Category: S/E

CLEVELAND TIN MINE

Hole No: C1515

Objective: 80m BELOW SURFACE

Location: WASHINGTON HAV RA4

Bearing of Hole: 114° 29' 31" (108) 114.5

Angle of Hole: -44° 47' 22" (-45) -44.8

Final Depth: 292.5

Core Size: NQ

Logged By:

Drilled By: LONGYEAR, A.BLOORE, G.COOMBE

Rig Type: EHS 38

Drilling Commenced: 12-4-80

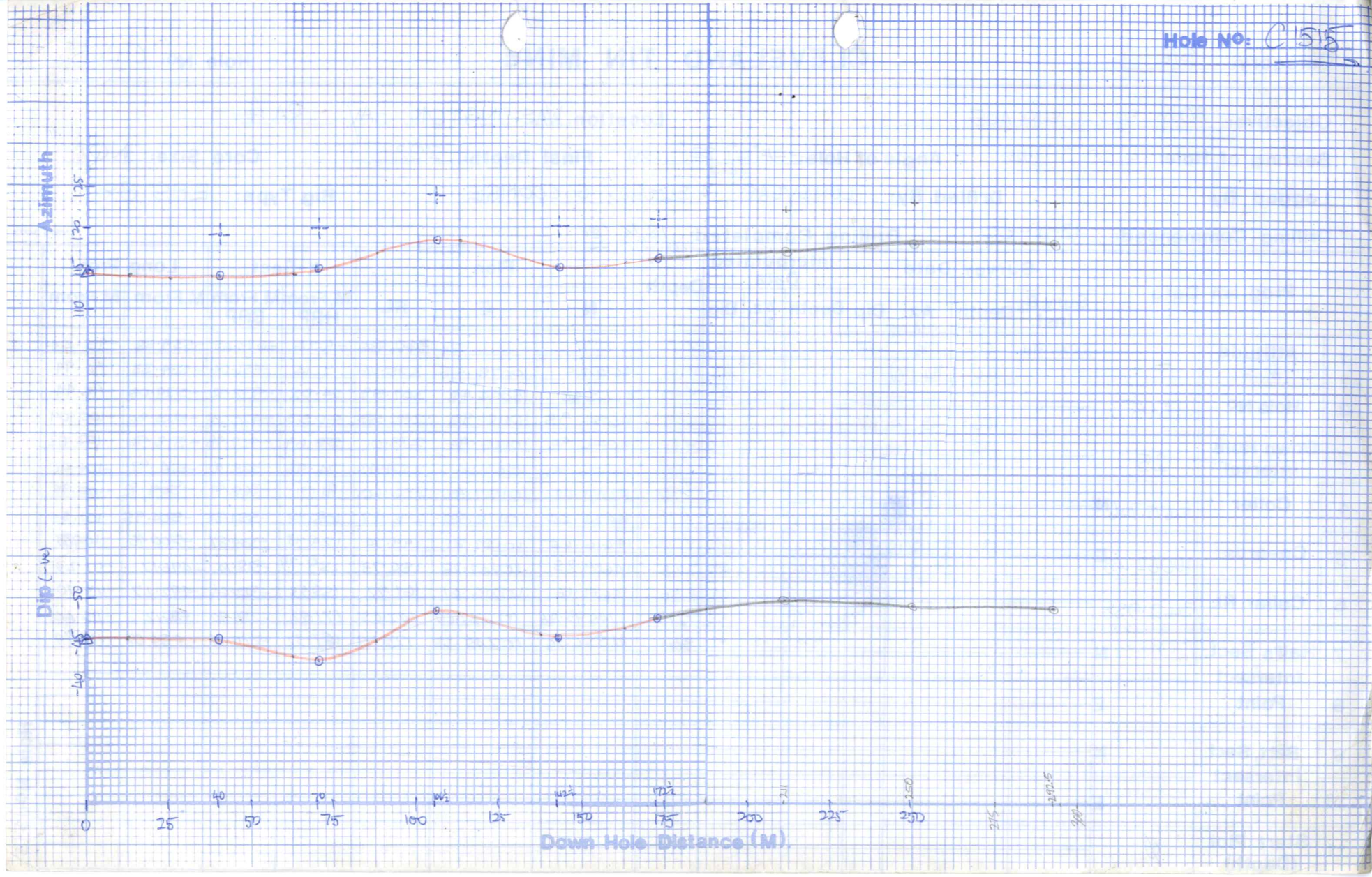
Drilling Completed: 18/4/80

NWPS 34773

Program Data			Survey Data				Interpolated Data			Depth	Plan			X-Sect.		Long. Proj.	
			Surv. By Inst.	Depth (m)	Az. grid mag	Dip	Depth	Az. grid	Dip		N	E	RL	M.From HRP	M.From BRP	M.From	M.From
1	Attitude + -	-	SURVEY PLU	0	114½	-45	12½	115	45	✓0	14677.746	10062.433	342.938	-9.74	-473.65	-539.58	-95.54
2	Hole No.	1515		40	114 (119)	-45	37½	115	45	✓25	14670.28	10078.45	325.26	7.14	-456.04	-534.33	-96.99
3	Down Hole Interval	25		70	115 (120)	-42½	62½	115½	43	✓50	14662.80	10094.48	307.58	24.02	-438.42	-529.08	-98.44
4	Collar Co-ords	14677.746 N		106½	119 (124)	-48½	87½	116½	44½	✓75	14654.93	10110.98	290.53	41.55	-420.21	-523.80	-100.09
5		10062.433 E		142⅓	115 (120)	-45	112½	118½	48	✓100	14646.98	10126.94	273.01	58.69	-402.48	-518.96	-102.02
6	Collar RL	342.938		172½	116 (121)	-47½	137½	115½	45½	✓125	14638.99	10141.64	254.43	74.93	-385.92	-514.97	-104.40
7	Hall's Sect. Intersect Point Gz	15070.45 N		211	117 (122)	-44⅔	162½	115½	46½	✓150	14631.45	10157.45	236.60	91.71	-368.47	-509.92	-105.99
8		10432.60 E		250	118 (123)	-49	181½	116½	48½	✓175	14624.04	10172.99	218.47	108.19	-351.34	-504.95	-107.55
9	Batt. Sect. Intersect Point Az	14602.99 N		292	118 (123)	-48⅔	212½	117	49½	✓200	14616.65	10187.81	199.74	124.13	-334.87	-500.45	-109.55
