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BOREHOLE: BQLA-07

Project: Pioneer-Burdekin PHES
Location: Netherdale/Dalrymple Heights
Client: Queensland Hydro
Job No.: PS138693

Position: Lower Reservoir
Coords: 659817.8 m E 7660877.8 m N MGA2020-55
Surface RL: 185.6 m AHD
Contractor: Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM
Inclination: -87° Direction: 043°

Sheet 1 of 6
Date Started: 16/10/2023
Date Completed: 24/10/2023
Logged: JC

Drilling				Sampling		Field Material Description								
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
VE			0	185.62				SP	SAND: fine grained, brown orange.	D	VD		RESIDUAL SOIL	
			1											
			1.50											
AD/V	F-H	Groundwater Not Encountered	1.50	184.12	SPT 1.50-1.94 m 20,25,30/140 mm D 1.50-1.94 m PB-BQLA-07-001			SW	SAND: fine to coarse grained, pale brown mottled white and orange, with low plasticity silt; with fine grained gravel.				EXTREMELY WEATHERED MATERIAL	
			2											
			3	SPT 3.00-3.24 m 27,30/90 mm HB D 3.00-3.24 m PB-BQLA-07-002										
			4											
			4.50	181.12	SPT 4.50-4.95 m 9,23,30/145 mm D 4.50-4.95 m PB-BQLA-07-003			SW						Gravelly SAND: fine to coarse grained, pale brown mottled white and orange, gravel is fine to coarse grained; with low plasticity silt.
			5											
			6	SPT 6.00-6.12 m 30/115 mm D 6.00-6.12 m PB-BQLA-07-004										
			7											
			8	SPT 7.50-7.74 m 15,30/85 mm HB D 7.50-7.74 m PB-BQLA-07-005										
			9	SPT 9.00-9.25 m 15,30/100 mm HB D 9.00-9.25 m PB-BQLA-07-006										

Comments

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Client: Queensland Hydro

Job No.: PS138693

Position: Lower Reservoir

Coords: 659817.8 m E 7660877.8 m N MGA2020-55

Surface RL: 185.6 m AHD

Contractor: Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM

Inclination: -87° Direction: 043°

Sheet 2 of 6

Date Started: 16/10/2023

Date Completed: 24/10/2023

Logged: JC

Drilling				Sampling		Field Material Description									
METHOD	PENETRATION RESISTANCE		WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION		MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
AD/V	F-H		Groundwater Not Assessed	10		SPT 11.30-11.37 m 30/65 mm HB D 11.30-11.37 m PB-BQLA-07-007			SW	Gravelly SAND: fine to coarse grained, pale brown mottled white and orange, gravel is fine to coarse grained; with low plasticity silt.	D	VD		EXTREMELY WEATHERED MATERIAL	
				GW	Sandy GRAVEL: sub-angular, pale brown white and orange, sand is fine to coarse grained; with low plasticity silt.										
WB				11.30 174.33						Continued as Cored Borehole					
				12	12.08										
				13											
				14											
				15											
				16											
				17											
				18											
				19											
				20											

Comments

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BOREHOLE: BQLA-07

Project:	Pioneer-Burdekin PHES	Position:	Lower Reservoir	Sheet	3 OF 6
Location:	Netherdale/Dalrymple Heights	Coords:	659817.8 m E 7660877.8 m N MGA2020-55	Date Started:	16/10/2023
Client:	Queensland Hydro	Surface RL:	185.6 m AHD	Date Completed:	24/10/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Logged:	JC
		Inclination:	-87° Direction: 043°		

Drilling						Field Material Description				Defect Information			
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa)	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)		
											10	30	100
											300	1000	3000
				10									
				11									
				12	12.08		Continuation from non-cored borehole						
					173.55		NO CORE 2.88m (12.08-14.96)						
				13									
		0	0	14									
				15	14.96		GRANODIORITE: medium to coarse grained, pale grey , brown orange and brown grey, crystalline, massive.	HW		15.40-15.44: EW, 40°, or br, 40 mm			
		74	57		170.68			XW					
				16				HW					
		96	79										
				17	16.25		NO CORE 0.03m (16.25-16.28)	HW		16.46-16.54: EW, 80 mm			
					169.36		GRANODIORITE: medium to coarse grained, pale grey mottled white and brown orange, crystalline, massive.	XW		16.56-16.60: EW, 40 mm			
								HW					
		100	85					XW		17.31-17.36: EW, 10°, 50 mm			
				18				HW		17.70-17.78: EW, or br, ST, 80 mm			
								XW					
								HW		18.12-18.24: EW, 120 mm			
		92	88					XW					
				19	19.17		NO CORE 1.83m (19.17-21.00)	HW					
					166.47								
		0	0	20									

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Position: Lower Reservoir
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Inclination: -87° Direction: 043°

Sheet 4 OF 6
Date Started: 16/10/2023
Date Completed: 24/10/2023
Logged: JC

Drilling					Field Material Description				Defect Information		
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa)	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
		0	0	20			NO CORE 1.83m (19.17-21.00)				
		44	0	21	21.00 164.64		GRANODIORITE: medium to coarse grained, pale grey mottled brown orange and white, crystalline, massive, Recovered as Sandy GRAVEL, fine to medium grained, fine to coarse sand, trace silt.	XW			
					21.28 164.17		NO CORE 0.20m (21.28-21.48)	SW			
		80	55	22			GRANODIORITE: medium to coarse grained, pale grey and black, crystalline, massive.	MW		21.63: J, 20°, or br, ST 21.64: J, 5°, or br, ST 21.65-21.66: CZ, 5°, ST, RF, angular rock fragments <20 mm 21.93: J, 10°, ST, RF 21.98: J, 10°, UN, RF 22.13: J, 45°, ST, RF 22.20: J, 80°, PR, RF	
					22.28 163.37		NO CORE 0.45m (22.28-22.73)				
		53	42	23	22.73 162.92		GRANODIORITE: medium to coarse grained, pale grey and black, crystalline, massive.	MW		22.77: J, 75°, or br, PR, SM 22.86: J, 80°, or br, UN, RF 23.02: J, 85°, or br, ST, RF 23.05: J, 50°, or br, PR, RF 23.19: J, 20°, IR, RF 23.23: J, 20°, IR, RF	
					23.24 162.41		NO CORE 0.30m (23.24-23.54)				
		44	44		23.54 162.11		GRANODIORITE: medium to coarse grained, pale grey and black, crystalline, massive.	MW		23.56: J, 10°, UN, RF 23.71: J, 60°, or br and pk, PR, RF 23.72: J, 20°, or br and pk, PR, RF 23.89: J, 65°, or br, ST, RF 23.98: J, 55°, bk and or br, PR, RF 24.04-24.14: FZ, 55°, fine to coarse gravel, UN, RF, 80 mm, angular rock fragments <25 mm 24.20: J, 80°, bk, UN, RF	
					23.78 161.81		NO CORE 0.06m (23.78-23.84)	HW to MW			
		89	0	24			GRANODIORITE: medium to coarse grained, pale grey and black, crystalline, massive.	SW			
										24.80: J, 25°, or br, ST, RF	
		100	94	25	25.28 160.37		NO CORE 0.99m (25.28-26.27)			25.23: J, 10°, or br, PR, RF 25.29: J, 85°, bk and o br, ST, RF, possible drilling break	
		0	0	26							
					26.27 159.12		GRANODIORITE: medium to coarse grained, pale grey, brown and brown orange, crystalline, massive.	HW		26.34-26.37: EW, 20°, RF, 30 mm, angular rock fragments <7 mm diameter 26.55: J, 0°, br, ST, RF	
		65	37		26.53 158.87		ANDESITE: fine to medium grained, dark grey brown, crystalline, massive, inclusion.	MW		26.81: J, 65°, br, PR, RF	
					26.78 158.52		GRANODIORITE: medium to coarse grained, pale grey, brown, black and brown orange, crystalline, massive.				
		100	72	27	27.13 158.52		Pale grey, black and pale brown.				
							Aplite vein, 30 mm thick.				
					27.58 158.07		Pale grey, pale brown orange, black and white.	HW		27.57: J, 35°, or br, UN 27.59: J, 35°, or br, PR 27.64: J, 60°, or br, ST, RF 27.86: J, 75°, yl br, PR, SM	
		100	67	28	27.83 157.82		Pale grey, brown orange, black and white, trace medium grained mafic clasts up to 50 mm diameter.	MW		28.21: J, 20°, br, ST, RF 28.40: J, 65°, PR, RF 28.53: J, 10°, PR, RF 28.67: J, 40°, or br, PR, RF 28.73: J, 70°, or br and bk, PR, RF 28.76: J, 10°, or br, UN, RF 29.02: J, 60°, or br, PR, RF 29.16: J, 20°, or br and bk, UN, RF 29.34: J, 65°, or br and bk, UN, RF 29.38: J, 55°, or br, UN, RF 29.53: J, 50°, or br, ST, RF 29.63: J, 20°, or br, PR, RF 29.78: J, 10°, PR, RF	
		100	70	29							
		100	26		29.63 156.03		Pale grey, black and white.	SW			
		100	86	30	30.00						

