HAT-1

Cominco

DRILL HOLE RECORD

Location Hatfield R. Property E.L. 15/73 District Tasmania, Australia. Alt./R.L. - Hole No H.1

Commenced 20.10.1976 Completed 27.10.1976 Core size NQ to 68.50 m BQ to 160 m Co-ordinate 6200N 3450E Date November 1976

Objective Target was an IP anomaly located at the contact of vesicular andesites and black carbonaceous shales (Que River Slate). % Recovery Bearing (M) 099° m. Logged E.H. SKEY

Grid bearing (M) 8°45' Dip -50°

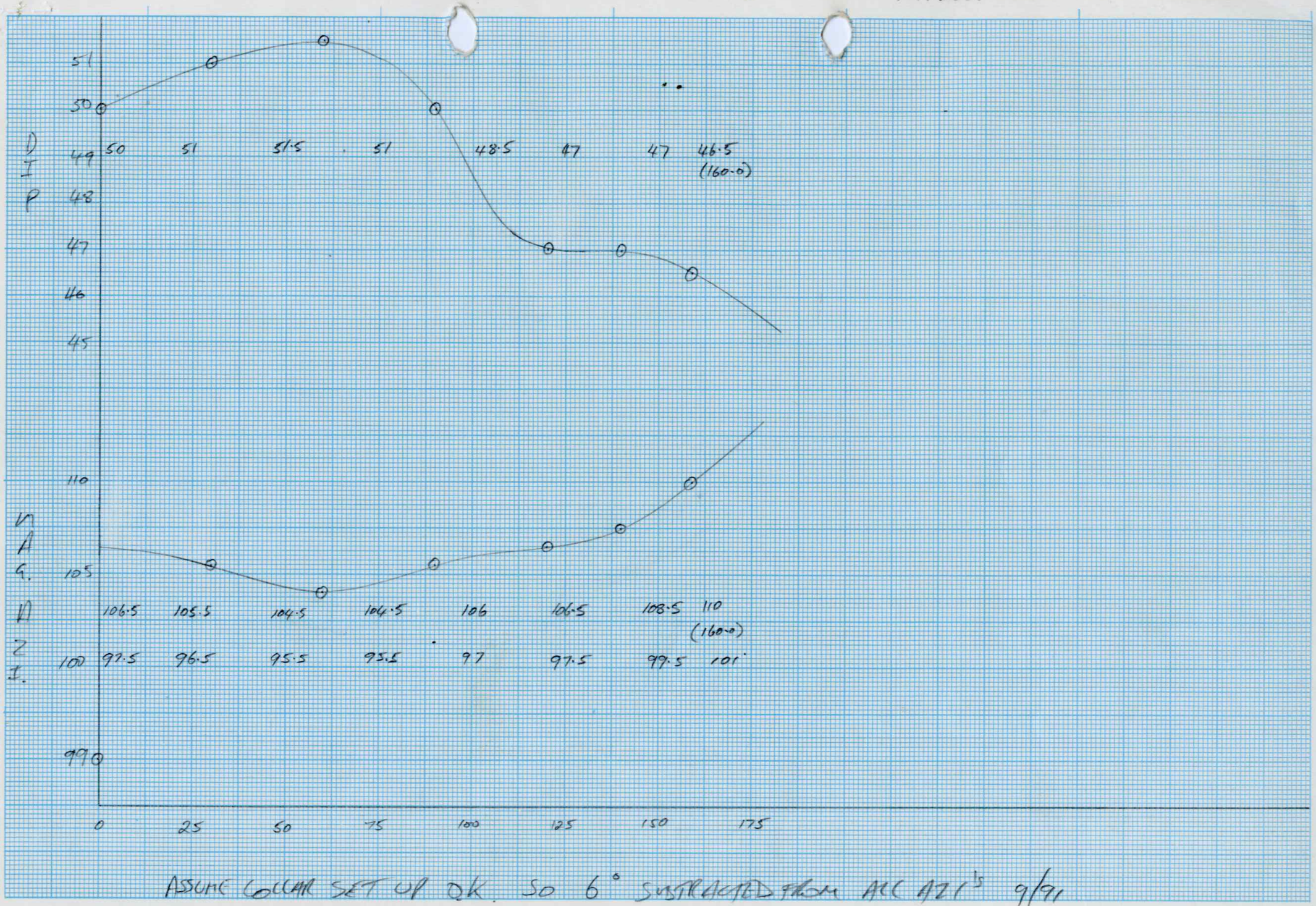
SURVEY DATA

DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE
0	50°	099	Theodolite and Brunton
-	-	-	Surveyors pick up
30 m	51.0°	105.5°	Que River Eastman
60	51.5°	104	"
90	50.0	105.5	"
120	47.0	106.5	"
140	47.0	107.5	"
159	46.5	110.0	"

GRAPH DERIVED DATA

DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	REMARKS
0	50	099	6200.00	3450.00	0.00	
25	50.5	100.5	6199.72	3465.98	-19.22	
50	51	99.5	6199.44	3481.80	-38.58	
75	51	100.0	6199.24	3497.53	-58.01	
100	49	100.8	6198.78	3513.59	-77.16	
125	47	101.8	6198.05	3530.30	-95.73	
150	47	104.0	6196.82	3547.30	-114.02	
160	46	105.5	6192.10	3554.14	-121.27	End of Hole.

HAT0001



ASSUME LOCAM SET UP OK. SO 6° SUBTRACTED FROM ACC AZI's 9/91

GEOEX PTY. LTD.

EHS.

Hatfield 8/85

Submitted by S.
Company Comi
Area
Date Submitted
Date Tested 6/
Tested by G. M

PHYSICAL PROPERTY ROCK TEST

Sample No. Client	Sample No. Geoex	Description	Wet Density gm/cc.	Dry Density gm/cc.	Dimensions Cross Section X x Y or diam. (cms)	Dimensions Length between measuring electrodes (cms)	Magnetic Susceptibility c.g.s. units	Resistance ohms.	Resistivity Freq 2.5 Hz ..... Ohm-m.	PFE (%) Freq 0.3 & 2.5 Hz
