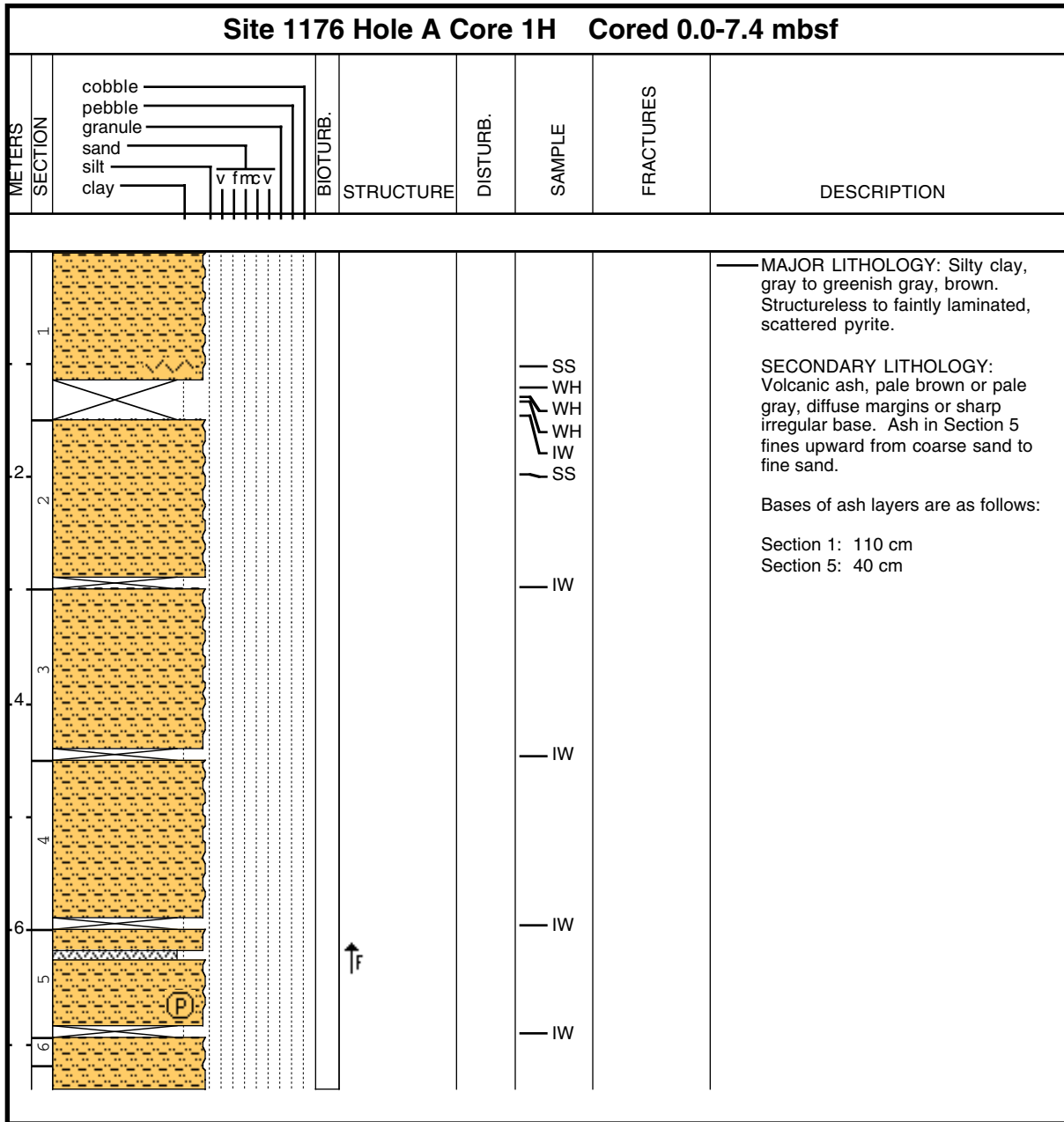
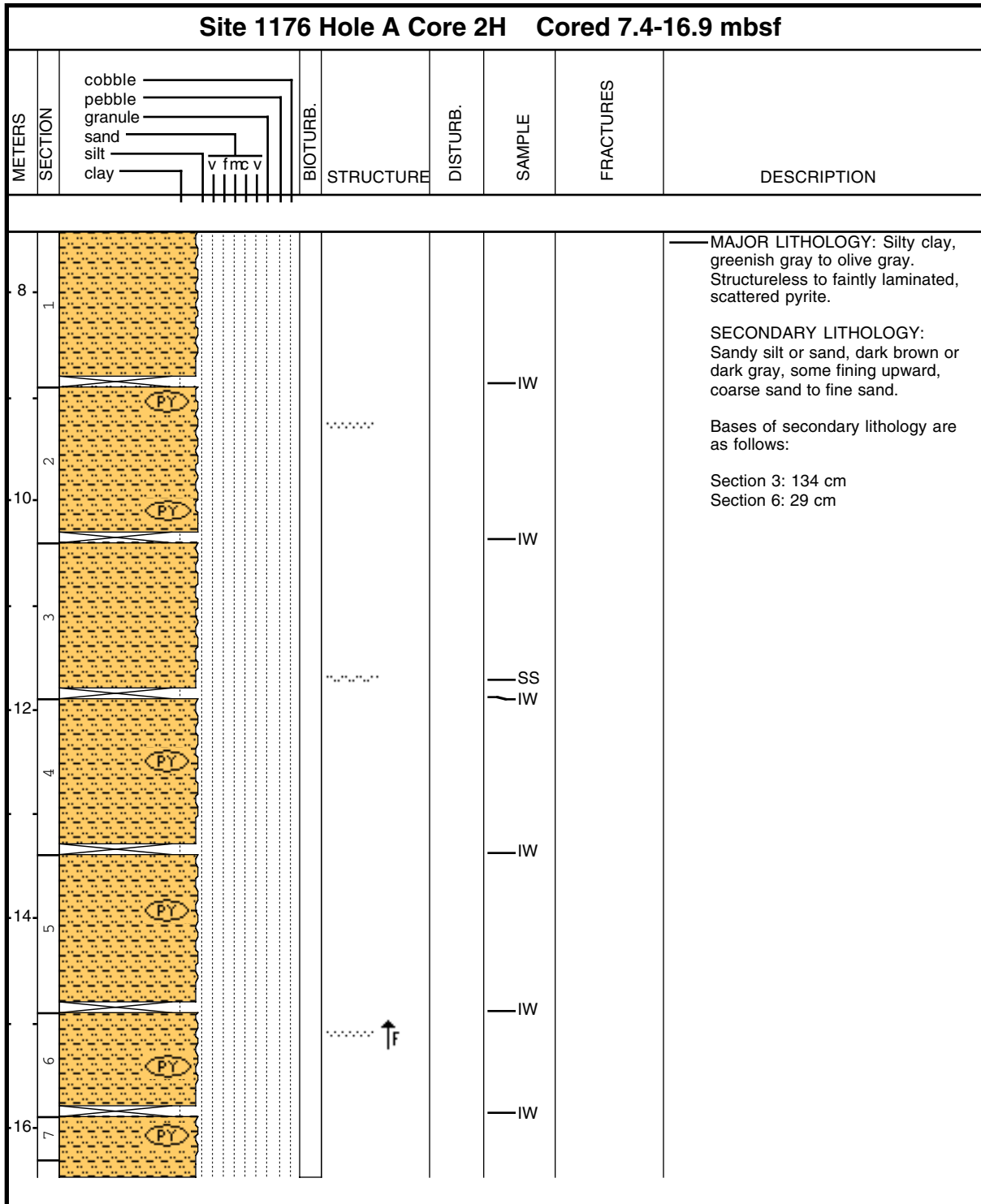


