BOREHOLE: BHL-07

Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	1 of 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

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 WB	E	30/9/2024, VWP3 - measured water pressure level 2.16m above ground level	0	149.96				ML	Clayey SILT: low plasticity, dark brown, trace fine to medium grained gravel; trace fine to coarse grained sand.	w<PL	S to St	ALLUVIAL SOIL
				1.00								
			1	148.96				ML	Sandy SILT: low plasticity, pale brown, sand is fine to coarse grained; with fine to medium grained gravel; trace root fibres.			
				1.50								
				148.46	U75 1.50-1.95 m PB-BHL-07-001			SP-SM	Silty SAND: fine to coarse grained, pale brown, trace fine to medium grained gravel; trace cobbles up to 70 mm.			
				148.26					Orange-brown.	M	L	
			2	*2.73*								
									Continued as Cored Borehole			
			3									
			4									
			5									
			6									
			7									
			8									
			9									
			10									

Comments

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BOREHOLE: BHL-07

Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	2 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
				0					VL .2 L .6 M .20 H .60 VH .200 EH		10 30 100 300 1000 3000
				1							
				2							
					2.73		Continuation from non-cored borehole				
					147.23						
HQ3	16/10/2024, VWP1	0	0	3			SW Gravelly SAND: fine to medium grained, pale brown, gravel is fine to coarse grained; trace low plasticity clay; trace cobbles up to 75 mm; Recovered as coarse GRAVEL and COBBLES. (ALLUVIAL SOIL). loose - medium dense.				
					3.27						
					146.69		MIXTURE OF GW GRAVEL AND COBBLES: gravel is fine to coarse, sub-rounded to rounded, grey, trace fine to coarse grained sand; Recovered as coarse GRAVEL and COBBLES. (ALLUVIAL SOIL). cobbles is to 75 mm.				
		0	0	4							
	16/10/2024 01:00, VWP2				4.70						
		0	0		145.26		MIXTURE OF GW-GC Sandy GRAVEL AND COBBLES: gravel is fine to coarse, sub-rounded to rounded, grey and brown-orange, sand is fine to coarse grained; with clay; Recovered as coarse GRAVEL and COBBLES. (ALLUVIAL SOIL). cobbles is to 75 mm.				
		0	0	5							
		0	0	6							
		0	0	7							
		0	0	8							
		95	20	9	9.30			SW		9.43: J, 40°, CN, PR, RF	
					140.52		GRANODIORITE: medium to coarse grained, grey pale grey and black, crystalline, massive, rare basalt inclusions up to 30mm, slighlty altered.	XW		9.63: J, 60°, CN, ST, RF	
				10			SW-SM Gravelly SAND: fine to coarse grained, grey-brown, gravel is fine to medium grained; with low	MW		9.80: J, 45°, SN, IR, RF, possible DB 9.87: J, 10°, CN, ST, RF	

Comments

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BOREHOLE: BHL-07

Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	3 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
									VL .2 L .6 M .20 H .60 VH .200 EH		10 30 100 300 1000 3000
HQ3		95	20	10			plasticity to non-plastic silt; (extremely weathered granodiorite). GRANODIORITE: medium to coarse grained, grey and black, crystalline.	FR		9.90: J, 45°, CN, ST, RF 10.07: J, 10°, SN, ST, RF 10.16: J, 75°, SN, PR, SM 10.19: J, 50°, SN, PR 10.34: J, 85°, SN, UN, RF 10.42: J, 40°, CN, PR, SM 10.55: J, 80°, VN, UN, SM 10.78: J, 25°, CN, PR, RF	
		100	76	11						11.24: J, 60°, SN, UN, RF	
							ocassional pale orange altered halos on healed joints			11.50: J, 60°, SN, PR, RF 11.64-12.00: PLT (A) Is50 = 5.3 MPa (M) : PLT (D) Is50 = 0.18 MPa (W)	
		100	99	12							
				13							
		100	86	14							
					14.83					14.63: J, 5°, CN, ST, RF 14.71: J, 30°, CN, ST, RF 14.75: J, 70°, CT, PR, RF 14.90: J, 15°, SN, PR, RF 15.09: J, 40°, CN, PR, RF	
		100	100	15			Basalt inclusion of 100mm.				
				16						15.63: J, 10°, SN, PR, RF 15.92: J, 40°, CN, PR, RF	
		100	98	17						16.30: J, 75°, VN, RF 16.33: J, 70°, SN, PR, RF	
				18						17.57-17.75: J x3, CN, IR, RF, 20-160 mm spacing	
		100	100	19						18.60: J, 70°, CN, ST, RF 19.00-19.36: PLT (A) Is50 = 7.2 MPa (M) : PLT (D) Is50 = 5.8 MPa (M)	
		100	100	20	20.00					19.75: J, 10°, CN, IR, RF	

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Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	4 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
HQ3		100	98	20	129.98		GRANODIORITE: medium to coarse grained, grey, pale grey, white and black, crystalline, massive, rare basalt inclusions up to 15mm, slightly altered.	FR		20.12: J, 65°, SN, CU, RF 20.49: J, 65°, SN, CU, RF 20.63: J, 20°, CN, PR, RF	
		100	100	21						21.26: J, 20°, SN, ST, RF 21.51: J, 25°, SN, PR, RF 21.82: J, 40°, SN, PR, RF	
		100	100	22						22.12: J, 40°, SN, ST, RF	
		100	100	23						22.86: J, 40°, CN, UN, RF 23.10: J, 45°, CN, ST, SM 23.46: J, 50°, SN, ST, SM 23.62: J, 50°, SN, PR, SM	
		100	96	24						24.52: J, 35°, SN, PR, RF	
		100	100	25						24.72: J, 40°, SN, PR, RF 24.72: J, possible DB 25.00-25.35: PLT (A) Is50 = 9.2 MPa (M) : PLT (D) Is50 = 5.2 MPa (M)	
		100	100	26						25.54: J, 25°, CN, PR, SM	
		100	100	27						26.37: J, CN, PR, RF	
		100	100	28							
		100	100	29							
		100	100	30	30.00						

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Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	5 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
HQ3		100	100	30	120.00		GRANODIORITE: medium to coarse grained, grey, pale grey, white and black, crystalline, massive.	FR			
										30.55: J, 45°, VN, PR, SM	
				31						31.00-31.33: PLT (A) Is50 = 8.1 MPa (M)	
		100	100							31.85: J, 15°, ST, RF	
				32							
		100	100	33						33.20: J, 60°, SN, ST 33.25: J, 80°, SN, UN, RF 33.32: J, 40°, SN, UN, RF 33.56: J, CN, UN, RF	
				34						33.73: J, 20°, SN, CU, RF 33.82: J, 65°, SN, UN, SM 33.95: J, 5°, CN, UN, RF 34.00: J, 20°, SN, UN, RF	
		100	100	35						34.78: J, 10°, CN, IR, RF	
				36						35.74: J, 45°, SN, UN, RF 35.85: J, 10°, SN, ST, RF	
		100	100	37						36.88: J, 25°, SN, PR, RF	
					37.45					37.25: J, 10°, CN, IR, RF	
		100	87	38			green, brown-orange, grey, and black, altered halos on healed joints, intrusive basalt interbedded, slightly to moderately altered			37.54-37.82: PLT (A) Is50 = 2.2 MPa (M) 37.55: J, 40°, SN, IR, RF 37.82: J, 60°, SN, IR, SM 37.89: J, SN, ST, RF 38.05: J, 55°, SN, ST, RF 38.21: J, 40°, SN, PR, SM 38.35: J, 60°, SN, UN, SM 38.36: J, 30°, SN, UN, SM 38.43: J, 50°, SN, ST, SM 38.51: J, 30°, SN, UN, RF 38.52: J, 55°, VN, PR, RF 38.56: J, 40°, CN, UN, RF 38.58: J, 40°, CN, CU, RF 38.83: J, 35°, SN, UN, RF 39.20: J, 6°, CN, ST, SM 39.22: J, 40°, SN, UN, SM 39.40: J, 40°, CN, UN, SM 39.47: J, 70°, CT, PR, SM 39.53: J, 30°, CN, IR, SM 39.56: J, 40°, VN, PR, SM	
		100	85	39							
				40	40.00						

Comments

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Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	6 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS (VL -2, L -6, M -20, H -60, VH -200, EH)	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)
HQ3		100	85	40	110.01		GRANODIORITE: medium to coarse grained, grey, pale grey and black, crystalline, massive, rare basalt inclusions up to 45mm, pale orange/brown altered halos on healed joints, slightly to moderately altered.	FR		39.65: J, 40°, SN, PR, SM 39.81: J, 75°, CT, PR, RF 39.84: J, 55°, VN, PR, SM 39.94: J, CT, PR, SM 40.04: J, 45°, SN, IR, RF 40.14: J, 40°, CN, UN, SM 40.20: J, 35°, CN, PR, SM 40.27: J, 15°, VN, UN, RF 40.30: J, 60°, CT, PR, SM 40.38: J, 45°, VN, UN, SM 40.45: J, 40°, SN, PR, RF 40.54: J, 35°, CT, UN 40.59: J, 15°, SN, ST, RF 40.75: IS, 40°, CLAY, high plasticity, white IN, IR, <30 mm 40.79: IS, 30°, CLAY, high plasticity, white IN, UN, <15 mm 40.84: J, 20°, CN, PR, RF 41.00: J, 50°, VN, RF 41.47: J, 30°, SN, PR, SM 41.52: J, 55°, VN, PR, SM 41.61: J, 30°, SN, PR, SM 41.70: J, 25°, VN, UN 41.72: J, 25°, CN, PR, RF 41.94: J, 75°, PR, RF 42.20: J, 10°, CN, UN, RF 42.36: J, 20°, CN, CU, RF 42.38: J, 20°, CN, PR, RF 42.66: J, 65°, CN, PR, RF 42.80: J, 60°, SN, UN, RF 42.88: J, 50°, CN, ST, RF 42.92: J, 75°, VN, PR, RF 43.04: J, 60°, VN, PR, SL 43.30: J, 25°, CN, PR, RF 43.58: J, 45°, CN, CU, RF	
		100	76	41							
		100	70	42							
		100	67	43							
		100	86	44						43.97: J, 70°, SN, PR, SM 44.04: J, 35°, VN, ST, RF 44.09: J, 70°, SN, PR, RF 44.28: J, 45°, CN, UN, RF 44.40: J, 45°, CN, ST, SM 44.43: J, 5°, VN, ST, RF 44.61: J, 55°, SN, CU 44.78: J, 20°, CN, PR, SM 44.87: J, 50°, CN, ST, RF	
		100	92	45						45.09: J, 50°, SN, UN 45.25: J, 40°, VN, ST, RF 45.44: J, 50°, CN, ST, RF 45.50: J, 50°, SN, ST, RF 45.75: J, 5°, SN, UN, RF 45.94: J, 40°, CN, ST, RF 46.06: J, 75°, SN, PR, SM 46.19: J, 40°, SN, ST, RF 46.37: J, 50°, CN, ST, RF	
		100	89	46						46.93: J, 65°, CN, CU, RF 47.19: J, SN, UN, RF 47.20: J, 30°, SN, CU, SL 47.29: J, 40°, SN, CU, SM 47.35: J, 70°, VN, PR, SM 47.55: J, 50°, ST 47.79: J, 20°, VN, ST 47.85: J, 30°, CN, ST, RF 47.90: J, 10°, CN, ST, RF 48.21: J, CN, UN, SM 48.28: J, 30°, SN, ST, RF 48.37: J, 70°, SN, PR, SM	
		100	86	47						48.95: J, 10°, CN, CU, RF 48.90-49.21: Jx4, CN, ST, RF, closely spaced 49.48: J, 80°, CT, PR, SM 49.70: J, 10°, CN, ST, RF	
				48	48.48						
				49	101.54 49.35		BASALT: fine grained, black, crystalline, massive, granadiorite inclusions up to 100mm.				
				50	100.67 49.55 100.47 50.00		GRANODIORITE: medium to coarse grained, grey pale grey and black, crystalline, massive, rare basalt inclusions up to 45mm, pale orange/brown altered halos on healed joints, slightly to moderately altered. Grey and brown-orange.				

Comments

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Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	7 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
									VL .2 L .6 M .20 H .60 VH .200 EH		10 30 100 300 1000 3000
HQ3		100	86	50	100.02		GRANODIORITE: medium to coarse grained, grey, pale grey, white and black, crystalline, massive, rare basalt inclusions up to 60mm, slightly to moderately altered, ocassional pale red-orange/brown altered halos on healed joints.	FR		50.03: J, 50°, VN, PR, RF 50.32: J, 30°, ST 50.37: J, 30°, CN, ST, RF 50.40: J, 15°, CN, ST, RF 50.67: J, 70°, VN, ST, RF 50.80: J, 70°, CT, PR, RF 50.92: J, 5°, SN, UN, RF	
		100	99	51			pale grey and black, slightly altered			51.10: J, 30°, CN, ST, RF 51.35: J, 40°, CN, CU, RF 51.80: J, 40°, CN, PR, RF 52.00: J, 35°, VN, PR, RF	
		100	81	52						52.30-52.33: Jx3, 30°, SN, ST, RF, <10 mm spacing 52.39: J, 40°, CN, CU, RF 52.40: J, 40°, CN, PR 52.61: J, 30°, VN, ST, RF 52.68: J, 30°, CT, ST, RF	
		100	96	53						53.05: J, 50°, gravel IN, UN, RF, <5 mm, SN 53.22: J, 40°, SN, PR, SM 53.34: J, 85°, SN, ST, RF 53.35: J, 50°, SN, RF 53.50: J, 40°, CN, PR, RF 53.66: J, 40°, CN, PR, SM	
		100	93	54						53.95: J, 40°, SN, PR, SM 54.11: J, 40°, CN, PR, RF 54.34: J, 25°, CN, PR, SM 54.07-54.71: Js, 30°, CN, PR, RF, zone of Js with spacing < 30mm, or alteration halo around most	
		100	72	55						54.90: J, 50°, SN, ST, RF 55.06: J, 30°, SN, PR, RF 55.86: J, 55°, VN, PR, SM 56.11: J, 65°, VN, UN, SM 56.25: J, 75°, CT, PR, SL 56.36: J, 50°, VN, PR, SM 56.47: J, 75°, CT, PR, SM	
		100	100	56						56.64: J, 40°, VN, PR, RF 56.70: J, 20°, CN, UN 56.85: J, 60°, CN, PR, RF 56.90: J, 45°, VN, PR, SM 57.06: J, 20°, CN, ST, RF 57.32: J, 20°, CN, PR, SM 57.39: J, 50°, UN	
		100	93	57						57.70: J, 20°, VN, UN, SM 57.77: J, 70°, CN, PR, SM 57.78: J, 60°, SN, PR, RF 57.92: J, 40°, SN, PR, RF 58.06: J, CN, ST, RF 58.12: J, 75°, CN, PR, RF 58.16: J, 15°, CN, ST, RF 58.32: J, 45°, VN, UN, RF	
				58							
				59						59.20: J, 60°, SN, UN, RF	
				60	60.00						

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Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	8 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS VL -2 L -6 M -20 H -60 VH -200 EH	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
HQ3		100	93	60	90.04		GRANODIORITE: medium to coarse grained, grey, pale grey, white and black, crystalline, massive, rare basalt inclusions up to 15mm, slightly altered, ocassional pale orange/brown altered halos on healed joints.	FR		59.96: J, CN, UN, RF 60.39: J, 20°, CN, PR, RF	
				61						60.97: J, VN, PR, SM	
		100	100	62						61.84: J, CN, UN, RF 61.87: J, 30°, VN, ST, RF 62.10: J, 85°, VN, ST, RF 62.20: J, 35°, VN, PR, RF	
		100	96	63						63.09: J, 15°, CN, ST, RF	
		100	100	64						63.89: J, 20°, CN, ST, RF 64.07: J, 75°, gravel, PR, SM, <20 mm 64.45: J, 20°, CN, PR, RF 64.70-65.00: PLT (A) Is50 = 2.4 MPa (J) : PLT (D) Is50 = 1.8 MPa (J)	
		100	100	65						64.69: J, 5°, CN, ST, RF 65.20: J, 15°, CN, ST, RF 65.38: J, 25°, VN, PR, RF	
		100	94	66						65.80: J, 60°, SN, PR, RF 66.32: J, 30°, gravel, PR, SM	
				67						66.64: J, 45°, CN, PR, RF 66.67: J, CN, PR, RF 66.95: J, 25°, CN, UN, RF 66.97: J, 15°, CN, ST, RF 67.13: J, 20°, CN, ST, RF	
		100	100	68						67.60: J, 40°, CN, ST, RF	
				69						68.27: J, 60°, VN, PR, SM 68.41: J, 10°, CN, UN, RF	
		100	100	70	70.00					69.86: J, 75°, SN, ST, RF	

Comments

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Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	9 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
HQ3		100	100	70	80.05		GRANODIORITE: medium to coarse grained, grey, pale grey/pink, white and black, crystalline, massive, rare basalt inclusions up to 20mm, slightly altered, ocassional pale orange/brown altered halos on healed joints.	FR	VL -2 L -6 M -20 H -60 VH -200 EH	70.33: J, 45°, CN, ST, RF	10 30 100 300 1000 3000
					70.50						
					79.49		Increased altered halos around healed defects, pale pink aplite veins.			70.67: J, 5°, CN, ST, RF	
		100	90	71			Pink to pale brown and black, moderately altered.			71.30: J, 80°, SN, PR, SM 71.38: J, UN 71.50: J, 90°, SN, UN, RF 71.57-71.75: Jx9, 10 - 15°, VN, ST, SM, <35 mm spacing	
					71.90						
				72	78.15		Pale grey and black.			71.85: J, 50°, CN, PR, RF 71.90: J, 50°, CN, PR, RF 72.03: J, 45°, CN, PR, RF 72.21: J, 30°, CN, PR, RF	
		100	93							72.54: J, 20°, CN, UN, RF	
				73						73.20: J, 70°, SN, PR, SM 73.34: J, 5°, SN, ST, RF 73.43: J, SN, ST, RF 73.55: CS, 60°, Clayey GRAVEL, PR, <20 mm	
					73.50						
					73.66		Green, highly altered.				
					76.40		Pale grey and black.			73.75: J, 80°, VN, PR, SM	
		100	91	74							
				75			75.20-75.24m: minor basalt dyke/vein, up to 40mm thick			75.07: J, 10°, CN, UN, SM	
		100	98	76							
		100	100	77						77.06: J, 70°, CN, ST, RF 77.29: J, 10°, CN, ST, RF 77.40: J, 75°, CN, PR, RF	
				78						77.79: J, 40°, CN, PR, RF 77.90: J, 50°, CN, UN, RF	
		100	98							78.52: J, 10°, CN, PR, RF	
				79						79.02-79.33: PLT (A) Is50 = 11.0 MPa (M) 79.03: J, CN, UN, RF	
		100	100	80	80.00						

Comments

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PBPHES LIB_REV8.GLB Log IS AU CORED BOREHOLE 3 BHL-07_FINAL FOR ISSUE (1).GPJ <<DrawingFile>> 22/10/2024 17:15 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.07.2 2023-10-30 Prj: WSP 5.04.1 2023-06-14

BOREHOLE: BHL-07

Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	10 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS (VL -2, L -6, M -20, H -60, VH -200, EH -200)	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)
HQ3		100	100	80	70.07		GRANODIORITE: medium to coarse grained, grey, pale grey/pink, white and black, crystalline, massive, rare basalt inclusions up to 40mm, slightly altered, ocassional pale orange/brown altered halos on healed joints, rare aplite veins.	FR		80.07: J, 85°, SN, PR, SM 80.69: J, 50°, SN, PR, SM	
		100	100	81						81.29: J, 45°, CN, ST, RF 81.48: J, 65°, CN, ST, RF	
		100	100	82						82.18: J, 45°, CN, ST, RF 82.62: J, 45°, CN, UN, RF 82.76: J, 45°, SN, PR, SM	
		100	100	83						83.05: J, 30°, CN, ST, RF 83.15: J, 45°, CN, ST, RF	
		100	97	84							
		100	95	85						84.96: J, 10°, CN, ST, RF 85.19: J, 20°, CN, PR, RF 85.70: J, 35°, SN, PR, RF	
		100	86	86						86.05: J, 20°, CN, ST, RF 86.41: J, 10°, CN, UN, RF 86.47: J, 55°, CN, UN, RF 86.50: J, 65°, CN, UN 86.55: J, 65°, CN, UN, RF 86.66: J, 70°, SN, PR, SM 86.83: J, 55°, CN, ST, RF 86.96: J, 70°, CN, UN, SM 87.04: J, 65°, CN, UN, RF 87.08: J, 60°, CN, ST, RF 87.33: J, 10°, VN, ST, RF	
				87			pink to pale brown, grey, and black	SW to FR			
		100	72	88						87.60: J, 20°, CN, CU, SM 87.90: J, 50°, CN, ST, RF 87.97: J, 5°, CN, PR, RF 88.08: J, 45°, VN, ST, RF 88.09: J, 60°, CT, PR, RF 88.18: J, 30°, VN, UN, RF	
		100	88	89			rare pale green/brown mineral within aplite veins			88.94: J, 5°, CN, ST, RF 89.00: J, 50°, VN, PR, SM 89.09: J, 65°, VN, PR, RF 89.12: J, 40°, VN, ST 89.33: J, 50°, VN, UN, SM 89.51: J, 70°, Clayey GRAVEL SN, PR, <50 mm 89.52: J, 40°, VN, ST, RF 89.56: J, 60°, CN, ST, RF	
		100	100	90	90.00		pale grey and black	FR		89.57: J, 40°, VN, UN	

