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Driller: Geodrill

Borehole: BH-02

Sheet: 1 of 3

Commenced: 21/07/08 Completed: 21/07/08

Client: Department of Main Roads (DMR) Location:

Project: Bruce Highway Road Cutting - Slope Stability Investigation: 464878

Project Number: 36826-001-01

Northing: 7104529

File Name: P:\WP\36826\Winlogs

Elevation: 77m

Inclination: 90°

Dri	Drilling Information				Soil Description	Testing			Strata Information			
Groundwater	Drilling Method	Sample Type	Depth	nsc	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Consistency/ Relative Density VS S F St VSt H VL L MD D VD H	Comments/ Test Results/ Origin	SPT Values Blows/150mm	Graphic Log	Elevation (m)	Depth (m)
	AV		-		TARMAC			Fill			-	_
			-	CI	ROADBASE Sandy CLAY Yellow-grey, medium plasticity, stiff, slightly moist	М		Residual Soil				- - - -
		SPT	1.0—	xw	Meta-SILTSTONE Grey-orange, extremely weathered, very low strength			Bedrock	SPT @ 1.00m 24, 25, 5/50mm N* = 55		76.0	- - -1.0 - - - - -
	RC		2.0	XW	Meta-SILTSTONE / Meta-SANDSTONE Alternate layers of Meta-Siltstone and Meta-						75.0	- -2.0 - - -
	NO.	SPT	3.0—		Sandstone, orange-grey, extremely weathered, very low strength				SPT @ 2.50m 11, 12, 22 N = 34		74.0	-3.0
		SPT	4.0						SPT @ 3.50m 12, 16, 21 N = 37		73.0	-4.0
			5.0—		Begin NMLC Rock Log @ -4.00m						72.0	

Drill Type: Hydrapower Scout Support: Hard Casing 2.50m Checked By: MS Checked Date: 08/08/08

Logged By: RA

Logged Date: 21/07/08

Remarks:



Borehole: BH-02

Commenced: 21/07/08 Completed: 21/07/08

Location:

Client: Department of Main Roads (DMR) Project: Bruce Highway Road Cutting - Slope Stability Investigation: 464878 Project Number: 36826-001-01 Northing: 7104529 File Name: P:\WP\36826\Winlogs

Elevation: 77m Inclination: 90°

Sheet: 2 of 3

ı		illing mati			Rock Description		Intact Strength			Rock Mass Defects			Strata Information	
Groundwater	Drilling Method	Core Recovery	Depth	Weathering	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	RQD (%)	Estimated Strength VL M VH	Is(50) A/D (MPa)	UCS (MPa)	Defect Spacing (m) 0.02 0.2 0.006 0.06 0.6	Defect Description (depth, type, angle, roughness, infill, thickness)	Graphic Log	Elevation (m)	Denth (m)
					Begin NMLC Rock Log at -4.00m									
	N M L C	100	4.0— - - - -	MW- HW	Meta-SANDSTONE Orange-grey, moderately to highly weathered, low to medium strength - Mainly grey - Orange-grey, moderately to highly	0					Refer to attached defects sheet		-4.0-	-4 - - - -
		100	5.0—	SW	veathered, low to medium strength CLAY Seam (30mm) Brown-orange, medium plasticity, moist, firm Meta-SANDSTONE	0							-5.0-	- - - -5
		82	6.0	XW SW- MW	Orange-grey, slightly weathered, medium to high strength Meta-SILTSTONE Mainly grey, extremely weathered, very low strength	0							-6.0	- - - - - - - -
	_	57	-	SW	Orange-grey, layered, extremely weathered, very low strength Meta-SANDSTONE Orange-grey, slightly to moderately weathered, medium strength, with grey bands of siltstone CLAY Seams (30-50mm)	0	-							-
		100	7.0—		Brown, medium plasticity, moist, firm LIMESTONE Dark grey, with white calcite viens, slightly weathered, high to very high strength	0						· - - - - - - - - - - - - - - - - - - -	-7.0	- - -7. - -
		40	-	XW	CORE LOSS (0.20m) LIMESTONE Grey, extremely weathered, low to very low strength	0						**		
		100	8.0		•	0						井	-8.0	- -8

Driller: Geodrill Remarks: Logged By: RA Date Logged: 21/07/08

Drill Type: Hydrapower Scout Support: Hard Casing 2.50m Checked By: MS Date Checked: 08/08/08



Borehole: BH-02

Sheet: 3 of 3

Commenced: 21/07/08 Completed: 21/07/08

Client: Department of Main Roads (DMR)

Location:

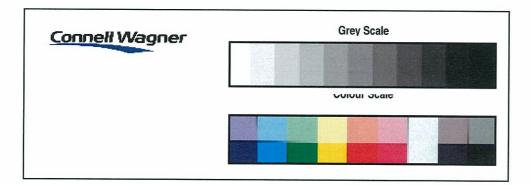
Project: Bruce Highway Road Cutting - Slope Stability Investigation: 464878

