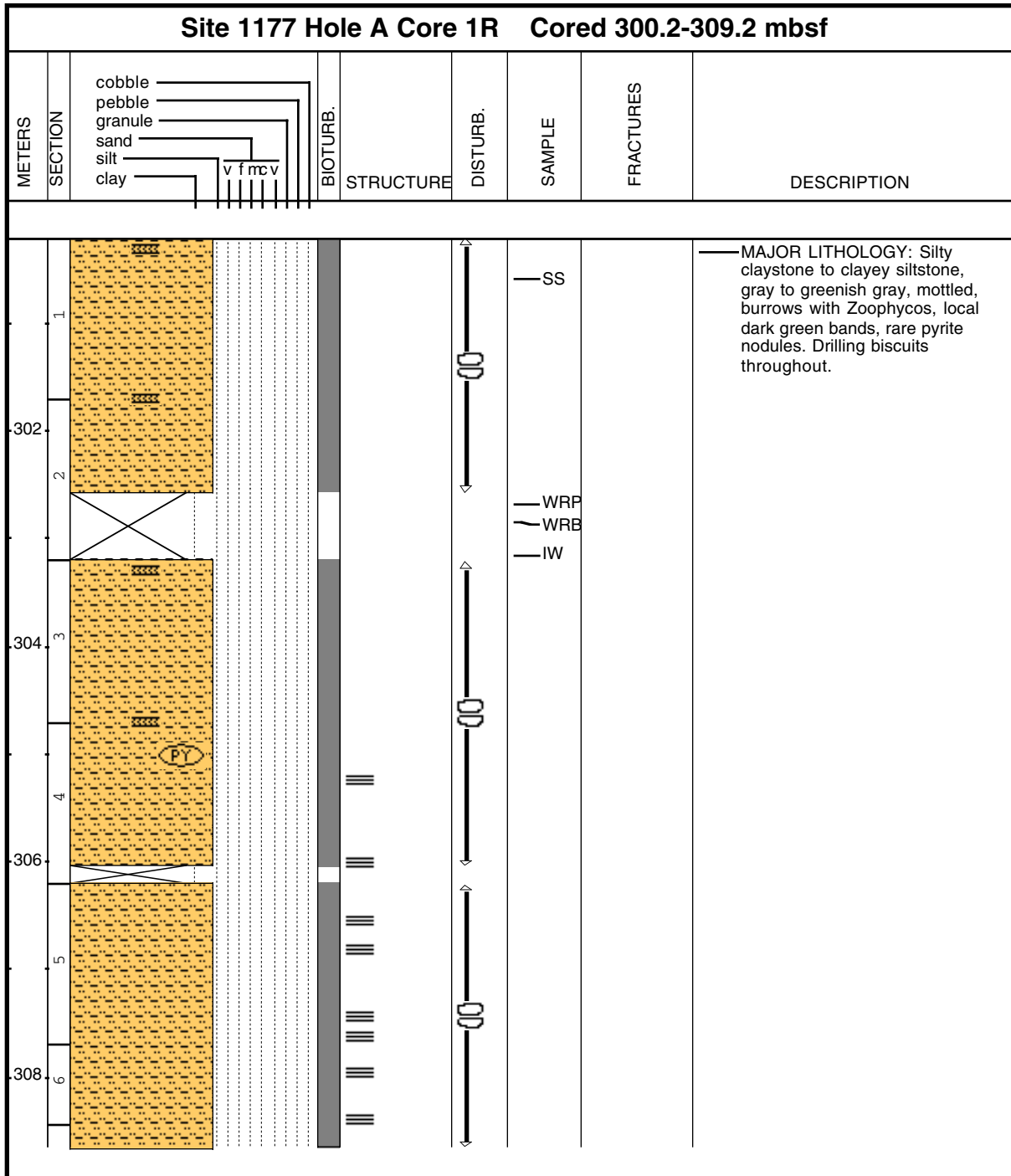
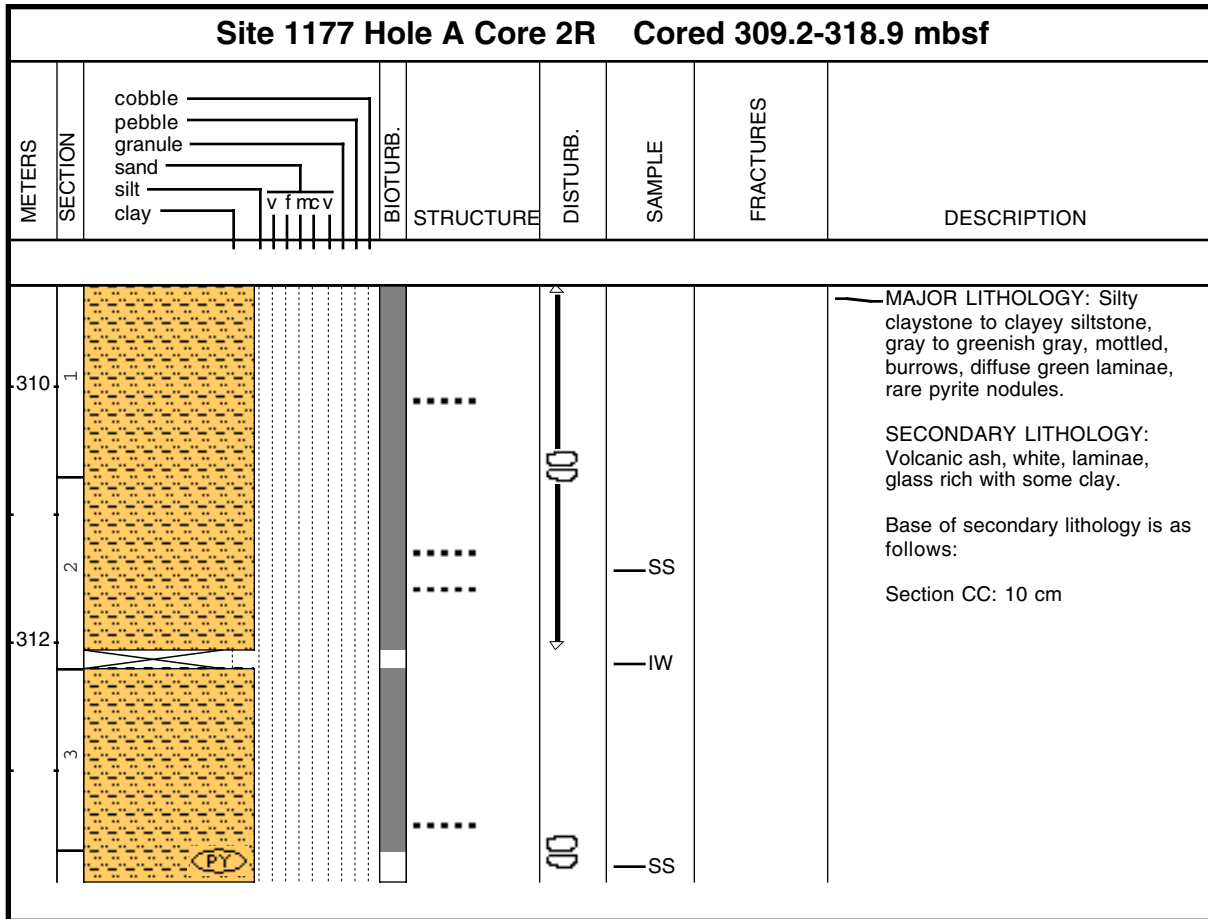


