ABMINCO N.L.
CLEVELAND MINE

CATEGORY: P/A

HOLE No.: C 1450

GENERAL DATA

Objective: TEST B&C LENS 20-21 LEVEL

Area of Operation: 20 LEVEL X CUT Location: L SECTION ,

Collar R.L.: 85-235 Co-ordinates: 15436.864 N, 10952.568 E.

Bearing of Hole: 122° 16' 40" (122°) Angle of Hole: -46° 13' 14" (-45°) Final Depth: 155.00 m

Drilling Commenced: 30-10-79 Completed: 15-11-79 Logged by:

DRILLING DATA

Drilled by: PHILPOTT Non Coring:

Drilling Rig: M 30 Coring: BmAQ AXT

Driller(s): K. DENBY, W. MOLLISON

Core Recovery:

HOLE SURVEYS

HOLE No.: C1450

NWPS 24164

ABMINCO N.L. - Cleveland Mine

DIAMOND DRILL HOLE DATA

Hole No. C1450

Sheet No.

PROGRAM DATA				SURVEY DATA				INTERPOLATED DATA		
				Instrument Type	Depth	Dip	Azimuth	Depth	Dip	Azimuth
1	Attitude	+	(+) (-)	SURVEY	Ø	-46¼	122¼	12½	47¼	120¼
				CAMERA	8m	-47°	120½ (125½)	37½	47	119½
2	Hole No.	1450			44m	-46⅔°	119½ (124½)	62½	45⅔	120½
					88m	-43½°	123½ (128½)	87½	43¾	123¼
3	Down Hole Interval	25			125m	-39½°	125½ (130½)	112½	40½	125
					155m	-40°	125½ (130½)	137½	39¼	125½
4	Collar Co-ords.	15436.864	N					∠162½	40½	125
5		10952.568	E							
6	Collar R.L.	85.235								
7	Halls Sect.	15533.665	N							
8	Intersect Point L	10853.682	E							
9	Battery Sect.	15409.213	N							
10	Intersect. Point FA	10838.117	E							
11	Start Plot (Depth)	Ø	Ø = Collar							

DOWN HOLE PLOT

Hole No: C1450

Sheet No:

DEPTH	PLAN N	PLAN E	PLAN RL	CROSS SECTION Dist.from H.R.P.	CROSS SECTION Dist.from B.R.P.	LONG SECTION Dist. from Halls	LONG SECTION Sect. L	LONG SECTION Dist from Batt.	LONG SECTION Sect. FA
Ø	15436.86	10952.57	85.24	138.29	97.74	-5.11		65.65	
25	15428.31	10967.23	66.88	154.88	114.46	-1.57		62.72	
50	15419.92	10982.07	48.59	171.51	131.29	2.20		59.99	
75	15411.05	10997.12	30.71	188.61	148.48	5.76		56.90	
100	15401.15	11012.22	13.42	206.45	166.08	8.59		52.85	
125	15390.25	11027.79	-2.81	225.31	184.47	11.00		48.03	
150	15379.00	11043.56	-18.63	244.53	203.16	13.28		42.96	
175	15368.10	11059.13	-34.87	263.39	221.39	15.69		38.14	

Depth	PLAN N	PLAN E	PLAN RL	CROSS SECTION Dist.from H.R.P.	CROSS SECTION Dist. from B.R.P.	LONG SECTION Dist from Halls	LONG SECTION Sect.	LONG SECTION Dist. from Batt	LONG SECTION Sec

HOLE No. : 1450

SAMPLE DATA

SHEET No. :

LENS	SAMPLE No.	ROCK TYPE	Σ	INTERVAL From	INTERVAL To	Length (L)	Assays (A) % Snt	Assays (A) % Sns	Assays (A) % Cu		Product (A x L) P. Snt	Product (A x L) [redacted] PAN	Product (A x L) [redacted] Basket	
	242577	Lode		48.26	48.50	0.24	.04	.02	.56			174	118.5	3.14
	578	Mineralised chert		104.96	105.4	.44	1.40	.02	.07			287.5	190	2.95

N.W.P.S.