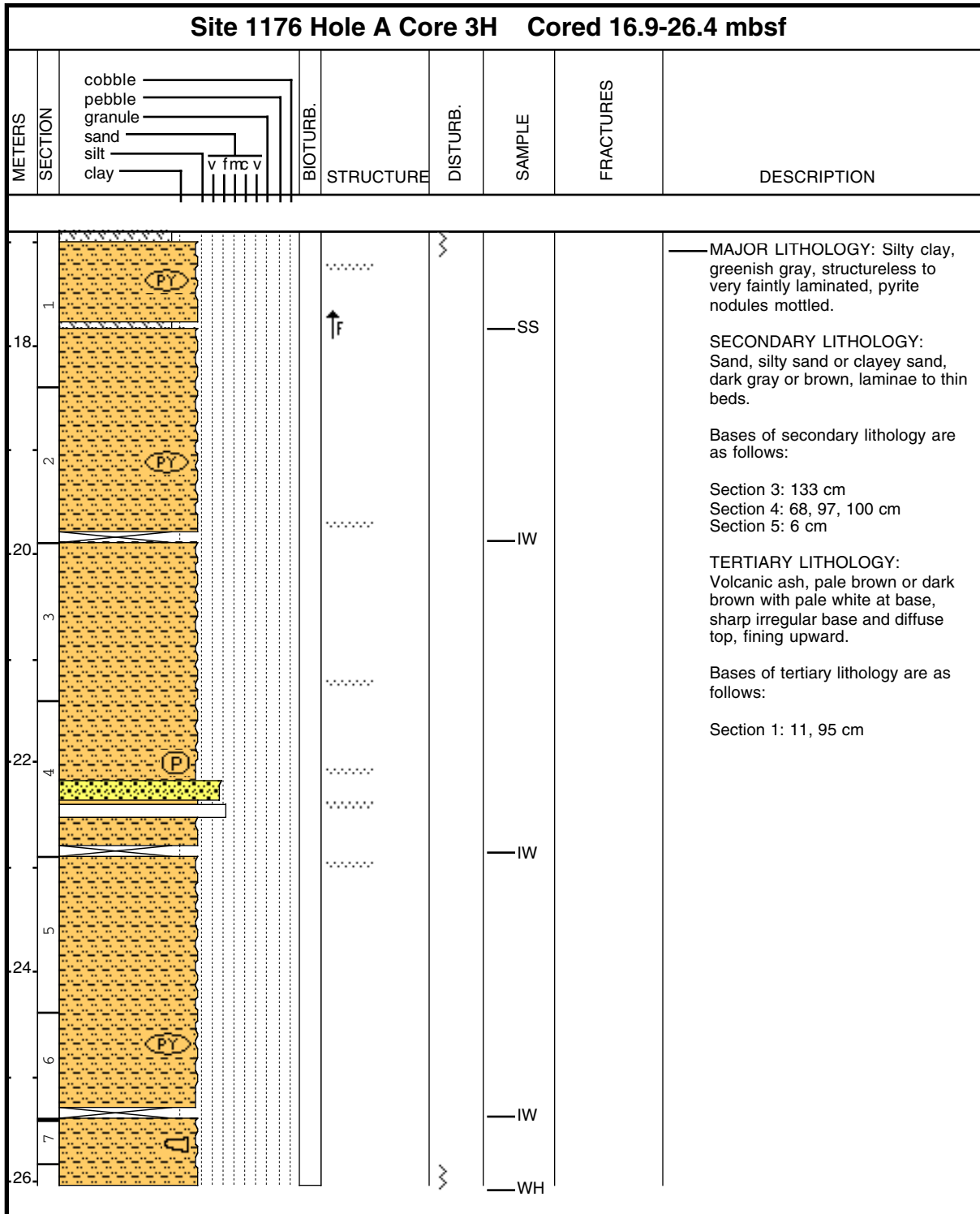
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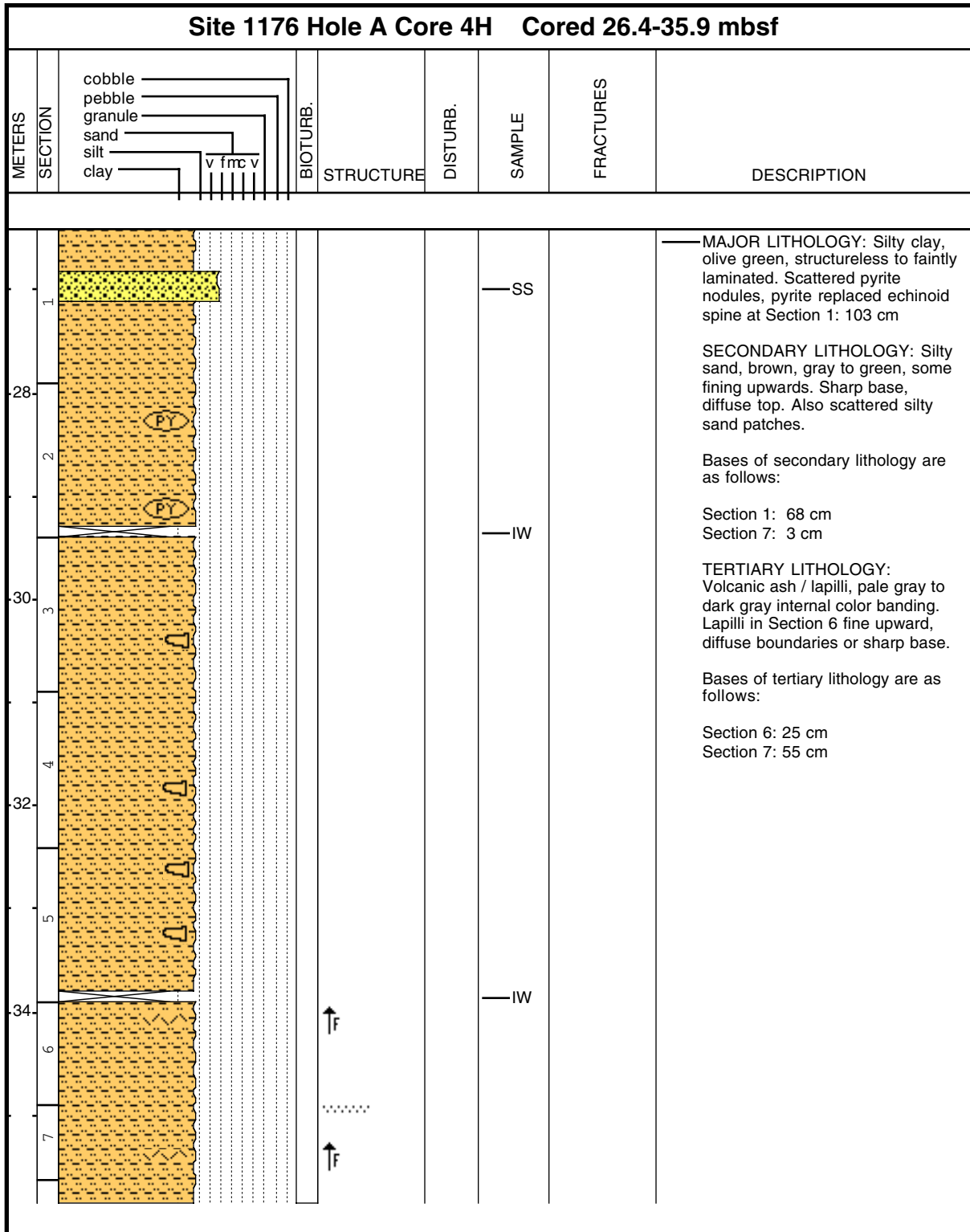
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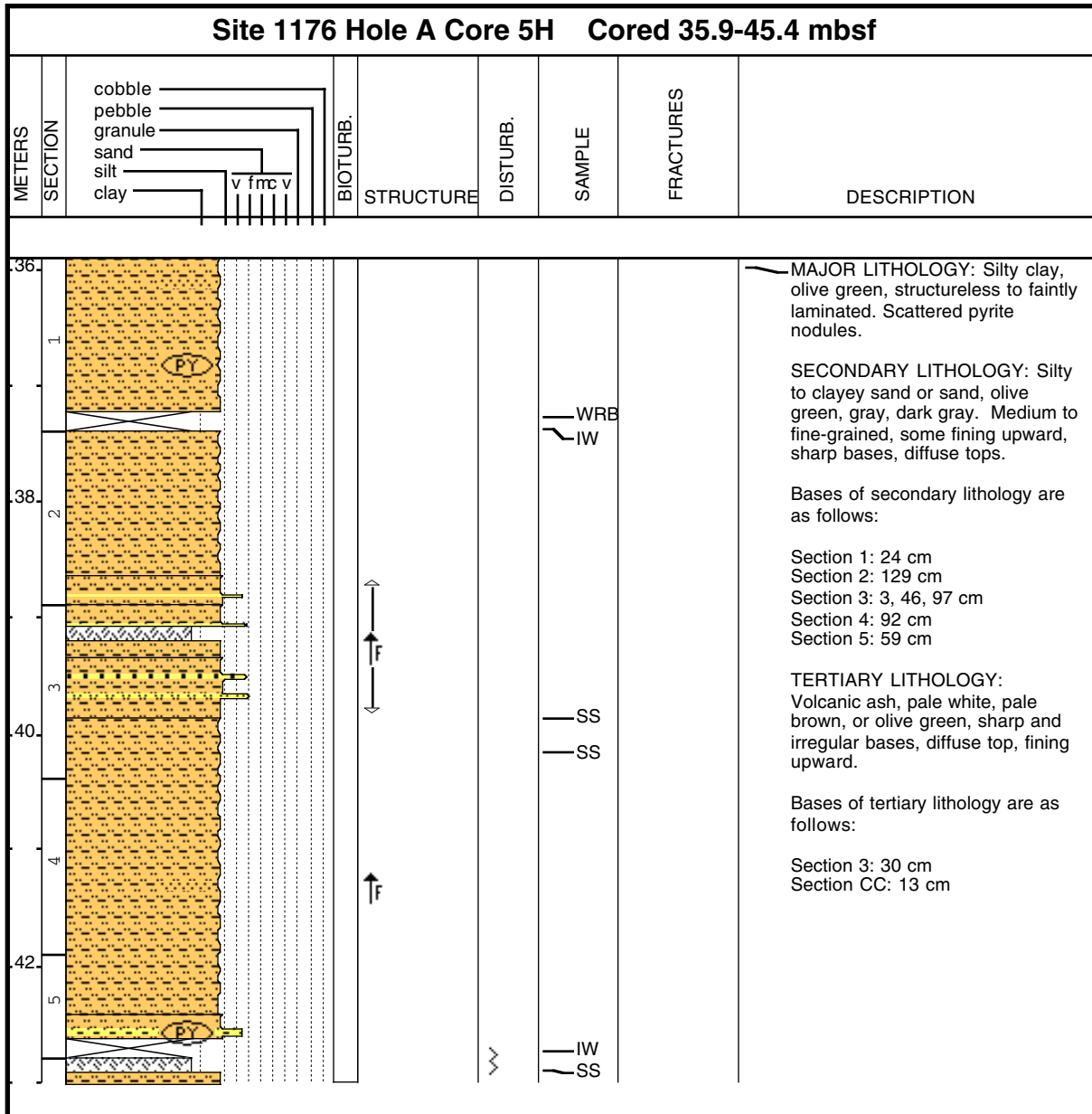
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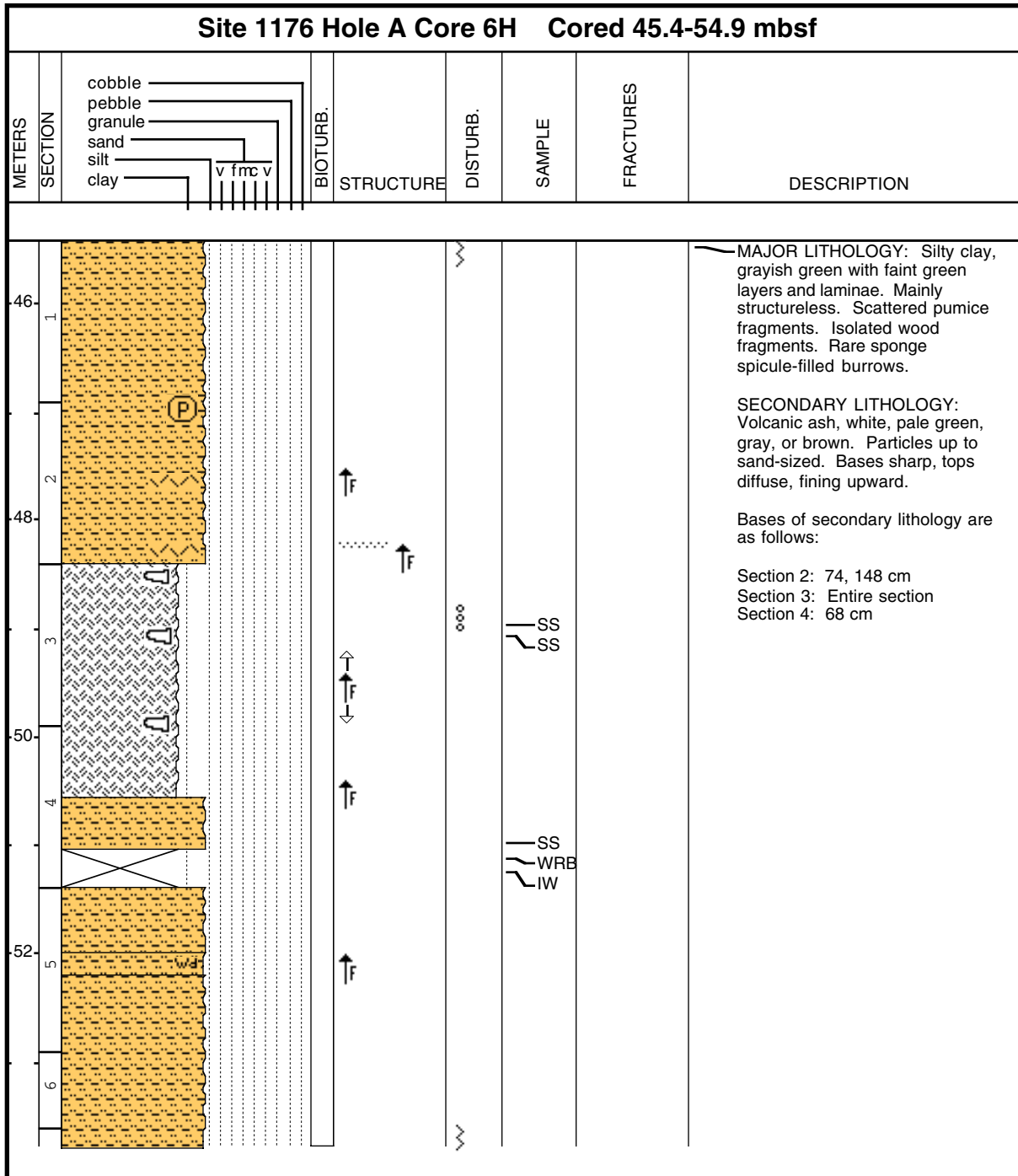
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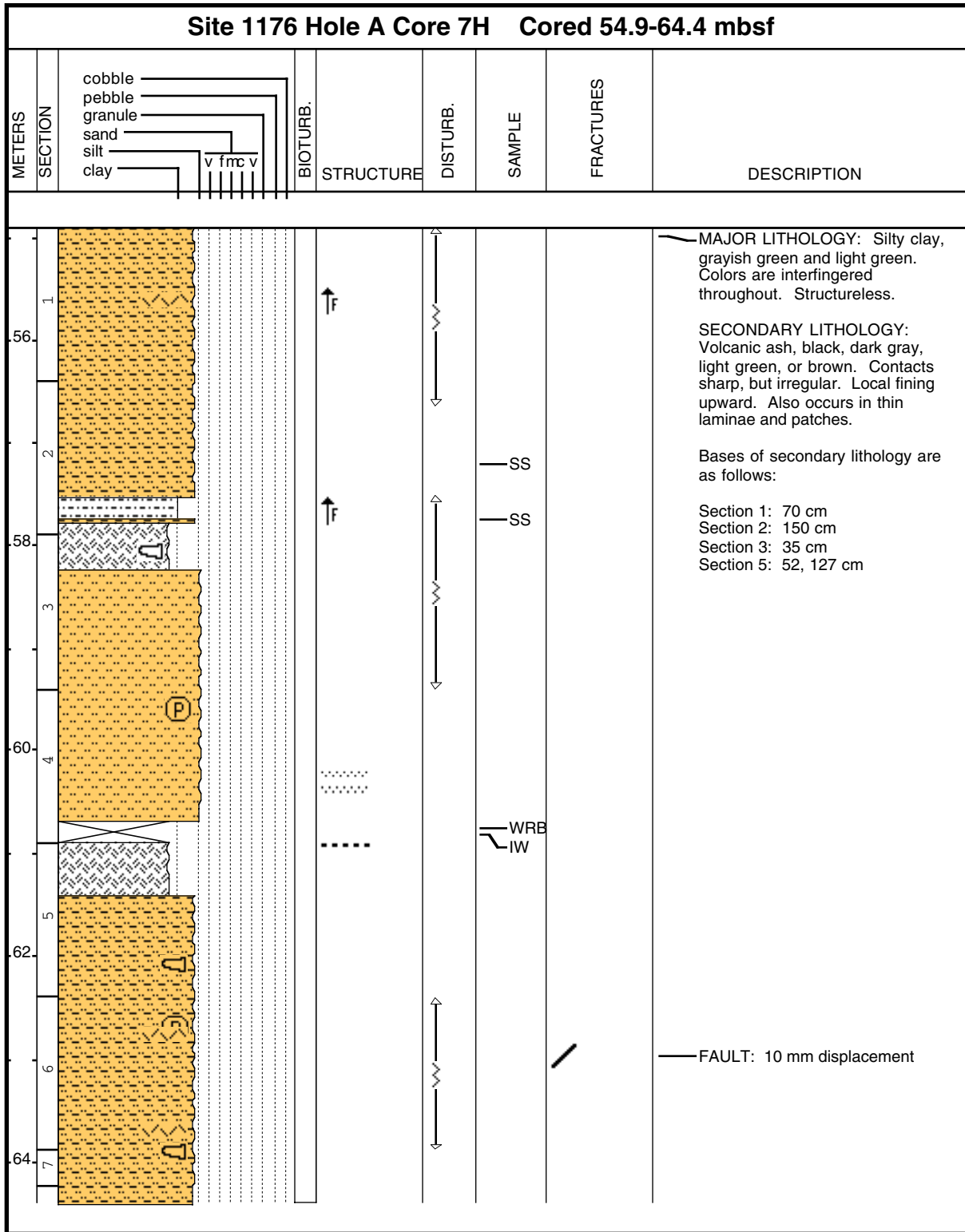
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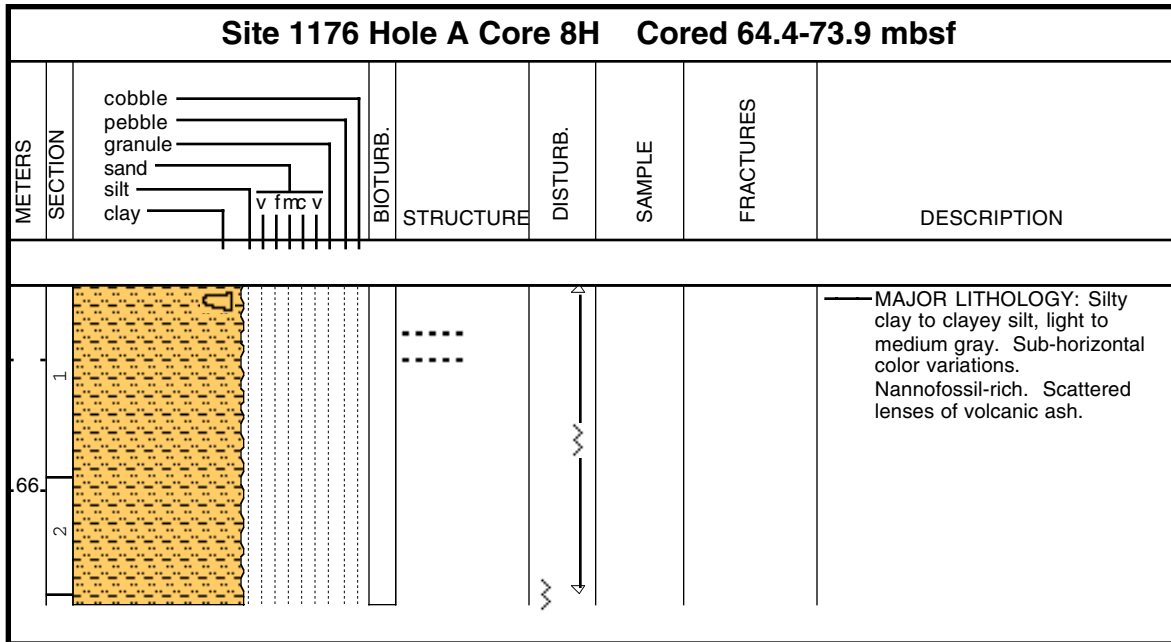