10		10539.81 E					237½	118	49½	✓225	14609.28	10202.28	180.73	139.79	-318.74	-496.17	-111.23
11	Start Plot (Depth)	Ø					262½	118	49	✓250	14601.66	10216.61	161.72	155.53	-302.65	-492.17	-113.40
							287½	118	49	275	14593.96	10231.09	142.85	171.92	-286.90	-488.12	-115.60
							292.5	118	49	300	14586.25	10245.58	123.99	187.32	-270.14	-484.09	-117.79

Hole No: 1515

Hole No: C158


Azimuth
Dip (-)
0
25
50
75
100
125
150
175
200
225
250
Down Hole Distance (M).

HOLE No.: 1515

SAMPLE DATA

SHEET No.: 1 of 2

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. Sns~~ ppm Ag	Product (A x L) ~~P. Cu~~ ppm Cd
	248164	CLAY (FAULT)		157.57	157.88		<0.01		0.01	0.02	0.01	<5	10
	248165	SANDSTONE		157.88	159.22		<0.01	NO	0.01	0.09	0.07	<5	10
	248166	MINERALIZED (SHEAR)		159.22	159.41		0.06	SNS	0.05	3.4	1.36	80	250
	248167	SANDSTONE		159.41	159.75		0.01	Assays	<0.01	0.25	0.13	5	30
	248168	BRECCIA SANDSTONE		159.75	160.63		0.01		<0.01	0.36	0.16	5	40
	248169	SANDSTONE		160.63	161.82		<0.01		<0.01	0.04	0.03	<5	10
	248170	MINERALIZED SANDSTONE		161.82	162.35		0.02		0.01	0.40	0.33	10	40
	248171	VEINED SANDSTONE		162.35	165.11		<0.01		<0.01	0.01	0.03	<5	<10
							⊗						
	248172	VEIN (BRECCIA)		169.38	170.68		0.01		<0.01	0.33	0.15	<5	⊗30
													2
	248173	SHALE/SANDSTONE (BRECCIA)		172.48	173.08		<0.01		<0.01	0.01	0.01	<5	<10
	248174	SANDSTONE		173.08 (2)	175.00		<0.01		<0.01 !	0.02	0.02	<5	<10
	248175	SANDSTONE		175.00	175.97		<0.01		<0.01	0.03	0.04	<5	<10
	248176	MINERALIZED (VEIN)		175.97	176.67		0.04		<0.01	0.85	0.27	10	70
	248177	SANDSTONE		176.67	177.80		<0.01		<0.01	0.20	0.10	<5	20
	248178	SANDSTONE		177.80	179.63		<0.01		<0.01	0.01	0.01	<5	<10

N.W.P.S.

