BOREHOLE No. BH02

Sheet 1 of 3

Project: RTA Wharf Upgrade
Location: Bell Bay
Job No: PI30328

Client: Rio Tinto Aluminum
Start - Finish Date: 19/02/09 - 19/02/09
Bore dia: 150/100mm

Driller: Dave
Rig: Hydropower Scout
Surface Conditions: Wharf

Northings: 5446365.8mN Logged: MT
Eastings: 489043.7mE Checked: DRAFT
RL: -11.0 Oriented: -90

LABORATORY DATA						FIELD DATA				SOIL DESCRIPTION		SOIL CONDITION		COMMENTS
dry density (t/m³)	moisture content (%)	liquid limit (%)	plasticity index (%)	percent fines (%)	design / test data	field & other tests	sample type	field tests	ground water depth (m)	graphic log	soil type, unified classification, colour, structure, particle characteristics, minor components	consistency/ density	moisture condition	drilling method, well construction, water and additional observations
											Sandy CLAY (CL) grey with yellow-brown, trace of orange-brown, fine to medium grained sand, fines of low plasticity	St		
	27.1	30	11	50		2/6/8 (N=14)			2					30cm sample in SPT
									3		Silty CLAY (CH) pale brown, grey, trace orange-brown, trace fine sand	St		
1.37	37.4	94	62	99	TRX c'=6 ϕ'=25°	Suv=162 Sup=105 Sup=70 Sup=110								25cm sample in push tube
	39.3	59	38	78		3/4/6 (N=10)			4		Silty SAND (SM) / Sandy SILT (ML) grey, fine grained sand	L / St		30cm sample in SPT
									5					
									6		Silty SAND (SM) grey-brown, fine grained sand	L		
						1/3/6 (N=9)			7		SAND (SP) grey, fine to medium grained	L		30cm sample in SPT
									8		Silty SAND (SM) dark grey, fine to medium grained sand	MD		
	23.1					5/10/10 (N=20)			9					25cm sample in SPT
									10					

LABORATORY DATA

UQN Unconfined Comp. (Natural)
UQC Unconfined Comp. (Compacted)
TQN Uncons. Undrained Triax. (Natural)
TQC Uncons. Undrained Triax. (Compacted)
TRX Consolidated Undrained Triaxial with pwp measurement
PSA Particle Size Analysis
CS 1D oedometer Test
LPM Laboratory Permeability

FIELD DATA ABBREVIATIONS

Suv = Uncorrected vane shear (kPa)
Sup = Pocket penetrometer (kPa)
N = SPT blows per 300mm
FPM = Field permeability

GROUNDWATER SYMBOLS

= Water level (static)
= Water level (during drilling)
= Outflow / Inflow

FIELD DATA SYMBOLS

= Shear vane test
= Pocket Penetrometer test
= Standard Penetration Test (SPT top = start of N blowcount)
= SPT Spoon Sample (Pushed)
= Undisturbed Tube Sample
= Disturbed Sample
= Bulk Sample

DENSITY (N-value)

VL	(very loose)	0 - 4
L	(loose)	4 - 10
MD	(medium dense)	10 - 30
D	(dense)	30 - 50
VD	(very dense)	50 - 100
CO	(compact)	>50/150mm

MOISTURE CONDITION

D = Dry M = Moist W = Wet

CONSISTENCY (Su)

VS	(very soft)	< 12 kPa
S	(soft)	12 - 25
F	(firm)	25 - 50
St	(stiff)	50 - 100
VSt	(very stiff)	100 - 200
H	(hard)	> 200 kPa

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											Silty CLAY (CL) dark grey	VSt		
									11					
									12					
						4/8/10 (N=18)								45cm sample in SPT
									13		basaltic black band (2mm)			
									14					
									15					
											Silty SAND (SM) dark grey, trace black and brown, fine to coarse grained sand	MD		
		57	33	97		Suv=100 Sup=260 Sup=275 Sup=275								45cm sample in push tube
									16					45cm sample in SPT
					Direct Shear c=42 ϕ=24°	5/12/17 (N=29)					Silty CLAY (CH) dark grey, trace of fine sand	VSt		
									17					
									18					
	37.2	54	26			6/9/12 (N=21)					black-brown, trace fine sand			45cm sample in SPT
									19					
											SAND (SP) dark grey, fine to coarse grained sand, trace non plastic fines	D		
									20					

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				10		4/14/26 (N=40)	●		21		SAND (SP) dark grey, fine to coarse grained sand, trace non plastic fines *(continued)*			change in drilling rate 45cm sample in SPT
									22		Borehole terminated in SAND at 21.75m			
									23					
									24					
									25					
									26					
									27					
									28					
									29					
									30					

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