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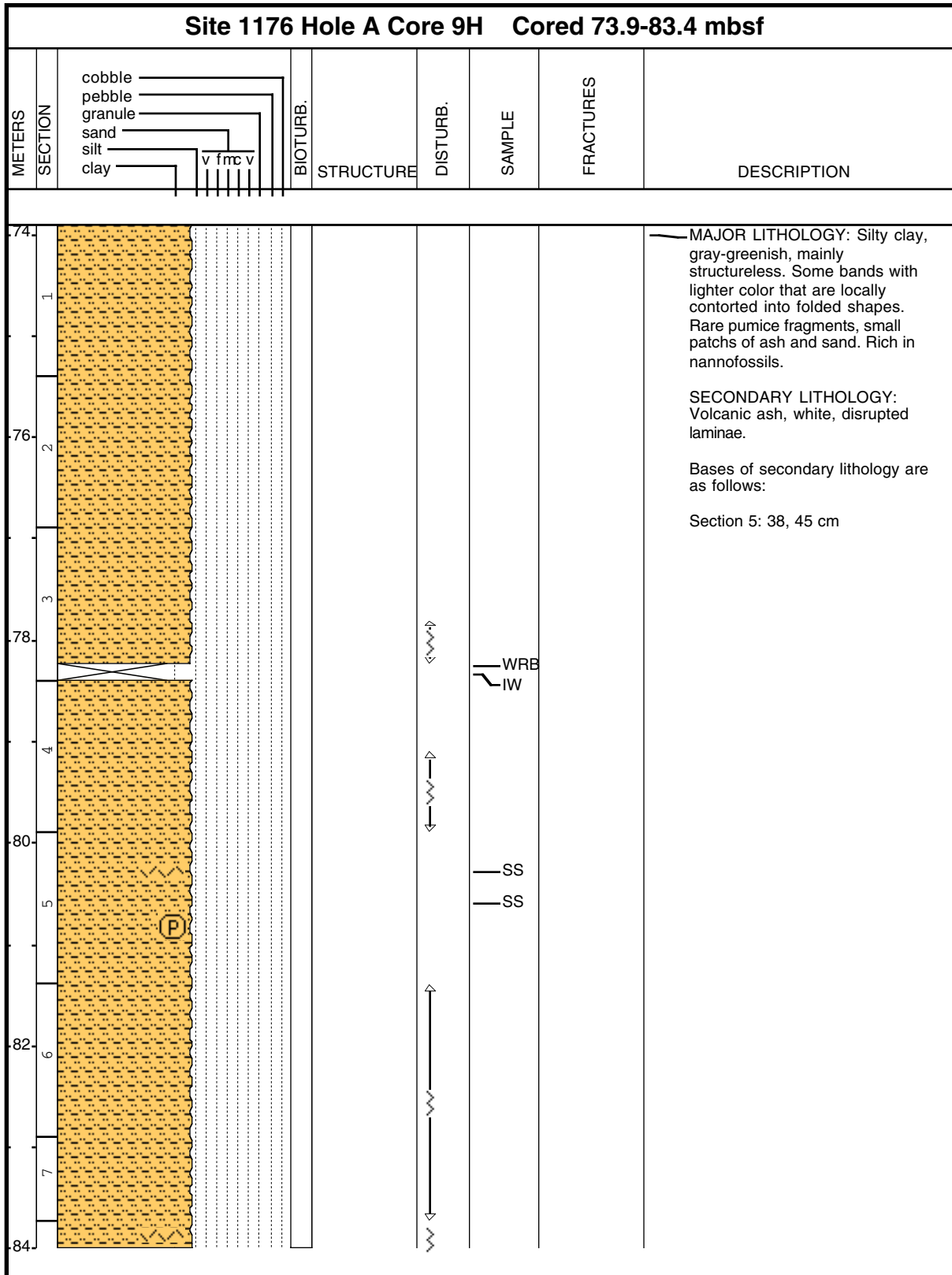
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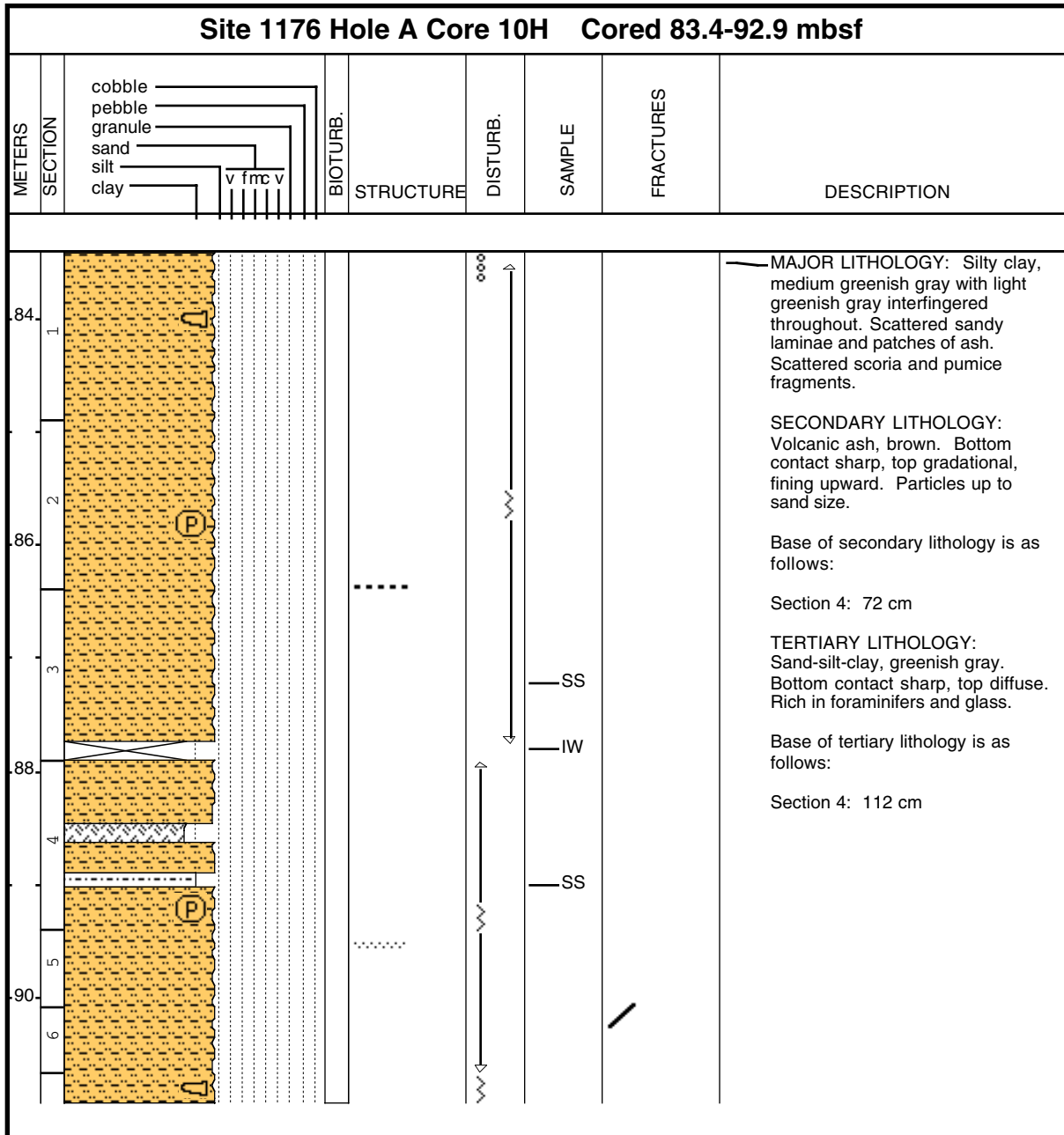
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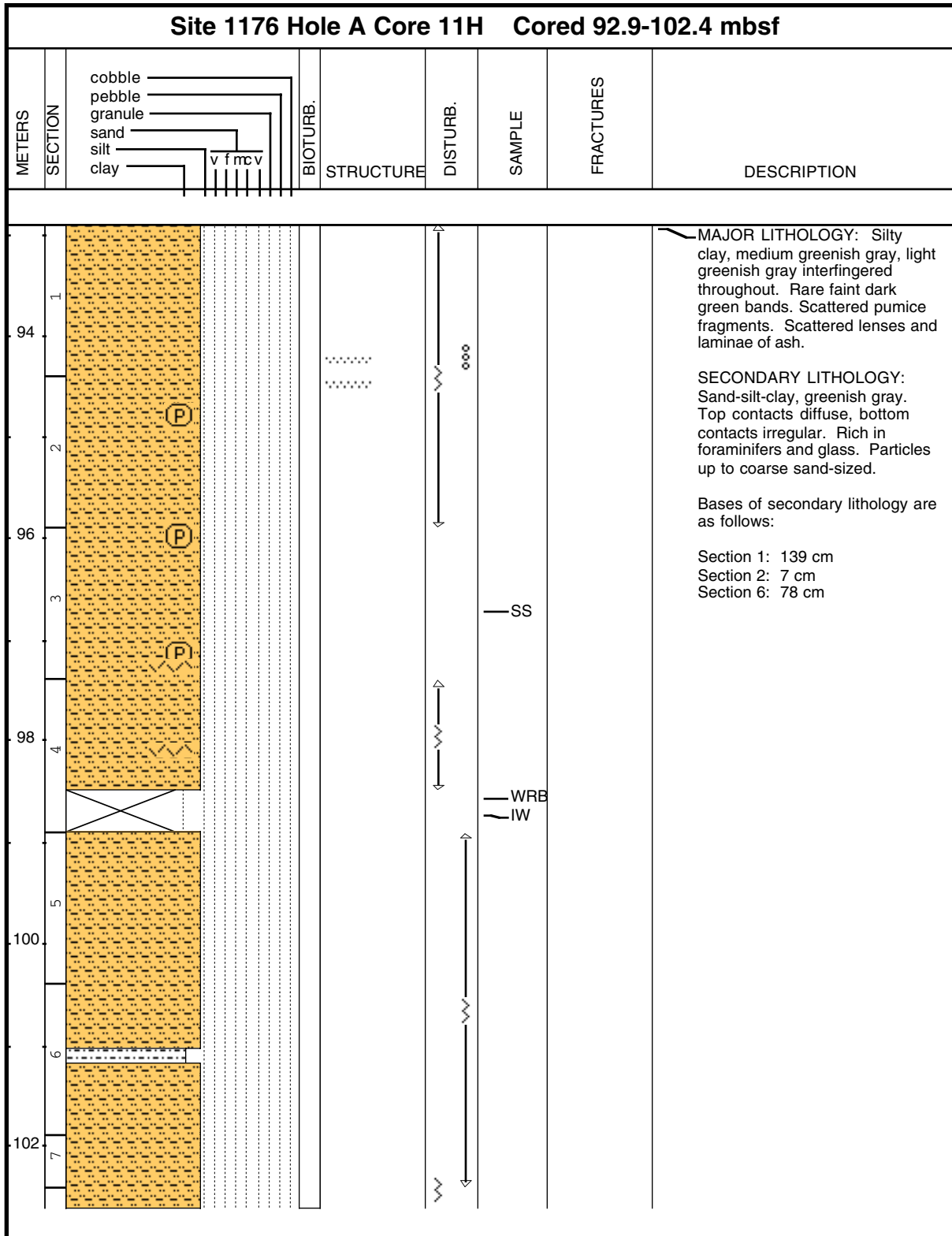
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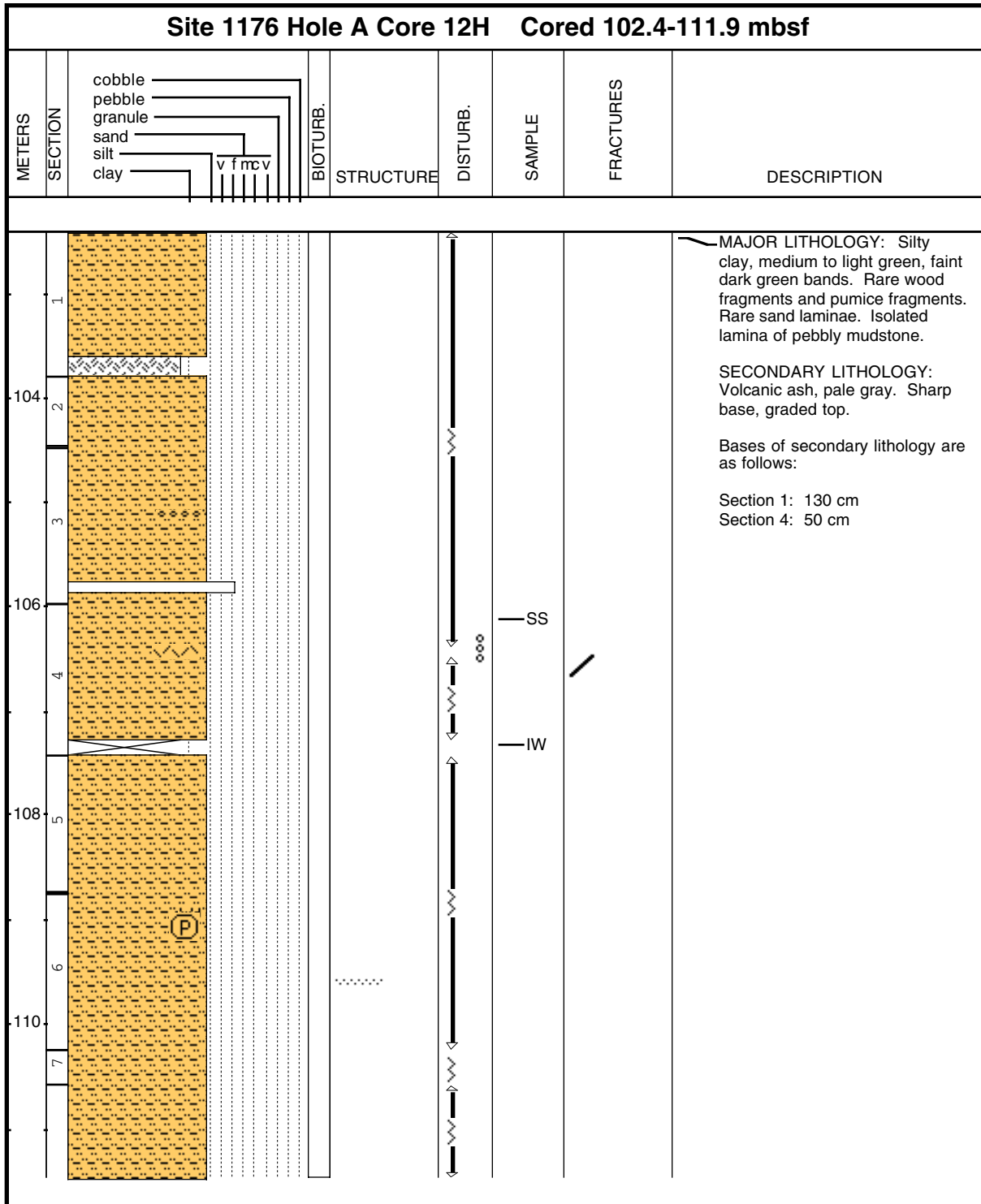
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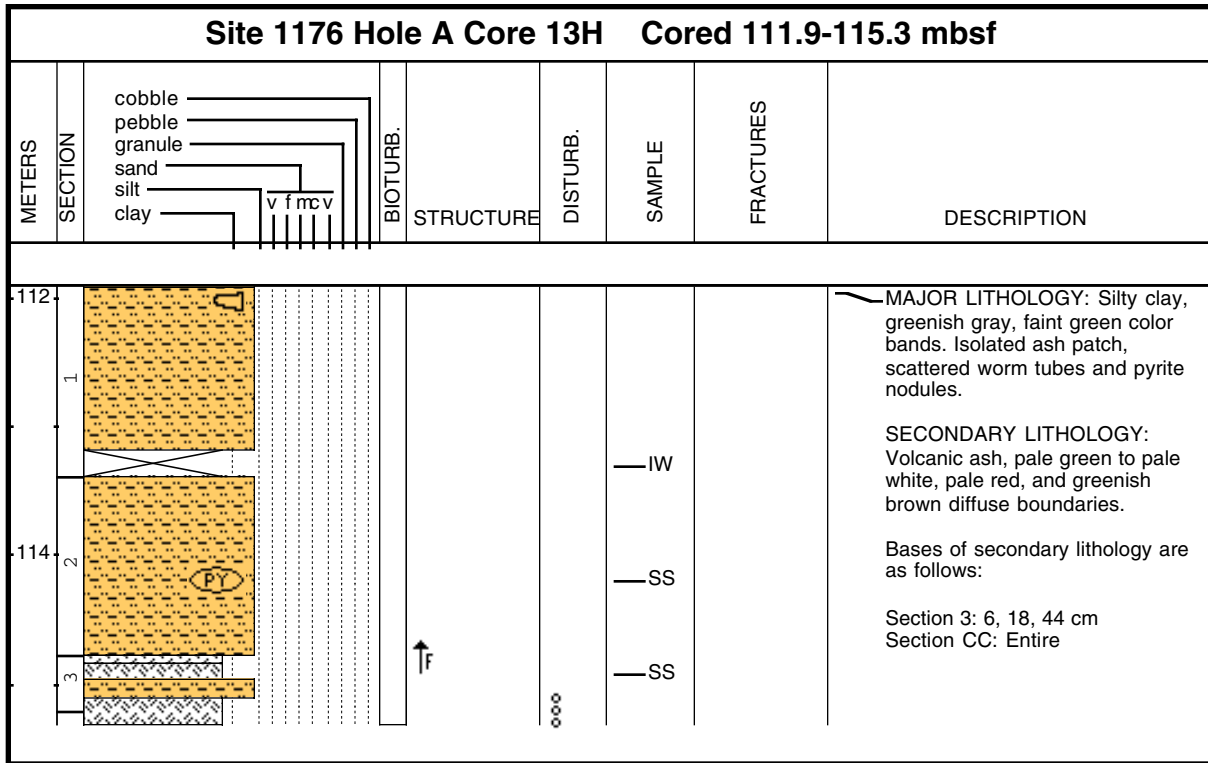
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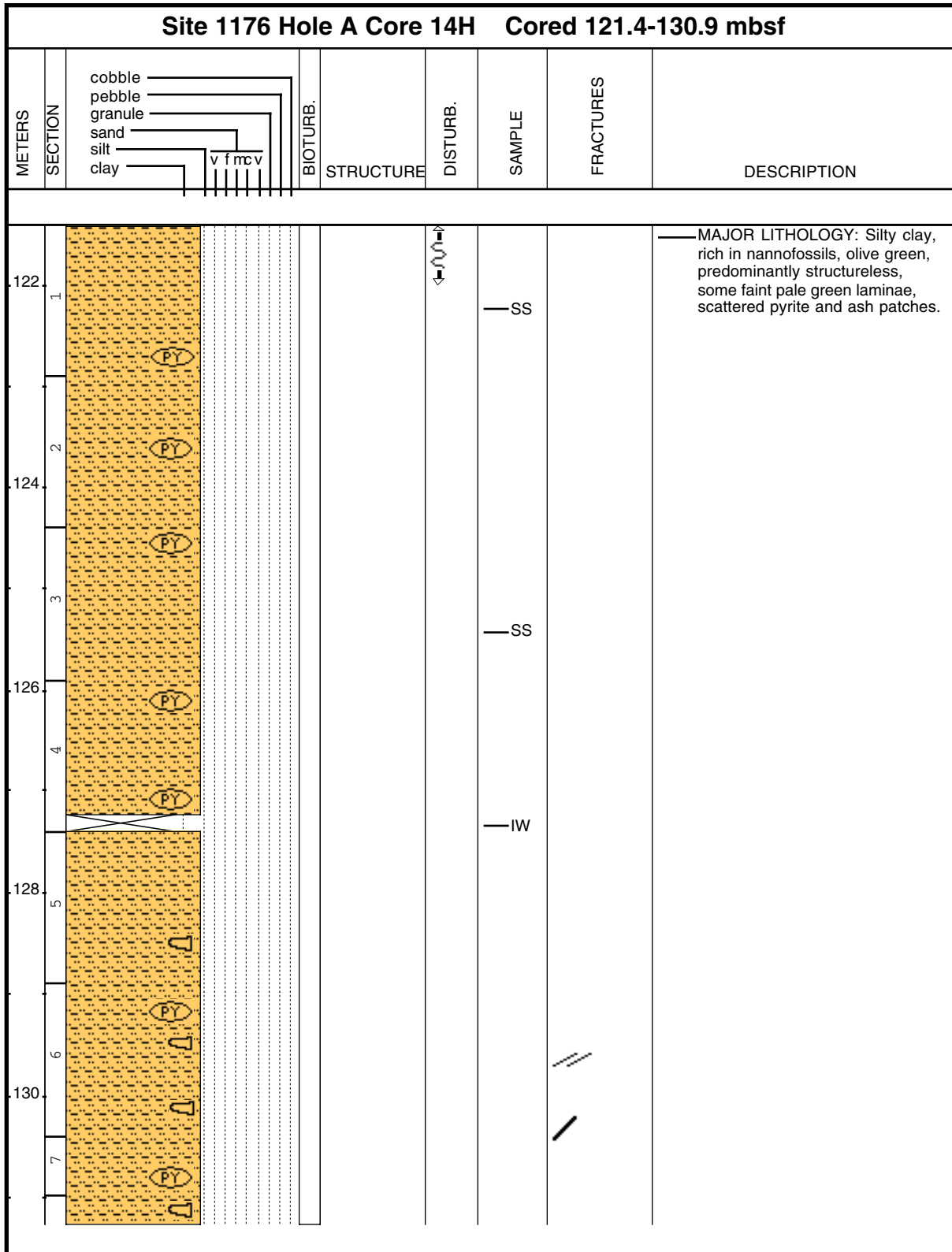
