REPORT ON EXPLORATION OF AREAS SUBJECT TO PROPOSED CONSTRUCTION OF HELLYER MINE FACILITIES

ABERFOYLE RESOURCES, EXPLORATION DIVISION

AUGUST 1987

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EHS

C O N T E N T S

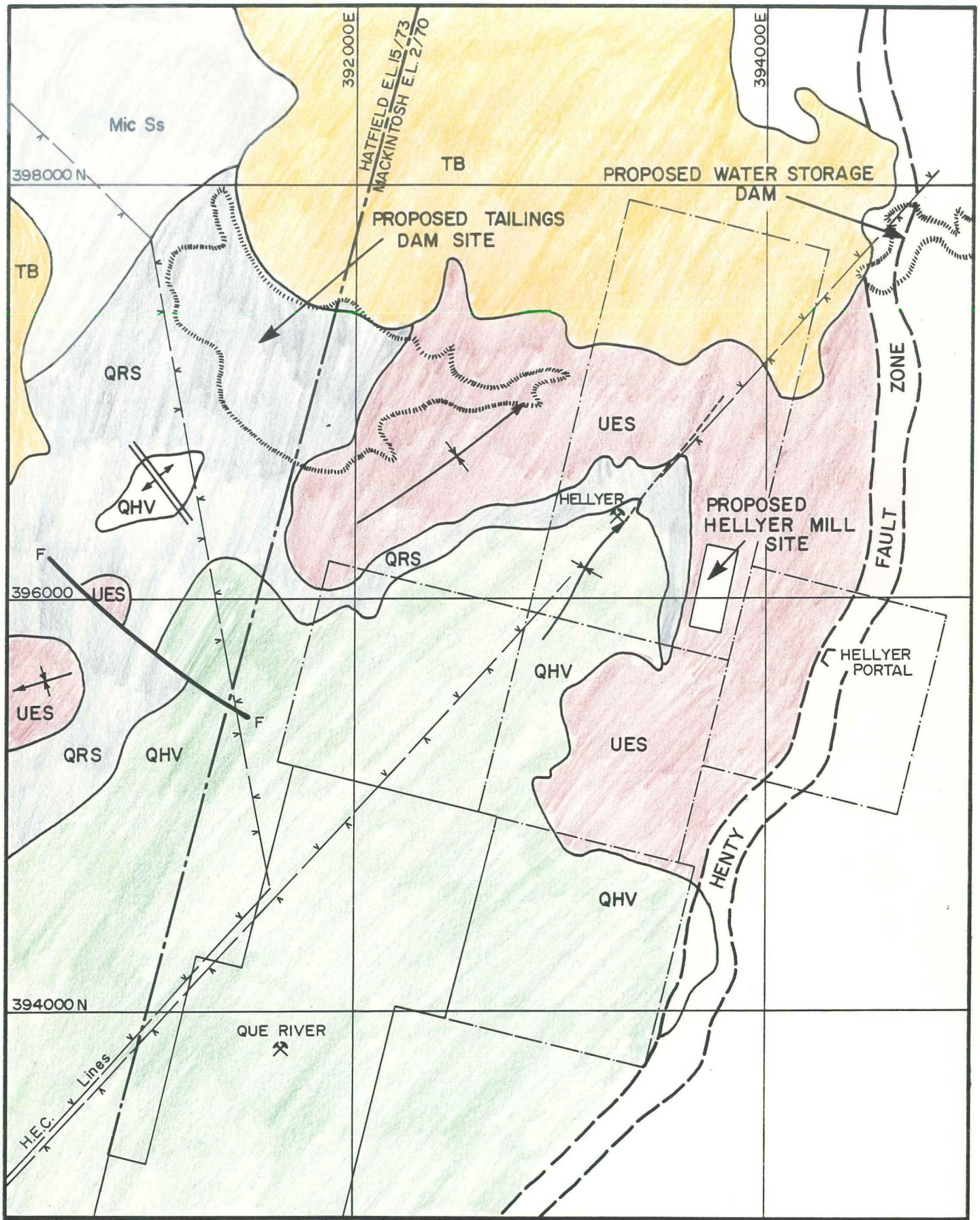
1. INTRODUCTION

This report describes work completed to assess the exploration potential of areas to be affected by the construction of the Hellyer concentrator, tailings dam and water storage dam.

The locations of these facilities relative to mining operations and the regional geology are shown in Figure 1.

The exploration programme was carried out by Aberfoyle Resources, Exploration Division, between January and June 1987.

Funds for the programme were raised in Work Proposal 98/87.



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AMHrje	8/87		

HELLYER FACILITIES EXPLORATION

LOCATION PLAN

Compiled : AMH

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Location Code : K55/6/44

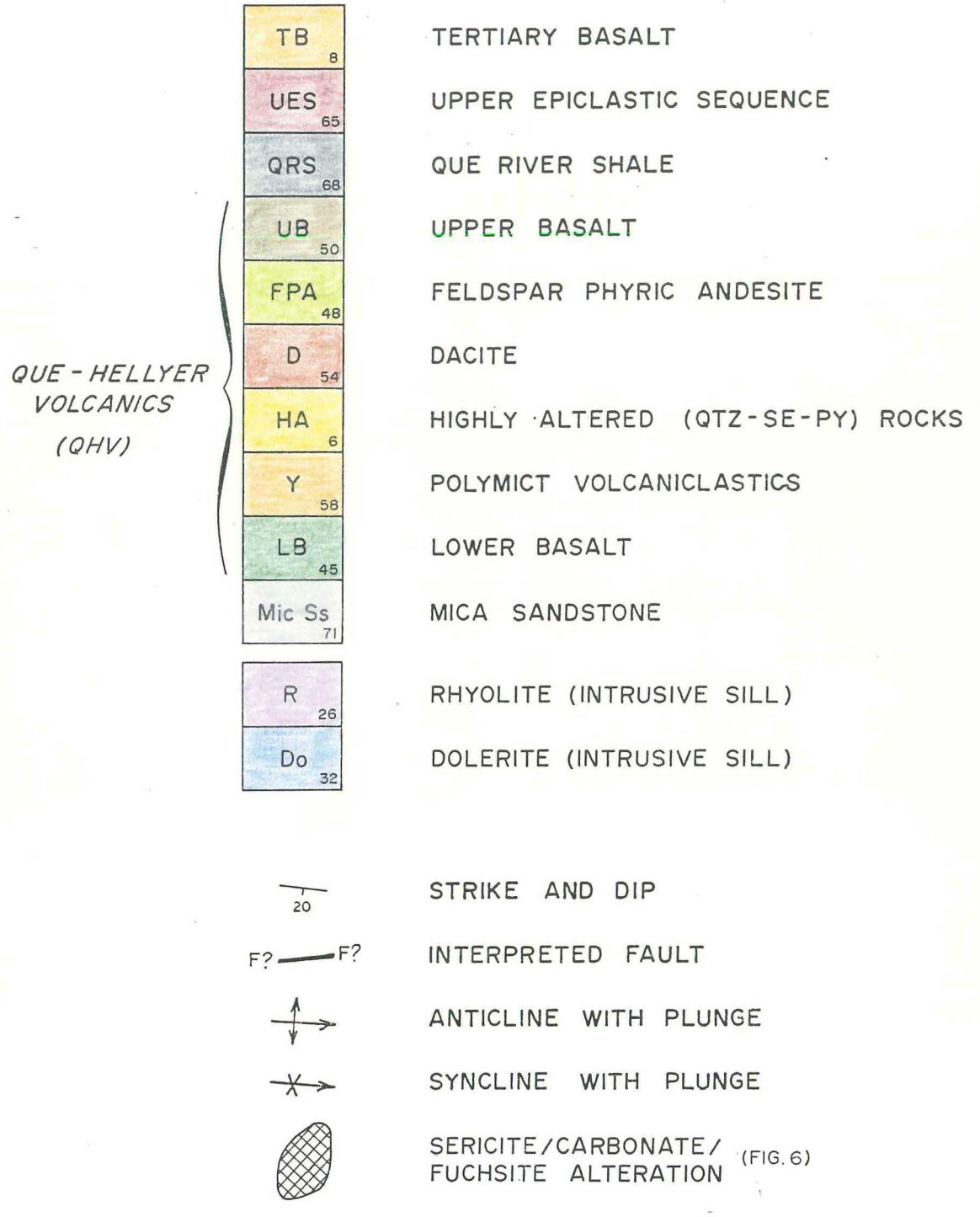
Scale : 1:25,000

Date : DEC, 1986

Plate No. : HEL 92

1511

FIG.1



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HELLYER FACILITIES EXPLORATION

GEOLOGICAL LEGEND

Location Code : K55/6/44	Scale :	Date : July, 1987	Plate No. : HEL 93

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Checked : AMH

1501

FIG. 2

2. SUMMARY AND CONCLUSIONS

2.1 Tailings Dam Site

* Further exploration of a zone of alteration and anomalous soil geochemistry in the north-west of the tailings dam site is planned. This will not affect dam construction or operation as it is on the periphery of the area to be flooded.

* No other exploration targets were detected in the dam area.

* The significance of a strongly broken zone in DDH HAT-9 in the dam wall area should be determined by engineering geologists.

2.2 Mill Site

* No exploration targets likely to affect mill operation or requiring a shift of the mill site were detected. Further exploration is proposed to the south of the mill site based on results obtained in MAC-11, but targets are at a depth (800m below surface) which would not affect mill operation.

2.3 Water Storage Dam Site

* No mineralisation or targets requiring further exploration were detected in prospective rocks around the water storage dam site.

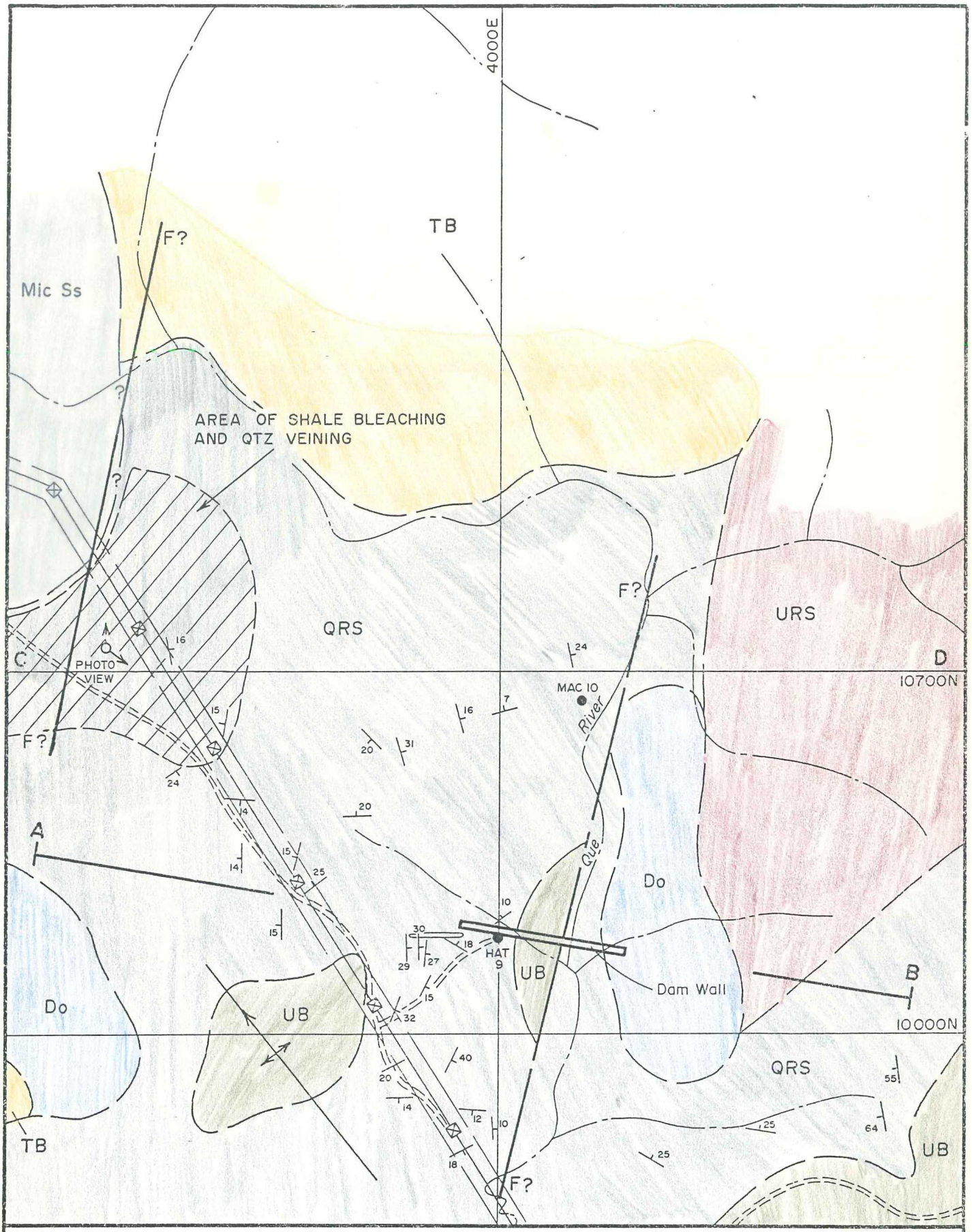
3. TAILINGS DAM SITE

3.1 Introduction

Within the tailings dam area, the host rocks to the Hellyer and Que River deposits (the Que-Hellyer Volcanics) are relatively flat lying and largely covered by later shales and volcaniclastic rocks. For this reason, and except for regional mapping, no surface exploration had been completed in the area prior to the current programme. To assess the prospectivity of the Que-Hellyer volcanics in the area to be sterilized by the Dam 6.3 line km of UTEM, 11.2 line km soil sampling, (452 samples), geological mapping and 713 m of drilling were completed.