		Geoex Test Sample			3.5	8.8		3.2K	35	1.8
26.5m		H1			4.7	5.1		8.8K	300	7.8
39m	X	H1			4.7	7.2		66K	1600	5.5
49m		H1			4.7	6.9		900	23	3.5
54m	X	H1			4.7	6.1		450	13	7.5
61m		H1			4.7	5.3		14K	460	2.3
67m		H1 Andesite			4.7	8.5		186K	3800	2.8

two Samples sent to Pontifex for identification of conductive minerals

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DIAMOND DRILL LOG

Hole Nº H.1 Page Nº 1.

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	VISUAL LOG	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
210		Massive black (carbonaceous) slate. Fine (< 1 mm) laminar bedding uniformly at 55° to core axis to 30 m then 60°. Below 25 m the rock is less weathered and beds up to 1 cm thick are discernible due to a slight variation in grain size (mud to fine silt) fine mica is present throughout. There is no cleavage but several joint planes are evident at both low and high angles to C.A. with several strike orientations.	BROKEN RUBBLE			Slight brown discolouration may be due to fine pyrite (< 1%)
95						
290	5					Disseminated pyrite on joint surfaces.
285						
	10					
285						
295	15					
275						Rare 1-2 mm beds of pyrite parallel to bedding in shale.
	20					
240		22.00 - 24.00 m Zone of jointing parallel to core axis, with fine (2 mm) quartz vein swarm.				Pyrite on joint surfaces.
250						24.25 Elongate pellet of massive pyrite parallel to bedding.
	25.0					

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DIAMOND DRILL LOG

Hole N° H.1 Page N° 2.

