Category: S/E

CLEVELAND TIN MINE

Hole No: C1510

Objective: 80m BELOW SURFACE Location: WASHINGTON HAY RA6

Bearing of Hole: 112° 39' 44" (108) 112.7 Angle of Hole: -46° 00' 34" (45) -46.0 Final Depth: 382.70 Core Size: HQ, NQ

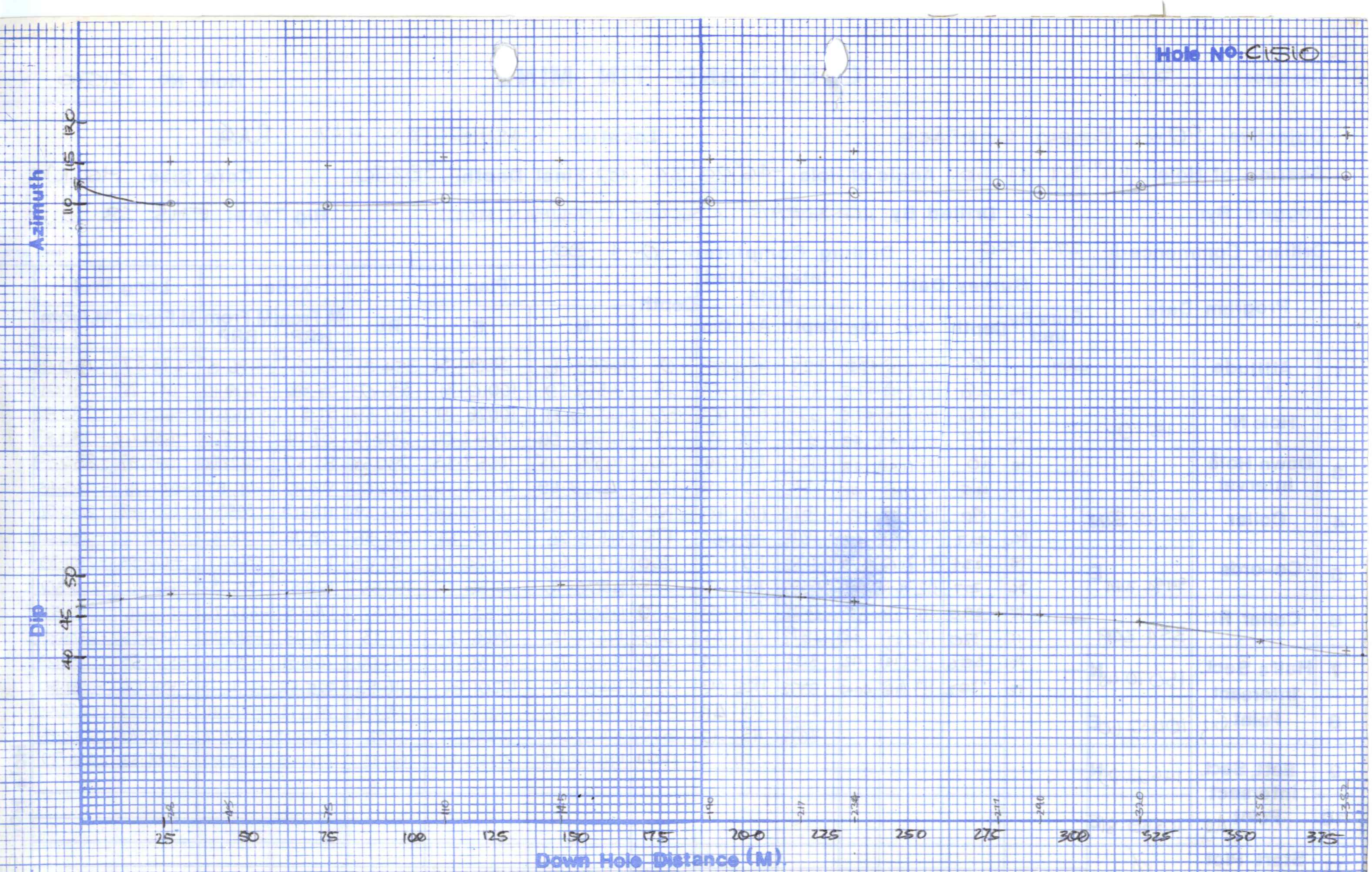
Logged By: Drilled By: LONGYEAR, A.BLOORE, C.NEWMAN, MOLE Rig Type: EHS 38

