Connell Wagner

Borehole Number: CW-02

Commenced: 30/07/08
Completed: 30/07/08
Location: CH 32750
Easting: 468717m
Northing: 7054232m
Elevation: Not Surveyed
Inclination: 90°

Datum: UTM - Zone 56J
Sheet: 1 of 4

Client: Department of Main Roads
Project: Maleny to Kenilworth
Project Number: 37009-001-01
File Name: P:\WP\37009\Winlog

Drilling Information				Soil Description			Moisture Content	Consistency/ Relative Density (VS VL, S L, F MD, St D, VSt VD, H C)	Testing		Strata Information		
Groundwater	Drilling Method	Sample Type	Elevation (m LAT)	USC	Material Type; Colour; Plasticity Or Particle Characteristics; Structure				Comments/ Test Results/ Origin	SPT Values	Graphic Log	Elevation (m LAT)	Depth (m)
	RC				**FILL (Sandy GRAVEL)** Yellow brown, non organic material, gravel up to 30mm diameter, medium dense to dense		D		Embankment Fill				
		SPT								SPT @ 0.50m to 0.95m (11, 12, 11) N = 23			
			-1.0		Road base							-1.0	1.0
		SPT		GC (XW/ HW)	**Clayey GRAVEL** Red mottled white and brown, mottle approx 3mm to 5mm, low to medium plasticity, medium dense (Extremely to highly weathered CONGLOMERATE)				Residual Material	SPT @ 1.00m to 1.45m (5, 9, 17) N = 26			
		SPT								SPT @ 1.50m to 1.95m (22, 17, 18) N = 35			
		SPT	-2.0		Brown grey, highly weathered, medium dense					SPT @ 2.00m to 2.15m (30/145mm) N* = 62		-2.0	2.0
		SPT								SPT @ 2.50m to 2.95m (15, 13, 12) N = 25			
			-3.0									-3.0	3.0
				SW	**CONGLOMERATE** Brown grey, fine grained, with 300mm to 400mm sequences of slightly weathered, medium strength rock and highly weathered, low strength rock				Water loss @ 3.80m				
			-4.0									-4.0	4.0
		SPT			**Clayey GRAVEL** Red mottled white and brown, mottle approx 3mm to 5mm, low to medium plasticity, medium dense (Extremely to highly weathered CONGLOMERATE)					SPT @ 4.00m to 4.45m (5, 16, 18) N = 34			
			-5.0									-5.0	5.0

Driller: GEODRILL **Remarks:** **Logged By:** JSM **Date Logged:** 30/07/08

Drill Type: Truck Mounted Hydrapower **Support:** Casing - 2.50m **Checked By:** MS **Date Checked:** 12/08/08

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Drilling Information				Soil Description				Testing		Strata Information		
Groundwater	Drilling Method	Sample Type	Elevation (m LAT)	USC	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	Consistency/ Relative Density (VS VL, S L, F MD, St D, VSt VD, H C)	Comments/ Test Results/ Origin	SPT Values	Graphic Log	Elevation (m LAT)	Depth (m)
	RC			GC (XW/ HW)	**Clayey GRAVEL (Continued)** Red mottled white and brown, mottle approx 3mm to 5mm, low to medium plasticity, medium dense	D						
		SPT			(Extremely to highly weathered CONGLOMERATE) White, increased clay content, high plasticity, moist, soft	M			SPT @ 5.50m to 5.65m (30/145mm) N* = 62			
			-6.0	MW	**CONGLOMERATE** Dark grey mottled white, highly weathered, hard						-6.0	6.0
					Begin NMLC Rock Log @ 6.30m							
			-7.0								-7.0	7.0
			-8.0								-8.0	8.0
			-9.0								-9.0	9.0
			-10.0								-10.0	10.0

Driller: GEODRILL
Remarks:
Logged By: JSM
Date Logged: 30/07/08

Drill Type: Truck Mounted Hydrapower
Support: Casing - 2.50m
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Datum: UTM - Zone 56J
Sheet: 3 of 4

Client: Department of Main Roads
Project: Maleny to Kenilworth
Project Number: 37009-001-01
File Name: P:/WP/37009/Winlog

Drilling Information				Rock Description			Intact Strength			Rock Mass Defects		Strata Information		
Groundwater	Drilling Method	Core Recovery	Elevation (m LAT)	Weathering	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	RQD (%)	Estimated Strength (VL M VH / EL L H)	Is(50) A/Ir/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 LAT)	Depth (m)
			-6.0		Start NLMC Rock Core Log @ 6.30m								-6.0	6.0
	NMLC	100		MW	**CONGLOMERATE** Dark grey mottled white and grey, moderately weathered, high to very high strength	88					Refer to attached sheet for defect descriptions			
			-7.0	MW-HW	Moderately to highly weathered, high to very high strength								-7.0	7.0
				MW	Moderately weathered, high to very high strength									
					Crushed seam, light grey clay, high plasticity, soft									
		100	-8.0			89							-8.0	8.0
		100				50								
			-9.0	HW	Highly weathered with crushed rock and clay, possible shear zone, extremely weathered, extremely low strength	72							-9.0	9.0
				SW	Increased frequency of white mottle, clasts up to 8mm diameter, sub-angular, slightly weathered, very high to extremely high strength									
		100	-10.0										-10.0	10.0

