

Appendix A

ASS Field Observations and Borelogs

Borehole Number: ASS 1

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

File Name: Borelogs

Driller: Connell Hatch

Commenced: 30/08/07

Completed: 30/08/07

Location: Jilalan

Easting: 0

Northing: 0

Elevation: 5

Method: Excavator

Sheet: 1 of 1

Investigation Information		Soil Description		pH		Observations and Strata Information					
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pH		Observations	Graphic Log	Elevation (m)	Depth (m)
						pHF	pHFOX				
						2 4 6 8 10 12	2 4 6 8 10 12				
	SPOCAS			Sandy Loam Dark yellowish brown (10YR 4/4) to dark brown (10YR 3/3)				Fine sand and silt present			
	SPOCAS										
	SPOCAS	1.0								4.0	1.0
	SPOCAS										
	SPOCAS	2.0						More sand than above		3.0	2.0
	SPOCAS			Sandy Clay Loam Dark yellowish brown (10YR 4/4) to brown (10YR 4/3)				30% dark grayish (10YR 4/2) mottling present			
	SPOCAS	3.0								2.0	3.0
	SPOCAS										
	SPOCAS	4.0						50% mottling of brown (10YR 4/4) and gray (10YR 5/1)		1.0	4.0
	SPOCAS			Light Clay Dark yellowish brown (10YR 4/6) with grey (10YR 5/1) mottling							
		5.0		End of Borehole						0.0	5.0

Moisture Key

D Dry
M Moist
W Wet

Particle Size Distribution

Gravel Coarse 20mm to 63mm	Sand Coarse 0.6mm to 2.36mm
Medium 6mm to 20mm	Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm	Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry **Date:** 22/11/07

Checked By: Chris Bignill **Date:** 22/11/07

Commenced: 30/08/07

Completed: 30/08/07

Location: Jilalan

Easting: 0

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Method: Excavator

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

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Driller: Connell Hatch

Investigation Information			Soil Description		pH		Observations and Strata Information				
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pH		Observations	Graphic Log	Elevation (m)	Depth (m)
						pHF	pHFOX				
						2 4 6 8 10 12	2 4 6 8 10 12				
	SPOCAS			Loam Dark Brown (10YR 3/3)				No plasticity			
	SPOCAS			Sandy Loam Dark brown (10 YR 3/3)							
	SPOCAS	1.0								4.0	1.0
	SPOCAS			Loamy Sand Brown (10YR 4/3)				Organic matter present			
	SPOCAS	2.0								3.0	2.0
	SPOCAS			Silty Clay Very dark grayish brown (10YR 3/2)				Low plasticity			
	SPOCAS			Light Clay Very dark grayish brown (10YR 3/2) with reddish brown (5YR) mottles				Sandy fines present			
	SPOCAS	3.0								2.0	3.0
	SPOCAS			Sandy Clay Brown (10YR 4/3) to dark yellowish brown (10YR 3/6)							
	SPOCAS			Silty Light Clay Very dark greyish brown 10YR 3/2 with reddish brown (5YR) and yellowish brown (10YR) mottles				Plastic			
	SPOCAS	4.0								1.0	4.0
				Coarse Sandy Clay with Gravel Dark reddish brown (5YR 3/4)				Subangular gravel fragments			
				End of Borehole							
		5.0								0.0	5.0

Moisture Key
D Dry
M Moist
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Particle Size Distribution
Gravel Coarse 20mm to 63mm Sand Coarse 0.6mm to 2.36mm
Medium 6mm to 20mm Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

Checked By: Chris Bignill Date: 22/11/07

Commenced: 30/08/07

Completed: 30/08/07

Location: Jilalan

Easting: 0

Northing: 0

Elevation: 5

Method: Excavator

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

File Name: Borelogs

Driller: Connell Hatch

Investigation Information		Soil Description		pH		Observations and Strata Information						
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pH		Observations	Graphic Log	Elevation (m)	Depth (m)	
						pHF	pHFOX					
	SPOCAS			Clay Loam Dark brown (7.5YR 3/2) to dark yellowish brown (10YR 4/4)				Silty fines present Clay content increases with depth				
	SPOCAS	1.0									4.0	1.0
	SPOCAS	2.0			Sandy Clay Loam Yellowish brown (10YR 5/4) to dark brown (10YR 3/3) and dark yellowish brown (10YR 4/4) with gray (10YR 5/1) mottling							3.0
	SPOCAS	3.0									2.0	3.0
	SPOCAS	4.0		Light Clay Gray (10YR 5/1) to dark gray (10YR 4/1) with yellowish brown (5 YR 4/6) mottles ranging from 5% to 30%				Sandy fines present				
	SPOCAS	4.0									1.0	4.0
	SPOCAS	5.0		Sandy Clay Loam Brown (10YR 4/3)								
				End of Borehole								