Drilling Commenced: 27-3-80 Drilling Completed: 10-4-80

NWPS 34773

	Program Data		Survey Data Surv. By Inst.	Depth	Az.	Dip	Interpolated Data Depth	Az.	Dip	Depth	Plan N	Plan E	Plan RL	X-Sect. M.From HRP	X-Sect. M.From BRP	Long. Proj. M.From	Long. Proj. M.From
1	Attitude + -	—	CAM.	Ø	112½	-46	12½	110½ 112	47	Ø	14558.56	9994.311	354.31	20.05	-496.15	-673.57	-230.95
			DC	28	110 (115)	-47.5	37½	110 112	47½	25	14552.59	10010.31	336.03	35.88	-479.10	-667.25	-231.01
2	Hole No.	1510	DC	46	110 (115)	-47.5	62½	110 112	47½	50	14546.81	10026.19	317.59	51.51	-462.21	-660.84	-230.92
			ME	75	109½ (114.5)	-48	87½	109½ 111	48	75	14541.04	10042.06	299.16	67.14	-445.33	-654.44	-230.83
3	Down Hole Interval	25	ME	110	110½ (115.5)	-48	112½	110½ 112	48	100	14535.45	10057.83	280.58	82.57	-428.60	-647.97	-230.59
			DC	145	110 (115)	-48.5	137½	110 112	48½	125	14529.59	10073.49	262.00	98.10	-411.87	-641.76	-230.65
4	Collar	14558.8 N	DC	190	110 (115)	-48	162½	110 112	48½	150	14523.93	10089.06	243.28	113.43	-395.31	-635.48	-230.56
			DC	217	110 (115)	-47	187½	110 112	48½	175	14518.26	10104.63	224.56	128.76	-378.74	-629.20	-230.48
5	Co-ords	9994.344 E	ME	234	111 (116)	-46.5	212½	110 112	47	200	14512.60	10120.19	205.83	144.09	-362.17	-622.93	-230.39
			DC	277	112 (117)	-45	237½	111 113	46	225	14506.76	10136.22	187.55	159.87	-345.13	-616.46	-230.30
6	Collar RL	354.309	ME	290	111 (116)	-45	262½	111½ 113	45½	250	14500.54	10152.43	169.57	176.05	-327.76	-610.16	-230.51
			ME	320	112 (117)	-44	287½	111 113	45	275	14494.12	10168.73	151.73	192.43	-310.24	-603.95	-230.87
7	Hall's Sect. Intersect Point G3	15070.45 N	ME	356	113 (118)	-42	312½	111 113	44½	300	14487.78	10185.24	134.06	208.91	-292.56	-597.53	-231.09
			ME	382	113 (118)	-40.5	337½	111½ 113	43	325	14481.39	10201.88	116.53	225.52	-274.73	-591.06	-231.30
8		10432.60 E					362½	115 113	41½	350	14474.40	10218.77	99.48	242.73	-256.46	-584.88	-232.00
							382.7	115 113	40	375	14467.08	10236.01	82.92	260.40	-237.76	-578.70	-232.89
9	Batt. Sect. Intersect Point A3	14602.99 N								400	14459.60	10253.64	66.85	278.48	-218.63	-572.38	-233.79
10		10539.81 E															
11	Start Plot (Depth)	Ø															

Hole No: C1510


Hole No: C1510
Azimuth
110
115
120
Dip
40
45
50
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
Down Hole Distance (M)