Comments

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BOREHOLE: BHL-07

Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	11 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS	DEFECT DESCRIPTION & Additional Observations (Core partings shown - refer to Detailed Defect Descriptions table for all logged features)	AVERAGE DEFECT SPACING (mm)
HQ3		100	100	90	60.08		GRANODIORITE: medium to coarse grained, pale grey and black, crystalline, massive, rare basalt inclusions up to 50mm, slightly altered, ocassional pale orange/brown altered halos on healed joints, rare aplite veins.	FR		89.68: J, 5°, CN, PR, RF 89.85: J, 55°, CN, UN, RF 90.00: J, 10°, CN, ST, RF 90.30: J, 60°, CN, UN, SM	
										90.64: J, VN, UN, RF 90.80: J, 5°, CN, ST, RF	
				91						91.14: J, 50°, SN, CU	
		100	93							91.56: J, 20°, CN, PR, RF 91.76: J, 60°, SN, PR, SM 91.88: J, 30°, VN, PR, RF	
				92						92.27: J, 45°, CN, PR, SM 92.51: J, 75°, SN, UN 92.63: J, 75°, SN, UN	
		100	100	93							
										93.65-93.74: J, 60°, CN, PR, SM 93.81-93.83: J, 20°, CN, CU, RF	
				94						94.10-94.14: J, 45°, CN, PR, SM	
		100	100	95						95.05: J, CN, PR, SM 95.02-95.12: J, 60°, CN, PR, SM 95.09: J, CN, PR, RF	
		100	100	96						96.67: J, 5°, CN, CU, RF	
				97			rare pale green/brown mineral within aplite veins			97.69: J, 60°, SN, UN, RF	
		100	100	98						98.17-98.25: Jx2, 60°, VN, PR, RF, 80 mm spacing 98.43: J, 45°, CN, PR, RF	
		100	100								
		100	100	99						99.20: J, 10°, CN, PR, RF	
		100	92							99.70: J, 45°, CN, PR, RF 99.86: J, 30°, CN, UN, RF	
				100	100.00						

Comments

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BOREHOLE: BHL-07

Project:	Pioneer Burdekin PHES	Position:	Lower Resservoir	Sheet	12 OF 12
Location:	Netherdale/Dalrymple Heights	Coords:	660504.7 m E 7661279.7 m N MGA2020-55		
Client:	Queensland Hydro	Surface RL:	150.0 m AHD	Date Started:	16/11/2023
Job No.:	PS138693	Contractor:	Twin Hills Engineering & Drilling Drill Rig: Hanjin D&B-8DTM	Date Completed:	30/11/2023
		Inclination:	-87° Direction: 341°	Logged:	AB

Drilling						Field Material Description				Defect Information	
METHOD	WATER	TCR	RQD	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	INFERRED STRENGTH (MPa) ■ - UCS (VL -2, L -6, M -20, H -60, VH -200, EH -200)	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)
HQ3		100	92	100	50.09		GRANODIORITE: medium to coarse grained, grey, pale grey/pink, white and black, crystalline, massive, rare basalt inclusions up to 65mm, slightly altered, ocassional pale orange/brown altered halos on healed joints, rare aplite veins.	FR		100.00-100.33: PLT (A) Is50 = 8.6 MPa (M) : PLT (D) Is50 = 4.1 MPa (M)	
		100	100	101						101.31: J, 75°, SN, UN, RF	
							rare pale green/brown mineral within aplite veins			101.50: J, VN, UN, SM	
		100	100	102						102.72: J, 75°, CT, CU, SM	
				103						102.90: J, 25°, CN, CU, RF	
										103.06: J, 35°, CN, ST, RF	
		100	100	104						104.07: J, 40°, SN, UN, RF	
		100	96	105						105.58: J, 5°, CN, PR, RF	
				106						105.97: J, 40°, CN, UN, RF	
		100	100	107						106.98: J, 40°, CN, UN, RF	
		100	100	108							
				109					■	108.93: J, 40°, CN, ST, RF	
		100	100								
				110	110.00		Hole Terminated at 110.00 m Target depth. Vibrating Wire Piezometers Installed.			109.90: J, 75°, SN, PR, SM	

Comments

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Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BHL-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
BHL-07	9.43				J		40			CN	PR	RF					
BHL-07	9.63				J		60			CN	ST	RF					
BHL-07	9.80				J		45			SN	IR	RF					possible DB
BHL-07	9.87				J		10			CN	ST	RF					
BHL-07	9.90				J		45			CN	ST	RF					
BHL-07	10.00				MB												
BHL-07	10.07				J		10			SN	ST	RF					
BHL-07	10.16				J		75			SN	PR	SM					
BHL-07	10.19				J		50			SN	PR						
BHL-07	10.29				HB												drilling induced
BHL-07	10.34				J		85			SN	UN	RF					
BHL-07	10.42				J		40			CN	PR	SM					
BHL-07	10.55				J		80			VN	UN	SM					
BHL-07	10.60				hJ		70				UN						
BHL-07	10.78				J		25			CN	PR	RF					
BHL-07	11.00				MB												
BHL-07	11.06				hJ		60				CU						
BHL-07	11.24				J		60			SN	UN	RF					
BHL-07	11.50				J		60			SN	PR	RF					
BHL-07	11.52	11.55			DB												
BHL-07	11.65				DB												
BHL-07	12.00				MB												
BHL-07	12.05				hJ						PR						
BHL-07	12.36				hJ		80				PR						
BHL-07	12.49				hJ						UN						
BHL-07	12.71	12.72			hJs	x2	30				PR						10 mm spacing
BHL-07	13.00				MB												
BHL-07	14.63				J		5			CN	ST	RF					
BHL-07	14.64				hJ		30				PR						
BHL-07	14.71				J		30			CN	ST	RF					
BHL-07	14.75				J		70			CT	PR	RF					
BHL-07	14.77				DB												
BHL-07	14.90				J		15			SN	PR	RF					
BHL-07	15.00				MB												
BHL-07	15.00				MB												
BHL-07	15.09				J		40			CN	PR	RF					
BHL-07	15.18				hJ						UN						
BHL-07	15.63				J		10			SN	PR	RF					
BHL-07	15.92				J		40			CN	PR	RF					
BHL-07	16.00				MB												
BHL-07	16.30				J		75			VN		RF					
BHL-07	16.33				J		70			SN	PR	RF					
BHL-07	17.00				MB												
BHL-07	17.57	17.75			J	x3				CN	IR	RF					20-160 mm spacing
BHL-07	17.86				DB												
BHL-07	17.96				hJ		65				PR	RF					
BHL-07	18.00				MB												
BHL-07	18.04				hJ		60				PR						
BHL-07	18.58				hJ		20				CU						
BHL-07	18.60				J		70			CN	ST	RF					
BHL-07	18.71				hJ		75				UN						
BHL-07	19.00				MB												
BHL-07	19.36				DB												
BHL-07	19.54				hJ		55				PR						
BHL-07	19.75				J		10			CN	IR	RF					
BHL-07	20.00				MB												
BHL-07	20.04				hJ		60				PR						
BHL-07	20.08				DB												
BHL-07	20.12				J		65			SN	CU	RF					
BHL-07	20.48				HB		5										
BHL-07	20.49				J		65			SN	CU	RF					
BHL-07	20.60				hJ		65				UN						
BHL-07	20.63				J		20			CN	PR	RF					
BHL-07	20.68				DB												
BHL-07	21.26				J		20			SN	ST	RF					
BHL-07	21.46				hJ		45				ST						
BHL-07	21.51				J		25			SN	PR	RF					
BHL-07	21.82				J		40			SN	PR	RF					
BHL-07	22.00				MB												
BHL-07	22.12				J		40			SN	ST	RF					
BHL-07	22.15				hJ		80				IR						
BHL-07	22.20				hJ		90				IR						
BHL-07	22.33				DB												
BHL-07	22.86				J		40			CN	UN	RF					
BHL-07	23.00				MB												
BHL-07	23.10				J		45			CN	ST	SM					
BHL-07	23.46				J		50			SN	ST	SM					
BHL-07	23.50				hJ		60				IR						
BHL-07	23.62				J		50			SN	PR	SM					

Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BHL-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
BHL-07	23.83				DB												
BHL-07	24.00				MB												
BHL-07	24.09				HB												
BHL-07	24.52				J		35			SN	PR	RF					
BHL-07	24.72				J		40			SN	PR	RF					
BHL-07	24.72				J												possible DB
BHL-07	24.82	24.94			hJs	x2	40				UN						120 mm spacing
BHL-07	24.90				hJ		60				UN						
BHL-07	24.96				hJ		25				UN						
BHL-07	25.00				MB												
BHL-07	25.19				hJ		35				CU						
BHL-07	25.54				J		25			CN	PR	SM					
BHL-07	25.84				hJ		70				UN						
BHL-07	26.00				MB												
BHL-07	26.06				hJ		50				PR						
BHL-07	26.26	26.28			hJs	x2	40				PR						25 mm spacing
BHL-07	26.37				J					CN	PR	RF					
BHL-07	26.83				DB												
BHL-07	27.00				MB												
BHL-07	27.44				hJ		50				ST						
BHL-07	27.45				hJ		20				CU						
BHL-07	27.77	29.40			hJ		90				IR						
BHL-07	28.00				MB												
BHL-07	28.33				DB												
BHL-07	28.62				hJ		70				UN						
BHL-07	29.22				hJ		90				IR						
BHL-07	29.34				hJ		30				IR						
BHL-07	29.61	30.90			hJ		90				IR						
BHL-07	30.00				MB												
BHL-07	30.16				hJ						UN						
BHL-07	30.39				hJ		50				PR						
BHL-07	30.40				hJ		45				CU						
BHL-07	30.55				J		45			VN	PR	SM					
BHL-07	31.33	32.30			hJ		90				UN						
BHL-07	31.85				J		15				ST	RF					
BHL-07	31.90				hJ		80				PR						
BHL-07	32.00				MB												
BHL-07	32.25				hJ		80				IR						
BHL-07	32.44				hJ		70				UN						
BHL-07	32.47	32.62			hJs	x2	40				ST	RF					140 mm spacing
BHL-07	32.54				hJ		40				ST						
BHL-07	32.83				DB												
BHL-07	33.00				MB												
BHL-07	33.08				hJ		90				ST						
BHL-07	33.20				J		60			SN	ST						
BHL-07	33.25				J		80			SN	UN	RF					
BHL-07	33.32				J		40			SN	UN	RF					
BHL-07	33.56				J					CN	UN	RF					
BHL-07	33.64				hJ		40				CU						
BHL-07	33.73				J		20			SN	CU	RF					
BHL-07	33.82				J		65			SN	UN	SM					
BHL-07	33.95				J		5			CN	UN	RF					
BHL-07	34.00				J		20			SN	UN	RF					
BHL-07	34.10				hJ		30				UN						
BHL-07	34.15				hJ		75				UN						
BHL-07	34.30				hJ		75				UN						
BHL-07	34.33				DB												
BHL-07	34.78				J		10			CN	IR	RF					
BHL-07	34.87				hJ		35				PR						
BHL-07	35.00				MB												
BHL-07	35.35	35.38			hJs	x3	30				PR						<10 mm spacing
BHL-07	35.51				hJ		70				IR						
BHL-07	35.62				hJ		50				IR						
BHL-07	35.74				J		45			SN	UN	RF					
BHL-07	35.83				DB												
BHL-07	35.85				J		10			SN	ST	RF					
BHL-07	36.00				MB												
BHL-07	36.15	36.53			hJ		90				UN						
BHL-07	36.52				hJ		55				IR						
BHL-07	36.66				hJ		45				UN						
BHL-07	36.84				hJ		40										
BHL-07	36.88				J		25			SN	PR	RF					
BHL-07	36.92				DB		15										
BHL-07	37.00				MB												
BHL-07	37.15				hJ		70				PR						
BHL-07	37.25				J		10			CN	IR	RF					
BHL-07	37.33				MB												
BHL-07	37.55				J		40			SN	IR	RF					
BHL-07	37.82				J		60			SN	IR	SM					

Pioneer-Burdekin Pumped Hydro Energy Scheme: Tranche 1 – BHL-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
BHL-07	37.89				J					SN	ST	RF					
BHL-07	38.00				MB												
BHL-07	38.05				J		55			SN	ST	RF					
BHL-07	38.10	38.59			hJs	x6	40				IR						<130 mm spacing
BHL-07	38.11				hJ		20				IR						
BHL-07	38.16				hJ		35				IR						
BHL-07	38.17				hJ		35				IR						
BHL-07	38.20				hJ		40				ST						
BHL-07	38.21				J		40			SN	PR	SM					
BHL-07	38.26				hJ		55				ST						
BHL-07	38.33				hJ		60				IR						
BHL-07	38.34				hJ		60				PR	SM					
BHL-07	38.35				J		60			SN	UN	SM					
BHL-07	38.36				J		30			SN	UN	SM					
BHL-07	38.40				hJ		90				ST						
BHL-07	38.43				J		50			SN	ST	SM					
BHL-07	38.45				hJ		60				PR						
BHL-07	38.50				hJ		45				ST						
BHL-07	38.51				J		30			SN	UN	RF					
BHL-07	38.52				J		55			VN	PR	RF					
BHL-07	38.56				J		40			CN	UN	RF					
BHL-07	38.58				J		40			CN	CU	RF					
BHL-07	38.73				hJ						PR						
BHL-07	38.80				hJ		60				UN						
BHL-07	38.83				J		35			SN	UN	RF					
BHL-07	38.88				hJ		55				UN						
BHL-07	39.00				MB												
BHL-07	39.04				hJ		70				UN						
BHL-07	39.14				hJ		70				UN						
BHL-07	39.19				hJ		70				IR						
BHL-07	39.20				J		6			CN	ST	SM					
BHL-07	39.22				J		40			SN	UN	SM					
BHL-07	39.25				hJ		40				ST						
BHL-07	39.29				hJ		50				UN						
BHL-07	39.40				J		40			CN	UN	SM					
BHL-07	39.47				J		70			CT	PR	SM					
BHL-07	39.49				hJ		20				ST						
BHL-07	39.52				hJ		90				ST						
BHL-07	39.53				hJ		90				IR						
BHL-07	39.53				J		30			CN	IR	SM					
BHL-07	39.56				J		40			VN	PR	SM					
BHL-07	39.61				hJ		85				ST						
BHL-07	39.65				hJ		30				ST						
BHL-07	39.65				J		40			SN	PR	SM					
BHL-07	39.78				hJ		65				IR						
BHL-07	39.81				J		75			CT	PR	RF					
BHL-07	39.84				J		55			VN	PR	SM					
BHL-07	39.91				hJ		70				UN						
BHL-07	39.94				J					CT	PR	SM					
BHL-07	39.95				hJ		75				ST						
BHL-07	39.97				HB												
BHL-07	40.00				MB												
BHL-07	40.04				J		45			SN	IR	RF					
BHL-07	40.07				hJ		30				UN						
BHL-07	40.10				hJ		80				PR						
BHL-07	40.14				J		40			CN	UN	SM					
BHL-07	40.20				J		35			CN	PR	SM					
BHL-07	40.24				hJ		20				ST						
BHL-07	40.27				hJ		75				ST						
BHL-07	40.27				J		15			VN	UN	RF					
BHL-07	40.30				J		60			CT	PR	SM					
BHL-07	40.37				hJ		30				UN						
BHL-07	40.38				J		45			VN	UN	SM					
BHL-07	40.45				J		40			SN	PR	RF					
BHL-07	40.46				hJ		10				UN						
BHL-07	40.54				J		35			CT	UN						
BHL-07	40.59				J		15			SN	ST	RF					
BHL-07	40.63				hJ		55				UN						
BHL-07	40.68				hJ		40				PR						
BHL-07	40.75				IS		40		CLAY, high plasticity, white	IN	IR		<	30			
BHL-07	40.79				IS		30		CLAY, high plasticity, white	IN	UN		<	15			
BHL-07	40.84				J		20			CN	PR	RF					
BHL-07	40.86				hJ		50				UN						
BHL-07	40.90				hJ		50				UN						
BHL-07	40.95				hJ		45				PR						
BHL-07	41.00				J		50			VN		RF					
BHL-07	41.08				hJ		40				UN						
BHL-07	41.12				hJ		20				PR						
BHL-07	41.22				hJ		30				UN						

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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
BHL-07	41.24				hJ		30				UN						
BHL-07	41.31				hJ		30				PR						
BHL-07	41.45				hJ		30				PR						
BHL-07	41.47				J		30			SN	PR	SM					
BHL-07	41.52				J		55			VN	PR	SM					
BHL-07	41.61				J		30			SN	PR	SM					
BHL-07	41.62				hJ		30				PR						
BHL-07	41.70				J		25			VN	UN						
BHL-07	41.72				J		25			CN	PR	RF					
BHL-07	41.77				HB												
BHL-07	41.83				DB												
BHL-07	41.92				hJ		70				UN						
BHL-07	41.94				J		75				PR	RF					
BHL-07	41.95				hJ		50				UN						
BHL-07	41.96				hJ		35				ST						
BHL-07	41.98				hJ		60				UN						
BHL-07	42.00				MB												
BHL-07	42.04				hJ		70				UN						
BHL-07	42.08				hJ		50				IR						
BHL-07	42.11				hJ		55				IR						
BHL-07	42.18				hJ		45				IR						
BHL-07	42.20				J		10			CN	UN	RF					
BHL-07	42.21				hJ		20				UN						
BHL-07	42.22				hJ		40				UN						
BHL-07	42.25				hJ		40				UN						
BHL-07	42.36				J		20			CN	CU	RF					
BHL-07	42.38				J		20			CN	PR	RF					
BHL-07	42.40				hJ		30				IR						
BHL-07	42.47				hJ		65				UN						
BHL-07	42.50				hJ		50				UN						
BHL-07	42.53				hJ						UN						
BHL-07	42.56				hJ		10				UN						
BHL-07	42.61				hJ		85										
BHL-07	42.66				J		65			CN	PR	RF					
BHL-07	42.72				hJ		60				UN						
BHL-07	42.73				hJ		60				UN						
BHL-07	42.78				hJ		50				UN						
BHL-07	42.80				J		60			SN	UN	RF					
BHL-07	42.85				hJ		70				IR						
BHL-07	42.88				J		50			CN	ST	RF					
BHL-07	42.92				J		75			VN	PR	RF					
BHL-07	43.00				MB												
BHL-07	43.04				J		60			VN	PR	SL					
BHL-07	43.15				hJ		80				UN						
BHL-07	43.21				hJ		25				PR						
BHL-07	43.28				hJ		35				IR						
BHL-07	43.30				J		25			CN	PR	RF					
BHL-07	43.33				DB												
BHL-07	43.40	43.56			hJs	x6	20				UN						<50 mm spacing
BHL-07	43.43				hJ		60				IR						
BHL-07	43.50				hJ		70				IR						
BHL-07	43.57				hJ		30				UN						
BHL-07	43.58				J		45			CN	CU	RF					
BHL-07	43.60	43.62			hJs	x2	40				CU						30 mm spacing
BHL-07	43.65				hJ		80				IR						
BHL-07	43.68	43.77			hJs	x2	20				UN						80 mm spacing
BHL-07	43.73	43.81			hJs	x4	20				IR						<40 mm spacing
BHL-07	43.84				hJ		85				UN						
BHL-07	43.86				hJ		10				PR						
BHL-07	43.88				hJ		70				PR						
BHL-07	43.92				hJ						ST						
BHL-07	43.97				J		70			SN	PR	SM					
BHL-07	44.00				MB												
BHL-07	44.04				J		35			VN	ST	RF					
BHL-07	44.09				J		70			SN	PR	RF					
BHL-07	44.10				hJ		30				UN						
BHL-07	44.16				hJ		60				UN						
BHL-07	44.17				hJ		45				UN						
BHL-07	44.28				J		45			CN	UN	RF					
BHL-07	44.40				J		45			CN	ST	SM					
BHL-07	44.43				J		5			VN	ST	RF					
BHL-07	44.48				hJ		30				UN						
BHL-07	44.53				hJ		75				UN						
BHL-07	44.55				hJ		50				CU						
BHL-07	44.61				J		55			SN	CU						
BHL-07	44.72				hJ		60				ST						
BHL-07	44.75				hJ		80				UN						
BHL-07	44.76				hJ		30				IR						
BHL-07	44.78				J		20			CN	PR	SM					

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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
BHL-07	44.87				J		50			CN	ST	RF					
BHL-07	44.95				hJ		75				UN						
BHL-07	45.00				MB												
BHL-07	45.03				hJ		90				UN						
BHL-07	45.05				hJ		90				UN						
BHL-07	45.08				hJ		70				UN						
BHL-07	45.09				J		50			SN	UN						
BHL-07	45.25				J		40			VN	ST	RF					
BHL-07	45.40				hJ		90				UN						
BHL-07	45.44				J		50			CN	ST	RF					
BHL-07	45.50				hJ		70				UN						
BHL-07	45.50				J		50			SN	ST	RF					
BHL-07	45.54				hJ		40				PR						
BHL-07	45.57				hJ		20				ST						
BHL-07	45.59				hJ		60				UN						
BHL-07	45.65				hJ						UN						
BHL-07	45.66				hJ		70				UN						
BHL-07	45.75				J		5			SN	UN	RF					
BHL-07	45.78				hJ		10				UN						
BHL-07	45.79				hJ		90				IR	RF					
BHL-07	45.86				hJ		60				IR						
BHL-07	45.89				hJ		35										
BHL-07	45.92				hJ		90				IR						
BHL-07	45.94				J		40			CN	ST	RF					
BHL-07	46.00				MB												
BHL-07	46.04				hJ		80				ST						
BHL-07	46.06				J		75			SN	PR	SM					
BHL-07	46.10				hJ		40				UN						
BHL-07	46.13				hJ		5				PR						
BHL-07	46.15				hJ		55				PR						
BHL-07	46.19				J		40			SN	ST	RF					
BHL-07	46.26				hJ		40				ST						
BHL-07	46.28				hJ		40				IR						
BHL-07	46.37				J		50			CN	ST	RF					
BHL-07	46.39				hJ		40				IR						
BHL-07	46.70				hJ		60				PR						
BHL-07	46.74				hJ		45				PR						
BHL-07	46.87				hJ		50				UN						
BHL-07	46.93				J		65			CN	CU	RF					
BHL-07	46.96				hJ		50				UN						
BHL-07	47.00				MB												
BHL-07	47.12				hJ		30				UN						
BHL-07	47.16				hJ		40				UN						
BHL-07	47.19				J					SN	UN	RF					
BHL-07	47.20				J		30			SN	CU	SL					
BHL-07	47.25				hJ		70				ST						
BHL-07	47.26				hJ		80				UN						
BHL-07	47.29				J		40			SN	CU	SM					
BHL-07	47.35				J		70			VN	PR	SM					
BHL-07	47.50				hJ		20										
BHL-07	47.52				hJ		40				ST						
BHL-07	47.55				J		50				ST						
BHL-07	47.62				hJ		75		qu?		ST						
BHL-07	47.65				hJ		65				UN						
BHL-07	47.67				hJ		25				ST						
BHL-07	47.75				hJ						IR						
BHL-07	47.79				J		20			VN	ST						
BHL-07	47.83				DB												
BHL-07	47.85				J		30			CN	ST	RF					
BHL-07	47.90				J		10			CN	ST	RF					
BHL-07	48.00				MB												
BHL-07	48.11				hJ		40				ST						
BHL-07	48.21				J					CN	UN	SM					
BHL-07	48.27				hJ		70				UN						
BHL-07	48.28				J		30			SN	ST	RF					
BHL-07	48.37				J		70			SN	PR	SM					
BHL-07	48.64				hJ		60				PR						
BHL-07	48.79				DB												
BHL-07	48.90	49.21			J	x4				CN	ST	RF				closely	
BHL-07	48.95				J		10			CN	CU	RF					
BHL-07	49.15	49.37			AZ						UN						
BHL-07	49.48				J		80			CT	PR	SM					
BHL-07	49.63				hJ		70				ST						
BHL-07	49.70				J		10			CN	ST	RF					
BHL-07	49.80				hJ		40				UN						
BHL-07	49.86				hJ		25				UN						
BHL-07	50.00				MB												
BHL-07	50.03				J		50			VN	PR	RF					
BHL-07	50.12				hJ		10				ST						