Driller: GEODRILL **Remarks:** **Logged By:** JSM **Date Logged:** 30/07/08

Drill Type: Truck Mounted Hydrapower **Support:** Casing - 2.50m **Checked By:** MS **Date Checked:** 12/08/08

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Datum: UTM - Zone 56J
Sheet: 4 of 4

Client: Department of Main Roads
Project: Maleny to Kenilworth
Project Number: 37009-001-01
File Name: P:/WP/37009/Winlog

Drilling Information				Rock Description			Intact Strength			Rock Mass Defects		Strata Information		
Groundwater	Drilling Method	Core Recovery	Elevation (m LAT)	Weathering	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	RQD (%)	Estimated Strength (VL L M H / EL L H)	Is(50) A/Ir/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 LAT)	Depth (m)
	NMLC	100		MW	**CONGLOMERATE (Continued)** Dark grey mottled white and grey, moderately weathered, high to very high strength	72					Refer to attached sheet for defect descriptions			
		100				65								
			-11.0										-11.0	11.0
		100				0								
				CH	**CLAY** White and grey, high plasticity, with some fragments of highly weathered rock, possible shear zone, very stiff									
		100		SW	**CONGLOMERATE** Dark grey, some ironstaining at defects, slightly weathered to fresh, very high to extremely high strength	97			30.49					
			-12.0										-12.0	12.0
									41.92					
			-13.0										-13.0	13.0
					End of Borehole @ 13.20m									
			-14.0										-14.0	14.0
			-15.0										-15.0	15.0

Driller: GEODRILL **Remarks:** **Logged By:** JSM **Date Logged:** 30/07/08

Drill Type: Truck Mounted Hydrapower **Support:** Casing - 2.50m **Checked By:** MS **Date Checked:** 12/08/08