3.2 Geology

Surface geology in the tailings dam area is shown in Figure 3. Outcrop in the area to be flooded is of gently folded Cambrian black shales (QRS) and rhyolitic volcaniclastics (UES). These rocks conformably overlie the prospective Que-Hellyer volcanics (QHV). Exposures of QHV through cover rocks are due to an anticlinal crest at 10000N 3600E, and uplift on an interpreted fault at 10200N, 4100E. Two occurrences of (Cambrian?) dolerite are thought to be intruded parallel to the stratigraphy. Flat lying Tertiary Basalt lava flows form topographic highs along the northern edge of the dam area.



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HELLYER FACILITIES EXPLORATION

PROPOSED TAILINGS DAM

GEOLOGY

(FOR LEGEND SEE FIG. 2)

From mapping by AMH and DJJ

Compiled :	DJJ
Drawn :	DJJ
Traced :	GLC
Checked :	DJJ
Plate No.	HEL 84

Location Code: K55/6/44

Scale : 1 : 10 000

Date : June, 1987

FIG. 3

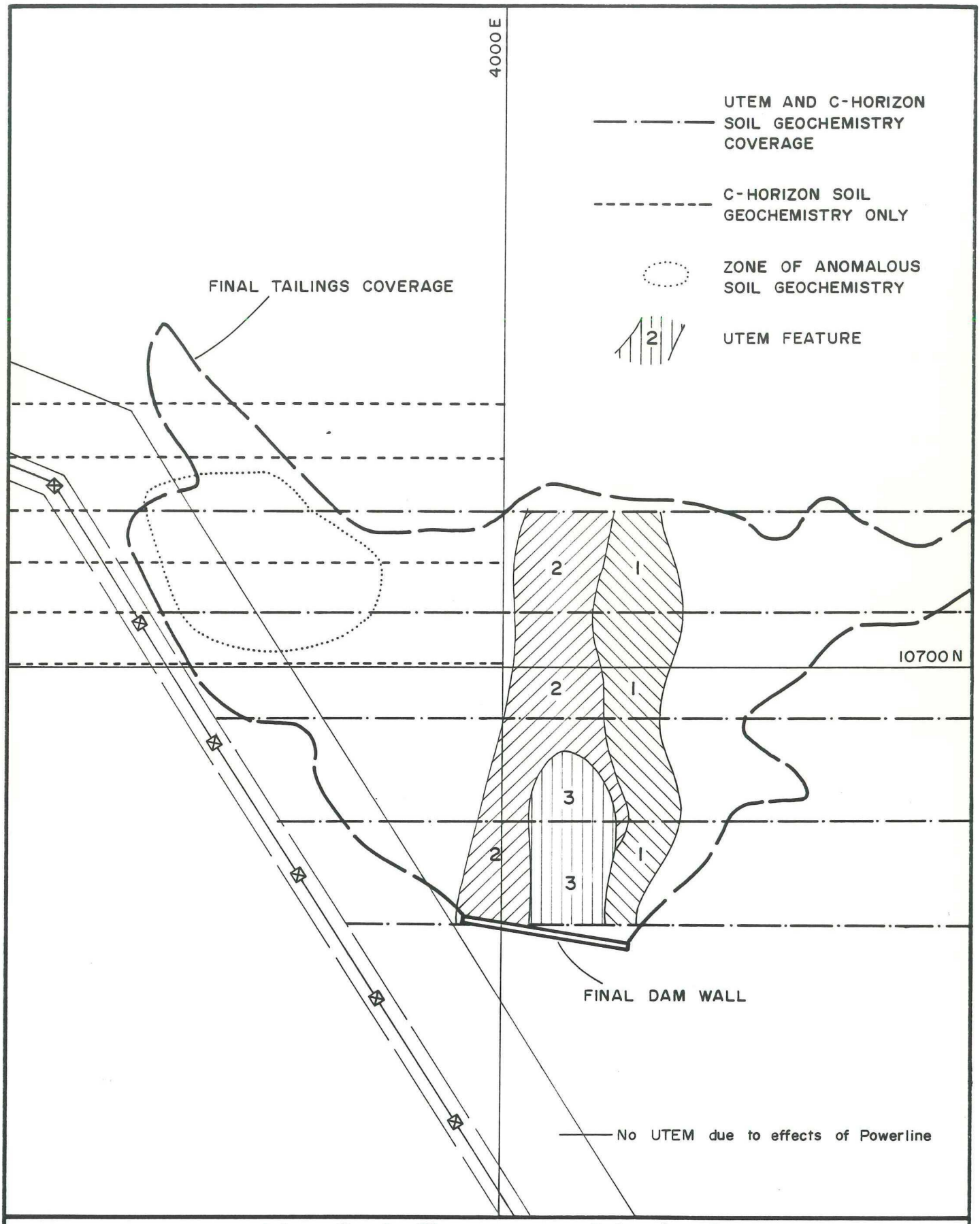
The only area of exploration significance located during mapping of the dam area occurs in the north west extremity of the area to be flooded. Here black shale (QRS) is strongly bleached and quartz veined. Anomalous soil geochemistry is coincident with part of this altered area (see section 3.4). At Hellyer, similar veined and bleached shale occurs directly over the ore deposit and the Jack Fault, and is interpreted to indicate persistence of the hydrothermal system which produced Hellyer after the deposition of hangingwall rocks. Further exploration is planned to test this concept in the tailings dam area. This exploration and any discovery would not be affected by dam construction as the prospect area is at the edge of the final design extent of the tailings dam. Photo 1 shows a view of the prospect area and part of the tailings dam.

3.3 Geophysics

UTEM was the primary exploration technique used in assessment of the tailings dam area and 6.3 line km were completed in two loops (Figure 4). Electrical noise prevented effective UTEM within 200m of the HEC powerline. UTEM has a depth of investigation of approximately 500 metres for a Hellyer size deposit and approximately 300 metres for a Que River size deposit in this area. No responses attributable to massive

PHOTO 1

VIEW OF TAILINGS DAM AREA FROM POINT SHOWN IN FIG.3. QUARTZ VEINING AND SHALE BLEACHING ARE EXPOSED IN ACCESS TRACK TO HEC TOWER.



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HELLYER FACILITIES EXPLORATION

PROPOSED TAILINGS DAM

UTEM, C-HORIZON SOIL GEOCHEMISTRY COVERAGE

Compiled :	AMH
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Plate No. :	HEL 89

Location Code : K55/6/44 | Scale : 1:10,000 | Date : July, 1987

1511

FIG.4

base metal sulphides were detected. The three zones of anomalous conductivity shown in Figure 4 have a lithological character. They have shallow sources (<50m), are parallel to strike and coincide with the western margin of the dolerite (zones 1, 2) and an outcrop of QHV basalt (zone 3).

3.4 Geochemistry

11.2 line km (452 samples) of C-horizon soil geochemistry were completed on the tailings dam area. Samples were analysed for Cu, Pb, Zn, Ag, As, Ba and Hg. The survey was designed to detect dispersion of the ore elements into hangingwall rocks from mineralised systems within the Que-Hellyer volcanics.

A zone of anomalous geochemistry, (Figure 4), was detected in the north west of the dam area as mentioned in section 3.2. The pattern of high values is erratically distributed due in part to poor development of C-horizon over black shale. Maximum values in the anomalous zone are 365 ppm Pb, 980 ppm Zn, 205 ppb Hg compared with background values of 60 ppm Pb, 50 ppm Zn and 50 ppb Hg. Follow-up trenching and drilling of this zone is planned. (Refer section 3.2).

3.5 Drilling

Introduction

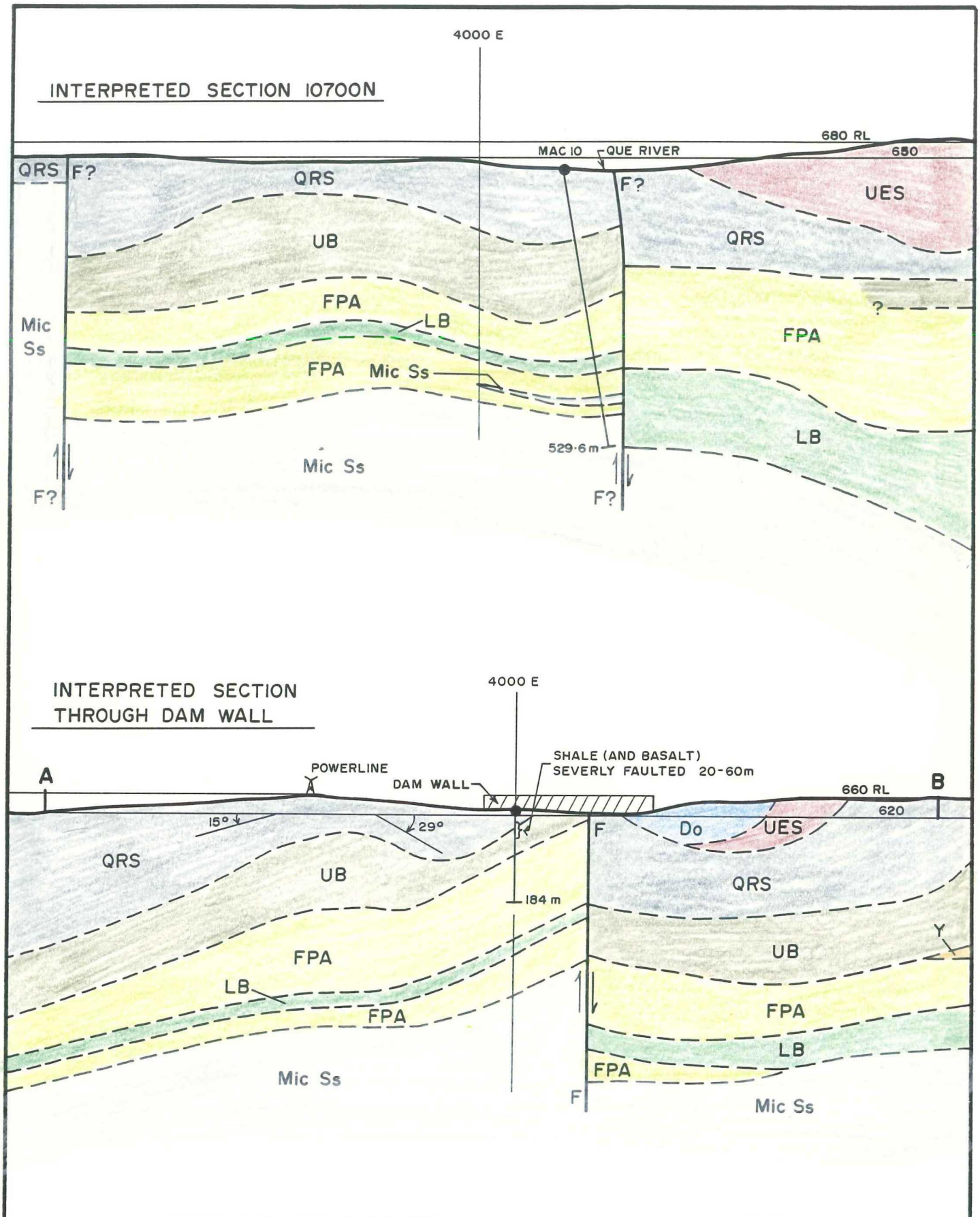
Two diamond holes were drilled to complete assessment of the tailings dam area. The holes wre located in the critical areas of the dam wall (HAT-9) and the "centre of volume" of the area to be flooded (MAC-10). MAC-10 was deepened from 250m to sandstone basement (529.6m) from a separate exploration budget, to improve regional stratigraphic information. Both holes were geologically logged, sampled for petrology and geochemistry and read with down hole SIROTEM. RQD measurements were made on the top 100m of each hole.

Drill logs are included in Appendix I.

DDH MAC-10

MAC-10 was collared at 10642N 4165E within the "centre of volume" of the dam (Figures 3 and 5). It was drilled at -70^{o} to grid east and finished at 529.6m after passing through black shale (QRS), a complete section of the QHV and into basement sandstone.

The main target of the hole was the Hellyer deposit stratigraphic position which was intersected at the base of the Upper Basalt at 260.7m downhole. This position was not



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HELLYER FACILITIES EXPLORATION

INTERPRETED SECTIONS : 1) 10700N, 2) DAM WALL

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Plate No.	HEL 85

Location Code: K55/6/44 | Scale : 1:10 000 | Date : June, 1987

FIG.5

mineralised and no significant alteration was associated with it. The position is usually marked by a thin sedimentary or volcaniclastic unit indicating a time break between lava flows but no such unit occurred in MAC-10 which passed directly from basalt into feldsparphyric andesite lava. No response was obtained from down hole SIROTEM. RQD measurements for the top 100m of the hole are shown in Figure 8.

DDH HAT 9

DDH HAT-9 was collared at 10196N 3994E in the vicinity of the proposed dam wall (Figures 3 and 5). The hole finished at 184m after passing through black shale (QRS) and Que-Hellyer Volcanics.