HOLE No.: 1515

SAMPLE DATA

SHEET No.: 2 of 2

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. Sns~~ ppm Ag	Product (A x L) ~~P. Cu~~ ppm Cd
	248179	SILICIFIED SHALE		187.50	188.34		<0.01		<0.01	0.06	0.05	<5	10
	248180	SHALE/SANDSTONE		188.34	190.10		0.03		<0.01	0.14	0.15	10	10
	248181	MINERALIZED (BRECCIA)		190.10	191.09		0.03		0.04	0.85	0.54	25	70
	248182	MINERALIZED (CARBONATE) SHALE/SILTSTONE		191.09	191.82		0.02		0.02	0.43	1.00	40	50
	248183	SANDSTONE (SHEARED)		191.82	193.44		<0.01		<0.01	0.04	0.03	<5	10
	248184	SANDSTONE (MINERAL)		193.46	194.32		<0.01		<0.01	0.06	0.06	<5	10
	248185	SANDSTONE (MINERAL)		196.55	196.74		<0.01		<0.01	0.22	0.21	10	20

N.W.P.S.

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº 1515 Page Nº 1

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
Tri-coned - No core.	0	Weathered rocks similar to those on the surface - Basalt / Ultramafic?							
	12.00	Chocolate Shale - red brown fine grained. massive shale. minor grey shale bands - weathered down to 14.1 m.							
	14.42		45° Fr						
	15.48	Green Grey Shale - fine grained, distorted							
	16.50	Chocolate Shale - red brown.							
	17.43	Green Grey Shale - very distorted	45° Fr					V2S 20°	q/3, crb, Tm
	19.50	Chocolate Shale - fine grained, massive - minor torques of green grey shale							
	20.95								
	22.50	Green Grey Shale - fine grained bleached at top - distorted in parts	30° Fr					VI 30	q/3, crb, Tm
	24.28		30° Fr						
	25.50	Interbedded Chocolate & Green Grey Shales - fine grained - intertonguing, deformed gradational lower contact							
	27.70								
	28.50	Grey Shale - fine grained, med grey							
		Chocolate Shale - red brown - fine grained - minor lenses and bands of green grey shale							
	31.50		80° Fr					VI 45°	q/3, crb - tension cracks
	34.50								
	37.50								
	40.50							VI 30	q/3, crb, Tm, green talc min
	43.50		20° Fr						
	46.50							VI 10°	q/3, crb, Tm.
	49.50								

