ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH120**
SHEET 1 of 4
REFERENCE No **12066**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Peak Downs Hwy Overpass Abutment B; CH: 5647m; COORDINATES 720966.1 E; 7658002.9 N
PROJECT No FG6184 SURFACE R.L. 12.84m PLUNGE DATE STARTED 7/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 8/10/14 DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	RQD ( ) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (EC VC C M W VW EW)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	12.84			**Silty CLAY (TOPSOIL)** Dark brown, moist to dry, stiff. High plasticity.		(CH)							
0.50	12.34			**Silty CLAY (ALLUVIUM)** Orange-brown mottled pale grey, moist, stiff. High plasticity.									
1			A								4,4,7 N=11		SPT
2			B			(CH)					4,4,5 N=9		SPT
3			C								4,4,8 N=12		SPT
3.70	9.14			**Silty Clayey SAND (ALLUVIUM)** Pale orange-brown, moist, medium dense. Fine grained.									
4			D			(SC)					5,7,12 N=19		SPT
4.80	8.04			**Silty CLAY (ALLUVIUM)** Pale brown and grey, moist, stiff to very stiff. High plasticity.									
5			E								3,4,5 N=9		SPT
6			F								4,5,6 N=11		SPT
7			G			(CH)					5,7,11 N=18		SPT
8			H								4,5,9 N=14		SPT
9			J								3,6,9 N=15		SPT
10													

AUGER / CASING / WASH BORING / CORE DRILLING

REMARKS Kgwu - Wundaru Granodiorite;
Sample failed along existing defect surface.

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BOREHOLE No BH120
SHEET 2 of 4
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10	2.84				**Silty CLAY (ALLUVIUM)** (Cont'd)		(CH)					3,8,8 N=16	K	SPT
10.70	2.14				**Sandy Clayey SILT (ALLUVIUM)** Pale brown and grey, moist, stiff to very stiff. Low plasticity. Fine grained sand.		(ML)					4,5,6 N=11	L	SPT
12				M								4,7,10 N=17	M	SPT
12.80	0.04				**Silty CLAY (ALLUVIUM)** Pale grey and brown, moist, stiff to very stiff. High plasticity.							6,9,13 N=22	N	SPT
14				P			(CH)					5,7,9 N=16	P	SPT
15				Q								5,6,7 N=13	Q	SPT
15.70	-2.86				**Silty Clayey SAND (ALLUVIUM)** Pale orange-brown and grey, moist, medium dense. Fine to medium grained sand. Trace fine gravel.		(SC)					8,11,9 N=20	R	SPT
16.80	-3.96				**Silty CLAY (ALLUVIUM)** Pale grey and brown, moist, very stiff. High plasticity.							9,12,13 N=25	S	SPT
18				T			(CH)					8,12,16 N=28	T	SPT
19				U								8,13,15 N=28	U	SPT
20														

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BOREHOLE No **BH120**
SHEET 3 of 4
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20	-7.16			V	**Silty CLAY (ALLUVIUM)** (Cont'd)		(CH)					7,12,15 N=27	SPT
21				W								6,8,10 N=18	SPT
21.80	-8.96				**Sandy Silty CLAY (RESIDUAL)** Pale grey, moist, stiff. Low plasticity. Fine grained sand.								
22				X			(CL)					6,6,8 N=14	SPT
23				Y								hw,hw,8 N=8	SPT
23.50	-10.66				**Silty Clayey SAND (RESIDUAL)** Pale grey, moist, medium dense to dense. Fine grained.								
24				Z								10,16,17 N=33	SPT
25				AA			(SC)					9,10,18 N=28	SPT
26				AB								6,7,16 N=23	SPT
26.80	-13.96				26.50m: Becoming medium grained sand.								
27				AC	**GRANODIORTIE (Kgwu)** **HW:** Brown, medium to coarse grained, extremely low to very low strength.	+						15,22,30 N=52	SPT
28				AD		+		HW				20,30/120	SPT
29				AE		+						30/85 hb	SPT
30						+							