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Sheet 5 OF 6
Date Started: 16/10/2023
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Logged: JC

Drilling						Field Material Description			Defect Information		
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa)	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
								VL-2 J M P S H VH-200 ■ - UCS			10 30 100 300 1000 3000
HQ3		100	86	30	155.66		GRANODIORITE: medium to coarse grained, pale grey, black and white, crystalline, massive.	SW		30.09: J, 15°, PR, RF 30.10: J, 25°, or br, PR, RF	
				31	31.13 154.53		Pale grey, pink and black, slightly altered.			30.67: J, 50°, pl or br, PR, SM 31.08: J, 50°, PR, RF 31.15: J, 50°, or br, PR, RF	
		100	83	32	32.52 32.72 152.94		ANDESITE: fine to coarse grained, dark grey with white, porphyritic, massive, possible inclusion.			31.56: J, 35°, ST, RF 31.99: J, 30°, PR, RF	
				33			GRANODIORITE: medium to coarse grained, pale grey, pink and black, crystalline, massive, slightly altered, reducing with depth.	MW SW		32.52: J, 50°, PR, RF 32.55-32.93: J, 70 - 90°, or br min VN, UN, SM, 2 mm, extremely closely spaced 32.56-32.94: J, 20 - 30°, or br min SN, PR, SM, closely spaced	
		100	72	34	34.00 151.66		Pale grey, black and white.			32.98: J, 45°, or br and bk, PR, RF 33.00: J, 45°, or br and bk, PR, RF 33.04: J, 10°, or br and gr, UN, RF 33.09: J, 5°, or br and gr, UN, RF 33.24: J, 10°, or br, PR, RF 33.29: J, 80°, or br, IR, RF 33.32: J, 20°, gr, UN, RF 33.33: J, 20°, gr, UN, RF 33.36: J, 75°, or br and yl br, UN, RF 33.52: J, 30°, or br and bk, UN, RF 33.61: J, 80°, or br and bk, UN, RF 33.67: J, 25°, wh, UN 33.72: J, 75°, bk, UN 33.93: J, 20°, or br, PR, RF 34.29: J, 55°, or br, PR, RF 34.71: J, 65°, wh, UN, 1 mm wh alt halo 34.73: J, 30°, bk, UN 34.74: J, 10°, or br, PR, RF 34.75: J, 65°, gr and bk, PR, RF 34.77: J, 70°, or br and gr, CU, SM 34.82: J, 75°, bk, UN 34.85: J, 10°, or br, PR, RF 34.90: J, 90°, bk, PR 34.91: J, 90°, or br and bk, PR 34.99: J, 30°, or br and gr, PR, RF 35.00: J, 35°, PR, RF 35.07: J, 80°, or br, UN 35.15: J, 5°, or br, UN, RF 35.64: J, 40°, or br, PR, RF 35.67: J, 55°, or br and bk, UN, RF 35.71: J, 70°, rd br, UN, RF 35.82: J, 80°, or br, PR, RF 35.84: J, 80°, UN, RF 35.87: J, 5°, PR, RF 35.88: J, 70°, bk, PR 35.89: J, 75°, bk, PR 36.00: J, 0°, ST, RF, possible DB 36.25-36.51: J, 45 - 65°, wh CN, PR, RF, very closely spaced 36.39: J, 10°, CN, UN, RF 37.09: J, 25°, CN, PR 37.33: J, 65°, or br CN, PR, RF 37.79: J, 5°, CN, IR, RF 37.82: J, 45°, wh CN, PR 38.00: J, 0°, or br CN, UN, RF 38.08: J, 60°, wh CN, PR, RF 38.33: J, 75°, or br, rd br and bk SN, UN, SM 38.39: J, 45°, or br and wh CN, PR, RF 38.40-38.47: SS, 45°, fragmented rock SN, PR, 60 mm, significant 38.54: J, 45°, wh SN, PR, SM 38.67: J, 50°, or nr SN, PR, SM 38.78: J, 20°, or br, PR, RF 38.82: J, 30°, rd br, bk and gr, UN, RF 38.80-38.92: J, 65 - 90°, CN, CU, RF 38.89: J, 5°, rd br and bk, UN, RF 38.91: J, 90°, bk, UN 39.03-39.33: J, 20 - 40°, bk SN, PR, RF, very closely spaced	
				35							
		100	23	36				FR			
				37							
		100	83	38							
				39							
		100	0	40	40.00						
		100	56								

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Sheet 6 OF 6

Date Started: 16/10/2023

Date Completed: 24/10/2023

Logged: JC

Drilling						Field Material Description				Defect Information			
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa)	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)		AVERAGE DEFECT SPACING (mm)	
HQ3		100	56	40	145.67	+	GRANODIORITE: medium to coarse grained, pale grey, black and white, crystalline, massive, minimal alteration. Hole Terminated at 40.28 m Target depth. Standpipe Piezometer Installed.	FR		39.18-39.30: J, 70°, or br SN, PR, RF, extremely closely spaced 39.40: J, 10°, CN, ST, RF 39.40-39.59: SZ, 40 - 50°, fragmented rock and clay, IR, RF, 150 mm, significant 39.64-39.84: Js, 35 - 50°, SN, PR, SM, very closely spaced 39.88: J, 10°, CU, RF 40.00-40.10: PLT (A) Is50 = 1.3 MPa (W); PLT (D) Is50 = 0.8 MPa (W) 40.00: J, 5°, PR, RF 40.10: J, 10°, rd br and gr, PR, SM 40.23: J, 65°, wh, UN, 2 mm or br alt halo			
				40.28	145.39	+							
				41									
				42									
				43									
				44									
				45									
				46									
				47									
				48									
				49									
				50									

Comments

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Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BQLA-07 Defects List

Refer to Explanatory Notes sheets for abbreviation definitions

PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	15.10				hJ		20				IR						
BQLA-07	15.40	15.44			EW		40		or br					40			
BQLA-07	15.54				hJ		30				PR						
BQLA-07	15.67				HB		30				PR	RF					
BQLA-07	15.83				HB						IR						
BQLA-07	15.87				HB						IR	RF					
BQLA-07	15.98				hJ		10				PR						
BQLA-07	16.22				hJ		25				PR						
BQLA-07	16.46	16.54			EW									80			
BQLA-07	16.56				hJ		0				PR						
BQLA-07	16.56	16.60			EW									40			
BQLA-07	17.02				hJ		90				ST						
BQLA-07	17.12	17.90				hJ	85	90	or br		UN			1			
BQLA-07	17.14				hJ		90				UN						
BQLA-07	17.21				hJ		88		or br		UN						
BQLA-07	17.28				HB						PR	RF					
BQLA-07	17.31				hJ		10				PR						
BQLA-07	17.31	17.36			EW		10							50			
BQLA-07	17.43				HB		15				ST	RF					
BQLA-07	17.58				hJ		90		or br		PR						
BQLA-07	17.70	17.78			EW				or br		ST			80			
BQLA-07	18.06				hJ		75		or br		PR						
BQLA-07	18.12				hJ		0				PR						
BQLA-07	18.12	18.24			EW									120			
BQLA-07	18.32				hJ		75		or br		PR						
BQLA-07	18.55				hJ		10		or br		ST						
BQLA-07	18.78				hJ		80		or br		UN						
BQLA-07	18.83				hJ		80		or br		UN						
BQLA-07	19.12				hJ		30				ST						
BQLA-07	21.06				hJ		0		or br		PR						
BQLA-07	21.48				hJ		0				UN						
BQLA-07	21.63				hJ		20		or br		ST						
BQLA-07	21.64				hJ		0		or br		ST						
BQLA-07	21.65	21.66			CZ		5				ST	RF					angular rock fragments <20 mm
BQLA-07	21.67				hJ		5		or br		PR						
BQLA-07	21.93				hJ		10				ST						
BQLA-07	21.98				hJ		10				UN						
BQLA-07	22.02				hJ		45				PR						
BQLA-07	22.05				hJ		65		or br		UN						
BQLA-07	22.07				hJ		20		or br		PR						
BQLA-07	22.08				hJ		60		or br		UN						
BQLA-07	22.13				J		45				ST	RF					
BQLA-07	22.20				J		80				PR	RF					
BQLA-07	22.23				hJ		20				UN						
BQLA-07	22.29				hJ		15				UN						
BQLA-07	22.77				J		75		or br		PR	SM					
BQLA-07	22.83				hJ		75		or br		PR						
BQLA-07	22.86				hJ		80		or br		UN						
BQLA-07	22.93				HB						IR						
BQLA-07	23.02				J		85		or br		ST	RF					
BQLA-07	23.05				J		50		or br		PR	RF					
BQLA-07	23.11				hJ		80		or br		UN						
BQLA-07	23.14				hJ		90		or br		UN						
BQLA-07	23.16				hJ		75		or br		UN						
BQLA-07	23.19				hJ		20				IR						
BQLA-07	23.23				hJ		20				IR						
BQLA-07	23.56				hJ		0				UN						
BQLA-07	23.58				hJ		70				PR						
BQLA-07	23.67				hJ		60		or br		PR						
BQLA-07	23.68				hJ		60		or br		PR						
BQLA-07	23.69				hJ		65		or br		PR						
BQLA-07	23.71				J		60		or br and pk		PR	RF					
BQLA-07	23.72				hJ		0		or br and pk		PR						
BQLA-07	23.84				hJ		0				IR						
BQLA-07	23.89				J		65		or br		ST	RF					
BQLA-07	23.93				hJ		75		bk		PR						
BQLA-07	23.98				hJ		55		bk and or br		PR						
BQLA-07	24.04	24.14			FZ		55		fine to coarse gravel		UN	RF		80			angular rock fragments <25 mm
BQLA-07	24.20				J		80		bk		UN	RF					
BQLA-07	24.25				hJ		55		or br		UN						
BQLA-07	24.31				hJ		20				PR						
BQLA-07	24.49				hJ		75		gr bk		PR						
BQLA-07	24.70				hJ		90		bk		UN						
BQLA-07	24.80				J		25		or br		ST	RF					
BQLA-07	24.86				hJ		40		rd		PR						
BQLA-07	24.88				hJ		85		or br		UN						
BQLA-07	25.08				V		60		pl or br		PR			2			
BQLA-07	25.09				hJ		85		bk		UN						
BQLA-07	25.14				hJ		70		pl or br		PR						



Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BQLA-07 Defects List

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PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	25.17				hJ		90		bk		UN						
BQLA-07	25.21				hJ		75		or br		PR						
BQLA-07	25.22				hJ		90		or br		UN						
BQLA-07	25.23				J		10		or br		PR	RF					
BQLA-07	25.29				J		85		bk and o br		ST	RF					possible drilling break
BQLA-07	26.27				hJ		0		br		CU						
BQLA-07	26.34	26.37			EW		20					RF		30			angular rock fragments <7 mm diameter
BQLA-07	26.43				hJ		10		br		PR						
BQLA-07	26.45				hJ		75		br		PR						
BQLA-07	26.47				hJ		70		br		PR						
BQLA-07	26.50				hJ		70		br		UN						
BQLA-07	26.52				hJ		80		br		UN						
BQLA-07	26.55				J		0		br		ST	RF					
BQLA-07	26.59				hJ		70		br		PR						
BQLA-07	26.63					hJ	75		pl yl br		PR	SM					
BQLA-07	26.65				hJ		55		br		PR						
BQLA-07	26.66				hJ		60		br		PR						
BQLA-07	26.74				hJ		5				IR						
BQLA-07	26.78				hJ		0		br		IR						
BQLA-07	26.81				J		65		br		PR	RF					
BQLA-07	26.82				hJ		25		br		PR						
BQLA-07	26.83				hJ		35		br		PR						
BQLA-07	26.84				hJ		20		br		PR						
BQLA-07	26.86				hJ		30		br		PR						
BQLA-07	26.91				hJ		10		bk		PR						
BQLA-07	26.95				hJ		40		br		PR						
BQLA-07	27.03				hJ		50		br		PR						
BQLA-07	27.24				hJ		90		or br		PR						
BQLA-07	27.30				hJ		40		or br		ST						
BQLA-07	27.53				hJ		50		or br		PR						
BQLA-07	27.57				hJ		35		or br		UN						
BQLA-07	27.59				J		35		or br		PR						
BQLA-07	27.64				J		60		or br		ST	RF					
BQLA-07	27.75				hJ		90		or br		UN						
BQLA-07	27.77				hJ		5		or br		PR						
BQLA-07	27.86				J		75		yl br		PR	SM					
BQLA-07	28.21				hJ		20		br		ST						
BQLA-07	28.31				hJ		35		or br		PR						
BQLA-07	28.33				hJ		70		rd		PR						
BQLA-07	28.34				hJ		50		or br		PR						
BQLA-07	28.36				hJ		80		rd		UN						
BQLA-07	28.37				hJ		60		rd		PR						
BQLA-07	28.40				J		65				PR	RF					
BQLA-07	28.40	28.46			hJ		75		rd and bk		UN						55-90 degrees
BQLA-07	28.53				J		10				PR	RF					
BQLA-07	28.56				hJ		60		or br		PR						
BQLA-07	28.59				hJ		80		or br		PR						
BQLA-07	28.64				hJ		20		or br		PR						
BQLA-07	28.65				hJ		20		or br		PR						
BQLA-07	28.67				J		40		or br		PR	RF					
BQLA-07	28.69				hJ		65		rd		UN						
BQLA-07	28.73				J		70		or br and bk		PR	RF					
BQLA-07	28.76				J		10		or br		UN	RF					
BQLA-07	28.78				hJ		60		or br		PR						
BQLA-07	28.81				hJ		60		or br		ST						
BQLA-07	28.84				hJ		75		or br		PR						
BQLA-07	28.85				hJ		25		or br		PR						
BQLA-07	28.89				hJ		65		bk		UN						
BQLA-07	28.90				hJ		45		or br		PR						
BQLA-07	28.91				hJ		90		or br		PR						
BQLA-07	28.92				hJ		40		or br		PR						
BQLA-07	28.94				hJ		70		or br		PR						
BQLA-07	28.96				hJ		90		or br		PR						
BQLA-07	28.98				hJ		70		or br		UN						
BQLA-07	29.02				J		60		or br		PR	RF					
BQLA-07	29.06				hJ		60				PR						
BQLA-07	29.07				hJ		70		or br		UN						
BQLA-07	29.08				hJ		10		or br		UN						
BQLA-07	29.16				J		20		or br and bk		UN	RF					
BQLA-07	29.19				hJ		50		or br		PR						
BQLA-07	29.30				hJ		90		or br		UN						
BQLA-07	29.33				hJ		70		or br		PR						
BQLA-07	29.34				J		65		or br and bk		UN	RF					
BQLA-07	29.38				J		55		or br		UN	RF					
BQLA-07	29.40				hJ		25		or br		ST						
BQLA-07	29.42				hJ		30		bk		ST						
BQLA-07	29.43				hJ		80		or br		UN						
BQLA-07	29.45				hJ		10		or br and bk		PR						
BQLA-07	29.48				hJ		65		or br		PR						



Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BQLA-07 Defects List

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PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	29.50				hJ		75		or br		PR						
BQLA-07	29.51				hJ		55		or br		PR						
BQLA-07	29.53				J		50		or br		ST	RF					
BQLA-07	29.56				hJ		50		or br		CU						
BQLA-07	29.59				hJ		75		rd		PR						
BQLA-07	29.60				hJ		65		or br		UN						
BQLA-07	29.63				J		20		or br		PR	RF					
BQLA-07	29.78				hJ		10				PR						
BQLA-07	29.79				hJ		80		or br		UN						
BQLA-07	29.86				hJ		80				UN						
BQLA-07	29.87				hJ		40		or br		PR						
BQLA-07	29.88				hJ		55		or br		PR						
BQLA-07	29.95				hJ		80		or br and wh		UN						
BQLA-07	29.96				hJ		70		or br		UN						
BQLA-07	30.08				hJ		0				PR						
BQLA-07	30.09				hJ		0				PR						
BQLA-07	30.10				J		25		or br		PR	RF					
BQLA-07	30.16				hJ		85		bk		UN						
BQLA-07	30.48				hJ		40		or br		UN						
BQLA-07	30.49				hJ		20				PR						
BQLA-07	30.52				hJ		0		or br		PR						
BQLA-07	30.58				hJ		0		or br		PR						
BQLA-07	30.60				hJ		40		or br		PR						
BQLA-07	30.67				J		50		pl or br		PR	SM					
BQLA-07	30.83				hJ		25				IR						
BQLA-07	31.08				J		50				PR	RF					
BQLA-07	31.09				hJ		20				PR						
BQLA-07	31.15				J		50		or br		PR	RF					
BQLA-07	31.19				hJ		75		rd br and wh		PR						2 mm alt halo
BQLA-07	31.20				hJ		5		or br		PR						
BQLA-07	31.23				hJ		75		or br		UN						2 mm alteration halo
BQLA-07	31.24				hJ		75		or br		PR						2 mm alteration halo
BQLA-07	31.27				hJ		85		wh		UN						
BQLA-07	31.28				hJ		20		or br		PR						
BQLA-07	31.29				hJ		40		rd		UN						
BQLA-07	31.44				hJ		65		wh		UN						
BQLA-07	31.46				hJ		60		bk and wh		PR						
BQLA-07	31.51				hJ		70		bk		UN						
BQLA-07	31.53				hJ		75		wh		PR						
BQLA-07	31.56				J		35				ST	RF					
BQLA-07	31.79				hJ		45		bk		UN						
BQLA-07	31.88				hJ		75		bk and wh		PR						
BQLA-07	31.94				V		75		or br and bk		PR			3			
BQLA-07	31.99				J		30				PR	RF					
BQLA-07	32.06				hJ		90		bk and wh		UN						
BQLA-07	32.15				hJ		70		wh		PR						
BQLA-07	32.22				hJ		75		bk and wh		UN						
BQLA-07	32.25				hJ		60		wh		PR						
BQLA-07	32.31				hJ		90		bk		UN						
BQLA-07	32.41				hJ		85		bk		UN						
BQLA-07	32.51				hJ		60		bk		PR						
BQLA-07	32.52				J		50				PR	RF					
BQLA-07	32.55				hJ		90				UN						
BQLA-07	32.55	32.93			J		70	90	or br min	VN	UN	SM		2		extremely closely	
BQLA-07	32.56				hJ		90		wh		UN						
BQLA-07	32.56	32.94			J		20	30	or br min	SN	PR	SM				closely	
BQLA-07	32.57				hJ		80		or br and wh		UN						
BQLA-07	32.59				hJ		40		wh		IR						
BQLA-07	32.61				hJ		20		or br		UN						
BQLA-07	32.73				hJ		85		bk and wh		UN						
BQLA-07	32.74				hJ		70		bk		UN						
BQLA-07	32.78				hJ		20		rd br		IR						
BQLA-07	32.98				J		45		or br and bk		PR	RF					
BQLA-07	33.00				J		45		or br and bk		PR	RF					
BQLA-07	33.04				J		10		or br and gr		UN	RF					
BQLA-07	33.09				J		5		or br and gr		UN	RF					
BQLA-07	33.17				hJ		55		wh		PR						2 mm alteration halo
BQLA-07	33.18				hJ		75		bk		PR						
BQLA-07	33.19				hJ		55		wh		PR						
BQLA-07	33.20				hJ		20		wh		PR						
BQLA-07	33.21				hJ		5		wh		PR						
BQLA-07	33.22				hJ		35		wh		PR						
BQLA-07	33.24				J		10		or br		PR	RF					
BQLA-07	33.26				hJ		45		or br		UN						
BQLA-07	33.28				hJ		45		or br		PR						
BQLA-07	33.29				hJ		80		or br		IR						
BQLA-07	33.30				hJ		70		bk		PR						
BQLA-07	33.32				J		20		gr		UN	RF					
BQLA-07	33.33				J		20		gr		UN	RF					



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PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	33.36				J		75		or br and yl br		UN	RF					
BQLA-07	33.43				hJ		20		bk		UN						
BQLA-07	33.49				hJ		20		or br		UN						
BQLA-07	33.50				hJ		50		or br		UN						2 mm wh alt halo
BQLA-07	33.52				J		30		or br and bk		UN	RF					
BQLA-07	33.54				hJ		15		or br		PR						
BQLA-07	33.57				hJ		85		or br and wh		UN						
BQLA-07	33.58				hJ		60		or br		PR						
BQLA-07	33.60				hJ		20		wh		PR						
BQLA-07	33.61				J		80		or br and bk		UN	RF					
BQLA-07	33.64				hJ		80		bk and wh		PR						
BQLA-07	33.67				hJ		25		wh		UN						
BQLA-07	33.70				hJ		80		or br		UN						
BQLA-07	33.72				hJ		75		bk		PR						
BQLA-07	33.80				hJ		70				PR						
BQLA-07	33.83				hJ		70		bk		PR						
BQLA-07	33.84				hJ		70		bk		UN						
BQLA-07	33.88				hJ		70		bk		PR						
BQLA-07	33.93				J		20		or br		PR	RF					
BQLA-07	34.12				hJ		20		gr		PR						
BQLA-07	34.13				hJ		65		bk		PR						
BQLA-07	34.14				hJ		10		gr		PR						
BQLA-07	34.27				hJ		90		wh		PR						
BQLA-07	34.29				J		55		or br		PR	RF					
BQLA-07	34.31				hJ		60		or br		UN						
BQLA-07	34.32				hJ		60		or br		UN						
BQLA-07	34.34				hJ		65		bk		PR						
BQLA-07	34.35				hJ		65		bk		PR						
BQLA-07	34.40				hJ		0		or br		PR						
BQLA-07	34.41				hJ		65		wh		PR						
BQLA-07	34.43				hJ		70		bk		UN						
BQLA-07	34.45				hJ		30		ot br and wh		PR						
BQLA-07	34.47				hJ		65		wh		PR						
BQLA-07	34.52				hJ		40		or br		UN						2 mm wh alt halo
BQLA-07	34.53				hJ		10		or br		PR						1 mm wh alt halo
BQLA-07	34.54				hJ		55		or br		UN						2 mm wh alt halo
BQLA-07	34.56				hJ		65		bk		UN						
BQLA-07	34.57				hJ		65		bk		IR						2 mm wh alt halo
BQLA-07	34.64				hJ		5		or br		PR						
BQLA-07	34.67				hJ		70		or br		UN						2 mm wh alt halo
BQLA-07	34.68				hJ		25		bk		UN						
BQLA-07	34.69				hJ		60		wh		PR						
BQLA-07	34.71				hJ		65		wh		UN						1 mm wh alt halo
BQLA-07	34.73				hJ		30		bk		UN						
BQLA-07	34.74				J		10		or br		PR	RF					
BQLA-07	34.75				J		65		gr and bk		PR	RF					
BQLA-07	34.77				J		70		or br and gr		CU	SM					
BQLA-07	34.78				hJ		65		or br		IR						2 mm wh alt halo
BQLA-07	34.81				hJ		90		bk		UN						
BQLA-07	34.82				hJ		75		bk		UN						
BQLA-07	34.85				J		10		or br		PR	RF					
BQLA-07	34.90				J		90		bk		PR						
BQLA-07	34.91				J		90		or br an bk		PR						
BQLA-07	34.99				J		30		or br and gr		PR	RF					
BQLA-07	35.00				J		35				PR	RF					
BQLA-07	35.03				hJ		15		wh		PR						
BQLA-07	35.07				hJ		80		or br		UN						
BQLA-07	35.15				J		5		or br		UN	RF					
BQLA-07	35.32				hJ		80		pl gr		UN						1 mm bk alt halo
BQLA-07	35.35				hJ		70		bk		PR						
BQLA-07	35.39				hJ		85		bk		UN						
BQLA-07	35.52				hJ		75		wh		PR						
BQLA-07	35.53				hJ		80		wh		PR						
BQLA-07	35.60				hJ		45		wh		PR						
BQLA-07	35.61				hJ		85		bk		PR						
BQLA-07	35.62				hJ		75		wh		PR						
BQLA-07	35.64				J		40		or br		PR	RF					
BQLA-07	35.67				J		55		or br and bk		UN	RF					
BQLA-07	35.71				J		70		rd br		UN	RF					
BQLA-07	35.74				hJ		60		wh		UN						
BQLA-07	35.76				hJ		80		wh		PR						
BQLA-07	35.77				hJ		65		bk		PR						
BQLA-07	35.78				hJ		85		wh		PR						
BQLA-07	35.79				hJ		70		wh		PR						
BQLA-07	35.80				hJ		45		bk		PR						
BQLA-07	35.82				J		80		or br		PR	RF					
BQLA-07	35.84				J		80				UN	RF					
BQLA-07	35.85				hJ		85		wh		PR						
BQLA-07	35.87				J		5				PR	RF					