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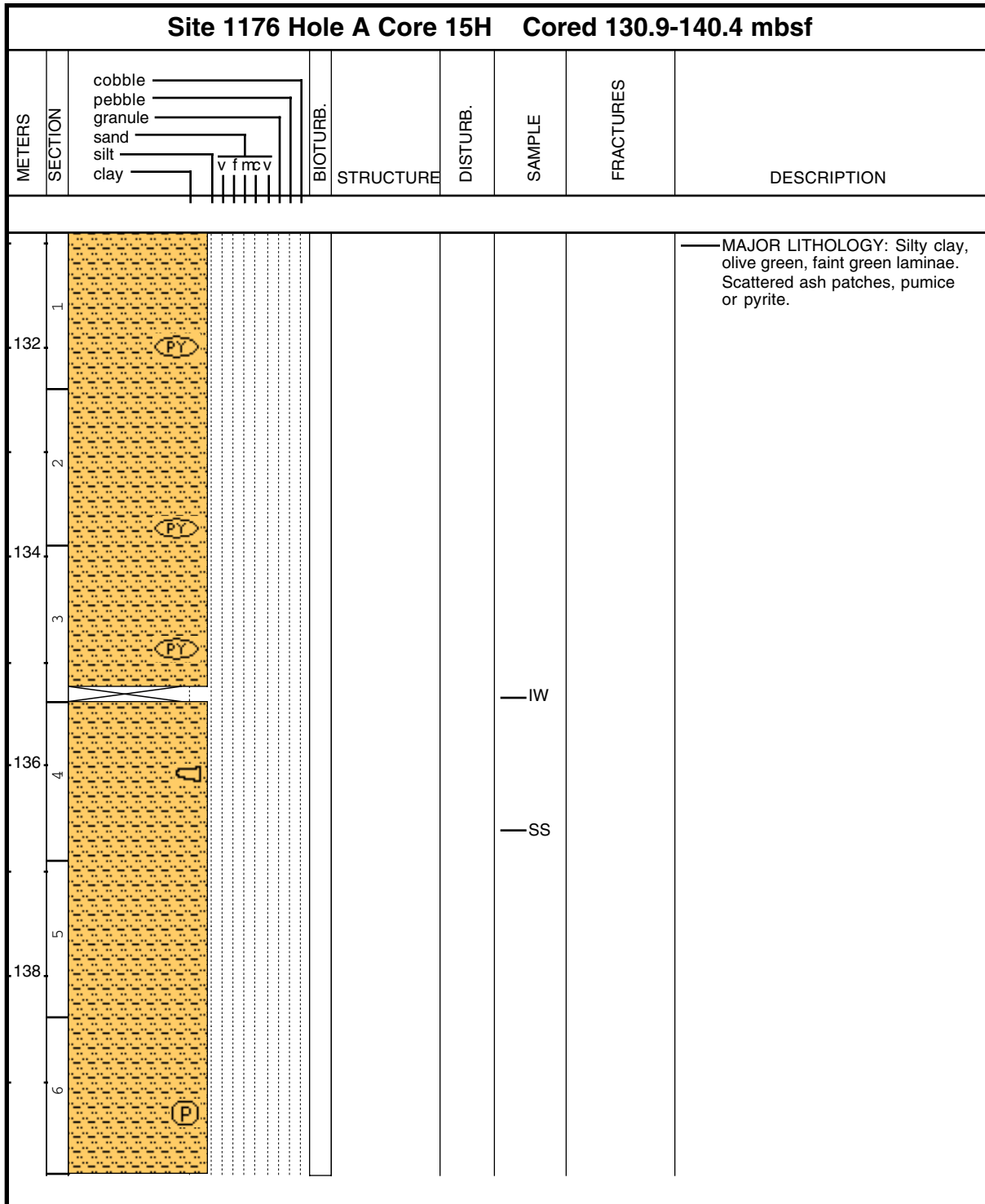
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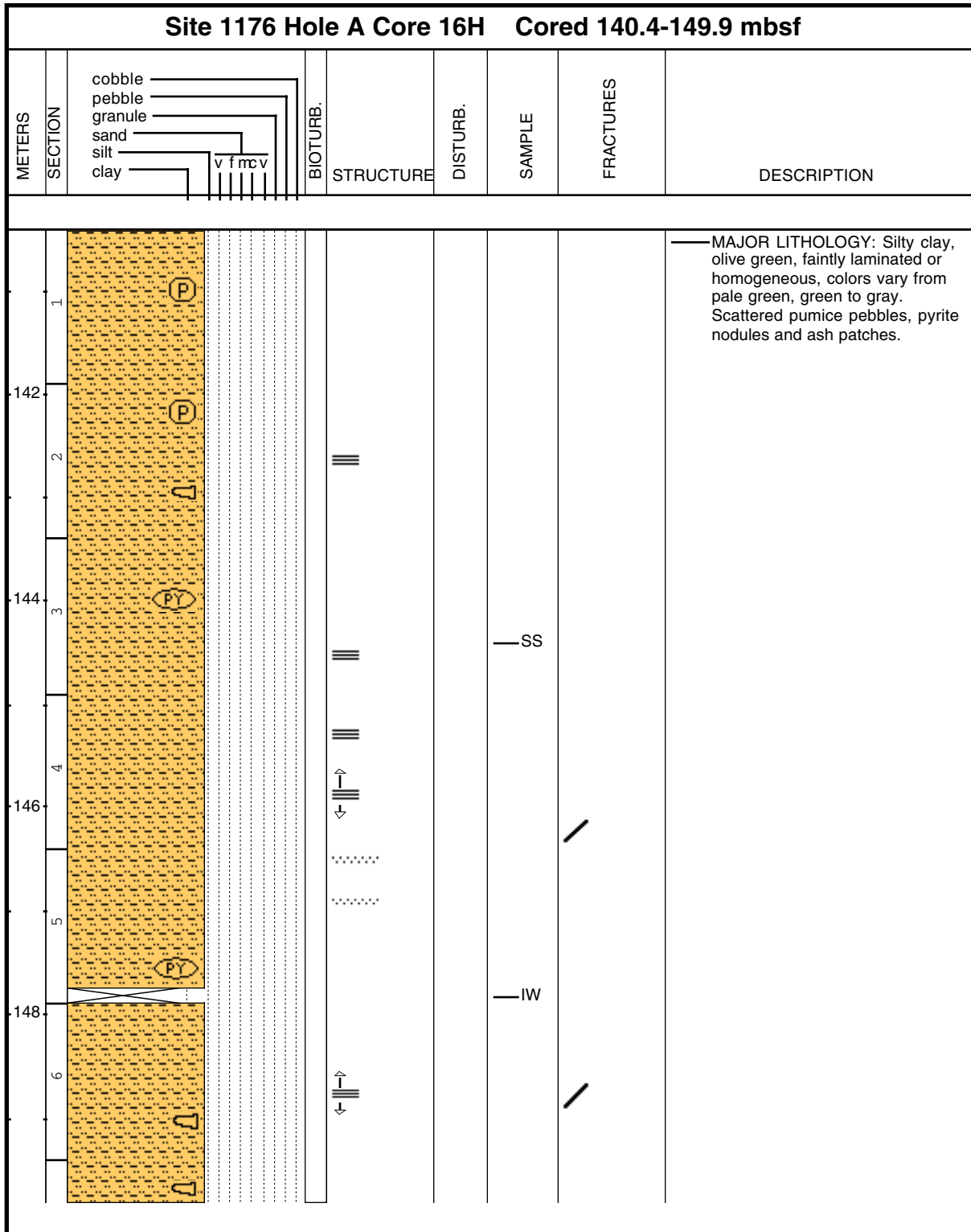
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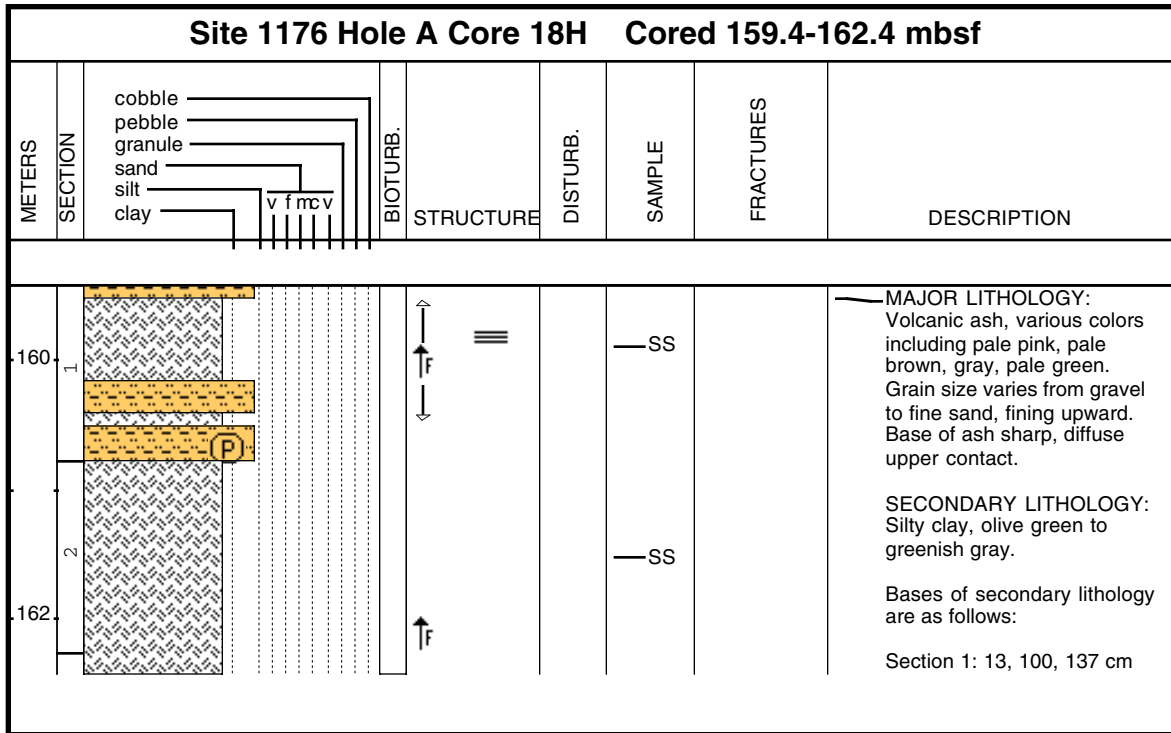
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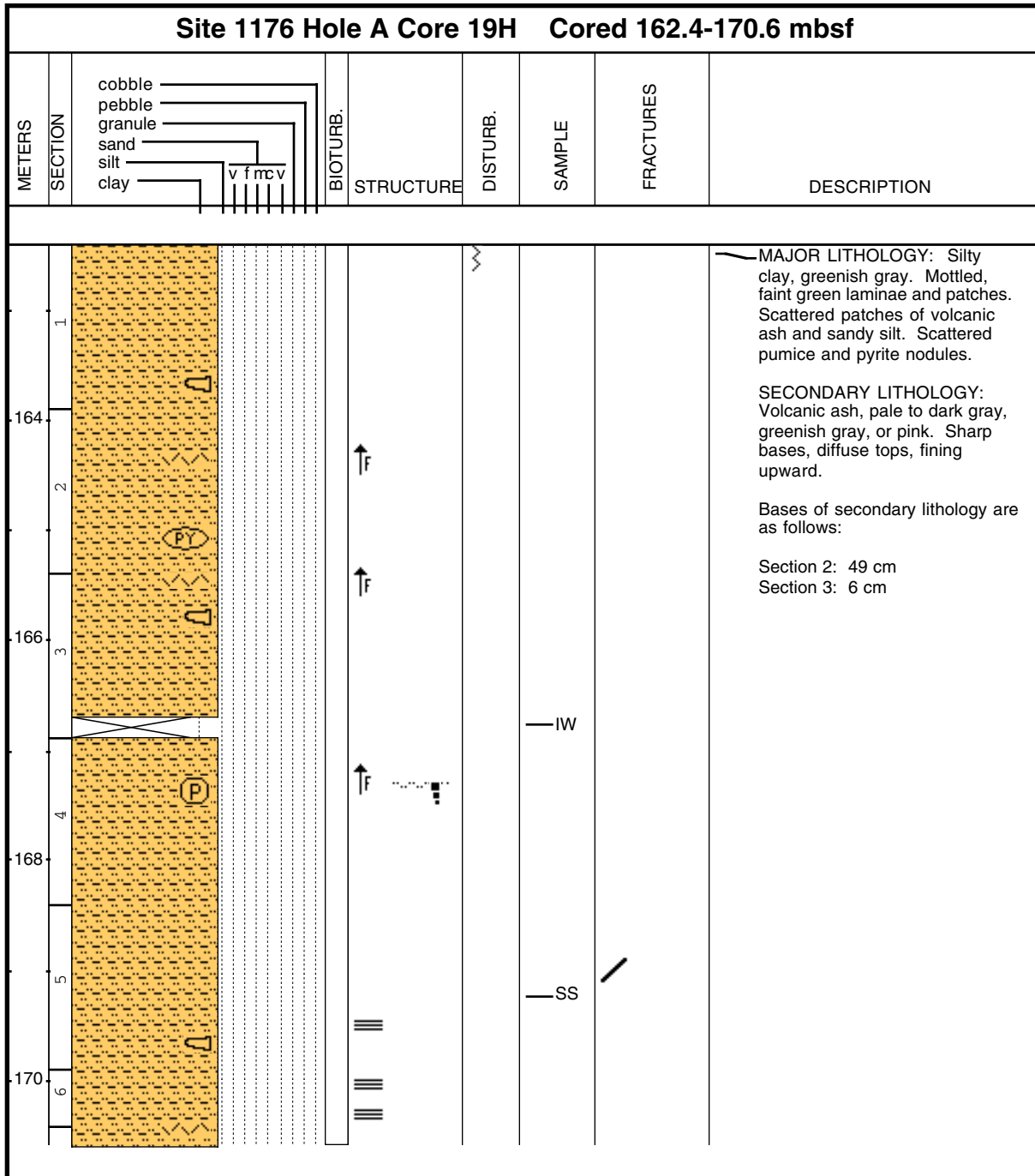
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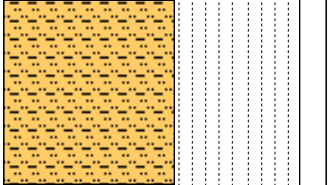