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BOREHOLE No **BH120**
SHEET 4 of 4
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30	-17.16			AF	**GRANODIORTIE (Kgwu)** **HW:** (Cont'd)							30/80 hb		SPT
31				AG				HW				30/100 hb		SPT
32.00	-19.16		(100)		**MICRODIORITE (Kgwu)** **SW:** Grey, medium grained, massive, high to very high strength. Frequent thin calcite veins throughout (<20mm). Defects: - Js; 0°-30° (2/m); Pl/Ro, OP; - Js; 30°-60° (<1/m); Pl/Ro, OP;							Is(50) = 1.98MPa Is(50) = 1.93MPa	D (32.05m) A (32.10m)	
33			100 (87)									Is(50) = 1.03MPa; # Is(50) = 0.83MPa; #	D (32.90m) A (32.95m)	
34			100 (98)					SW				Is(50) = 4.56MPa Is(50) = 6.67MPa Is(50) = 0.41MPa; #	A (33.58m) D (33.64m) D (34.23m)	
35												34.90m-35.10m: J; 70°, CA;		
36 36.25	-23.41		100									Is(50) = 1.28MPa; # Is(50) = 4.53MPa	A (35.23m) D (35.33m)	
					Borehole terminated at 36.25m. .									
37														
38														
39														
40														

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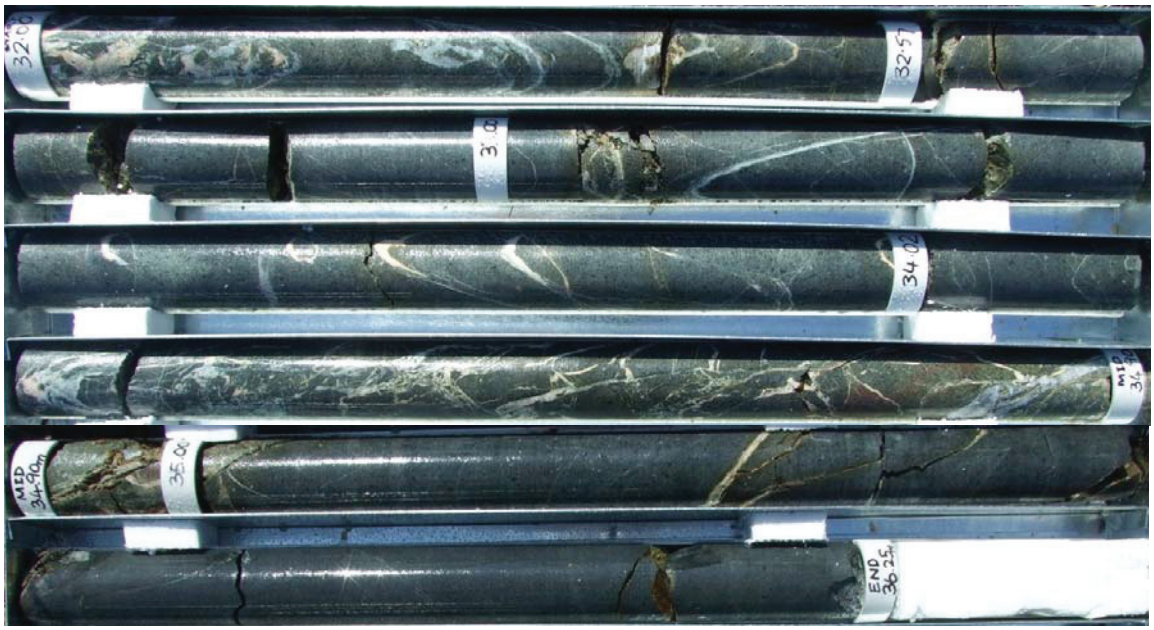
CORE PHOTO LOG

DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3066 3336

Queensland Government

Department of Transport and Main Roads

Project Name	**Mackay – Ring Road**		
Project No	FG6184	Date	08/10/14
Borehole No	BH 120	TMR H No	12066
Location	Peak Downs Highway Overpass	Start Depth (m)	32.0
Detail	Abutment B	Finish Depth (m)	36.25
Chainage	**5647**	Submitted By	M.Ensor
Remarks			



0 100 200 300 400 500 600 700

SCALE 1:5

GEOT043/1