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº 1515 Page Nº 2

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
	50	Chocolate Shale continued							
	51								
	52								
52.50	53 53.61	sharp distorted lower contact						VI	all angles, q/3, crb, Tm.
	54	Chaotic Shale/Ultramafic							
	55	Domin Ultrabasic at top and distorted shale at base - very distorted.							
55.50	56 56.02	green at top to purple brown at base.							
	57	Chocolate Shale 30° Ft							
	58	- red brown - massive - minor green grey shale lenses and bands							
58.50	59 59.47	10° Ft							
	60	Chaotic Ultramafic/Shale 30° Ft						VI S 30	g/3, crb, talc
	61	- dark green overall - distorted, chaotic, ultramafic with bags of choc & grey shales.							
61.50	62	- some shale bands.							
	63 63.47								
64.50	64 65	Chocolate Shales - red brown - massive - minor green grey shale						VI S 30	g/3, Tm
	66 66.35								
	67 67.20	Green Grey Shale - fine						VI S 10-50°	g/3
67.50	68 68.53	Chocolate Shales - red brown - massive						VI 30	g/3, spy, spd, py, Fl, Tm, chl
	69	Chaotic Shales - generally red brown or dark purple shales but with above chert and ultrabasic - very distorted - several coarse breccia bands.							
70.50	70 71								
	72 72.19								
	73	Grey Shales - mid grey - fine grained 70 Ft						VI 70	g/3, crb
73.50	74	- changes to green towards base. 10° Ft						VI 10°	g/3, Tm spy, Talc.
	74.94								
	75 75.97	Chocolate Shale - red brown - massive							
76.50	76 77	Chaotic Shales generally red brown and dark purple grey shales. - very distorted.							
	78	breccia down to 79.60							
	79	then chocolate shale to 80.10							
79.50	80	then breccia to 80.33						VI S 30	g/3 crb.
	81	then fine agglomerate 80.61							
	82	then choc shales to 81.18							
82.50	83	breccia to 82.70							
	84 84.49	then choc shales to 83.92 then breccia							
	85	Green Grey Shale - fine grained - massive							
85.50	86	- minor veins and joints throughout. 10° Ft							py
	87	35° Ft						VI 35	usmn of g/3, crb, qa, py, spl, chl
	88 88.33								cpy, Ms
88.50	89	Ultramafics Overall dark green - coarse granular - distorted						VI S 50	g/3, crb.
	90 90.81								
	91 91.34	Mineralized Breccia zone - mainly g/3 & crb							g/3, crb, sph, ~~cpy~~, Tm, ~~Talc~~ chl ~~cpy~~.
91.50	92	Ultramafics - overall dark green. dark wk						VI 30	g/3, crb cpy, py, Ms - minor Ga, cpy
	93	- top broken then massive						VI S 30-70°	g/3 with some crb.
	94	many fine g/3, crb veins							
94.50	95	60° Ft dark wk							
	96	darker from 99.54 to 101.14							
	97								
97.50	98								
	99	50° Ft						VI S 50	g/3, crb, py, sph minor Ga.
	100								

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº 1515

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
100.50	100	Ultramafic continued	60° Fi					V3 60	gft, cvb.
			20 Fi					V3 20	gft, cvb.
		Fault & veins from 108.11 to 108.36	50 Fi					V2 50	gft, cvb.
								V4 40	gft, cvb, sph, ga, talc, As, ch, Tm minor Py, Cpy
103.50		- change at 121.2 to 121.45							
		changes to a very fine, light green ultramafic							
106.50		then changes to a dark green, black course ultramafic at 122.27 m							
		then changes to light to mid green medium grained ultramafic at 126.4.	65° Fi					V4 65°	gft, cvb.
109.50									
112.50			60° Fi					V1 60	gft, cvb, talc
115.50									
119.50								V2 60	cvb, talc
								V2 20	cvb, talc, cpy, sph., Py.
121.50			30° Fi						cvb in thin fault zones
124.50			45° Fi						
127.50								V1 5 5°	cvb
	128.88	Sharp lower contact							
		Silicified Silty Shale	30° Bk						
130.50		mid grey with some patches greenish and others greenish - hard - finely banded and distorted	30° Fi					V1 5 30	cvb, gft.
133.50									
			20-30° Fi						
136.50	136.63		Fi						
		Ultramafic - mid green medium grained - minor fine bands many fine cvb veins at 70°						V1 70°	fine cvb.
139.50	139.83								
		Shale - mid greenish grey - silicified down to 140.07 and from 142.9 to base - both greenish - very fine grained	70° Fi					V3 30	70° cvb
142.50	143.23		Bk						
		Ultramafic - very dark green						V1 3 70	cvb
145.50								V2 25	cvb
148.50									