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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
BHL-07	50.23				hJ		30				ST						
BHL-07	50.27				hJ		20				UN						
BHL-07	50.32				J		30				ST						
BHL-07	50.37				J		30			CN	ST	RF					
BHL-07	50.40				J		15			CN	ST	RF					
BHL-07	50.45				hJ		20				ST						
BHL-07	50.60				hJ		55				UN						
BHL-07	50.67				J		70			VN	ST	RF					
BHL-07	50.80				J		70			CT	PR	RF					
BHL-07	50.92				J		5			SN	UN	RF					
BHL-07	51.00				MB												
BHL-07	51.05				hJ		40				UN						
BHL-07	51.10				J		30			CN	ST	RF					
BHL-07	51.20				hJ		75				UN						
BHL-07	51.32				hJ		20				UN						
BHL-07	51.35				J		40			CN	CU	RF					
BHL-07	51.50				hJs	x3	80				UN						<10 mm spacing
BHL-07	51.56				hJ		65				UN						
BHL-07	51.68				hJ		85				UN						
BHL-07	51.80				J		40			CN	PR	RF					
BHL-07	51.85				hJ		40				PR						
BHL-07	51.89				hJ		40				ST						
BHL-07	52.00				J		35			VN	PR	RF					
BHL-07	52.06				hJ		65				PR						
BHL-07	52.10				hJ		50				PR						
BHL-07	52.30				hJ		50				PR						
BHL-07	52.30	52.33			J	x3	30			SN	ST	RF					<10 mm spacing
BHL-07	52.39				J		40			CN	CU	RF					
BHL-07	52.40				J		40			CN	PR						
BHL-07	52.61				J		30			VN	ST	RF					
BHL-07	52.63	52.69			hJs	x4	45				UN						<10 mm spacing
BHL-07	52.68				J		30			CT	ST	RF					
BHL-07	52.80				hJ		48				UN						
BHL-07	52.81				hJ		85				UN						
BHL-07	52.84				hJ		70				UN						
BHL-07	52.88				hJ		35				ST						
BHL-07	52.91				hJ		50				UN						
BHL-07	53.02				hJ		55				UN						
BHL-07	53.05				J		50		gravel	IN	UN	RF	<	5			SN
BHL-07	53.08				hJ		30				UN						
BHL-07	53.22				J		40			SN	PR	SM					
BHL-07	53.25				hJ		40				UN						
BHL-07	53.34				J		85			SN	ST	RF					
BHL-07	53.35				J		50			SN		RF					
BHL-07	53.50				J		40			CN	PR	RF					
BHL-07	53.52				hJ		50				PR						
BHL-07	53.58				hJ		35				PR						
BHL-07	53.66				J		40			CN	PR	SM					
BHL-07	53.75	53.82			hJs	x5	50				UN						<35 mm spacing
BHL-07	53.90				hJ		85				UN						
BHL-07	53.95				J		40			SN	PR	SM					
BHL-07	54.00				MB												
BHL-07	54.07	54.71			Js		30			CN	PR	RF					zone of Js with spacing < 30mm, or alteration halo around most
BHL-07	54.10				hJ		40				UN						
BHL-07	54.11				J		40			CN	PR	RF					
BHL-07	54.17	54.25			hJs	x5	45				PR						<30 mm spacing
BHL-07	54.28	54.33			hJs	x3	30				PR						<20 mm spacing
BHL-07	54.34				J		25			CN	PR	SM					
BHL-07	54.40	54.66			hJs	x6	30				UN						<100 mm spacing
BHL-07	54.46				hJ		15				UN						
BHL-07	54.72				hJ		35				UN						
BHL-07	54.80				hJ		75				PR						
BHL-07	54.87				hJ		40				PR						
BHL-07	54.90				J		50			SN	ST	RF					
BHL-07	54.93				hJ		20				UN						
BHL-07	54.98				hJ		20				UN						
BHL-07	55.00				MB												
BHL-07	55.06				J		30			SN	PR	RF					
BHL-07	55.13				hJ		60		qu?		IR						
BHL-07	55.75				hJ		30				UN						
BHL-07	55.77				hJ		50				CU						
BHL-07	55.86				J		55			VN	PR	SM					
BHL-07	55.92				hJ		75				UN						
BHL-07	55.95				hJ		55				UN						
BHL-07	55.96				hJ		30				UN						
BHL-07	56.00				MB												
BHL-07	56.00	56.06			hJs	x3	40				IR						<20 mm spacing
BHL-07	56.10				hJ		50				ST						
BHL-07	56.11				J		65			VN	UN	SM					

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BHL-07	56.25				J		75			CT	PR	SL					
BHL-07	56.27				hJ		60				UN						
BHL-07	56.32				hJ		85				UN						
BHL-07	56.36				J		50			VN	PR	SM					
BHL-07	56.47				J		75			CT	PR	SM					
BHL-07	56.64				J		40			VN	PR	RF					
BHL-07	56.70				J		20			CN	UN						
BHL-07	56.83				DB												
BHL-07	56.85				J		60			CN	PR	RF					
BHL-07	56.90				J		45			VN	PR	SM					
BHL-07	56.91				DB		5										
BHL-07	57.00				MB												
BHL-07	57.06				J		20			CN	ST	RF					
BHL-07	57.10				hJ		25				PR						
BHL-07	57.14				hJ		20				PR						
BHL-07	57.17				hJ		30				PR						
BHL-07	57.24				hJ		20				PR						
BHL-07	57.26				hJ		80				UN						
BHL-07	57.29				hJ		20				PR						
BHL-07	57.32				J		20			CN	PR	SM					
BHL-07	57.39				J		50				UN						
BHL-07	57.40				hJ		60				UN						
BHL-07	57.42				hJ		50				UN						
BHL-07	57.58				hJ						UN						
BHL-07	57.70				J		20			VN	UN	SM					
BHL-07	57.77				J		70			CN	PR	SM					
BHL-07	57.78				J		60			SN	PR	RF					
BHL-07	57.92				J		40			SN	PR	RF					
BHL-07	58.00				MB												
BHL-07	58.06				J					CN	ST	RF					
BHL-07	58.12				J		75			CN	PR	RF					
BHL-07	58.16				J		15			CN	ST	RF					
BHL-07	58.18				hJ		50				UN						
BHL-07	58.20				hJ		60				UN						
BHL-07	58.25				DB												
BHL-07	58.32				J		45			VN	UN	RF					
BHL-07	58.33				DB												
BHL-07	58.40				hJ		60		qu?		UN			5			SN
BHL-07	58.52				hJ		80				UN						
BHL-07	58.70				hJ		80				UN						
BHL-07	58.73				hJ		50				UN						
BHL-07	58.77				hJ		40				CU						
BHL-07	58.95				hJ		80				UN						
BHL-07	59.00				MB												
BHL-07	59.05				hJ		50				PR						
BHL-07	59.08				hJ		60				UN						
BHL-07	59.12				hJ		60				UN						
BHL-07	59.15				hJ						UN	RF					
BHL-07	59.20				J		60			SN	UN	RF					
BHL-07	59.33				hJ		50				ST						
BHL-07	59.43				hJ		70				UN						
BHL-07	59.47				hJ		50				UN						
BHL-07	59.54				hJ		60				PR						
BHL-07	59.70				hJ		40				UN						
BHL-07	59.77				hJ		70				UN						
BHL-07	59.83				hJ		80				UN						
BHL-07	59.87				hJ		75				PR						
BHL-07	59.96				J					CN	UN	RF					
BHL-07	60.00				MB												
BHL-07	60.39				J		20			CN	PR	RF					
BHL-07	60.75				hJ		85				UN						
BHL-07	60.86				hJ		40		qu?		UN			5			
BHL-07	60.94				hJ		85				UN						
BHL-07	60.97				J					VN	PR	SM					
BHL-07	61.00				MB												
BHL-07	61.01				hJ		80				UN						
BHL-07	61.12				hJ		75				UN						
BHL-07	61.33				MB												
BHL-07	61.41				hJ		85				PR						
BHL-07	61.54				hJ		75				PR						
BHL-07	61.65				hJ		70				PR						
BHL-07	61.84				J					CN	UN	RF					
BHL-07	61.87				J		30			VN	ST	RF					
BHL-07	61.95				hJ		55				UN						
BHL-07	62.10				J		85			VN	ST	RF					
BHL-07	62.20				J		35			VN	PR	RF					
BHL-07	62.40				hJ		80				ST	SM					
BHL-07	62.70				hJ		80				UN						
BHL-07	62.83				DB												

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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
BHL-07	63.00				MB												
BHL-07	63.09				J		15			CN	ST	RF					
BHL-07	63.30				hJ		45				PR						
BHL-07	63.43				hJ						PR						
BHL-07	63.89				J		20			CN	ST	RF					
BHL-07	64.00				DB												
BHL-07	64.07				J		75		gravel		PR	SM	<	20			
BHL-07	64.21				hJ		40				PR						
BHL-07	64.33				DB												
BHL-07	64.45				J		20			CN	PR	RF					
BHL-07	64.47				hJ		40				ST						
BHL-07	64.62				hJ		40				UN						
BHL-07	64.69				J		5			CN	ST	RF					
BHL-07	64.97				hJ		50				ST						
BHL-07	65.00				MB												
BHL-07	65.10				hJ		50				UN						
BHL-07	65.15				hJ		85				UN						
BHL-07	65.20				J		15			CN	ST	RF					
BHL-07	65.27				hJ		50				CU						
BHL-07	65.36				hJ		65				UN						
BHL-07	65.38				J		25			VN	PR	RF					
BHL-07	65.46				hJ		20				UN						
BHL-07	65.57				hJ		90				UN						
BHL-07	65.68				hJ		30				UN						
BHL-07	65.72				hJ						ST						
BHL-07	65.80				J		60			SN	PR	RF					
BHL-07	66.00				MB												
BHL-07	66.10				hJ		40				PR						
BHL-07	66.32				J		30		gravel		PR	SM					
BHL-07	66.64				J		45			CN	PR	RF					
BHL-07	66.67				J					CN	PR	RF					
BHL-07	66.95				J		25			CN	UN	RF					
BHL-07	66.97				J		15			CN	ST	RF					
BHL-07	67.00				MB												
BHL-07	67.13				J		20			CN	ST	RF					
BHL-07	67.33				DB												
BHL-07	67.44				hJ		30				PR						
BHL-07	67.60				J		40			CN	ST	RF					
BHL-07	67.75				hJ		80				UN						
BHL-07	67.80				hJ		80				UN						
BHL-07	68.00				MB												
BHL-07	68.27				J		60			VN	PR	SM					
BHL-07	68.41				J		10			CN	UN	RF					
BHL-07	68.60				hJ		10				UN						
BHL-07	68.83				DB												
BHL-07	69.00				MB												
BHL-07	69.40				hJ		30				PR						
BHL-07	69.86				J		75			SN	ST	RF					
BHL-07	69.93				HB												
BHL-07	69.97				HB												
BHL-07	70.00				MB												
BHL-07	70.10				hJ		75				ST						
BHL-07	70.33				J		45			CN	ST	RF					
BHL-07	70.43				hJ		75				UN						
BHL-07	70.47				hJ		70				UN						
BHL-07	70.56				hJ		50				PR						
BHL-07	70.59				hJ		50				PR						
BHL-07	70.67				J		5			CN	ST	RF					
BHL-07	70.78				hJ		75				ST						
BHL-07	70.87				HB												
BHL-07	71.00				MB												
BHL-07	71.10				hJ		80				PR						
BHL-07	71.15				hJ		40				ST						
BHL-07	71.17				HB												
BHL-07	71.30				J		80			SN	PR	SM					
BHL-07	71.38				J						UN						
BHL-07	71.40				hJ		10				UN						
BHL-07	71.43				hJ		15				ST						
BHL-07	71.45				hJ		15				ST	PO					
BHL-07	71.50				J		90			SN	UN	RF					
BHL-07	71.57	71.75			J	x9	10	15		VN	ST	SM					<35 mm spacing
BHL-07	71.85				J		50			CN	PR	RF					
BHL-07	71.90				J		50			CN	PR	RF					
BHL-07	72.00				MB												
BHL-07	72.03				J		45			CN	PR	RF					
BHL-07	72.14				hJ		45										
BHL-07	72.21				J		30			CN	PR	RF					
BHL-07	72.24				hJ		30				UN						
BHL-07	72.39				hJ		75				UN						

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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
BHL-07	72.54				J		20			CN	UN	RF					
BHL-07	72.82				hJ		70				UN						
BHL-07	72.86				hJ		90				UN						
BHL-07	72.91				hJ		75				UN						
BHL-07	73.00				MB												
BHL-07	73.20				J		70			SN	PR	SM					
BHL-07	73.34				J		5			SN	ST	RF					
BHL-07	73.43				J					SN	ST	RF					
BHL-07	73.55				CS		60		Clayey GRAVEL		PR		<	20			
BHL-07	73.75				J		80			VN	PR	SM					
BHL-07	74.00				MB												
BHL-07	74.07				hJ		85				UN						
BHL-07	74.12				hJ		70				UN						
BHL-07	74.45				hJ		70				UN						
BHL-07	74.65				hJ		80				UN						
BHL-07	74.83				DB												
BHL-07	74.95				hJ		70				ST						
BHL-07	75.00				MB												
BHL-07	75.07				J		10			CN	UN	SM					
BHL-07	75.70				hJ		70				UN						
BHL-07	75.88				hJ		65				UN						
BHL-07	76.00				MB												
BHL-07	76.06				hJ		80				UN						
BHL-07	76.11				hJ		80				UN						
BHL-07	76.33				DB												
BHL-07	76.37				hJ		25				UN						
BHL-07	76.53				hJ		40				UN						
BHL-07	76.70				hJ		45				UN						
BHL-07	76.79				hJ		70				UN						
BHL-07	77.00				MB												
BHL-07	77.06				J		70			CN	ST	RF					
BHL-07	77.29				J		10			CN	ST	RF					
BHL-07	77.30				hJ		30				UN						
BHL-07	77.40				J		75			CN	PR	RF					
BHL-07	77.79				J		40			CN	PR	RF					
BHL-07	77.90				J		50			CN	UN	RF					
BHL-07	78.00				MB												
BHL-07	78.52				J		10			CN	PR	RF					
BHL-07	78.84				hJ		70				UN						
BHL-07	79.00				MB												
BHL-07	79.03				J					CN	UN	RF					
BHL-07	79.06				hJ		70				UN						
BHL-07	79.20				hJ		70				UN						
BHL-07	79.26				hJ		75				UN						
BHL-07	79.33				DB												
BHL-07	79.76				hJ		50				UN						
BHL-07	79.94				hJ		80				UN						
BHL-07	80.00				MB												
BHL-07	80.07				J		85			SN	PR	SM					
BHL-07	80.09				hJ		70				PR						
BHL-07	80.19				hJ		35				UN						
BHL-07	80.36				hJ		65				UN						
BHL-07	80.69				J		50			SN	PR	SM					
BHL-07	80.83				DB												
BHL-07	80.98				hJ		50				UN						
BHL-07	81.00				MB												
BHL-07	81.06				hJ						UN						
BHL-07	81.29				J		45			CN	ST	RF					
BHL-07	81.39				hJ		45				ST						
BHL-07	81.42				hJ		45				UN						
BHL-07	81.48				J		65			CN	ST	RF					
BHL-07	81.55				hJ		65				UN						
BHL-07	81.67				hJ		75				UN						
BHL-07	81.75				hJ		30				ST						
BHL-07	81.84				hJ		65				ST						
BHL-07	81.85				hJ		60				ST						
BHL-07	81.90				hJ		55				ST	SM					
BHL-07	82.00				MB												
BHL-07	82.18				J		45			CN	ST	RF					
BHL-07	82.33				DB												
BHL-07	82.41				hJ		50				UN						
BHL-07	82.62				J		45			CN	UN	RF					
BHL-07	82.76				J		45			SN	PR	SM					
BHL-07	83.00				MB												
BHL-07	83.05				J		30			CN	ST	RF					
BHL-07	83.13				hJ		50				UN						
BHL-07	83.14				hJ		40				PR						
BHL-07	83.15				J		45			CN	ST	RF					
BHL-07	83.72				hJ		50				PR						

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BHL-07	83.78				hJ		55				PR						
BHL-07	83.83				DB												
BHL-07	84.00				MB												
BHL-07	84.30				hJ		35				PR						
BHL-07	84.41				hJ		45				ST						
BHL-07	84.44				hJ		45				ST						
BHL-07	84.47				hJ		50				ST						
BHL-07	84.50				hJ		30				UN						
BHL-07	84.52				hJ		50				UN						
BHL-07	84.54				hJ		60				UN						
BHL-07	84.57				hJ		70		qu?		UN		<	5			SN
BHL-07	84.72				hJ						UN						
BHL-07	84.74				hJ		70				UN						
BHL-07	84.84				hJ		70				PR						
BHL-07	84.96				J		10			CN	ST	RF					
BHL-07	85.00				MB												
BHL-07	85.16				hJ		50				PR						
BHL-07	85.19				J		20			CN	PR	RF					
BHL-07	85.21				hJ		40				PR						
BHL-07	85.23				hJ		40				PR						
BHL-07	85.26				hJ		50				PR						
BHL-07	85.33				DB												
BHL-07	85.37				hJ		45				PR						
BHL-07	85.40				hJ		45				PR						
BHL-07	85.45				hJ		50		APLITE		PR						
BHL-07	85.59				hJ		50				PR						
BHL-07	85.70				J		35			SN	PR	RF					
BHL-07	85.86				hJ		70				PR						
BHL-07	85.95				hJ		70				PR						
BHL-07	86.00				MB												
BHL-07	86.05				J		20			CN	ST	RF					
BHL-07	86.29				hJ		65				ST						
BHL-07	86.30				hJ		65				ST						
BHL-07	86.41				J		10			CN	UN	RF					
BHL-07	86.47				J		55			CN	UN	RF					
BHL-07	86.50				J		65			CN	UN						
BHL-07	86.52				DB												
BHL-07	86.55				J		65			CN	UN	RF					
BHL-07	86.66				J		70			SN	PR	SM					
BHL-07	86.76				hJ		75				UN						
BHL-07	86.77				hJ		75				UN						
BHL-07	86.83				J		55			CN	ST	RF					
BHL-07	86.96				J		70			CN	UN	SM					
BHL-07	87.00				MB												
BHL-07	87.04				J		65			CN	UN	RF					
BHL-07	87.08				J		60			CN	ST	RF					
BHL-07	87.30				hJ		60				CU						
BHL-07	87.33				J		10			VN	ST	RF					
BHL-07	87.60				J		20			CN	CU	SM					
BHL-07	87.73				V		70		qtz		PR	RF	<	5			
BHL-07	87.80				hJ		65				ST						
BHL-07	87.90				J		50			CN	ST	RF					
BHL-07	87.93				hJ		60				ST						
BHL-07	87.95				hJ		20				CU						
BHL-07	87.97				J		5			CN	PR	RF					
BHL-07	88.00				MB												
BHL-07	88.08				J		45			VN	ST	RF					
BHL-07	88.09				J		60			CT	PR	RF					
BHL-07	88.18				J		30			VN	UN	RF					
BHL-07	88.28				hJ		70				IR						
BHL-07	88.34				hJ		70				PR						
BHL-07	88.38				DB												
BHL-07	88.61				hJ		70				UN						
BHL-07	88.67				hJ		70				UN						
BHL-07	88.90				hJ		80				PR						
BHL-07	88.94				J		5			CN	ST	RF					
BHL-07	89.00				J		50			VN	PR	SM					
BHL-07	89.09				J		65			VN	PR	RF					
BHL-07	89.12				J		40			VN	ST						
BHL-07	89.20	89.37			hJs	x2	40				UN	SM					300 mm spacing
BHL-07	89.33				J		50			VN	UN	SM					
BHL-07	89.45				hJ		50				UN						
BHL-07	89.51				J		70		Clayey GRAVEL	SN	PR		<	50			
BHL-07	89.52				J		40			VN	ST	RF					
BHL-07	89.56				J		60			CN	ST	RF					
BHL-07	89.57				J		40			VN	UN						
BHL-07	89.68				J		5			CN	PR	RF					
BHL-07	89.76				hJ						UN						
BHL-07	89.79				hJ						UN						