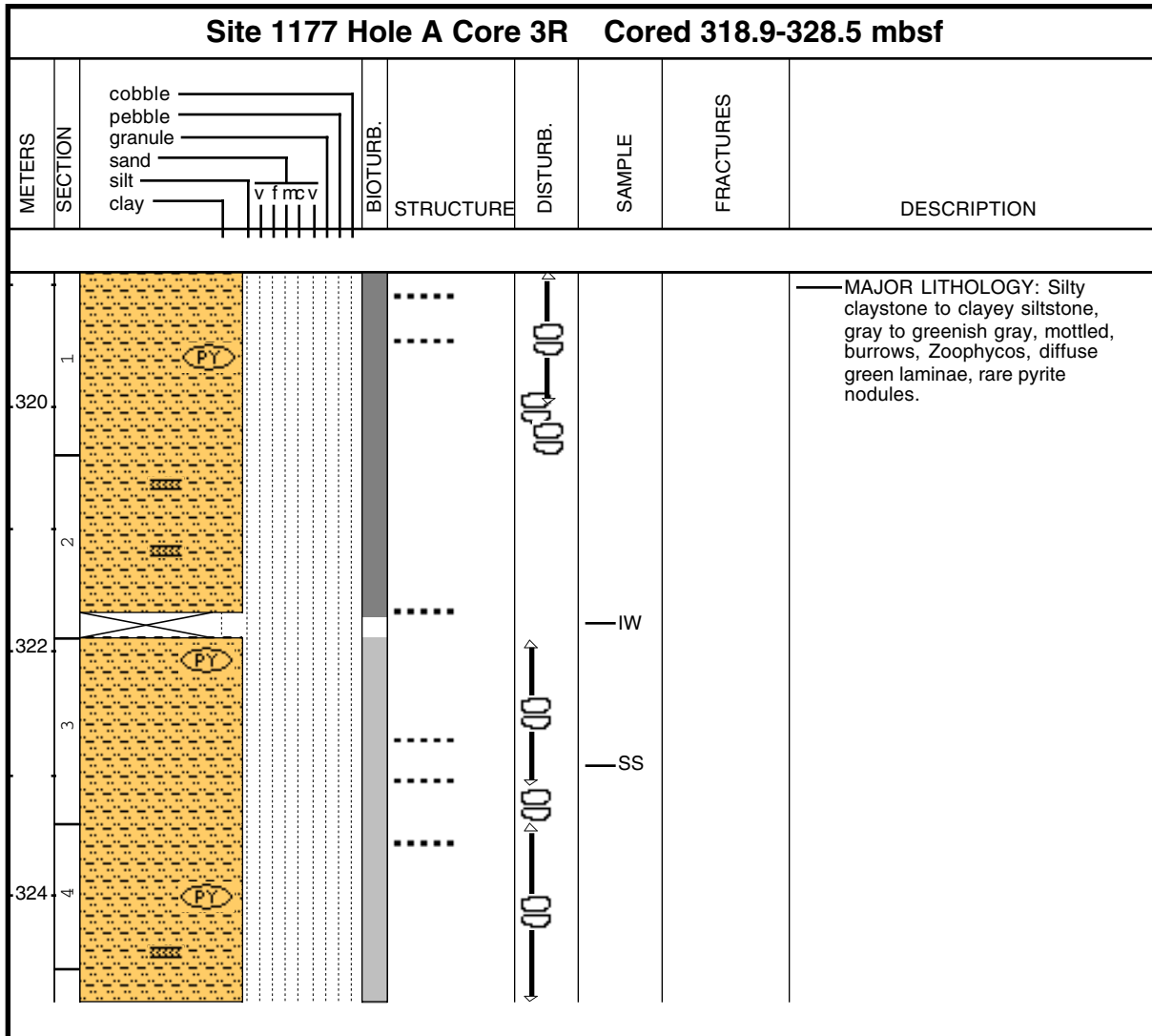
Core Photo



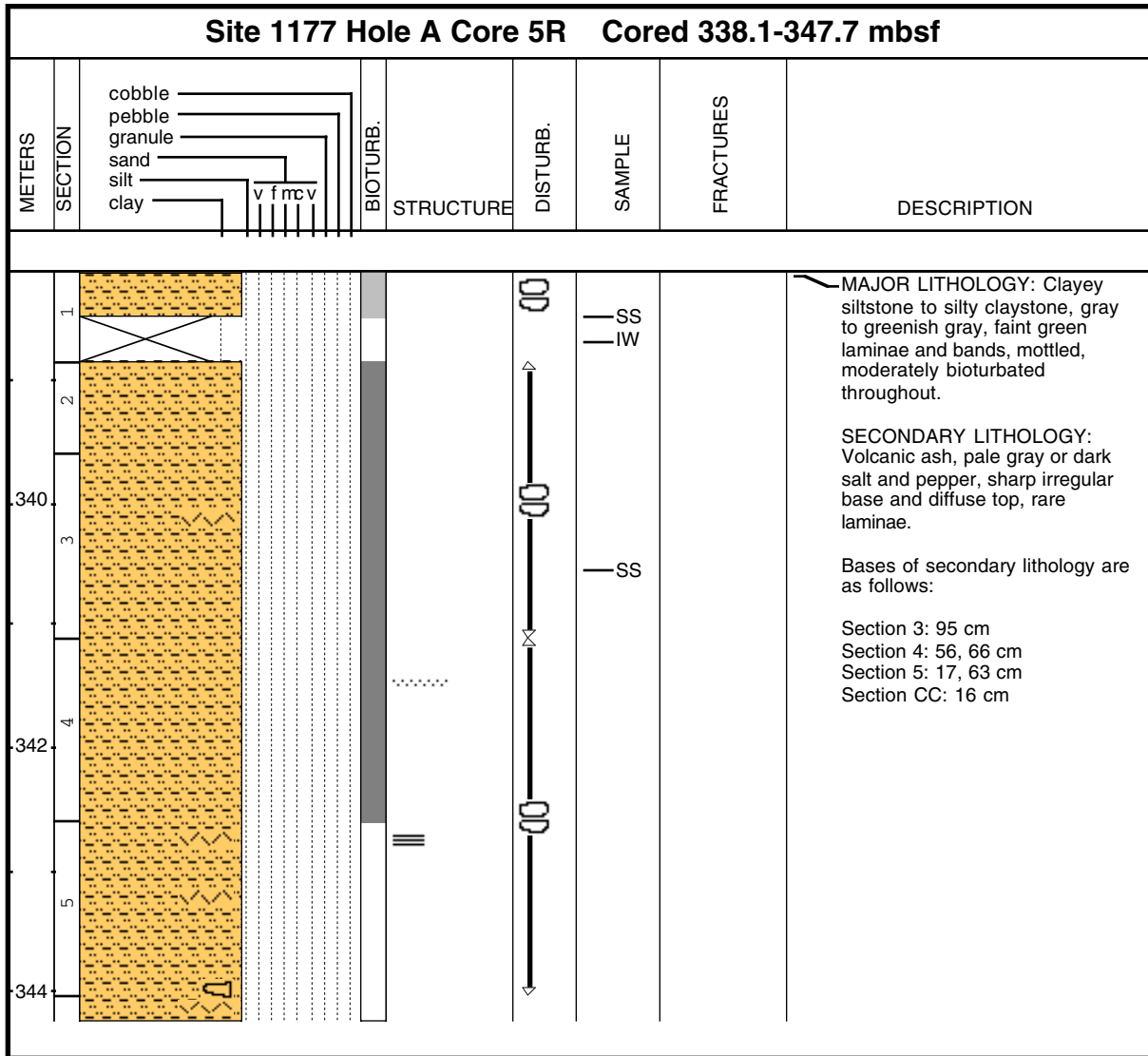
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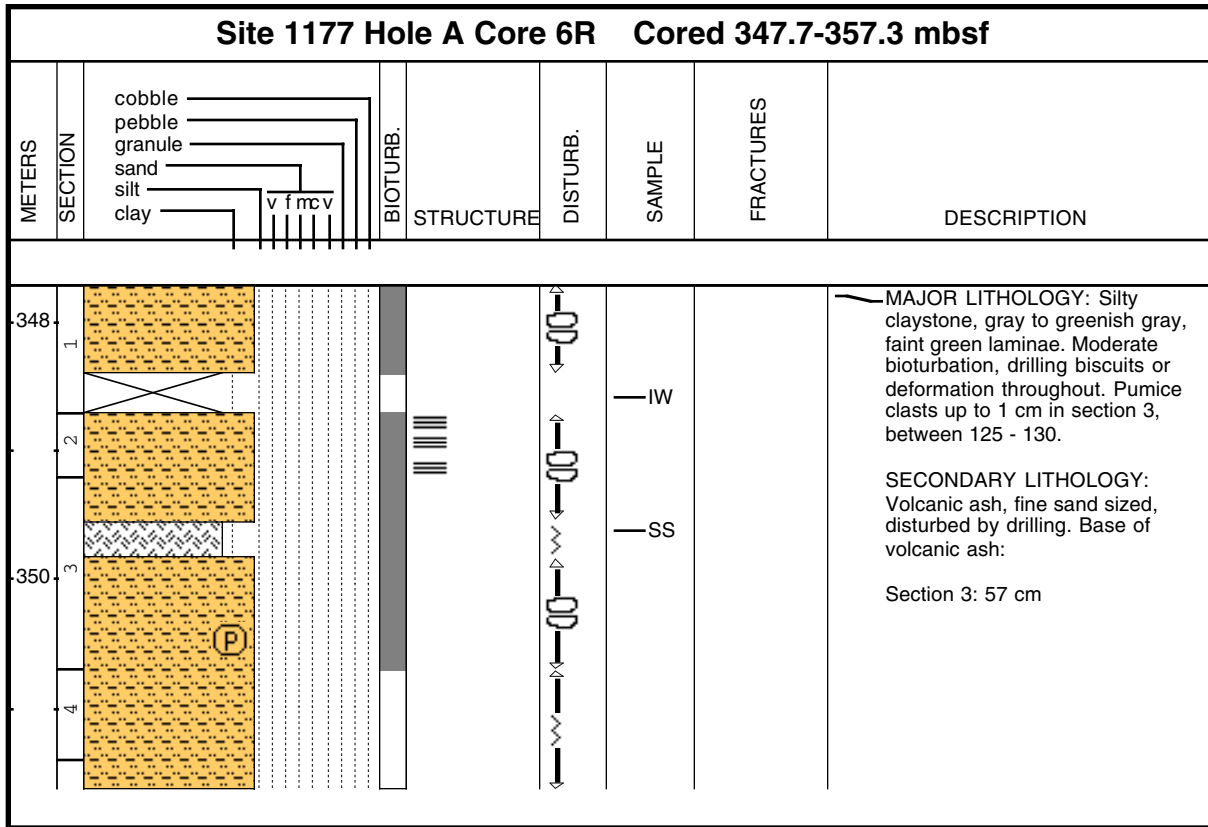
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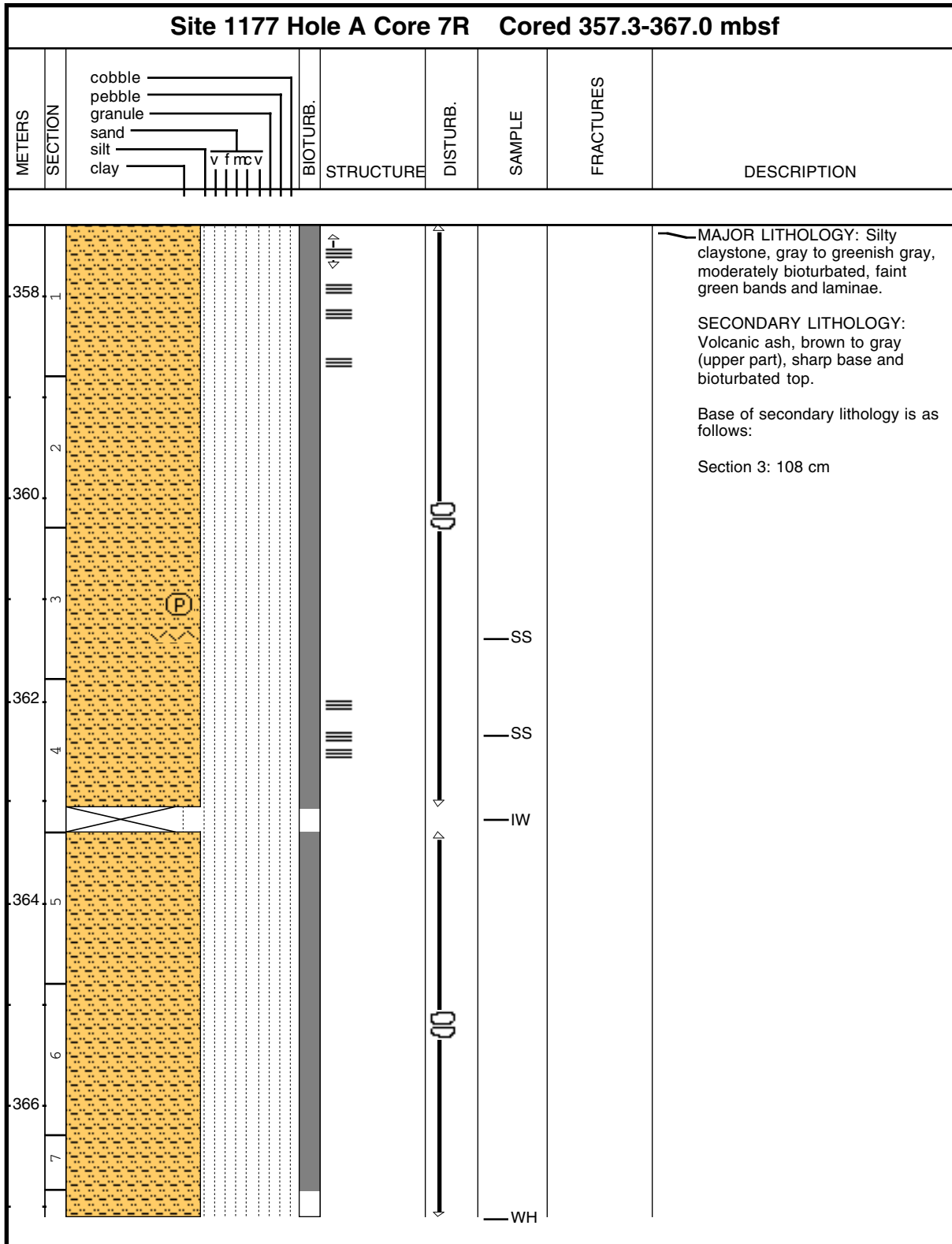
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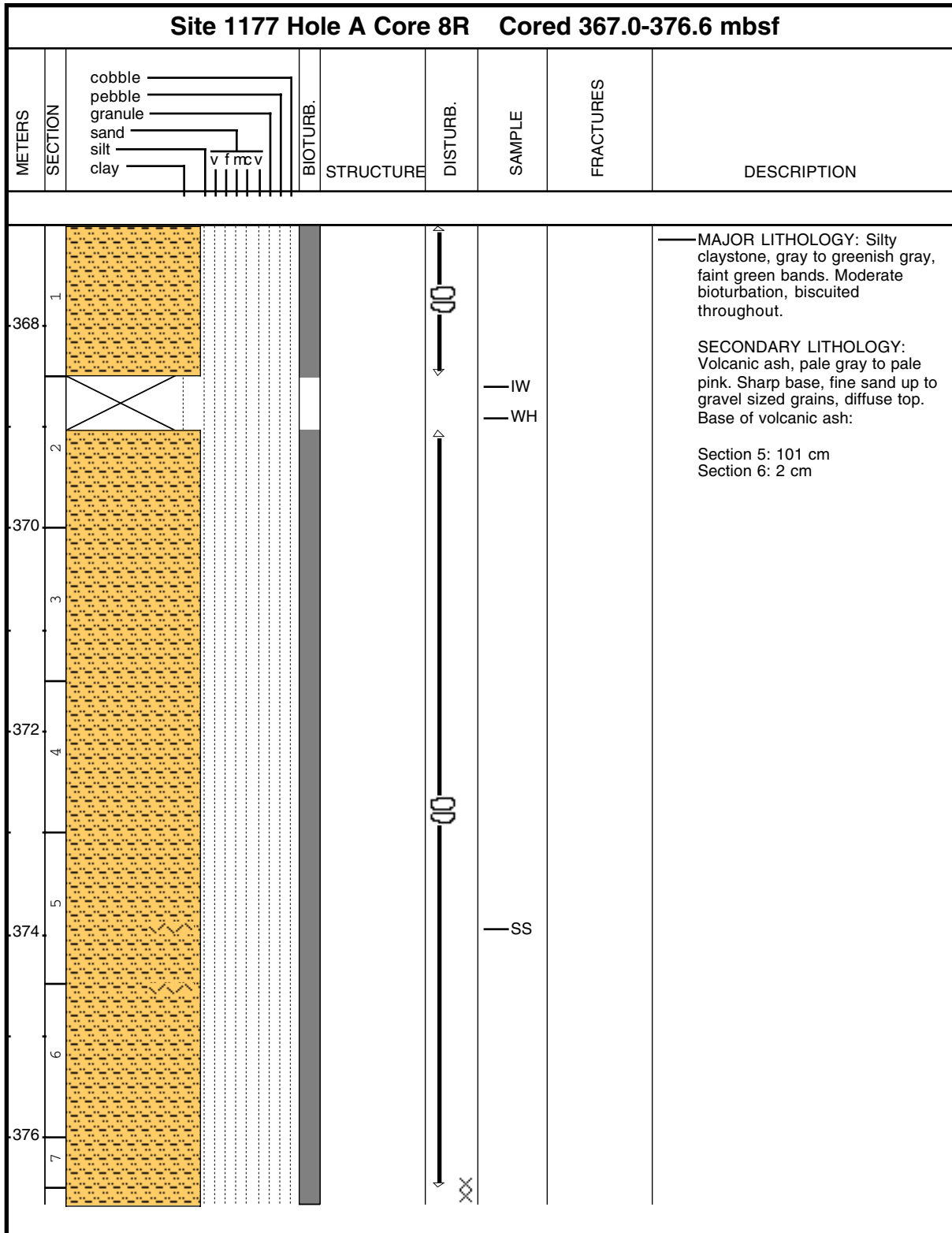
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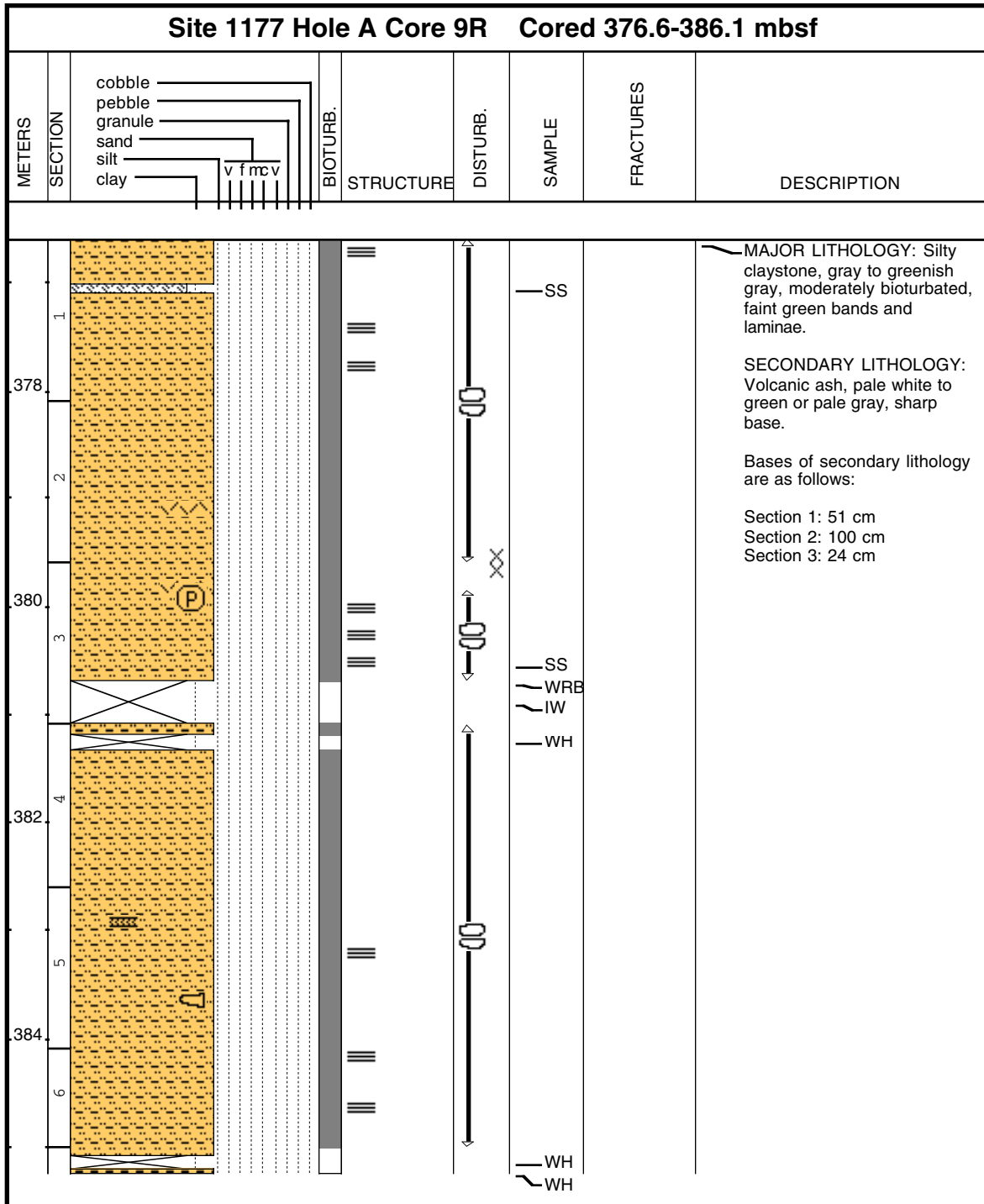
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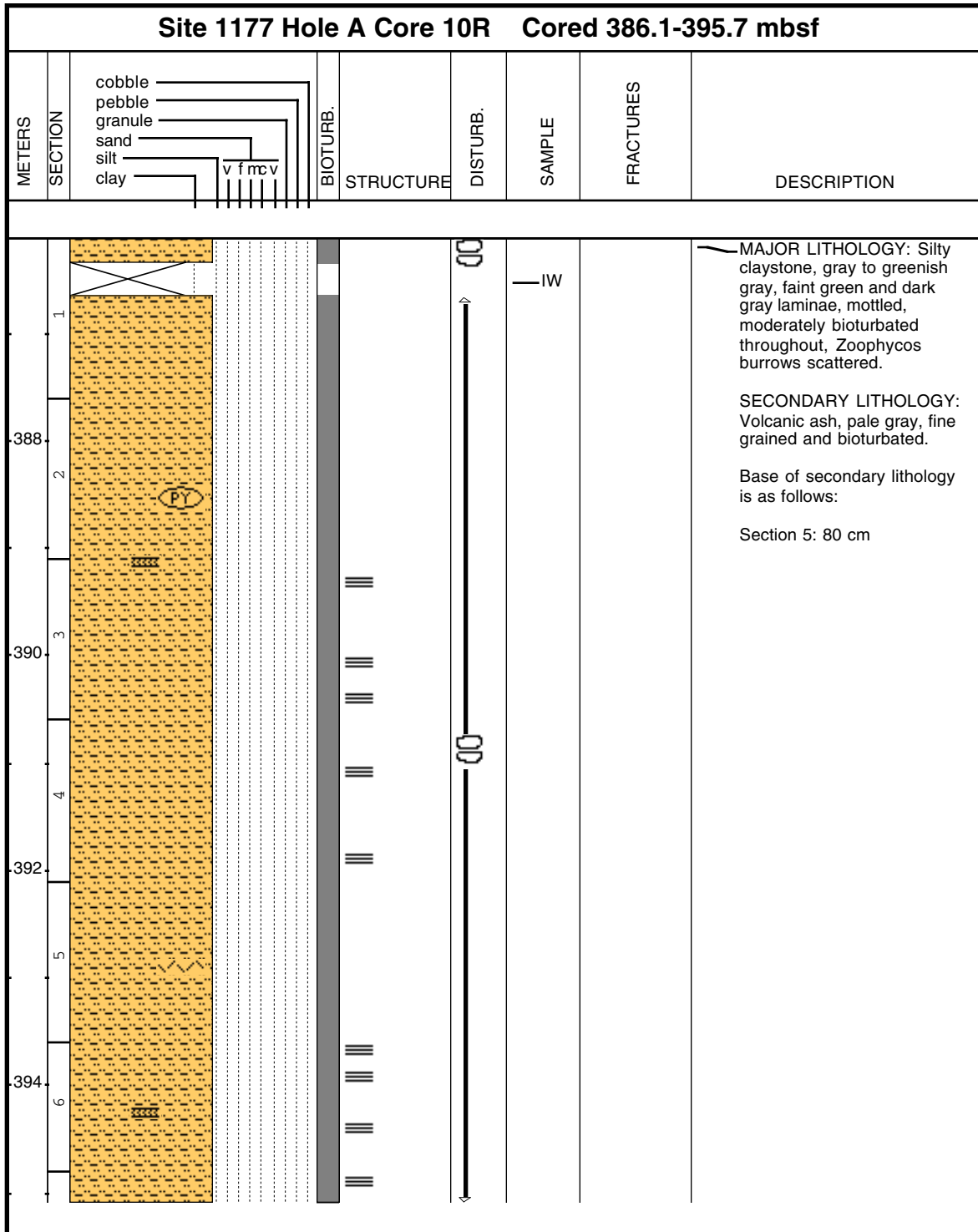
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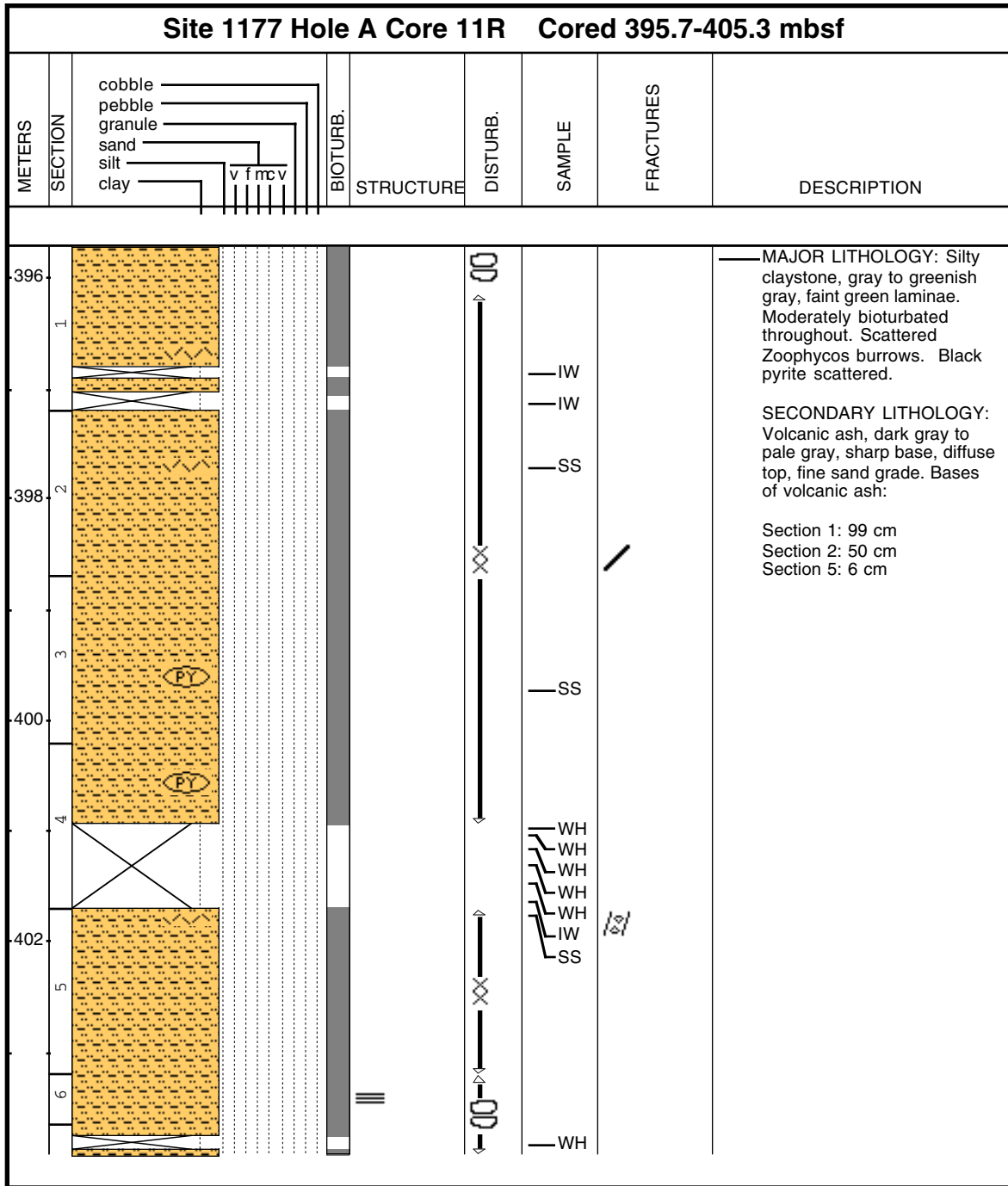
