	
or after its completion and, to the best of my kno	wledge, the annexed rep	port is true.			ي المحمود الم	
Signature of Recorded Holder or Agent		(9)	Date	. 5/97		
Agent's Address	Telephone Nu VS-268	umber: ••• 3-9686	The Numb	10-58	366,	

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

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, and the second s						
Mining work wa mining column indicate	Claim Number. Or if is done on other eligible and, show in this the location number d on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg	TB 7827	16 ha	\$26, 825	N/A	\$24,000	\$2,825
eg	1234567	12	0	\$24,000	0	0
eg	1234568	2	\$ 8, 892	\$ 4,000	0	\$4,892
. 1	P-1207094,	4		1600		
2	P-1207096,	4		1600		
3	P-1213703.	6		2400		
. [•] 4	P-1218962:	4	\$12.875	1600	8000	\$3275
5	P-1219/DI	4	,-,-	1600		
6	P-12,19602	2		800		
7					· · ·	• · · ·
8			······································		· · · ·	
9			· · · · · · · · · · · · · · · · · · ·			
10				u.	3. 4-5	the Car
11						· · · · · ·
12						
13						· ·
14	· ·					
15				n an		
	0	Column Totals	12,875	#9,600 ···	#8000	*3275
I, subse the cla Signatur	(Print Full (Print Full aim where the work w re of Recorded Holder or Age	AILLY Name) essment Work Ri as done. Int Authorized in Wrt Solution	ing	by certify that the assignment to conf	above work credits	or application to $mt 5/97$.
э. IП Some	of the credits claimed	in this declarat	ion may be cut bac	ck. Please check (\sim) in the boxes t	pelow to show how
you w	ish to prioritize the de 2. Credits a 3. Credits a 4. Credits a	letion of credits: re to be cut bac re to be cut bac re to be cut bac re to be cut bac	k from the Bank fir k starting with the k equally over all o k as prioritized on	rst, followed by op claims listed last, claims listed in this the attached appe	tion 2 or 3 or 4 as working backwards declaration; or	indicated. s; or (describe):
			, · · ·	- ·	JUN 2 9 1037	
Note:	If you have not indicat followed by option nur	ted how your cre nber 2 if necess	edits are to be dele ary.	eted, credits will be	e cut back from the	e Bank first,
For O	Stamp	1215111071	Deemed	Approved Date	, Date No	tification Sent
	41 Y J 14	V REAL VI	a fili i			

	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
JUN 5 1997		$\mathcal{M} = \frac{1}{2} \frac{1}{$
LAR 1.2.	Approved for Recording by Mining Re	corder (Signature)



Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilo- metres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
D. SMOND DRILLING			\$ 11,2.75
A COUCENET CORE			E1600
LOGAINE, SPLITTING			, ,
GEFORT PREFERENCES	<u></u>		
			· · ·
Associated Costs (e.g. supplies	, mobilization and demobilization).		
			4
	G	1746	\$
Tropo	vertetion Costs	d ⁶ -	
Food	and Lodging Costs	•	
			·
	· · · · · · · · · · · · · · · · · · ·		
	Total Value of	Assessment Work	# 10 000

Calculations of Filing Discounts:

Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
 If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK	× 0.50 =	Total \$ value of worked claimed.
	A 0.00 -	

N	ote:

- Work older than 5 years is not eligible for credit. - A recorded holder may be required to verify expenditures claimed of costs within 45 days of a tement request for verification and/or correction/clarification. If verification and/or correction/clarification. rification is not made. the Minister may reject all or part of the assessment work submit ed. JUN Certification verifying costs: BANCH NU JUN 5 1997 DR. H.E.Y , do hereby certify, that the amounts shown are as accurate as may 1. ase print full name) 170 reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as IGENTI (recorded holder, agent, or state company position with signing authority) to make this certification.

.Ô Date 1 Λ

Ministry of Northern Development and Mines

CROSS LAKE MINERALS LTD.

210-800 WEST PENDER ST.

Ministère du Développement du Nord et des Mines



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

Telephone: (888) 415-9846 Fax: (705) 670-5863

Dear Sir or Madam:

VANCOUVER, B.C.

V6C-2V6

August 25, 1997

Submission Number: 2.17424

 Subject: Transaction Number(s):
 W9760.00137
 Deemed Approval

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

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

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

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at beneteau_s@torv05.ndm.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,

110

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

Correspondence ID: 11251 Copy for: Assessment Library

Work Report Assessment Results

Submission Num	ber: 2.17424				
Date Correspond	ence Sent: August	25, 1997	Assessor:Steve Bene	eteau	
Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date	
W9760.00137	1218962	BOND	Deemed Approval	August 22, 1997	
Section: 16 Drilling PDRILL					
Correspondence	to:		Recorded Holder(s)	and/or Agent(s):	
Resident Geologis	t		Robert Bailey		
South Porcupine,	ON		TIMMINS, ONTARIO, CANADA		
Assessment Files	Library		CROSS LAKE MINERALS LTD.		
Sudbury ON			VANCOUVER, B.C.		

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FROM DISPOSITION **3HTS ONLY**

IGHTS ONLY

D SURFACE RIGHTS Disposition

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES. AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MIN-ING CLAIMS SHOULD CON-SULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOP MENT AND MINES, FOR AD-DITIONAL INFORMATION

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MINING LANDS BRANCH





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