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BHL-07	89.83	89.97			hJs	x2	50				UN						120 mm spacing
BHL-07	89.85				J		55			CN	UN	RF					
BHL-07	90.00				MB												
BHL-07	90.00				J		10			CN	ST	RF					
BHL-07	90.10				hJ		60				UN						
BHL-07	90.15				hJ		70				UN						
BHL-07	90.23				hJ		60				UN						
BHL-07	90.24				hJ		50				UN						
BHL-07	90.25				hJ		60				UN						
BHL-07	90.30				J		60			CN	UN	SM					
BHL-07	90.33				DB												
BHL-07	90.42				hJ		60				UN						
BHL-07	90.50				hJ		40				UN						
BHL-07	90.64				J					VN	UN	RF					
BHL-07	90.71				hJ		70				UN						
BHL-07	90.80				J		5			CN	ST	RF					
BHL-07	91.00				MB												
BHL-07	91.14				J		50			SN	CU						
BHL-07	91.56				J		20			CN	PR	RF					
BHL-07	91.76				J		60			SN	PR	SM					
BHL-07	91.88				J		30			VN	PR	RF					
BHL-07	91.91				hJ		45				PR						
BHL-07	91.98				hJ		60				PR						
BHL-07	92.00				MB												
BHL-07	92.20				hJ		70				UN						
BHL-07	92.21				hJ		50				UN						
BHL-07	92.27				J		45			CN	PR	SM					
BHL-07	92.29				hJ		45				UN						
BHL-07	92.51				J		75			SN	UN						
BHL-07	92.56				hJ		75				UN						
BHL-07	92.63				J		75			SN	UN						
BHL-07	92.83				DB												
BHL-07	92.92				hJ		10		yl mi		PR	SM					
BHL-07	93.08	93.14			hJ		40		gr mi		PR	SM					
BHL-07	93.15	93.36			hJ		70		gr-br mi		PR	SM					
BHL-07	93.43	93.50			hJ		60		gr-gy mi		PR	SM					
BHL-07	93.65	93.74			J		60			CN	PR	SM					
BHL-07	93.81	93.83			J		20			CN	CU	RF					
BHL-07	94.02	94.07			hJ		45		gr-yl mi		CU	SM				2578	
BHL-07	94.10	94.14			J		45			CN	PR	SM					
BHL-07	94.11				hJ				wh mi		PR	SM					
BHL-07	94.13				hJ				wh mi		PR	SM					
BHL-07	94.22	94.26			hJ		40				PR	SM					wh with pk halo
BHL-07	94.25	94.29			hJ		40		gr mi		PR	SM					
BHL-07	94.33				DB												
BHL-07	94.39	94.42			hJ		20		wh mi		PR	SM					
BHL-07	94.51	94.53			hJ		20		wh mi		PR	SM					
BHL-07	94.65	94.69			hJ		30		gr mi		PR	SM					alt halo
BHL-07	94.68	94.69			hJ		10		wh mi		PR	SM					
BHL-07	94.75	94.79			hJ		30		gr mi (qu?)		PR	SM					alt halo
BHL-07	94.76	94.83			hJ		50		wh mi		PR	SM				2169	alt halo
BHL-07	94.82	94.83			hJ		10		wh mi		PR	SM					
BHL-07	94.94	94.95			hJ		5				PR	SM					
BHL-07	95.02	95.12			J		60			CN	PR	SM					
BHL-07	95.05				J					CN	PR	SM					
BHL-07	95.09				J					CN	PR	RF					
BHL-07	95.23				hJ		95.3		wh mi		PR	SM					
BHL-07	95.24	95.25			hJ		5		wh mi		PR	SM					
BHL-07	95.41	95.51			hJ		60		gr mi		PR	SM					
BHL-07	95.50	95.60			hJ		60		gr mi		PR	SM					
BHL-07	95.58	95.70			hJ		90		gr mi		PR	SM					
BHL-07	95.83				hJ						PR	SM					
BHL-07	95.83				DB												
BHL-07	96.67				J		5			CN	CU	RF					
BHL-07	97.25	97.30			hJ		30		wh mi		PR	SM					
BHL-07	97.33				DB												
BHL-07	97.55				DB												
BHL-07	97.69				J		60			SN	UN	RF					
BHL-07	98.00				MB												
BHL-07	98.17	98.25			J	x2	60			VN	PR	RF					80 mm spacing
BHL-07	98.43				J		45			CN	PR	RF					
BHL-07	98.83				DB												
BHL-07	98.92				DB												
BHL-07	99.00				MB												
BHL-07	99.04				hJ		50				PR						
BHL-07	99.12				hJ		50				PR						
BHL-07	99.20				J		10			CN	PR	RF					
BHL-07	99.70				J		45			CN	PR	RF					
BHL-07	99.86				J		30			CN	UN	RF					

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BHL-07	100.00				MB												
BHL-07	100.18				hJ		45				CU						SN
BHL-07	100.33				DB												
BHL-07	100.35				hJ		85				UN						
BHL-07	100.70				hJ		80				UN						SN, possible DB
BHL-07	100.90				hJ		80				UN						
BHL-07	101.00				MB												
BHL-07	101.23				hJ		50				UN						
BHL-07	101.30				hJ		80				PR						
BHL-07	101.31				J		75			SN	UN	RF					
BHL-07	101.36				hJ						UN						
BHL-07	101.42				hJ		75				PR						
BHL-07	101.50				J					VN	UN	SM					
BHL-07	101.53				DB												
BHL-07	101.78				DB												
BHL-07	102.00				DB												
BHL-07	102.72				J		75			CT	CU	SM					
BHL-07	102.90				J		25			CN	CU	RF					
BHL-07	103.00				DB												
BHL-07	103.06				J		35			CN	ST	RF					
BHL-07	103.10				hJ		65				UN						
BHL-07	103.33				DB												
BHL-07	103.64				hJ		65				UN						
BHL-07	104.00				MB												
BHL-07	104.07				J		40			SN	UN	RF					
BHL-07	104.67				hJ		85				UN						
BHL-07	104.83				DB												
BHL-07	105.00				MB												
BHL-07	105.54				hJ		60				UN						
BHL-07	105.58				J		5			CN	PR	RF					
BHL-07	105.97				hJ		40				PR						
BHL-07	105.97				J		40			CN	UN	RF					
BHL-07	106.00				MB												
BHL-07	106.20				hJ		40				UN						
BHL-07	106.33				DB												
BHL-07	106.46				hJ		40				PR						
BHL-07	106.98				J		40			CN	UN	RF					
BHL-07	107.00				MB												
BHL-07	107.12				hJ		75				UN						
BHL-07	107.32				hJ		45				UN						
BHL-07	107.83				V					IN							
BHL-07	108.00				MB												
BHL-07	108.93				J		40			CN	ST	RF					
BHL-07	108.95				hJ		90				UN						
BHL-07	109.00				MB												
BHL-07	109.33				DB												
BHL-07	109.55				hJ		75				UN						
BHL-07	109.65				hJ		85				UN						
BHL-07	109.90				J		75			SN	PR	SM					

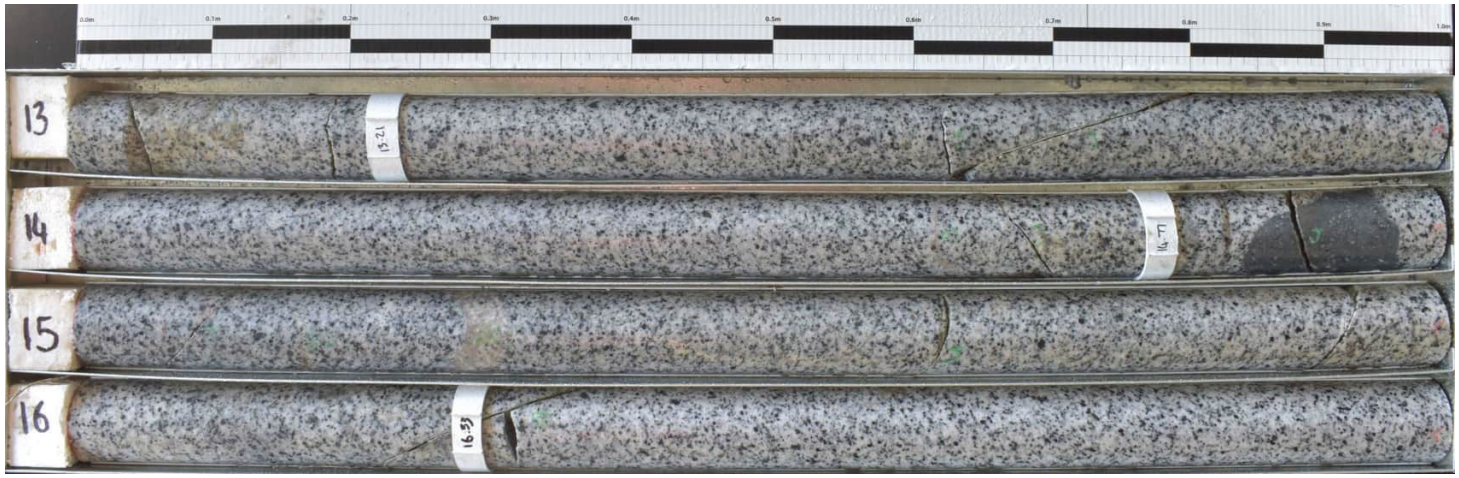
WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:24 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14

PointID : BHL-07 Depth Range: 2.73 - 9.00 m

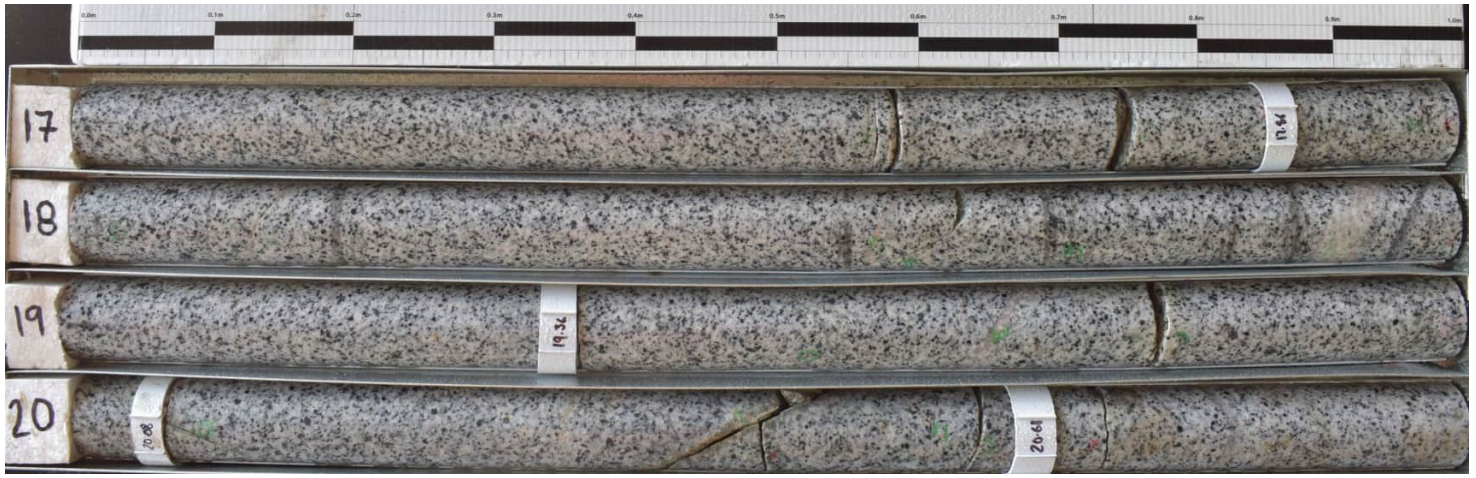
PointID : BHL-07 Depth Range: 9.00 - 13.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 1/14

WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:24 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14

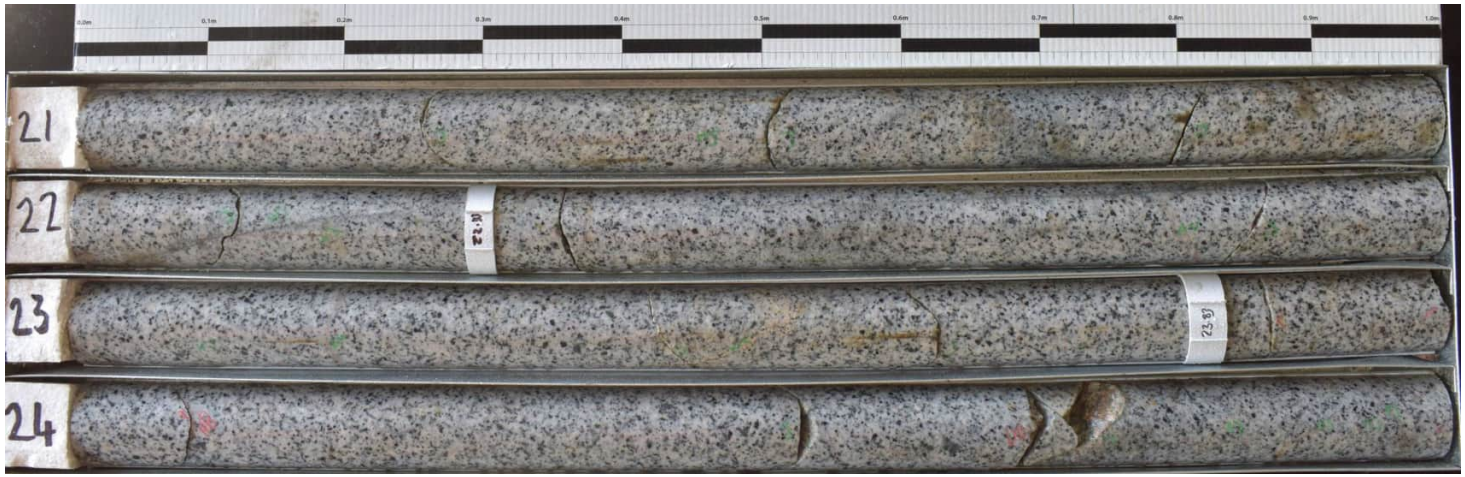


PointID : BHL-07 Depth Range: 13.00 - 17.00 m

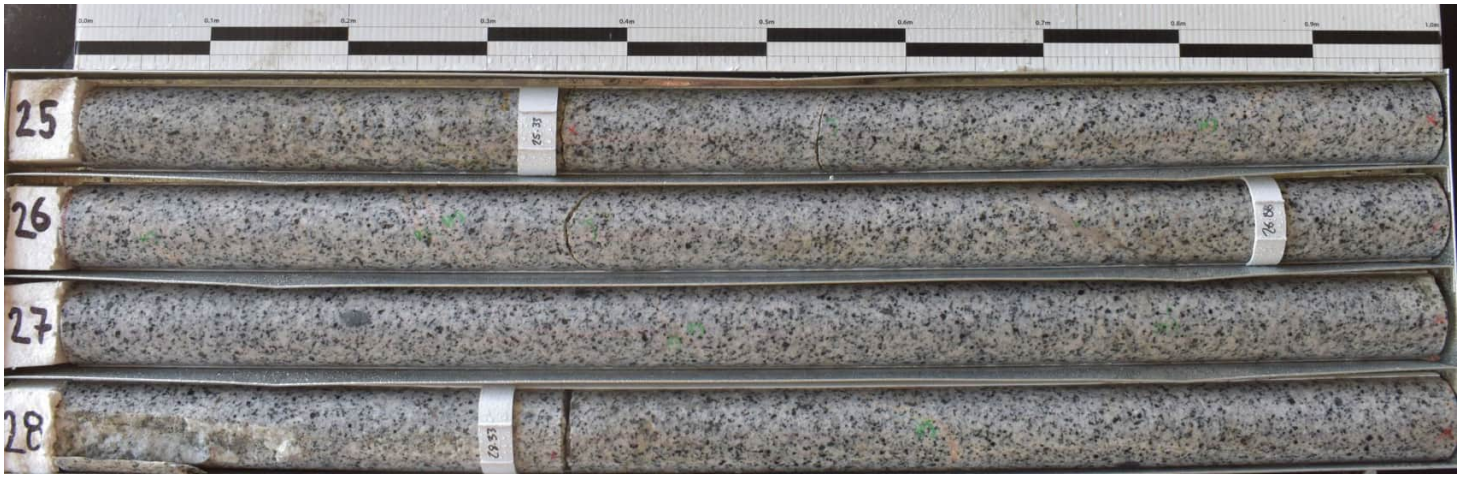


PointID : BHL-07 Depth Range: 17.00 - 21.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 2/14

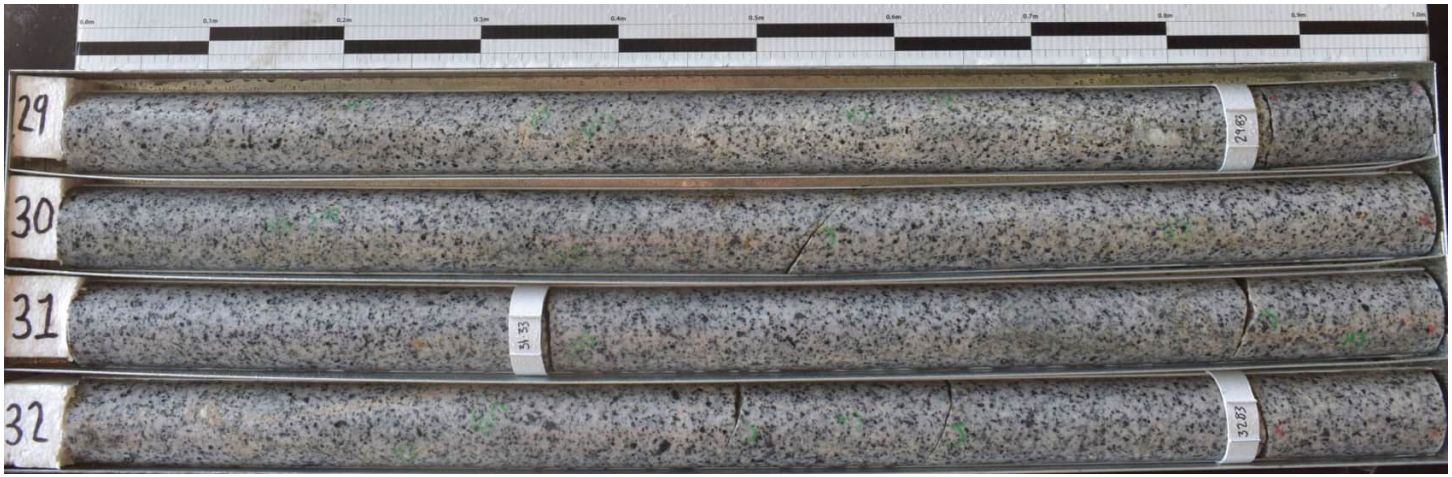


PointID : BHL-07 Depth Range: 21.00 - 25.00 m

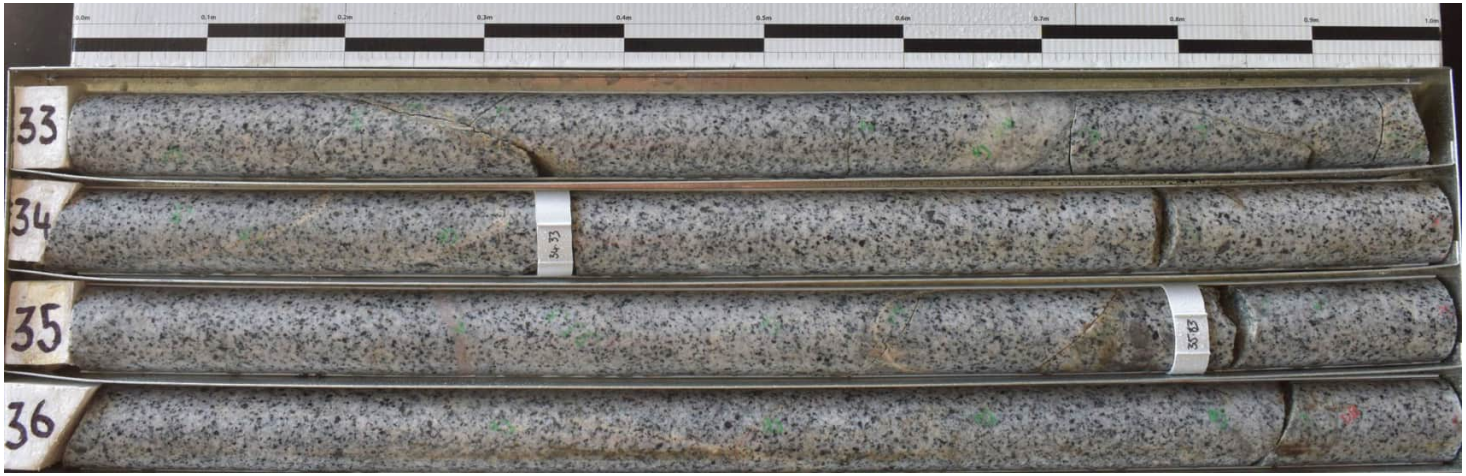


PointID : BHL-07 Depth Range: 25.00 - 29.00 m

	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 3/14



PointID : BHL-07 Depth Range: 29.00 - 33.00 m



PointID : BHL-07 Depth Range: 33.00 - 37.00 m

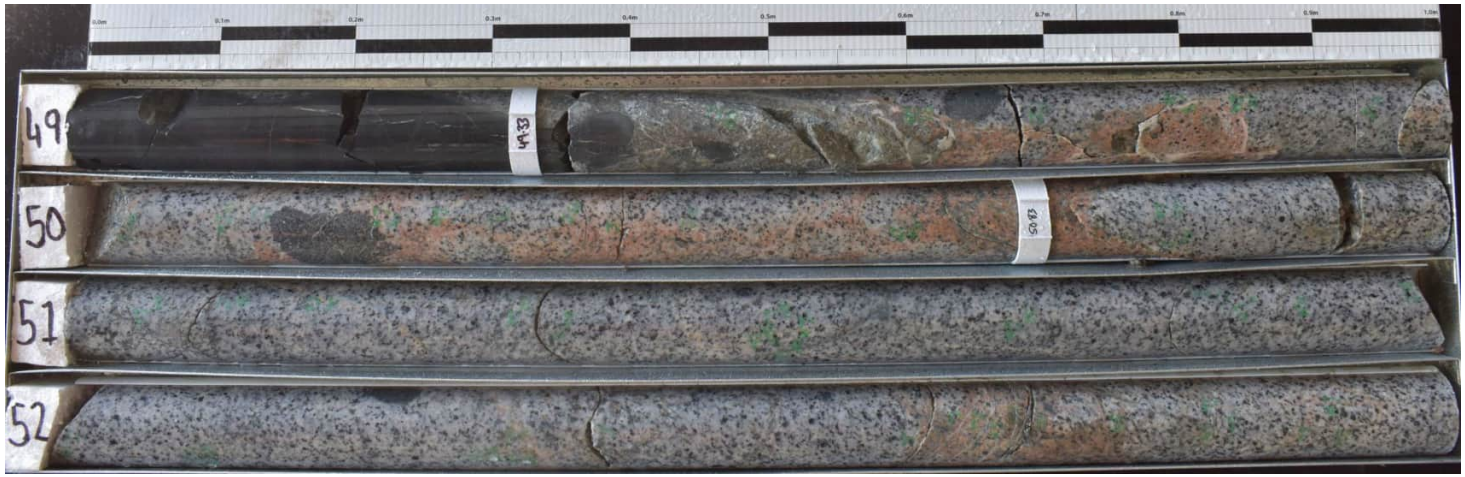
	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 4/14