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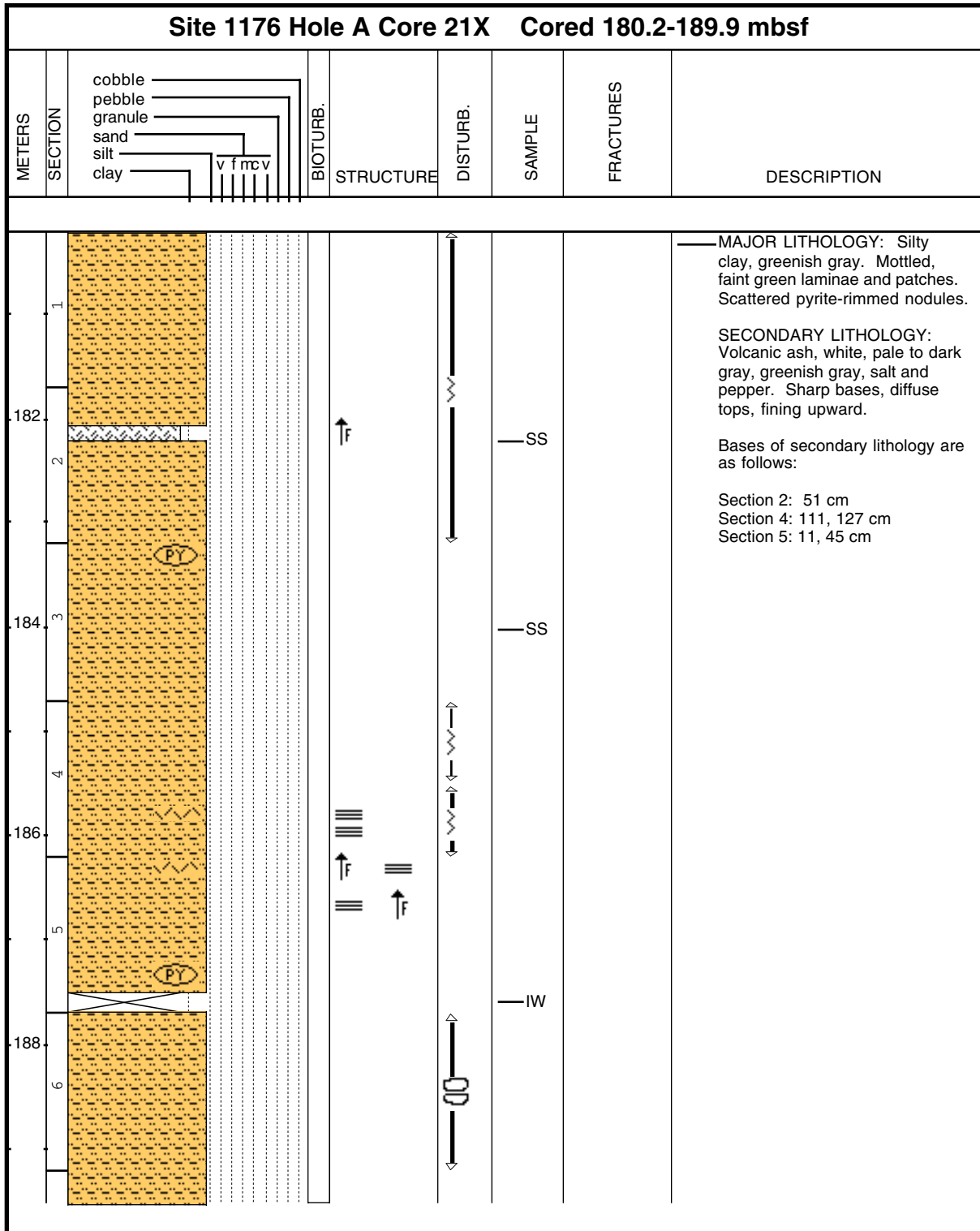
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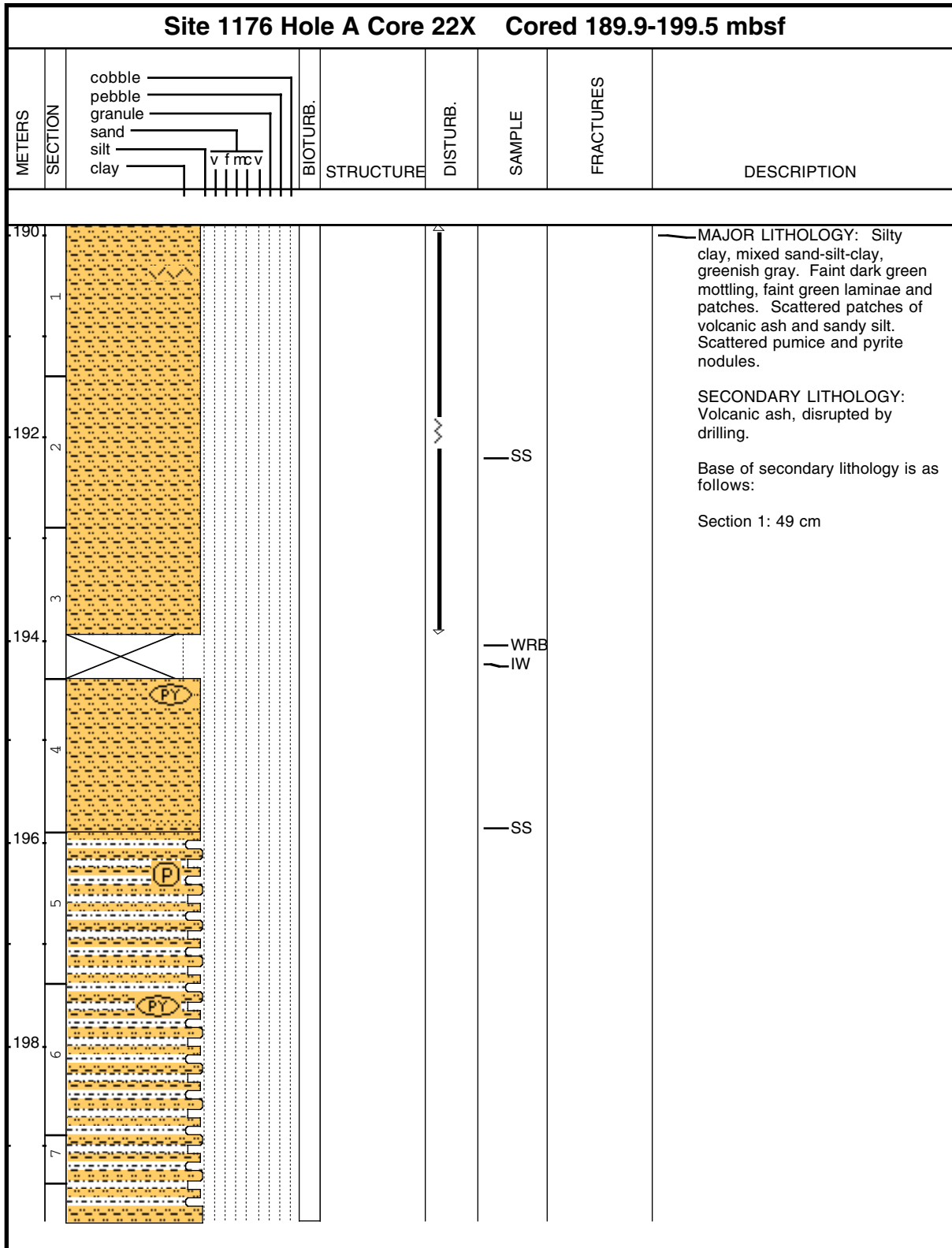
Core Photo