The target of the hole, as for MAC-10, was the Hellyer Ore Position, which was intersected between 98-103m. Various lithologies, including mica sandstone/siltstone and volcaniclastics occur on the HOP in HAT-9 but no significant geochemistry or alteration are associated with it. No response was obtained from down hole SIROTEM.

A strongly broken zone occurs in HAT-9 between 20m and 57m down hole. Part of the zone is shown in photograph 2 to 5 and by RQD measurements in Figure 8. It straddles the contact between Que River Shale and the Upper Basalt. Its orientation is not known. Further engineering investigation of this feature is recommended before detailed dam wall planning begins.

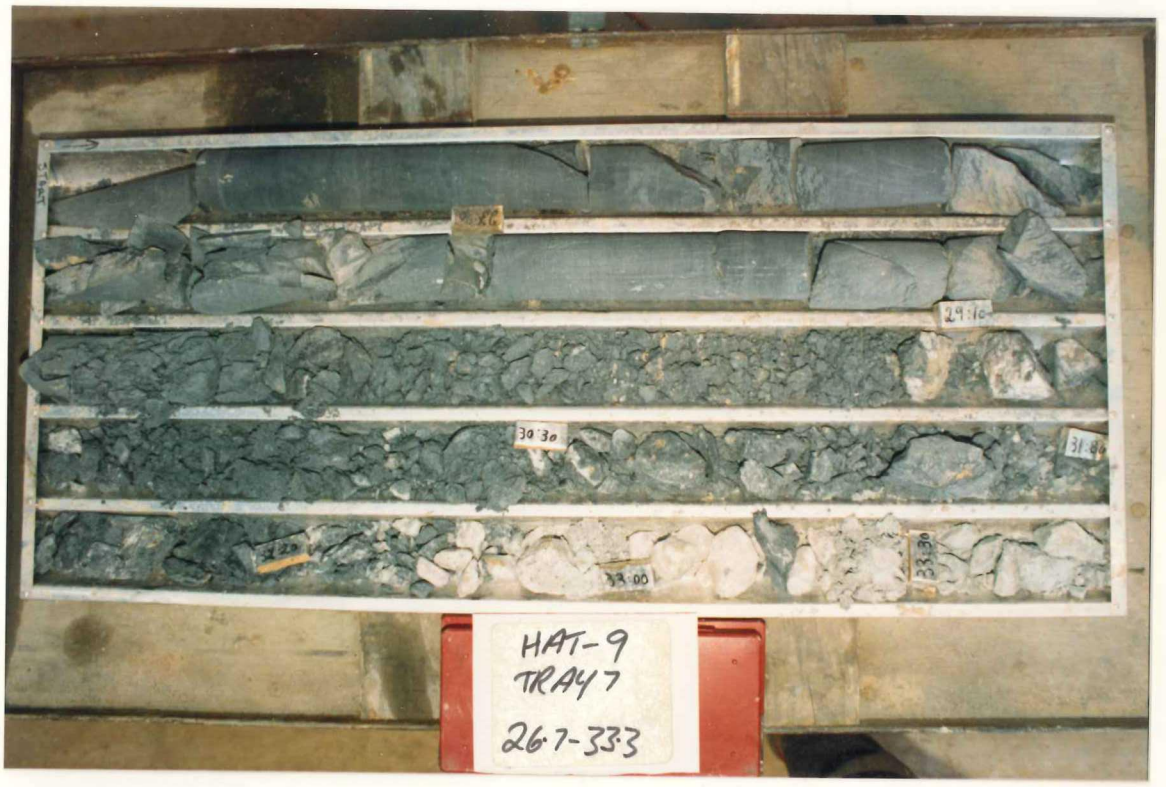


PHOTO 2

PHOTO 3

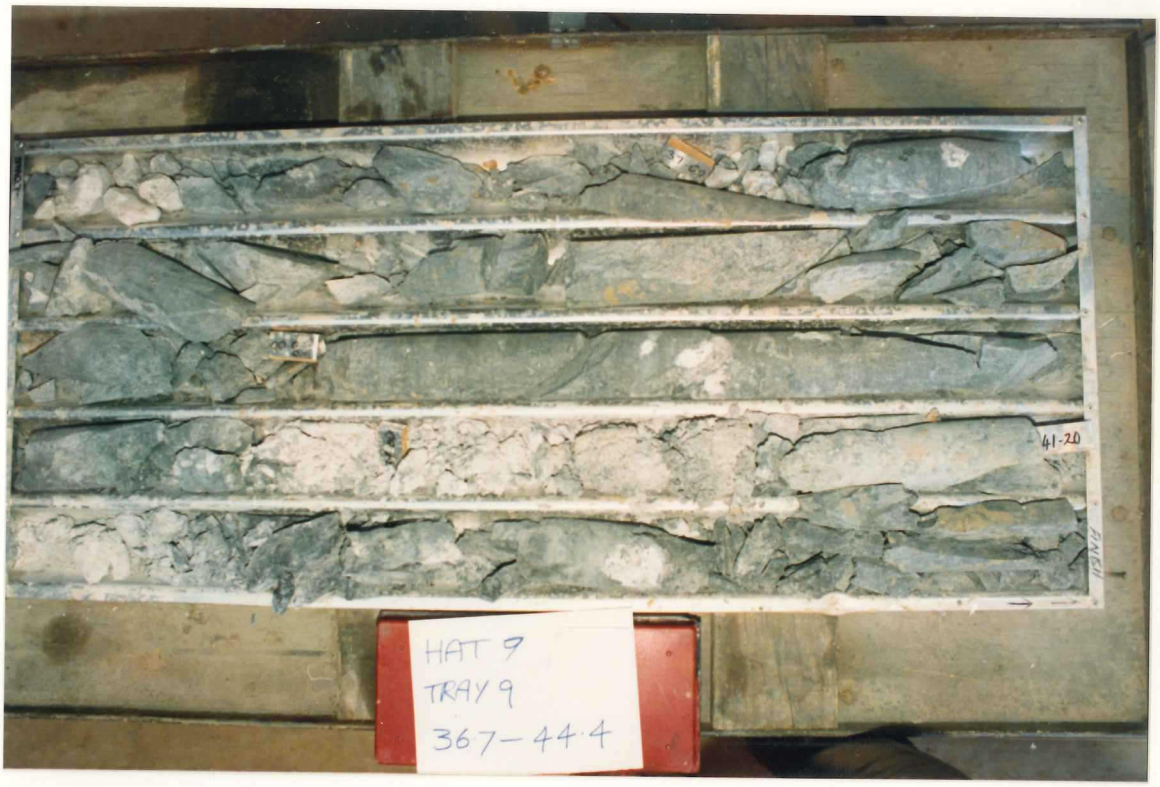


PHOTO 4

PHOTO 5

4. HELLYER MILL SITE

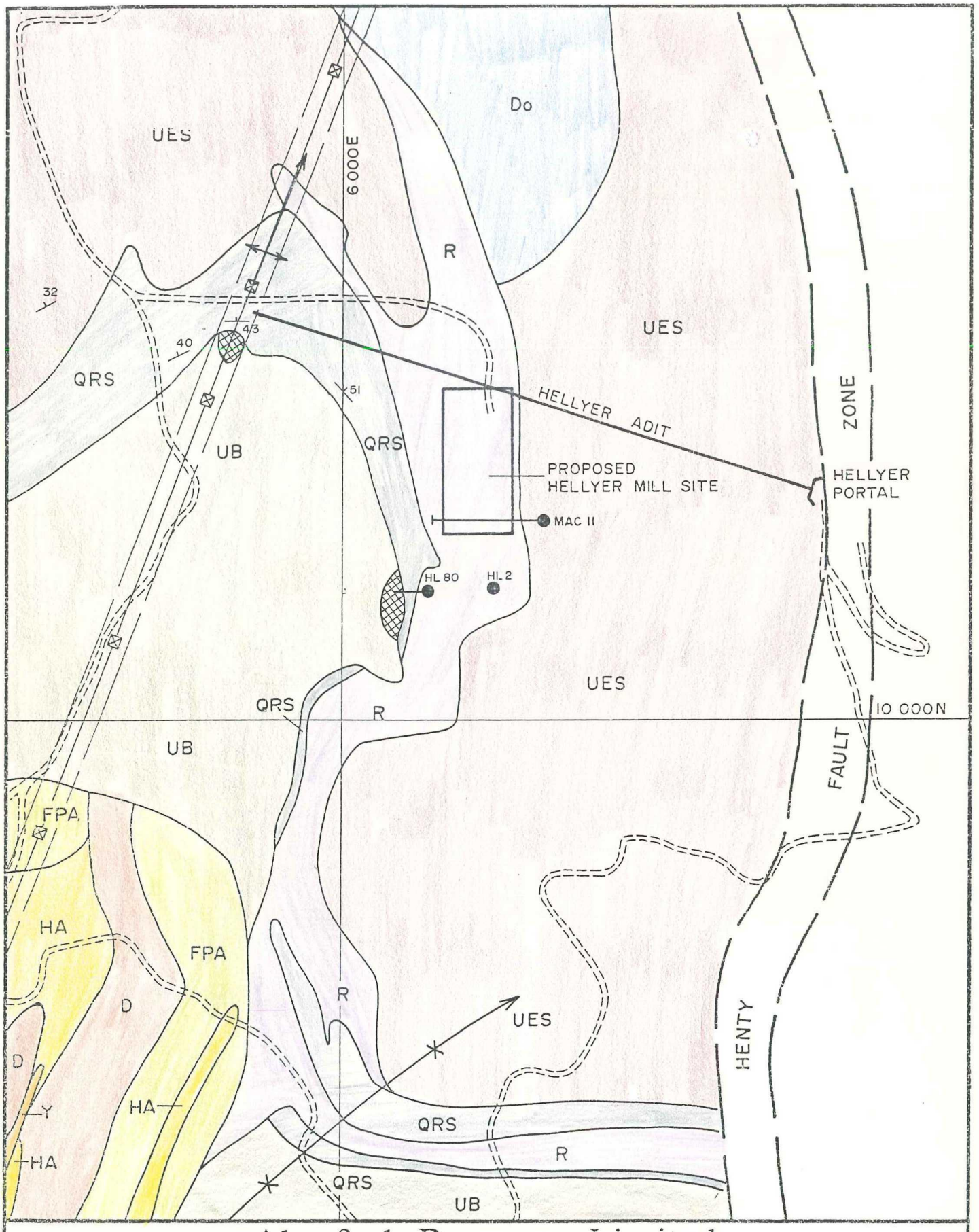
4.1 Introduction

Assessment of the prospectivity of the proposed mill site began with a review of exploration completed in the area. Conclusions of this review were:

i) Surface UTEM had tested for a Hellyer size deposit to around 400m in the mill site area. UTEM in the adit had tested significantly deeper than this to the north of the mill site around 10700N. These surveys did not preclude the occurrence of a smaller deposit (<5mt) at depths <400m at the southern end of the mill site.

ii) Drilling and surface mapping showed that the Hellyer Ore Position dipped to the east under the Mill Site.

iii) Intense sericite/carbonate/fuchsite alteration, as occurs in the hangingwall basalts above Hellyer, also occurs at surface around 10200N 6100E and was intersected in HL-2 and HL-80. (For location see Figure 6). This alteration was interpreted to have a source down dip to the east below the southern end of the proposed mill site.



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HELLYER FACILITIES EXPLORATION

PROPOSED HELLYER MILL SITE

GEOLOGY

(FOR LEGEND SEE FIG. 2)

Compiled :	AMH
Drawn :	AMH
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Checked :	AMH

Location Code : K55/6/44 | Scale : 1:10,000 | Date : July, 1987 | Plate No. : HEL 91

FIG. 6

iv) The southern end of the proposed mill site was inadequately tested by drilling. There was potential for a 5 mt deposit to occur there at depths where mining would affect mill operation.

A drill hole (MAC-11) was completed to test this area. It was deepened from 500m to end of hole at 839.9m from a separate exploration budget to improve regional stratigraphic information.

4.2 Geology

The proposed mill site is situated on the eastern limb of the Hellyer anticline (Figure 6). Exposure at surface and in the adit show that rock units typically dip at 60° to the east but are steep to overturned (West dipping) at the portal. The mill site is underlain by rhyolite which is intruded parallel to the stratigraphy.