Maleny To Kenilworth

CW-02

37009-001-01

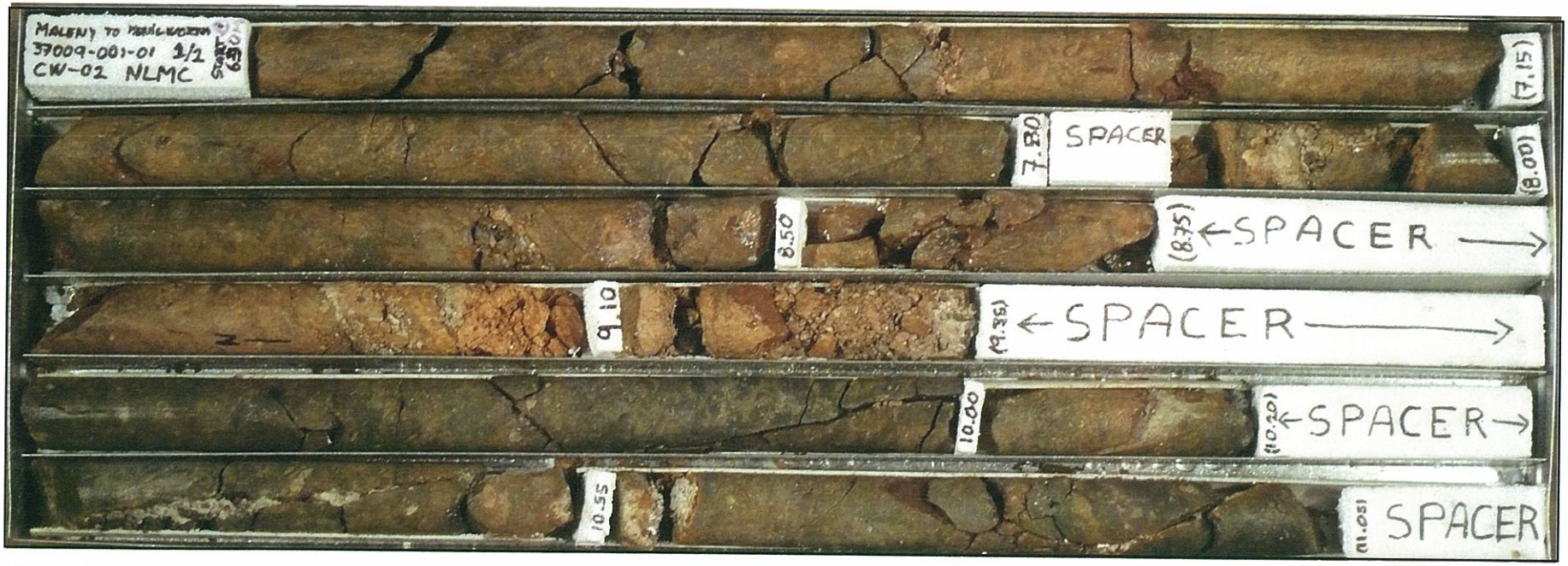
Depth (m)	Type	Dip (Degrees)	Aperture (mm)	Nature of Infilling	Infill Consistency	Roughness (Profile, JRC @ 100mm)
6.70	Joint	60	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
6.80	Joint	35	Extremely Narrow (2mm)	Surface Stainlng	High Strength	Rough - Undulating
6.90	Joint	65	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
7.15	Joint	40	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
7.30	Joint	45	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
7.40	Joint	45	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
7.58	Joint	40	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
7.73	Joint	60	Extremely Narrow (2mm)	Surface Staining	Soft / Loose	Rough - Planar
7.78	Joint	75	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
7.80	Joint	70	Extremely Narrow (2mm)	Surface Staining	Soft / Loose	Rough - Planar
7.85	Joint	45	Narrow (6-20mm)	Cohesive (clay/silts)	High Strength	Rough - Planar
7.90	Joint	15	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
8.32	Joint	60	Very Narrow (2-6mm)	Cohesive (clay/silts)	High Strength	Rough - Undulating
8.45	Joint	40	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
8.62	Joint	55	Very Narrow (2-6mm)	Quartz	High Strength	Rough - Undulating
8.70	Joint	55	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Planar
8.75	Joint	65	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
8.93-8.96	Joint	40	Moderately Narrow (20-60mm)	Cohesive (clay/silts)	Soft / Loose	Rough - Planar
9.00	Joint	35	Very Narrow (2-6mm)	Cohesive (clay/silts)	Firm/Med Dense	Rough - Planar
9.18	Joint	5	Extremely Narrow (2mm)	Cemented	Stiff/Dense	Rough - Planar
9.3-9.35	Joint	95	Moderately Narrow (20-60mm)	Cohesive (clay/silts)	Soft / Loose	Rough - Planar
9.35	Joint	25	Extremely Narrow (2mm)	Cemented	Very High Strength	Rough - Planar
9.56	Joint	70	Tight	Surface Staining	Extremely High	Rough - Planar
9.70	Joint	50	Extremely Narrow (2mm)	Surface Staining	Extremely High	Smooth - Planar
9.90	Joint	87	Extremely Narrow (2mm)	Surface Staining	Extremely High	Rough - Planar
10.10	Joint	70	Very Narrow (2-6mm)	Cohesive (clay/silts)	High Strength	Rough - Planar
10.20	Joint	50	Extremely Narrow (2mm)	Surface Staining	Extremely High	Smooth - Planar
10.40	Joint	85	Very Narrow (2-6mm)	Cohesive (clay/silts)	Soft / Loose	Smooth - Planar
10.50	Joint	40	Very Narrow (2-6mm)	Surface Staining	Very High Strength	Rough - Undulating
10.60	Joint	20	Moderately Narrow (20-60mm)	Cohesive (clay/silts)	Firm/Med Dense	Rough - Undulating
10.70	Joint	60	Tight	Surface Staining	Extremely High	Smooth - Planar
10.75	Joint	70	Extremely Narrow (2mm)	Surface Staining	Extremely High	Smooth - Planar
10.81	Joint	35	Extremely Narrow (2mm)	Surface Staining	High Strength	Rough - Undulating
10.86	Joint	65	Extremely Narrow (2mm)	Surface Staining	Very High Strength	Rough - Undulating
10.95	Joint	75	Extremely Narrow (2mm)	Cohesive (clay/silts)	Soft / Loose	Smooth - Planar
11.20	Joint	65	Extremely Narrow (2mm)	Surface Staining	High Strength	Smooth - Planar
11.33	Joint	80	Very Narrow (2-6mm)	Cohesive (clay/silts)	High Strength	Smooth - Planar
11.45 - 11.65	CLAY					
11.75	Joint	85	Extremely Narrow (2mm)	Surface Staining	Very High Strength	Smooth - Planar
11.78	Joint	85	Extremely Narrow (2mm)	Surface Staining	Very High Strength	Rough - Planar
11.80	Joint	10	Extremely Narrow (2mm)	Surface Staining	Extremely High	Rough - Undulating
11.90	Joint	20	Extremely Narrow (2mm)	Surface Staining	Extremely High	Smooth - Planar
12.05	Joint	55	Extremely Narrow (2mm)	Surface Staining	Extremely High	Rough - Planar
12.43	Joint	60	Moderately Narrow (20-60mm)		Soft / Loose	Rough - Planar
12.46	Joint	60	Extremely Narrow (2mm)	Surface Staining	Extremely High	Smooth - Planar
12.90	Joint	65	Extremely Narrow (2mm)	Surface Staining	Extremely High	Smooth - Planar
13.10	Joint	65	Extremely Narrow (2mm)	Clean	Extremely High	Smooth - Planar

Connell Wagner

Grey Scale

Colour Scale

Borehole Number			BH02
Page	1	of	2
Depth	6.30	to	11.05
Project	Maleny to Kenilworth Slope Stability Investigation		
Number	37009-001-01		
Client	Department of Main Roads		



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Grey Scale

Colour Scale

Borehole Number			BH02
Page	2	of	2
Depth	11.05	to	13.20
Project	Maleny to Kenilworth Slope Stability Investigation		
Number	37009-001-01		
Client	Department of Main Roads