The Shell Company of Australia Limited
METALS DIVISION

DRILL LOG SHEET

PROJECT: HIGHCLERE

Hole No: HG1

COLLAR CO-ORDINATES: 5427500m N 394400m E

LOCATION CODE: MQ03

COLLAR R.L.:

LOCATION: HAMPSHIRE GATE (DUDFIELD ROAD)

MAP/PHOTO REFERENCE: HELLYER 1:100000

DATE STARTED	7-12-82	HOLE SIZE		FROM	TO	TOTAL	CORE STORAGE	DEVONPORT
DATE FINISHED	23-12-82	NON CORE	PERCUSSION	0	85m	85m	Nº OF TRAYS	
TOTAL DEPTH	258·5 m						SAMPLE STORAGE	DEVONPORT
LOGGED BY	P.A.RUXTON	CORE	B Q	85 m	258·5m	173·5m	ASSAY LAB.	COMLABS
CONTRACTOR	OVERLAND DRILLING CO.						ASSAY REPORTS	DEVONPORT
RIG	SCOUT/WARMAN 250							
DRILL CREW		CASING					MIN. & PET. LAB.	FANDER
							MIN. & PET. REPORTS	DEVONPORT
		CASING LEFT						

HOLE SURVEY DATA

INSTRUMENT:

DEPTH	INSTRUMENT INCL.	INSTRUMENT AZ.	ACID ETCH INCL.	ACID ETCH AZ.	REMARKS
COLLAR	VERT.				

GRAPHIC/LETTER SYMBOL LOGGING KEY

STRUCTURE/ALTERATION CODE

B BEDDING
J JOINTING
C CLEAVAGE
F FOLIATION
sh SHEARING
q QUARTZ VEINS
O OXIDATION

DRILLING SUMMARY:

07

285080

PROJECT : HIGHCLERE SCALE : 1:100 HOLE No : HG 1

From	To	Inter'l (m)	Core Rec'd	% Rec'd	Sample No	Grap'c Log	Assays			% Estimates	Core Angles	Alt.	T.S. P.S.	Description
0	2				9301	S			2000 Ground					Soil and weathered dolerite chips - ferromagnesian minerals weather red (Hornblende)
						S	Collared at 1.5m							
						S			750					
2	4				9302	D			340					Dolerite - black/grey chips with green hornblend up to 2mm across. Typical Jurassic dolerite.
						D								
4	6				9303	D			240					Dolerite - black/grey - green hornblende up to 3mm across - Jurassic dolerite.
						D			Water Table					
							Dolerite							
6	8				9304	D			250					Dolerite - black/grey - Hornblende - 10% weathered fragments (to limonite / hematite) water table ≈ 7m
						D								
8	10				9305	D			250					60% Dolerite, 40% weathered dolerite - minor claystone Water colour change to dark brown - Dolerite as above weathered material brown/yellow.
						W.B								
10	12				9306		clay layer (plant fragments)		360					Dark Brown shale/clay with plant carbonaceous fragments - soft but consolidated 30%, 10% weathered dolerite, 10% dolerite at base of sample.
12	14				9307	D			470					Dolerite - m.g. with visible Hb - minor amygdales filled with blue & white zeolites (- hard)
						D								
						D								
14	16				9308	D			500					Dolerite - m.g. as above.
						D								
						D								
						D								
16	18				9309	D			1600					Dolerite - m.g. Hb - minor red staining in Hb indicative of weathering - only very slight, some Calcite
						D	Pale Hm staining Amygdales							
						D			Reddish water colouration					
18	20				9310	D			2500					Weathered dolerite - red dolerite with Amygdaloidal fills of green and white zeolites (10%). Red colour reflects Hm staining of Ferromagnesian minerals (dominantly Hb) (Some hard Chips magnetic!) + Calcite < 1%.
						D	Hm							
						D								
20	22				9311	D			1600					Dolerite - minor Hm staining with claystone/Soapstone (green) - Zeolite nature & some free calcite < 1%
						D								
						D								
22	24				9312	D			1500					Dolerite - partly weathered Hm (15%) Some dark brown shale/mudstone particles (10%) minor green zeolites < 2%
						D								
						D								
24	26				9313		Hm Pale		1200					Weathered dolerite - reddish hue - Ferromagnesian minerals altered to Hm. - Amygdales filled with

5 cm

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PROJECT : HIGHCLERE SCALE : 1:100 HOLE No : HG 1