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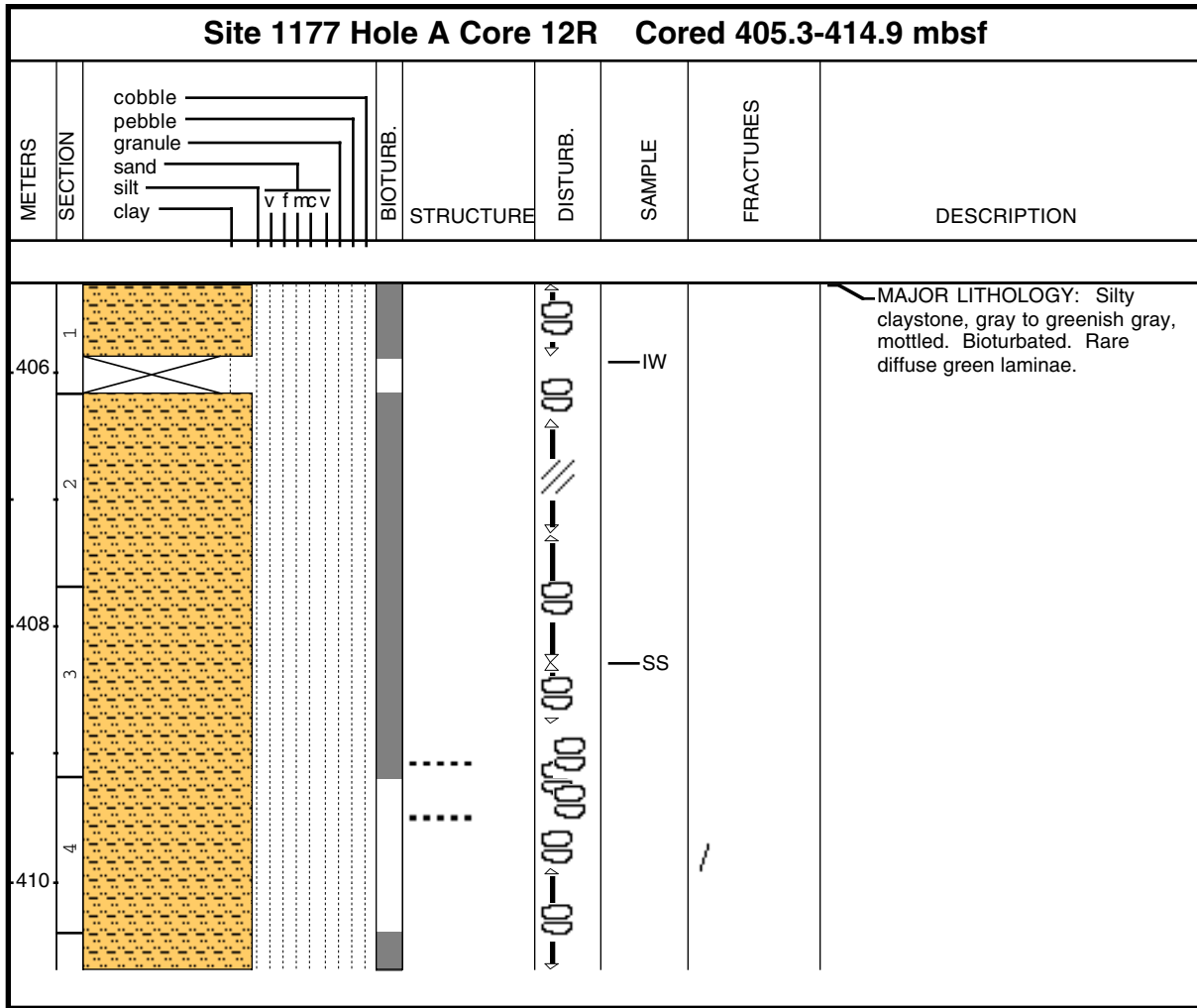
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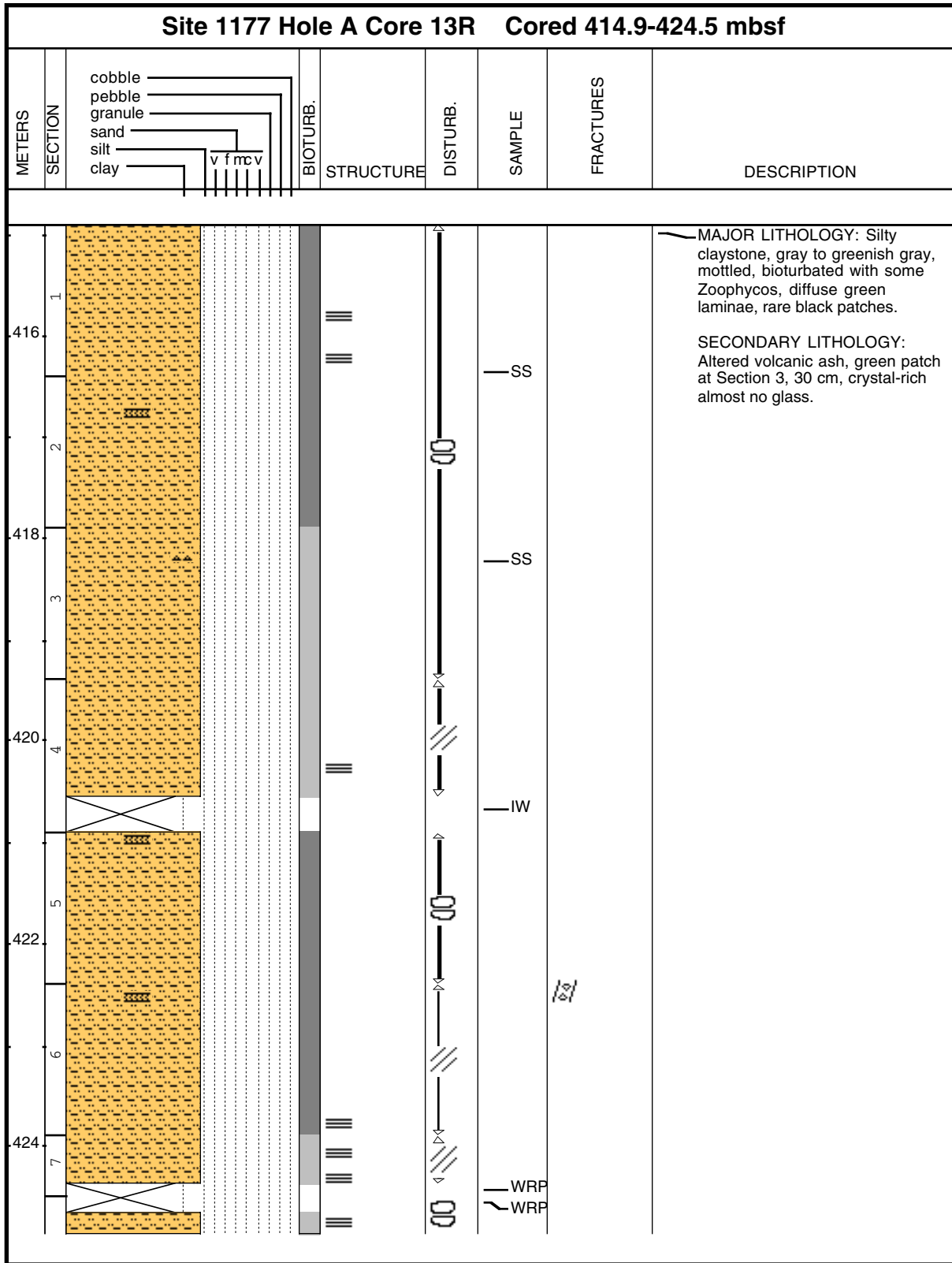
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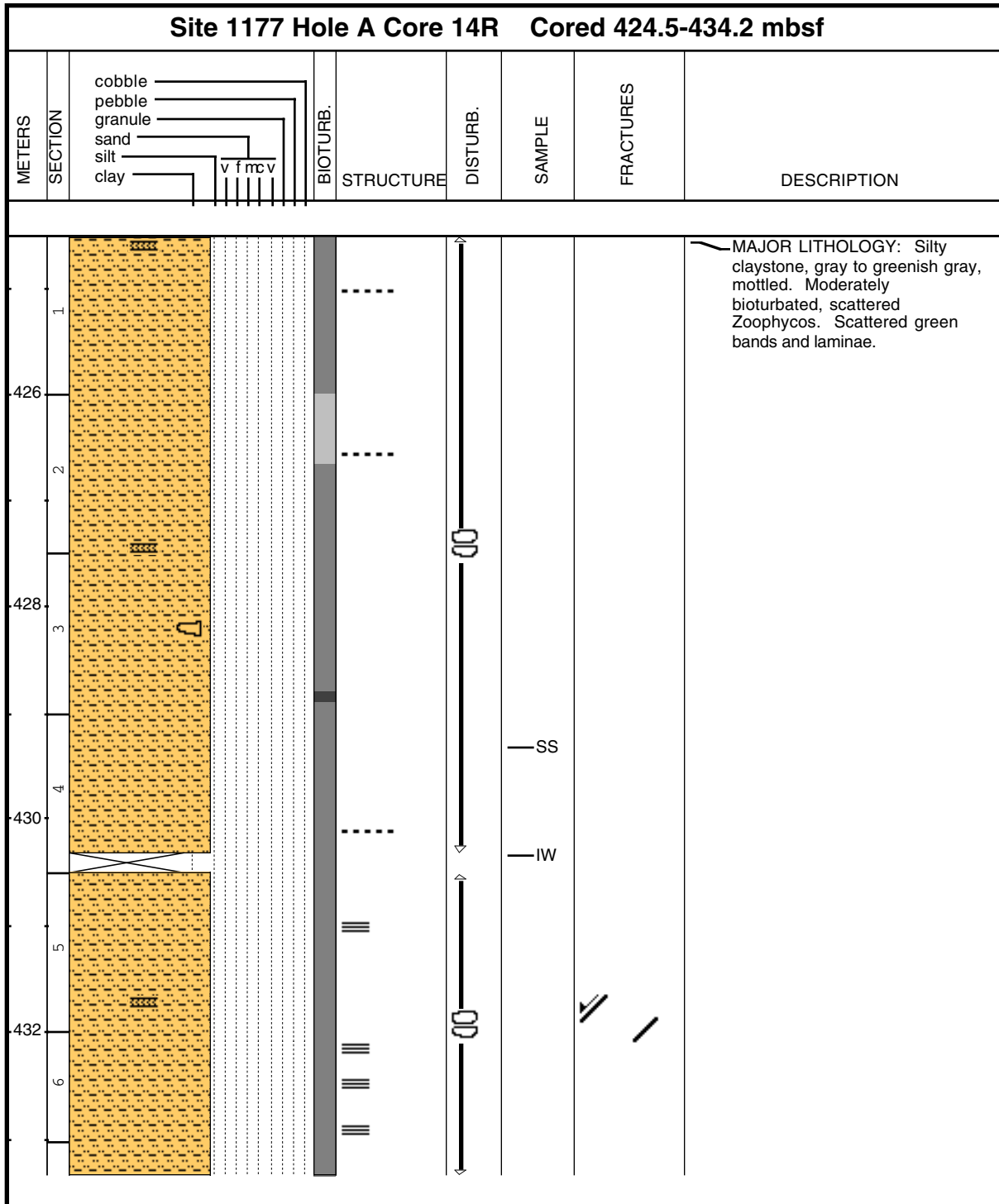
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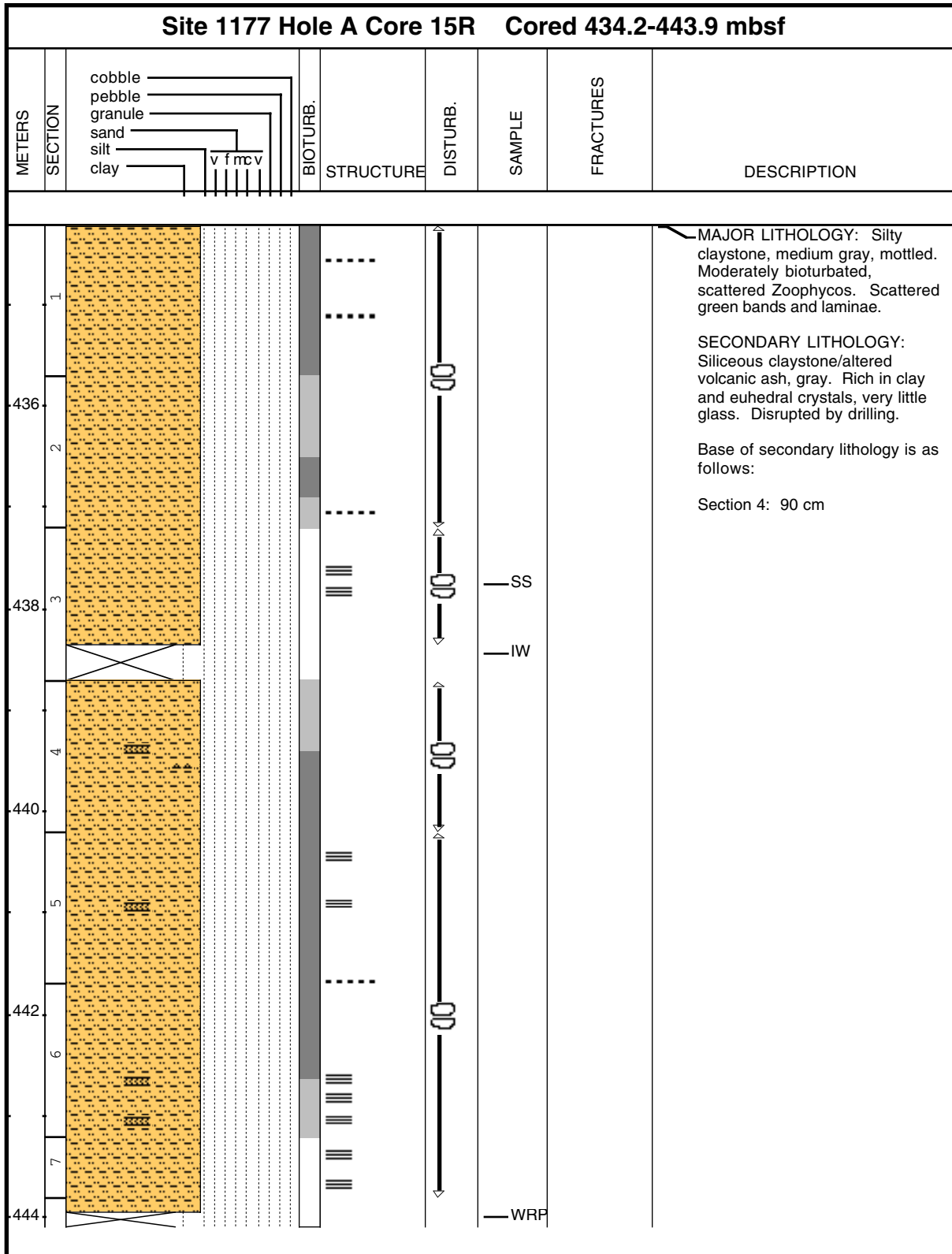
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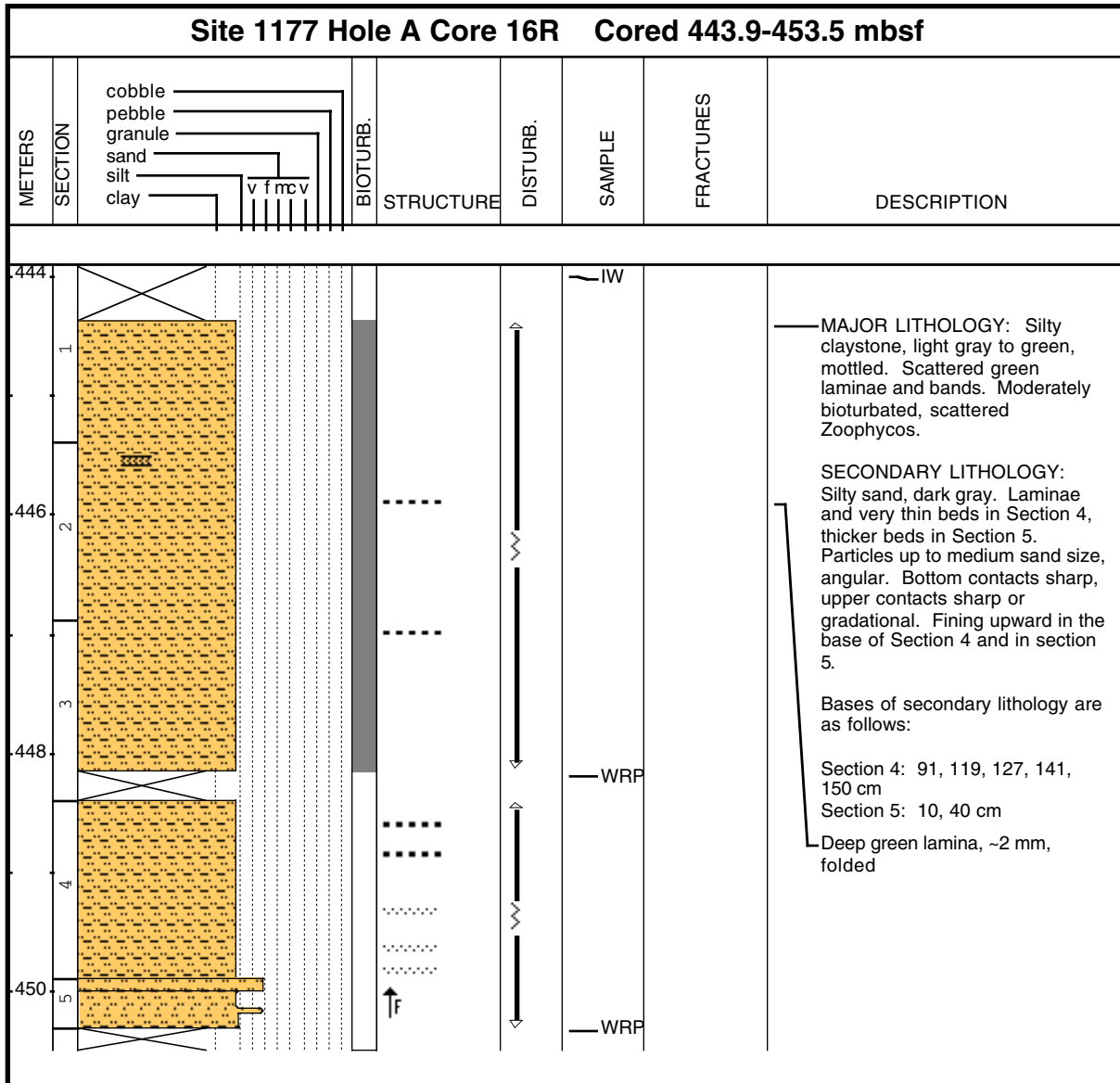
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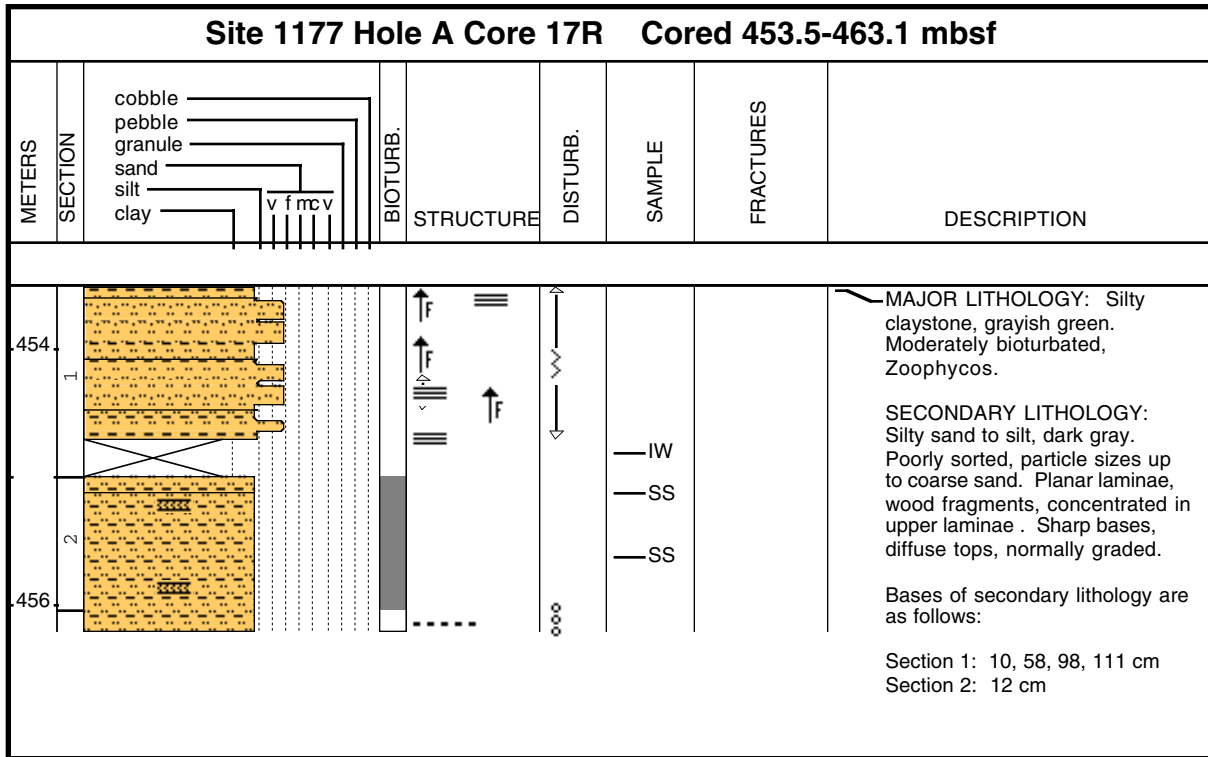
Core Photo