PointID : BHL-07 Depth Range: 37.00 - 41.00 m

PointID : BHL-07 Depth Range: 41.00 - 45.00 m

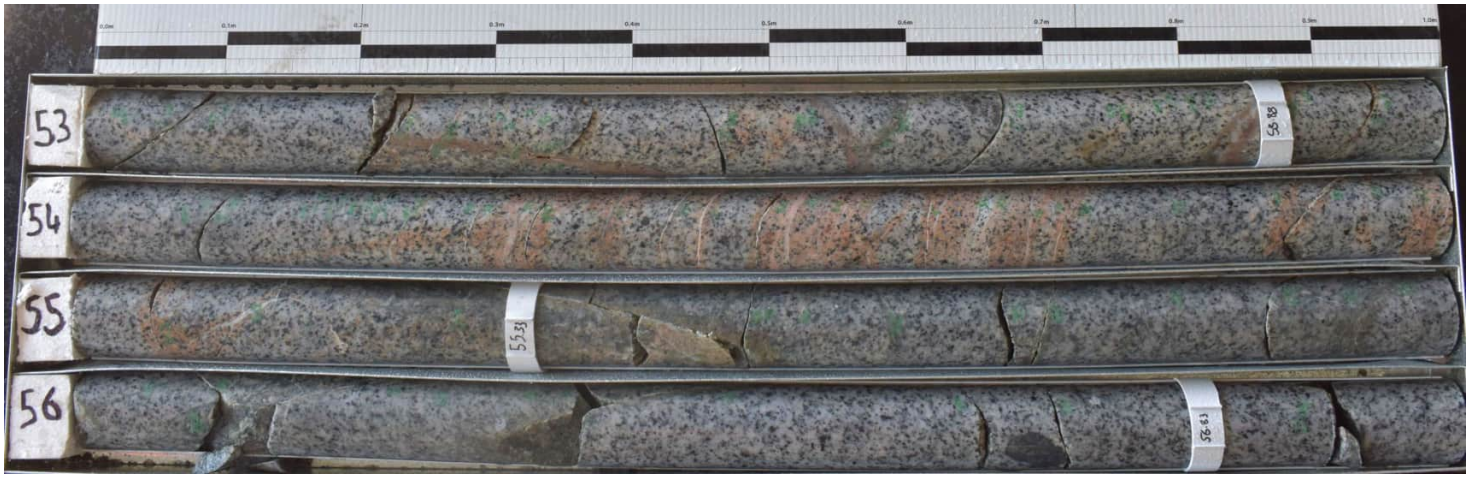
	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 5/14

PointID : BHL-07 Depth Range: 45.00 - 49.00 m

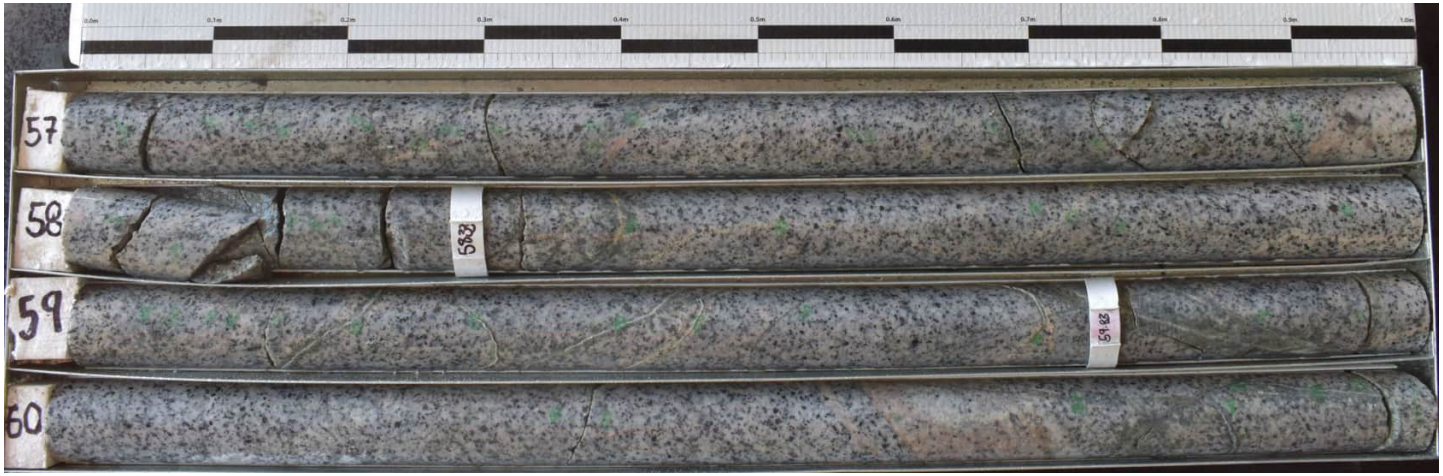


PointID : BHL-07 Depth Range: 49.00 - 53.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 6/14



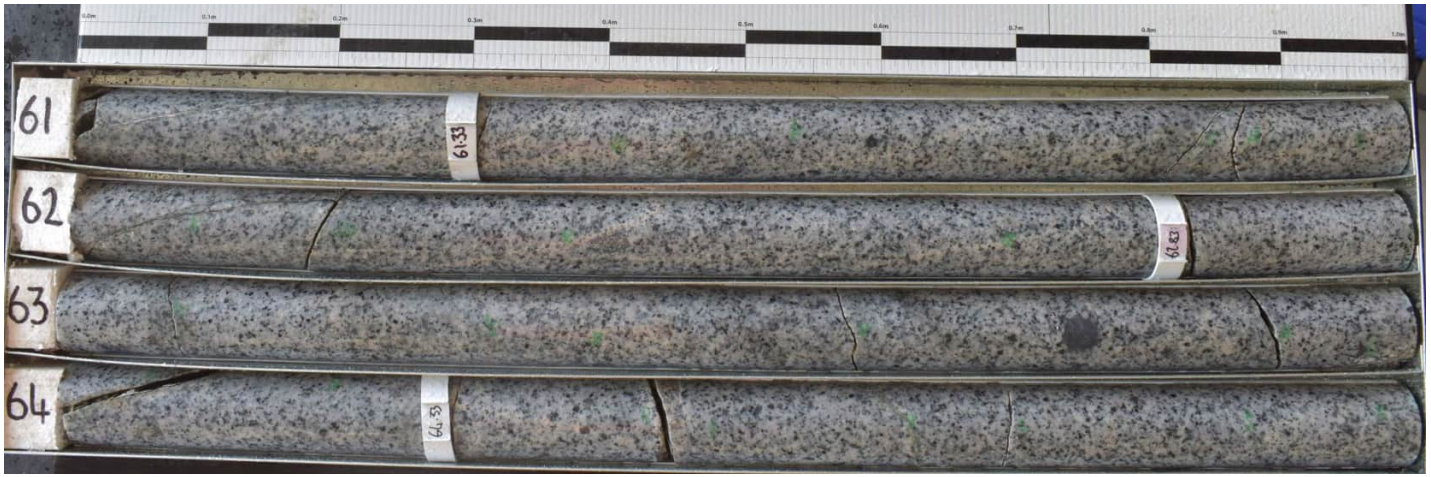
PointID : BHL-07 Depth Range: 53.00 - 57.00 m



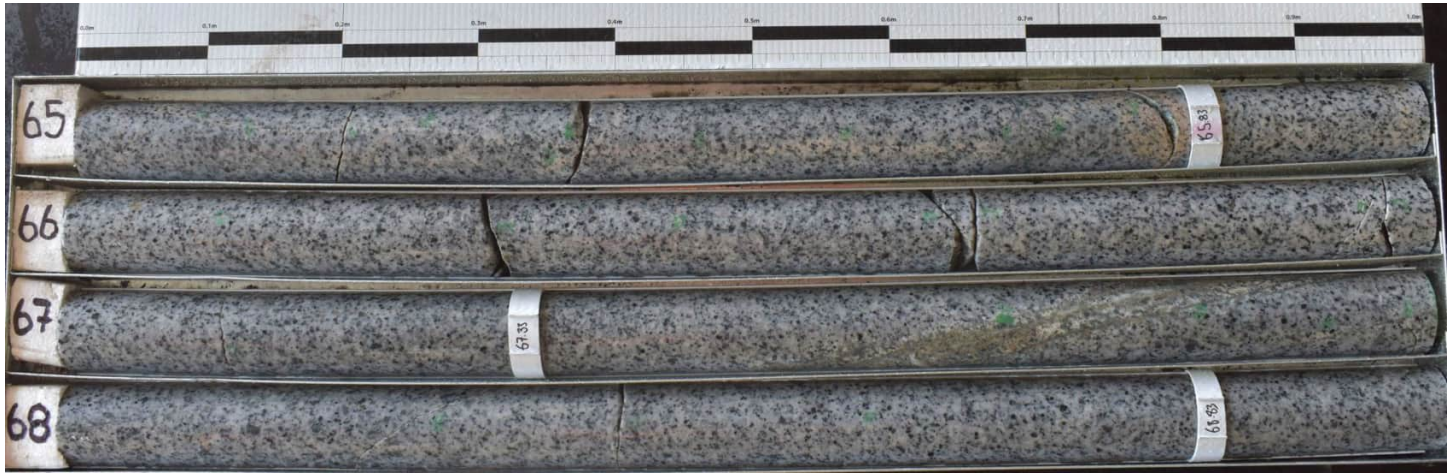
PointID : BHL-07 Depth Range: 57.00 - 61.00 m

	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 7/14

WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:25 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14



PointID : BHL-07 Depth Range: 61.00 - 65.00 m

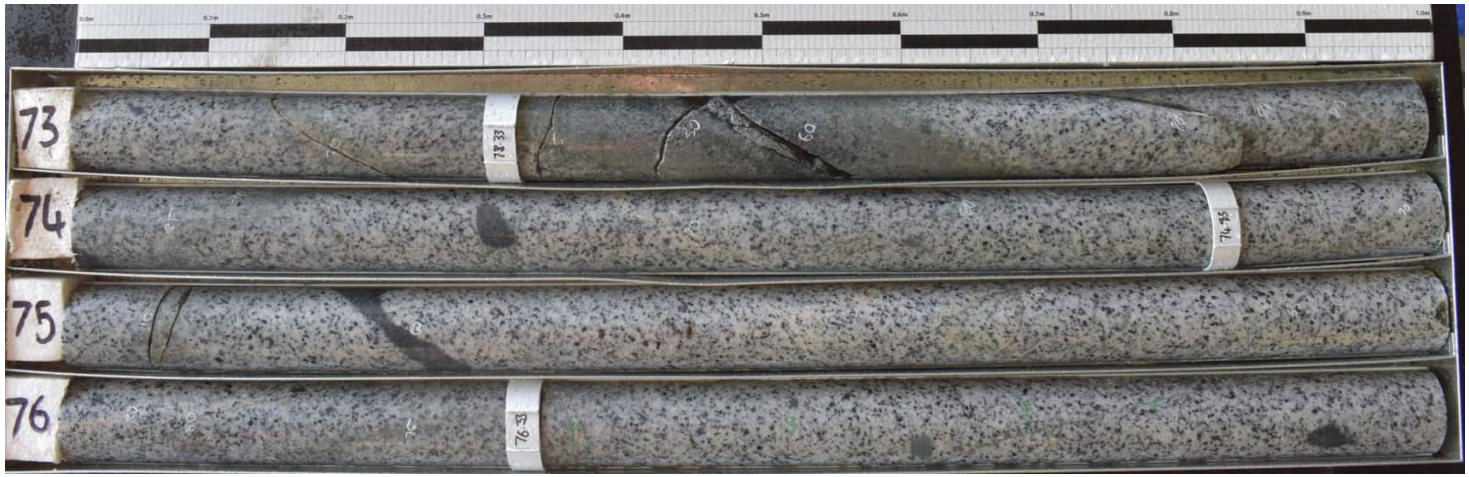


PointID : BHL-07 Depth Range: 65.00 - 69.00 m

	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 8/14

WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:25 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14

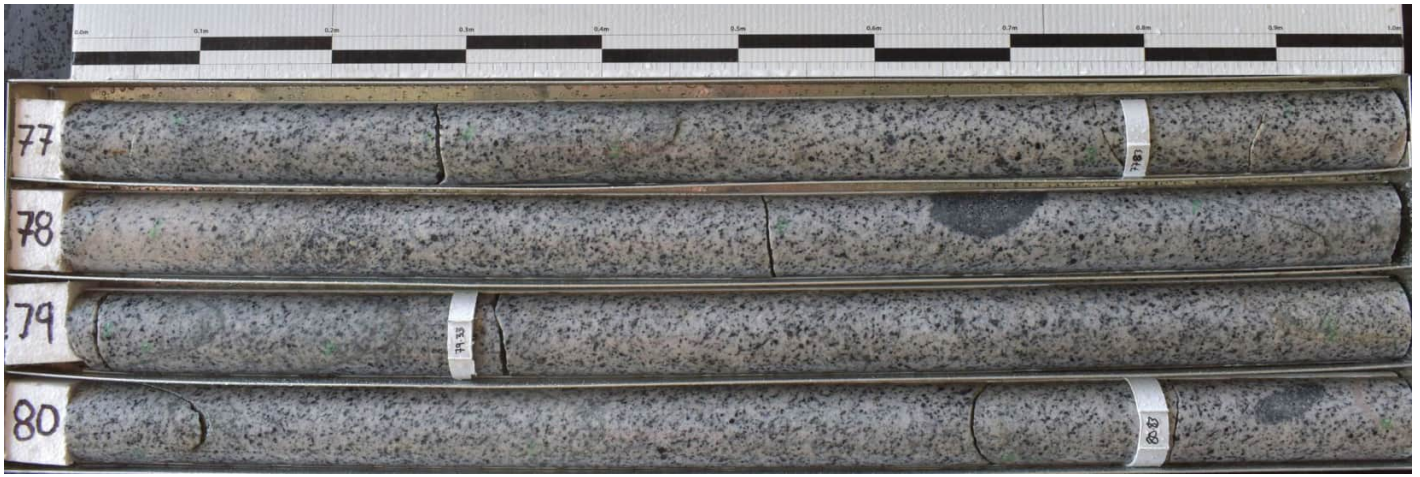
PointID : BHL-07 Depth Range: 69.00 - 73.00 m



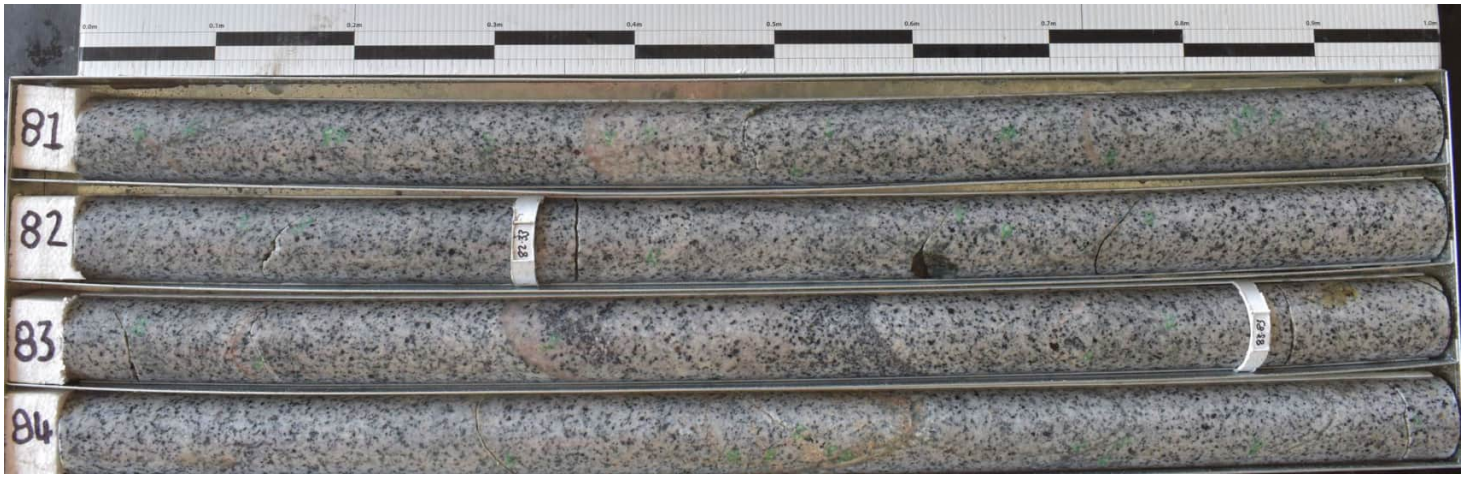
PointID : BHL-07 Depth Range: 73.00 - 77.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 9/14

WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:25 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14



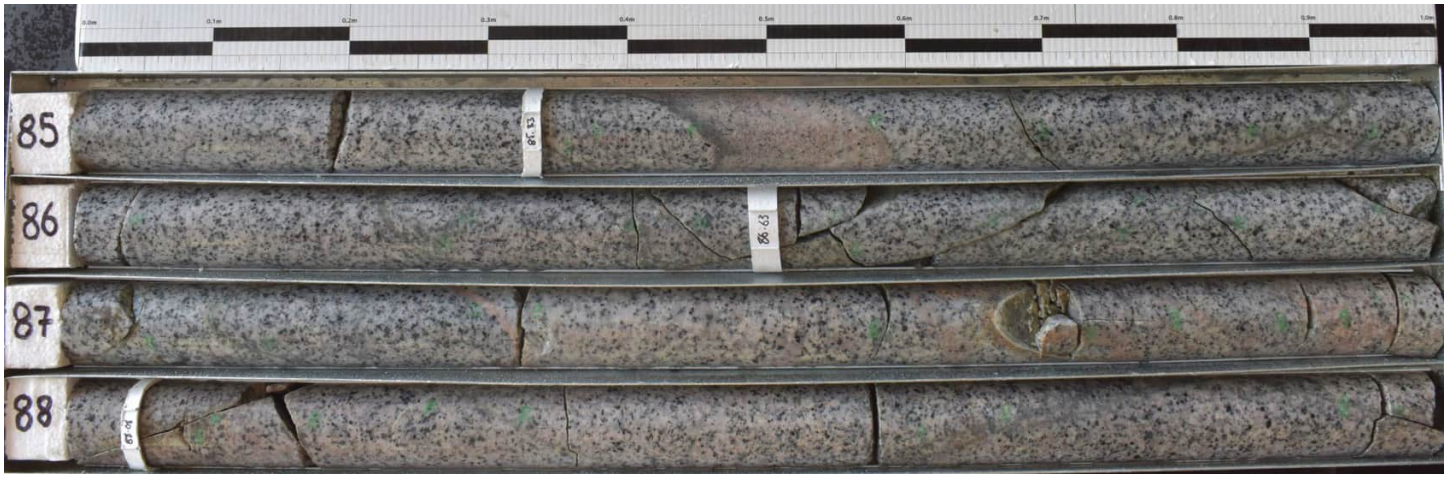
PointID : BHL-07 Depth Range: 77.00 - 81.00 m



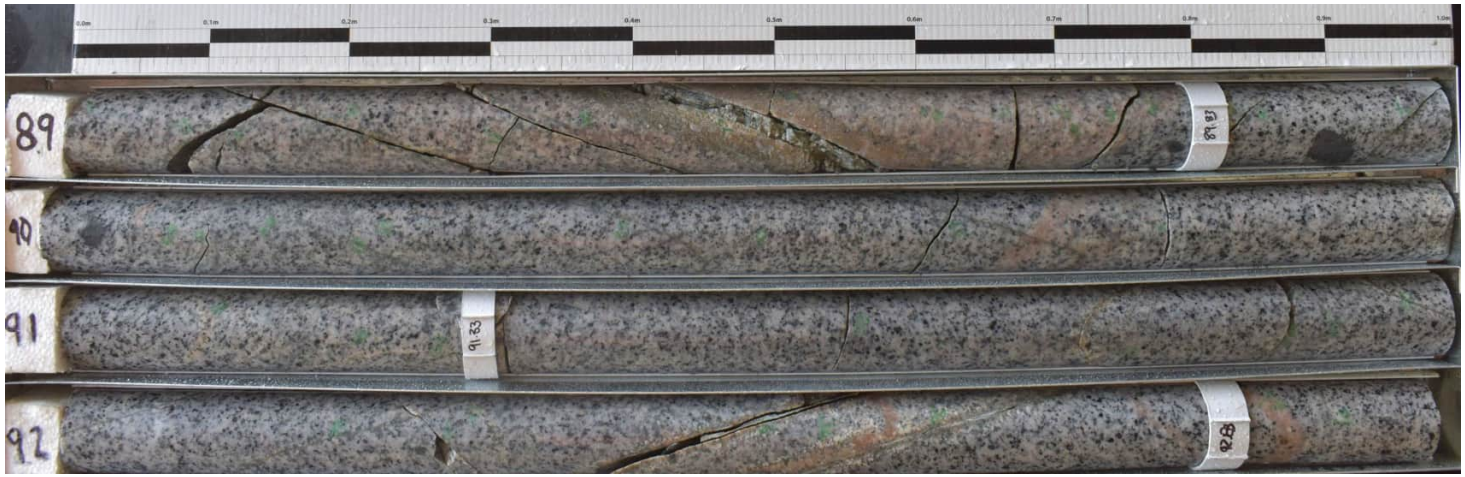
PointID : BHL-07 Depth Range: 81.00 - 85.00 m

wsp	TITLE Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN RC/PL	DATE 7/08/2024
		CHECKED GEM	DATE 7/08/2024
		SCALE Not To Scale	A4
		PROJECT No PS138693	FIGURE No 10/14

WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:25 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14