Project Number: 36826-001-01 Northing: 7104529

	Drilling Information			Rock Description		Intact Stre	ngth		Rock Mass Defects			Strata Information		
Groundwater	Drilling Method	Core Recovery	Depth	Weathering	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	RQD (%)	Estimated Strength VL M VH EL 'L' H' EH	Is(50) A/D (MPa)	UCS (MPa)	Defect Spacing (m) 0.02 0.2 0.006 0.06 0.6	Defect Description (depth, type, angle, roughness, infill, thickness)	Graphic Log	Elevation (m)	Depth (m)
	NMLC	70	-	FR- SW	LIMESTONE (continued) Dark grey, fresh to slightly weathered, very high strength	50		4.09 (A) 4.88 (D)	121.7				-	-
			_		CORE LOSS (0.30m)							※	-	-
			9.0		End of Borehole @ -9.00m		-					~	-9.0	9.0 _
													-10.0	-
			-										-	-
			11.0 —										-11.0	-11.0
			12.0	-									-12.0	

Driller: Geodrill Remarks: Logged By: RA Date Logged: 21/07/08

Drill Type: Hydrapower Scout Support: Hard Casing 2.50m Checked By: MS Date Checked: 08/08/08



Borehole	Number	BH02					
Page	1	of	1				
Depth	4.00	to	9.00				
Project	Bruce Highway						
Number	36826-001-01-7D-7G						
Client Department of Main Roads							



Project:

Bruce Highway Road Cutting - Slope Stability Investigation

BH ID:

BH-02

Depth (m)	Туре	Dip (Degrees)	Nature of Infilling	Infill Consistency	Roughness (Profile, JRC @ 100mm)	Defect Spacing	Defect Weathering
4.00	Joint		Clean		Smooth - Planar	Very Close	Moderately Weathered
4.17	Shear		Cohesive (clay/silts)	Soft / Loose	Smooth - Planar	Extremely Close	Highly Weathered
4.20	Joint	80°	Clean		Smooth - Planar	Close	Moderately Weathered
4.30	Joint	10°	Cohesive (clay/silts)	Soft / Loose	Smooth - Planar	Very Close	Moderately Weathered
4.40	Shear		Non Cohesive (sandy)	Soft / Loose	Rough - Planar	Extremely Close	Moderately Weathered
4.50	Bedding	5-10°	Clean		Rough - Planar	Very Close	Slightly Weathered
4.60	Joint	70°	Cohesive (clay/silts)	Soft / Loose		Very Close	Moderately Weathered
4.65	Shear		Cohesive (clay/silts)	Firm / Med. Dense		Extremely Close	Highly Weathered
4.70	Joint	5°	Clean		Rough - Planar	Very Close	Moderately Weathered
4.80	Joint	10°	Clean		Rough - Planar	Very Close	Slightly Weathered
4.90	Joint	80°	Clean		Smooth - Planar	Close	Slightly Weathered
5.00	Joint	10°	Clean		Smooth - Undulating	Close	Slightly Weathered
5.10	Joint	_ 10°	Cohesive (clay/silts)	Soft / Loose	Smooth - Planar	Close	Slightly Weathered
5.40	Joint	70°	Clean		Smooth - Undulating	Close	Slightly Weathered
5.50	Bedding	10°	Non Cohesive (sandy)	Firm / Med. Dense	Smooth - Planar	Extremely Close	Highly Weathered
5.60	Joint	50-90°	Clean		Smooth - Undulating	Extremely Close	Slightly Weathered
5.70	Joint		Clean		Rough - Planar	Extremely Close	Slightly Weathered
5.80	Shear		Cohesive (clay/silts)	Soft / Loose	Smooth - Planar	Extremely Close	Highly Weathered
5.90	Joint	50-70°	Non Cohesive (sandy)	Soft / Loose	Smooth - Planar	Very Close	Slightly Weathered
6.00	Joint	80°	Clean		Smooth - Planar	Very Close	Slightly Weathered
6.10	Shear		Cohesive (clay/silts)	Soft / Loose		Extremely Close	Decomposed
6.20	Joint		Clean		Rough - Planar	Close	Slightly Weathered
6.30	Joint		Clean		Smooth - Planar	Very Close	Slightly Weathered
6.40	Joint		Clean		Smooth - Planar	Very Close	Slightly Weathered
6.50	Joint	5°	Clean		Smooth - Planar	Very Close	Slightly Weathered
6.60	Joint	60-70°	Clean		Rough - Planar	Medium	Slightly Weathered
7.00	Joint	5-10°	Clean		Smooth - Planar	Medium	Slightly Weathered
7.10	Joint	10°	Clean		Smooth - Planar	Medium	Slightly Weathered
7.20	Joint	70°	Clean		Smooth - Planar	Close	Slightly Weathered
7.30	Joint	60-80°	Clean		Smooth - Planar	Close	Slightly Weathered
7.60	Joint		Clean		Smooth - Planar	Extremely Close	Slightly Weathered
7.70	Shear			Soft / Loose		Extremely Close	Decomposed
7.80	Joint		Clean			Extremely Close	Moderately Weathered
7.90	Joint		Clean			Very Close	Slightly Weathered
8.00	Joint	10°	Clean		Rough - Undulating	Medium	Slightly Weathered
8.10	Joint	50°	Clean		Rough - Undulating	Medium	Slightly Weathered
8.50	Joint	10°	Clean		Rough - Undulating	Wide	Slightly Weathered
8.60	Shear		Non Cohesive (sandy)	Soft / Loose	Rough - Undulating	Extremely Close	Moderately Weathered