ABERFOYLE

DIAMOND DRILL LOG

HOLE N° 15-75 Page N° 4

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
	150	Ultramafic continued.							
151.50	151								
	152							VI 40	cvb
	153								
154.50	154								
	155								
	156								
	157								
157.50	157.57	Fault - two clay zones - with vb between	x						Faults at 55°
	157.82	Ultramafic - dark green - medium grained - py, cpy grains - green mineralization near base	x					VI⁵ 60	cvb q/s
	158.22	Mineralized shear	x						cvb, q/s, ga, py, spl, Tm, cpy, As, green min
	158.78	Ultrabasic - fine	x						
	159.35	Brecciated Ultramafic - partially mineralized V4 at 160.57, 160.30, 159.95 green Cu? around V4's	x					V4⁵ 30	cvb, q/s, sph, ga, cpy, py, green min
160.50	160.62								
	161	Ultramafic - fine, dark green grey - light green Cu? areas	x						
	161.82								
	162	Mineralized Ultrabasic - green Cu? salts	x					V4⁵ 30	cvb, q/s, ga, sph, py, As
	162.38								
162.50	163	Veined Part mineralized Ultrabasic - fine grained - many fine $CaCO_3$ veins throughout at all angles - veins less below 165.11 m sampled to 165.11	x						
	164							V1⁵	all angles cvb.
	165								
	165.70								
166.50	166	Sandstone - fine grained - mid grey - composed of rock fragments - generally massive - chaotic at 166.5 & 166.8 to 167.6							
	167								
	168							V2 20	cvb, q/s, ga, spl, Tm.
	169								
	169.38								
170.50	170	Veined Breccia Zone Shale/sandstone - dominantly q/s, cvb, with ga, spl, Tm	x					V4 20	q/s, cvb, ga, spl, Tm, py, As
	170.68								
	171	Sandstone - fine - mid grey - massive						V2⁵ 30	cvb
	172								
172.50	172.48								
	173	Brecciated sandstone/shale - very broken and recemented by cvb, q/s veins	x					V1⁵	all angles q/s, cvb
	173.02								
	174	Ultramafic (mineralized) - mid green - fine grained - many calcite veinlets - green Cu minerals below 175.00 - partially altered - py, as occurs particularly in base.						V1⁵	20° main angle others at 70° cvb, q/s.
175.50	175								
	175.97								
	176	Veined mineralization - sheared distorted and brecciated zone - infilled by q/s, cvb.							cvb, q/s, cpy, spl, As, py, minor Cu
	176.67								
	177	Ultramafic - mid to dark green - fine grained - very distorted - many fine calcite veinlets 177.50						V1⁵	20° cvb, q/s
178.50	178								
	179								
	179.53								
	179.79	Grey shale - slightly silty						V1 15	q/s, cvb.
	180	Partially silicified shale							

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº C85-15 Page Nº 5

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
180.90	180	partially silicified shale continued - light greenish grey - massive - many fine black joints							
181.50	181								
182.50	182								
	183								
	184								
184.50									
	185								
185.90									
	186								
	187								
187.50	187.50	Silicified shale - light coloem brown - bleached. x - fine py 50 F-							
188.50	188.24	~~Sheared shale/Sandstone~~ Ultramafic - mid green x - sheared with many veins at 30° - fine pyrite - tourmalinized - some Cu salts.						W 30	carb, qtz
	189								
	189.98	Mineralized Breccia x Top is breccia with carb, qtz, py, ga, sph							
190.50	190	Base is carb rich. - ga, qtz, sph, py, cpy 190.09 x1 As, Ag							
	191							V4 20	qtz, carb, ga, sph, py, Bo, cpy. As.
	191.82	Ultramafic x - fine grained - greenish grey sheared to 193.44 x then very green - Cu salts to 194.32 x about carb veins another green band at 196.55 to 196.74 x and at 199.50 to 199.58.						V3 30	qtz, carb
	192								
193.50	193							V3 20	carb.
	194								
	195								Vi S throughout mainly at 30° carb rich with qtz
	196	30 Fi							
196.50		F							
	197								
	198								
	199	30 Fi 35 Fi							
199.50		40° Fi						V4 60	carb rich
	200								
	201								
	202	30 Fi							
202.50	203 203.15								
	204 204.19	Breccia zone - chaotic shales & sandstones - mainly contorted shales						Vi S 30	carb, qtz.
	205	Sandstone - mid grey generally distorted - minor shale						Vi S 20	60° carb, qtz
205.50	205.65								
	206	Shale - generally light greenish grey - except for top 55cm very chaotic with chert, shale fragments - partly silicified							
	207								
	207.83								
	208	Chert/silicified Shale - light to mid grey, broken						Vi S 70	qtz.
208.50	209	Sandstone - mid grey - fine grained - massive							
	210 210.31								
	211	Shale - light greenish grey - generally chaotic and distorted							
211.50	212								