HOLE No.: 1450

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		Product (A x L) P. Snt	Product (A x L) Pan	Product (A x L) Basket	
	242564	Lode		50.83	50.97	0,14	.56	.02	.08			93	60.5	2.86
	565	Vein / lode		57.69	58.50	0,81	2.14	.03	2.21			530.5	353.5	3.00
	566	chert		92.88	94.58	1,70	.13	.02	.08			1349	900	3.00
						0.70								
	567	lode		95.28	96.85	1,57	.15	.03	.42			1287.5	886	3.21
	568	"		96.85	97.77	0,92	.46	.03	.24			748.5	504.5	3.07
	569	"		97.77	99.17	1,40	.36	.02	.32			1141.5	791.5	3.26
	570	"		99.17	100.67	1,50	.25	.02	.29			1238.5	863.5	3.30
						2.50								
	571	lode		103.17	104.27	1,10	.29	.02	.30			872.5	589.5	3.08
	572	Min chert		104.27	104.76	0,49	.31	.02	.09			355.5	234.5	2.93 ~~3.88~~
						1.66								
	573	lode		106.42	107.70	1,28	.28	.02	.34			1138.5	808	3.44
						0.50								
	574	lode		108.20	109.27	1,07	.77	.02	.25			935	651.5	3.30
	575	lode		109.27	111.16	1,89	.72	.02	.50			1529.5	1045.5	3.16
	576	Lode		111.16	111.87	0,71	.28	.02	.50			611.5	420	3.19
			Σ	95.28	111.87	16.59	0.29	0.02	0.25					

N.W.P.S.

HOLE No.: 1450

SAMPLE DATA

SHEET No.: 2813

LENS	SAMPLE No.	ROCK TYPE	Σ	INTERVAL From	INTERVAL To	Length (L)	Assays (A) % Snt	% Sns	% Cu		Product (A x L) P. Snt	Paw	Basket	
	242578	lode		113·20	113·94	0·74	·19	·02	·66			610	423	3·26
↓														
*	580	Lode		114·41	115·65	1·24	·62	·02	·66			1011	705·5	3·31
				*										
	581	chert		129·87	130·59	0·72	·14	·02	·11			592	381·5	2·81
	582	Lode		130·59	131·37	0·78	·09	·02	·58			673	456	3·10
						1·49								
	583	Lode		132·86	134·00	1·14	·05	·03	·09			895·5	600	3·03
	584	"		134·00	135·22	1·22	·19	·03	·20			971·5	663·5	3·15
	585	"		135·22	136·40	1·18	·29	·03	·13			935·5	638·5	3·15
	586	"		136·40	137·54	1·14	·76	·02	·08			820	569·5	3·27
	587	"		137·54	138·89	1·35	·53	·02	·10			1142	795·5	3·30
	588	"		138·89	140·10	1·29	·47	·03	·07			919	631·5	3·20
	589	"		140·10	141·16	1·06	·36	·03	·24			891·5	612·5	3·20
Lode			Σ	129·87	141·16	11·29	0·30	0·02	0·14					

N.W.P.S.

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº 1450 Page Nº 3 of 4

Feature: Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein, F, 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
2.99	97	Lode cont - banded at 97.2m. - minor barren bands. - below 97.77 m tends to be greenish							Po(25%) cpy(15%) qtz(25%) Tm(15%) Fl(5%) crb(15%) access(5%) chl(5%)
98.0	98	(4) 95.28 - 96.85 (5) 96.85 - 97.77 (6) 97.77 - 99.17 (7) 99.17 - 100.67							
3.02	99								
	100	100.67							
101.0	101	Chert/Shale - generally light to mid grey and light greenish grey - silicified	30° ft						qtz, Fl, Tm chl veins with minor sulphides & crb common
3.01	102								
	103	103.17							
		Lode 20 - 50% sulphides (ave 30%)							Po(15%) Cpy(15%) qtz(30%) Tm(20%) Fl(5%) chl(5%) crb(5%) access(5%)
104.0	104	104.27 (8)							
		Mineralized chert - greenish grey with sulphides in patches (9)							
	104.76								
	105	Chert - mid to dark greenish grey generally chert but some small dark grey shale bands. 104.96 - 105.40 mineralized - SAMPLE.							
3.00	106	106.42							
		Lode 30 - 70% sulphides (ave 45%) - generally massive							Po(30%) Cpy(15%) qtz(15%) Tm(20%) chl(5%) Fl(5%) access(5%)
107.0	107	(10)							
		107.70							
	108	Chert - light to mid green brown grey							
		108.20							
2.99	109	Lode 10 - 60% sulphides ave (35%) crb, chl rich at top - generally disseminated although from 111.16 down abundant to massive							Po(20%) cpy(15%) qtz(15%) Tm(15%) Fl(15%) crb(10%) chl(5%) access(5%) Sh
110.0	110	(11) 108.20 - 109.27 m (crb, chl) (12) 109.27 - 111.16 (barren patches) (13) 111.16 - 111.87 (massive)							
	111								
3.02		111.87							
	112	Chert/Silicified Shale - mid to dark grey - some greenish zones							
113.0	113	113.20							
		Lode 30-70% sulphides (ave 40%)							Po(25%) Cpy(15%) qtz(25%) Tm(20%) chl(5%) Fl(5%) access(5%)
		113.94 (14)							
	114	Chert - light to mid grey - patches with green or purplish tinge 114.41							
3.07		Lode 10 - 50% sulphides (ave 30%) - generally disseminated.							Po(15%) cpy(15%) qtz(30%) Tm(15%) chl(10%) Fl(10%) crb(5%) access(5%)
	115	115.65 (15)							
116.0	116	Chert - light grey tending to mid grey - upper portion has greenish matrix	Brk.						
	117								
2.93	118	118.38							
119.0	119	Shale - mid to dark grey - sandy bands at 123.0 m for 30cm. - very fine grained							
	120								
3.05	121								
122.0	122							V3 80	qtz, stained red - tension fill
	123							V1 20	qtz, Fl
3.10	124							V3 30	qtz, Fl, Tm, Py
125.0	125								
	126								