HOLE No.: C1510

SAMPLE DATA

SHEET No.: 1

LENS	SAMPLE No.	ROCK TYPE	Σ	INTERVAL From	INTERVAL To	Length (L)	Assays (A) % Snt	Assays (A) % Sns	Assays (A) % Cu	Assays (A) % Zn	Product (A x L) % P. Snt Pb	Product (A x L) P.P.M. P. Sns Ag	Product (A x L) P.P.M. P. Cu Cd
	248149	SHALE/SILTSTONE		258·72	259.26	0·54	<0.01		0.01	0.01	<0.10	<5	<10
	248150	MINERALIZED		259.26	260·34	1.08	0·07		0.03	2·70	2·10	70	190
	248151	CHERT/CARBONATE		260·34	261·18	0·84	0.02	NO	0.01	0·75	0·45	20	60
	248152	CHERT		261·18	262·88	1·70	<0.01	SNS	<0.01	0·03	<0.10	5	<10
								ASSAYS					
	248153	SHALE		277·48	278·07	0·59	<0.01		0.01	0·03	<0.10	<5	<10
	248154	SANDSTONE		278·07	278·95	0·88	<0.01		<0.01	0·12	<0.10	<5	10
	248155	MINERALIZED		278·95	279·71	0·76	0·03		0.01	1·10	0·25	10	70
	248156	CLAY		279·71	280·10	0·39	0·01		<0.01	0·24	0·12	5	20
	248157	SANDSTONE		280·10	280·73	0·63	<0.01		<0.01	0·04	<0.10	<5	<10
	248158	SHALE		280·73	281·43	0·70	<0.01		0.01	0·04	<0.10	<5	<10
	248159	SANDSTONE		281·43	282·36	0·93	0·05		<0.01	0·22	0·95	30	20
	248160	MINERALIZED		282·36	283·00	0·64	0·07		0.01	1·50	5·50	180	110
	248161	SHALE		283.00	283·55	0·55	0·01		0.01	0·10	<0.10	5	10
	248162	SHALE		283·55	284·90	1·35	0·02		0.01	0·10	<0.10	5	10
	248163	SHALE/SANDSTONE		286·46	288·03	1·57.	0·04		0.01	0·32	<0.10	5	30

N.W.P.S.

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DIAMOND DRILL LOG

HOLE Nº C1510 Page Nº 1

Feature — Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (carbonate / quartz)

Mineralization — Trace 1–5%, Common 5–15%, Abundant 15–60%, Massive > 60%

Tri-cored - Nº Core

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG (TRACE / COMMON / ABUNDANT / MASSIVE)	DEPTH m	MINERALIZATION
	0	Weathered Ultrabasic - brown orange, broken - distorted. - harder and more greenish towards base – from 12.7m.			
	15.00	Ultrabasic - dark green. - few dark minerals - top very broken - rest hard - distorted with flow structures - silicified in parts	Very Broken		minor cvb veining all angles main veins at 25°
HQ	16.90				
	18.50				
	20.00				
	22.70				
NQ	25.70				
	28.70		Brk		
	31.70				
	34.70		Brk		
	37.70		Brk Brk		
	40.70				
	43.70		15°F46° F1 Brk		
	46.70		Brk		
	49.70		70° V3		q/s, cvb.