Core Photo



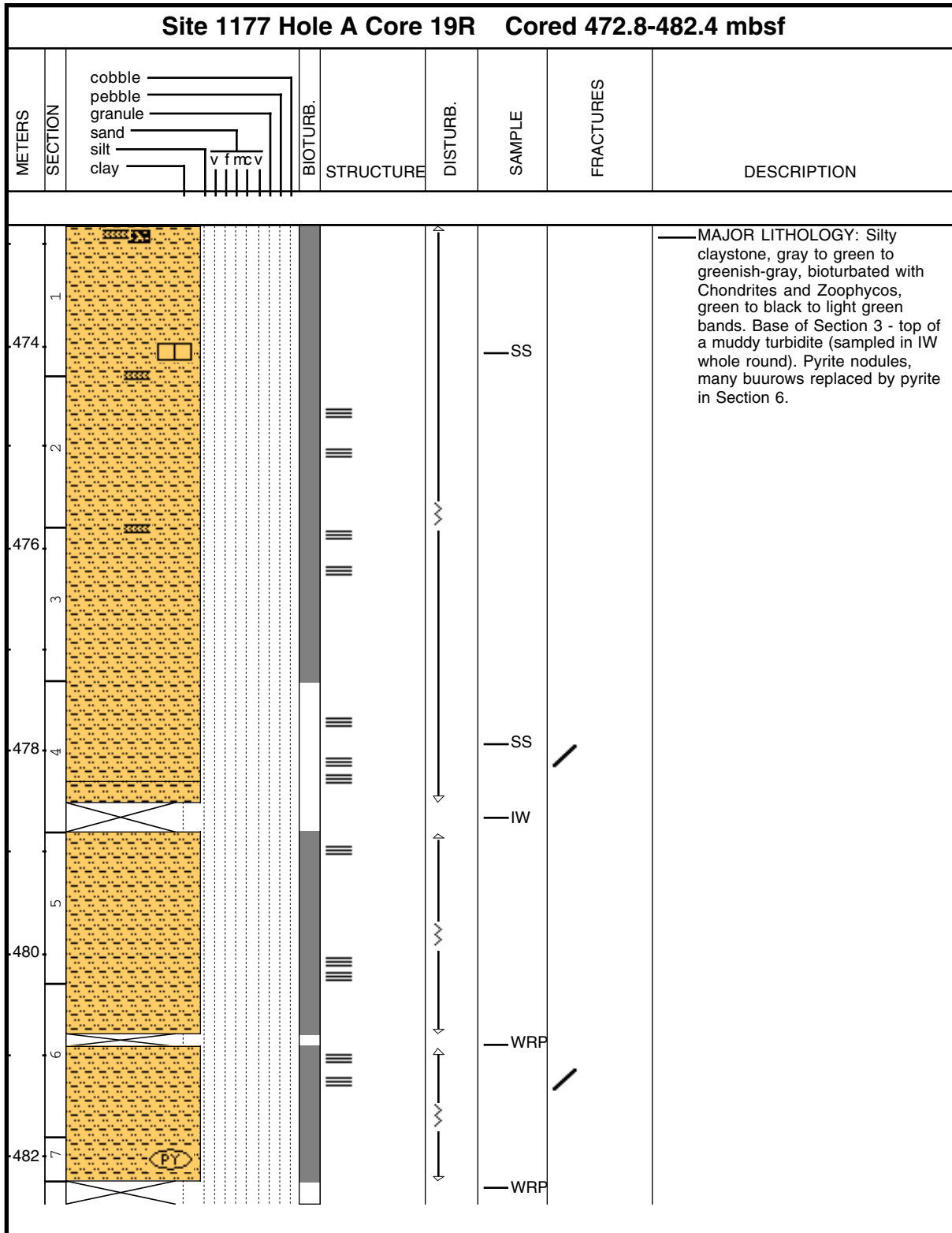
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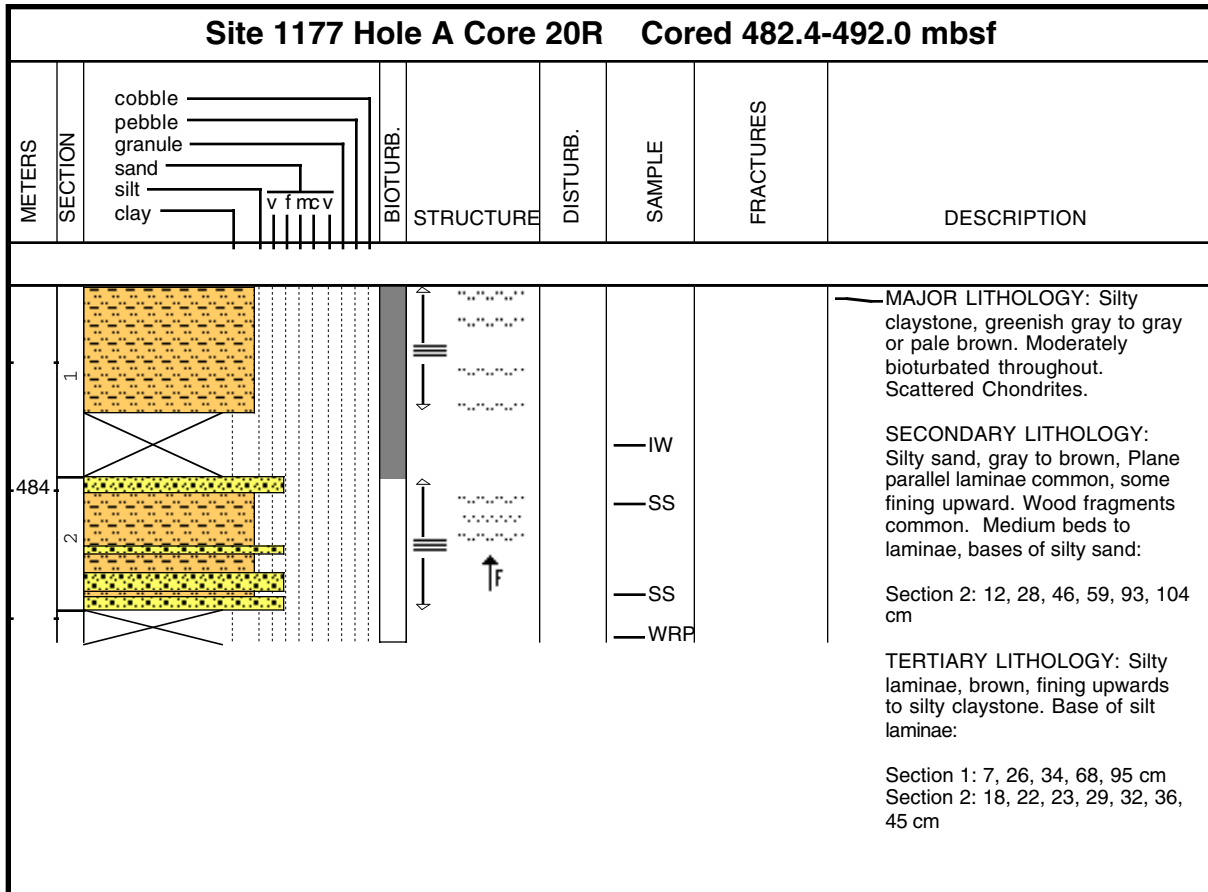
Core Photo

Site 1177 Hole A Core 18R Cored 463.1-472.8 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
464	1					SS		<p>MAJOR LITHOLOGY: Silty sand to sandy silt, dark gray, wood particles (especially at the tops of layers), sharp bases, diffuse tops, graded.</p> <p>SECONDARY LITHOLOGY: Silty claystone, grayish green.</p> <p>Bases of secondary lithology are as follows:</p> <p>Section 1: 28, 48 cm</p>

Core Photo



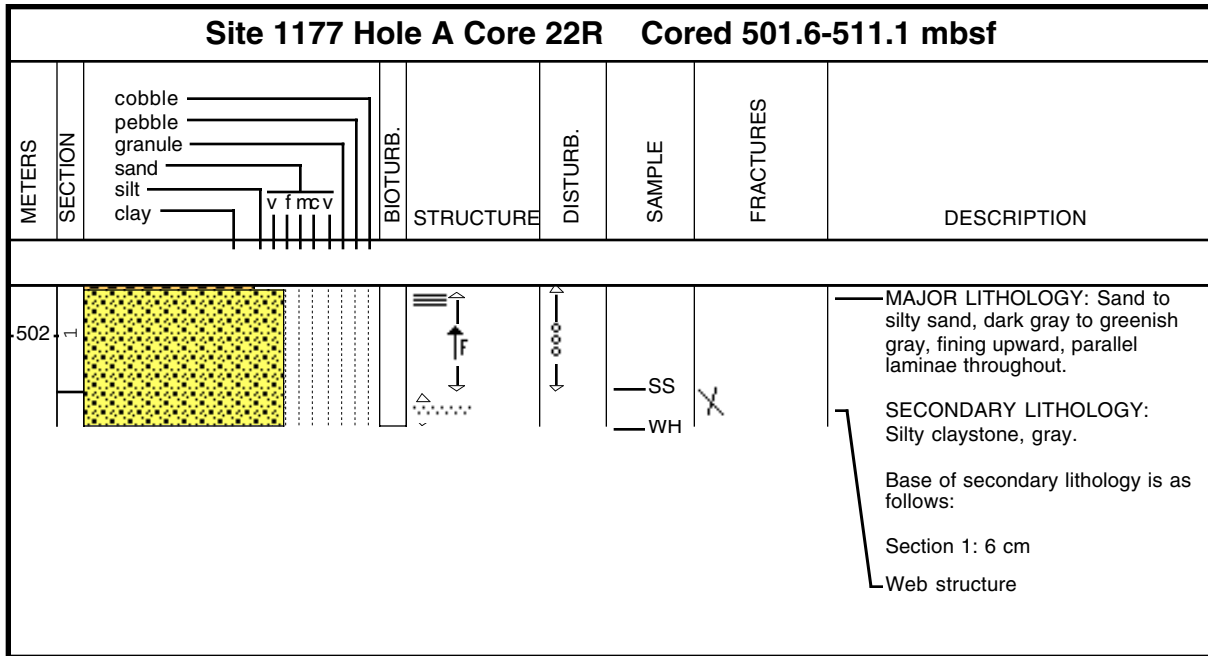
Core Photo



Core Photo

Site 1177 Hole A Core 21R Cored 492.0-501.6 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
	1					—SS		<p>MAJOR LITHOLOGY: Silty claystone, gray to greenish gray, some bioturbation.</p> <p>SECONDARY LITHOLOGY: Silty sand, to sandy silt, gray, laminated, some fining upwards to silty claystone, plane-parallel lamination common, cross lamination. Woody fragments common. Base of silty sand.</p> <p>Section 1: 4, 20, 34, 70 cm</p>

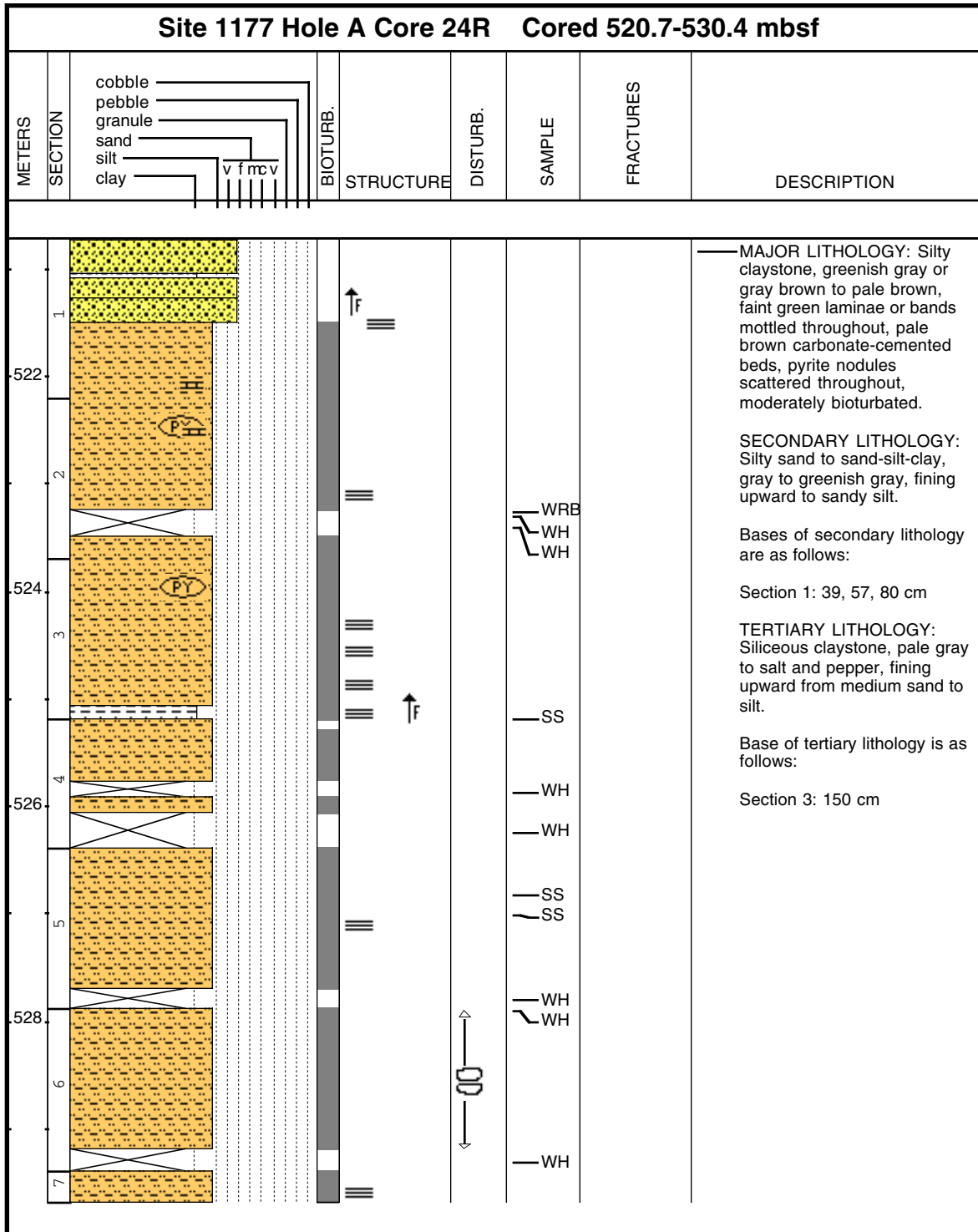
Core Photo



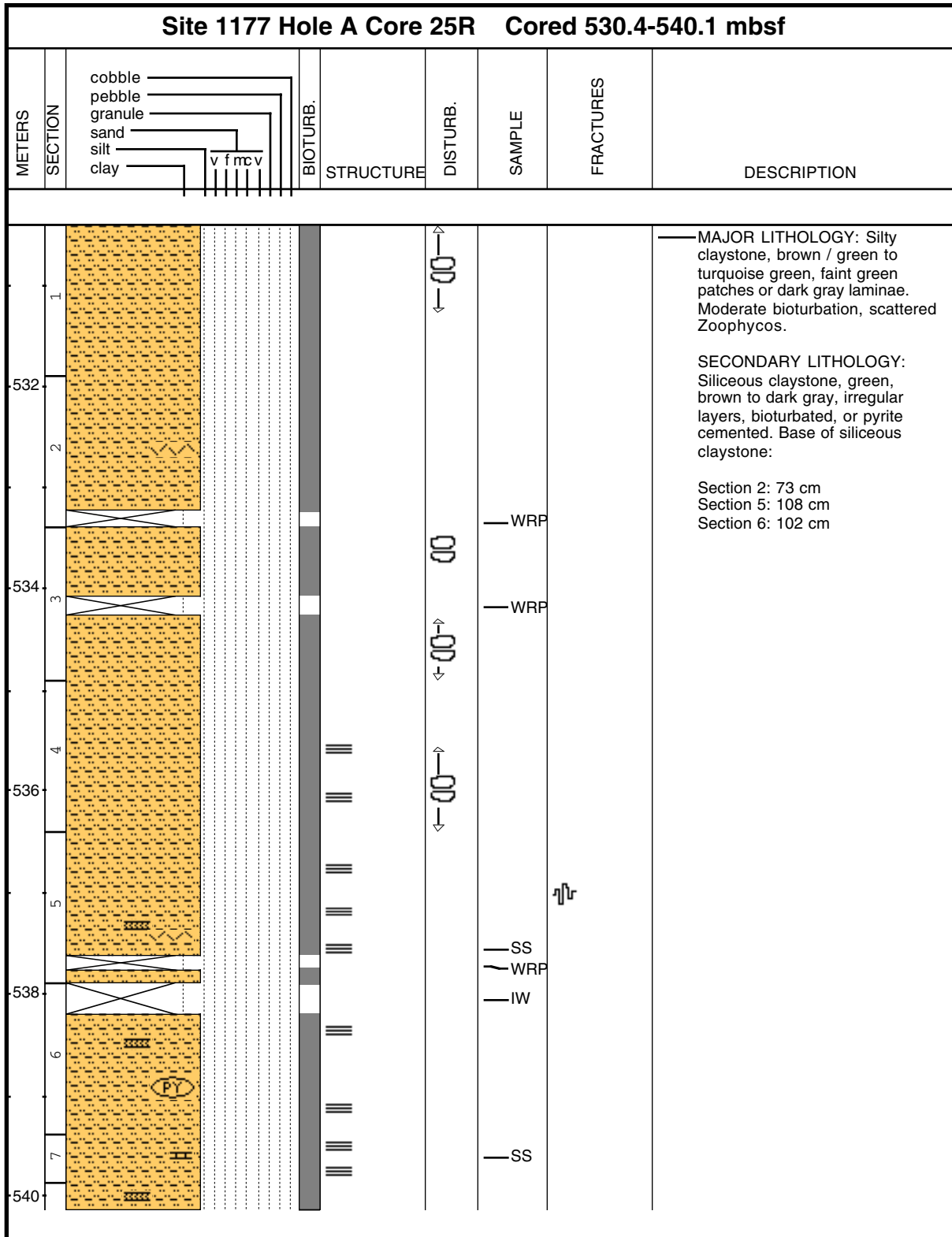
Core Photo

Site 1177 Hole A Core 23R Cored 511.1-520.7 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay	v f mc v					
512	1							<p>MAJOR LITHOLOGY: Silty sand, interbedded silty claystone, gray to greenish gray, some fining upward, plane parallel lamination common, moderately bioturbated throughout.</p> <p>Bases of finer beds are as follows:</p> <p>Section 1: 9, 48, 52, 54, 64, 69, 78, 88, 91, 93, 100, 127, 130, 141 cm</p> <p>Section 2: 44 cm</p>
	2							