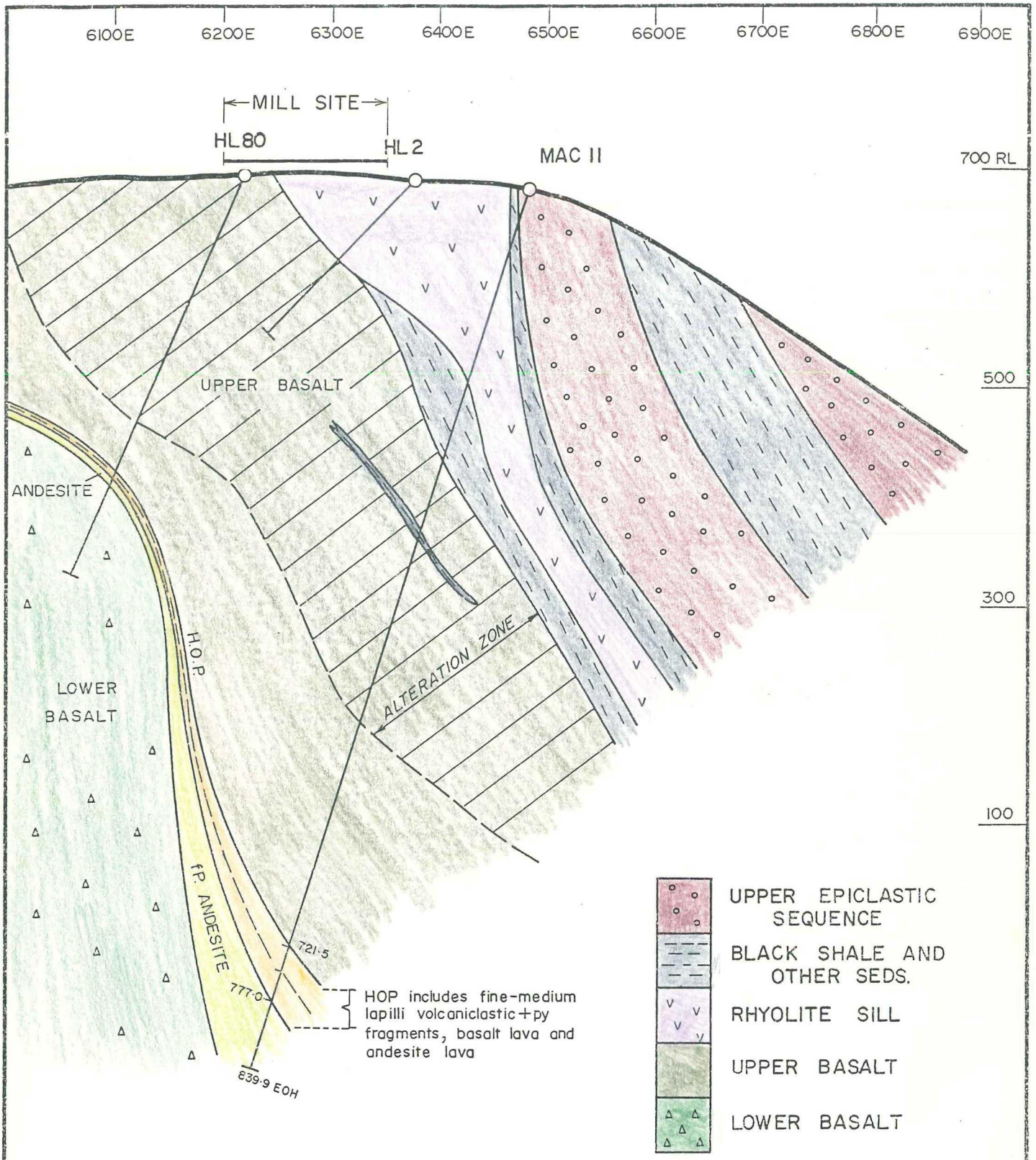
4.3 Drilling

MAC-11 was collared at 10380N 6396E and drilled at -70° to grid west to test for mineralisation on the Hellyer position at less than 400m below the southern end of the mill site (see section 4.1). At the time of drilling the Hellyer Ore Position was interpreted to lie within this depth range below the mill site.

Figure 7 is a section showing the geology intersected in the hole. The outcropping stratigraphy is repeated in the hole, and the strong sericite/carbonate/fuchsite alteration at surface and in DDH's HL2 and HL80 was intersected between 258.3 and 502.5m. The target HOP was intersected between 721.5m and 777.0m and contains sericite altered volcaniclastics with pyrite fragments and is similar to the hangingwall volcaniclastics adjacent to ore at Hellyer. The HOP in HL80 is a thin fine grained unit. An unexpected result was the rapid steepening in dip between HL-80 and MAC-11, which places the HOP at 800m below the mill site.

The thin sedimentary unit within the hangingwall basalt (333.5-344.6m) is a potential ore host horizon. Ore grade mineralisation was intersected in a similar position above Hellyer in DDH HL69A. Mineralisation is unlikely to occur updip of the position in MAC-11 as it would have been detected by surface UTEM surveys. Any mineralisation downdip would be sufficiently distant not to interfere with mill operation.

The intersection in MAC-11 of strong alteration in Upper Basalt and of lithologies on the HOP similar to those at Hellyer is encouragement for further exploration to the south and east of the hole. The target HOP in this direction will be deeper and further away from the mill site than in MAC-11 and a discovery would not affect mill operation.



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HELLYER FACILITIES EXPLORATION

PROPOSED HELLYER MILL SITE

COMPOSITE SECTION 10200N - 10400N MAC - II

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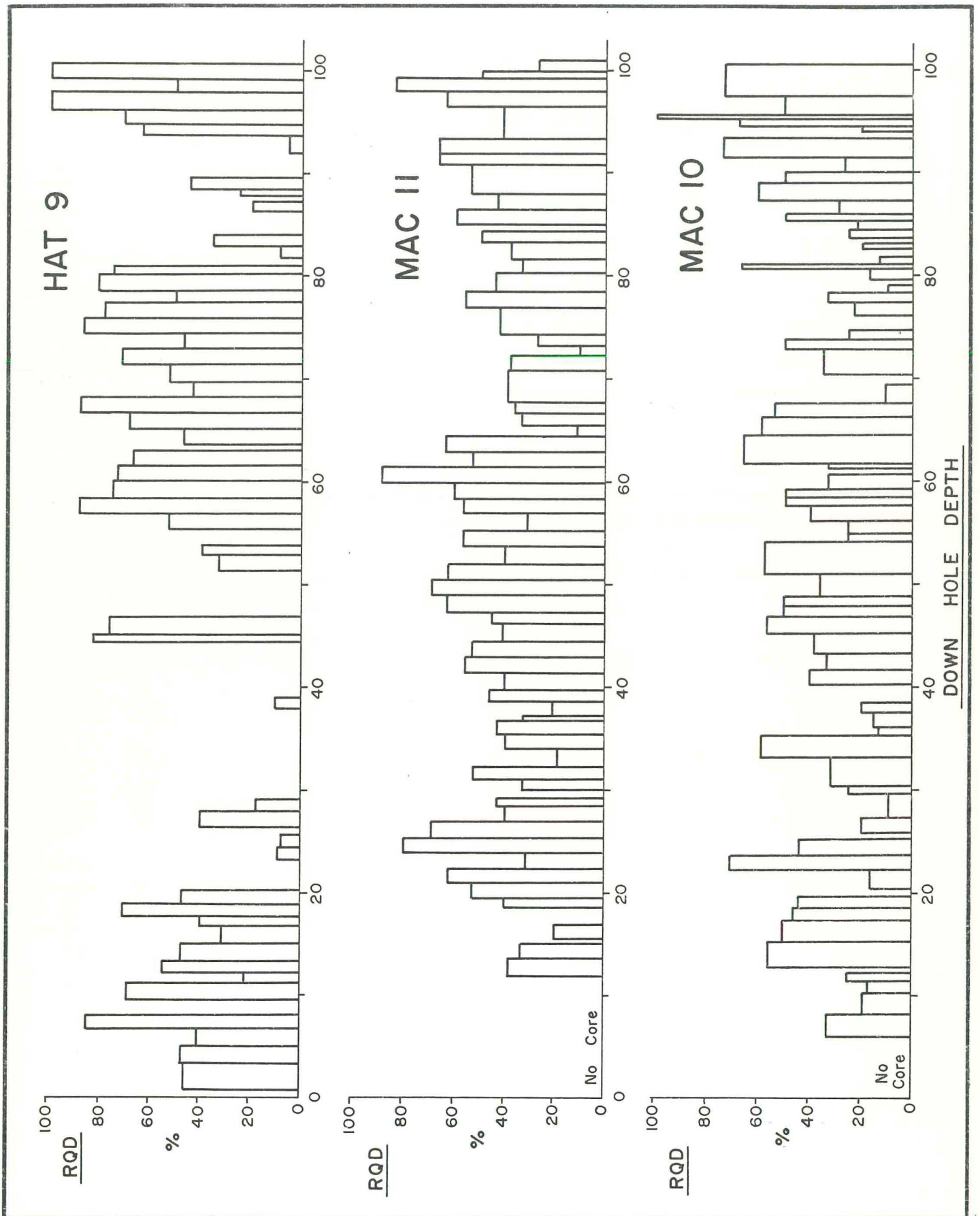
Plate No. :	HEL 90

Location Code : K55/6/44 | Scale : 1 : 5000 | Date : May, 1987

FIG. 7



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HELLYER FACILITIES EXPLORATION

RQD VALUES

MAC 10, MAC 11, HAT 9

Compiled :	AMH		
Drawn :	R de B		
Traced :	GLC		
Checked :			
Location Code :	Scale : As shown	Date : August, 1987	Plate No. : HEL 94

1511

FIG. 8

At the time of compilation of this report, DHEM has not been completed in MAC-11 because of problems running PVC casing. This problem has been solved and a survey is expected to be completed by September 1987.

A geological log of MAC-11 is included in Appendix 1.

5. WATER STORAGE DAM SITE

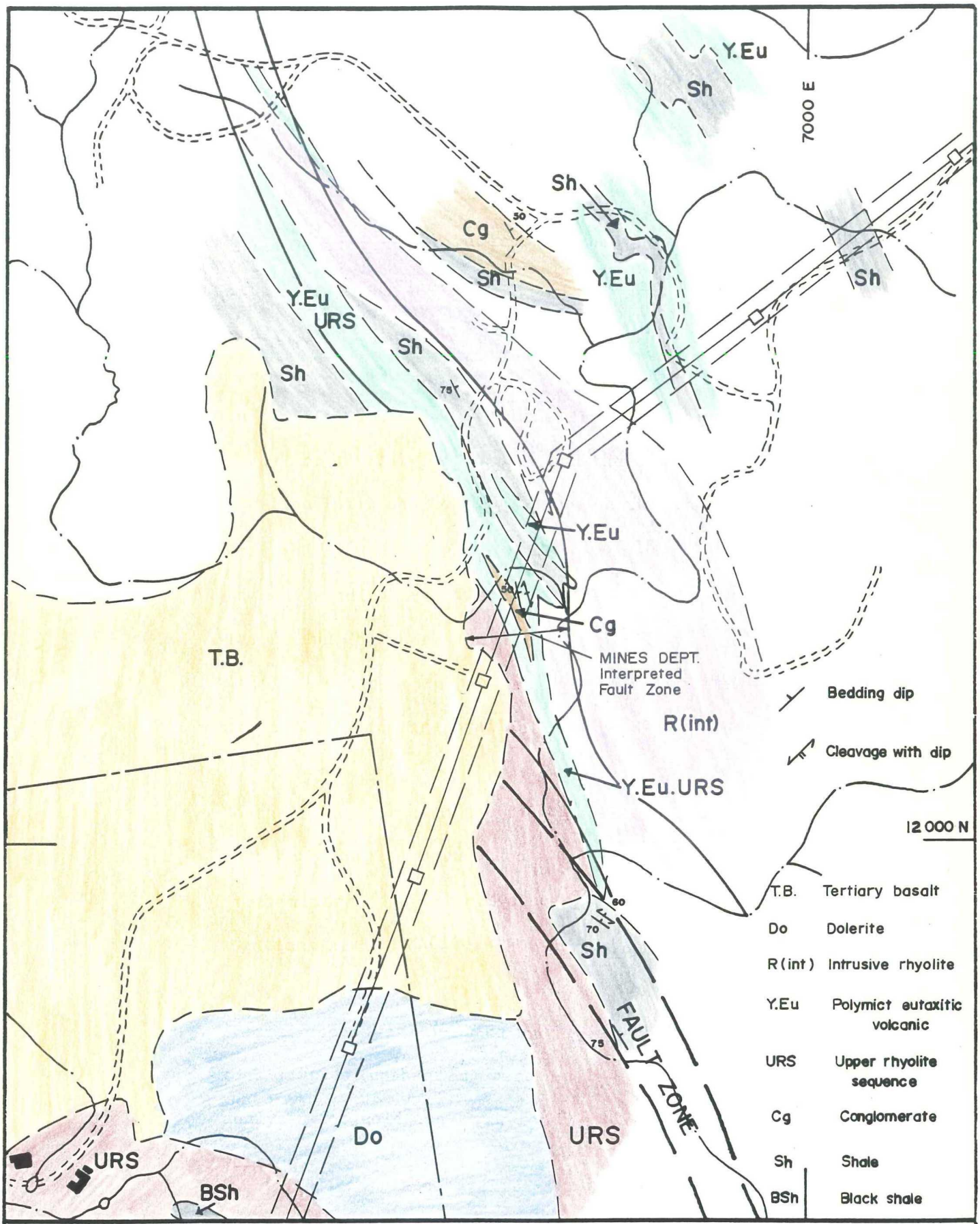
5.1 Introduction

A storage dam on the Southwell River is proposed. The Henty fault zone is interpreted to occur in this area. This zone is auriferous elsewhere in Tasmania particularly at Renison Goldfields Consolidated Ltd's Henty Fault prospect, west of Lake Julia.

The location of the proposed dam wall was not precisely fixed at the time of mapping. As a result no detailed sampling in the vicinity of the dam wall was undertaken. Rather, a broader reconnaissance sampling programme aimed at establishing whether there was gold in the area as a whole, and in sheared zones in particular, was undertaken.

5.2 Method

There is some debate as to the exact location of the Henty fault zone near the proposed storage dam. Aberfoyle has interpreted a fault zone in the south as shown on Figure 9. This abuts a major regional Landsat feature. There are sheared zones north east of this, particularly in the strongly foliated polymict eutaxitic volcanic unit. As a result the



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HELLYER FACILITIES EXPLORATION

STORAGE DAM SITE GEOLOGY

Compiled: DJJ

Drawn:

Traced: R de B

Checked:

Location Code:

Scale: 1:10 000

Date: JULY 87

Plate No. HEL 88

FIG.9

Mines Department map interprets the fault north east of where it is shown in Figure 9. Shear zones in both interpreted fault areas have been sampled for gold.