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	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Sample at 26.5 m for conductivity testing.							25.65 - 2 cm massive pyrite band parallel to bedding.
260									
									28.50 - 1 cm band massive pyrite parallel to bedding.
275	30								
250									
		34.25 - 46.00 Zone of very broken core and slickensided fragments, some fine quartz veining.	VERY BROKEN						34.10 - 5 mm 'bed' of massive pyrite, but terminated, occupies only ½ core. Appears to have slumped into place, and been surrounded by fresh deposits of shale.
	35								
255									
		Bedding locally 60 - 65° to core axis.							
285		Sample at 39 m for conductivity testing.							
	40								
270									
245	45								
	46.5	Silty zone, faulted at 46.55, 5 cm pug.							
	46.9								
285		Black shale. Fainter bedding than previously, colour uniformly black. Bedding 50° to C.A.							Pyrite on joint surfaces, also rare lenticles (to 3 mm) parallel to the bedding.
		Sample at 49 m for conductivity testing.							
	50								

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DIAMOND DRILL LOG

Hole N° H.1 Page N° 3.

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	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
245									
265		Very broken at 54.00 m.							
	55	Sample at 54.5 m for conductivity testing.							
285									
		Very broken at 58.50.							59.10 m Flattened ball structures in pyrite with black shale centres.
275	60								
		Sample at 61 m for conductivity testing.							59.9 - 61.5 m Coarse aggregates of pyrite to 5 mm. Also some dendritic pyrite aggregates.
90									61.5 - 64.85 m Pyrite 2% as disseminations.
15									
	64.65	Light grey chert, gradational contact							
	64.85	with shale.						64.85	Pyrite 3-5% as disseminations and aggregates to 1 mm.
	65	Conformable contact gradational over 1 cm							
290		to <u>vesicular andesite</u>. Colour is green with white spotting due to carbonate alteration. Irregular veining of carbonate occurs throughout. Minor grey quartz veins have been noted. Vein margins are occasionally pyritic.							
30		Some carbonate zones e.g. 65.9 maybe flow tops. Fragmental andesite is immediately adjacent.							
170		Sample at 67 m for conductivity testing.							
	70								
300									
	73.60	Sharp contact at 30° to C.A.							
	74.00	Fine grey <u>pyritic chert</u>, fragmental at base.							
250		Fine grained variably <u>vesicular andesite</u> with carbonate veining and rare cherty layers.							
	75								

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DIAMOND DRILL LOG

Hole N° H.1 Page N° 4.

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	VISUAL LOG	DEPTH m	MINERALIZATION
30	75.74 76.14	Sedimentary breccia of pyritic chert. Carbonated amygdaloidal andesite. Weak foliation at 45° to core axis.		75.74 76.14	Pyrite 5%+, bedded sulphide in chert fragments.
295	77.16 77.49	Pyritic grey chert, fragmental below 76.3. Carbonated amygdaloidal andesite. Weakly foliated at 40° to C.A. Occasional cherty inclusions, also irregular masses (xenoliths). Fine carbonate veining is common.			Pyrite 3% veinlets parallel to foliation, also associated with carbonate vesicles.
265	79.99 80 81.22	Zone of deformed (breccia) chert. Upper 5 cm is sedimentary breccia of pyritic chert.			
290	85	81.5 m Fault breccia of chert and andesite healed with carbonate. Below 81.22 m sub-ophitic amygdaloidal andesite-basalt. Amygdules are not common every 5-10 cm and average 1-2 mm in size. The rock is dark green in colour with a foliation at 40° to C.A. Dark grey chert bands or inclusions have been noted. at 30° - 60° to C.A. They show a relict foliation. They appear to occupy the sites of primary joints and fractures.			Disseminated pyrite typically less than 1%.
300					
40					
250	90				
70					
10	92.25			92.25	Pyrite up to 2% locally,
70		Cherty shale and chert. Mostly dark grey in colour, some pale greenish, cream beds (5 mm), discontinuous pyritic beds (1-2 mm) and pyritic mud balls to 1 cm have been noted. Bedding is 60° to C.A.			beds and mud balls.
140	94.86	and is laminar.		94.86	
300	95	Andesitic-dacitic feldspar porphyry agglomerate (lava breccia) with a cherty matrix. Fragments are green (chloritic) and light grey. There are minor quartz veins throughout.			Disseminated pyrite, pyrite in quartz veins.
		98.62 - 98.85 m Laminated shale with dropped boulders of andesite at upper contact.			Pyrite lenticles in shale.
250	98.62 98.85	15 cm quartz vein at base.		98.8	Galena and pyrite in quartz vein.
	100	Altered andesite agglomerate and coarse lithic tuff. Fragments are typically dark green (chloritic) with relict			Pyrite 1-5% as disseminations and veins.

