ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C51
SHEET 1 of 3
REFERENCE No H11052

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 13 COORDINATES 470891.3 E; 7096433.6 N
PROJECT No FG5799 SURFACE R.L. 81.10m PLUNGE DATE STARTED 27/06/11 GRID DATUM MGA94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/06/11 DRILLER Drillsure 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
0	81.10													
	80.95				**TOPSOIL**									
					Silty CLAY (Residual): Grey/brown, minor organic content, occasional gravel.		(Cl)					Based on driller's logs only		
1	80.10			A	**SILTSTONE (XW):** Generally exhibits engineering properties of a brown, moist, very stiff to hard, highly plastic silty clay. Minor organic content present.		XW					8,9,8 N=17		SPT
2				B								30/70mm N>50		SPT
3	78.10		(12)		**SILTSTONE (HW):** Brown, fine grained, subtly foliated, low strength. Defects: -Foliation at 35°-40° (~4/m) -Joint at 5°-10° (3-4/m) Defect spacing is generally close. Defects are generally planar, open, smooth, clay infilled.		HW				XW Clay Seam XW Clay Seam XW Clay Seam			
4	77.10		100 (44)								XW Clay Seam XW Clay Seam			
5			100 (25)		**SILTSTONE (MW):** Brown/grey, fine grained, subtly foliated, medium to high strength, indurated and/or slightly metamorphosed. Defects: -Foliation parting at 35°-40° (4-5/m) -Joint at 55°-60° (2-3/m) -Joint at 70°-75° (~1/m) Defect spacing is mainly medium. Defects are generally planar, tight or open, smooth, clay infilled, quartz infilled.							Is(50) = 0.79MPa Is(50) = 2.54MPa		x o
6														
7			100 (44)				MW					Is(50) = 0.48MPa		x
8			100 (20)								Andesite dyke? XW Clay Seam	Is(50) = 6.77MPa Is(50) = 7.43MPa		x o
9												Is(50) = 0.62MPa		o
10			100 (15)											

QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5799 - BRUCE HWY UPGRADE SECTION C.GPJ DWG48352.GDW Datgel CPT Tool gINI Add-in 12/12/2011 16:30

REMARKS *Point load failed along existing defect

LOGGED BY JA/DC

ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C51
SHEET 2 of 3
REFERENCE No H11052

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 13 COORDINATES 470891.3 E; 7096433.6 N
PROJECT No FG5799 SURFACE R.L. 81.10m PLUNGE DATE STARTED 27/06/11 GRID DATUM MGA94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/06/11 DRILLER Drillsure 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	71.10				**SILTSTONE (MW):** Cont'd									
			100 (0)											
11			100 (50)											
12														
13			100 (45)				MW							
14			100 (47)									Is(50) = 1.61MPa Is(50) = 1.84MPa	x o	
			100 (86)											
15												QZ Infill		
16			100 (43)									Is(50) = 0.76MPa Is(50) = 1.50MPa	x o	
	64.50				**ANDESITE (MW):** Grey/brown, fine to medium grained, massive, very high strength. Defects: -Joint at ~20° (2/m) -Joint at ~60° (2/m) Defect spacing is medium. Defect surfaces are planar, open, rough, clay infilled, iron stained.		MW					Is(50) = 8.08MPa Is(50) = 7.48MPa; * Water loss from 17.55m Is(50) = 3.29MPa	x o L	
17			100 (75)											
18	63.10				**SILTSTONE (MW):** Brown/grey, fine grained, subtly foliated, medium to high strength, indurated and/or slightly metamorphosed. Defects: -Foliation parting at 35°-40° (4-5/m) -Joint at 55°-60° (2-3/m) -Joint at 70°-75° (~1/m) Defect spacing is medium. Defects are generally planar, tight or open, smooth, clay infilled, quartz infilled.		MW					Is(50) = 0.95MPa Is(50) = 3.35MPa	x o	
19			100 (44)											
20														

REMARKS *Point load failed along existing defect.