081

From	To	Inter'l (m)	Core Rec'd	% Rec'd	Sample No	Grap'c Log	Assays		% Estimates	Core Angles	Alt.	T.S. P.S.	Description
													White zeolites - 90% altered dolerite Minor Calcite < 1%
26	28				9314	Hm			1100				Weathered dolerite - Hm staining and white phenocrysts - Amygdales - blue/green zeolite fill, minor clay or soap stone (5%)
28	30				9315	Hm			520				Extremely weathered dolerite at base - Red chips composed of > 50% Hm stain with clay/soapstone and white/clear crystal inclusions - majority of sample as in 9315
							Major Flow Top						
30	32				9316	Bole Red Chips			480	Red Water			Ex. weathered dolerite - red Hm stained chips minor green zeolite - 30% fresh dolerite minor amygdales
32	34				9317				340				Weathered dolerite - red staining less apparent, grey reddish colour, very minor zeolite.
34	36				9318				910				Weathered dolerite - minor red Hm staining - dark grey colour (reddish tinge): Pyrite replacing woody material; minor clay/soapstone and calcite
							Minor Flow Top						
36	38				9319	Bole Hm			780				Weathered dolerite - red/grey altered dolerite with black (Fe/Mn rich ?) amygdales - minor khaki siltstone/shale ie: poor soil development; Trace green zeolites.
38	40				9320	Fresh			510				Weathered dolerite / fresh dolerite - partly weathered dolerite with minor amygdales (green zeolite fills) at top (slightly reddish) - fresh dolerite at the base of sample.
40	42				9321				420				Fresh dolerite - very minor (< 5%) of chips reddened. Trace green zeolite.
42	44				9322				1100				Fresh dark grey dolerite - minor amygdales 5% Trace zeolites - essentially fresh.
44	46				9323				1200				Fresh dolerite - minor amygdales 5% - Traces reddening. 1-2% chalk/siltstone - major contamination.
46	48				9324				390				Fresh dolerite - Trace calcite - no visible amygdales Trace reddening in some chips - probably contamination
48	50				9325				320				Fresh dolerite - 5% large chips (2mm across) of weathered dolerite - Hm stained amygdales and claystone.

5 cm

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PROJECT : HIGHCLERE SCALE : 1:100 HOLE NO : [redacted]G1

98

From	To	Inter'l (m)	Core Rec'd	% Rec'd	Sample No	Grap'c Log	Assays		% Estimates	Core Angles	Alt.	T.S. P.S.	Description
50	52				9326	D D D D	Fresh	38C					Fresh dolerite - 2-5% amygdales - black & small - irregular shaped - ; (green zeolite + clay/soapstone about 5% - ie. partially altered.
52	54				9327	D D D D		42C					Fresh dolerite - Pile of chips is a much lighter grey colour - no apparent cause - rock has similar mineralogy to above 3% green zeolites etc ; 3% red altered chips
54	56				9328	D Fe Fe D Fe	Bole Weathered.	18CC					Weathered dolerite - red staining in most chips (Hm) amygdales 2-3%, brown/green clay/soapstone. Definately a basalt/dolerite bole
56	58				9329	Fe Fe		13CC					Weathered dolerite - not as weathered as previous sample dark grey/red colour to chips - Hm stained 8-12% zeolite as amygdale fills; 1-2% crystalline calcite.
58	60				9330	D Fe Fe D		19CC					Weathered dolerite - red hematite stained chips, amygdales 3-12% - green/white/brown zeolite fills Calcite appears to fill amygdale centres (hence crystalline void filling phase.)
60	62				9331	D Fe D Fe		13CC					Weathered dolerite - Hm staining common - most chips affected 15% amygdales and zeolite (green fills) plus clay/soapstone // Alteration products also filling fractures as well as voids // 2-5% calcite less.
62	64				9332	D D	Fresh to Sh. dolerite	6-8C					Weathered dolerite - light grey colour, Hm red staining minor ; amygdales + zeolite fill fragments 5% of sample ; some calcite in veins
64	66				9333	Fe D Fe	Bole	16CC					Very weathered dolerite/basalt - Red Hm staining pervasive, dark brown silt mudstone 2%; zeolite fills (green) 2-5%; calcite 1-2% - less weathered at base of sample.
66	68				9334	Fe D D Fe Fe D		12CC					Weathered dolerite - red Hm stained chips, 3-5% amygdales, black or green colouration in zeolites. Red/dark grey colour to chips. Also 2% silt stained soil.
68	70		•		9335	Fe D		11CC					Partly weathered dolerite - minor red (Hm) staining, green yellow zeolite/soapstone filling amygdales = 9 to 20%; some greens & black zeolitic components large shale chips 3% with plant debris
70	72				9336	D Fe Fe D		13CC					Partly weathered dolerite - red staining not uncommon yellow/brown soft clay/soapstone (zeolite) 10-15% of rock - mainly free but has an amygoroidal type texture on some chips.
72	74				9337	Fe D D D		11CC					Partly weathered dolerite - minor red staining at top of sample - bottom of sample is almost fresh dolerite, Brown/grey soapstone 15-25% of chips also some green zeolite rock 2-4% - baked + soapstone, probably amygdale fills
74	76				9338	D D		13CC					Fresh dolerite/basalt. -

5 cm

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2850083 HOLE NO.