ABERFOYLE DIAMOND DRILL LOG HOLE No C1510 Page No 2

Feature

Bedding	Shearing	Mineralization	
Foliation	Fault	Trace	1-5%
Fragment (size & shape)	Vein (c carbonate, q quartz)	Common	5-15%
		Abundant	15-60%
		Massive	> 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
	50	~~[illegible]~~. Ultrabasic cont.			
52.70	53			V4 70	crb.
	54			V4 70	crb.
	55 55.14 – 55.35	vein - crb c		← 80°	crb center with ga, sph - then green zones ~~[illegible]~~ crb, qtz, sph, Tm minor ga, As
55.70	56 – 56.94	Ultrabasic - dark green Ultrabasic - distorted flow structure - silicified in parts		V1 30	qtz, crb, ga, sph
	57.53	veins - crb rich in brecciated basalt		35°	~~[illegible]~~ crb, qtz, Ga, sph, py, cpy
58.70	58	Shale - very fine for top 0.91m then coarse/fine alternations for 0.68 then fine ↑ skeans 20cm breccia band at 60.07 & 61.8 coarse at 63.07 - 63.84 Chert or qtz vein at 63.84 - 64.26 Flow breccia to 66.74 from 64.26 also 68.09 - 71.35 Silicified breccia 71.35 - 72.78 also silicified & crb rich at 72.02 - 74.94 Pink band at 74.57m. - flow structured breccia at 77.12 - 77.50 - crb veins at 77.82 - 78.07 Coarse breccia at base.	Brec 15° Fl; Brec.; 25° direct Flow banded breccia; 65° Flow breccia; Silic		
61.70					
64.70					
67.70					
70.70	72				qtz rich - cemented
73.70					
76.70	76		Shear		crb veins
	78			V4 50	crb with ~~[illegible]~~ qtz, sph, py & minor Ga.
79.70	80		Brk zone	V1 ?	crb.
	81.48	sharp lower contact.			
82.70	81.98	Purple Shale - silicified hard - chert like			
	84.17	Shale - silicified fine grained some purple tuff bands hard.			
85.70	86	Purple Shale - silicified - fine grained - some fine grained silicified green tuff breccia at 86.15 - 86.45		V2 25	crb, Tm.
88.70	89.07	gradational contacts.			
	90.42	Shale - fine grained green - hard silicified		V3 60-70	crb.
91.70	92.82	Silicified Brecciated Shale - very little movement between pieces but broken & rewelded by black mineralization			crb veins common - fine
	93.55	Breccia + crb rich - broken tuff.			crb veining
94.70	94.74	Silicified Brecciated Shale - bleached - very little movement - rewelded with black mineral.			
97.70	95 – 100	Shale - bleached in top 1.35m Shale - very fine grained - distorted and rewelded down to 99.37 then massive & fine grained. at 99.37 is 1cm of crb vein		V1 80	crb.

ABERFOYLE — DIAMOND DRILL LOG — HOLE No C1510 — Page No 3

Feature: Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization: Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
100.70	100–102.16	purplish and green tuff interbands and gradations from 100.15 - 102.16m.			
103.70	102.16–105.38	Shale - coarse flow banded and fine massive greentuff interbands sharp contacts	F1, 10° Brk.	103	v1 70 crb.
106.70	105.38	Basalt - Ultra basic? No dark minerals overall green color talc y feel. many fine veins of $CaCO_3$ all angles		106	Many crb v1s at 80°.
109.70				108	v4 40 crb, green min.
112.70					
115.70				114	v4 80 crb 10cm thick
				115	v1 80 [struck through] crb, qtz, sph minor Ga, py + green min
118.70			Brk.		
121.70					
124.70					
127.70					
130.70				130	v1s 60 crb
				131	v1s 80 crb
133.70				134	v4 60 crb
136.70					
139.70					
142.70					
145.70					
148.70		150			

ABERFOYLE DIAMOND DRILL LOG HOLE No C1510 Page No 4

Feature

Bedding	Shearing		
Foliation	Fault		
Fragment (size & shape)	Vein	c carbonate	q quartz

Mineralization

Trace	1–5%
Common	5–15%
Abundant	15–60%
Massive	> 60%

CORE REC'D	DEPTH m (150)	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
	151	Ultramafic continued		V4 55	crb
151.70	152				
	153				
	154				
154.70	155				
	156				
	157				
157.70	158				
158.90	159			V2³ 60°	crb.
				V1⁵ 85°	crb
160.70	160				
	161				
	162 / 162.52			V3³ 50	crb.
	163	Sandstone			
[illegible].70	164	- mid grey; - fine grained; - composed of shale particles; - distorted in upper 1.33m then massive; - minor distorted shale bands	Fl³ 25° Axle [illegible]		
	165			V1⁵ common	80°, 30, 10° crb
	166				
166.70	167	very broken at 182.88 to 183.31 m			
	168	shale from 187.10 to 188.07 m			
	169	very coarse 191.35 to 191.72 m			
169.70	170	crb cement throughout			
	171	minor thin shale bands			
	172	minor tourmalinized zones	shear	V4 45	crb with minor pyrite, Tu
172.70	173				
	174				
	175				
175.70	176			V3 35°	crb, qtz, py, Ga in one zone, Sph in another
	177				
	178				
178.70	179				
	180				
	181				
181.70	182				
	183		Brk	V2⁵ 30	crb, qtz, sph, minor Ga
	184				
184.70	185				
	186				
	187				
187.70	188		shale		
	189			V3 50	crb, qtz, sph. minor Ga, py, As
	190				
190.70	191			V2⁵ all angles	crb
	192				
	193				
193.70	194				
	195				
	196				
196.70	197				
	198				
	199				
199.70	200				