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DIAMOND DRILL LOG

Hole N° H.1 Page N° 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	DEPTH m	MINERALIZATION
30		altered feldspars, also pale green (sericitised). Dark green fragments may show slightly bleached rims.			Pyrite as above.
30		Matrix material is typically altered by carbonate and sericite and varies from white to pale green in colour.			
265		Carbonate veining is sporadic.			
		Fragments are sub-angular to angular from 0.5 cm to 5 cm. They are occassionally mid grey in colour.			
300	105	The core shows crude jointing.			
300					
	110				
300					
300					
	115				
295					
	118.50				
300	120	Tuff-agglomerate as above but with less sericite alteration. Colour is pale green.			
	122.06				
300		Textures as above, but with mottled green colour due to sericite-epidote-carbonate. Probably both andesitic and dacitic clasts present.			
		Minor quartz veining shows tension fractures with carbonate.			
	125				

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DIAMOND DRILL LOG

Hole Nº H.1 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	MINERALIZATION
300	125.95	Mid grey weakly sericitic, carbonated porphyritic dacite. Sparse carbonate and quartz veins.	Trace pyrite throughout.
	126.65	Mottled green-grey siliceous dacite feldspar porphyry weakly foliated at 45° to core axis. Patchy carbonate alteration imparts a mottled texture.	
300		There are areas andesitic in appearance with white feldspar phenocrysts to 2 mm in a green lava matrix.	
	130	Narrow carbonate veinlets are present throughout typically at 70° - 80° to C.A.	
115			
180		Thin section specimen 126.5 m No. 179620.	
150		Thin section specimen 135.8 m No. 179621.	
	135		
165			
300			
30	140	Broken zone, possible Fault.	
120		Thin section specimen 142.7 m No. 179622.	
120	142.00	Scoriaceous andesite. Numerous closely packed silica filled vesicles have been noted.	
	143.00	Mottled andesite lava as above.	
300	143.63	Midgrey vesicular porphyritic andesite lava. Feldspars and carbonate filled vesicles define a foliation at 50° to C.A. The rock is scoriaceous towards the base of the unit.	Pyrite 1 - 3%.
	145		
	146.10	Mottled porphyritic andesite as above. Distinctly fragmented (lava breccia)? in part.	
300			
	148.85	Massive fine grained grey porphyritic andesite often vesicular, similar to above.	
300	150		

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DIAMOND DRILL LOG

Hole N° H.1 Page N° 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
	150.05	Altered agglomerate of andesitic to dacitic composition, with dark green porphyritic and mid-pale green sericite-carbonate-epidote(?) rich fragments. Fragments vary up to 5 cm in size. The matrix is both carbonated and silicified. Rare quartz veins of 2 cm are present. There is no distinctive foliation, fracturing is rare.						150.05	Pyrite is rare.
300									
	155								
300									
230									
	160	END OF HOLE.							

Ian R. Pontifex & Associates Pty. Ltd.

TEL. 332 6744
A.H. 31 3816

26 KENSINGTON ROAD, ROSE PARK
SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD
SOUTH AUSTRALIA 5067

MINERALOGICAL REPORT NO. 2097

16th February 1977

TO:	Mr. C. H. Young, Abminco N.L. (Exploration Division) c/- Cleveland Mine, LUINA, Tasmania 7321
COPY TO:	The Accountant, Abminco N.L. 1 Greenhill Road, WAYVILLE, S.A. 5034
YOUR REFERENCE:	Order No. 7503 Charge: Hatfield 1400
MATERIAL:	Drill Core (DHH 1 and 2)
IDENTIFICATION:	179617 to 179622
WORK REQUESTED:	Petrographic examination and comments as requested
SAMPLES & SECTIONS:	Returned to - H. Skey, Abminco N.L., 1 Greenhill Road, WAYVILLE, S.A. 5034

PONTIFEX & ASSOCIATES PTY. LTD.