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº 85/3 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
	212								
	212.12	Chert/Silicified shale mid grey distorted. silicified & hard.							
	213.69								
214.50	214	Chaotic Shale/Sandstone - overall greenish grey - very distorted						VU 30	cvb, q/3, Tm
	216.93							VI 60	cvb, q/3
217.50	217	Sandstone - mid grey - fine grained - massive - minor shale bands at 216.66, 220.15 and 220.44 m. - from 220.57 it is broken and distorted and partially tourmalin, zard 50 Fe						VI^S 40	cvb, q/3
220.50	220							VI^S 50	cvb
	221.30								
	222	Chaotic Shales - generally light green grey - minor sandstone bands at 221.97 222.81, 223.55-223.97, 226.05, 227.83 229.08 and 230.57 m between 229.25 and 230.57 mainly black shale with pyrite grains and nodules throughout.							
223.50	223							V2 15	cvb, q/3, cpy
	224								
	225								
226.50	226							VI 20	cvb, q/3, Tm
	227								
	228								
229.50	229								
	230								
	231							VI^S 40	cvb q/3
	232.23								
232.50	233	Sandstone - light to mid grey - fine grained - generally massive although some parts broken and recalcited. cvb rich cement - minor pyrite grains 40 Fe							
	234								
235.50	235							VI^S 40	cvb.
	236								
	237								
	238.72								
238.50	239	Chaotic Shales/Silty Shales/Sandstones Mid grey - very distorted - generally very silty						VI^S at 50-80°	cvb.
	240								
	241								
50	242	30 Fe						VI 30	qtz, cvb, py. in Fault plane Sph, Gn
	242.34								
	243	Sandstone - mid grey - fine grained - massive although broken and recemented in parts, cvb rich cement - some distorted shales grains - some minor pyrite grains - composed of rock frags, qtz, shale.							
	244								
244.50	245								
	246								
	246.80								
	247	Chaotic Sandstone/Shale - dominantly fine grained sandstone in silty shales and fine grained shale - mid to dark grey - minor pyrite - some black shales							
247.50	248							VI^S 45°	cvb, q/3.
	249								
250.80	250								
	251								
	251.20								
	252	Sandstone - mid grey - fine grained - massive - some broken & recemented parts						VI^S 35°	cvb, minor q/3.
	253.13								
253.50	254	Siltstone/Shales - mid to dark grey, fine grained - silty, distorted.							
	254.60								
	255	Sandstone - mid grey - fine grained - generally massive although chaotic in parts. calcite rich cement - minor shale band at 262.05 m. Ank Veins							
	256								
256.50	257							VI^S 15°, 35°, 80°	cvb.
	258								
	259								
259.50	260								
	261								
	262								

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº C1515 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
262.50	262	Sandstone continued minor shale band at 266 bedded at 30° minor shales at 271.40m and 273.1m	10° F2					V2 10° carb, qtz.	
265.50	263 264 265 266 267							V2 10° carb	
268.50	268 269		dark grey 25° F1					V1S 25° carb	
270.50	270		25° F2 Brk					V1S 25° carb, py, As, sph.	
271.50	271 272 273 274								
274.30	275 276 276.58							V3 15° carb	
276.80	277 277.38	Shale and Siltstone - mid to dark green							
277.40	278 278.20	Sandstone - fine grained, massive, mid grey						V1S 15-30° carb.	
278.20	278.70	Shale - mid grey distorted							
279.20	279 279.10	Sandstone - fine grained, mid grey.							
279.20	279.90	Shale - light to mid grey, distorted							
280.50	280 281 282	Dominantly Sandstone - very fine grained mid grey - curved shaley and siltstone bands - carb rich cement - composed of rock frags						V1S all angles carb	
283.50	283 283.40								
	284	Shale - light to mid grey - some greenish bands							
	285 286 286.65							V1S & V2S at 45° carb.	
286.50		gradational contact							
	287	Chocolate Shale - red brown minor light grey shale bands						minor V1S of carb at 40°	
	288 289 289.37	gradational contact							
289.50	290 290.32	Shale - mid grey massive							
290.00	290.80	Sandstone - mid grey, fine, massive							
290.50	291	Shale - mid to dark grey, massive - some minor sandstone bands conglomerate for basal 11cm.							
292.50	292								

END OF HOLE C1515 at 292.50m.