BOREHOLE No. BH03

Sheet 1 of 3

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

Client: Rio Tinto Aluminum
Start - Finish Date: 20/02/09 - 20/02/09
Bore dia: 150/100mm

Driller: Dave
Rig: Hydropower Scout
Surface Conditions: Wharf

Northings: 5446394.0mN
Eastings: 489101.1mE
RL: -11.0

Logged: MT
Checked: DRAFT
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
						2/2/2 (N=4)					Silty SAND (SM) dark grey, fine to coarse grained sand, traces of fine to medium grained gravel, rounded, with shell fragments	VL		10cm sample in SPT
									1					
											Silty CLAY (CL) dark orange-brown, with basaltic black coarse grained gravel (pebble)	VSt		wood or similar in material
														change in drilling rate
									2					
						4/5/14 (N=19)					basaltic band, black (15cm)			20cm sample in SPT
									3		Silty CLAY (CH) grey, orange-brown, with thin black basaltic bands, trace fine sand	St		change in drilling rate
	45.2			91										
						4/4/5 (N=9)								5cm sample in SPT from bottom
									4					
											grey-brown, with fine sand	F		
									5					
	44	71	41			2/4/4 (N=8)								30cm sample in SPT
									6		Silty SAND (SM) yellow-brown, grey, fine grained sand	MD		
														45cm sample in push tube
				12	Direct Shear c=0 ϕ=31.5°									
						2/5/12 (N=17)								35cm sample in SPT
									7					
									8					
									9		dark grey, with fine sand			
						4/7/10 (N=17)					Silty CLAY (CL) dark brown	VSt		40cm sample in SPT
									10					

SKM 001 SOIL RTA_GEOTECH_2008 REV_04 300409.GPJ SKM_001_2008 05 07_DS.GDT 5/5/09

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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									11		Silty CLAY (CL) dark brown *(continued)*			
									12					
1.58	22	43	23	85	TRX c'=12 ϕ'=32°	Suv=237 Suv=91			13		light grey, light brown, with fine to medium sand, with black basaltic fine to coarse grained gravel	St		45cm sample in push tube 45cm sample in SPT
						3/5/7 (N=12)								
						Sup=145 Sup=145 Sup=140			14					
									15		SILTY SAND (SM) grey, with fine grained gravel (10cm)	MD		
	24			16		2/5/13 (N=18)			16		fine to medium grained sand, with thin black layer bands, fines of low plasticity black basaltic band (3cm)	MD		45cm sample in SPT
									17					
									18		fine to coarse grained sand, with fine grained gravel, fines of low plasticity	MD		
	19.2			17		2/3/9 (N=12)			19					40cm sample in SPT
									20					

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										SILTY SAND (SM) grey, with fine grained gravel (10cm) *(continued)*			
										CLAYEY SAND (SC) grey	MD		
													
1.44	31.6	42	22	45		4/6/11 (N=17)	●						40cm sample in SPT
								22		black thin layer basaltic bands (10cm) Borehole terminated in Silt at 21.95m			
								23					
								24					
								25					
								26					
								27					
								28					
								29					
								30					

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