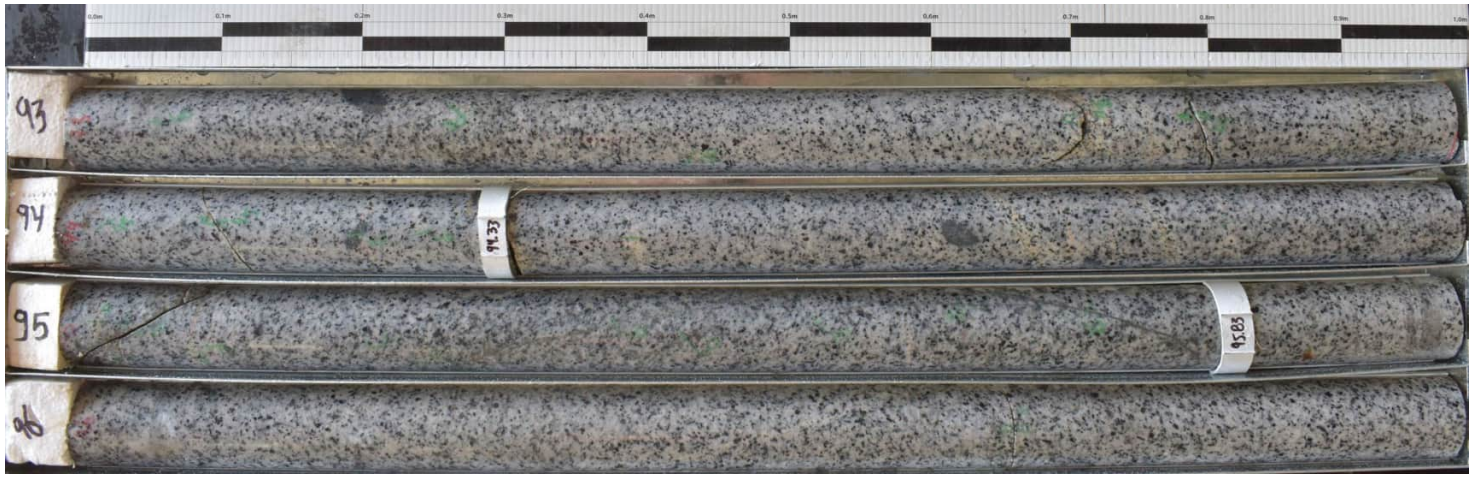


PointID : BHL-07 Depth Range: 85.00 - 89.00 m

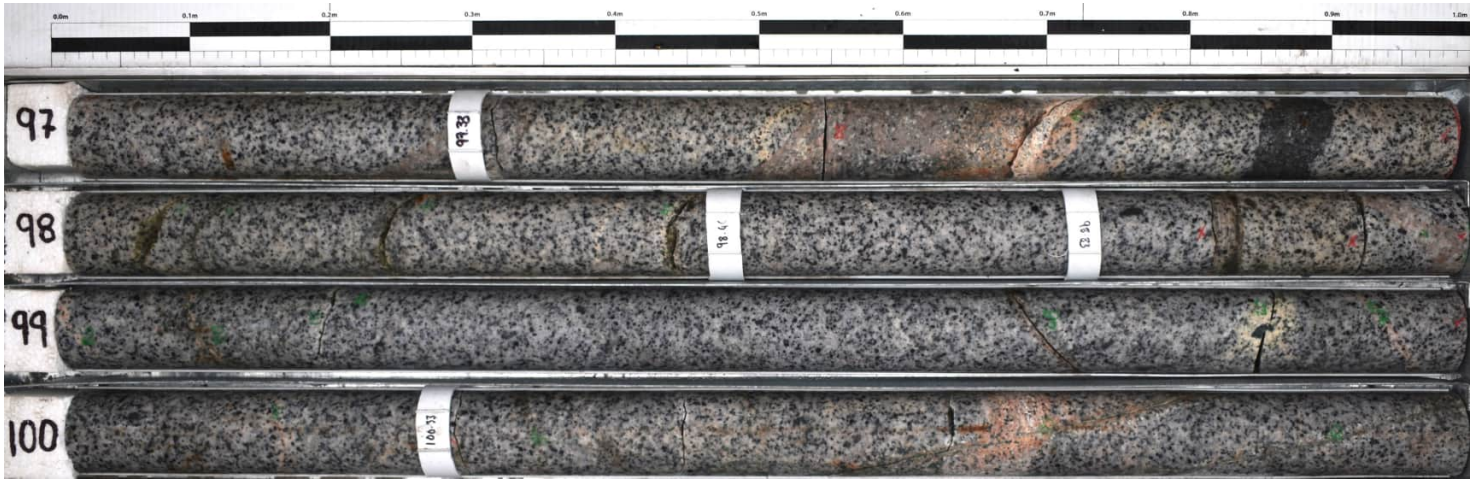


PointID : BHL-07 Depth Range: 89.00 - 93.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 11/14



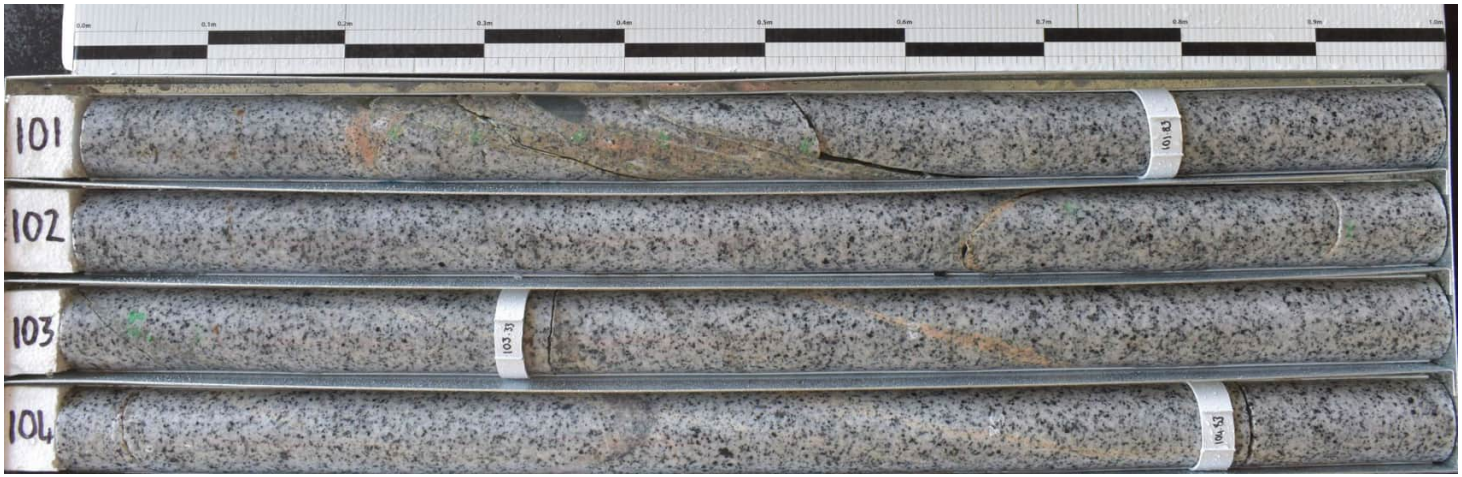
PointID : BHL-07 Depth Range: 93.00 - 97.00 m



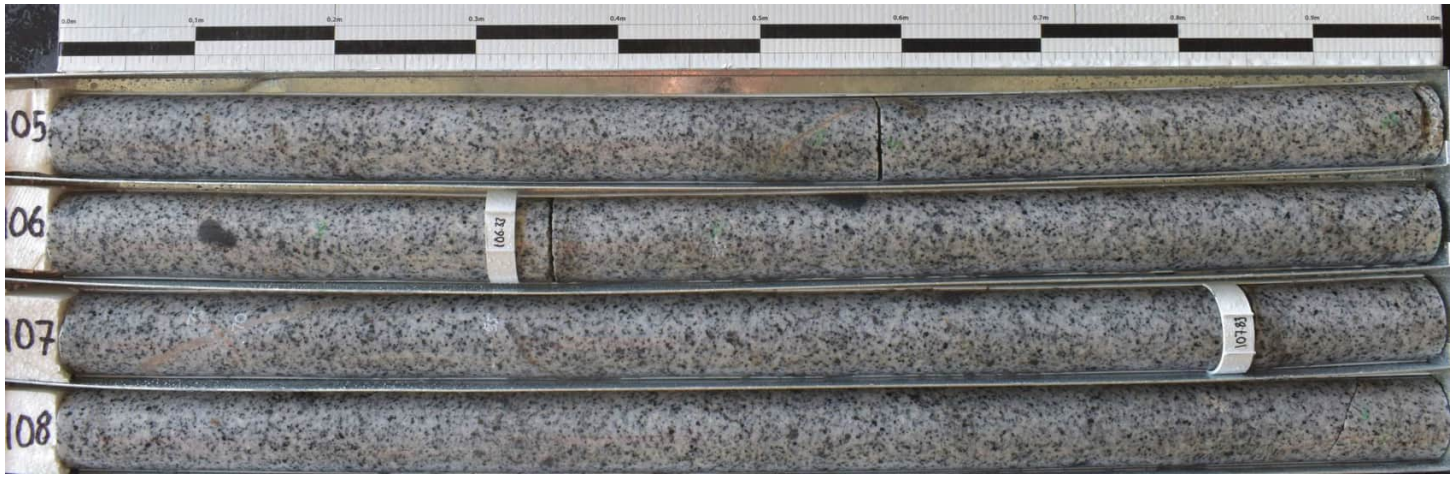
PointID : BHL-07 Depth Range: 97.00 - 101.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 12/14

WSP-AU 5.04.1 LIB 1.GLB GrfcTbl PHOTO CORE 2 PER PAGE VERT A4L PIONEER_NIP_20240619_BHL-07_RC.GPJ <<DrawingFile>> 2024/8/7 16:25 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: WSP 5.04.1 2023-06-14 Prj: WSP 5.04.1 2023-06-14



PointID : BHL-07 Depth Range: 101.00 - 105.00 m



PointID : BHL-07 Depth Range: 105.00 - 109.00 m

wsp	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 13/14

PointID : BHL-07 Depth Range: 109.00 - 110.00 m

	TITLE: Queensland Hydro Netherdale/Dalrymple Heights Pioneer-Burdekin PHES Core Photo - BHL-07	DRAWN: RC/PL	DATE: 7/08/2024
		CHECKED: GEM	DATE: 7/10/2024
		SCALE: Not To Scale	A4
		PROJECT No: PS138693	FIGURE No: 14/14

BHL-07 Structural Log

WSP Australia Pty Limited
Level 12, 900 Ann Street
Fortitude Valley
QLD 4006
Australia

GEOPHYSICAL RECORD OF BOREHOLE: BHL-07

PROJECT: Pioneer-Burdekin PHES JOB # PS138693

CLIENT: Queensland Hydro DATE: 25/03/2024

BOREHOLE DETAILS

LOCATION:	Lower Reservoir	BH DEPTH:	110.00 m
EASTING:	660504.729 m E	BH DIAMETER:	96 mm (HQ)
NORTHING:	7661279.727 m N	BH AZIMUTH:	341°
ELEVATION:	149.995 m	BH PLUNGE:	-87°
COORD SYSTEM:	MGA2020-55	CASING DEPTH:	7.54 m
LOGGING DATUM:	Ground Level	CASING TYPE:	HWT

DOCUMENT DETAILS

LOGGED BY:	G Hay
LOGGED DATE:	01/12/2023
DRAWN BY:	SB
REVIEWED BY:	GH
FILE:	BHL-07_Structure_RevC
LOGGED DEPTH:	109.78 m

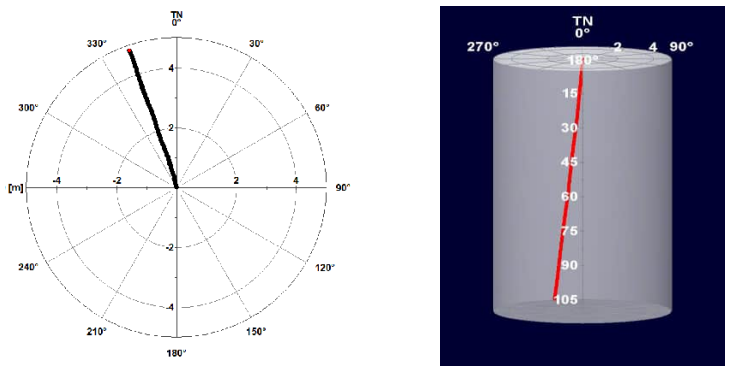
NOTES

Image logs are oriented relative to magnetic north. 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.

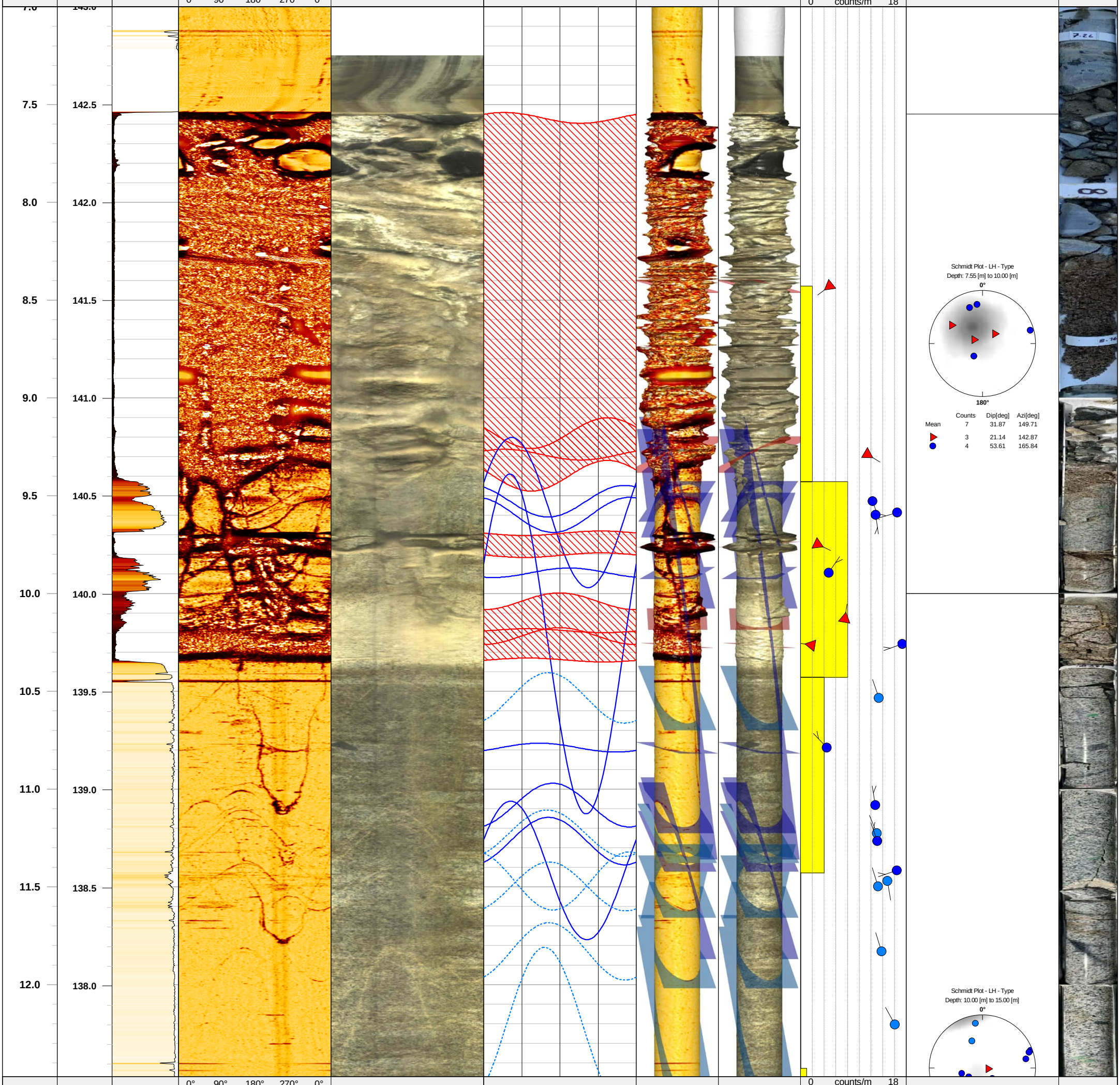
BOREHOLE DEVIATION



INTERPRETED STRUCTURES

Contact · Extremely Weathered Seam · Fracture Zone · Joint · Shear Seam · Shear Zone · Vein · Healed Joint

BHL-07



BHL-07

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

Depth: 12.5 – 19.5 m; RL m: 137.5 – 130.5 AHD

Stereoplots:

180°

	Counts	Dip[deg]	Azi[deg]
Mean	17	56.19	344.23
	2	19.64	353.84
	8	43.89	32.78
	7	79.57	340.64

Schmidt Plot - LH - Type
Depth: 15.00 [m] to 20.00 [m]
0°

180°

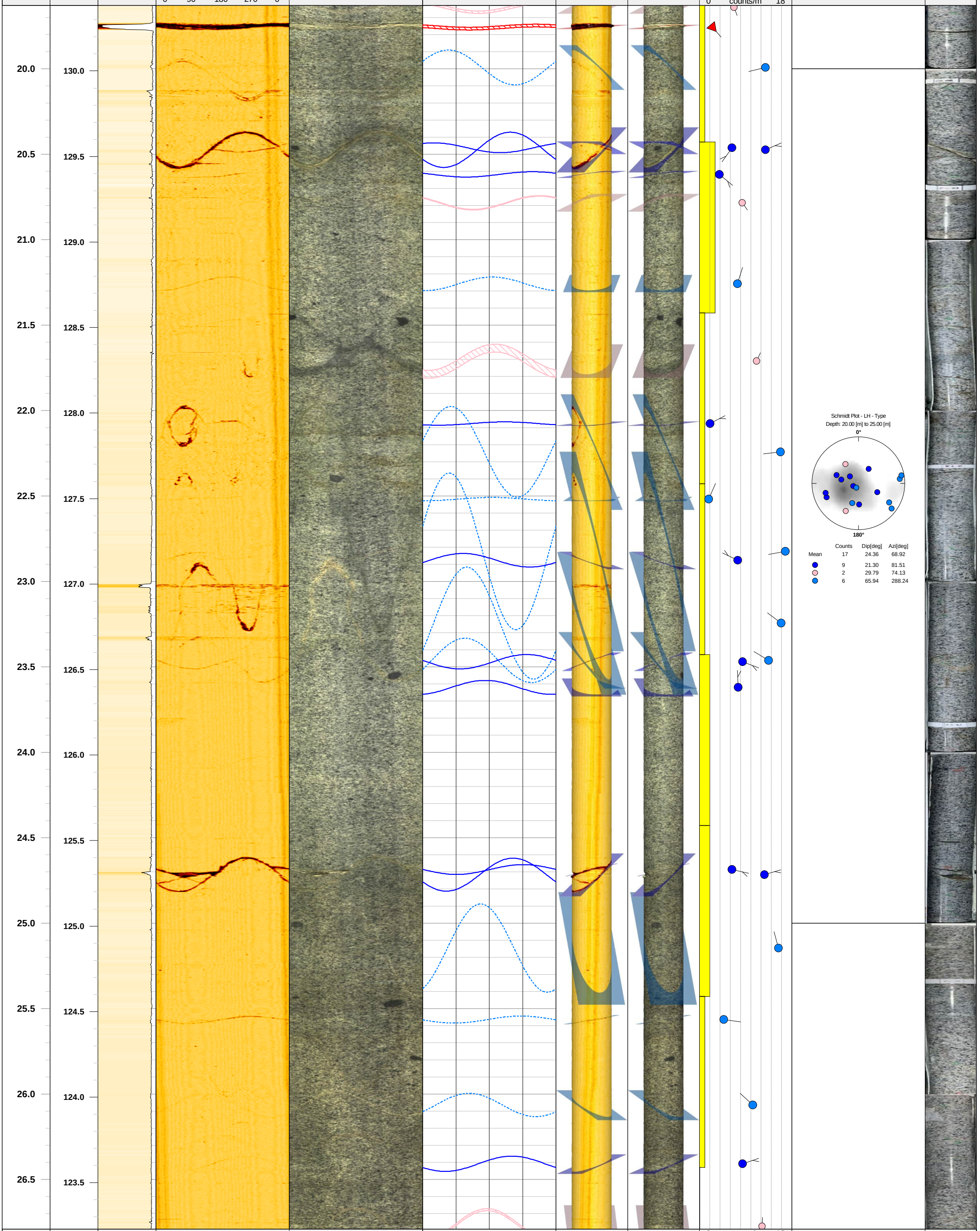
	Counts	Dip[deg]	Azi[deg]
Mean	17	17.53	209.76
	3	39.18	155.31
	7	8.41	135.43
	5	63.46	262.17
	2	3.59	151.50

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

BHL-07

BHL-07

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



Schmidt Plot - LH - Type
Depth: 20.00 [m] to 25.00 [m]
0°
180°

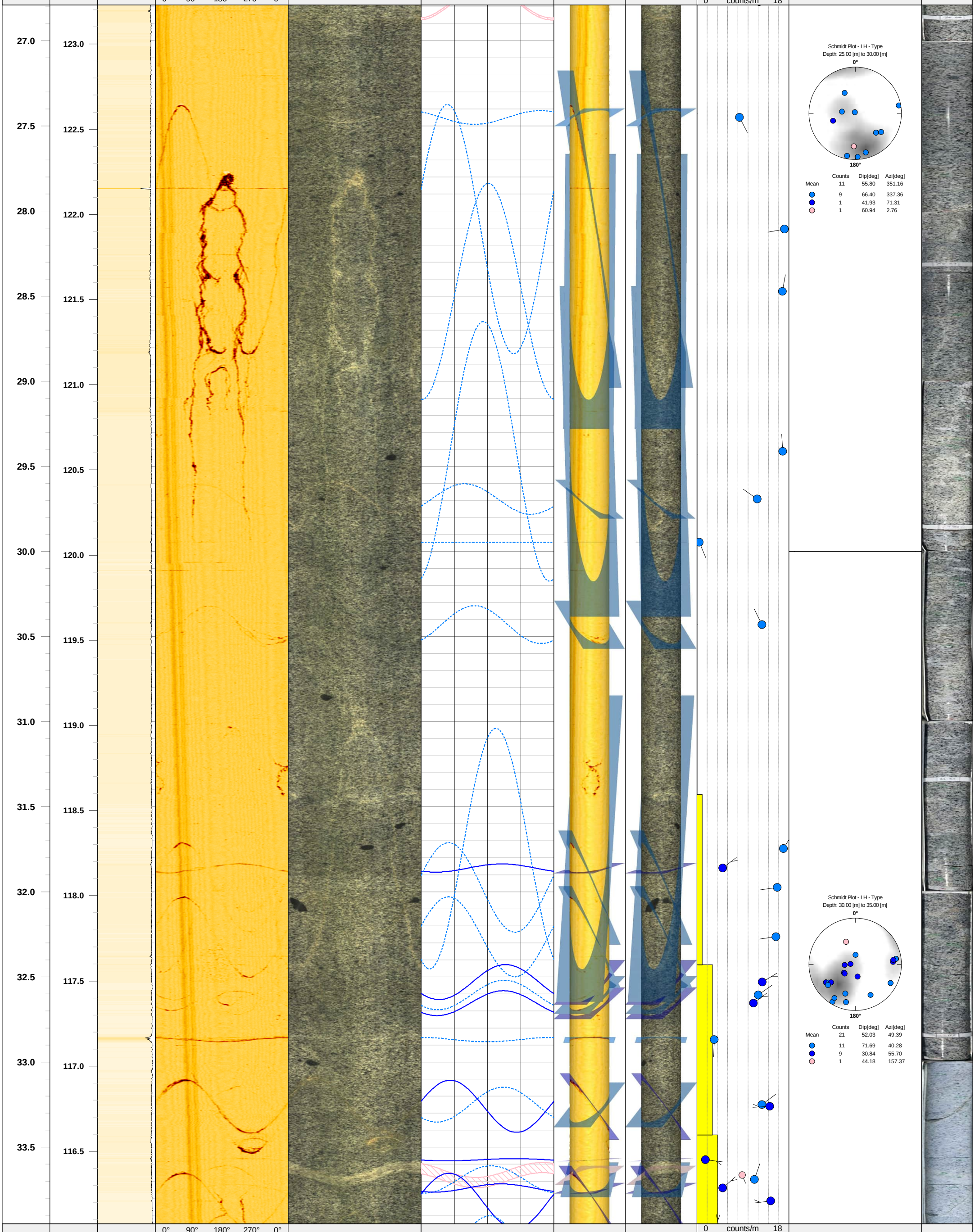
	Counts	Dip[deg]	Azi[deg]
Mean	17	24.36	68.92
	9	21.30	81.51
	2	29.79	74.13
	6	65.94	288.24