ABERFOYLE **DIAMOND DRILL LOG** **HOLE No** 1450

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

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

CORE REC'D	DEPTH m	GEOLOGY	FEATURES	MINERALIZATION
	50.83	Shale cont	tension faults	V1 40 qtz, Fl, Tm, Py, cpy
3.04	50.97	~~Lode – disseminated sulphides (ave 20%)~~ ①		
		Shale – dark grey – thin chert at top. – massive		V2 30 qtz, Fl, Tn, sulphides; qtz tension gashes.
	52.38	sharp contact		
3.01		Sandstone – mid grey – some black tourmalinized zones and also greenish tinged zones; – fine grained; – massive	tourm 30° fi & tourm veinlets	V1^S 50 qtz Fl, Tm, crb; V4 40 qtz, Tm, Fl, crb, chl; V2^S 70 30° – qtz, Tm, Fl, crb, Py, Po; V1 60 qtz, Fl, Tm, cpy Sp Po
2.98	57.69	– ss altered near contact – bleached for 15cm.		V2 30 qtz, Fl, Tm
	57.92	Vein – minor sulphides } possibly associated ②		
		Lode		Po, cpy, qtz, Tm; Fl chl, crb Sn.
	58.50	Vein /chert – minor sulphides		
2.98		Sandstone – mid grey; – some greenish tinged zones and tourmalinized zones; – chaotic at 60.44; – vein at 60.96 to 61.25 m. – altered this ss; – bleached at large veins at top and at 60.96 & 61.25 m.	chert; vein	V2 40 qtz, Fl, Tm, fine sulphides & Sn, chl; V4 30 qtz, Tm, Fl central zone; Tm, cpy, Po Sn outer zones
3.00		– shale band at 63.95 to 64.28; – vein at 64.92 – 65.12; – fine grained; – massive	60° fi; fi; shale; silicified shale; vein	V2 30° qtz, Fl, Tm; V4 ? qtz, Fl, Tm, chl, crb – minor sulphides; V1 or V2 30 & 60 qtz, Fl, Tm, crb
		distinct contact		
2.96	66.49	Shale – dark grey to black; – massive; – sharp contact – no veins or faults	50 fi	V4 50 qtz, Fl, Tm; V1 50 qtz, Fl, Tm, crb
3.04	67.81	Sandstone – light to mid grey – some darker tourmalinized zones.; – fine grained; – massive	Brk; 30 fi	V3 30 qtz, Fl, Tm, crb; V1^S 10 qtz Tm, Fl, chl, cpy
2.99		– just above box – thin bands of shale 3mm thick with ss between – at 50°; then sharp contact with shale	move 5mm shown by qtz tension cracks 20° fi; 30° Fi	V4 30° qtz, Fl, Tm, crb – distorted; V4 40° qtz, Fl, Tm
3.02	74.57	Shale – mid to dark grey; – massive; – sandstone bands at 75.4, 76.4, 78.8, 79.4; – some bedding with sandstone bands	40 fi	V4 50 qtz, Fl, Tm, crb, some sulphides; V1 40 qtz, Fl, Tm cpy, Po, As; V1 40 qtz Fl, Tm cpy Po
3.02		sharp contact	ss – soft distorted	V1 40 cpy, Po, crb, qtz, Fl, Tm; V4 20 qtz, Tm, Fl, chl Po, Py
2.88	80.47	Sandstone – light to mid grey – some darker zones; – fine grained; – massive; – shale band at 83.29 – 83.63; – sharp contact	shale shear 30 fi	V3 40 qtz, Fl, Tm; V2 20 qtz, Tm, crb chl, Fl, sulphides Sn; V4 50 qtz, Tm, Fl, crb; V3 40 qtz, Tm, Fl, crb
2.92 / 6.34	84.70	Shale – dark grey to black; – massive; – zones of crb replacement spots; – sandstone at 87.4 m; – distorted at 90.4 m	50 fi; Brk 0–50 poss slips; 20° fi distorted; 40 fi	V1 30 qtz, Fl, Tm; V2 40 qtz Fl, Tm
		sharp contact		
3.01	92.88	Chert – light to mid greenish grey; – minor mineralization ③; – gradational contact		
	94.58	Shale – mid to dark grey – some lighter silicified chert pieces		
	95.28	Lode – 10 to 70% sulphides (ave 40%); – fairly massive down to 96.85 m; then generally disseminated		