EHS.

Ian R. Pontifex & Associates Pty. Ltd.

TEL. 332 6744
A.H. 31 3816

26 KENSINGTON ROAD, ROSE PARK
SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD
SOUTH AUSTRALIA 5067

Replaced 3100 a a/a

MINERALOGICAL REPORT NO. 2077

14th December, 1976

TO: Mr. S. Webster,
Cominco Exploration Pty. Ltd.,
1 Greenhill Road,
WAYVILLE, S.A. 5034

YOUR REFERENCE: Samples personally delivered

MATERIAL: Drill Core

IDENTIFICATION: H1 - 39m
H1 - 54m

WORK REQUESTED: Microscopic examination to determine reasons for different I.P. response

SAMPLES & SECTIONS: Returned to you

PONTIFEX & ASSOCIATES PTY. LTD.

COMMENTS

These black shale samples contain dispersed, extremely fine pyrite and graphite, both of which are marginally more abundant at 54m than at 39m. Also, about 25% of the pyrite tends to selectively form small aggregates in very fine sandy laminations at 54m, which are not present at 39m.

On the basis of these differences in estimated abundances, and distribution, it is expected that sample at 54m will produce a "slightly stronger" I.P. response than the 39m sample.

However, the optical data may not adequately explain what is understood to be a "large" difference in I.P. response between the two samples. A chemical analysis for C and S may indicate a more specific, total abundance of carbon (graphite) and pyrite, which may more positively explain their different geophysical properties.

- - -

H1 - 39m: black shale; evenly dispersed extremely fine pyrite (5-7%) and ultrafine graphite (5%)

Macroscopically, and as viewed in thin section this is a laminated black shale. Individual laminae and/or thin beds consist of variable concentrations of clays, ultrafine sericite, opaque grains and relatively minor quartz and felspar silt and some chlorite. Variation in composition and grain size between laminations is very minor, certainly less than in sample H1-54m.

In polished section fine pyrite is seen quite evenly dispersed throughout the rock, forming an estimated 5-7% of it. These grains range in size from 0.002 mm to 0.04 mm, average about 0.006 mm, (i.e. 6 microns). One exception to this is a single irregular segregation of chalcopyrite which has a maximum dimension of 0.4 mm.

This is mainly framboidal and spheroidal pyrite, with subordinate generally coarser subhedral to euhedral crystals.

Trace chalcopyrite very rarely occurs as inclusions in this pyrite, and even more rarely occurs as single grains.

.../

H1-39m contd. :

Ultrafine graphite is ubiquitous throughout the clay fraction of the rock. It occurs essentially as a finely divided "dust" with individual flakes rarely greater than 0.01 mm although several, extremely thin, variably continuous laminae occur sporadically along the bedding. Some of this finest "dust" may not be truly crystalline carbon, i.e. not genuinely graphite.

The fine size and diffuse, dispersed distribution of the graphite makes it difficult to ascertain its abundance, but it is estimated at about 5%.

If the exact quantity of C becomes important in resolving the geophysical problem, then a chemical analysis for this element is recommended.

Likewise, if the exact quantity of pyrite becomes important for the same reason, then an analysis for total sulphur is recommended (since this resides almost exclusively in pyrite.) An Fe analysis may also be considered, however this may be not as diagnostic due to probable Fe in minor chlorite through the rock.

H1 - 54m: black shale; dispersed and minor locally aggregated pyrite (up to 10%) and extremely fine graphite (7-10%)

This is also a laminated black shale. In thin section it is seen to be somewhat more sericitic than at 35m and slightly more silty. The quartz (and felspar) silt has a consistent average size in a given lamination, which is generally very slightly coarser than at 39m, and layers up to very fine sand size occur at irregular intervals through the sequence.

The opaque material is slightly less dense than at 39m, apparently due to a slightly greater average size.

Fine grains of framboidal and spheroidal pyrite, and subordinate subhedral to euhedral pyrite are also dispersed throughout this core. Generally the size of these is about the same as at 39m, but the abundance of this pyrite appears to be marginally more than at 39m, possibly up to 10%, as a result the individual grains are slightly more closely packed.