PROJECT : HIGHCLERE SCALE : 1:100 HOLE NO : HC1 (AQ Hole diam. 48 mm)

From	To	Inter'l (m)	Core Rec'd	% Rec'd	Sample NO	Grap'c Log	Assays						% Estimates		Core Angles		Alt.	T.S. P.S.	Description
							40% amygdales												numerous amygdaloids - Zeolitic material & clay/soapstone of amygdale fills 40 - 45 % of the rock mainly dark brown/white colours, dolerite Fresh
76	78				9339							800							Large chips of brown/grey, clay/shale = 3 % of chips. Fresh amygdaloids dolerite/basalt - green zeolitic
72	80				9340							1700							amygdaloidal fill material 20 % of rock some brown soapstone still 10 % - Calcite = % minor shale 1 %, Tr Hm Fresh amygdaloidal basalt/dolerite - Green to brown
80	82				9341							280							zeolitic amygdale fills 8 - 10 %, Tr Hm & Limonite Fresh dolerite/basalt - amygdales filled with green zeolitic
							Fresh								V Hard (1½ hours)				material = 8 % , 3 large chips of brown/grey shale (contamination)
82	84				9342							800							Fresh dolerite - dark grey - minor amygdales & zeolites < 2 % + calcite 2 % - some large chips of shale - contamination
84	85				9343							330							Fresh dolerite/basalt - 10 % green/brown clay/soapstone/ zeolite as amygdales fills + free chips 2 - 4 % calcite. some large shale chips
85							Diamond Drilling at 85 m - Percussion capacity of rig reached as = 80 m with 4 Hrs for the last 5 m + large water return and low chip to water ratio. Hole continued with F30 Rig											

5 cm

SHEET ... OF ... SHEETS

HOLE NO 1

[redacted] SHE[redacted]OMP[redacted]F AU[redacted]RALIA[redacted] - M[redacted]S DI[redacted]ON [redacted]

PROJECT: HIGHCLERE

DIAMOND DRILL LOG - SAMPLING RECORD

HOLE NO: HG1

From	To	Interval (m)	Core Rec'd	% Rec	Sample No.	Composite No.	Assays Sn	W	CaF_2	Cu	Pb	Zn	Mo	Au	Weighted Assays. Ratios	% Estimates	Core Angles	T.S Lith	T.S P.S	Description
85.0	87.6																			Predominantly massive green-grey basalt
87.6	90.5																			Strongly vesicular & weathered dk. grey basalt. Some amygdales
90.5	92.1																			Light brown silt/mud unit with very thin basalt interlayers at 91.6 m (10 cm thick) and 92.5 m (15 cm thick)
92.1	122.5																			Predominantly massive fresh basalt with some vesicles / amygdales weakly zoned. Some Fe staining bleaching, Veinclite
122.5	124.8																			Lignite / sediments (silt) sand, Basal pebble bed
124.8	143.6																			Predominantly massive grey-green basalt (slightly weathered → speckled texture) Top of flow (124.8 - 127.5m) amygdaloidal and strongly weathered
143.6	149.0																			Amygdales / vesicular basalt at top of interval (weathered) grading downward into massive green/grey basalt
149.0	181.5																			Strongly vesicular/weathered (partly amyg.) basalt to approx 153.7 m Sediment bands 151.3 - 151.5 m (+ possibly 152.0 - 152.5 m). Mn abundant. Bottom of interval (153.7 - 181.5 m) generally massive green-grey basalt with some zones of small amygdales (168.0-170.5m)
181.5	190.5																			Fine sand clay (laminated and thin bedded in part) with thin (2 cm) lignite bands
190.5	202.3																			Top of interval vesicular / weathered basalt to ~ 194.5 m then massive mod fresh basalt to 201.5 m then amyg. (coarse) to base., strongly weathered at base.
202.3	203.0														202.3					"Grey billy"? Highly siliceous
203.0	212.0																			Minor strongly weathered basalt (green clay) and small pebbles approx 20 cm (at top of interval) then soft sediment conglomerate (Tertiary) - f.g. sst. and slst., then bedded f.g. sst (?) to 206.3 m then fragmented weathered skarn horizon (as in 'C' horizon profile) becoming fresher with depth but remaining hematite (no magnetite) (core loss)
212.0	231.6																			Becoming massive fresh hematite / magnetic skarn with some strongly weathered geothitic layers (core loss)
231.6	232.8																			Strongly weathered hematite skarn → clay soil (Core loss)
232.8	235.8																			Pyroxene - magnetite skarnised sediment (core loss)
235.8	239.8																			M.S.M sediments (psammatic) with only minor pyx - magnetite skarning
239.8	248.0																			Pyroxene - magnetite skarn (variable pyx : magnetite) Magnetic cont. between 243 - 246 m (Core loss)
248.0	255.1																			Strongly kaolinised weathered sediment
255.1	258.5																			Strongly weathered / kaolinised sericitised granite.

5 cm

Sheet [redacted] of [redacted] Sheets

084

2850851