In the area interpreted by the Mines Department as Henty fault there are several shear zones and these were sampled on the HEC line, near the Longyear Camp, on the Cradle Mountain Link road and on Murrays Road. A total of 18 samples were taken and the results are filed in our geochemistry file, (File job nos 27 and 28) where sample descriptions are available. Sample locations are plotted on a 1:2500 interpretive geologic map MAC148/4 and are available in our geochemical data base.

South of this area in the faulted zone shown on Figure 9, a further 8 samples were taken and the results are filed in our geochemistry file (file job nos 26, 29). Again, sample locations are on MAC148/4 and on the computer.

Sheared zones were 5-10 kg rough channel chip samples, massive rock samples (unsheared) were smaller. All samples were analysed for gold and some for our standard set of elements as well.

The results of the mapping are presented on the 1:2500 interpretive geologic map MAC148/4 available at our Burnie

office. The geology is summarised on Figure 9. A total of 22 samples were sent for petrologic description and report nos. CMS 86/3/9 and 87/1/25 with field and petrologic descriptions are available in Burnie.

5.2 Results

i) All of the samples taken had gold levels at or below detection limit.

ii) Interpreted geology is available on MAC148/4 and is summarised on Figure 9.

5.4 Rock Units

Figure HEL86 (Figure 9), a 1:10000 Interpretive Geological Map of the Storage Dam Site Geology shows the rock units.

Rocks under the dam site occur on, or north-east of the Henty Fault. The rocks are dominantly rhyolitic with interbedded shale and minor conglomerate. A green polymict rock with eutaxitic units often contains a prominent schistoscity. Feldspar porphyritic rhyolite and a rock dominated by a black vitric matrix make up the remaining rhyolitic units. All of these units are intruded by a characteristic massive rhyolite similar to that under the mill site.

Note the occurrence of conglomerate, characteristic of rocks north-east of the Henty fault within the area interpreted as fault by the Mines Department. It is for this reason that Aberfoyle interpret the fault further west.

APPENDIX 1

DIAMOND DRILL LOGS

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HATFIELD

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: HAT-9

PAGE: 1 of 5

LOGGED: AMH

DATE: MAY 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
2			BLACK SHALE	MASSIVE FEATURELESS BLACK SHALE. NO VEINING NO BEDDING					FRESH AT SURFACE			
4												
6												
8												
10												
12												
14												
16												
18												
20												
22								20.9 CORE SOFT PUGGY BUT NOT OXIDIZED			FROM 20.9 TO 56.0 M BOTH SHALE AND BASALT ARE PUGGY AND VERY BROKEN WITH INTERMITTENT ZONES OF SOLID CORE. BOTH UNITS ESPECIALLY PUGGY AROUND CONTACT.	
24												
26												
28								28.4 PUG ZONE 37.2				
30												
32				STRONGLY FAULTED CONTACT SHALE BRECCIA REMINED WITH MILKY QUARTZ								
34			33.0 BASALT LAVA. BRECCIA	BASALT IS STRONGLY BROKEN TO PUGGY. COMPETENT CORE - DULL GREY-GREEN (SLIGHTLY LEACHED?) FRAGMENTAL ROCK CONSISTING OF DARKER IRREGULAR CLASTS (DIFFUSE MARGINS) OF VESICULATED BASALT IN DARKER BASALTIC MATRIX MATRIX: CLAST > 50: 50								
36												
38												
40												
42												

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HATFIELD

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: HAT-9

PAGE: 2 of 5

LOGGED: AMH

DATE: MAY 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
44				A HIGHLY VESICULATED AUTO-BRECCIATED LAVA. SIMILAR LAVA OCCURR BELOW SHALE IN VICINITY OF HAT-1 NO LARGE (10cm) VESICLES AS IN FOLLOWING UNIT.									
46													
48													
50													
52													
54													
56				GRADATIONAL CONTACT OVER 1.0m ↓					56.0 ▼				
			56.5			56.5.							
58			MASSIVE VESICULAR BASALT LAVA.	TYPICAL GREEN-GREY VESICULAR BASALT WITH "PAINT SPLASH" QTZ/CARB VEIN VESICLE FILLING. PREDOMINANTLY MASSIVE BUT A VAGUE BRECCIA TEXTURE IS COMMON - PROBABLY DUE TO AUTOBRECCIATION SOME HYALOCLASTITE BRECCIATION WITH CHERTY INFILL (e.g. 88.0m)		"PAINT SPLASH" CALCITE/ QUARTZ VEINS AND VESICLE FILL	3					58.6 - 58.8 FINE GRAINED PYRITE AROUND Q/CALC. VEIN MARGINS.
60													
62													
64													
66													
68													
70								69.0 TR BRN-RIM SPH. IN CALC/QTZ VEIN.					
72													
74						"	3						
76													
78													
80													
82													
84													

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HATFIELD

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: HAT-9

PAGE: 3 of 5

LOGGED: AMH

DATE: MAY 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
86									85.0 ↑ BROKEN ZONE ASSOC. WITH FAULT.				
88						"	3						
90													
92													
94				FINELY INTERBEDDED MICA SANDSTONE AND SILTSTONE + Y-flv	94.7 PATCHY BUFF/PINK (FLD/Si??) AND BLACK CHLORITE ALT. → BX APPEARANCE.				F 93.9; 70cm WIDE 10° TO CA;			FAULT CONTAINS FRAGMENTS OF BASALT AND IS HEALED WITH QUARTZ / CALCITE	
96													
98			98.0 / 98.7	VERY SHARP, SLIGHTLY IRREGULAR CONTACT	98.0	98.0 "	3						
100			BASALTIC f-m. lvlc.	1 BLACK MASSIVE SHALE 2 flvlc; ANGULAR SHALE AND BLEACHED BASALT FRAGS; C:M = 10:90 3 GREY MICA. SS + BLACK SHALE, FINE (≤1mm) INTERBEDS WITH CONTORTED LAMINAE		CALCITE - VEIN (?) REGULAR (II SIDED)	2					99.7 - 103.4 HYALO / AUTO BRX LAVA?	
102													
104			103.4		103.4								
106	HQ / NQ 105.0				INTENSE PERVASIVE OR BRECCIA MATRIX SELECTIVE PINK FLD/Si ALT		5						
108			FELDSPARPHYRIC ANDESITE	LIGHT TO DARK GREY-GREEN, ANGULAR VESICULAR (VES <1mm CHLORITE) FRAGS. OF BASALT IN GREY CHERTY MATRIX (JIGSAW FIT → HYALOCLASTITE) C:M = 70:30 GRADED INTO BRECCIA WITH SIMILAR CLASTS IN DARK GREY BASALTIC MATRIX SOME BASALT CLASTS ARE ALTERED TO PINK - BUFF COLOUR									
110													
112													
114						"	2						
116				TYPICAL STRONGLY FELDSPARPHYRIC MASSIVE AND (ALTERATION ENHANCED BRECCIA) ANDESITE LAVA									
118													
120				NOTE BLACK SHALE MATRIX TO ANDESITE BRECCIA, 103.4 - 108.1	120.0								
122					"		4						
124						"	2						
126													

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HATFIELD

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: HAT-9

PAGE: 4 of 5

LOGGED: AMH

DATE: May 1997

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
128					"	4	"	2						
130														
132														
134														
136														
138														
140														
142														
144														
146														
148					"	4	"	2						
150														
152														
154														
156														
158														
160														
162														
164														
166														
168					"	4	"	2						

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HATFIELD

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: HAT-9

PAGE: 5 of 5

LOGGED: JMH

DATE: May 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
170					" 4	" 2						
172												
174												
176												
178												
180					" 4	" 2						
182												
184				184.0 EOH.								
186												

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACLINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC - 10

PAGE: 1 of 13

LOGGED: AMH

DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE / INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
2				TRICONE.								
4												
6				6.0								
8			BLACK SHALE	BLACK PREDOMINANTLY MASSIVE BLACK SHALE WITH SOME ZONES SHOWING VERY FAINT BEDDING.							SHALE UNWEATHERED FROM SIX MILE.	
10												
12												
14								13.2 BACA. 45°				
16												
18												
20								19.4 BACA. 35°				
22						21.0 VUGGY DIRTY YELLOW - BROWN, PARTLY OXIDIZED CARB/QTZ VEINS INFILLING FRACTURES CREATED BY FAULT AT 30.3. 2-3						
24												
26												
28												
30								30.3; 200cm: SHALE RUBBLE (BRECCIA) REMEDIED WITH QTZ/CARB				
32												
34												
36						37.0 RARE 1-5mm WHITE QTZ/CARB VEINS V CALCITE						
38												
40												
42												

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC-10

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LOGGED: ATMH

DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE / INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
44			BLACK SHALE			" /						
46				HQ NQ 47.9								
48												
50								50.0 BACA. 40°				
52												
54												
56												
58												
60						" /		59.4 B.A.CA. 45°				
62												
64												
66												
68												
70						69.4		69.4			69.4 Breccia?	
72						ZONE OF BROKEN CORE KNOCKINGS WITH WHITE CALCITE/BTZ VEINING 3		POSSIBLY A FAULT IN THIS ZONE				
74												
76												
78												
80								80.2 B.A.CA. 45°				
82												
84												

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT : HELLYER TAILINGS DAM

HOLE NO : MAC-10

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LOGGED : AMH

DATE : APRIL 1987

DEPTH	LITHOLOGY – ROCK NAME	LITHOLOGY – DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	REMARKS
86–117.4	BLACK SHALE.	117.4 CALCITE/QTZ VEINED BROKEN CORE BUT INTERPRETED TO BE SHARP CONFORMABLE CONTACT		91.7 WISPY IRREGULAR 1-2mm WHITE CALCITE/QTZ VEINS 2	90.6 ONE SPECK OF RED-BROWN SPH. IN VEIN.	90.0 B. ∧ CA. 20°; 91.7 ∇; 105.4 B. ∧ CA. 50°; BEDDING IN SH OVER LAST 10cm AT 20° TO C.A.	
117.4–126	BASALT LAVA. (PILLOW LAVA)	118.6–118.9 SHALE; PILLOW LAVA: GREY-GREEN LAVA WITH CALCITE/QTZ FILLED SPHERICAL AMYGDULES TO 3cm. NUMEROUS BRECCIA PATCHES (PILLOW MARGINS) CEMENTED WITH BLACK MUDSTONE OR GREY CHERT.		117.4 TYPICAL PAINT-SPLASH CALCITE-QTZ VEINING FOUND IN BASALTS i.e. VESICLE FILL, IRREGULAR 5-10cm PATCHES, AND IRREGULAR VEINS. 4	115.9–120.0 PYRITE AROUND CONTACT – FINE GRAINED 1cm BLEBS IN SHALE, LINING VESICLES AND FRACTURES IN BASALT.	F? ON CONTACT. 117.5, 70cm SOME SOFT PUGGY BASALT AND SHALE BROKEN AND QTZ/CALCITE VEINED	(AMM ?? ?? ?? ??) ON CONTACT

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC-10

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE / INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
128			BASALT PILLOW LAVA								PPM 396701 128.7 REF: 1174-255.1	
130												
132						" 4						
134												
136						137.0						
138						" 3						
140												
142												
144												
146						146.0						
148											170.0 1495 - ~~1550~~ SMOOTH PITTED CRYSTS?	
150						" 4						
152												
154												
156												
158												
160												
162						" 4						
164												
166												
168												

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC-10

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DATE: APRIL 1997

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
170			BASALT PILLOW LAVA											
					170.6									
172					171.9	3	"	4						
				173.5 CLASTS (TO 10cm) OF BASALT IN BK SH MATRIX ARE PINK (FD-SI ?) AGG. WITH "ILLITE" FLECKS.	PALE GREEN TO KHAKI CLAYEY. (SERICITE) + MINOR FUCHSITE ASSOCIATED WITH LAMINAR QTZ/CALCITE VEIN								
174				174.9										
176														
178														
180														
182														
184							"	4						
							185.0							
186				186.8			"	3						
188				SHALE RICH PATCH.										
190														
192				192.6			192.0							
							"	4						
194														
196														
198														
							199.0							
200														
202				202.3	202.3		"	3						
			DACITE INTRUSIVE	PINK BROWN BRECCIA OF SUBROUNDED PARTLY ROTATED, 1mm - 10cm BASALT FRAGMENTS IN SHALE MATRIX	PERVASIVE PINK-BROWN FLO-SIL ALT	3								
204				205.2 INTERPRETED TO BE A DEPOSITIONAL BRECCIA WHICH WAS SELECTIVELY ALTERED RELATIVE TO SURROUNDING BASALTS.	205.2									TEX. 39673 202.5 RIP 202.3 - 205.2 DACITIC PORPHYRY. PHENOCRYSTS OF ALBITE-OLIGOCLASE + QUARTZ, SERICITE AMPHIBOLE IN STRONGLY MASS OF SERICITIC FELDSPAR AND QTZ.	
206			BASALT PILLOW LAVA.											
208														
210														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MK-10