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo

BHL-07

BHL-07

Depth		Image Logs			Structural Data						Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots		Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type		

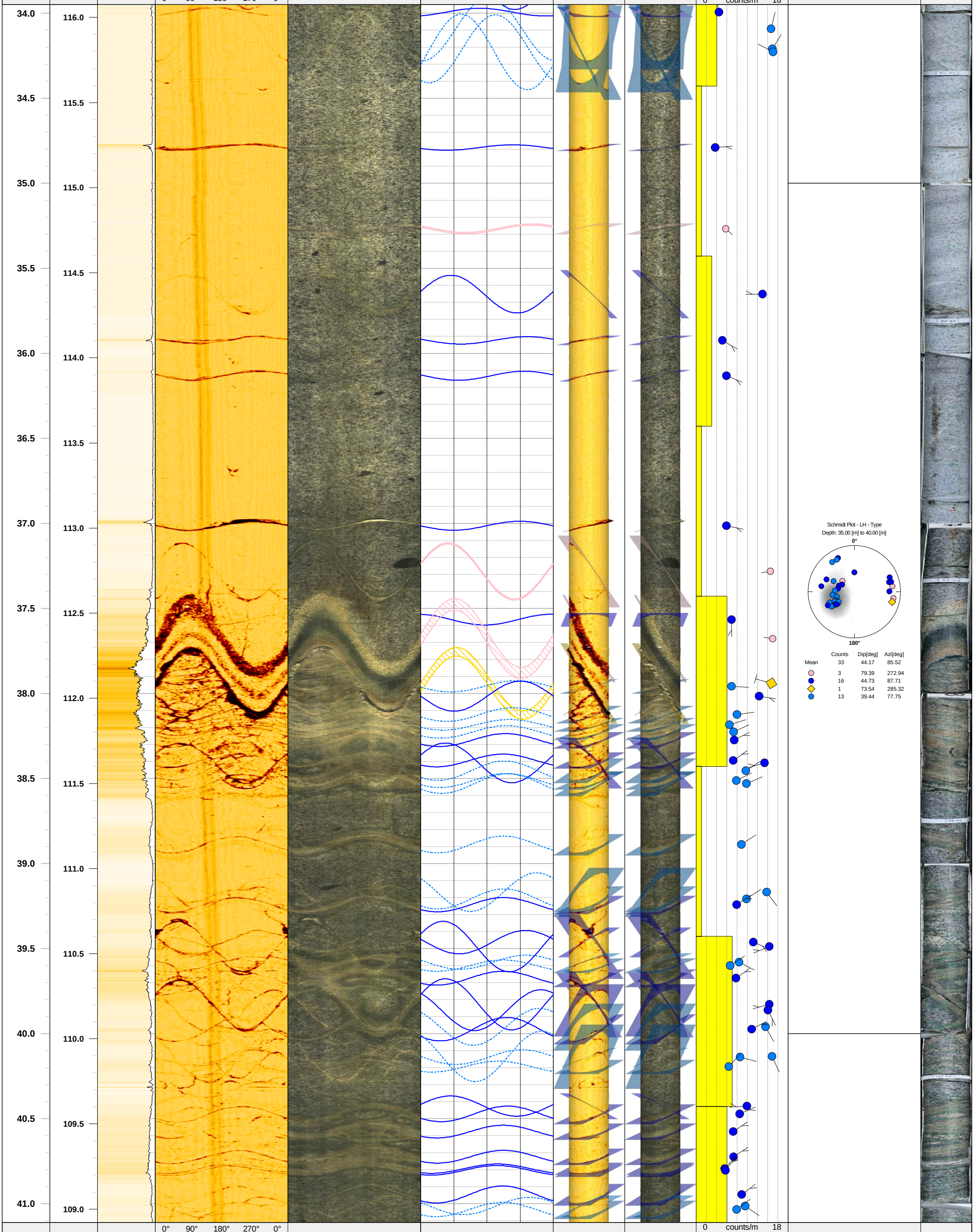


Depth		Image Logs			Structural Data						Core
1m:20m	AHD	0 9500	0° 90° 180° 270° 0° 0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 counts/m 18 Freq/metre 0 90	Schmidt Plot - LH - Type		
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots		Core Photo

BHL-07

BHL-07

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



	Counts	Dip[deg]	Azi[deg]
Mean	33	44.17	85.52
	3	79.39	272.94
	16	44.73	87.71
	1	73.54	285.32
	13	39.44	77.75

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

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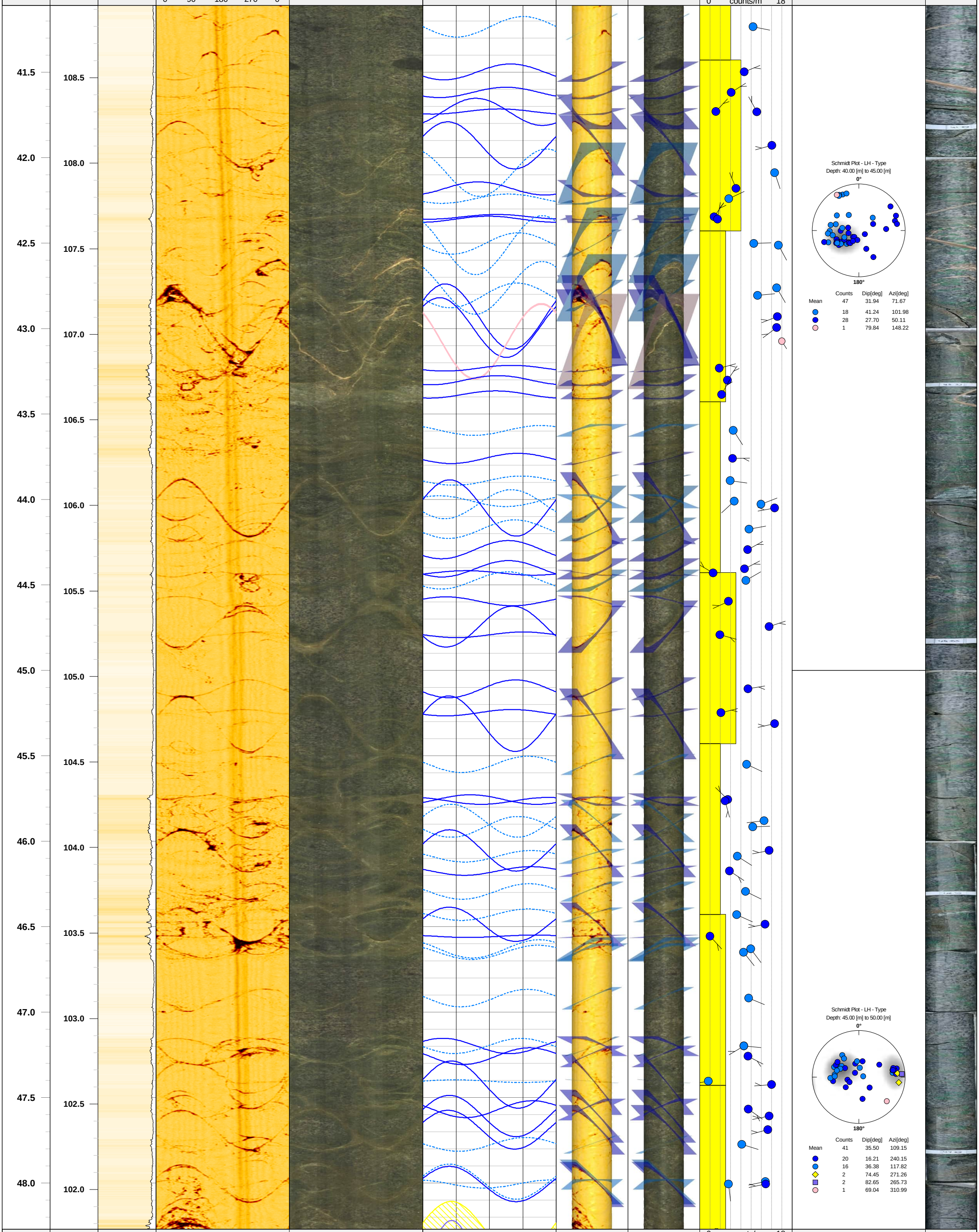
Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



1m:20m	AHD	0 9500	0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
Depth		Image Logs			Structural Data					Core

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Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	
48.5	101.5									
49.0	101.0									
49.5	100.5									
50.0	100.0									
50.5	99.5									
51.0	99.0									
51.5	98.5									
52.0	98.0									
52.5	97.5									
53.0	97.0									
53.5	96.5									
54.0	96.0									
54.5	95.5									
55.0	95.0									

Schmidt Plot - LH - Type
Depth: 50.00 [m] to 55.00 [m]

0°

180°

	Counts	Dip[deg]	Azi[deg]
Mean	38	40.65	61.57
	15	42.66	62.34
	15	43.41	62.59
	4	49.52	18.39
	4	27.64	68.02

1m:20m AHD 0 9500 0° 90° 180° 270° 0° 0 6500 0° 90° 180° 270° 0° 0° 90° 180° 270° 0° -0° -0° 0 counts/m 18 Freq/metre 0 90 Schmidt Plot - LH - Type
Depth RL m Reflectivity Amplitude-NM HPF Image-NM Apparent Structures 3D ATV 3D OTV Structures - TN Stereoplots Core Photo
Depth Image Logs Structural Data Core

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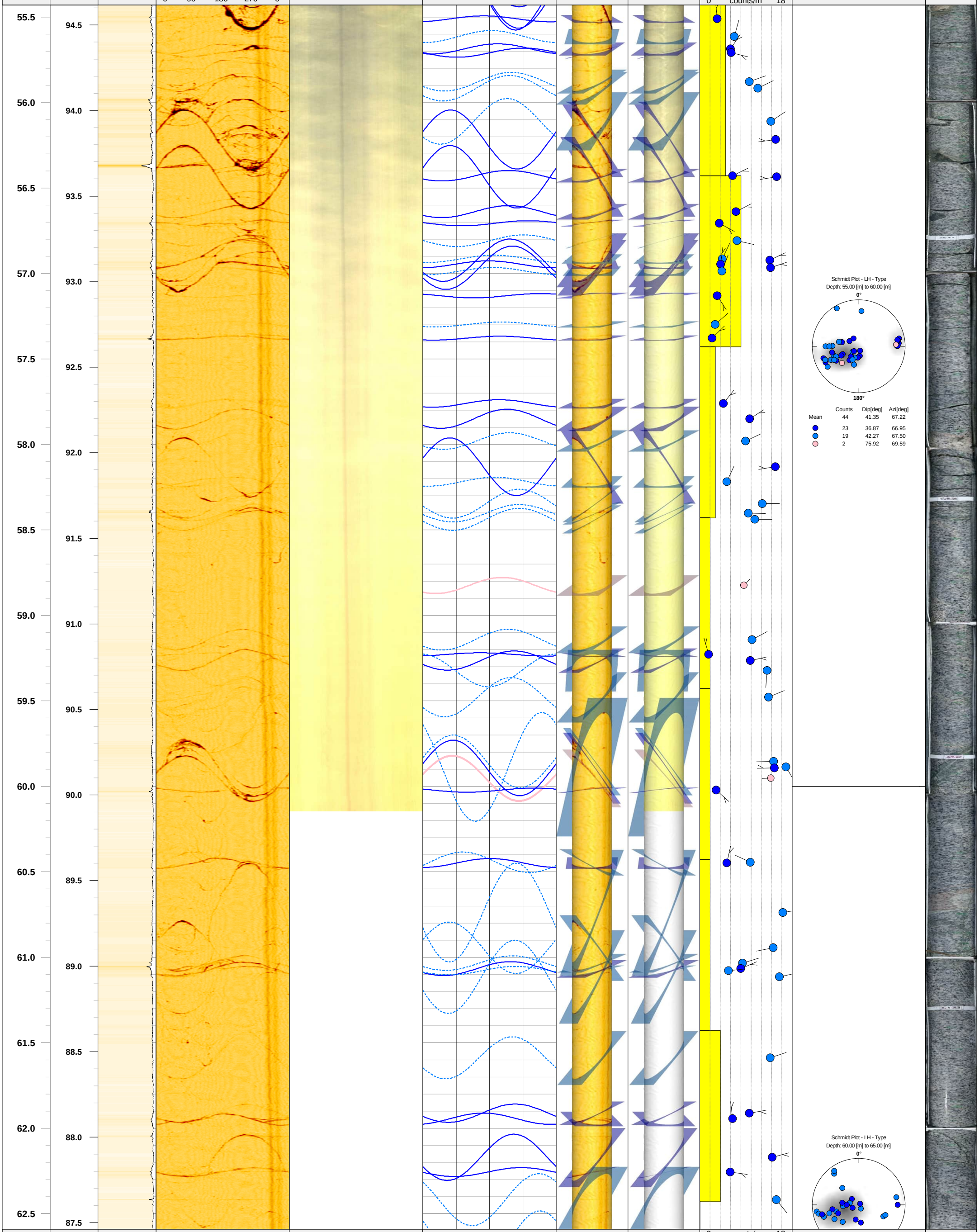
Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

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Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

Depth: 63.0 – 69.5 m; RL m: 87.0 – 80.5 AHD

Stereoplots:

180°

	Counts	Dip[deg]	Azi[deg]
Mean	27	35.83	77.60
	11	23.99	69.34
	16	51.40	84.32

Schmidt Plot - LH - Type
Depth: 65.00 [m] to 70.00 [m]
0°
180°

	Counts	Dip[deg]	Azi[deg]
Mean	19	1.15	229.81
	8	10.56	306.24
	9	4.73	130.96
	2	78.09	266.76

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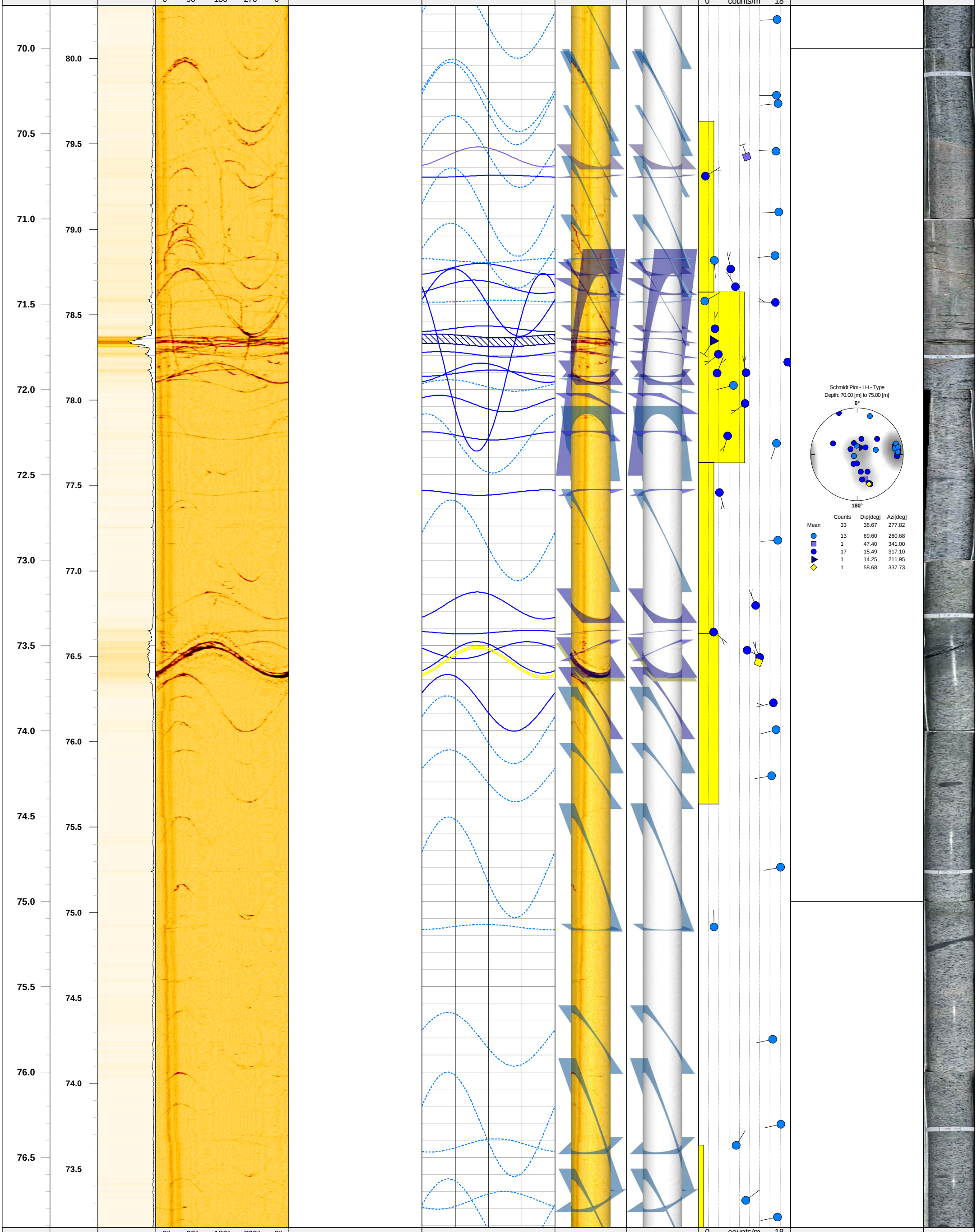
Depth		Image Logs			Structural Data						Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots		Core Photo
1m:20m	AHD	0 9500	0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type		



Schmidt Plot - LH - Type
Depth: 70.00 [m] to 75.00 [m]

	Counts	Dip[deg]	Azi[deg]
Mean	33	36.67	277.82
	13	69.60	260.68
	1	47.40	341.00
	17	15.49	317.10
	1	14.25	211.95
	1	58.68	337.73

1m:20m	AHD	0 9500	0° 90° 180° 270° 0° 0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 counts/m 18 Freq/metre 0 90	Schmidt Plot - LH - Type	Core Photo
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	
Depth		Image Logs			Structural Data					Core

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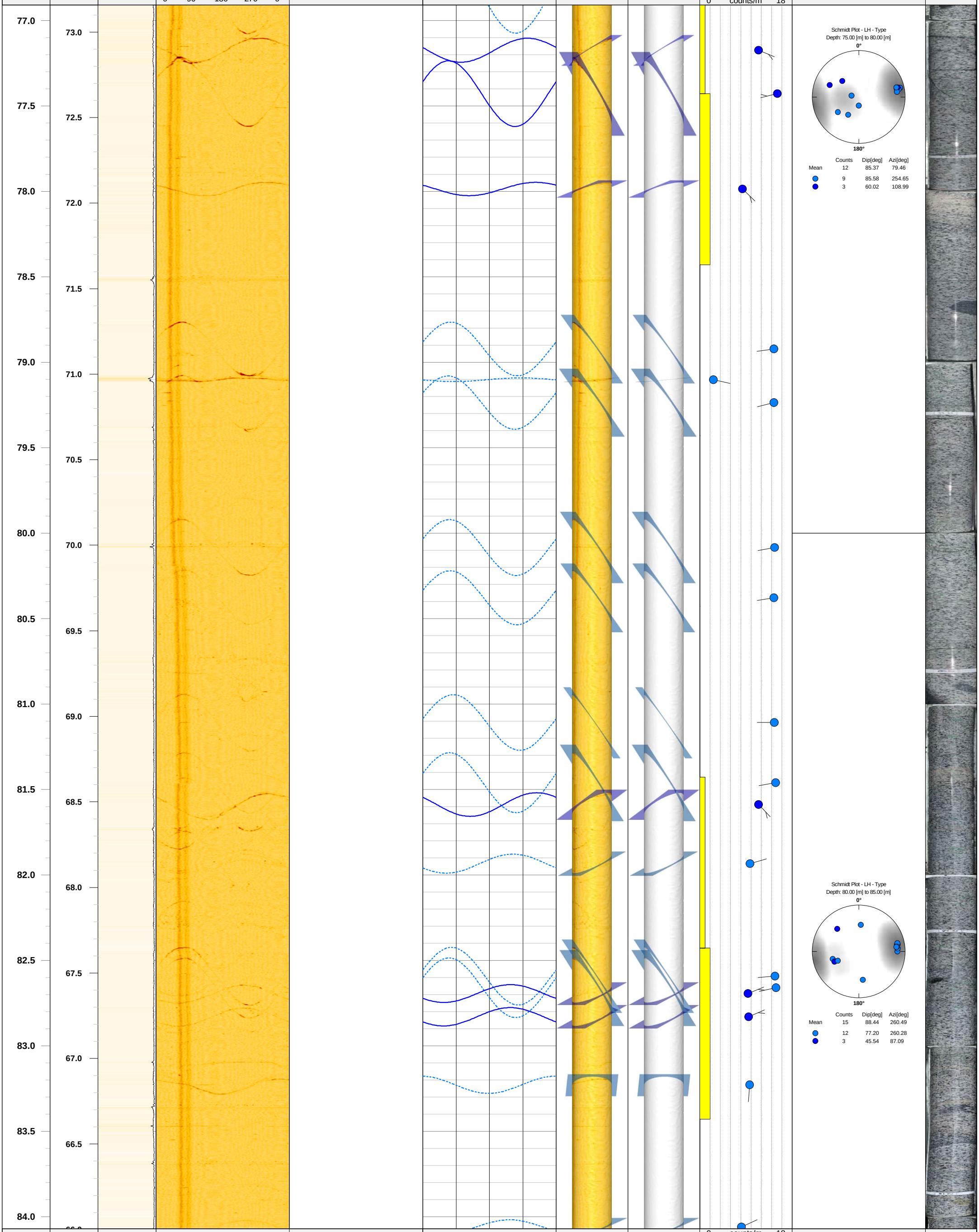
Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



1m:20m	AHD	0 9500	0° 90° 180° 270° 0° 0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 counts/m 18 Freq/metre 0 90	Schmidt Plot - LH - Type	
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
Depth		Image Logs			Structural Data					Core