Core Photo



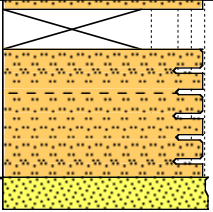
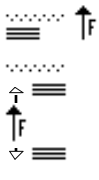
Core Photo



Core Photo

Site 1177 Hole A Core 26R Cored 540.1-549.7 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
	cobble pebble granule sand silt clay							
1						—SS —WRP —IW		<p>MAJOR LITHOLOGY: Silty sand, greenish gray to gray, plane parallel laminated in parts, poorly sorted, abundant wood fragments.</p> <p>SECONDARY LITHOLOGY: Sand, dark gray, fining upward, contains pebbles of sandstone. Base of sandstone:</p> <p>Section 1: 82 cm</p> <p>TERTIARY LITHOLOGY: Sand-silt-claystone, greenish gray. Base of sand-silt-claystone:</p> <p>Section 1: 10 cm</p>

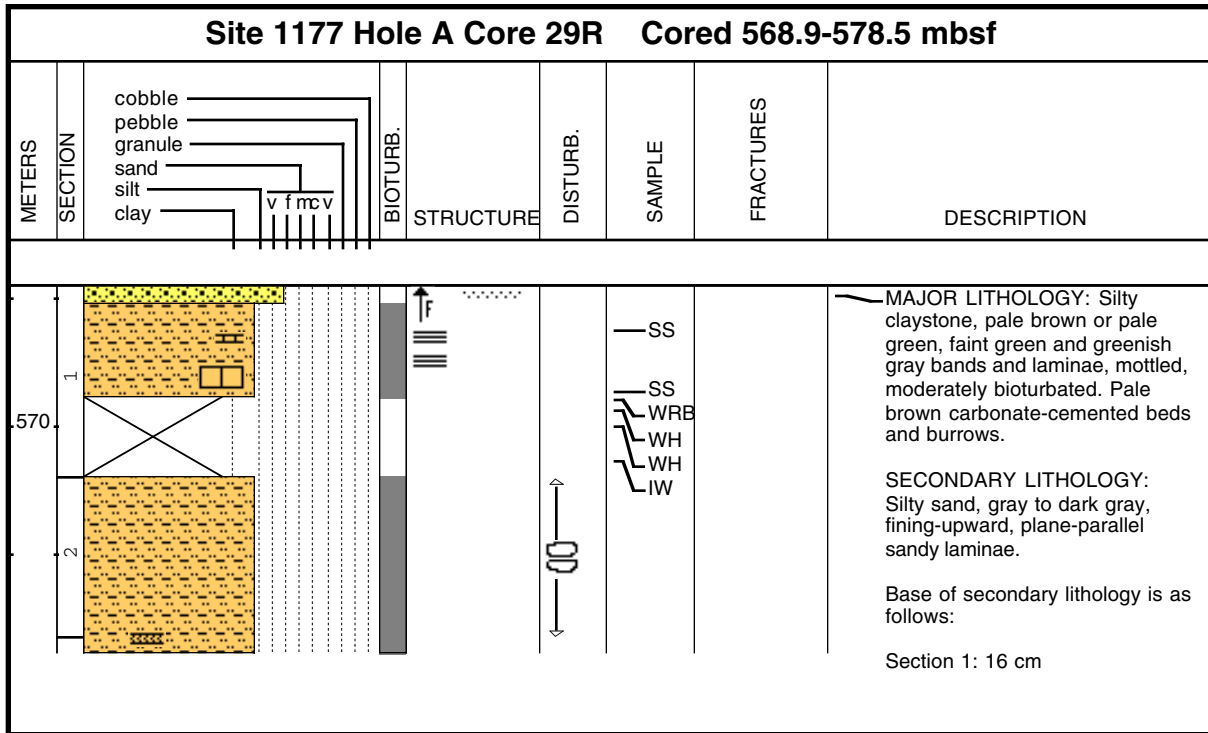
Core Photo

Site 1177 Hole A Core 27R Cored 549.7-559.4 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
550	I							<p>MAJOR LITHOLOGY: Sand to silt, interbedded gray to greenish gray silty claystone, coarse sand to silt, fining upward, cross laminae, plant material common.</p> <p>Bases of finer beds are as follows:</p> <p>Section 1: 10, 47, 50, 91, 96, 100 cm Section CC: 18, 27 cm</p>
						SS		
						WH		

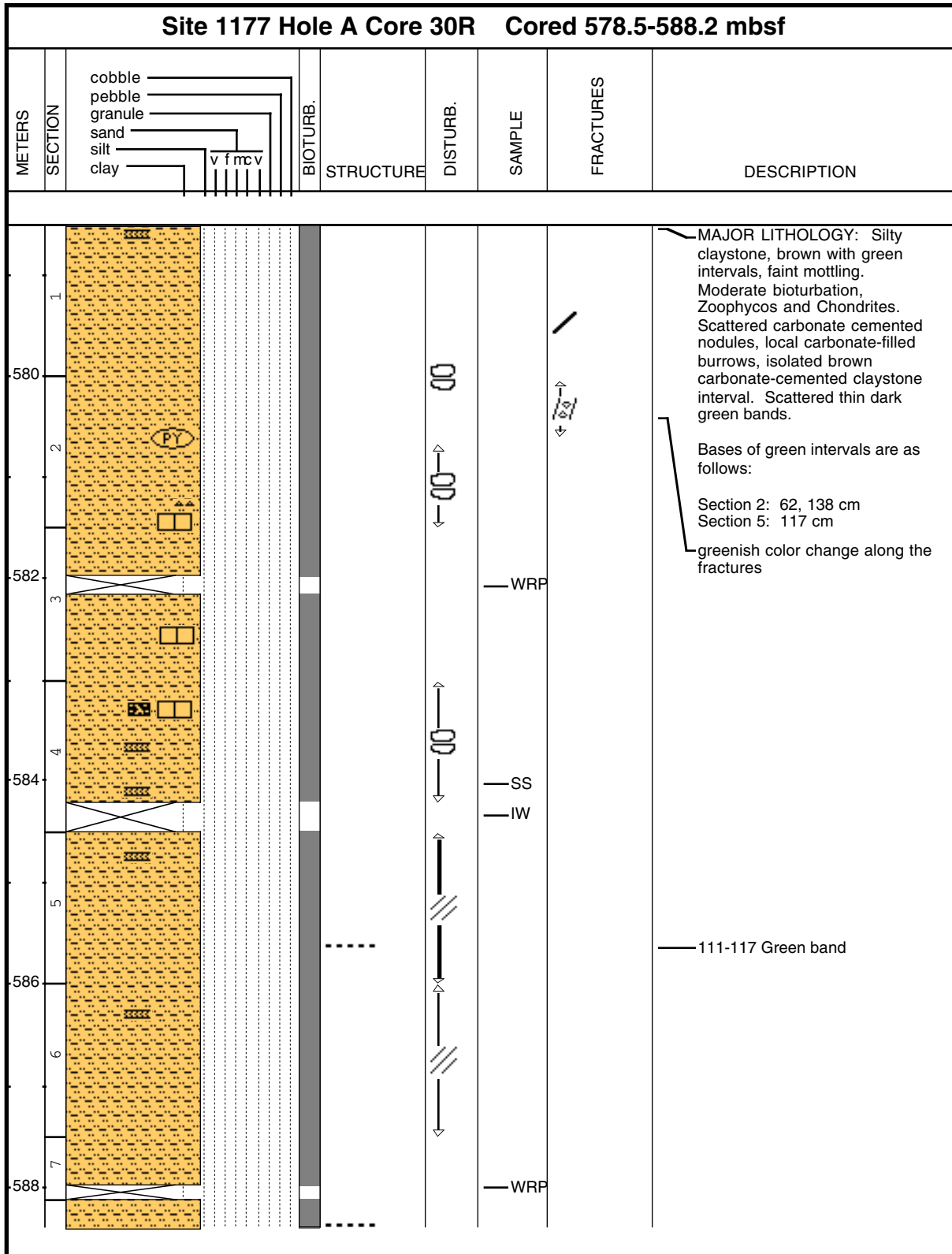
Core Photo

Site 1177 Hole A Core 28R Cored 559.4-568.9 mbsf								
METERS	SECTION	cobble pebble granule sand silt clay	BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
								<p>MAJOR LITHOLOGY: Silty sand, gray to dark gray, medium sand grains scattered throughout.</p> <p>SECONDARY LITHOLOGY: Silty claystone, greenish gray.</p> <p>Base of secondary lithology is as follows:</p> <p>Section CC: 3 cm</p>

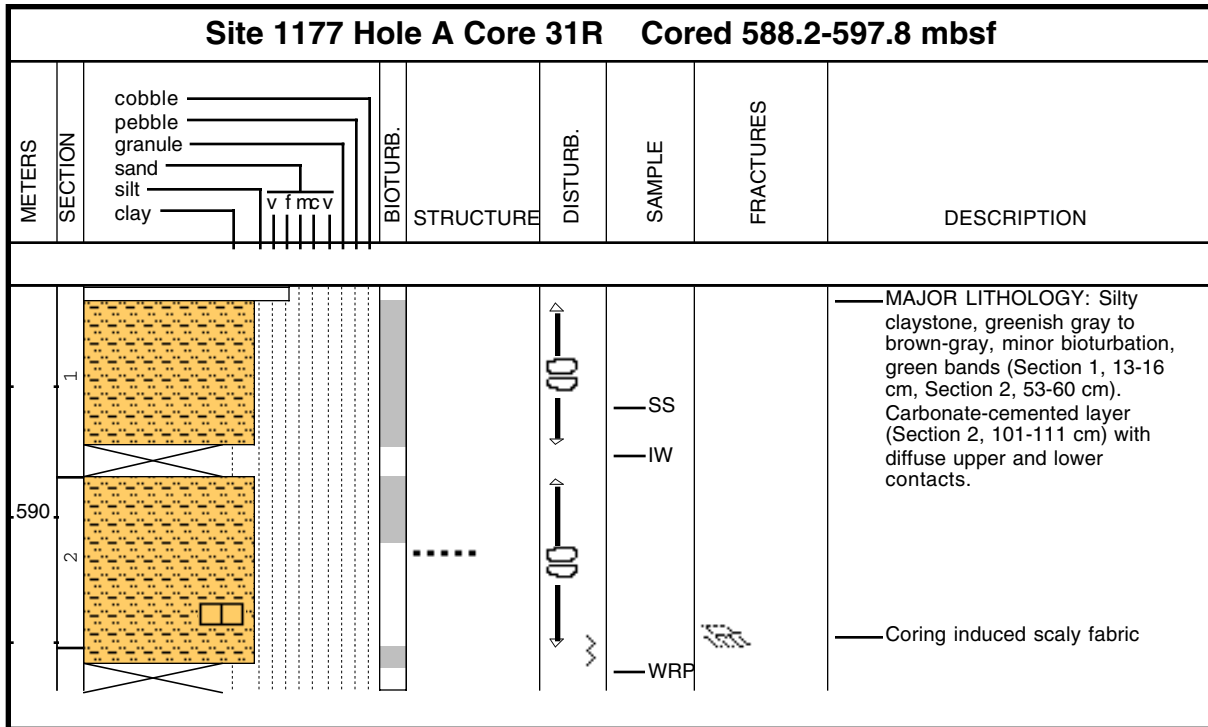
Core Photo



Core Photo



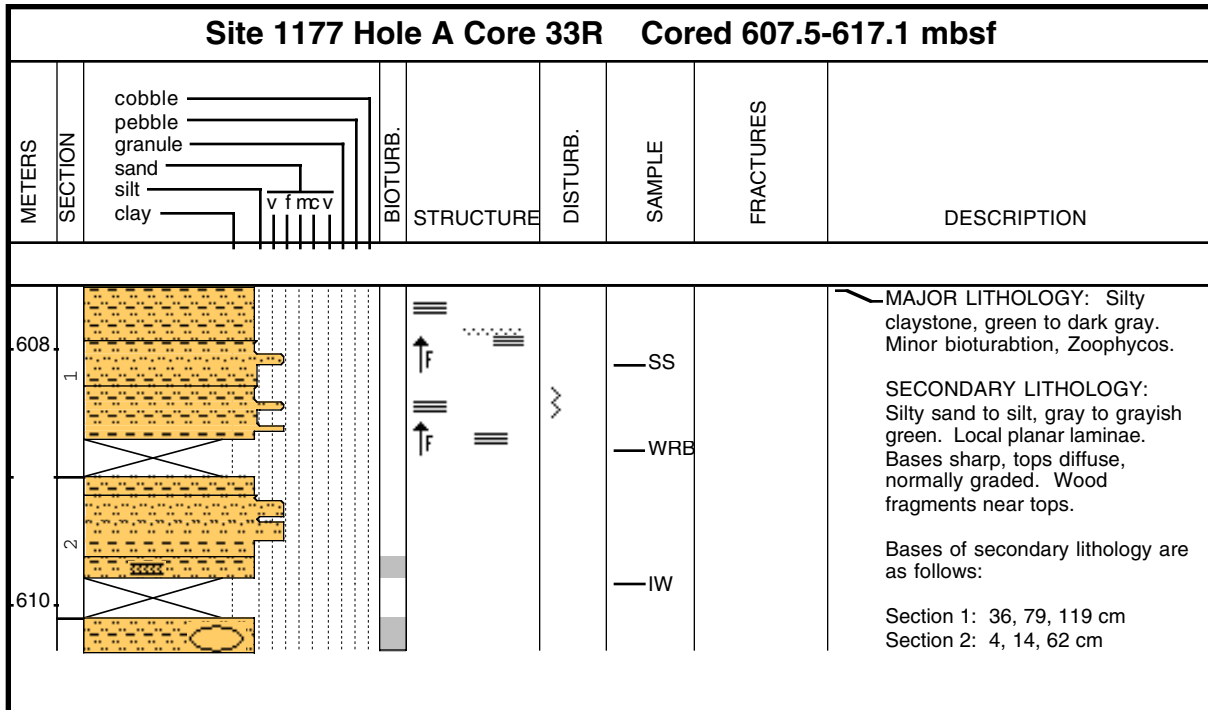
Core Photo



Core Photo

Site 1177 Hole A Core 32R Cored 597.8-607.5 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay	v f mc v					
598	1					— SS — SS		<p>MAJOR LITHOLOGY: Silty claystone to claystone, green and greenish gray. Color bands throughout. Moderately bioturbated.</p> <p>SECONDARY LITHOLOGY: Sand to silty sand, medium gray. Sharp top and base. Structureless.</p> <p>Base of secondary lithology is as follows:</p> <p>46 cm</p> <p>TERTIARY LITHOLOGY: Carbonate-cemented claystone, light gray. Well lithified.</p> <p>Base of tertiary lithology is as follows:</p> <p>27 cm</p>

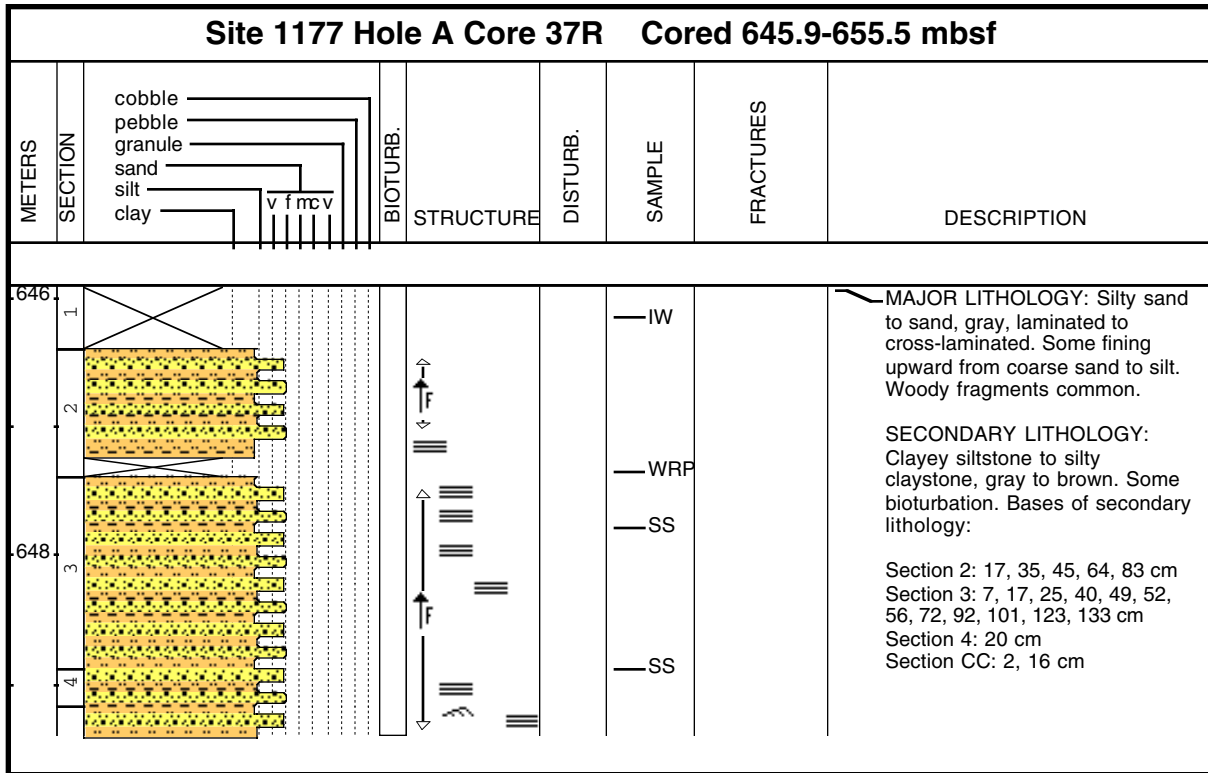
Core Photo



Core Photo

Site 1177 Hole A Core 34R Cored 617.1-626.7 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
								MAJOR LITHOLOGY: Silty clay, grayish green. Laminae. SECONDARY LITHOLOGY: Silty sand, gray. Planar laminae. Sharp base. Wood fragments concentrated near the tops. Bases of secondary lithology are as follows: Section 1: 12, 17 cm