In addition to being dispersed, minute spheroids of pyrite form clusters up to 0.1 mm across, and these, and trace, single euhedral crystals up to 0.05 mm are scattered along fine sandy layers. These account for about one quarter of the total pyrite.

.../

H1-54m contd. :

Ultrafine graphite is ubiquitous throughout the clays and fine micas which form a large proportion of this rock. The graphite is marginally more distinct as micron-size flakes, rather than the dominant finely divided "dust" at 39m. Maximum size of the graphite however is also about 0.01 mm, and several thin foliae of graphite are present as at 39m.

The graphite appears to be slightly more abundant than at 39m (7-10%).

From Appendix A.
Young (1980)
(Mack/Hat 2)

samples the feldspar phenocrysts are totally sericitized and are scattered through what appears to be basually a primary siliceous matrix. A few slightly "reabsorbed" quartz grains are also present in similar to those normally ancountened in dacites.

Diamond Drill Hole DDMH 1 and H 2 (samples 206252, 60.5 m; 206253, 103.5 m)

Sample 206252 is a fine siltstone consisting of a very weakly foliated mass of sericite, quartz, chlorite, some fine pyrite and carbonaceous material. Secondary veinlets of pyrite with pressure fringes of chlorite and quartz cut the rock. Sample 206253 is sericitized, chloritized and silicified andesitic tuff lava or pyroclastic although the alteration is not as strong as in the acid samples of DDM's MC 1, 2,and 3. The rock consists of variably sized, often large (up to many millimetres) porphyritic andesitic rock fragments with partially altered feldspar phenocrysts separated by zones of polycrystalline fine-grained quartz containing some smaller feldspar crystals. The latter are also only slightly altered.

Diamond Drill Hole H 2 (samples 206254, 202 m; 206255, 153 m)

Sample 206254 is a weakly altered andesite or dacite consisting of feldspar laths and euhedra (0.3 to 0.8 mm) in a "dusty" matrix of feldspar, quartz, chlorite, minor sericite and some secondary leucoxene. Sample 206255 seems to be a more altered (carbonatized) version of sample 206253.

TRACE ELEMENT ANALYSIS BY XRF Continued...

Hole No.	Depth	Sample No.	Ba	Ce	Co	Cr	Cu	La	Nb	Ni	Pb	Rb	Sc	Sr	Th	V	Y	Zn	Zr	Geological Log
H1	60.5 m	206252	955	82	47	160	137	111	9	160	48	103	19	7	15	150	30	183	117	Pyritic black shale (Que River Slates)
	103.5 m	206253	1601	197	44	22	110	222	5	31	0	95	22	550	13	178	30	73	140	Andesitic pyroclastic
H2	202 m	206254	2304	153	65	10	18	171	6	22	70	79	18	460	30	128	24	2684	123	Andesite
	153 m	206255	2240	138	25	3	135	165	9	21	842	28	20	508	20	174	26	1775	125	Andesitic pyroclastic

CORE GRIND SAMPLING - MACKINTOSH / HATFIELD

HOLE No. HAT1.

DATE 15-6-89

No.	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST	SAMPLE NUMBER	INTERVAL	ELEMENTS REQUIRED	ST
1	515650	0 - 10 m	Cu, Pb, Zn, Ba, As, Ag, Au					
2	651	10 - 20 m	"					
3	652	20 - 30 m	"					
4	653	30 - 40 m	"					
5	654	40 - 50 m	"					
6	655	50 - 64.7 m	"					
7	656	64.7 - 73.3 m	Cu, Pb, Zn, Ba, As, Ag, Cr, Ti, Zr, Au					
* 8	657	Standard 5	"					
9	658	73.3 - 83.3 m	"					
10	659	83.3 - 92.25	"					
X 11	660	92.25 - 93.1	SCOR "					
X 12	661	93.1 - 94.9	SCOR "					
13	662	94.9 - 104.5	"					
14	663	104.5 - 114.5	"					
15	664	114.5 - 124.5	"					
16	665	124.5 - 130	"					
17	666	130 - 140	"					
18	667	140 - 150.1	"					
19	515668	150.1 - 160	"					
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