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DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
212			BASALT PILLOW LAVA			"	3						
214				215.1	215.1	215.1		215.1				PET. 396704. 221.7m: REP. 215.1–225.1	
216			DACITE INTRUSIVE BRECCIA	SIMILAR TO 202.3 – 205.2 BUT MUCH MORE THOROUGHLY BRECCIATED AND ALTERED.	VERY STRONG WHITE FLD/SW(?) ALT.	1/ SIDEW QTZ/CREAM CARBONATE (ANKERITE?) VEINS WITH TRACE OF BLUE-(GREEN) MIN, RED-BROWN SPH AND GALENA.	5	← IN VEINS.				BRECCIATED RHYODACITIC PORPHYRY SIMILAR TO 396703	
218				(COULD BE BX QTZ PORPHYRY DYKE – SOME FRAGMENTS APPEAR TO HAVE QTZ. PHENOCRYSTS.)								(IDENTIFY BLUE GREEN MINERAL IN VEIN)	
220													
222													
224				225.1	225.1	225.1		225.1					
226			BASALT LAVA	PROBABLY SHEET LAVA – NO CHERT/SHALE SECTIONS BELOW 225.1		V							
228						"	2						
230						(FEW VESICLES)							
232													
234													
236				237.4	237.4	237.4			F				
238				PINK ALT. BASALT LAVA BELOW FAULT. SIMILAR TO 202.3 – 205.2	STRONG PERVASIVE PINK FLD/SI ALT.	QUARTZ/CALCITE VEINING, PATCHES	2		• 237.7, HORIZ. SILICIFIC BASALT + QTZ/CARB PUG.			DEFINITE FAULT	
240				240.4	240.4	240.4							
242						PAINT SPLASH VEINING DISTINCT PURPLE (MANGANESE) TINT TO CARBONATE IN THIS INTERVAL	3-4					
244													
246													
248													
250				250.0 TENSELY SPOTTED WITH PALE YELLOW-GREEN 1MM ? PHENOCRYSTS. (EPIDOTE?)		"	3-4						
252													

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT : HELLYER TAILINGS DAM

HOLE NO : MAC-10

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
254			BASALT LAVA											
256														
258														
260				VERY SHARP CONTACT			"	3-4						
				260.7	Z60.7		Z60.7							
262			FP. ANDESITE LAVA, LAVA BRECCIA	PINK TO YELLOW-GREEN MASSIVE, TO WEAKLY BRECCIATED, NON-FP. ANDESITE LAVA	PATCHY BUT PERVASIVE PINK FD-SI ALT WITH VEINLET STYLE YELLOW-GREEN ILLITE ALT.	3	// SIDED 0.5-2CM WHITE CALCITE-QUARTZ VEINS WITH SOME CM WISPY VEINLETS	2-3						
264				262.7										
266				PINK TO YELLOW GREEN BRECCIATED LAVA; MATRIX DOMINANT WITH FEW 1-3CM CLASTS GRADING INTO TYPICAL MT CHARTER STYLE FELDSPAR PHYRIC ANDESITE LAVA BRECCIA			(VEIN STYLE IN MASSIVE FP. A.1)							
268														
270							271.0							
272							MUCH VEINING ABOVE ↓			F 271.0-271.6, 273.0-275.0 2CM WIDE, SUB-PARALLEL TO C.A. SILICIFIC PUG. QTZ/CARB VEINING IN FAULT PLANE			NOTE HIGH ROCK TYPE CONTROL VEIN STYLE AND TO SOME EXTENT COMPOSITION E.G. CARBONATE CREAMY, IN ANDESITE, WHITE IN BASALT.	
274					"	3	275.0							
276							SPARSE, VERY THIN (<1MM) WHITE WISPY QTZ/CALCITE VEINS	1-2					NOTE VARIETY OF ANDESITE TEXTURAL TYPES COMPARED WITH ANDESITES AT MT CHARTER	
278							(VEIN STYLE IN BRECC. FP. A.2)							
280														
282				281.3 FLOW BANDED FP. ANDESITE LAVA. STRONGLY CONTRASTING TEXTURE. VERY SMALL (<1MM) FELDSPAR PHENOCRYSTS.	281.3	2								
284					"									
286				286.2 UNUSUAL "INCIPIENTLY BRECCIATED" TEXTURE OR "CRACKLE TEXTURE" SURROUNDING FP. LAVA WITH CLASTS SURROUNDED BY VEINLETS OF ? EXTREME PINK TO WHITE SILICIFICATION / FERROPHITIZATION	286.2	5								
288					"									
290								1						
292														
294														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC-10

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DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
296			fp. ANDESITE LAVA; LAVA BRECCIA	296.2 CORE GRINDS Zn/Ti RATIOS SHOW SHARP CHANGE AT 296.2 (10cm SAMPLE)	"	"	1					PBS. 296-305; 300.5; REP. 286.2 - 306.6 LEUCO ANDESITE BRECCIA. PHENOCRYST OF ALBITISED PLAGIOCLASE FELSIC GROUNDMASS. QTZ - ALB - SIDERITE AND SE-PY ALT.	
298					"		5						
300													
302													
304													
306				306.3 GRADATIONAL CHANGE TO MASSIVE fp. A. LAVA. TEXTURE - MT CHALMERS TYPE BRECCIA	306.6	306	" 1		F 307.1; 10cm; H5° C.A. SERICITIC PUG.			307 - 309.8 EVIDENCE THAT "BRECCIA" TEXTURE IS ALTERATION ENHANCED.	
308					"	M FOR 260.7 - 271.0	2						
310			310.0 fp. ANDESITE LAVA.	DARK GREY - GREEN STRONGLY FELDSPAR PHYRIC ANDESITE LAVA. MASSIVE WITH A FEW CLAST DOMINANT BRECCIA ZONES.	PATCHES (10cm - 200cm) OF STRONG KHAKI - YELLOW - GREEN SERICITE(?) ALT. WITH 1mm DARK GREEN ?FUCHSITE SPOTS		3						
312													
314													
316													
318													
320						"	2						
322													
324													
326													
328													
330													
332					332.2 "UNALTERED" ?								
334					↓ TO 356.8.								
336						"	2						

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC 10

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DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
338			fp. ANDESITE LAVA.										
340													
342													
344													
346													
348													
350													
352													
354													
356				CONTACT MARKED BY LIGHT GREY SILICIFICATION AND BLACK CHLORITE									
356.8			BASALT LAVA	GREEN-GREY MASSIVE BASALT WITH VERY FEW VESICLES AND LITTLE VEINING AT 1-2m INTERVALS ARE 10-20cm CHLORITE PATCHES COMMONLY WITH A CORE OF LIGHT GREY CHERT M A MARGIN TO BASALT PHENOMENA (PILLOW BASALT?)		356.8							
358						UPPER SECTION OF BASALT VERY WEAKLY VEINED IRREGULAR PATCHES OF QTZ/CALCITE WITH CORES OF PINK FELDSPAR(?) IN INTERVAL 366.0 - 369.0 (ASSOCIATED WITH CHL/CHERT	1						
360													
362													
364													
366													
368													
370													
372													
374													
376				376.0 MORE VESICULAR AND VEINED SECTION WITH NO CHLORITE / CHERT PATCHES.		376.0 FAINT SPLASH VEINING	3					377.9 YELLOW-GREEN EPIDOTE, DIFFUSE BLUE-GREEN MIN + FINE FLDS IN VEIN.	
378													

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO : MAC 10

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DATE : APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
380						"	3						
382				5cm CARBONATE VEIN ON CONTACT									
					382.8								
384			fp. ANDESITE LAVA BRECCIA	GREY TO YELLOW-GREEN LAVA BRECCIA CREAM-PINK ANGULAR FRAGMENTS IN GRAY SILICEOUS MATRIX. PATCHES OF YELLOW-GREEN SERICITE ALT.	PATCHY PERVASIVE KHAKI-YELLOW-GREEN SERICITE ALT. PATCHES → CONTINUOUS ALT. DOMINANT FELDSPAR PHENOCRYSTS ALTERED TO YELLOW-GREEN ILLITE THIN TO DARK INTENSE GREEN ? FUCHSITE	382.8	THIN QTZ/CALCITE VEIN	1					CONTACT IN DEGREE OF VEINING IN BASALT AND ANDESITE	
386						2mm PATCHES TO blm							
388					388.0								
390			fp. ANDESITE LAVA.	LAVA M ABUNT (382.8 - 388.0) BUT PREDOMINANTLY MASSIVE, TO DISTINCTLY FLOW BANDED BELOW 408mm. THIN UNIT IS WEAKLY VESICULAR								380.6 - 381.1 ALTERATION HAS INCIPIENT "QUELLITE" TEXTURE. NO PYRITE	
392													
394													
396													
398													
400													
402													
404					"	3							
406													
408													
410													
412													
414													
416						"	1						
418													
420					"	3							

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAKINGS DOWN

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

HOLE NO: MAC 10

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LOGGED: AMH

DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
422			tp. ANDESITE LAVA.		"	"	3						
424						"	1						
426													
428													
430													
432													
434													
436				CONFORMABLE, SHARP, INTERPENETRATIVE CONTACTS WITH FRAGMENTS OF SHALE / ANDESITE INSIDE/OUTSIDE CONTACTS CHAOTIC									
438					"	"	3						
440						"	1						
				441.2	441.2	441.2							
442			MICACEOUS SANDSTONE + BLACK SHALE	SECTIONS OF MASSIVE BLACK SHALE (≈ QRD), FINELY LAMINATED BLACK SHALE AND MICA SANDSTONE AND BRECCIA OF ANGULAR 1-5mm SHALE FRAGMENTS IN MICA SANDSTONE MATRIX		IRREGULAR PATCHES, THIN WISPY VEINLETS OF CALCITE/QUARTZ. PATCHES - EVIDENCE OF HYDRAULIC FRACTURING - SPLINTERY SHALE FRAGMENTS IN CALCITE/QUARTZ MATRIX		OCCASIONAL OVOID BLEBS OF FINE GRAINED PYRITE (TYPICAL OF BK SHALE).				SEDIMENT BAND CONTAINS DENITRIFIED (ORIGINALLY ENCASED?) ANDESITE FRAGMENTS.	
444									444.3 BACA 75°				
446									446.2 BACA. 50°				
448									447.9 BACA. 85°				
450									449.0 BACA 80°				
				450.1	450.1	450.1							
452			tp. ANDESITE LAVA BRECCIA	~~GREY~~ FELDSPAR-PHYRIC ANDESITIC LAVA. WEAKLY BRECCIATED GRADUAL CHANGE (≈449) TO A LAVA WITH 1mm CHLORITE FILLED VESICLES AND A FEW 5mm QTZ/CARB. VESICLES	(GREY MS - FG) SILICEOUS?	PARALLEL SIDED, < 5mm CALC/QTZ VEINS (≈ 45° CA) WITH WISPY OFF SHOOTS		2					BMARK BELOW 463.1'	
454													
456													
458													
460													
462						"	2						

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT: MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC 10

LOGGED: AMH

DATE: APRIL 1987

DEPTH	DRILL RUNS	CORE LOSS	ROCK NAME	DESCRIPTION	ALTERATION	VEINING TYPE	VEINING INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS
464–475.8			FP. ANDESITE LAVA BRECCIA.		(SEE ALT FROM [illegible])	"	2					
471.4									471.4, 40cm 25°CA; CARBONATE + PUG (MINOR FAULT?)			
474						"	2					
475.8–476.4				VERY ANGULAR ELONGATE WISPY BLACK SHALE FRAGMENTS IN MICA SANDSTONE MATRIX (WET SEDIMENT SLUMPING). SHARP INTER-PENETRATING CONTACTS	475.8–476.4	475.8–476.4 NO VEINS						
476.4–480.2			FP. ANDESITE LAVA BRECCIA		PALE GREEN FUCHSITE SPOTTED CARB/SER? ALT TOWARDS LOWER CONTACT	"	2					
480.2–499.3			BLACK SHALE/ MICA SANDSTONE	BROKEN ON CONTACT. SEQUENCE OF (i) FINELY LAMINATED BLACK SHALE AND MICA SANDSTONE (ii) MASSIVE BLACK SHALE (iii) MICA SANDSTONE WITH VERY SUBTLE LAMINATION (iv) BRECCIA OF SHALE FRAGMENTS IN SANDSTONE MATRIX		CALCITE/QTZ, // SEDDING	1					
486.5									486.5 BACA 40°			
489.4									489.4 BACA 40°			
492.7									492.7 BACA 30°			
495						"	1					
499.3–500.2			A-Y. mlv	MEDIUM LAPILLI VOLCANICLASTIC OF WHITE ALT (SE/Q/PY) VOLCANIC FRAGMENTS AND SHALE FRAGMENTS								ALTERATION OF VOLC FRAGS PRE-DEPOSITION?
500.2–504			BLACK SHALE MICA SANDSTONE									
504.6									504.6 BACA 45°			

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : MACKINTOSH

PROSPECT: HELLYER TAILINGS DAM

HOLE NO: MAC 40

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
506						"	1						
508				508.5 BLACK SHALE TO EOH.					508.0 BACA 45°				
510													
512													
514													
516						"	1						
518													
520													
522													
524									524; 3mm OF BROKEN CORE; 10° TO C.A? INCLUDES MINOR SHALE BX REMARKED WITH QTZ + CARB.				
526													
528													
530			529.6 EOH			"	1						