Feature: Bedding; Foliation; Fragment (size & shape); Shearing; Fault; Vein (c carbonate, q quartz)

Mineralization: Trace 1-5%; Common 5-15%; Abundant 15-60%; Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	200	<u>Sandstone</u> continued some chaotic distorted zones							
202.70									
	204							Vi[s]	all angles - cb rich
205.70									
208.70									
211.70									
214.70									
217.70									
220.70									
223.70									
226.70									
[illegible]70									
	232	50mm - 35° Shear						V4 35°	55mm cb, [illegible] qz, sph - minor py, As, Ga.
232.70									
235.70									
238.70									
241.70									
	243.80	<u>Chaotic Sandstone</u> - dominantly SS with a silty fraction and tourmalinized matrix.						V1	Many calcite veins 35-40° mainly others at 70°
244.70									
	246.83	<u>Sandstone</u> fine grained becoming coarser downwards - still some silt sized fraction in parts							
247.70								F1 45°	
3.01	250								

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DIAMOND DRILL LOG

HOLE Nº C1510 Page Nº 6

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization Trace 1-5% · Common 5-15% · Abundant 15-60% · Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	250								
250.70	251	Sandstone (cont) Mid grey - many dark minerals (lime) many thin bands of black (Tm) Calcite grains throughout - lime to pedium grained - generally massive						Fl 35°	Calcite veins 20-30° to core Rw at 70° to core
7.14	252								
	253								
253.70	253.76								
	254	Siltstone / Sandstone Chaotic - dark grey to black tourmalinized - some pyrite							Calcite veins mainly 60-70° some 20-30°
2.98	255								
	256	256.07							
256.70	257	Chaotic Siltstone / Shale. Dark grey tourmalinized siltstone with some light brown grey shale - shales are slumped.							Calcite veins (thin) dominantly 60-70°
	257.60								
2.49	258	Sandstone - very destorted fine grained - mid to dark grey tourmalinized!							Calcite veins
	258.72								
	259	Shale / Siltstone - Dark grey fine grained	x						
	259.26								
259.70	260	Mineralized Carbonate Calcite rich carbonate with ga, sp, Py - very chaotic zone with shales & sandstones	x						crb (50%) sp (20%) q13 (15%) Py (5%) ga (10%) spy (trace)
	260.36								
	261	~~Shale / Siltstone~~ Chert / Carbonate - very contorted. ~~dark grey fine grained~~ - some shale. pyrite veins	x						crb, q13, Py
	261.18								
3.25	262	Chert. - hard - light to med grey. silicified shale. some pyrite.	x						
262.70	262.88								
	263	Chaotic Shale - light brownish cream - greenish tinge in places. - includes pieces of grey, brown, cream shale. - stress direction at 45°						v2 45°	crb3, cpy, py, crb
3.03	264								
	265								
	265.57								
265.70	266	Chaotic Shale / Sandstone. mid grey - shale dominant at top with sandstone dominant at base - generally calcite rich							Thin calcite veins common
2.96	267								
	268								
268.70	269								
	270								
3.04	271							v3 40°, 10°	crb, q13, Tm minor sph
271.70	272							v4 30	crb, q13, Tm. minor sph
	272.71								
3.07	273	Sandstone - fine to medium grained, light to mid grey - calcite rich - shale at 275.50-275.80							q13 veins v1 5 35°
	274								
274.70	275								