Depth scale (left margin): 53.0, 56.0, 59.0, 62.0, 65.0, 68.0, 71.0, 74.0, 77.0, 80.0, 83.0, 86.0, 89.0, 92.0, 95.0

ABERFOYLE — DIAMOND DRILL LOG

HOLE Nº 1450 — Page No 1 of 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
Cores		Sandstone - light fawn brown - fine grained - massive - sharp contact with distorted zone	30° f1					VIS 20	40-70° q/3, Tm, Fl, cpy
2.35	1.69								
	2.48	chaotic Shale/Sandstone - light to mid greenish grey - distorted	40° f1					VI 30	q/3, Fl, Sc.
3.0	3.07	Shale - mid to dark grey - massive	40° f2						
		Chaotic Sandstone/Shale - light to mid browny grey - dominantly sandy - distorted zones - sharp contacts on veins	Brk					VIS 40	q/3, Fl, Tm.
2.64	4.76								
		Shale - mid to dark grey with some brownish tinges - massive - sharp contacts							
6.0								V4 40	coarse q/3, Tm, Fl, some sulphides
6.5	0.66		Brk						
	7.41							VI ?	q/3, Fl, cpy
2.64		Sandstone - light grey to mid grey with a greenish tinge overall. - tourmalinized between 10.27 & 11.73m. - fine grained - some shaley zones in the broken area at 19.3m, - 19.8m. - chaotic zone at 23.60m - fault? - another at 24.8m. - massive	40° fs					VI 40	q/3 Fl, Tm.
9.5			5° f1						
								VI, VIS, VIS V2	60, 30, 40° q/3, Tm, Fl, cvb pyrite
3.00			10° f1					V4 50	q/3 with Tm, Fl, cvb.
12.5								—	with pyrite
			10° f1					VI? V4?	q/3, Tm, Fl with some cvb
2.86								V4 60	q/3, Tm, Fl
15.5									
3.11									
								V4 ?	q/3, Tm, Fl in vugg - also S. 2cm
18.5			50° f1						
			15° f1						
1.77			40° f2 Brk					V4 50	q/3, Tm, Fl
21.5									
			30° f1						
2.30									
23.5			60° f2 20° f4					V2 15	q/3, Fl, Tm
								V1 40	q/3, Fl, Tm, cpy
								V4 20	q/3, Fl, Tm, cvb - also includes some
2.26								VIS 30-50	q/3, Tm, Fl, cvb - distorted shale -
			50 f1					V4 50	q/3 Tm, Fl, cvb - some cpy - tension
	26.13	sharp contact - no veins or shears							
26.5	26.33	Shale - dark grey - massive						V1 40	q/3, Tm, Fl, sulphides Sn.
	27.10	chaotic Sandstone/Shale - light to mid grey							
	27.98	Shale - dark grey - massive - sharp contacts							
3.05	28.75	Sandstone - mid to light greeny grey - some tourmalinized - massive - fine grained						V3 50	q/3, Fl, Tm, cpy, As, cvb
		Chert/Shale/Sandstone - chaotic - mainly chert - some sandstone and shale bands.							
	30.01							V4 50	q/3, Fl, Tm cvb.
2.76		Sandstone - generally light grey - some darker zones - fine grained - massive	50° f4					V1 30	q/3, Fl, Tm, cpy, As, cvb.
32.0			30 f2						
			15° f4 Brk						
			many f1's						
2.72									
								V4S 40	q/3, Tm
35.0								—	tension cracks
								VIS 50	q/3, Fl, Tm, cvb
2.78								V3 50	q/3, Fl, py, Tm.
38.0								V4 40	q/3, Fl, Tm, cvb
3.14			40 f1					V4 30	q/3, Tm, Fl, cvb, chl, Sn.
41.0								V4 40	q/3, Tm, Fl, chl. py, cpy, Sn
3.15			70° f4						
	43.05	Shale - dark grey - massive - distorted in lower portion - contact on vein						V1 70	q/3, Fl, Tm cvb
44.0	44.74							V2 40	q/3, Fl, Tm, cvb, sulphides, chl, Sn
		Sandstone - mid grey, fine grained massive - contact on thin vein						V4 50	q/3, Fl, Tm, chl, sulphides
	45.80							V3 80	q/3, Tm, Fl, chl, cpy, py, Sn.
3.05		Shale - dark grey to black - massive - minor sandstone band near base							q/3 Tm.
								V4 50	q/3, Fl, Tm, cvb, As, cpy Po
47.0			15° f1					V3 30	q/3, Fl, Tm, chl.
			30° f1					VIS 40	q/3 sulphides
	47.96							V3 70	q/3, Tm, Fl, minor sulphides & pink min
3.05	48.26	Chert - light greenish grey - disseminated sulphides (over 20%) SAMPLE							
	49.01	Shale - dark grey, massive - includes a 12cm sandstone at top and a 13cm chert at base.	20 f1						
50.0									