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PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	35.88				hJ		70		bk		PR						
BQLA-07	35.89				hJ		75		bk		PR						
BQLA-07	35.90				hJ		30		bk		PR						
BQLA-07	35.91				hJ		50		bk		PR						
BQLA-07	35.95				hJ		70		wh		CU						
BQLA-07	36.00				J		0				ST	RF					possible DB
BQLA-07	36.04				hJ		65		bk		PR						
BQLA-07	36.10				hJ		20		bk		PR						
BQLA-07	36.11				hJ		70		wh		IR						
BQLA-07	36.12				hJ		45		wh		PR						
BQLA-07	36.16				hJ		75		wh		UN						
BQLA-07	36.17				hJ		75		wh		PR						
BQLA-07	36.20				hJ		60		wh		PR						
BQLA-07	36.22				hJ		40		wh		CU						
BQLA-07	36.24				hJ		60		wh		UN						
BQLA-07	36.25				hJ		55		wh		UN						
BQLA-07	36.25	36.51			J		45	65	wh	CN	PR	RF				very closely	
BQLA-07	36.27				hJ		65		wh		UN						
BQLA-07	36.28				hJ		30		bk		PR						
BQLA-07	36.31				hJ		30		wh		PR						
BQLA-07	36.33				hJ		10				PR						
BQLA-07	36.35				hJ		90		wh		PR						
BQLA-07	36.36				hJ		90				PR						
BQLA-07	36.39				J		10			CN	UN	RF					
BQLA-07	36.45				hJ		75		bk		UN						
BQLA-07	36.46				hJ		45		bk		UN						
BQLA-07	36.53				hJ		55		bk		PR						
BQLA-07	36.65				hJ		55		bk		PR						
BQLA-07	36.69				hJ		60		bk		PR						
BQLA-07	36.84				hJ		65		bk		UN						
BQLA-07	36.86				hJ		75		bk		UN						
BQLA-07	36.89				hJ		60		wh		PR						
BQLA-07	36.93				hJ		55		bk		PR						
BQLA-07	36.96				hJ		60		wh		PR						
BQLA-07	37.04				hJ		55		rd br		UN						
BQLA-07	37.08				hJ		65		wh		PR						
BQLA-07	37.09				J		25			CN	PR						
BQLA-07	37.16				hJ		60		or br		PR						
BQLA-07	37.26				hJ		60		wh		PR						
BQLA-07	37.27				hJ		30		bk		PR						
BQLA-07	37.29				hJ		70		wh		PR						
BQLA-07	37.30				hJ		55		wh		PR						
BQLA-07	37.32				hJ		10				PR						
BQLA-07	37.33				J		65		or br	CN	PR	RF					
BQLA-07	37.35				hJ		60		wh		PR						
BQLA-07	37.37				hJ		75		rd br		UN						
BQLA-07	37.40				hJ		70		bk		UN						2 mm pl or br alt halo
BQLA-07	37.43				hJ		80		rd br		UN						
BQLA-07	37.47				hJ		75		rd br		UN						
BQLA-07	37.53				hJ		60		bk		PR						
BQLA-07	37.55				hJ		60		bk		PR						
BQLA-07	37.57				hJ		60		bk		UN						
BQLA-07	37.58				hJ		65		bk		PR						
BQLA-07	37.62				hJ		60		wh		UN						
BQLA-07	37.63				hJ		75		wh		PR						
BQLA-07	37.68				hJ		80		rd br		UN						
BQLA-07	37.72				hJ		55		wh		PR						
BQLA-07	37.74				hJ		70		or br		UN						
BQLA-07	37.77				hJ		60		or br and wh		PR						
BQLA-07	37.79				J		5			CN	IR	RF					
BQLA-07	37.81				hJ		85		wh		PR						
BQLA-07	37.82				hJ		45		wh		PR						
BQLA-07	37.84				hJ		30		wh		PR						3 mm pl rd br alt halo
BQLA-07	37.85				hJ		35		wh		UN						
BQLA-07	37.86				hJ		75		wh		PR						
BQLA-07	37.89				hJ		90		wh		UN						
BQLA-07	37.92				hJ		90		wh		PR						
BQLA-07	37.95				hJ		75		bk and wh		UN						
BQLA-07	38.00				J		0		or br	CN	UN	RF					
BQLA-07	38.04				hJ		55		rd br		PR						
BQLA-07	38.08				hJ		60		wh		PR						
BQLA-07	38.11				hJ		75		rd br		PR						
BQLA-07	38.12				hJ		55		wh		UN						
BQLA-07	38.13				hJ		70		wh		PR						
BQLA-07	38.15				hJ		80		bk		UN						
BQLA-07	38.31				hJ		55		bk		UN						
BQLA-07	38.33				J		75		or br, rd br and bk	SN	UN	SM					
BQLA-07	38.35				hJ		10		wh		UN						with 2 mm wh alt halo
BQLA-07	38.39				J		45		or br and wh	CN	PR	RF					



Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BQLA-07 Defects List

Refer to Explanatory Notes sheets for abbreviation definitions

PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	38.40	38.47			SS		45		fragmented rock	SN	PR			60			significant
BQLA-07	38.42	38.48			hJ		70		bk		PR						
BQLA-07	38.47				hJ		50		wh		PR						
BQLA-07	38.48				hJ		35		or br		PR						
BQLA-07	38.49				hJ		75		wh		UN						
BQLA-07	38.50				hJ		20		wh		CU						
BQLA-07	38.51				hJ		60		wh		UN						1 mm pl or br alt halo
BQLA-07	38.52				hJ		10		wh		UN						
BQLA-07	38.54				hJ		35		wh		UN						
BQLA-07	38.60				hJ		20		wh		UN						
BQLA-07	38.61				hJ		20		wh		ST						
BQLA-07	38.62				hJ		5		wh		UN						
BQLA-07	38.64				hJ		30		rd br		PR						
BQLA-07	38.66				hJ		25		bk		PR						
BQLA-07	38.67				J		50		or nr	SN	PR	SM					
BQLA-07	38.68				hJ		0				UN						
BQLA-07	38.69				hJ		50		bk		PR						
BQLA-07	38.70				hJ		5		bk		UN						
BQLA-07	38.71				hJ		65		or br		UN						
BQLA-07	38.72				hJ		0		rd br		PR						
BQLA-07	38.75				hJ		20		rd br		PR						
BQLA-07	38.76				hJ		55		or br								
BQLA-07	38.78				J		20		or br		PR	RF					
BQLA-07	38.79				hJ		30		bk		PR						
BQLA-07	38.80	38.92			J		65	90		CN	CU	RF					
BQLA-07	38.81				hJ		5		bk		PR						
BQLA-07	38.82				J		30		rd br, bk and gr		UN	RF					
BQLA-07	38.83				hJ		50		wh		UN						
BQLA-07	38.84				hJ		70		or br		PR						
BQLA-07	38.86				hJ		50		wh		PR						1 mm pl or br alt halo
BQLA-07	38.87				hJ		50		wh		PR						2 mm or br alt halo
BQLA-07	38.89				J		5		rd br and bk		UN	RF					
BQLA-07	38.91				hJ		90		bk		UN						
BQLA-07	38.93				hJ		50		wh		UN						
BQLA-07	38.95				hJ		90		bk		PR						
BQLA-07	38.96				hJ		70		bk		UN						
BQLA-07	38.97				hJ		20		rd br		PR						
BQLA-07	38.98				hJ		10		rd br		PR						
BQLA-07	39.03				hJ		50		wh		PR						
BQLA-07	39.03	39.33			J		20	40	bk	SN	PR	RF				very closely	
BQLA-07	39.09				hJ		50		or br		PR						
BQLA-07	39.10				hJ		25		or br		PR						
BQLA-07	39.11				hJ		65		bk		UN						
BQLA-07	39.14				hJ		20		wh		PR						1 mm pl or br alt halo
BQLA-07	39.15				hJ		65				UN						
BQLA-07	39.16				hJ		50		wh		PR						
BQLA-07	39.18				hJ		40		wh		PR						
BQLA-07	39.18	39.30			J		70		or br	SN	PR	RF				extremely closely	
BQLA-07	39.21				hJ		20		wh		UN						
BQLA-07	39.24				hJ		35		rd br		UN						
BQLA-07	39.26				hJ		40		rd br		UN						
BQLA-07	39.27				hJ		35		wh		PR						
BQLA-07	39.28				hJ		55		or br		PR						
BQLA-07	39.29				hJ		25		rd br and wh		PR						
BQLA-07	39.30				hJ		0		rd br		PR						
BQLA-07	39.31				hJ		0		bk and wh		PR						
BQLA-07	39.36				hJ		10		bk		ST						
BQLA-07	39.37				hJ		80				PR						
BQLA-07	39.38				hJ		45		wh		UN						
BQLA-07	39.39				hJ		50		wh		UN						
BQLA-07	39.40				J		10			CN	ST	RF					
BQLA-07	39.40	39.59			SZ		40	50	fragmented rock and clay		IR	RF		150			significant
BQLA-07	39.43				hJ		60				UN						
BQLA-07	39.64	39.84			Js		35	50		SN	PR	SM				very closely	
BQLA-07	39.69				hJ		45		wh		PR						
BQLA-07	39.72				hJ		40		bk		PR						
BQLA-07	39.76				hJ		40		wh		PR						
BQLA-07	39.81				hJ		50		wh		PR						
BQLA-07	39.82				hJ		50		bk		PR						
BQLA-07	39.83				hJ		0		bk		PR						
BQLA-07	39.85				hJ		35		bk		UN						
BQLA-07	39.88				hJ		10				CU						
BQLA-07	39.96				hJ		20		wh		PR						
BQLA-07	39.97				hJ		10		wh		PR						
BQLA-07	39.99				hJ		10		or br		PR						
BQLA-07	40.00				J		5				PR	RF					
BQLA-07	40.03				hJ		20		bk		PR						
BQLA-07	40.05				hJ		90		bk		UN						
BQLA-07	40.10				J		10		rd br and gr		PR	SM					



Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BQLA-07 Defects List

Refer to Explanatory Notes sheets for abbreviation definitions

PointID	Depth	Bottom	Fracture Set	Defect Number	Type	Type Suffix	Dip Minimum (degrees)	Dip Maximum (degrees)	Infilling Material	Aperture Observation	Planarity	Roughness	Aperture Measurement Sign	Aperture Measurement	Aperture	Spacing	Remark
BQLA-07	40.14				hJ		30		bk		PR						1 mm or br alt halo
BQLA-07	40.15				hJ		40		bk		PR						1 mm or br alt halo
BQLA-07	40.17				hJ		20		or br		PR						
BQLA-07	40.19				hJ		30				PR						
BQLA-07	40.23				hJ		65		wh		UN						2 mm or br alt halo
BQLA-07	40.24				hJ		70		rd br		UN						
BQLA-07	40.25				hJ		70		bk		UN						1 mm wh alt halo
BQLA-07	40.28				hJ		70		bk and wh		PR						

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PointID : BQLA-07 Depth Range: 14.78 - 18.00 m



PointID : BQLA-07 Depth Range: 18.00 - 22.00 m

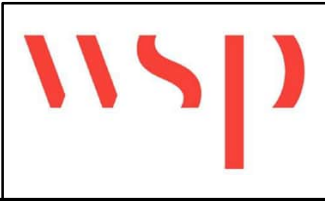
	TITLE Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BQLA-07	DRAWN	RC/PL	DATE	20/08/2024
		CHECKED	GEM	DATE	7/10/2024
		SCALE	Not To Scale		A4
		PROJECT No	PS138693		FIGURE No 1/4

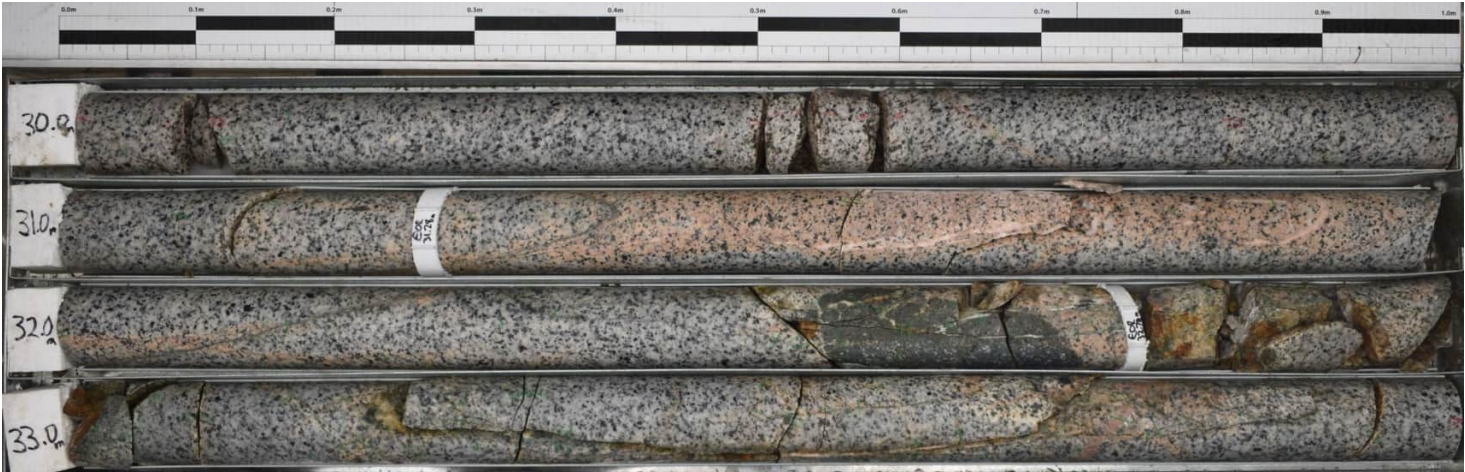


PointID : BQLA-07 Depth Range: 22.00 - 26.00 m



PointID : BQLA-07 Depth Range: 26.00 - 30.00 m

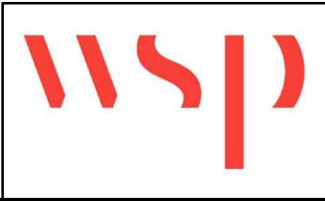
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		CHECKED	GEM	DATE	7/10/2024
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		PROJECT No PS138693		FIGURE No 2/4	

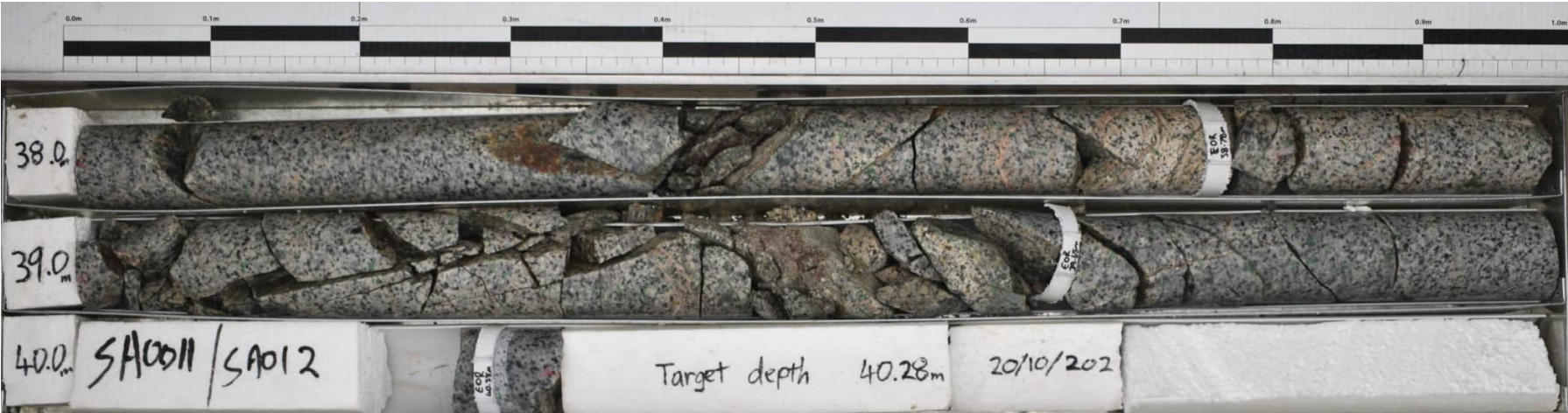


PointID : BQLA-07 Depth Range: 30.00 - 34.00 m



PointID : BQLA-07 Depth Range: 34.00 - 38.00 m

	TITLE Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BQLA-07	DRAWN	RC/PL	DATE	20/08/2024
		CHECKED	GEM	DATE	7/10/2024
		SCALE Not To Scale			A4
		PROJECT No PS138693		FIGURE No 3/4	



PointID : BQLA-07 Depth Range: 38.00 - 40.28 m

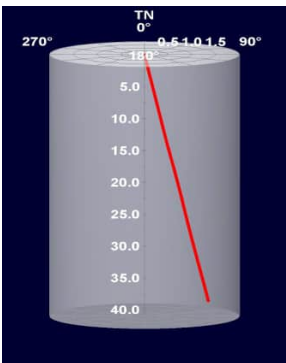
	TITLE Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BQLA-07	DRAWN	RC/PL	DATE	20/08/2024
		CHECKED	GEM	DATE	7/10/2024
		SCALE	Not To Scale		A4
		PROJECT No	PS138693		FIGURE No 4/4



BQLA-07 Structural Log



PROJECT:	Pioneer-Burdekin PHES	JOB #	PS138693
CLIENT:	Queensland Hydro	DATE:	21/11/2023



LOCATION:	Lower Reservoir	BH DEPTH:	40.28 m
EASTING:	659817.794 m E	BH DIAMETER:	96 mm (HQ)
NORTHING:	7660877.827 m N	BH AZIMUTH:	043°
ELEVATION:	185.616 m	BH PLUNGE:	-87°
COORD SYSTEM:	MGA2020-55	CASING DEPTH:	14.39 m
LOGGING DATUM:	Ground Level	CASING TYPE:	HWT

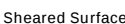
LOGGED BY: GH
LOGGED DATE: 21/10/2023
DRAWN BY: SB
REVIEWED BY: GH
FILE: BQLA-07_Struct_Re
LOGGED DEPTH: 40.10 m

Image logs are oriented relative to borehole highside. Final structures corrected to true north using magnetic declination of 8.2 deg East.