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DIAMOND DRILL LOG

HOLE Nº C150 Page Nº 7

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization Trace 1-5% · Common 5-15% · Abundant 15-60% · Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	275	Sandstone cont.							
3.00	276								
	276.24	Shale/Sandstone - chaotic and distorted. - mid to dark grey.						VI 80	cvb, qfg
	277							VI 60	cvb, sph, ga, py
	277.48	fault or shear contact with py						VI 20	cvb, qfg, py
277.70		Shale - contorted shale - py common. parted in veins - light and mid grey	x					VI^S 10-50°	py, cvb
	278.97	Chaotic Sandstone - mid to dark grey - bed py else veins of py, cvb.	x					VI^S 40	cvb, qfg, py, sph, minor Ga
2.50	279.95	Mineralization - cvb veins & minor ss.	x						cvb with sph, py, ga qfg
	279.71								
	280 280.10	Clay - grey - fault zone - unmineralized	x						
280.20		Chaotic Sandstone - mid to dark grey some py.	x						
	280.73								
	281	Shales - light grey, base mid grey - minor pyrite	x					VI^S 50	qfg, cvb, py
	281.63								
281.50		Sandstone - fine grained - light grey	brk x						
	282							VI^S 80	cvb, qfg, sph.
	282.76								
	283 285.60	Mineralized Breccia - brecciated shale with qfg, cvb in fill with ga, sph	x						qfg (20%) · ga (20%) cpy (trace) cvb (60%) sph (20%) py (")
	287.55	Chaotic Shales - light brown grey. - contorted.	x						
283.70									
	286	Chaotic Shales - black, grey, brown grey. shales with some py chert piece	x					VI^S 30	70° cvb, qfg, py, sph, cpy Ga.
	284.90								
	285	Shales - light brown grey							
	286.46								
286.70	287	Shale/Sandstone - mid to light grey py rich in parts (dark)	x						
	287.03								
	289	Sandstone - mid grey. - fine grained - qfg and shale bags - massive - minor shale bands						V2 35°	cvb, qfg py AS, sph minor Ga
289.70	290								
	291								
292.70	292								
	293							VI^S dominantly 35°-0 - cvb	
	294								
	295								
295.70	296								
	297								
	298								
298.70	299								
	300								
	301								
301.70	302								
	303								
	304								
304.70	305								
	306								
	307								
307.70	308								
	309								
	310								
310.70	311								
	312								
	313								
313.70	314								
	315								

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DIAMOND DRILL LOG

HOLE Nº C1570

Feature

Bedding
Foliation
Fragment size & shape

Shearing
Fault
Vein

c carbonate
q quartz

Mineralization

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	315 m	Sandstone continued							
316.70		ss/shale bands from 320.93 to 322.10m also shale bands at 329.0m						VI 5°	cvb, q/3, cpy, py, po minor sph
319.70		Shale bands at 334.2 (10cm) massive light green grey fine 335.25 (25cm) 336.05 (10cm) 336.45 (50cm)	ss/sh bands						
322.70		mid grey shale at 328.1 (40cm)							
325.70									
70			sh bands						
			shear					VI 15°	cvb j q/3
331.70									
334.70								VI 15	q/3, cvb
337.70									
340.70								VI 15°	q/3, sph, cvb
343.70									
346.70								VIS 10-30°	q/3, cvb.
349.70									
352.70									
355.70			70° FI					VIS	all angles 70°, 15°, 30°, 50° q/3, cvb.
358.70			70° FI						
361.70									
364.70									

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DIAMOND DRILL LOG

HOLE Nº C1510 Page Nº 9

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization Trace 1-5% · Common 5-15% · Abundant 15-60% · Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG (TRACE / COMMON / ABUNDANT / MASSIVE)	DEPTH m	MINERALIZATION
	365				
	366	Sandstone continued			
	367				
367.70	367.92			VI 45	cvb, py
	368	Shale - mid grey			
	369	- silty		VI 70	cvb, gls, py. minor ba, sph
	370	- bedded.			
	371				
	372	372.09 Sandstone - mid grey, fine grained, very fine at top		VI 30	gls, cvb, py, sph, AS
	373	- massive			
	374	- cvb cement			
	375	- minor shale bands at 375.3 and 376.0			
	376				
	377				
	378				
	379				
	380	380.03 Siltstone / shale - mid grey, fine grained, chaotic		VI 30	gls, cvb.
	381				
	382	382.07 Sandstone - mid grey, fine grained massive			
382.70		END OF HOLE C1510 at 382.70m.			