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT : HELLYER MILL SITE

HOLE NO : MAC-11

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LOGGED : JUNE 87

DATE : ASMH

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE / INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
2				TRICONE								
4								DECOMPOSED	OX5			
6												
8				THOROUGHLY WEATHERED UPPER EPICLASTIC SEQUENCE								
9.0												
9.5												
10			BLACK SHALE.	FINELY BEDDED GREY BLACK SHALE. PATCHY STRONG WEATHERING. BEDDING 50° TO C.A.		LEACHED OXIDIZED VEIN REMANENTS. 2						
11.9								11.9	11.9			
12								BROKEN - WEATHERING ON JOINTS, VEINS.	OX3			
14												
16												
18				CONTACT WEATHERED, BROKEN								
18.5									18.5			
20			RHYOLITE (INTRUSIVE)	MASSIVE GREY SPHERULITIC (?) RHYOLITE (CHILLED MARGIN PHASE?)								
22											PR. 379947: 21.2 - REP 18.5 - 29.0	
24											ALTERED RHYOLITE. SE - QTZ - CAL - (CHL) ALTERED. WEAKLY AMYGDALOIDAL. QTZ. + FLD. PHYRIC.	
25.0												
26						CALCITE / QUARTZ - DS FINE (<2mm) WISPY VEINLETS AND 2-5mm PATCHES (HYD. FRX?) + FINE (<1mm) WISPY SERICITE VEINS WITH YELLOWISH-GREY ALTERATION SELVAGES + FINE (1-5mm) CHLORITE VEINS WITH GREEN ALTERATION SELVAGES + CARBONATE VEINS 2							
28									OX2			
29.0				MASSIVE PINK RHYOLITE. FLD + QUARTZ PORPHYRITIC. DISTINCT DARK GREEN 0.5-1cm DIAMETER CHLORITE (?) CLOTS. DEVITRIFICATION? FELDSPAR PHENOCRYSTS REPLACED BY CARBONATE? MAFIC PHENOCRYSTS MORE COMMON IN CENTRE OF INTRUSIVE								
30												
32												
34								34.0				
36								BROKEN ALONG FINE VEINLETS - BOYD DRILLING				
38												
40												
42												

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER CMIL

PROSPECT: HELLYER MILL SITE

HOLE NO: MK-11

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LOGGED: AMH

DATE: JUNE 87

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
44			RHYOLITE (INTRUSIVE)			"	2						
46													
48													
50													
52													
54						55.0							
56						"	3						
58													
60													
62													
64							3		64.6 - SLUDGE + BX. SH + QTZ FRMS - DRILLING PROBLEMS?				
66						67.0							
68						"	2						
70													
72									f. 73.1; 1.0m CHLORITIC RUBBLE				
74													
76													
78													
80													
82						"	2						
84													

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER CMZ

PROSPECT: HELLYER MILL STOKE

HOLE NO: MAC-11

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LOGGED: AMH

DATE: JUNE 87

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
86			RHYOLITE (INTRUSIVE)			"	2						
88						87.0							
90						"	3						
92													
94													
96													
98													
100													
102									102.0 – 105.2 BROKEN CORE AFTER HYDRAULIC BRECCIATION.				
104													
106						"	3						
108													
110												PET. 379448; III-1, REP. 29.0 – 148.0	
112												ALTERED RHYOLITE, MORE CRYSTALLINE THAN HW. CHLOR-ANK-SER ALT. FeMag PHENOS (MINOR). QTZ + FLDS. PHYRIC. GREEN CLOTS ARE AFTER FeMag OR SILICATES TO AMYGDULES.	
114													
116													
118													
120													
122													
124													
126						"	3						

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER OML

PROSPECT: HELLYER MILL SITE

HOLE NO: MAC-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
128						"	3						
130													
132													
134									FAULT ZONE 134.0 - 128.7 (5.3m) RUBBLE, CARB/ QTZ. VEININGS, MINOR OXIDATION			MAJOR FAULT.	
136													
138													
140													
142													
144						"	3						
146													
148				148.0		148.2							
150				148.2 - 153.0 GRADATIONAL CHANGE TO GREY-BROWN TO GREEN RHYOLITE WITHOUT DIFFUSE GREEN CHLORITE SPOTS, SIMILAR TO 18.5 - 29.0 - LOWER CHILLED MARGIN?		"	2						
152													
154												Pyt. what are 1-2mm white carbs?	
156													
158													
160													
162													
164						"	2						
166													
168													

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : Hellyer OML

PROSPECT: Hellyer Mill Site

HOLE NO: MH-11

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DEPTH	ROCK NAME	DESCRIPTION	ALTERATION	VEINING (TYPE / INTENSITY)	MINERALISATION	STRUCTURE	REMARKS
170–182.9		SHARP CONTACT AT 90° C.A, MARKED BY CALCITE VEIN (at 182.9)		" 2 (c. 173); " 2 (c. 182)			PET. 379449. 173.9; REP. 148-182.9. ALTERED RHYOLITE Sim. to 447, 448 QTZ + FELD + (FeMag) PORPHYRITIC. AMYGDALOIDAL.
182.9–187.9	BLACK SHALE + RHYOLITE	INTERVALS OF BLACK SHALE (MASS) INTRUDED BY RHYOLITE. RHYOLITE IS KHAKI WITH VERY FINE REGULAR FLOW BANDING AT 90° CA AND HAS DIGESTED SOME SHALE FRAGS.		IRREGULAR WISPY 1-5mm VEINS + 1-3cm VEINS/PATCHES OF QUARTZ + CREAM CALCITE — 2		F - 183.3, 10cm; 70-90° TO C.A; BLACK SHALE PUG + ROTATED QTZ. VEIN FRAGMENTS.	DEFINITE FAULT. PET. 379450 184.4m REP. 182.9-187.9 RHYOLITIC TUFF. (DACITIC?) VITRIC - CRYSTAL TUFF WITH ZONES OF TUFF MATRIXED SHALE BRECCIA. MICROSHARD TEXTURED. SHEARED.
187.9–209.5		SHARP IRREGULAR CONTACT AT 70°-90° CA (at 187.9). LIGHT GREEN FINE SANDSTONE TO SILTSTONE WITH SCATTERED ANGULAR TO SUBROUNDED <0.5cm BLACK SHALE FRAGMENTS. Bk. Sh FRAGS. WEAKLY ALIGNED AT ≈45° C.A. SECTION TO 209.5 HAS APPEARANCE OF VAGUE INCIPIENT TECTONIC BRECCIATION (STRESS DUE TO RHYOLITE INTRUSION?)		" 2 (c. 206)			PET. 379451; 195.0; REP. 187.9 - 209.5 XENOTUFF MICROXTALLINE + SPLINTERY CLASSIC QTZ; SERICITE, Fe-CARBONATE CLOTS; SHALE CLASTS.
206.8	HQ / NQ						
209.5–		AS ABOVE BUT WITHOUT VAGUE STRESS TEXTURE. BECOMING DARKER GREY DOWNHOLE.					

Depth scale: 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER CML

PROSPECT : HELLYER MILL SIDE

HOLE NO : MAC-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
212						"	2						
214													
216													
218													
220												PET. 379452, 219; REP. 209·5 - 233.1	
222												XENOLITH sim. TO 450, 451.	
224													
226													
228						227.6							
230													
232				SHARP CONTACT? OBSCURED BY QTZ/CARB VEINING + SILICIFICATION		"	4		fault zone.				
			233.1										
234			BLACK SHALE.	BLACK SHALE. 50% MASSIVE, 50% FINELY LAMINATED WITH BEDDING AT 70° (TOP) TO 45° (BOTTOM) TO C.A.									
236						"	4						
238						239.1							
240									FAULT ZONE 239.1 - 227.6 BROKEN CORE, SOME FUG ZONES, STRONG CARB/QTZ VEINING, PYRITIZATION; INCIPIENT SHEARED APPEARANCE. 30°-45° TO C.A?				
242													
244						"	2						
246													
248													
250													
252													

PROJECT : Hellyer Cmyl

PROSPECT: Hellyer Mill Site

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

HOLE NO: MK-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
254						"	2		F. 256.3; Hm; BROKEN SHALE, PUY ZONE; STRONG FOLIATION SHALE.				
256													
258				MIXED SHALE AND BASALT OVER 50cm ↓									
258.3			BASALT PILLOW LAVA.	LIGHT GREEN - CREAM - GREY (AR. INTENSELY ALTERED) VESICULAR BASALT FRAGMENTS IN A BLACK (SHALEY) TO GREY (CHERTY) MATRIX. CLASTS ARE EITHER WHOLE PILLOWS OR PILLOW DERIVED BRECCIA LARGER (5 - 30mm) VESICLES ARE FILLED WITH QTZ/CALCITE, SMALLER (<2mm) VESICLES WITH CHLORITE	258.3 INTENSE LIGHT GREEN - CREAM - GREY SERICITE/PY ALTERATION OF BASALT WITH STRONG FUCHSITE SPOTTING (Sc-Comb-Py Qtz)	258.3 WISPY VEINLETS NOT COMMON. CALCITE + MINOR QTZ. PREFERENTIALLY AS VESICLE FILLINGS AND 2-20cm IRREGULAR PATCHES.	3	258.3 1-2 VOL % PY. OCCURS IN MATRIX SHALE AS PATCHES AND AS RIMS AROUND BASALT FRAGMENTS.			NOTE: PY. IS PART OF ALTERATION PHASE.	
260													
262													
264													
266													
268												(WHAT IS THE SIGNIFICANCE OF TWO GROUPS OF VESICLES?)	
270													
272					" 5	"	3	"					
274													
276													
278													
280													
282													
284													
286					" 5	"	3	"					
288													
290													
292													
294													

PROJECT : Hellyer Mine

PROSPECT: Hellyer Mill Site

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

HOLE NO : MK-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
296														
298					"	5	"	3	"					
300														
302														
304														
306														
308														
310														
312														
314					"	5	"	3	"					
316														
318														
320														
322														
324														
326														
328														
330														
332				MIXED INTERPENETRATING CONTACT OVER 10cm	"	5	"	3	"					
333.5					333.5		333.5		333.5					
334			BLACK SHALE	MASSIVE (NON-LAMINATED) BLACK CARBONACEOUS SHALE (ORE EQUIVALENT)			WITH IRREGULAR 2 HAIR LIKE CALCITE/ QUARTZ VEINS - OUTLINE TECTONIC FABRIC TEXTURE		< 1vol % PATCHES OF FINE GRAINED PYRITE					
336														

PROJECT : HELLYER ORE

PROSPECT: HELLYER MINE SITE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

HOLE NO : MK-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
338				HM SHATTERED APPEARANCE TOWARDS BASE (335.5 - 335.6 - BASALT MIXED WITH SH) AND IS ALTERED		" Z	"				CAL/DOL VEINS IN SHALE CONTROLLED BY TECTONIC BRECCIATION - ?, DEVONIAN.	
339.8					(FAULT ON CONTACT)		339.8	F 340.7, 1.5m 35° C.A. SH/SS BRECCIA, RUBBLE AND PUG ALONG SH/SS CONTACT.				
340				LIGHT GREY MASSIVE SANDSTONE WITH <1CM ANGULAR SUBROUNDED BLACK SHALE FRAGMENTS - <1%VOL. IDENTICAL LITHOLOGY TO 209.5 - 333.1		" Z						
342												
344					344.6	344.6	344.6				?SEDIMENT MAY SURROUNDED BY INTENSE ALTERATION IN THE BASALT - HAVE THEY BEEN AFFECTED? IF NOT SUGGESTS THAT IMPERMEABLE SEDIMENTS CHANNELLED THE FLUIDS WHICH CAUSED THE ALTERATION. NOTE THAT 332.5 - 6 BASALT WITHIN SEDS IS ALT.	
346			BASALT PILLOW LAVA, BRECCIA	INTERMIXED SHALE + BASALT FOR 2m BELOW CONTACT	MA FOR 258.3 - 333.5 4 BUT LESS INTENSE (GREYISH COLOUR) AND NO FUCHSITE SPOTS.	MA FOR 258.3 - 333.5 3	MA FOR 258.3 - 333.5					
348				MA FOR 258.3 - 333.5 WITH WELL DEVELOPED HYALOCLASTITE BRECCIA 358.3 - 383.5.	JUDGED BY COLOUR, ALTERATION BECOMES LESS INTENSE DOWN-HOLE TO ABRUPT CUT-OFF AT 502.5							
350												
352				THROUGHOUT THIS UNIT MASSIVE ALTERNATES OVER 10 - 50m INTERVALS BETWEEN								
354												
356												
358												
360												
362					" 4	" 3	"					
364												
366												
368												
370												
372												
374												
376					" 4	" 3	"					
378												

HYALOCLASTITE BRECCIA ZONE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : Hellyer OML

PROSPECT: Hellyer Mine Side

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
380			Basalt Pillow Lava, Breccia		"	4	"	3	"					
382														
384														
386														
388														
390														
392														
394														
396														
398					"	4	"	3						
400														
402														
404														
406														
408														
410														
412														
414					"	4	"	3	"					
416					4160									
418					"	3	"	3	"					
420														

PROJECT : HELMER CML

PROSPECT: HELMER MIN SIDE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
422			BASALT PILLOW LAVA, BRECCIA		"	3	"	3	"					
424														
426														
428														
430														
432														
434														
436														
438													PER. 396.94; 437.5; REP. 416.0 - 502.0	
440					"	3	"	3	"				AMYGDALOIDAL BASALT	
442													Se-Ca MS. FeMag. PHENS. QTZ XENOCRYSTS. PERVASIVELY Se-C-QTZ-PY MS.	
444														
446														
448														
450														
452														
454														
456														
458														
460														
462					"	3	"	3	"					