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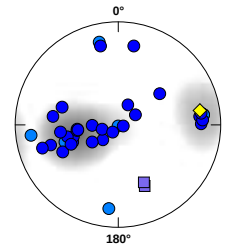
Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

84.5 65.5
85.0 65.0
85.5 64.5
86.0 64.0
86.5 63.5
87.0 63.0
87.5 62.5
88.0 62.0
88.5 61.5
89.0 61.0
89.5 60.5
90.0 60.0
90.5 59.5
91.0 59.0

Schmidt Plot - LH - Type
Depth: 85.00 [m] to 90.00 [m]



	Counts	Dip[deg]	Azi[deg]
Mean	41	42.73	77.94
	8	89.73	258.90
	30	35.72	81.60
	2	53.47	336.12
	1	69.98	259.84

Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

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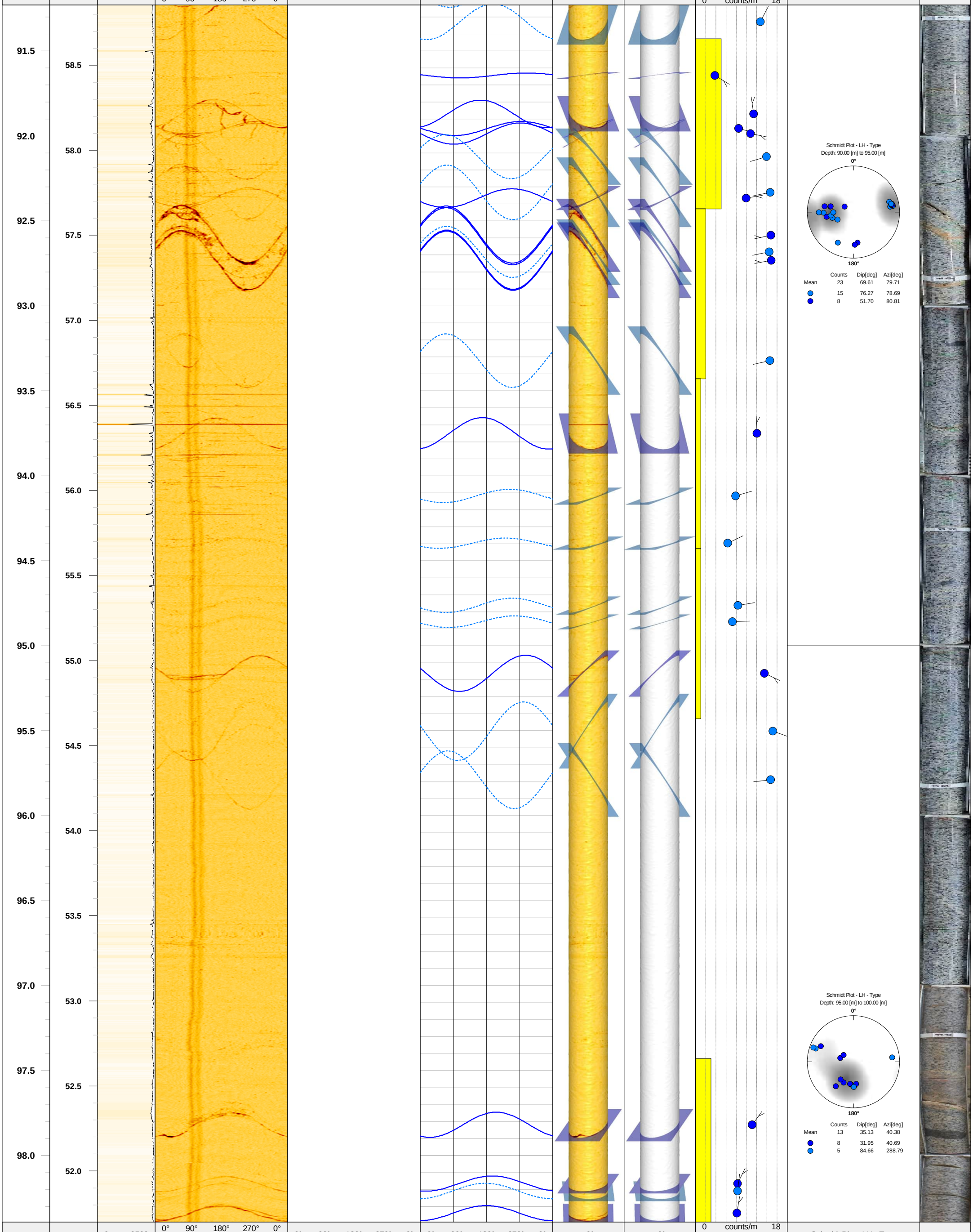
Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



1m:20m	AHD	0 9500	0° 90° 180° 270° 0° 0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 counts/m 18 Freq/metre 0 90	Schmidt Plot - LH - Type	
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
Depth		Image Logs			Structural Data					Core

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Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

98.5 51.5
99.0 51.0
99.5 50.5
100.0 50.0
100.5 49.5
101.0 49.0
101.5 48.5
102.0 48.0
102.5 47.5
103.0 47.0
103.5 46.5
104.0 46.0
104.5 45.5
105.0 45.0
105.5

Schmidt Plot - LH - Type
Depth: 100.00 [m] to 105.00 [m]
0°
180°

	Counts	Dip[deg]	Azi[deg]
Mean	16	74.52	82.89
	8	60.83	86.00
	7	84.73	81.41
	1	30.32	318.45

1m:20m	AHD	0 9500	0° 90° 180° 270° 0° 0 6500	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 counts/m 18 Freq/metre 0 90	Schmidt Plot - LH - Type	
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
Depth		Image Logs			Structural Data					Core
BHL-07										

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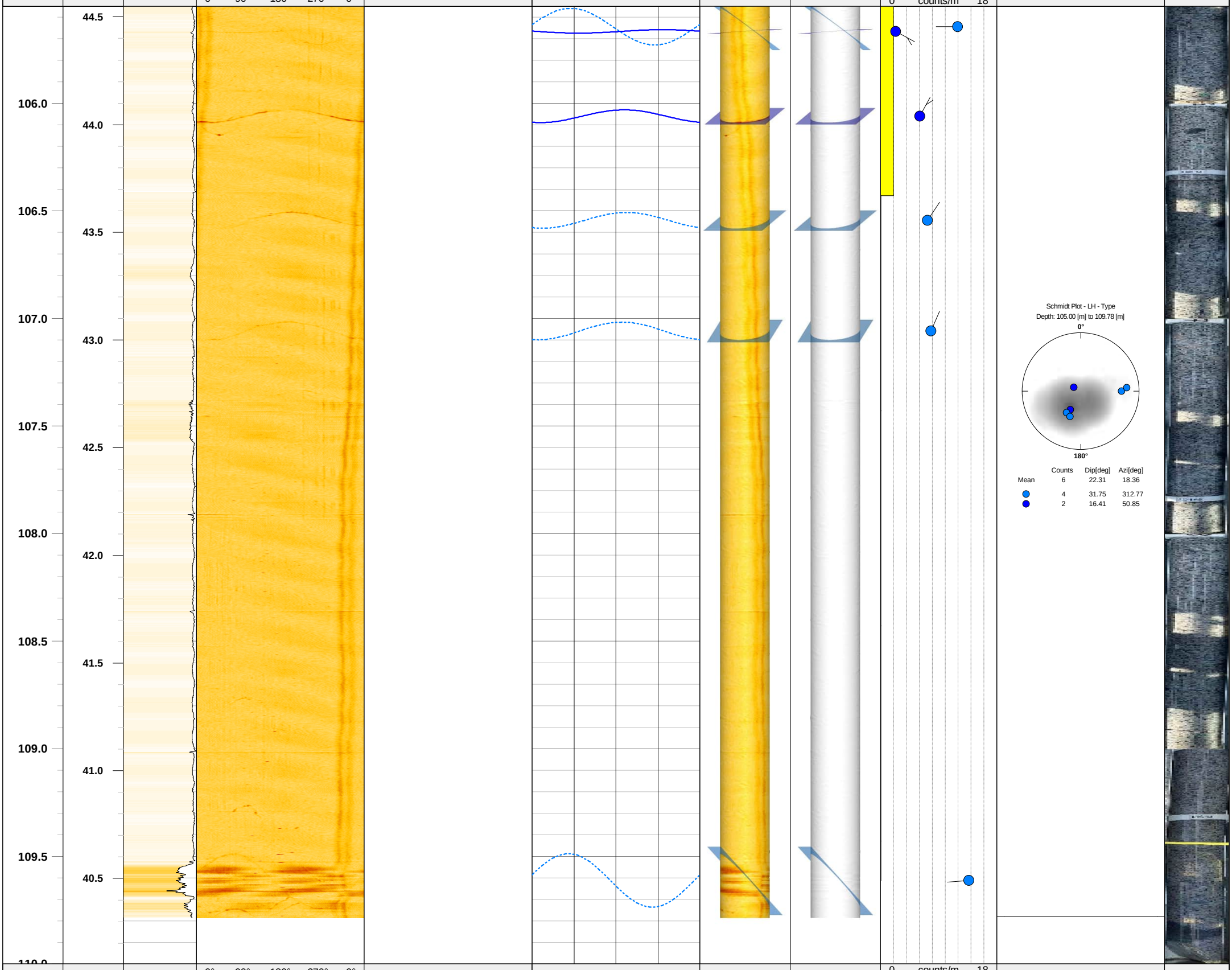
Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	



Depth		Image Logs			Structural Data					Core
Depth	RL m	Reflectivity	Amplitude-NM HPF	Image-NM	Apparent Structures	3D ATV	3D OTV	Structures - TN	Stereoplots	Core Photo
1m:20m	AHD	0 9500	0 6500 0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	-0°	-0°	0 90 Freq/metre 0 counts/m 18	Schmidt Plot - LH - Type	

BHL-07

BHL-07 Composite Log

WSP Australia Pty Limited
Level 12, 900 Ann Street
Fortitude Valley
QLD 4006
Australia

GEOPHYSICAL RECORD OF BOREHOLE: BHL-07

PROJECT: Pioneer-Burdekin PHES JOB # PS138693

CLIENT: Queensland Hydro DATE: 25/03/2024

BOREHOLE DETAILS

LOCATION:	Lower Reservoir	BH DEPTH:	110.00 m
EASTING:	660504.729 m E	BH DIAMETER:	96 mm (HQ)
NORTHING:	7661279.727 m N	BH AZIMUTH:	341°
ELEVATION:	149.995 m	BH PLUNGE:	-87°
COORD SYSTEM:	MGA2020-55	CASING DEPTH:	7.54 m
LOGGING DATUM:	Ground Level	CASING TYPE:	HWT

DOCUMENT DETAILS

LOGGED BY:	G Hay
LOGGED DATE:	01/12/2023
DRAWN BY:	SB
REVIEWED BY:	GH
FILE:	BHL-07_Composite_RevC
LOGGED DEPTH:	109.78 m

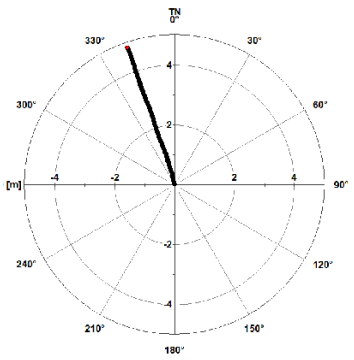
NOTES

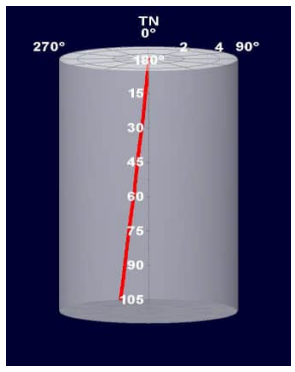
Image logs are oriented relative to magnetic north. Final structures corrected to true north using magnetic declination of 8.2 deg East.

Mechanical calliper log used for structure dip corrections.

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

BOREHOLE DEVIATION



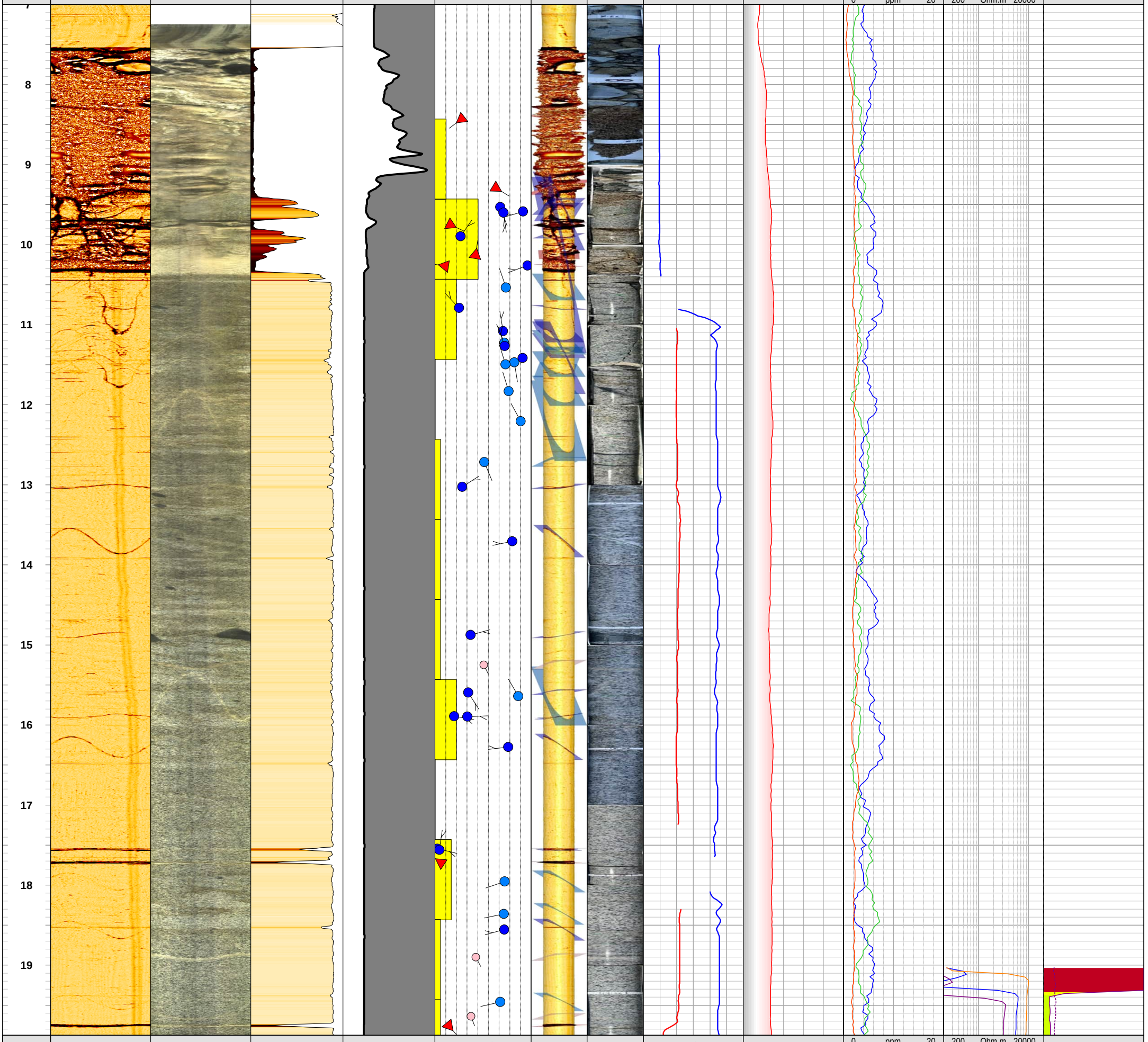


INTERPRETED STRUCTURES

Contact · Extremely Weathered Seam · Fracture Zone · Joint · Shear Seam · Shear Zone · Vein · Healed Joint

BHL-07

Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
								Vs		Th	N8	Ma64
										0 ppm 20	200 Ohm.m 20000	



Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
								Vs		Th	N8	Ma64
										0 ppm 20	200 Ohm.m 20000	

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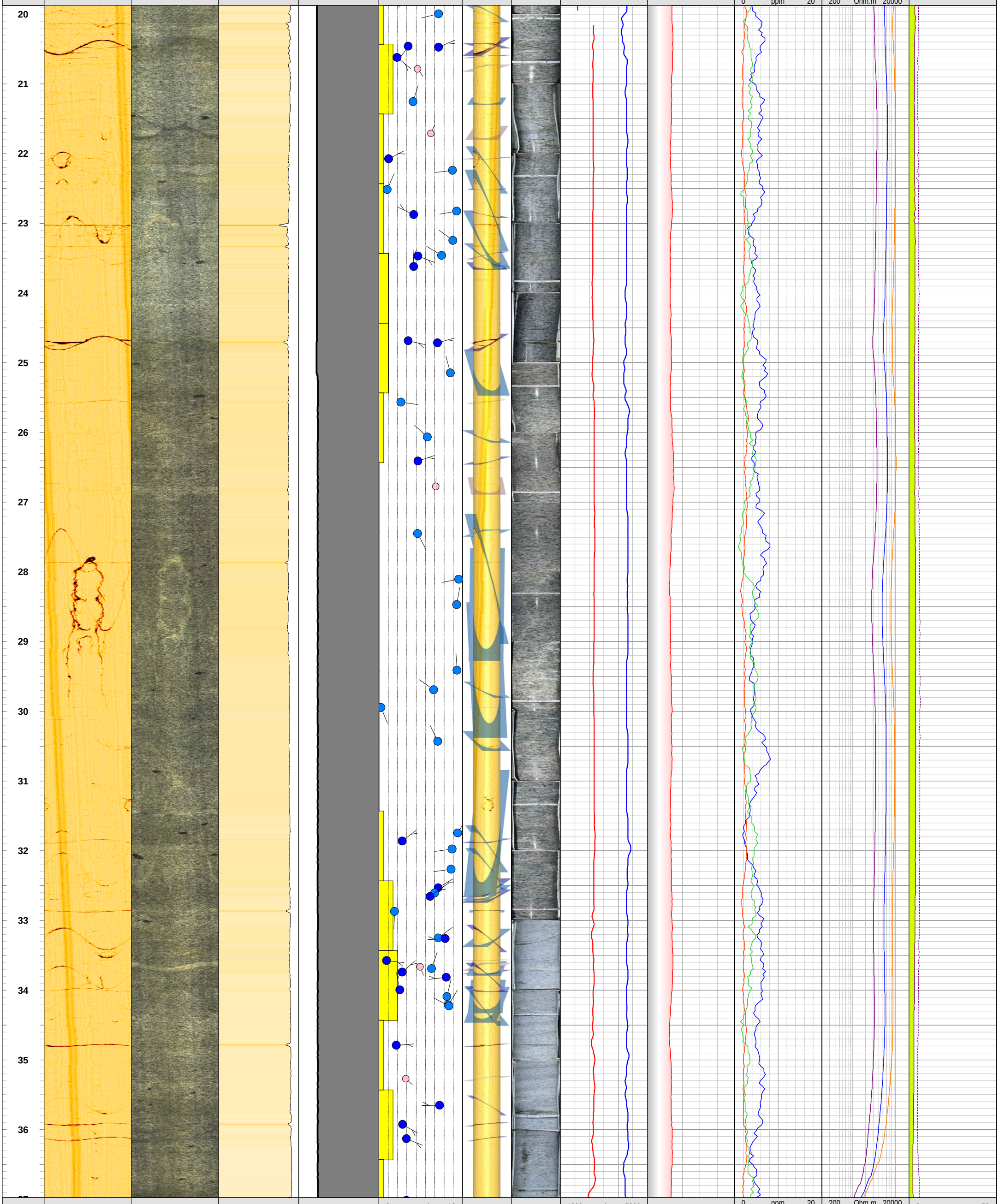
Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	



Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
1m:50m	0° 90° 180° 270° 0° 500 6000	0° 90° 180° 270° 0°	0 10000	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
					Freq/metre			Vp		Th	N8	Ma16
					0 90			1000 m/s 7000		0 % 10	200 Ohm.m 20000	
										K	N32	
										0 ppm 10	200 Ohm.m 20000	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	

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Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs	Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16
	500 6000		0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000
1m:50m	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°			Freq/metre			Vp		K	N32
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000
										Th	N8
										0 ppm 20	200 Ohm.m 20000

Ma64	Ma16
0 ms 50	0 ms 50

37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54

Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs	Electrical Logs	
1m:50m	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 counts/m 18	-0°		1000 m/s 7000	0 API 250	0 ppm 20	200 Ohm.m 20000
	500 6000				Freq/metre			Vp		Th	N8
					0 90			1000 m/s 7000		0 % 10	200 Ohm.m 20000
										K	N32
										0 ppm 10	200 Ohm.m 20000
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16

Ma16	Ma64
0 ms 50	0 ms 50

Depth	Image Logs	Calliper	Structural Logs	Sonic Logs	Gamma Logs	Electrical Logs

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Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	

55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71

Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	

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Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs	Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000
										Th	N8
										0 ppm 20	200 Ohm.m 20000

Ma64	Ma16
0 ms 50	0 ms 50

72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88

Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs	Electrical Logs	
1m:50m	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 counts/m 18	-0°		1000 m/s 7000	0 API 250	0 ppm 20	200 Ohm.m 20000
	500 6000				Freq/metre			Vp		Th	N8
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	0 90	3D ATV	Core	1000 m/s 7000	GR	0 % 10	200 Ohm.m 20000
					Structures - TN			Vs		K	N32
										0 ppm 10	200 Ohm.m 20000
										U	N16

Ma16	Ma64
0 ms 50	0 ms 50

Depth	Image Logs	Calliper	Structural Logs	Sonic Logs	Gamma Logs	Electrical Logs

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Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	

89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105

Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	

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Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	

106

107

108

109

110

Depth	Image Logs			Calliper	Structural Logs			Sonic Logs	Gamma Logs		Electrical Logs	
Depth	Amplitude-NM HPF	Image-NM	Reflectivity	CAL	Structures - TN	3D ATV	Core	Vs	GR	U	N16	Ma64
1m:50m	500 6000	0° 90° 180° 270° 0°	0 10000	80 mm 160	0 90	-0°		1000 m/s 7000	0 API 250	0 ppm 10	200 Ohm.m 20000	0 ms 50
	0° 90° 180° 270° 0°				Freq/metre			Vp		K	N32	Ma16
					0 counts/m 18			1000 m/s 7000		0 % 10	200 Ohm.m 20000	0 ms 50
										Th	N8	
										0 ppm 20	200 Ohm.m 20000	

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