Mechanical calliper log used for structure dip corrections.

All logs zeroed to ground level. Cased section assumed straight for deviation calculations.

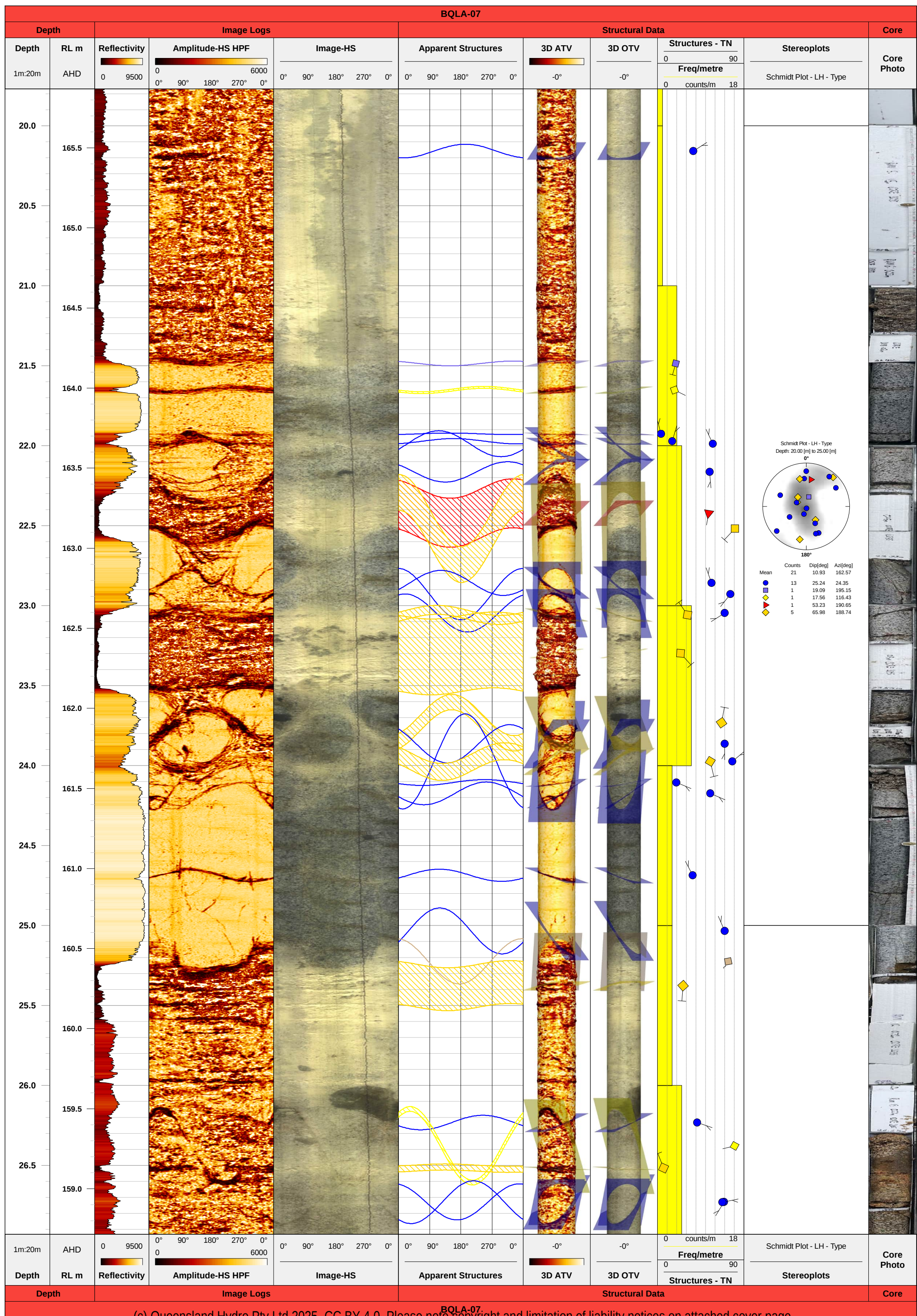
INTERPRETED STRUCTURES

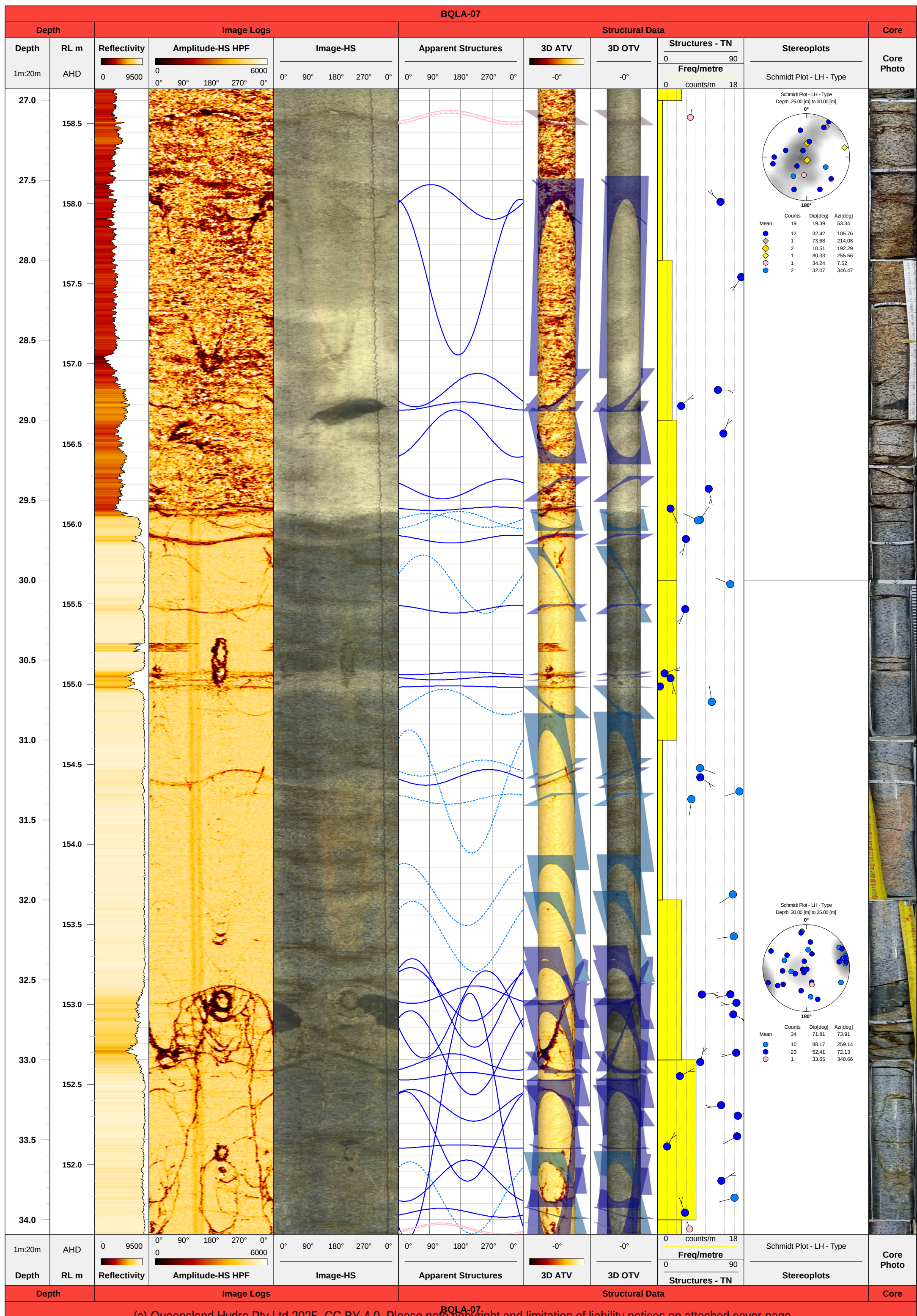


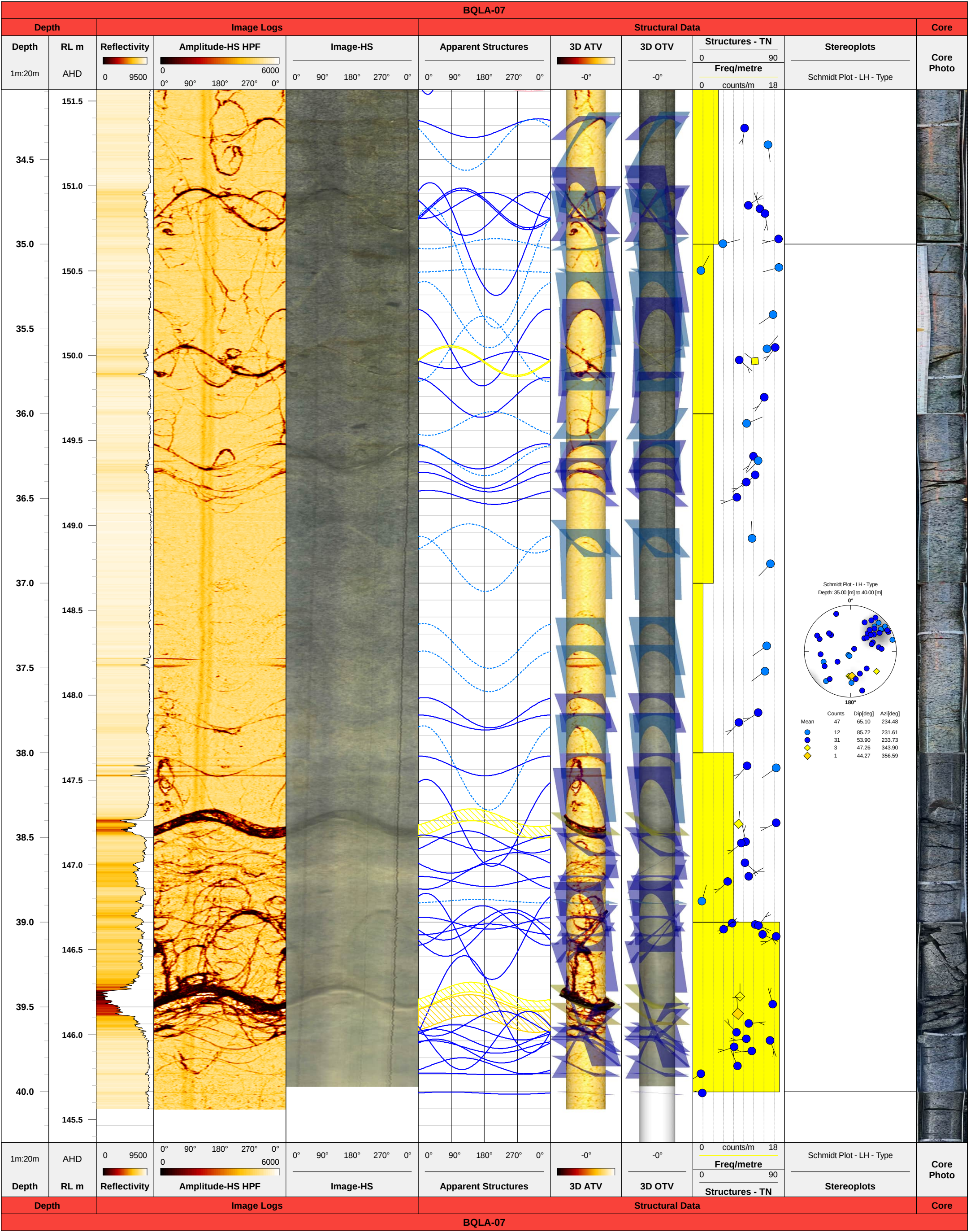
BOLA-07

Depth		Image Logs				Structural Data						Core
Depth	RL m	Reflectivity	Amplitude-HS HPF	Image-HS	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo		
1m:20m	AHD	09500	06000	0°90°180°270°0°	0°90°180°270°0°	-0°	-0°	090 Freq/metre 0counts/m18	Schmidt Plot - LH - Type	Core Photo		
14.5	171.0											
15.0	170.5											
15.5	170.0											
16.0	169.5											
16.5	169.0											
17.0	168.5											
17.5	168.0											
18.0	167.5											
18.5	167.0											
19.0	166.5											
19.5	166.0											
1m:20m	AHD	09500	06000	0°90°180°270°0°	0°90°180°270°0°	-0°	-0°	090 Freq/metre 0counts/m18	Schmidt Plot - LH - Type	Core Photo		
Depth	RL m	Reflectivity	Amplitude-HS HPF	Image-HS	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo		

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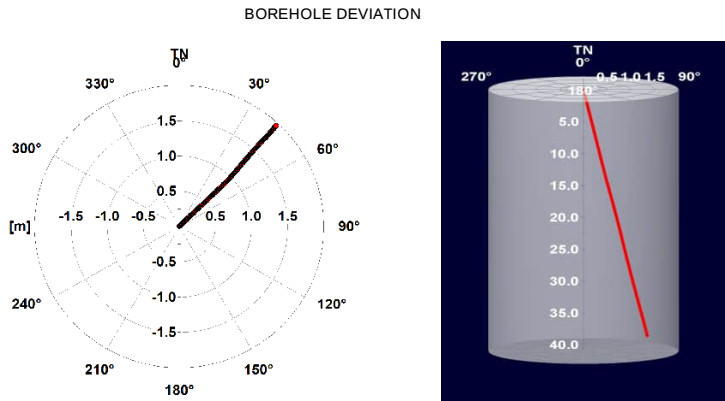




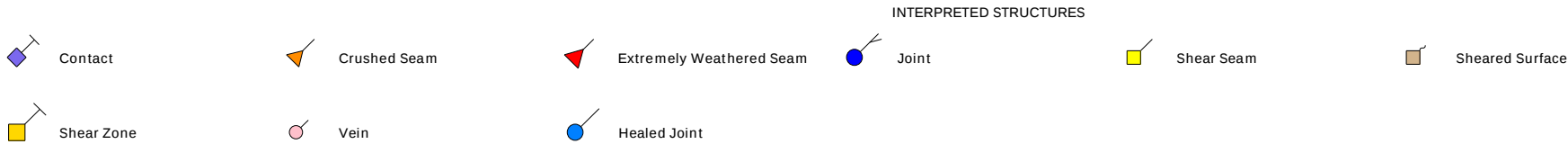
BQLA-07 Composite Log



PROJECT:	Pioneer-Burdekin PHES	JOB #	PS138693
CLIENT:	Queensland Hydro	DATE:	21/11/2023



BOREHOLE DETAILS				DOCUMENT DETAILS		NOTES