LOGGED BY JA/DC

QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5799 - BRUCE HWY UPGRADE SECTION C.GPJ DWG46352.GDW Datgel CPT Tool gINt Add-In 12/12/2011 16:30

Queensland Government

ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C51
SHEET 3 of 3
REFERENCE No H11052

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 13 COORDINATES 470891.3 E; 7096433.6 N
PROJECT No FG5799 SURFACE R.L. 81.10m PLUNGE DATE STARTED 27/06/11 GRID DATUM MGA94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/06/11 DRILLER Drillsure 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	61.10													
	60.40		100		**SILTSTONE (MW):** Cont'd	× × × × × × × × × × × × × ×	MW					Is(50) = 0.56MPa		x
					Borehole terminated at 20.7m									
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														

QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5799 - BRUCE HWY UPGRADE SECTION C.GPJ DWG46352.GDW Datgel CPT Tool gINt Add-In 12/12/2011 16:30

REMARKS *Point load failed along existing defect

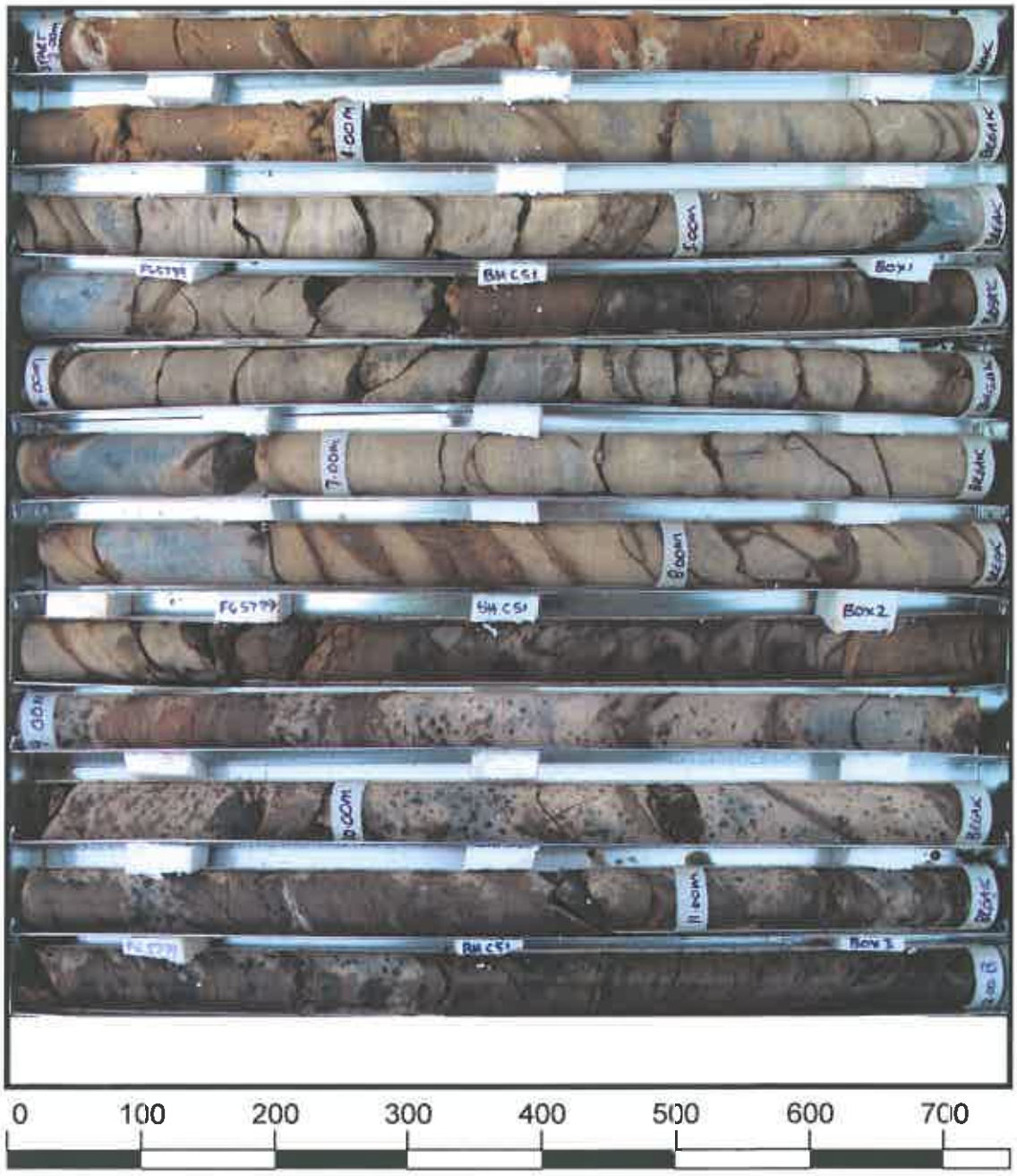
LOGGED BY JA/DC

DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3115 3035 Fax 07 3115 3011

Queensland Government

CORE PHOTO LOG - BH C51

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 13	Start Depth (m):	3.00
Reference No.:	H11052	Finish Depth (m):	20.70