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER CML

PROSPECT: HELLYER MILL SIDE

HOLE NO: MAC-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
464			BASALT PILLOW LAVA, BRECCIA		"	3	"	3	"					
466														
468														
470														
472														
474														
476														
478														
480														
482					"	3	"	3	"					
484														
486														
488														
490														
492														
494														
496				502.5 ABRUPT ALTERATION BOUNDARY - BASALT STILL BRECCIATED BUT LESS CHLORITE / SERICITE MATRIX DOWNHOLE										
498													502.5 BASE OF PILLOW BASALT AND CHANGE TO MORE MASSIVE TYPE?	
500					"	3	"	3	"					
502					502.5 WEAK PATCHY PALE BROWN TO PINK FOL / SI ALT.	2								
504														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
506			BASALT PILLOW LAVA, BRECCIA		"	2	"	3	"					
508									507.0					
510														
512														
514														
516														
518														
520														
522					"	2	"	3						
524													PET. 396895 524.6 REP. 502-5-721-2	
526													AMYGDALOIDAL BASALT	
528													? ORTHOPYROX + PLAG. PHENOCRYSTS IN GROUNDMASS OF AUGITE ALBITE XTALS + CHL.	
530														
532														
534														
536														
538														
540														
542														
544					"	2	"	3						
546														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
548			BASALT PILLOW LAVA, BRECCIA		"	2	"	3						
550														
552														
554														
556														
558														
560					560.4 PATCH OF PALE GREEN WEAK SERICITE ALT.									
562							"	3						
564					564.0	3	563.0 VEINING AS ABOVE BUT WITH APPEARANCE OF PINK QUARTZ + PALE GREEN "ILLITE" IN SOME VEINS	3						
566														
568														
570														
572														
574														
576					"	2	"	3						
578														
580														
582														
584														
586					"	2	"	3						
588														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : Hellyer ML

PROSPECT: Hellyer Mine Site

HOLE NO: MAC 11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
590			BIMIM PILLOW LAVA, BRECCIA		"	2	"	3						
592				CRYPTOCRYSTALLINE CONTACT QUITE LOW										
594				594.0										
596			BIMIM (SHEET) LAVA.	VESICULAR BRECCIA TEXTURE (AUTO-BRECCIA, BUT CHERTISH MATRIX IS RARE. POORLY VESICULAR COMPARED WITH BIMIM ABOVE.										
598														
600														
602														
604														
606														
608														
610					"	2	"	3						
612														
614														
616														
618														
620														
622														
624														
626														
628														
630					"	2	"	3						

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
632			BASALT (SILL?) LAVA.		"	2	"	3						
634														
636														
638														
640														
642														
644														
646														
648														
650					"	2	"	3						
652														
654														
656														
658														
660														
662														
664														
666														
668					"	2	"	3						
670														
672														

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION: TYPE	ALTERATION: INTENSITY	VEINING: TYPE	VEINING: INTENSITY	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
674					"	2	"	3						
676														
678														
680														
682														
684														
686														
688														
690														
692													PET. 396896: 690.2; REP. 502.5-721.2	
694													AMYDALOIDAL LEUCOGRANITE	
696					"	2	"	3					FERROMAG. DEFICIENT COMPARED WITH 894. 895.	
698														
700														
702														
704														
706														
708														
710														
712					"	2	"	3						
714														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

HOLE NO: MR-11

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716			BASALT PILLOW LAVA, BRECCIA		"	2	"	3						
718														
720														
721					"	2	"	3						
				SHARP INTERPENETRATING CONTACT OBSCURED BY BROKEN CORE										
			721.2		721.2		721.2							
			ASH - FINE LAPILLI VOLCANICLASTIC	PINK (FD-SI ALT) TO GREEN-YELLOW (SERICITE ALT.) ASH TO FINE LAPILLI VOLCANICLASTIC WITH 10-20% VOL. FINE STRONG PYRITE FODS - PROBABLY REWORKING FRAGMENTS.			VERY SPARSE WHITE FINE CALCITE/QTZ VEINS + PATCHES	1					PET. 396898: 721.8; REP. 721.2 - 722.2 DACITIC TUFF. PERVASIVE, STRONG SERICITISATION A LITTLE VITRIC TUFF.
722			722.2							F 721.7; 2cm; 45°C.A, PUG + SHEARED ROCK, SURROUNDED BY QTZ/CARB VEINS				
			BASALT LAVA.	GRADATIONAL CONTACT OVER 200cm										
723				GREY-GREEN PREDOMINANTLY MASSIVE WEAKLY VESICULAR BASALT WITH SOME (HYALOCLASTITE?) BRECCIA ZONES IN FILLED WITH LIGHT GREEN CHERTY AND PATCHES OF HYDRAULIC BRECCIATION BY QTZ/CARB VEINS.										
724				JAGGED CONTACT. MAY BE SOME ASH VCL. MIXED WITH TOP OF ANDESITE.										
			724.8											
725			ANDESITE LAVA BRECCIA.	GREEN - BLACK (WITH PATCHES OF PINK BROWN FD-LI ALT) VERY WEAKLY FELDSPAR PHYRIC ANDESITE LAVA BRECCIA. CLASTS VERY ANGULAR; (WITH-OUT GHOSTING BY ALTERATION); <1 - 5 cm; MATRIX IS ANDESITIC OR PINKISH ALTERED CHERT.	725.0 PATCHY PINK FD-LI ALT	3								
726							"	1						
727				POSSIBLE VOLCANICLASTIC INTERMIXED 724.8 - 728.0										
728				MIXED HYALOCLASTITE - AUTOBRECCIA.	"	3			728.0 PATCHES OF GRANULAR PYRITE (<1% VOL)					
							"	1	729.0					
729														

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

HOLE NO: MK 11

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LOGGED: AMH

DATE: JUNE 87

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
730					" 3	" 1						
732												
734												
736											PET. 396899 736.9 REF. 724.8 - 748.5	
738											ANDESITIC BRECCIA MINOR ALBITISED PLAGIOCLASE, CHLORITISED FeMg PHENOCRYSTS IN ALBITISED PLAGIOCLASE MICROLATHS GROUNDMASS. FLOW BRECCIATED WITH CHERTY MATRIX.	
740												
742												
744					" 3	" 1						
746				GRADATIONAL CONTACT OVER 3cm - 60°C.A.								
748			748.5.								PET. 396900 748.6 REF. PMC 748.5 - 751.5	
750			B or A qv - flv.	PREDOMINANTLY LIGHT TO DARK GREY-GREEN, MOD - POORLY SORTED VLCL. WITH 50cm BAND OF SIMILAR COMPOSITION BUT FINER (qv)							SCORIACEOUS BRECCIA (PYROCLAST) CHLORITIZED PUMICE, CHLORITE SE/QTZ MATERIAL LAVA CLASTS IN SPARSE QTZ MATRIX. CONTIGUOUS CHROMITE.	
752			751.5									
754			BASALT? LAVA BRECCIA	VAGUE LAMINAE IN qv AT HIGH ANGLE (160° - 90°) TO CORE AXIS. BROKEN CORE OBSCURES CONTACT.	754.0 " 3						PET. 396901 749.8 REF. PMC 748.5 - 751.5	
756					" 2	" 1					TUFFACEOUS BRECCIA ANDESITIC LITHIC / VITRIC TUFF CHLORITE / ALBITE / CARBONATE ALTERED.	
758				DARK GREY-GREEN BASALTIC? BRECCIA. 751.5 - 756.2 CLASTS DOMINANT. CLAST OUTLINES VERY VAGUE RARE PATCHES OF CHERTY MATRIX. 756.2 - 761.5 CLASTS HAVE VERY SHARP							PET. 396902; 758.2; REF. 756.2 - 761.5	
760											ANDESITIC BRECCIA PHENOCRYSTS - ALBITISED PLAGIOCLASE; CALCITE / CHLORITE / QUARTZ PSEUDOMORPHED PYROXENES. CLASTS CEMENTED BY DOLOMITIC CHERT.	
762			761.5 A.Y. flv	EXTREMELY ANGULAR OUTLINES. RATIO OF CLASTS: MATRIX = 60:40. MATRIX IS PALE GREEN-GREEN AND CHERTY IN CONTRAST WITH BLACK GREEN CLASTS. TEXTURE VERY SIMILAR TO ANDESITE LAVA BRECCIAS (HYALOCLASTITE BX?) NOTE CLASTS ARE NON-FELDSPAR-PHYRIC AND ONLY OCCASIONALLY VESICULAR - COULD BE ANDESITE OR BASALT.	GRADATIONAL CONTACT OVER 10cm	" 2	" 1						

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

HOLE NO: MK 11

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DATE: JUNE 87

DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
762				CLASTS BUFF AND DARK GREEN; ANGULAR TO SUBROUNDED; 2-8mm RARELY TO 20mm; OUTLINES VAGUE DUE TO MATRIX OF SIMILAR COLOUR (AND COMPOSITION?) NOT BEDDED - MASSIVE ASPECT EXCEPT FOR WEAK ALIGNMENT OF CLASTS AT 45° C.A.	" 2	" 1					
763												
764					764.0 " 2							
765												
766												
767				GRADATIONAL CONTACT OVER 10cm								
				767.5	767.5	" 1	767.5					
768			A.Y. f-m lv.	GREY-GREEN VOLCANICLASTIC COARSER AND MORE POLYMICT THAN ABOVE. CLASTS ARE ANGULAR AND INCLUDE BASALT (ANDESITE?), CHERT AND PYRITE + CREAM SERICITE ALT. FRAGMENTS.	SELECTIVE CREAMY SERICITE ALTERATION OF SOME VLCL FRAGMENTS (POSSIBLY ALT. BEFORE DEPOSITION?) 2		PYRITE FRAGMENTS IN VOLCANICLASTIC.				
769				SHARP CONTACT								
				769.4			769.4					
770			A.Y. av f lv.	INTERBEDDED FINELY BEDDED - SLUMP BEDDED GREEN AV AND Y f lv SIMILAR TO 767.5 - 769.4.	" 2							
771				CONTACT OBSCURED BROKEN CORE								
				771.4								
772			A.Y. f-m-c lv	SIMILAR TO 767.5 - 769.4 WITH NOTEABLE AND CONTINUOUS LAMINATIONS DOWNHOLE AND ALIGNMENT OF CLASTS AT 45° C.A.	CHERTY IRREG. CONTACT AT 20° TO CA " 1							
				772.2								

av. DARK GREEN - BLACK VAGUELY BANDED av.

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

HOLE NO: MAR-11

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DEPTH	ROCK NAME	DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	REMARKS
772.7 – 774.2	Andesite Lava Breccia (Hyaloclastite)	Sharp irreg. contact. Distinctive "eutaxitic" shape dark green F.P. andesite fragments in light grey cherty matrix. Clast : matrix = 40:60. Some clasts strongly altered to creamy sericite.	" 2	" 1			
774.2 – 776.8	AY f-m lv.	Gradational contact over 10cm. Similar to 767.5 - 769.5. Mixed chert + VLCL over 15cm on contact	" 2	" 1			
776.8 –	Andesite Lava Breccia.	Similar to 727.7 - 774.2. Angular 1-15cm f.p. andesite lava clasts in grey cherty matrix. Dark green - black andesite clasts are variably pink altered. Clast : matrix = 50 : 50	776.8 Patchy pink Fd Ci Alt. 3; " 3; " 3	776.8 Patches of cream carbonate + quartz as hydraulic fracture patches and minor irregular veins 2; " 2			

Depth scale: 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

HOLE NO : MAC-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
784					" 3	" 2						
786				GRADES INTO ↓								
788				787.4 BRECCIATED FP. ANDESITE LAVA, NO CHERT MATRIX. CLASTS WEAKLY DEFINED								
790												
792												
794												
796												
798												
800												
802					" 3	" 2						
804												
806				GRADES INTO ↓								
808				808.0 FP. ANDESITIC LAVA BRECCIA, DISTINCT ANGULAR CLASTS, BROWN-GREY CHERTY MATRIX.				F • 812.0; 50cm RUBBLE, DUG				
810												
812												
814												
816												
818												
820												
822												
824					" 3	" 2						

PROJECT : HELLYER ML

PROSPECT: HELLYER MILL SITE

ABERFOYLE EXPLORATION

DIAMOND DRILL LOG

HOLE NO: MK-11

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DEPTH	DRILL RUNS	CORE LOSS	LITHOLOGY: ROCK NAME	LITHOLOGY: DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	WEATHERING	VISUAL LOG	REMARKS	DEPTH
826					" 3	" 2						
828												
830												
832												
834												
836												
838					" 3	" 2						
840			839.9 EOH.									
842												
844												
846												
848												
850												

APPENDIX 2

LIST OF ORIGINAL DATA PLANS

APPENDIX 2 LIST OF ORIGINAL DATA PLANS

List of plans, held at Burnie, containing original data used to prepare this report.

Geology

Plate No.	Title	Coverage
MAC 161 A,B,C,D	1:10,000 scale interpretive geology	All areas
MAC 148/YY	1:2,500 scale interpretive geology	Tailings Dam
MAC 148/ZZ	1:2,500 scale interpretive geology	Tailings Dam
MAC 148/XX	1:2,500 scale interpretive geology	Mill Site
MAC 148/WW	1:2,500 scale interpretive geology	Mill Site
MAC 148/4	1:2,500 scale interpretive geology	Water Storage Dam

Drilling

Plate No.	Title
MAC 159	1:1,000 section, DDH MAC 10
MAC 160	1:1,000 section, DDH MAC 11
HT 89	1:1,000 section, DDH HAT 9