Moisture Key
 D Dry
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 Medium 6mm to 20mm Medium 0.2mm to 0.6mm
 Fine 2.36mm to 6mm Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

Checked By: Chris Bignill Date: 22/11/07

Commenced: 30/08/07

Completed: 30/08/07

Location: Jilalan

Easting: 0

Northing: 0

Elevation: 5

Method: Excavator

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

File Name: Borelogs

Driller: Connell Hatch

Investigation Information		Soil Description		pH		Observations and Strata Information					
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pH		Observations	Graphic Log	Elevation (m)	Depth (m)
						pHF	pHFOX				
						2 4 6 8 10 12	2 4 6 8 10 12				
	SPOCAS			Silty Clay Loam Yellowish brown (10YR 5/3) to dark yellowish brown (10YR 4/4)				Hard set, dry and brittle Low plasticity when wet Very low to low plasticity when wet			
	SPOCAS										
	SPOCAS	1.0		Sandy Clay Dark yellowish brown (10YR 2/4) to yellowish brown				Silty fines present with very low plasticity		4.0	1.0
	SPOCAS										
	SPOCAS	2.0		Silty Clay Brown (10YR 4/3) to dark brown (10YR 3/3) and dark yellowish brown (10YR 3/6 to 10YR 3/4)				Sticky when wet with very low plasticity and slightly loamy		3.0	2.0
	SPOCAS										
	SPOCAS	3.0								2.0	3.0
	SPOCAS										
	SPOCAS	4.0		Silty Light Clay Brown (10YR 4/3) to dark gray (10YR 4/1)				Plastic Dark yellowish brown mottling present		1.0	4.0
	SPOCAS										
	SPOCAS	5.0								0.0	5.0
	SPOCAS										
	SPOCAS			Sandy Clay Dark grey (10YR 4/1)				Very soft, sticky low plasticity with sandy fines present			
		6.0		End of Borehole						-1.0	6.0

Moisture Key
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Gravel Coarse 20mm to 63mm Sand Coarse 0.6mm to 2.36mm
Medium 6mm to 20mm Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

Checked By: Chris Bignill Date: 22/11/07

Commenced: 30/08/07

Completed: 30/08/07

Location: Jilalan

Easting: 0

Northing: 0

Elevation: 10

Method: Excavator

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

File Name: Borelogs

Driller: Connell Hatch

Sheet: 1 of 1

Investigation Information		Soil Description			pH		Observations and Strata Information				
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pH		Observations	Graphic Log	Elevation (m)	Depth (m)
						pHF	pHFOX				
						2 4 6 8 10 12	2 4 6 8 10 12				
	SPOCAS			Loam Brown (7.5YR 3/2) to dark brown (7.5YR 4/3)				Silty fines present			
	SPOCAS										
	SPOCAS	1.0		Light Clay Brown (7.5YR 4/4) with brownish yellow (10YR 6/8)/yellowish brown (10YR 5/8) and grayish brown (10YR 5/2)/gray (10YR 6/1) mottling						9.0	1.0
	SPOCAS										
	SPOCAS	2.0						Sand and gravel layer present (approx 0.5m thickness in profile)		8.0	2.0
	SPOCAS										
	SPOCAS	3.0								7.0	3.0
	SPOCAS										
	SPOCAS	4.0		Sandy Clay Brown (10YR 5/3) to very dark brown (7.5YR 5/2) with brownish yellow (10YR 6/8) mottling to gray (2.5YR 5/1) sandy clay						6.0	4.0
	SPOCAS										
	SPOCAS	5.0						Layer of clayey sand (approx 0.5m thickness)		5.0	5.0
	SPOCAS							Light yellowish brown (2.5YR 6/3) loamy material present			
				End of Borehole							

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Medium 6mm to 20mm Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

Checked By: Chris Bignill Date: 22/11/07

Commenced: 8/11/07

Completed: 8/11/07

Location: Jilalan

Easting: 0

Northing: 0

Elevation: 12

Method: Drill Rig

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

File Name:

Driller: Connell Hatch

Investigation Information			Soil Description		pH		Observations and Strata Information								
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pHF					pHFOX	Observations	Graphic Log	Elevation (m)	Depth (m)
						2	4	6	8	10					
	SPOCAS			Clay Loam Brown (10YR 4/3)								Silty fines and fine black nodules present			
	SPOCAS			Light Clay Dark yellowish brown (10YR 4/4)											
	SPOCAS			Medium Heavy Clay Dark gray (10YR 4/1)											
	SPOCAS	1.0		Medium to Light Medium Clay Light olive brown (2.5Y 5/3)										Platy structured profile	
	SPOCAS			Not descriptions recorded for the profile											
	SPOCAS	2.0												10.0	2.0
	SPOCAS			End of Borehole										9.0	3.0

Moisture Key
D Dry
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Particle Size Distribution
Gravel Coarse 20mm to 63mm Sand Coarse 0.6mm to 2.36mm
Medium 6mm to 20mm Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

Checked By: Chris Bignill Date: 22/11/07

Commenced: 12/11/07

Completed: 12/11/07

Location: Jilalan

Easting: 0

Northing: 0

Elevation: 12

Method: Drill Rig

Client: QR

Project: Jilalan Acid Sulfate Soils Investigation

Project Number: 30420-005

File Name: Borelogs

Driller: Connell Hatch

Investigation Information			Soil Description		pH		Observations and Strata Information						
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pH				Observations	Graphic Log	Elevation (m)	Depth (m)
						pHF		pHFOX					
						2 4 6 8 10 12	2 4 6 8 10 12						
	SPOCAS			Sandy Loam Dark brown (10YR 3/3) to dark yellowish brown (10YR 4/4)						Fine to medium grade sand			
	SPOCAS									Plastic with fine to medium grain sand			
	SPOCAS	1.0										11.0	1.0
	SPOCAS			Sandy Clay Loam Dark yellowish brown (10YR 4/4) to yellowish brown (10YR 5/6)									
	SPOCAS	2.0										10.0	2.0
	SPOCAS			Sandy Loam Gray (2.5YR 6/1)									
	SPOCAS	3.0										9.0	3.0
	SPOCAS			End of Borehole									
		4.0										8.0	4.0

Moisture Key

D Dry
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Particle Size Distribution

Gravel Coarse 20mm to 63mm	Sand Coarse 0.6mm to 2.36mm
Medium 6mm to 20mm	Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm	Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

Checked By: Chris Bignill Date: 22/11/07

Commenced: 13/11/07

Completed: 13/11/07

Client: QR

Location: Jilalan

Project: Jilalan Acid Sulfate Soils Investigation

Easting: 0

Project Number: 30420-005

Northing: 0

File Name: Borelogs

Elevation: 10

Sheet: 1 of 1

Driller: Connell Hatch

Method: Drill Rig

Investigation Information			Soil Description		pH		Observations and Strata Information						
Groundwater	Sample Taken	Depth	Soil Code	Material Type; Colour; Plasticity Or Particle Characteristics; Structure	Moisture Content	pHF		pHFOX		Observations	Graphic Log	Elevation (m)	Depth (m)
						2 4 6 8 10 12	2 4 6 8 10 12	2 4 6 8 10 12	2 4 6 8 10 12				
	SPOCAS			Silty Loam Brown (10YR 5/3)						Organic matter and some mixed grade gravel present Flecks of white calcereous material present			
	SPOCAS			Light Clay Yellowish brown (10YR 5/4) to light olive brown with brownish yellow (10YR 6/6 to 10YR 6/8) and light gray (10YR 7/1) mottling						Small black nodules present			
	SPOCAS	1.0								Platy structure		9.0	1.0
	SPOCAS									Sandy coarse fragments and small black nodules present			
	SPOCAS									Small black, red and yellow nodules present			
	SPOCAS	2.0		Sandy Clay Loam Yellowish brown (10YR 5/4) with light grey (2.5YR 7/1) mottling								8.0	2.0
	SPOCAS			Sandy Loam Yellowish brown (10YR 5/6)						Flecks of black present			
	SPOCAS	3.0		End of Borehole								7.0	3.0
	SPOCAS												
	SPOCAS	4.0										6.0	4.0

Moisture Key
D Dry
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Particle Size Distribution
Gravel Coarse 20mm to 63mm Sand Coarse 0.6mm to 2.36mm
Medium 6mm to 20mm Medium 0.2mm to 0.6mm
Fine 2.36mm to 6mm Fine 0.075mm to 0.2mm

Logged By: Elizabeth Warry Date: 22/11/07

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