Site 1176 Hole A Core 20X Cored 170.6-180.2 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
172	1							MAJOR LITHOLOGY: Silty clay, greenish gray. Mottled with green patches. SECONDARY LITHOLOGY: Volcanic ash, pale gray. Gradational top with silty clay.
	2					—SS		Bases of secondary lithology are as follows: Section 1: 150 cm Section 2: 28 cm Section 3 (CC): 8 cm
	3							

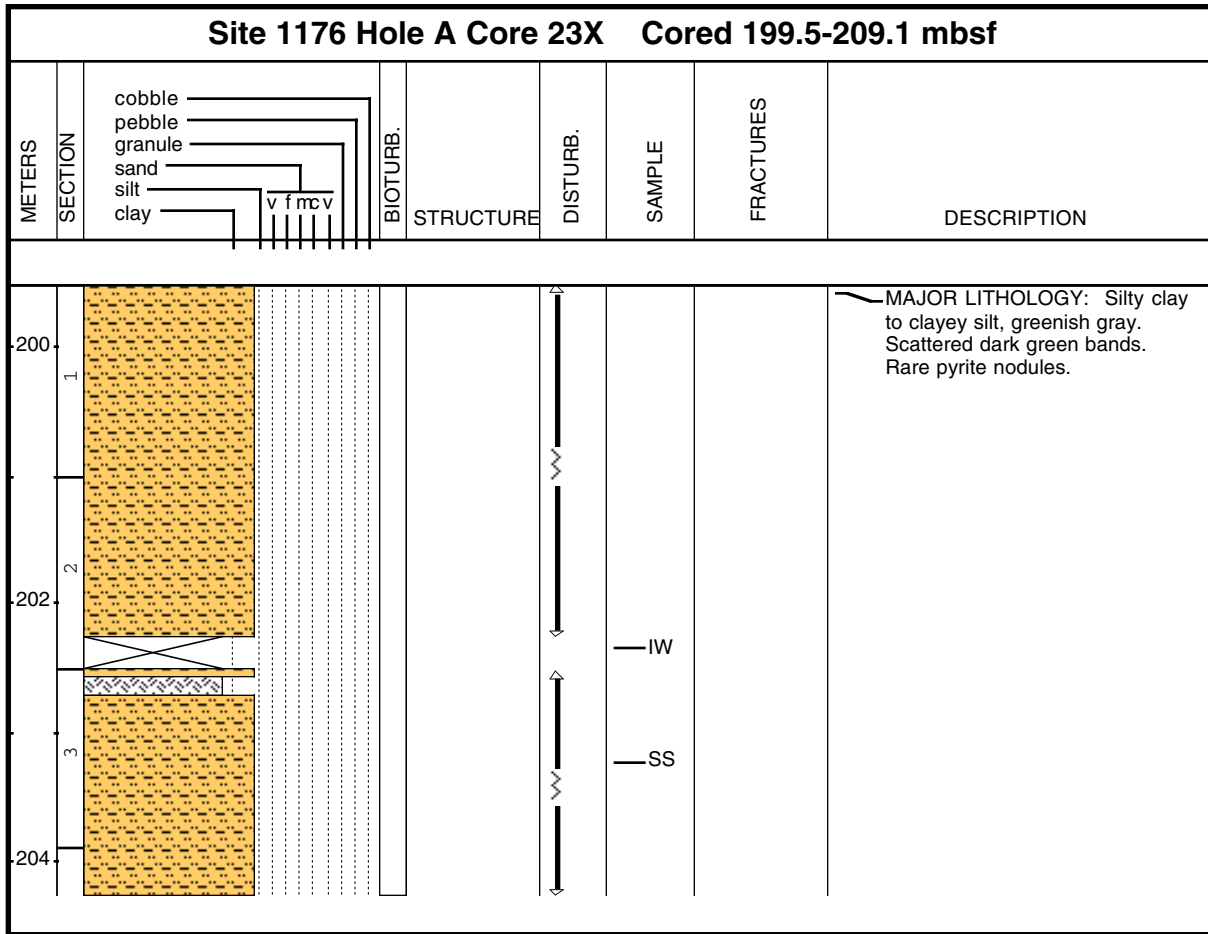
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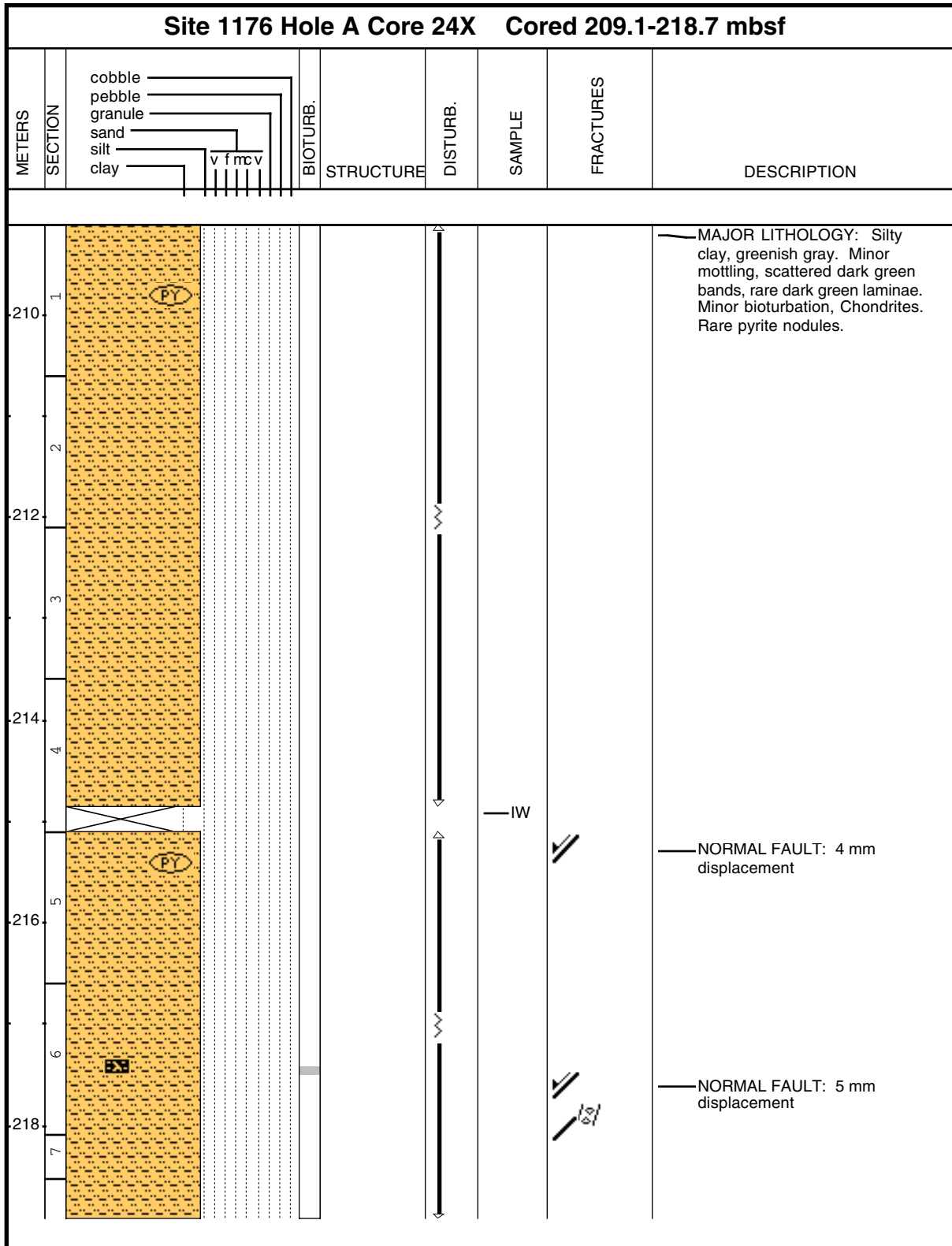
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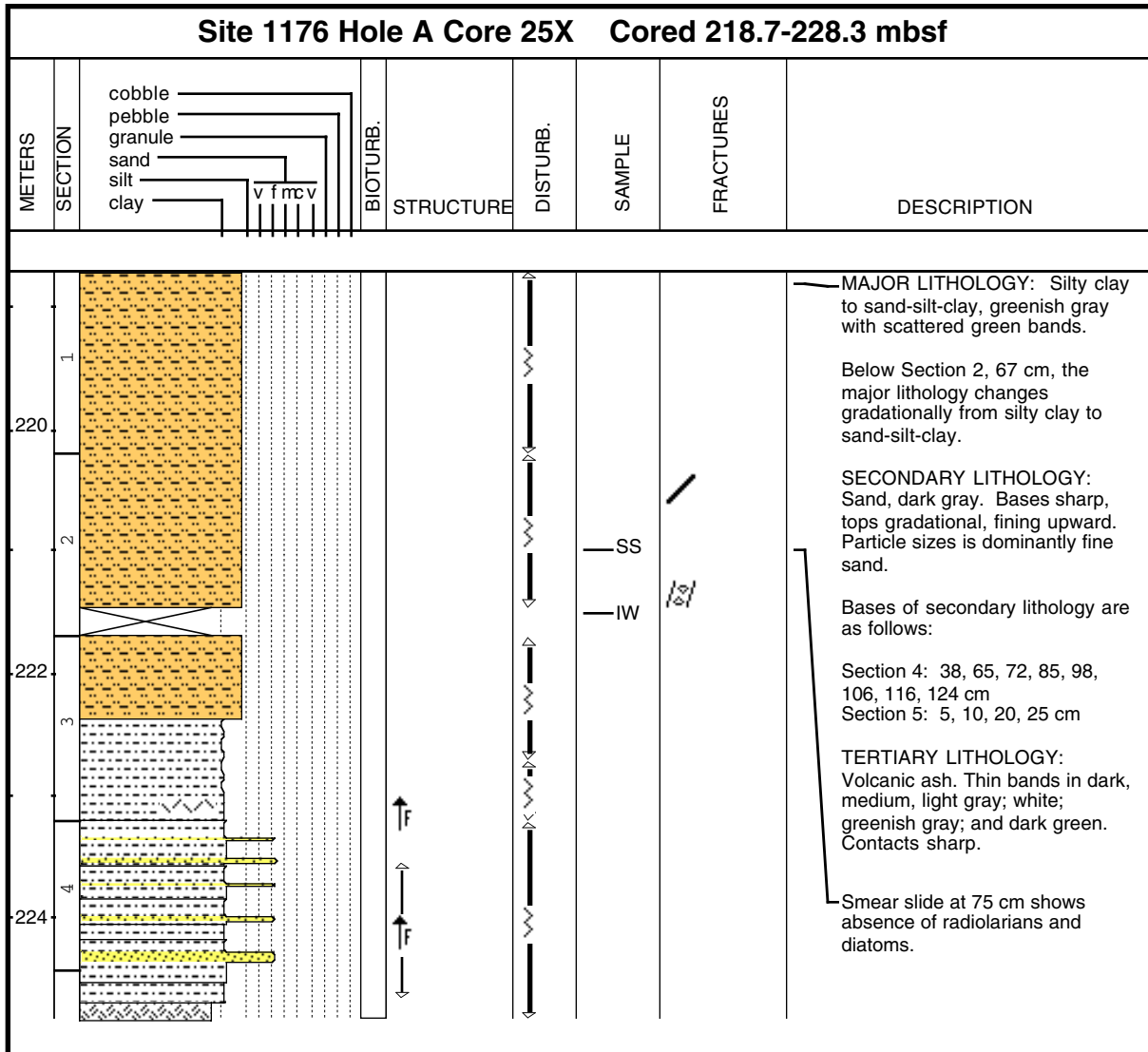
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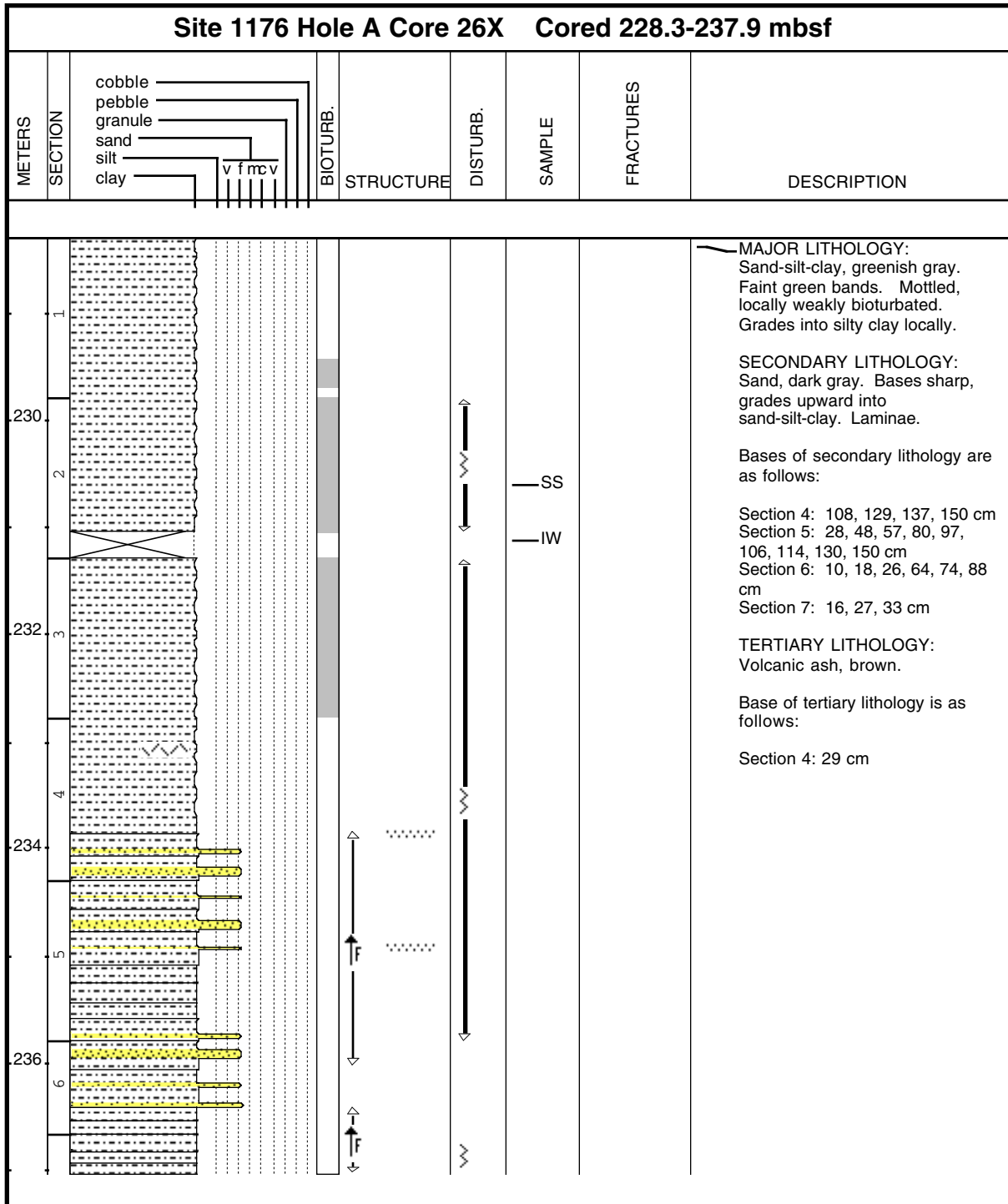
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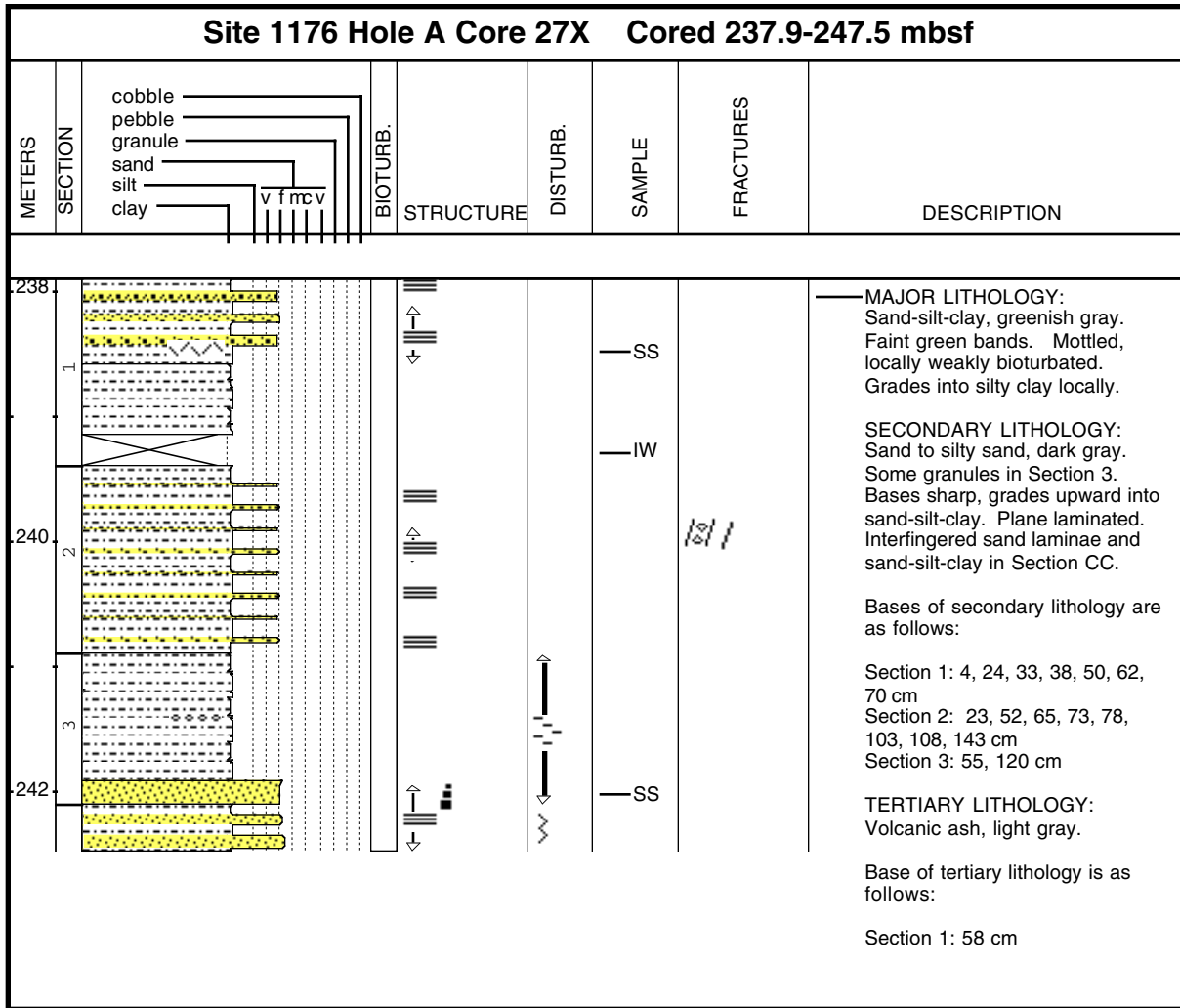
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Core Photo



