Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/2-2004

BOREHOLE No BH129
SHEET 1 of 3
REFERENCE No H9438

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
LOCATION CONTROL LINE: MCAO - Ch. 23355.3 - OFFSET 4.9 R
COORDINATES 9427.5 E; 173604.6 N
PROJECT No FM2055
SURFACE R.L. 1.68
DATE STARTED 18/8/04
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 18/8/04
DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	MATERIAL DESCRIPTION	USC	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	1.68	**SANDY SILTY CLAY - TOPSOIL** Dark grey to mottled orange, moist, soft to firm, high plasticity, fine to coarse sand.	CI	▽ 7/9/04 ▽ 6/10/04 ▽ 18/8/04	1,2,1 N=3 SPT
-0.02		**SAND / CLAYEY SAND - ALLUVIUM** Orange grey to orange brown, wet, mainly loose to medium dense. Minor fine fraction.			2,2,2 N=4 SPT
		Becoming medium dense with depth.	SP-SC		3,5,6 N=11 SPT
					4,5,6 N=11 SPT
-4.92		**SILTY SAND - ALLUVIUM** Pale grey to orange brown, slightly moist, mainly very stiff. Fine grained sand, slightly clayey silt towards bottom.			5,4,6 N=10 SPT
					4,5,10 N=15 SPT
-8.32			SM		8,9,13 N=22 SPT

AUGER / CASING / WASH BORING / CORE DRILLING
RQD ( ) % CORE REC %
SAMPLE
LITHOLOGY
WEATHERING
INTACT STRENGTH EH VH H M L VL EL
DEFECT SPACING (mm) 20 60 200 600 2000
GRAPHIC LOG

BOREHOLE WITH LITHOLOGY GATEWAY NORTHERN UPGRADE.GPJ ENG BOREHOLE FINAL.GDT 28/4/05

REMARKS Defect angles have been measured with respect to a horizontal plane.

LOGGED BY
B.Woodgate & A.Dissanayake

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ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/2-2004

BOREHOLE No BH129
SHEET 2 of 3
REFERENCE No H9438

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
LOCATION CONTROL LINE: MCAO - Ch. 23355.3 - OFFSET 4.9 R COORDINATES 9427.5 E; 173604.6 N
PROJECT No FM2055 SURFACE R.L. 1.68 DATE STARTED 18/8/04 DATUM SETP
JOB No DATUM AHD DATE COMPLETED 18/8/04 DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( )% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES / TESTS
10	-8.32				**SILTY SAND - ALLUVIUM** (As above)		SM					7,10,13 N=23	SPT
11													
12												5,9,9 N=18	SPT
13	-11.32				**SANDY CLAY - ALLUVIUM** Pale grey, moist to slightly dry, very stiff, high plasticity.		CI					4,8,10 N=18	SPT
14	-12.32				**SANDY SILTY CLAY - ALLUVIUM** Grey brown to dark mottled brown, moist to mainly dry, mainly very stiff. Frequent irregular mottling, some concretions and some Mn oxide nodules.		CL					6,8,11 N=19	SPT
15													
16												7,10,14 N=24	SPT
17													
18												7,10,14 N=24	SPT
19												7,11,16 N=27	SPT
	-18.07												
20	-18.32				**SANDSTONE** (See next page)		XW						

BOREHOLE WITH LITHOLOGY GATEWAY NORTHERN UPGRADE.GPJ ENG BOREHOLE FINAL.GDT 28/4/05

REMARKS Defect angles have been measured with respect to a horizontal plane.

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ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/2-2004

BOREHOLE No BH129
SHEET 3 of 3
REFERENCE No H9438

PROJECT GATEWAY UPGRADE PROJECT GEOTECHNICAL INVESTIGATION - NORTHERN SECTION
LOCATION CONTROL LINE: MCAO - Ch. 23355.3 - OFFSET 4.9 R
COORDINATES 9427.5 E, 173604.6 N
PROJECT No FM2055
SURFACE R.L. 1.68
DATE STARTED 18/8/04
DATUM SETP
JOB No
DATUM AHD
DATE COMPLETED 18/8/04
DRILLER R&D DRILLING PTY LTD

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( )% / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC / WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
20	-18.32				**SANDSTONE** FINE TO MEDIUM GRAINED, MAINLY LAMINATED TO MASSIVE, POORLY CEMENTED ROCK. XW : Possible XW rock.		XW				Drilling record only		
	-18.82		(89)		**MW :** Orange brown to blue brown, mainly laminated to massive, mainly medium strength. Some carbonaceous laminations. Defects - Generally rare. - Drilling induced lamination partings <10deg (1-2/m).		MW				Is(50)=0.93 MPa Is(50)=0.90 MPa	o x	
21													
22			100								Is(50)=0.53 MPa Is(50)=0.21 MPa	o x	
			(100)										
23											Is(50)=0.53 MPa Is(50)=0.89 MPa	o x	
											Is(50)=0.32 MPa Is(50)=0.86 MPa	o x	
	-21.84				**SW :** Dark grey to blue grey, laminated to massive, mainly medium strength. Frequent carbonaceous laminations and occasional scattered rip-up clasts. Defects - Generally rare. - Occasional drilling induced lamination partings 20-40deg (1/m).						Is(50)=0.52 MPa Is(50)=0.69 MPa Is(50)=0.73 MPa Is(50)=0.12 MPa	o x o x	
24							SW						
							MW				MW sandstone band		
25			100										
			(100)								Is(50)=0.52 MPa Is(50)=0.34 MPa	o x	
							SW						
26							SW						
											Is(50)=1.60 MPa Is(50)=0.81 MPa	o x	
27											Is(50)=0.65 MPa Is(50)=0.47 MPa	o x	
	-25.92		100								Is(50)=0.53 MPa Is(50)=0.58 MPa Core lost in the hole	o x	
					Borehole terminated at 27.6m								
28													
29													
30													

BOREHOLE WITH LITHOLOGY GATEWAY NORTHERN UPGRADE.GPJ ENG BOREHOLE FINAL.GDT 28/4/05

REMARKS Defect angles have been measured with respect to a horizontal plane.

LOGGED BY
B.Woodgate & A.Dissanayake

Project: **Gateway Upgrade Project Geotechnical Investigation**

Borehole No: **BH 129**

Start Depth: 20.50m
Finish Depth: 27.50m
Project No: PM2055
H No: 9438