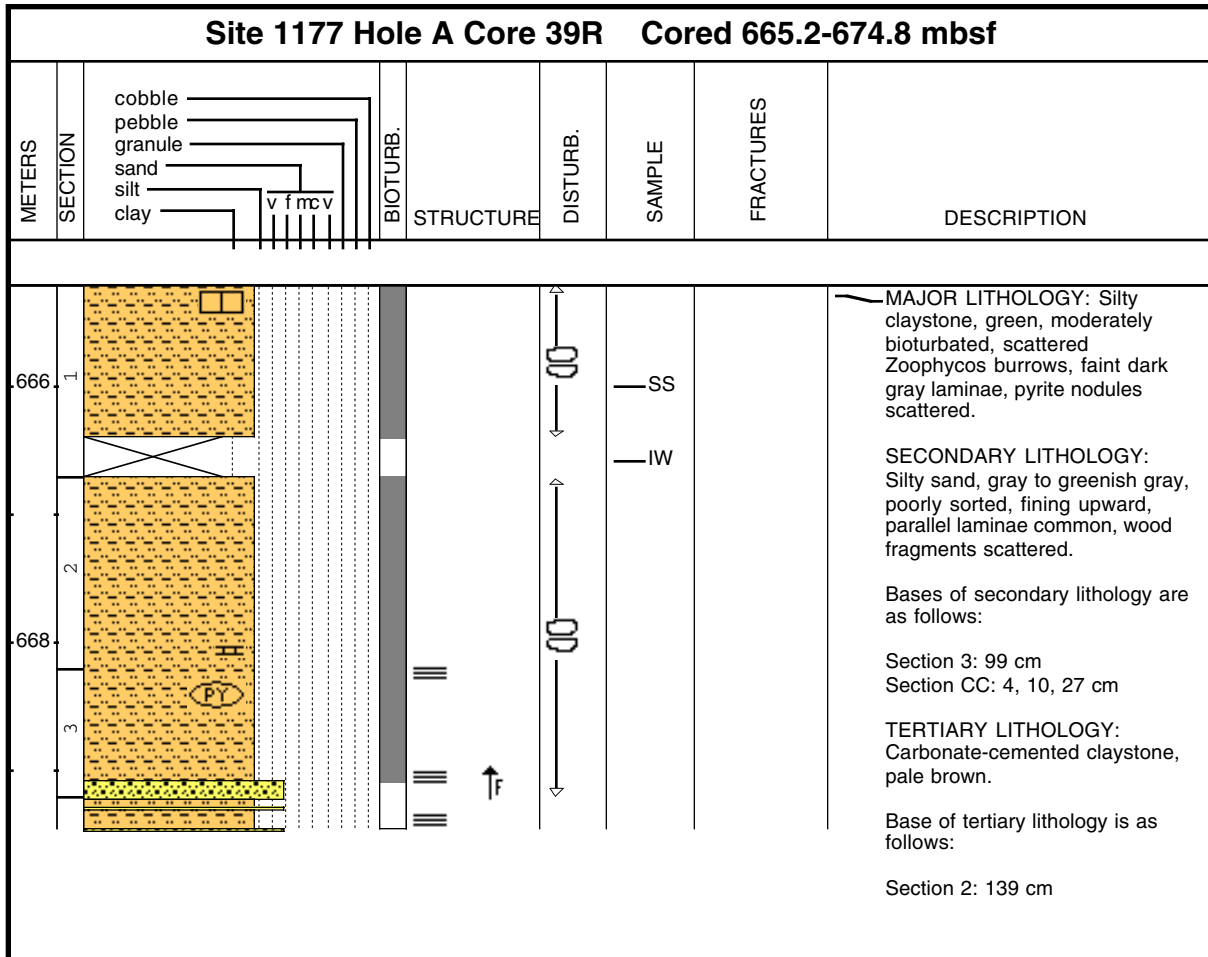
Core Photo



Core Photo

Site 1177 Hole A Core 38R Cored 655.5-665.2 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
656	I					IW SS		<p>MAJOR LITHOLOGY: Silty claystone or clayey siltstone, greenish gray or brown. Moderate bioturbation</p> <p>SECONDARY LITHOLOGY: Silty sand, gray to greenish gray, rich in woody fragments, fining upward. Bases of silty sand:</p> <p>Section 1: 28, 48, 68 cm Section 2: 3 cm</p>

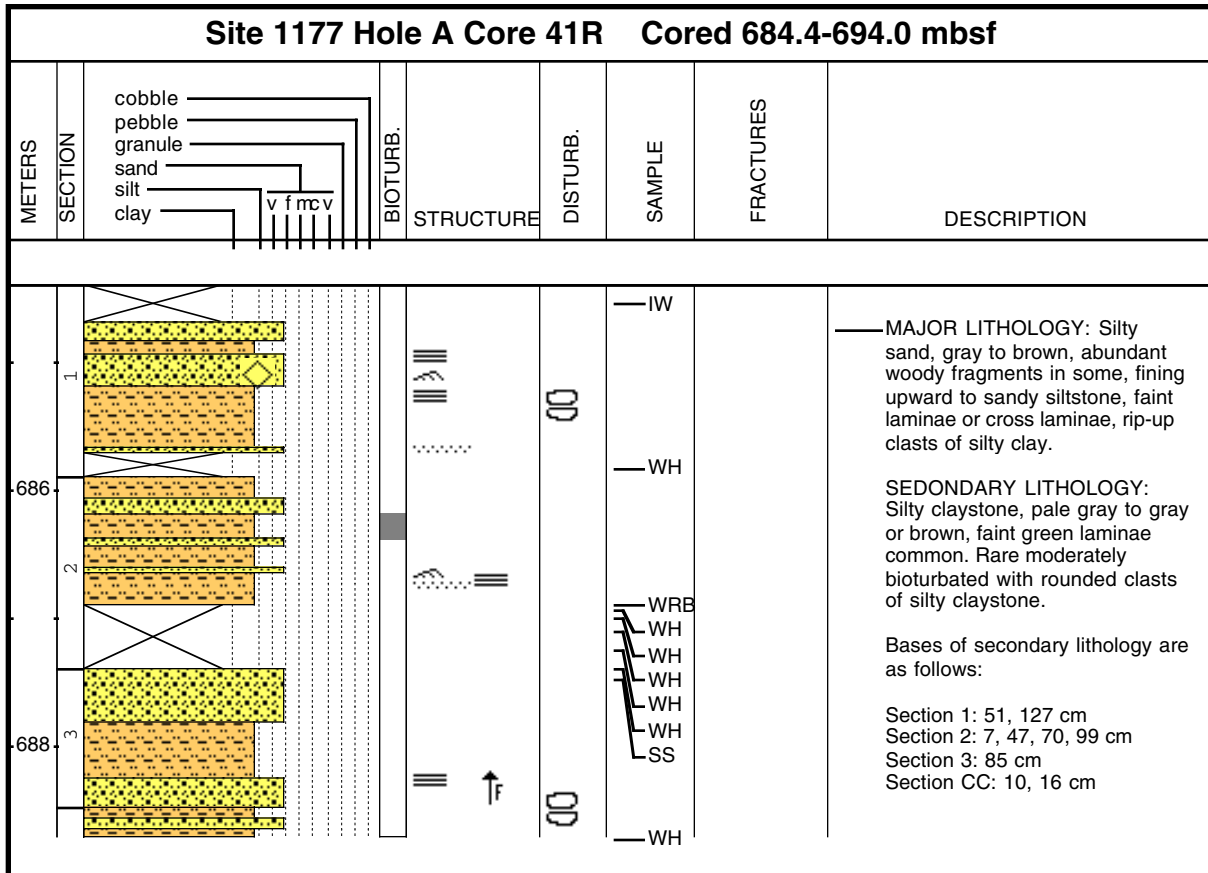
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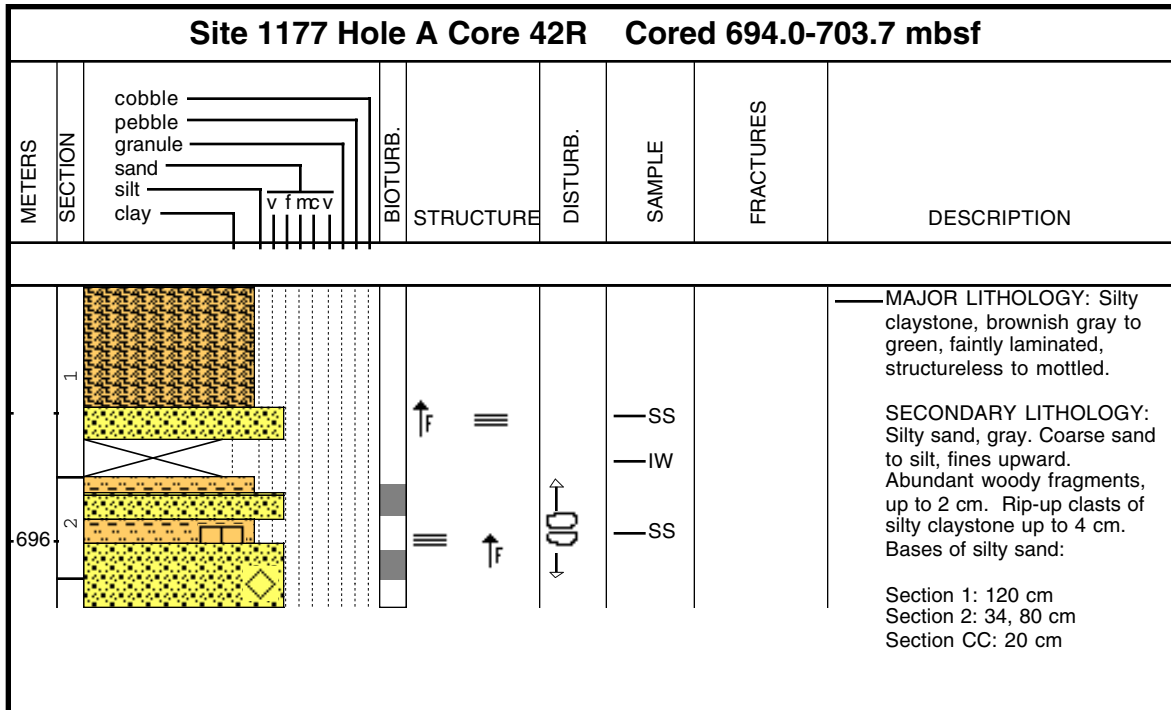
Core Photo

Site 1177 Hole A Core 40R Cored 674.8-684.4 mbsf								
METERS	SECTION		BIOTURB.	STRUCTURE	DISTURB.	SAMPLE	FRACTURES	DESCRIPTION
		cobble pebble granule sand silt clay						
676	1					IW SS SS WH		<p>MAJOR LITHOLOGY: Silty claystone, green, brown or gray, carbonate cemented in Section 1, 89 - 107 cm.</p> <p>SECONDARY LITHOLOGY: Silty sand, gray, plane parallel laminated or massive, some fining upward.</p> <p>Bases of secondary lithology are as follows:</p> <p>Section 1: 56, 84, 121 cm Section CC: 18 cm</p>