Core Photo



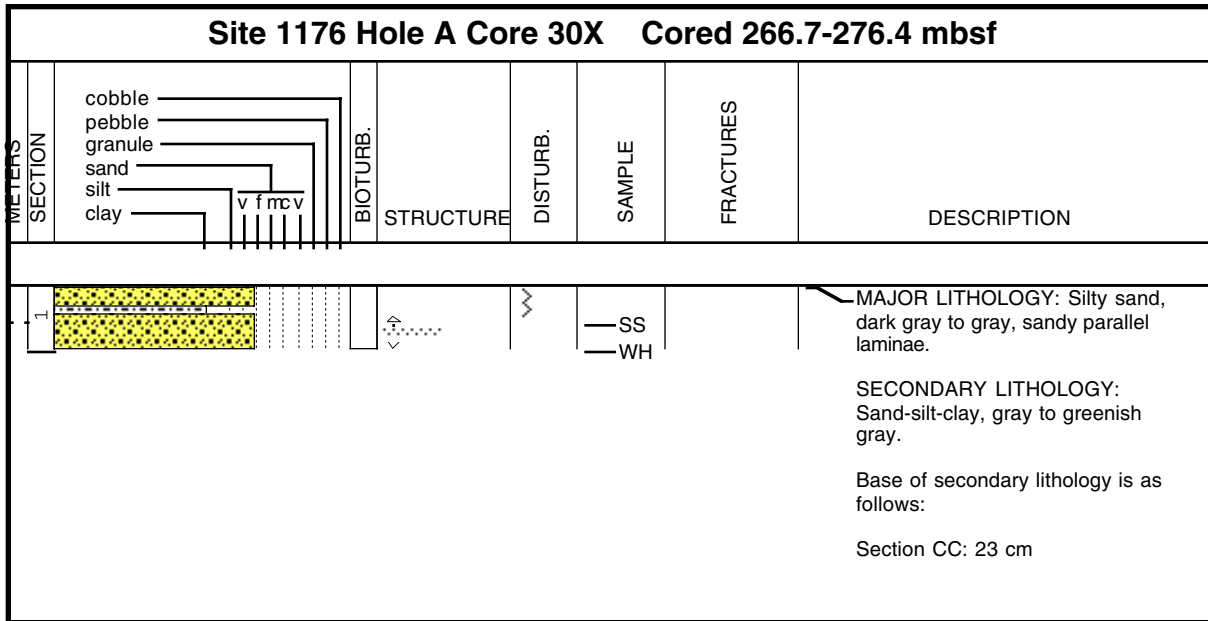
Core Photo

Site 1176 Hole A Core 28X Cored 247.5-257.1 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay v f mc v						
248	I					SS		<p>MAJOR LITHOLOGY: Sand-silt-clay, gray, drilling disturbance throughout.</p> <p>SECONDARY LITHOLOGY: Silty sand to sandy silt, gray, poorly sorted silt to coarse sand. Bases of silty sand:</p> <p>Section 1: 49, 58, 65, 70, 81, 86, 96, 108, 113 cm Section 2: 12, 17, 20 cm</p>

Core Photo

Site 1176 Hole A Core 29X Cored 257.1-266.7 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1						—SS		<p>MAJOR LITHOLOGY: Sand-silt-clay, gray.</p> <p>SECONDARY LITHOLOGY: Silty sand, gray, poorly sorted, medium to coarse grained.</p> <p>Bases of secondary lithology are as follows: Section CC: 8, 16, 23, 34 cm</p>

Core Photo



Core Photo

Site 1176 Hole A Core 31X Cored 276.4-286.1 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1		cobble pebble granule sand silt clay v f mc v				—WH		<p>MAJOR LITHOLOGY: Sand-silt-clay, gray to greenish gray, highly disrupted by drilling.</p> <p>SECONDARY LITHOLOGY: Silty sand, dark gray to gray, sandy parallel laminae throughout.</p> <p>Base of secondary lithology is as follows: Section CC: 28 cm</p>





Core Photo

Site 1176 Hole A Core 32X Cored 286.1-295.7 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1						—WH		<p>MAJOR LITHOLOGY: Sand-silt-clay, gray to greenish gray, highly disrupted by drilling.</p> <p>SECONDARY LITHOLOGY: Silty sand, dark gray to gray, very coarse sand to silt, sandy laminae throughout.</p> <p>Base of secondary lithology is as follows:</p> <p>Section CC: 27 cm</p>

Core Photo

Site 1176 Hole A Core 33X Cored 295.7-305.3 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
296	I							<p>MAJOR LITHOLOGY: Sandy silt, dark gray to gray, coarse sand to silt, sandy laminae.</p> <p>SECONDARY LITHOLOGY: Sand-silt-clay, greenish gray to gray.</p> <p>Bases of secondary lithology are as follows:</p> <p>Section 1: 7, 73 cm Section CC: 6, 24, 36 cm</p>

Core Photo

Site 1176 Hole A Core 34X Cored 305.3-314.9 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1								<p>MAJOR LITHOLOGY: Silty sand, gray, poorly sorted, coarse to medium, angular to sub-rounded.</p> <p>SECONDARY LITHOLOGY: Gravel, gray, poorly sorted, medium sand to gravel up to 1 cm, rounded to angular. Woody material at base.</p> <p>Base of secondary lithology is as follows:</p> <p>Section CC: 10 cm</p> <p>TERTIARY LITHOLOGY: Sand-silt-clay, gray.</p> <p>Base of tertiary lithology is as follows:</p> <p>Section CC: 2 cm</p>

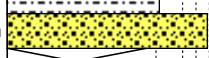





Core Photo

Site 1176 Hole A Core 35X Cored 314.9-324.5 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
	cobble pebble granule sand silt clay							
						SS		<p>MAJOR LITHOLOGY: Gravel, gray. Poorly sorted, subrounded to subangular clasts up to 1 cm, quartz and lithic fragments. Fining upward.</p> <p>SECONDARY LITHOLOGY: Sand-silt clay, gray.</p> <p>Bases of secondary lithology are as follows:</p> <p>Section 1: 13, 30 cm Section CC: 11 cm</p> <p>TERTIARY LITHOLOGY: Silty sand, gray, poorly sorted.</p> <p>Bases of tertiary lithology are as follows:</p> <p>Section CC: 6, 19, 27, 34 cm</p>



Core Photo

Site 1176 Hole A Core 36X Cored 324.5-334.1 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1					XX	IW		<p>MAJOR LITHOLOGY: Gravel, gray. Poorly sorted, clasts up to 2 cm. Clast lithology includes shale, quartz, and chert.</p> <p>SECONDARY LITHOLOGY: Sand-silt-clay, gray, poorly sorted.</p> <p>Bases of secondary lithology are as follows:</p> <p>Section 1: Interspersed in drilling breccia Section 2: 24 cm Section CC: 7 cm</p> <p>TERTIARY LITHOLOGY: Silty sand, laminated, woody fragments, poorly sorted.</p> <p>Bases of tertiary lithology are as follows:</p> <p>Section 1: Interspersed in drilling breccia Section 2: 10 cm SectionCC: 33 cm</p>
2					SS			
326					IW			

Core Photo

Site 1176 Hole A Core 37X Cored 334.1-343.7 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay	v f mc v					
1								<p>MAJOR LITHOLOGY: Silty sand, gray to dark gray, laminated throughout, possible cross lamination, wood fragments common. Poorly sorted, some pebbles, and fining upward.</p> <p>SECONDARY LITHOLOGY: Sand-silt-clay, gray, poorly sorted, wood fragments. Base of sand-silt-clay:</p> <p>Section 1: 14 cm Section 2: 11 cm, 16 cm Section CC: 15 cm</p>
2						IW SS		

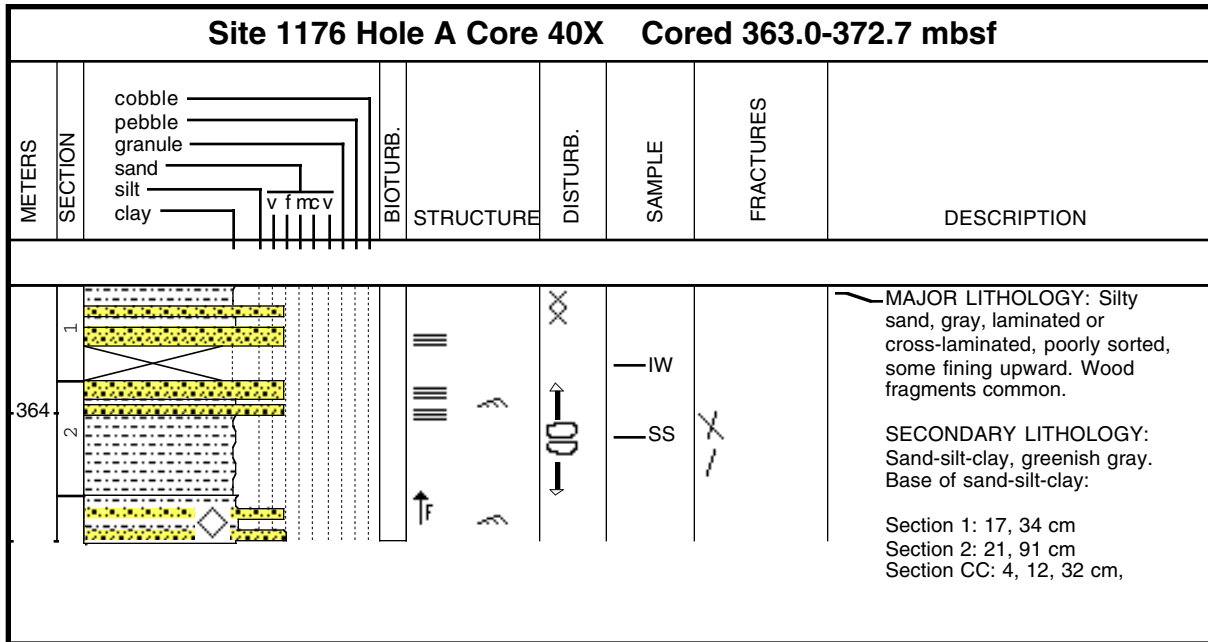
Core Photo

Site 1176 Hole A Core 38X Cored 343.7-353.4 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
344	I							<p>MAJOR LITHOLOGY: Silty sand, cross-laminated or laminated, wood fragments, poorly sorted.</p> <p>SECONDARY LITHOLOGY: Sand-silt-clay, greenish gray.</p> <p>Base of sand-silt-clay:</p> <p>Section CC: 12 cm</p>

Core Photo

Site 1176 Hole A Core 39X Cored 353.4-363.0 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay	v f mc v					
.354	1 2					— IW — SS		<p>MAJOR LITHOLOGY: Sand-silt-clay, gray, disturbed by drilling.</p> <p>SECONDARY LITHOLOGY: Silty sand, gray, laminated or cross-laminated, wood fragments common, poorly sorted, some fining upward. Medium to coarse grained.</p> <p>Bases of secondary lithology are as follows:</p> <p>Section 2: 4, 7, 23 cm Section CC: 25, 40 cm</p>