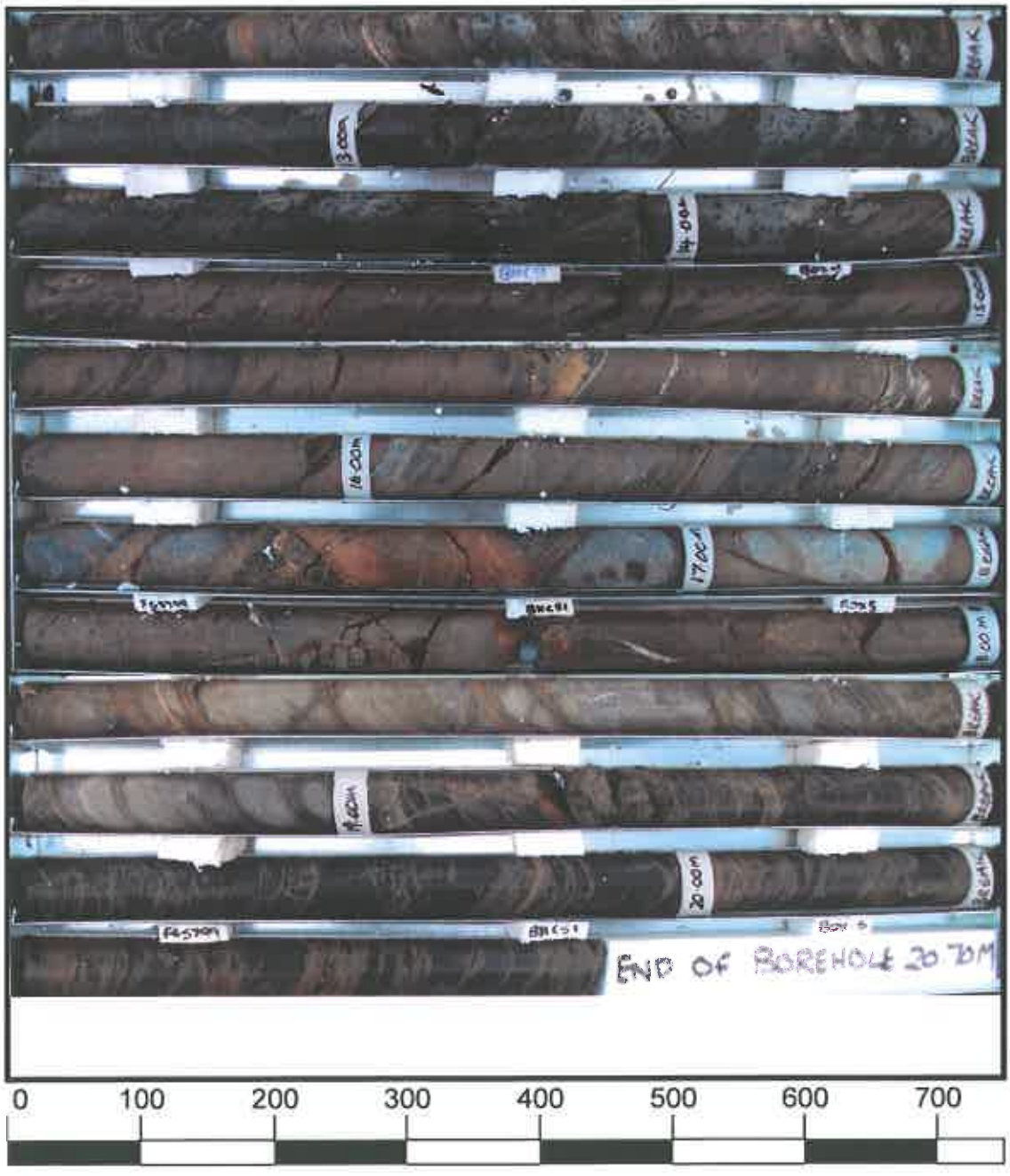
SCALE 1:5

DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3115 3035 Fax 07 3115 3011

Queensland Government

CORE PHOTO LOG - BH C51

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 13	Start Depth (m):	3.00
Reference No.:	H11052	Finish Depth (m):	20.70



SCALE 1:5