CORE GRINDING (SHEET 2)

HOLE No H1 DATE 2/6/77

SAMPLE No	FROM |M|	TO |M|	IW |cm|	REMARKS
205855	131·65	136·65	500	Datum 131·70, 136·50
56	136·65	141·65	500	" 139·50, 141·30
57	141·65	143·70	205	" 142·50
58	143·70	146·10	240	" 145·50
59	146·10	148·85	275	" 148·50
60	148·85	150·10	125	" —
61	150·10	155·10	500	" 151·50, 154·50
205862	155·10	160·00	490	" 157·50.
	E.O.H.			

INITIAL ANALYSIS:										CHECK LAB:			
%Cu		%Pb		%Zn		%Fe	ppm Ag	ppb Au	ppm Au	INT.	%Cu	%Pb	%Zn
AAS	XRF	AAS	XRF	AAS	XRF	TIT	AAS	AAS	FIRE				

CORE GRINDING.

HOLE No H1 DATE 2/6/77

SAMPLE No	FROM (M)	TO (M)	IW (cm)	REMARKS	INITIAL ANALYSIS: %Cu AAS	%Cu XRF	%Pb AAS	%Pb XRF	%Zn AAS	%Zn XRF	%Fe TIT	ppm Ag AAS	ppb Au AAS	ppm Au FIRE	CHECK LAB: INT.	%Cu	%Pb	%Zn
205821	0.00	5.00	500	Datum 3.00, 4.50														
22	5.00	10.00	500	" 7.50														
23	10.00	15.00	500	" 10.50, 13.50														
24	15.00	20.00	500	" 16.50, 19.50														
25	20.00	25.00	500	" 22.50														
26	25.00	30.00	500	" 25.50, 28.50														
27	30.00	35.00	500	" 31.50, 34.50														
28	35.00	40.00	500	" 37.50														
29	40.00	45.00	500	" 40.50, 43.50														
30	45.00	50.00	500	" 46.50, 49.50														
31	50.00	55.00	500	" 52.50														
32	55.00	60.00	500	" 55.50, 58.50														
33	60.00	65.00	500	" 61.50, 62.60, 64.50														
34	65.00	70.00	500	" 67.50, 68.80														
35	70.00	73.50	350	" 70.50, 73.50														
36	73.50	75.70	220	" 73.50														
37	75.70	76.35	65	" 76.00														
38	76.35	77.20	85	" 76.50														
39	77.20	77.52	32	" —														
40	77.52	80.20	268	" 79.50														
41	80.20	81.20	100	" —														
42	81.20	86.20	500	" 82.50, 85.50														
43	86.20	91.20	500	" 88.50, 89.00, 91.00														
44	91.20	92.25	105	" 92.20														
45	92.25	94.85	260	" 93.10, 94.50														
46	94.85	99.85	500	" 97.50														
47	99.85	104.85	500	" 100.2, 100.8, 103.50														
48	104.85	109.85	500	" 106.50, 109.50														
49	109.85	114.85	500	" 112.50														
50	114.85	118.50	365	" 115.50, 118.50														
51	118.50	122.05	355	" 118.50, 121.50														
52	122.05	125.90	385	" 124.50														
53	125.90	126.65	75	" —														
205854	126.65	131.65	500	" 127.50, 130.50														

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999 — 52 Murray Road, Welshpool, W.A. 6106 — Telex AA92560

FAX: 004 31 8890

ANALYTICAL REPORT No. 23.3.08.06288

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

ORDER No.	PROJECT
7860	

DATE RECEIVED	RESULTS REQUIRED
19/06/89	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
2	11/07/89	1	19

STATE OF SAMPLES		PRE-TREATMENT							ANALYSIS		
REFER BELOW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
	515650/668	CG	Prep: 01e						Cu,Pb,Zn,Ag/101,As/114		
	515650/668	CG							Ba/401,Au,AuChk/309		
	515656/668	CG							Cr,Zr,Ti/401		