LOCATION:	Lower Reservoir	BH DEPTH:	40.28 m	LOGGED BY:	GH	Image logs are oriented relative to borehole highside. Final structures corrected to true north using magnetic declination of 8.2 deg East. Mechanical calliper log used for structure dip corrections. All logs zeroed to ground level. Cased section assumed straight for deviation calculations.
EASTING:	659817.794 m E	BH DIAMETER:	96 mm (HQ)	LOGGED DATE:	21/10/2023	
NORTHING:	7660877.827 m N	BH AZIMUTH:	043°	DRAWN BY:	SB	
ELEVATION:	185.616 m	BH PLUNGE:	-87°	REVIEWED BY:	GH	
COORD SYSTEM:	MGA2020-55	CASING DEPTH:	14.39 m	FILE:	BQLA-07_Comp_RevC	
LOGGING DATUM:	Ground Level	CASING TYPE:	HWT	LOGGED DEPTH:	40.10 m	



BQLA-07														
Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs			Electrical Logs		
Depth	Amplitude-HS HPF	Image-HS	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	K	N16	Ma64		
					Freq/metre					U	N32	Ma16		
1m:50m	500 6000	0° 90° 180° 270° 0°	0 9000	80 mm 160	0 counts/m 18	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50		
	0° 90° 180° 270° 0°									0 ppm 20	200 Ohm.m 20000			
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
1m:50m	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0 9000	80 mm 160	0 counts/m 18	-0°		1000 m/s 7000	0 API 250	0 ppm 20	200 Ohm.m 20000	0 ms 50		
	500 6000				Freq/metre			Vp		Th	N8	Ma16		
Depth	Amplitude-HS HPF	Image-HS	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N32	Ma64		
Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs			Electrical Logs		

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BQLA-07