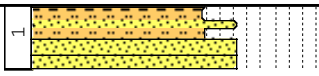
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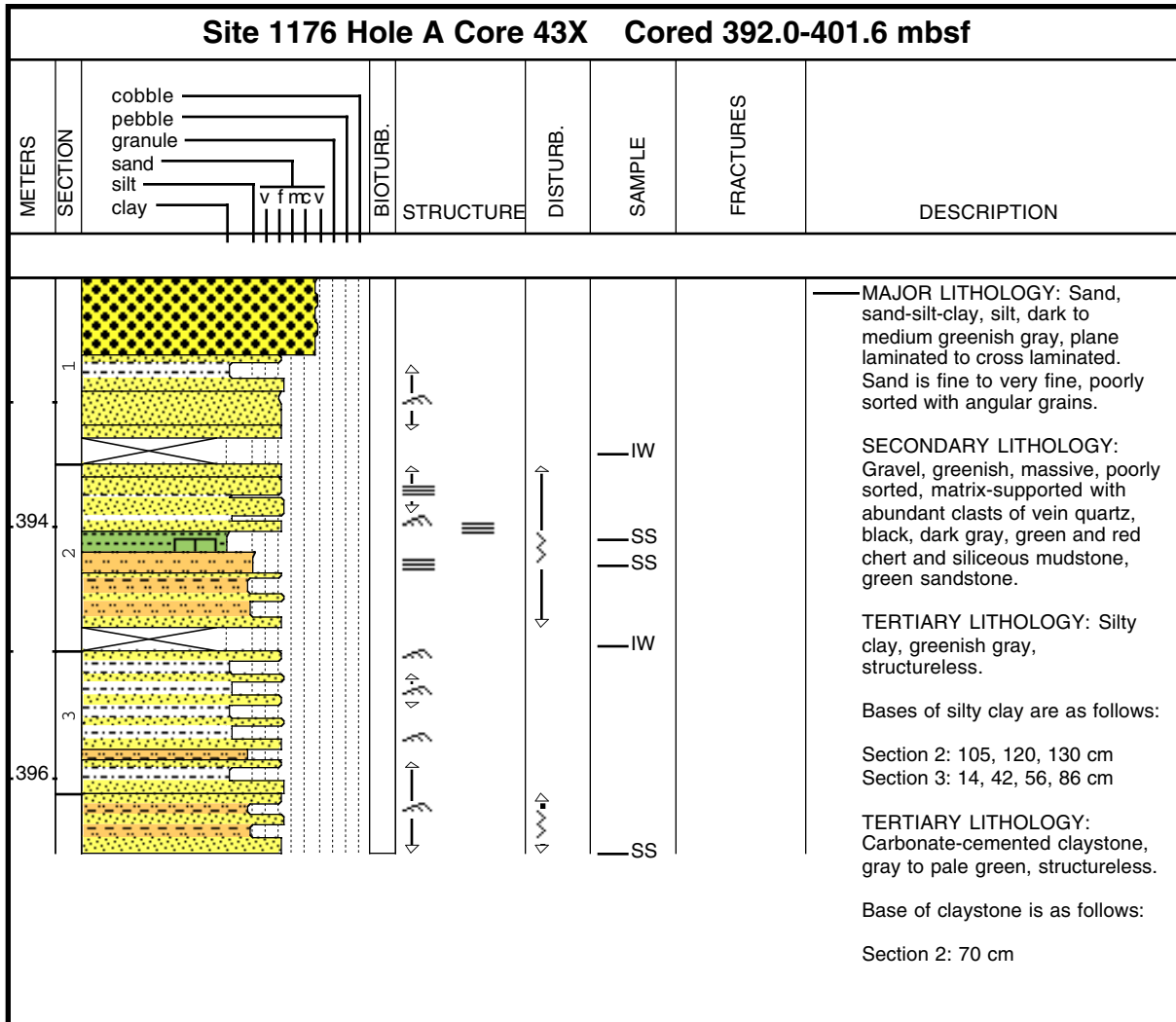
Core Photo

Site 1176 Hole A Core 41X Cored 372.7-382.4 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1						SS		<p>MAJOR LITHOLOGY: Silty sand, gray, plane-parallel laminae and possible cross-lamination. Woody fragments. Poorly sorted.</p> <p>SECONDARY LITHOLOGY: Silty clay, greenish gray.</p> <p>Base of secondary lithology is as follows:</p> <p>Section CC: 11 cm</p>

Core Photo

Site 1176 Hole A Core 42X Cored 382.4-392.0 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1								<p>MAJOR LITHOLOGY: Sand, sand-silt-clay, very fine to coarse, greenish-gray, interfingers with silty clay, cross laminated. Sand is angular and poorly sorted. Some wood.</p> <p>SECONDARY LITHOLOGY: Silty clay, greenish gray.</p>

Core Photo





Core Photo

Site 1176 Hole A Core 44X Cored 401.6-411.2 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
402	I							<p>MAJOR LITHOLOGY: Sand, gray green. Coarse to fine sand sizes, planar laminae and minor cross laminae. Fining upward to grayish green, silty clay or clayey sand.</p> <p>SECONDARY LITHOLOGY: Pebbly mudstone. Clast dominantly granule size, up to 0.5 cm. Lithologies of clasts include vein quartz; black, red, and green chert; siliceous mudstone. Matrix-supported. Matrix is sand-silt-clay.</p> <p>Base of secondary lithology is as follows:</p> <p>Section 1: 11 cm</p>



Core Photo

Site 1176 Hole A Core 45X Cored 411.2-420.8 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1								<p>MAJOR LITHOLOGY: Sand, greenish gray. Planar laminae.</p> <p>SECONDARY LITHOLOGY: Gravelly mudstone. Very poorly sorted, clasts up to 1 cm, subrounded to subangular. Clast lithologies include vein quartz, black and green chert, siliceous mudstone, mud chips, and veined clasts. Matrix-supported. Matrix is sand-silt-clay. Crude fining upward.</p> <p>Base of secondary lithology is as follows:</p> <p>Section 1: 45 cm</p>



Core Photo

Site 1176 Hole A Core 46X Cored 420.8-430.3 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1								<p>MAJOR LITHOLOGY: Gravel, very poorly sorted. Clasts are up to 1 cm, sub-rounded to sub-angular. Clast lithologies include vein quartz, black and green chert, shell fragments, and green sandstone. Matrix-supported. Matrix is sand-silt-clay, green.</p>

Core Photo

Site 1176 Hole A Core 47X Cored 430.3-440.0 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
1								<p>MAJOR LITHOLOGY: Pebbly mudstone. Very poorly sorted, clasts up to 1.5 cm, sub-angular. Lithologies of clasts include various-colored quartz, chert, igneous rocks. Matrix supported. Matrix is sand-silt-clay, greenish gray to gray.</p>

Core Photo

Site 1176 Hole A Core 48X Cored 440.0-449.6 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
1								MAJOR LITHOLOGY: Pebbly mudstone. Very poorly sorted, clasts up to 1.5 cm, subangular. Lithologies of clasts include various-colored quartz and chert, feldspar, igneous rocks. Matrix -supported. Matrix is sand-silt-clay, gray to greenish gray to green.

Sample							Texture			Mineral										Biogenic						Rock	Comments	
Hole	Core	CT	Section	Top (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Accessory Minerals	Carbonate	Clay	Feldspar	Glauconite	Opauques	Pyroxene	Quartz	Volcanic Glass	Zeolite	Diatoms	Foraminifers	Nannofossils	Radiolarians	Silicoflagellates	Sponge Spicules	Lithic Fragments		
1176																												
A	1	H	1	107	1.07	M	D	C	C			P	P				C	D				A						Volcanic ash
A	1	H	2	48	1.98	D	C	A	D		P	D					P	P			P	C	P	P	C	P		Silty clay
A	2	H	3	134	11.74	M	A	D	A		R	A	C		P		C		R						R	P		Silty sand
A	3	H	1	92	17.82	M	D	C	C			C	P		P		P	D	P			P						Volcanic ash
A	3	H	4	84	22.24	M	D	C	P				P				C	D			P	P				C		Silty sand / ash
A	4	H	1	58	26.98	M	C	D	C	P	P	C	C				C	C		R	P	C			P	P		Silty sand - dark brown
A	5	H	2	96	38.36	M	D	C	C			C	C		C		D	C		R	R	P						Silty sand
A	5	H	2	124	38.64	D		C	D			A					R	P		P	P	C	C		C			Silty clay
A	5	H	CC	10	42.89	M		D	A			A	P		R		P	A		P	R	R	R		D			Volcanic ash
A	6	H	3	54	48.94	M	D	C	C	R			P		R		P	D				R	R			P		Volcanic ash - light gray
A	6	H	3	65	49.05	M	A	D	A				P				P	D		R		P				P		Volcanic ash
A	6	H	4	105	50.95	D		A	D			A	P				P	P		C	R	C	R		P	R		Silty clay
A	7	H	2	80	57.2	D		A	D			A	P				P	P		C		A	R		P			Silty clay
A	7	H	2	134	57.74	M	A	A	A	P		A					P	C		P	C	C	R		P			Sand-silt-clay
A	7	H	3	8	57.98	M	D	A	A				P				P	D		P		C						Volcanic ash - brown
A	8	H	1	80	65.2	D		A	D			D	P				P	P		P	P	C	R	R	P			Silty clay
A	9	H	5	70	80.6	D		A	D			D	P				P	P		P	P	A	R	R	P			Silty clay
A	9	H	5	38	80.28	M	A	D	C				P				P	D		R		P						Volcanic ash - white
A	10	H	3	107	87.47	D	P	A	D			A	P				P			P	P	A	R		P	P		Silty clay
A	10	H	3	80	87.2	M	A	A	D	P		A	C				C			P	C	A			P			Sand-silt-clay
A	10	H	4	70	88.6	M	D	A	A	P			P				P	D		R		P						Volcanic ash - pale gray
A	11	H	3	80	96.7	D		A	D			A					P	P		P	P	A	R	R	P			Silty clay
A	12	H	1	126	103.66	M	A	D	C			C					D			P	R	C			P			Volcanic ash - light gray
A	12	H	4	4	106.01	D		A	D			D					R	P		C	R	A	R	P	P			Silty clay
A	13	H	2	79	114.19	D	P	C	D		P	A					P	P		P		A			P	P		Silty clay
A	13	H	3	14	114.92	M	D	C	C		P	A					P	P		P		A			P	P		Volcanic ash
A	14	H	1	81	122.21	D	C	C	D			P	C	P		R		P	C	R	*	D	R	*	P			Silty clay
A	14	H	3	100	125.4	D	C	C	D			C	P				P	P		P	R	D			C			Silty clay
A	15	H	4	120	136.6	D		C	D			A	C	R			C	C		*	*	D		R	P			Silty clay
A	16	H	3	100	144.4	D	P	C	D			A	P	R	P		C	C	R	R	R	D	*			P		Silty clay
A	17	H	3	53	153.43	M	D	C	C			P	C		P		C	A				P				C		Volcanic ash (pink)
A	17	H	3	88	153.78	M	D	C	A		P	C	P				P	A			R	C				P		Volcanic ash (greenish gray)
A	17	H	4	12	154.52	M	A	A	A			C	P		C		C	C		C		C				C		Silty sand
A	18	H	1	75	160.15	M	A	A	A	A		A			C		C	D				P						Volcanic ash
A	18	H	2	75	161.52	M	D	A					P		C		P	D								C		Volcanic ash
A	19	H	2	47	164.37	M	D	A	C				P		R		P	D	P	R	R	P				R		Volcanic ash
A	19	H	5	80	169.2	D		A	D			D	P				P	P		P	P	A	R		P			Silty clay
A	20	X	2	20	172.3	M	A	D	C				P		R		P	D										Volcanic ash - white-light gray
A	21	X	2	50	182.2	M	D	A	C	P			P				P	D				R			R			Volcanic ash - salt and pepper
A	21	X	3	80	184	D		A	D			D	P				P	P		P	P	C			P			Silty clay
A	22	X	2	79	192.19	D		A	D			A	P				C	C		C		C	C		C			Silty claystone
A	22	X	4	22	194.62	M	C	A	D	P		A	P				C		C	R	A				C			Sand-silt-clay
A	23	X	3	70	203.2	D		A	D	P		D	P				P	P		P	R	A	R		P			Silty claystone
A	24	X	4	75	214.35	D	C	A	D			D	P				P	C		P	R	C	R					Silty clay
A	25	X	2	75	220.95	D		A	D			D					P	P	R			C			P	R		Silty clay
A	25	X	4	101	224.21	M	A	A	A			A	P				P	C			C	C				C		Sand-silt-clay
A	25	X	CC	18	224.6	M	D	C		P			C				A	A				P				P		Sand
A	26	X	2	80	230.6	M	A	A	A			A	P				C	A		R	P	C				R		Sand-silt-clay
A	27	X	1	58	238.48	M	C	D	C			A	P				P	D										Volcanic Ash

Sample					Texture			Mineral										Biogenic						Rock	Comments				
Hole	Core	CT	Section	Top (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Accessory Minerals	Carbonate	Clay	Feldspar	Glauconite	Opalines	Pyroxene	Quartz	Volcanic Glass	Zeolite	Diatoms	Foraminifers	Nannofossils	Radiolarians	Silicoflagellates		Sponge Spicules	Lithic Fragments		
1176																													
A	27	X	3	110	242	D	A	A	C			C	C		P		D	P											Sand-silt-clay
A	28	X	CC	21	248.91	M	D	A				C			P	P	A	P									A	Sandy silt	
A	29	X	CC	29	257.39	D	D	A	A			C			P	P	A	P									A	Sand-silt-clay	
A	30	X	CC	30	267	D	D	A				P			P	P	A	P									A	Silty sand	
A	31	X	CC	16	276.56	M	A	D	C			C		P	C		A	P									A	Silty sand	
A	33	X	CC	25	296.74	D	D	A	C			C			C		D										A	Silty sand	
A	35	X	CC	12	315.45	M	A	A	A			C			P		A	P									A	Sand-silt-clay	
A	36	X	2	10	325.03	M	A	A	A	P		A	C	R	P		P										C	Silty sand	
A	37	X	2	25	334.96	M	A	A	A	*	*	C	A		P		C										P	Silty sand	
A	39	X	CC	41	354.49	M	C	A	D			A	C				C	A				*						Silty clay - rich in volcanic glass	
A	40	X	2	36	364.11	M	A	A	D	R		D	P		R		C					P			P			Silty sand	
A	43	X	2	80	394.3	M	C	A	D			D	C				A					P						Silty claystone	
A	43	X	2	59	394.09	M		C	D		A	A					R					R						Carbonate-cemented claystone	
A	43	X	CC	46	396.58	D	D	A	C	P		C	A				D					R				A		Sand	
A	44	X	CC	15	402.54	D	D	A	A			A					A				R	P				A		Clayey sand	