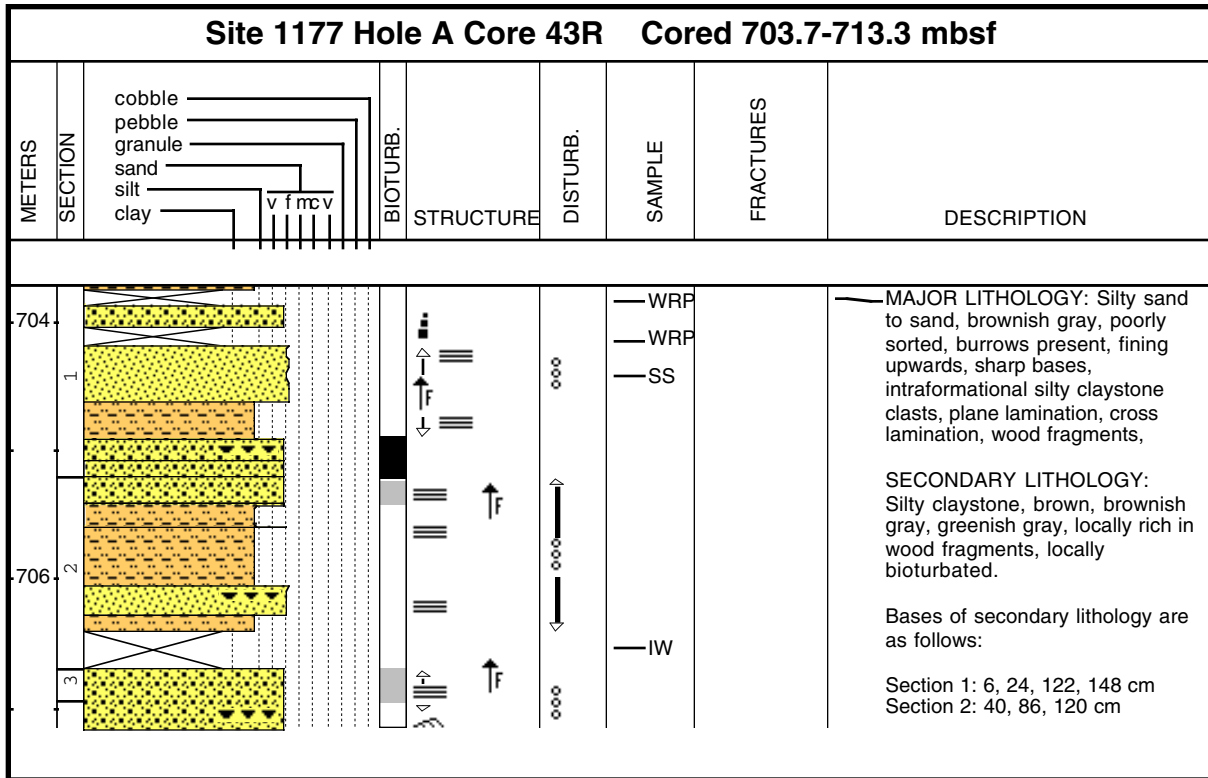
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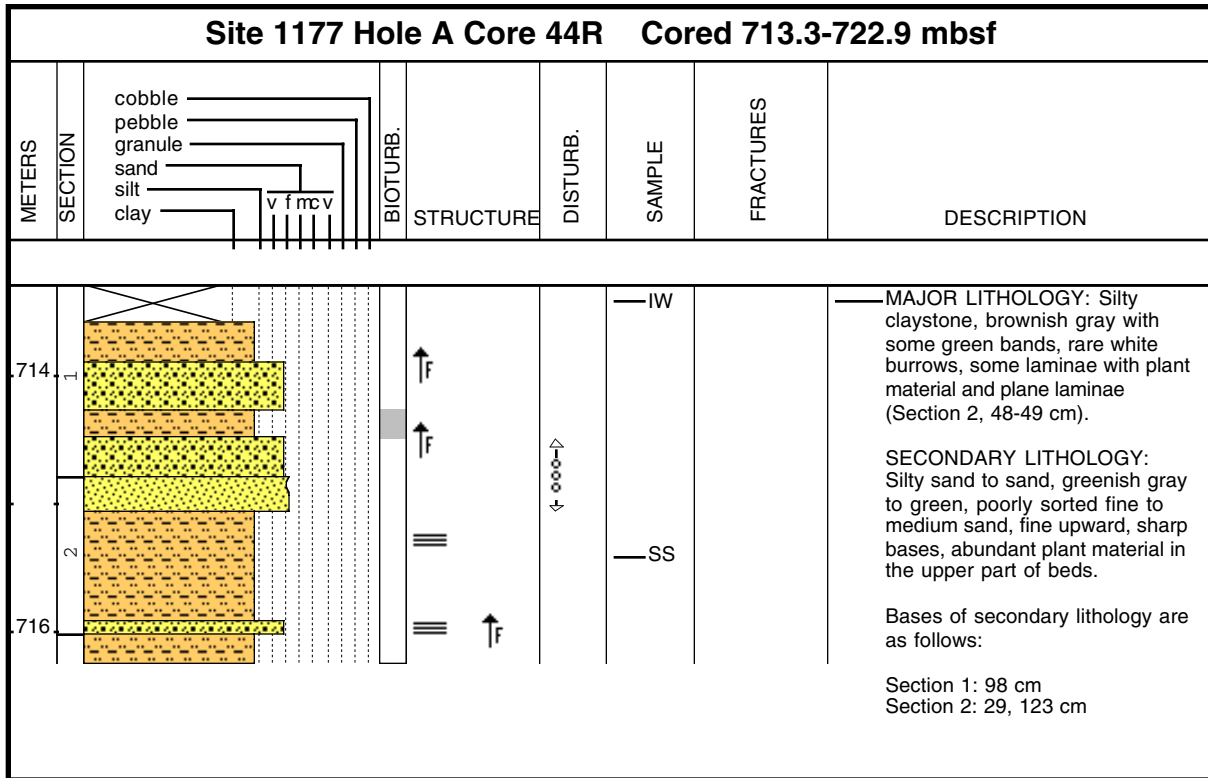
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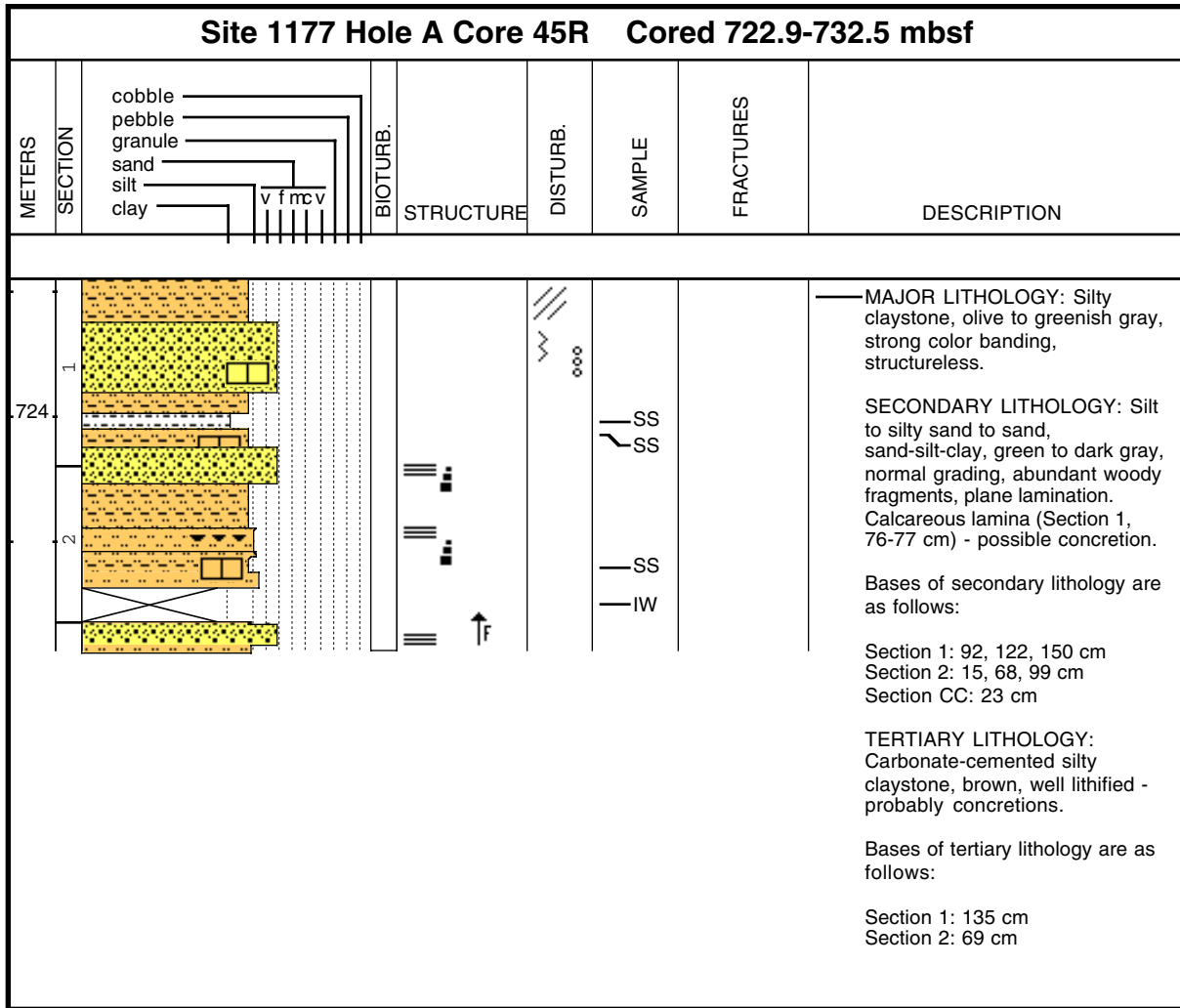
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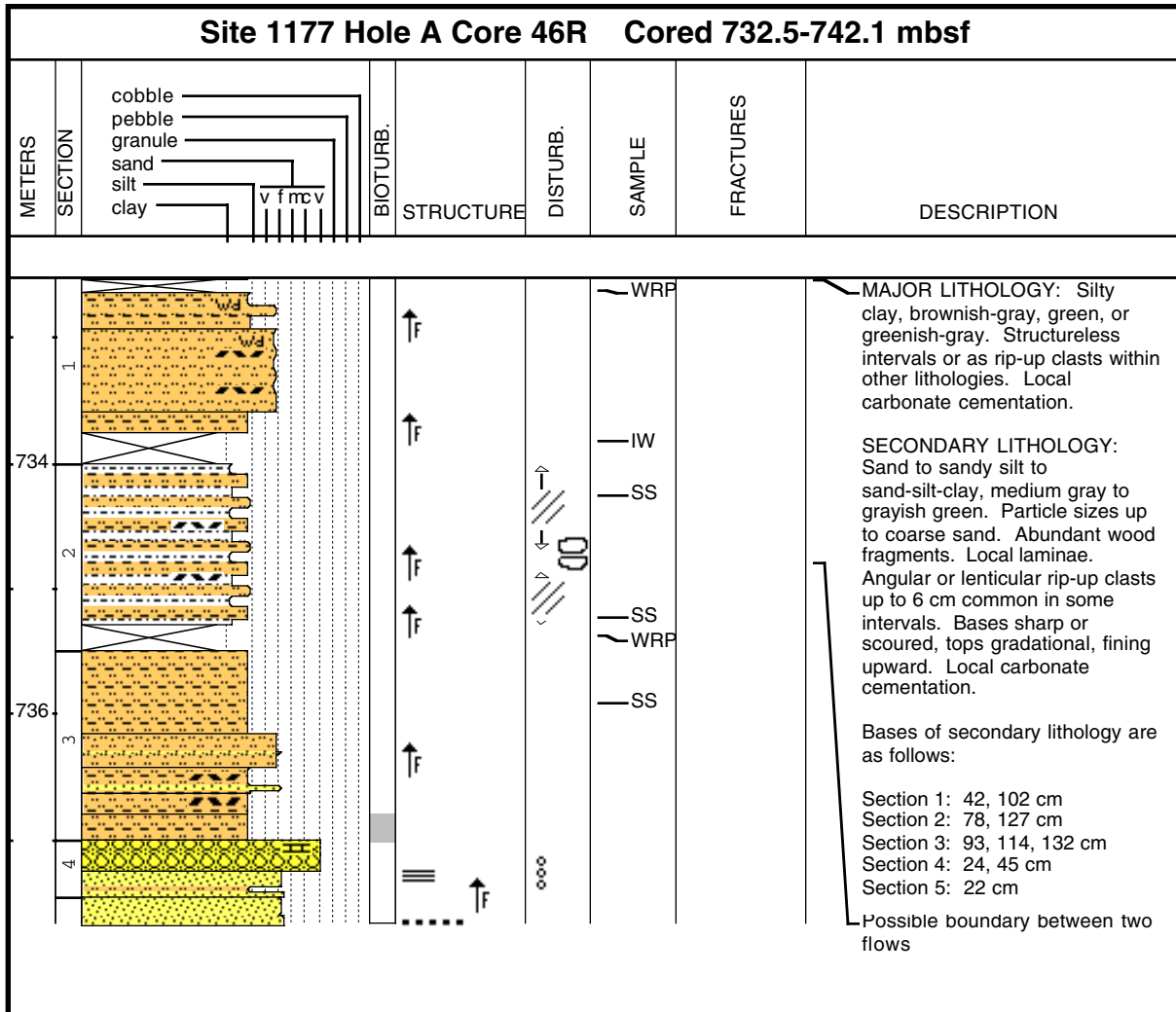
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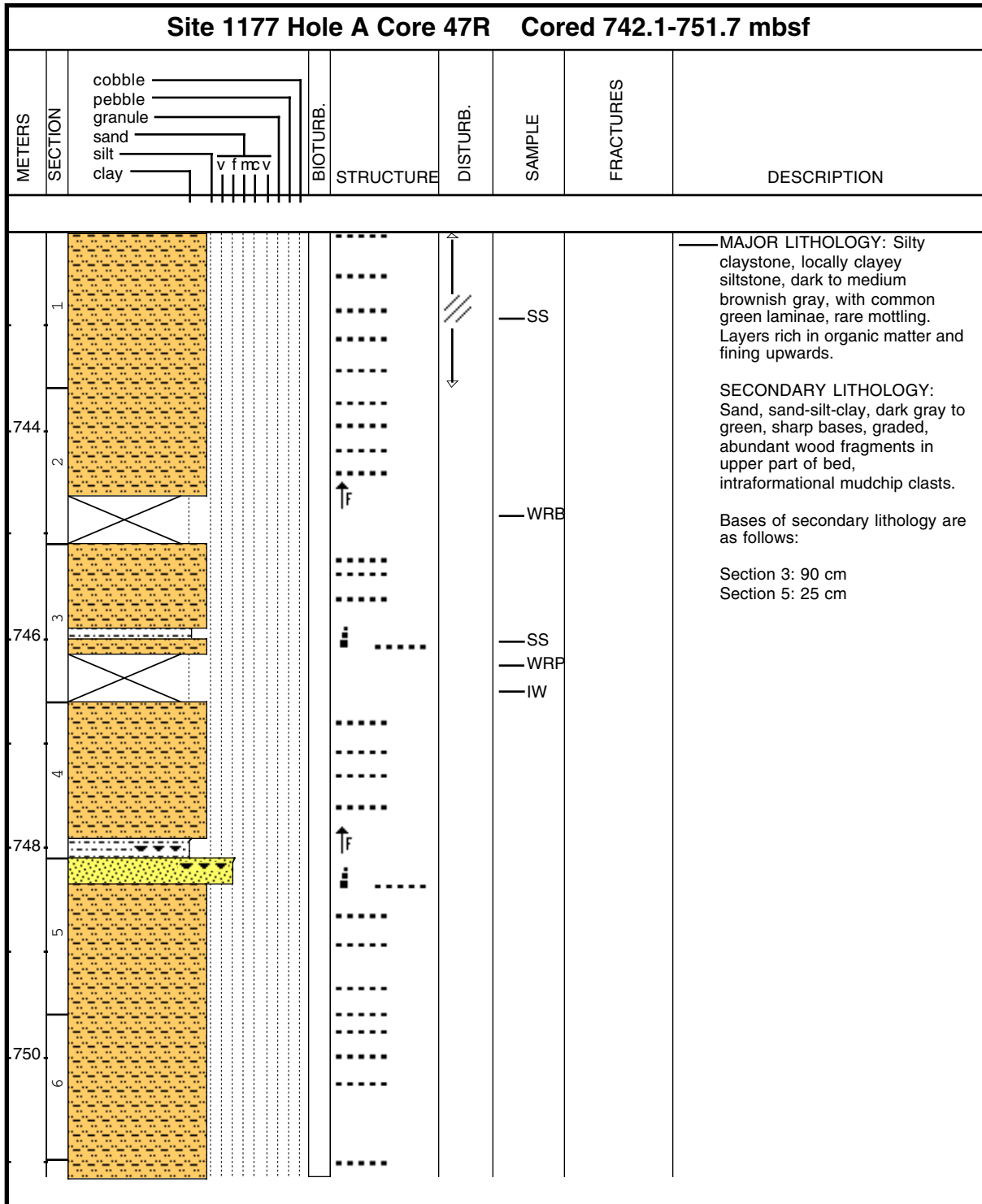
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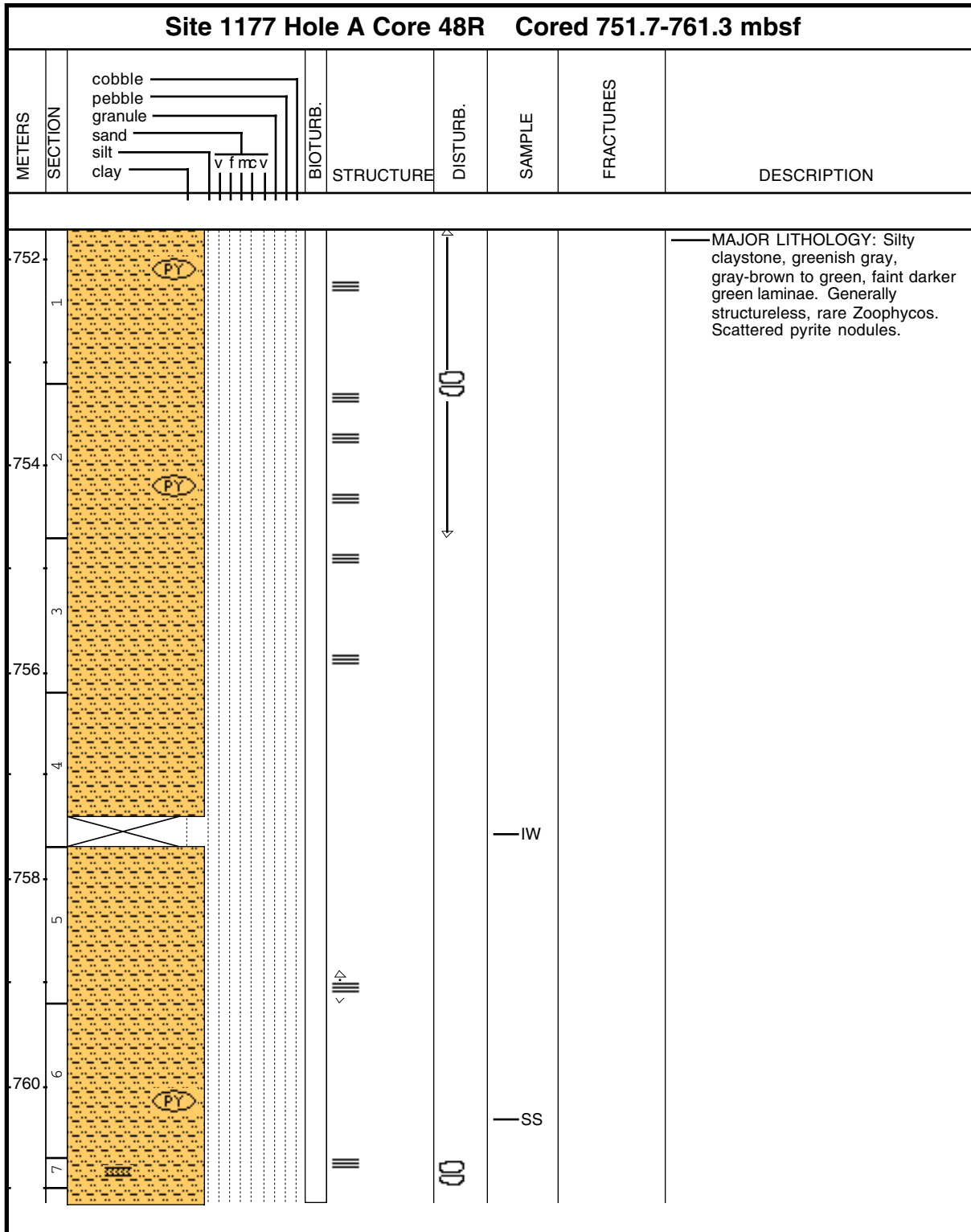
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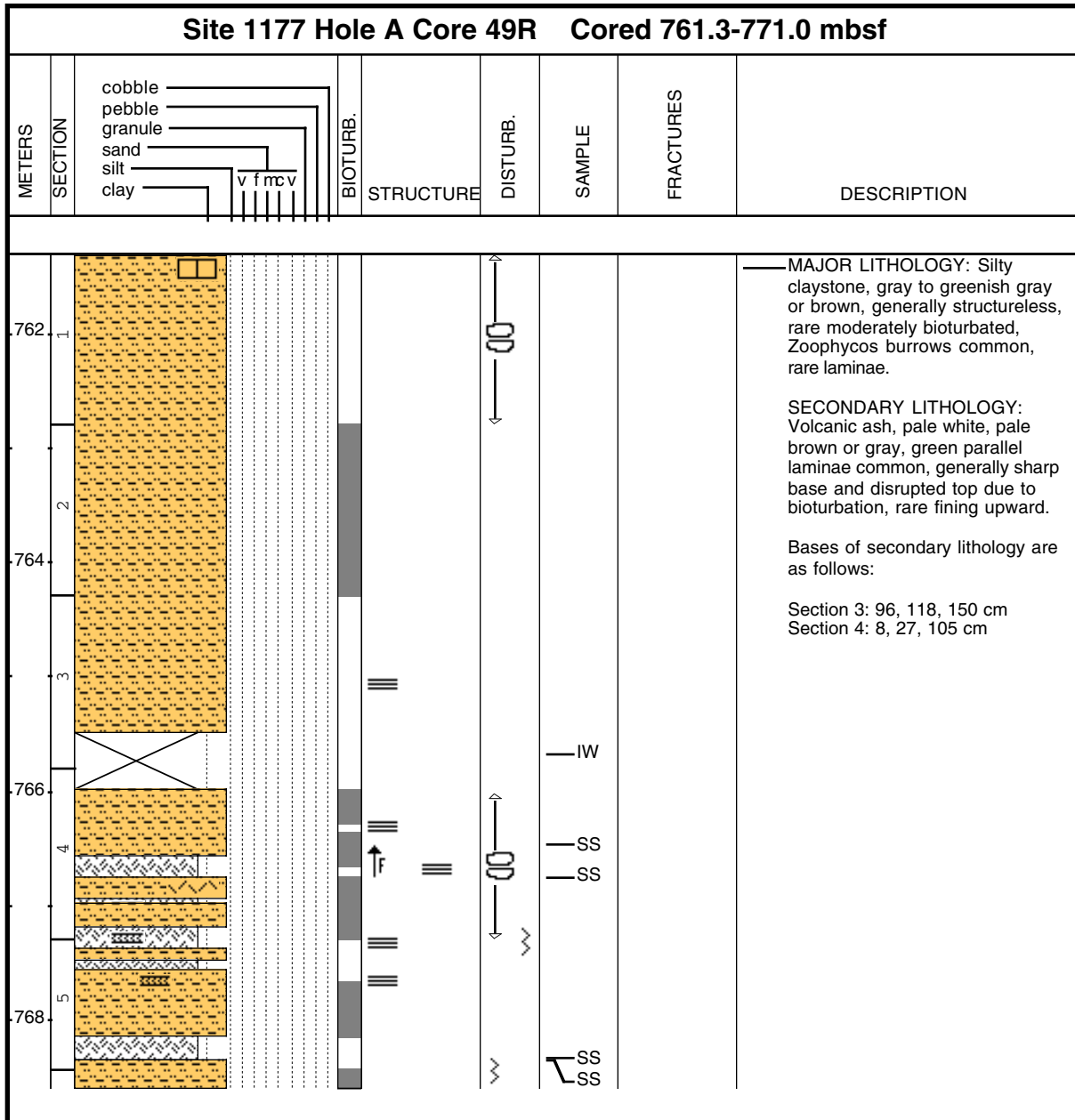