RESULTS TO

Aberfoyle Resources Exp. Division
P.O. Box 952
Burnie
Tasmania 7320

RESULTS TO

REMARKS

MAT-1

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorbtion	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemicals means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

.. ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	23.3.08.06288	11/07/89	7860	2 OF 2

TUBE No.	SAMPLE No.	Ti	Zr/Ti							
1	515650	–								
2	515651	–								
3	515652	–								
4	515653	–								
5	515654	–								
6	515655	–								
7	515656	2300	.07							
8	515657	2450	.037							
9	515658	2250	.071							
10	515659	2800	.064							
11	515660	2450	.09							
12	515661	1800	.111							
13	515662	3150	.07							
14	515663	2800	.061							
15	515664	2900	.062							
16	515665	2600	.065							
17	515666	2350	.072							
18	515667	2350	.072							
19	515668	2650	.068							
20										
21										
22										
23	DETECTION	50								
24	UNITS	PPM								
25	METHOD	401								

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

HAT-1

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

.. ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	23.3.08.06288	11/07/89	7860	1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Au	Ba	As	Cr	Zr
1	0-10 515650	65	75	110	1.5	0.020	1600	14	–	–
2	10-20 515651	75	75	110	1.0	0.016	1500	18	–	–
3	20-30 515652	110	65	155	1.5	0.014	1150	21	–	–
4	30-40 515653	110	100	190	1.0	0.013	900	22	–	–
5	40-50 515654	100	205	15	0.5	0.024	1050	50	–	–
6	50-64.7 515655	80	100	290	0.5	0.022	930	20	–	–
7	64.7-73.3 515656	100	40	110	0.5	<0.008	2000	5	650	160
8	515657 STD 5	130	215	2200	1.0	<0.008	1100	19	910	90
9	73.3-83.3 515658	100	50	110	<0.5	<0.008	1500	4	640	160
10	83.3-92.25 515659	100	45	120	<0.5	<0.008	1400	9	770	180
11	92.25-93.1 515660 SCOR	50	60	130	<0.5	0.008	2100	26	60	220
12	93.1-94.9 515661 SCOR	25	35	70	<0.5	<0.008	2100	18	35	200
13	94.9-104.5 515662	80	215	820	0.5	<0.008	1650	73	15	220
14	104.5-114.5 515663	80	100	480	<0.5	0.009	1500	19	<5	170
15	114.5-124.5 515664	85	85	240	1.0	0.011	1050	12	<5	180
16	124.5-130 515665	110	75	200	1.5	<0.008	1500	9	7	170
17	130-140 515666	130	60	180	0.5	0.009	1300	8	15	170
18	140-150.1 515667	75	60	160	0.5	0.012	1150	10	6	170
19	150.1-160 515668	60	70	185	<0.5	0.013	690	9	10	180
20										
21										
22										
23	DETECTION	5	5	5	0.5	0.008	10	1	5	5
24	UNITS	PPM	PPM	PPM	PPM	PPM	401	PPM	PPM	PPM
25	METHOD	101	101	101	101	309	401	114	401	401

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

Aberfoyle Exploration Pty Ltd

(Incorporated in Victoria)
144 Camberwell Road, Hawthorn East, Victoria 3123 Australia
Telephone: (03) 82 2226 Telex: AA38646

Aberfoyle Exploration Pty. Ltd.
Lot 9, River Rd., Wivenhoe
(P.O. Box 952, Burnie)
Tasmania 7320
Phone 31 6332

11th January, 1985

Mr. H.W. Fander,
Central Mineralogical Services,
39 Beulah Road,
NORWOOD. S.A. 5067

Dear Wally,

Enclosed are the two samples (270991, 270992) I mentioned to you on the phone today. I think that they represent a distal ore horizon and that the light and dark banding are a result of alternating exhalative and clastic deposition. Can this be confirmed under the microscope? If so can you please return the slides as soon as possible - I may try some electron probe microanalysis on them.

Yours faithfully,
ABERFOYLE EXPLORATION PTY. LTD.

270991 DDH H-1/93-35

270992 DDH H-1/93-9

HATFIELD EL 15/73 TASMANIA

A. M. HESPE,
GEOLOGIST.

Encl.