ABERFOYLE

DIAMOND DRILL LOG

HOLE Nº 1450 Page No 4 of 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
3.04	126	shale cont.							
127	126.43	Sandstone/shale interbeds - dominantly SS with thin shale bands. (up to 20cm) - mid grey ; both SS & shale massive - SS fine grained	chaotic					VI 30	q/3, Fl, Tm, Sn.
128.0	127.73	sandstone - light to mid greeny grey - fine grained massive - sharp contacts.						VI	q/3, Fl, Tm, some cvb & Sn
	128.71	shale - mid to dark grey - massive - sharp contact.	30° fl						
3.12	129.87	Chert - light to mid greenish - thin shale bands at 130.0m & 130.3m. - contains minor sulphides	(16)						
131.0	130.54	Lode 10-50% sulphides (ave 30%) - disseminated	(17)						Po (15%) Cpy (15%) q/3 (25%) Tm (15%) Fl (5%) chl (15%) cvb (10%) access (5%)
132	131.37	Chert/Shale - mid to dark grey silicified shale - generally massive - some chaotic chert/shale bands.							
3.04	132.86								
133		Lode - generally low sulphides but high chl & cvb. - sulphides 10 - 40% ave (25%) - few barren shale bands from 135.22 to 135.32 m " 137.62 to 137.72 m							Po (15%) cpy (10%) cvb (5%) chl (20%) q/3 (25%) Tm (5%) Fl (6%) access. (5%)
134.0	134								
	135								
3.01	136								
137.0	137								
	138	(18) 132.86 - 134.00 chl, cvb.							
3.03		(19) 134.00 - 135.22 sulphides							
	139	(20) 135.22 - 136.40 coarse.							
		(21) 136.40 - 137.54 low.							
140.0	140	(22) 137.54 - 138.89 massive							
		(23) 138.89 - 140.10 dark - low sulphides							
	141	(24) 140.10 - 141.16. massive							
	141.16								
3.01	141.50	Chert with chaotic sandstone light greenish grey.							
	142	Sandstone - light grey with greenish tinge - darker at base - fine grained - massive - gradational contact.							
	142.57								
	143	Shale - mid to dark grey - massive						VI 30°	q/3, Tm, Fl
	144.15	sharp contact.							
		Chert - light grey - greenish tinge - distorted.	vertical dist						
2.91	144.61								
	145	Shale - mid brownish grey to 145.5m - appears bleached in parts. - then mid to dark grey except for last 1.0m which has greenish tinge - massive - Chert band at 152.80 m.	?					VI 30°	q/3, Tm, Fl, cvb, chl, - appears shear zone.
146.0	146							many VI	- tension cracks - q/3 fill
	147								
3.04	148								
149.0	149								many q/3 filled tension gaps at 30-40°
	150								
3.03	151								
152.0	152								
	153								
3.07	154		40° fl						
155.0	155	END OF HOLE AT 155.0m.	20° fl						