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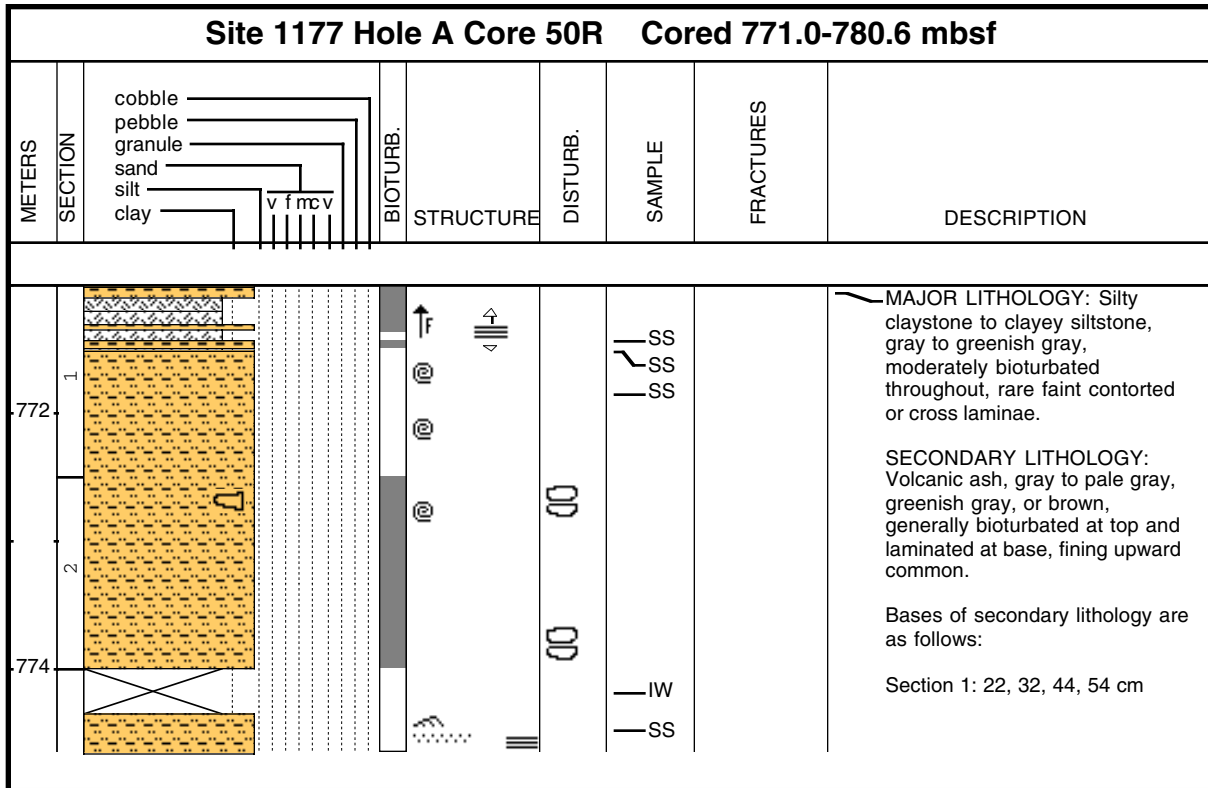
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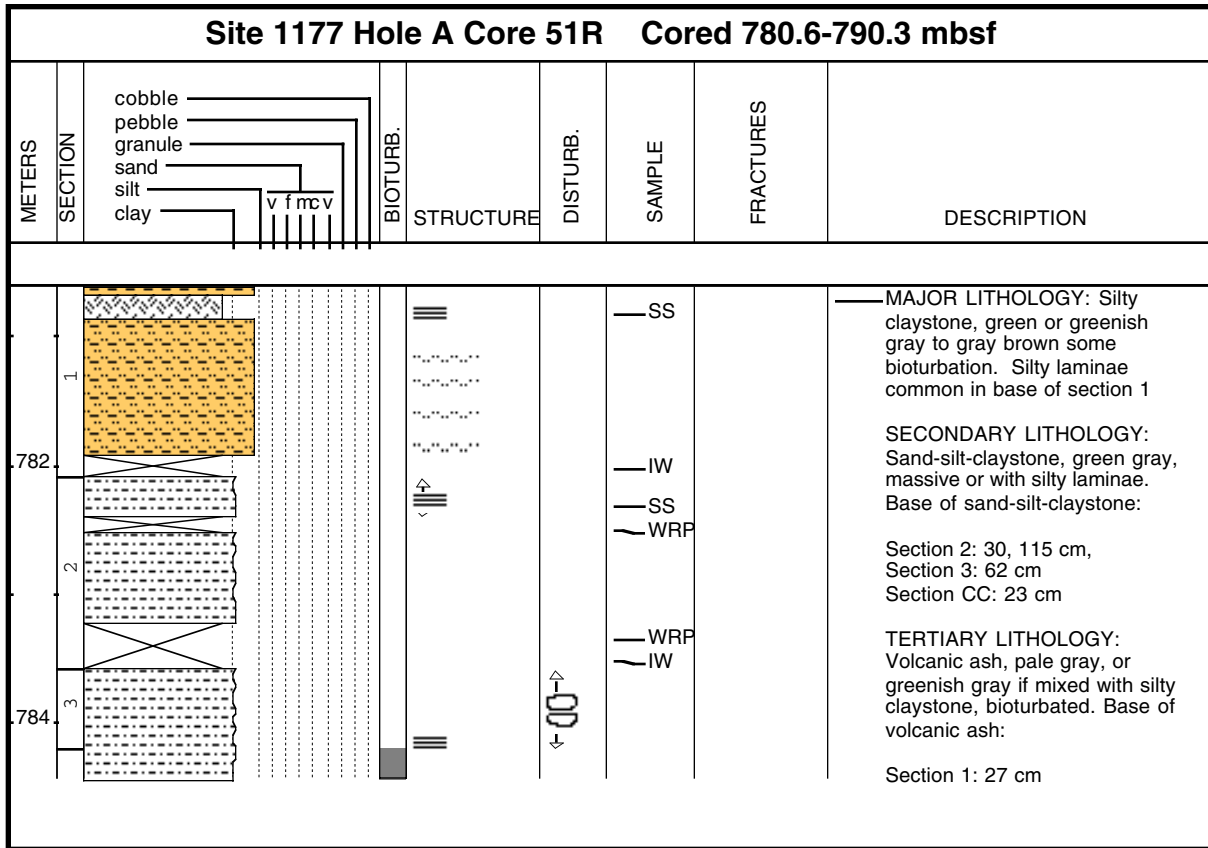
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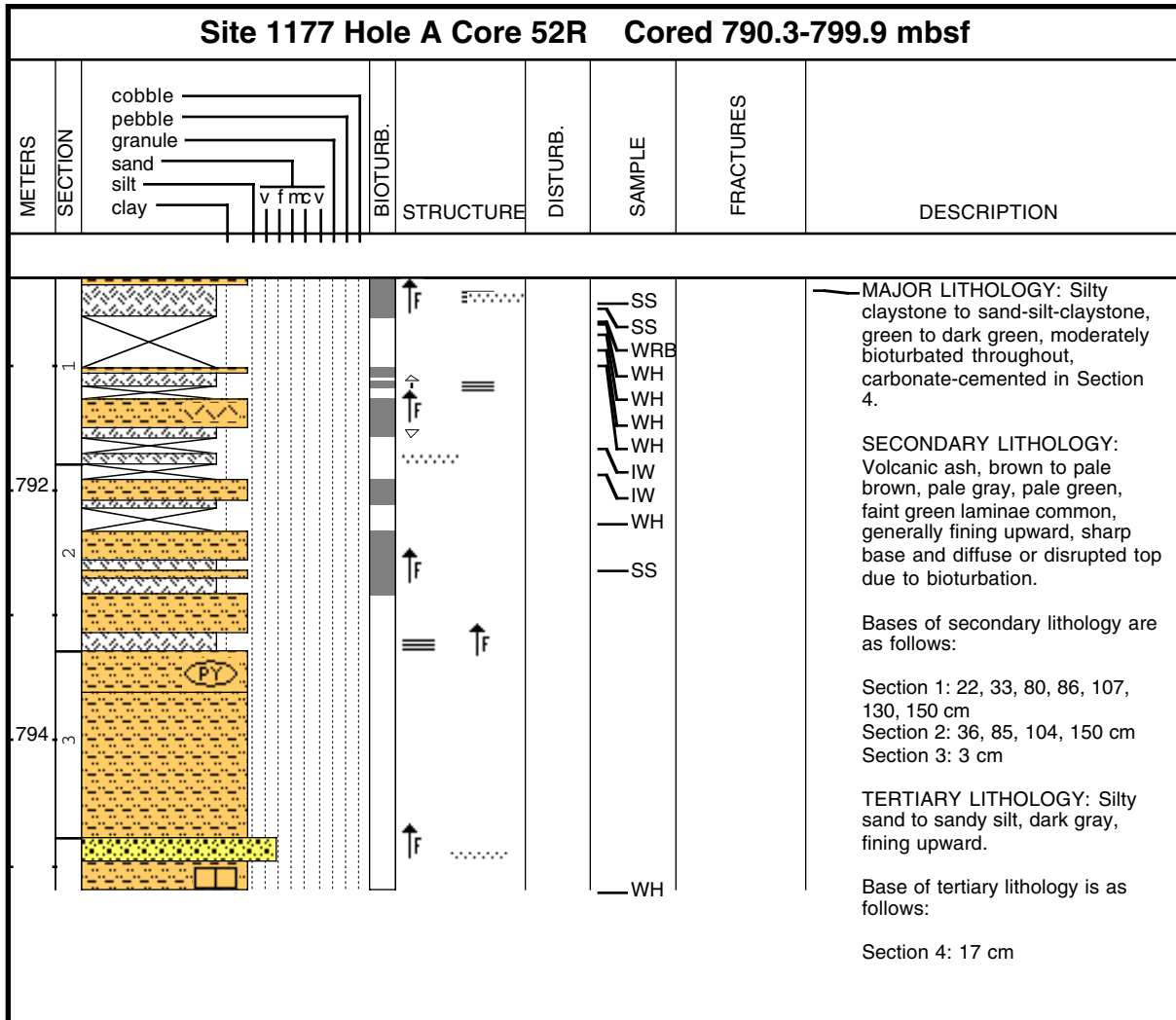
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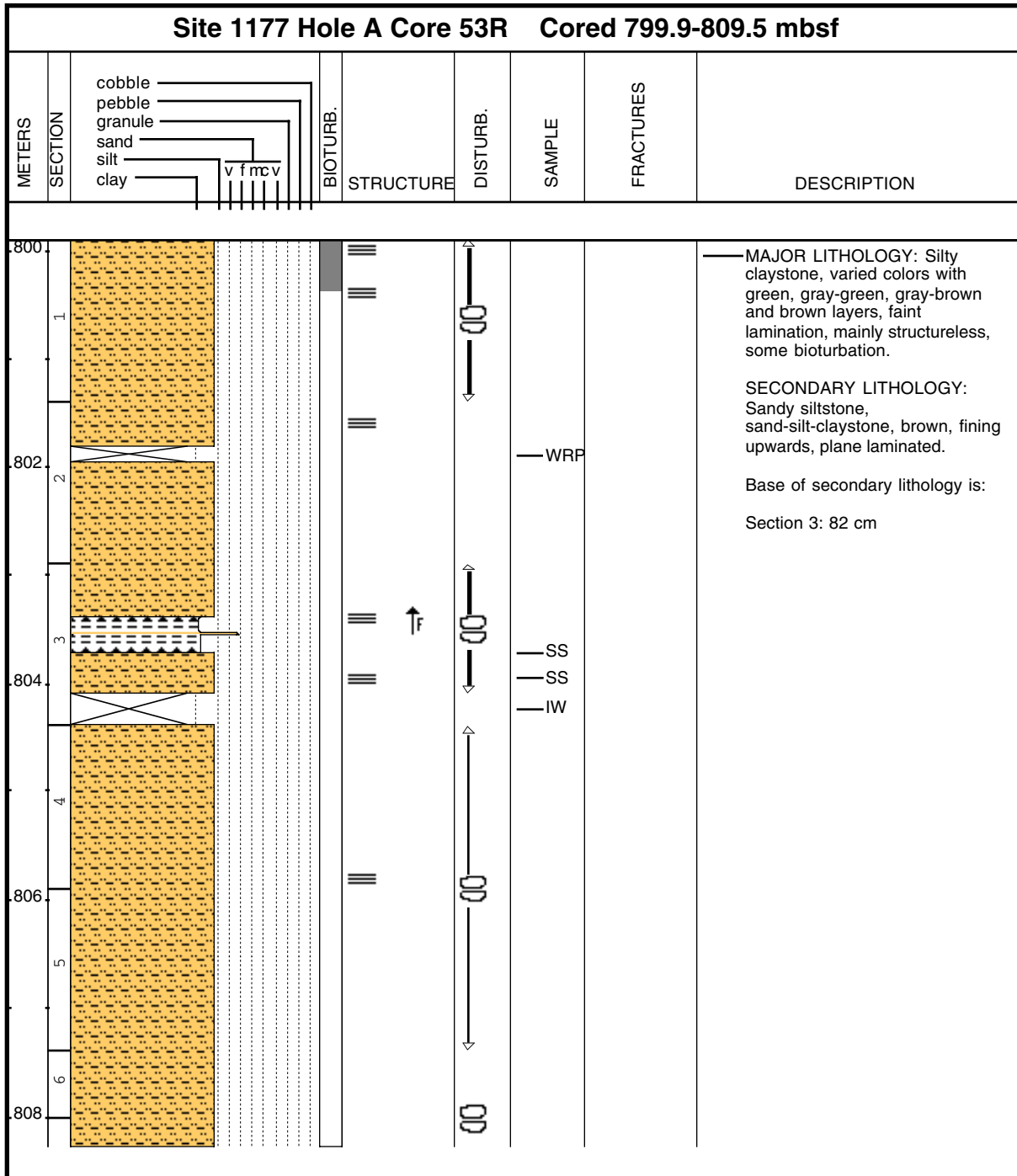
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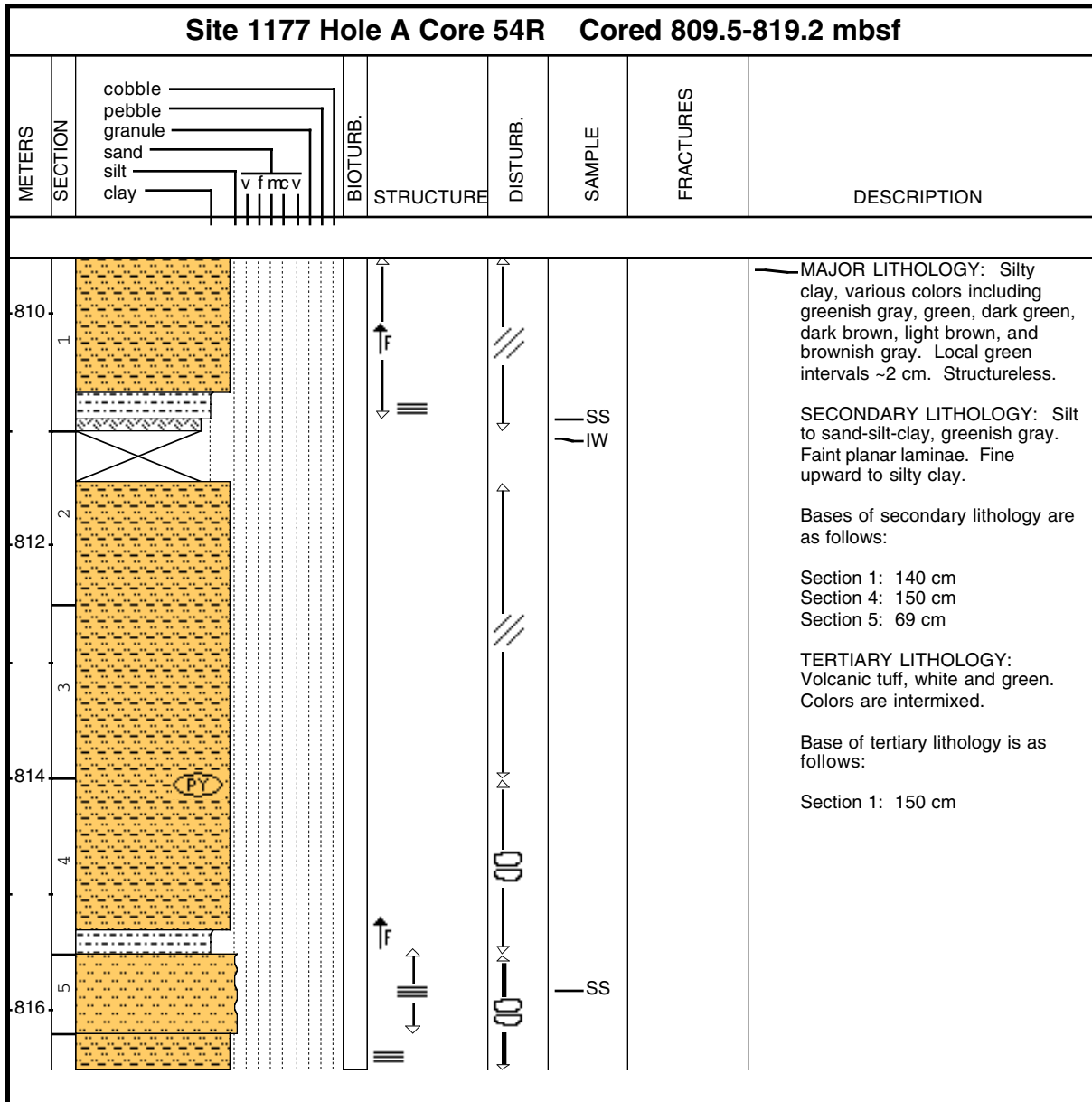
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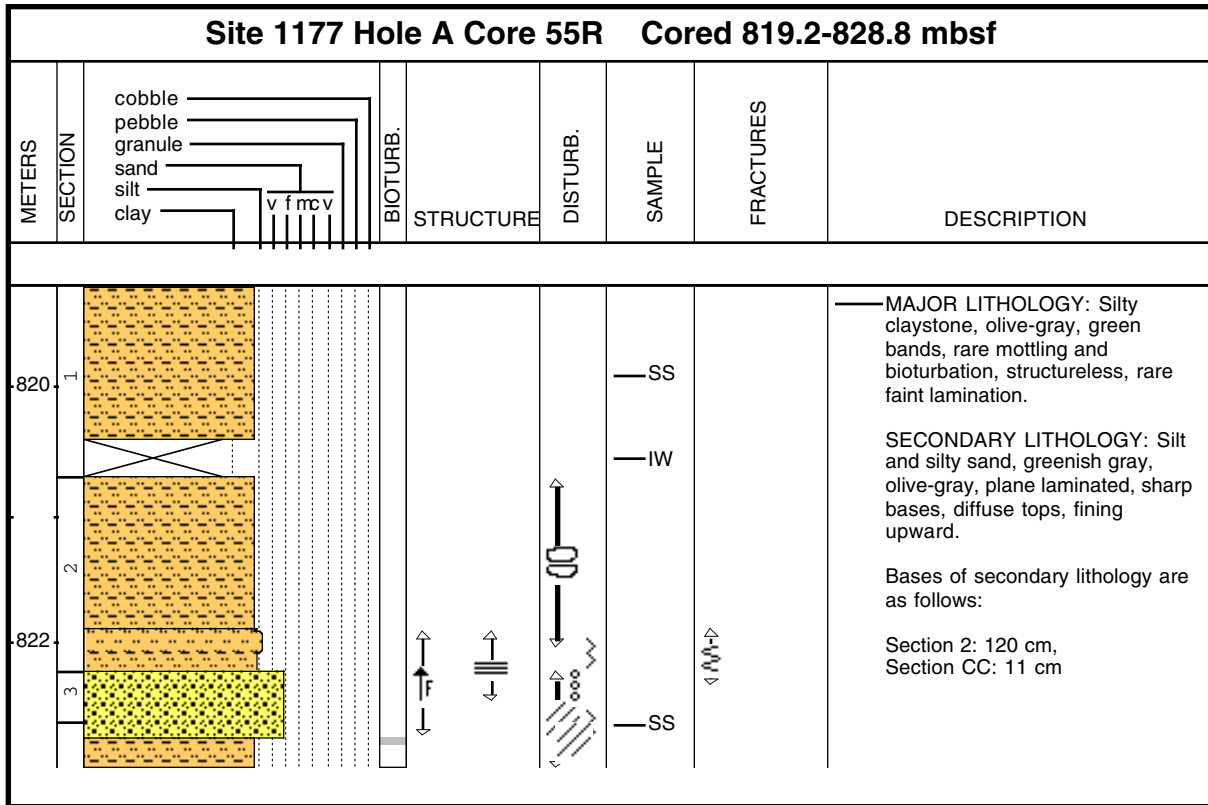
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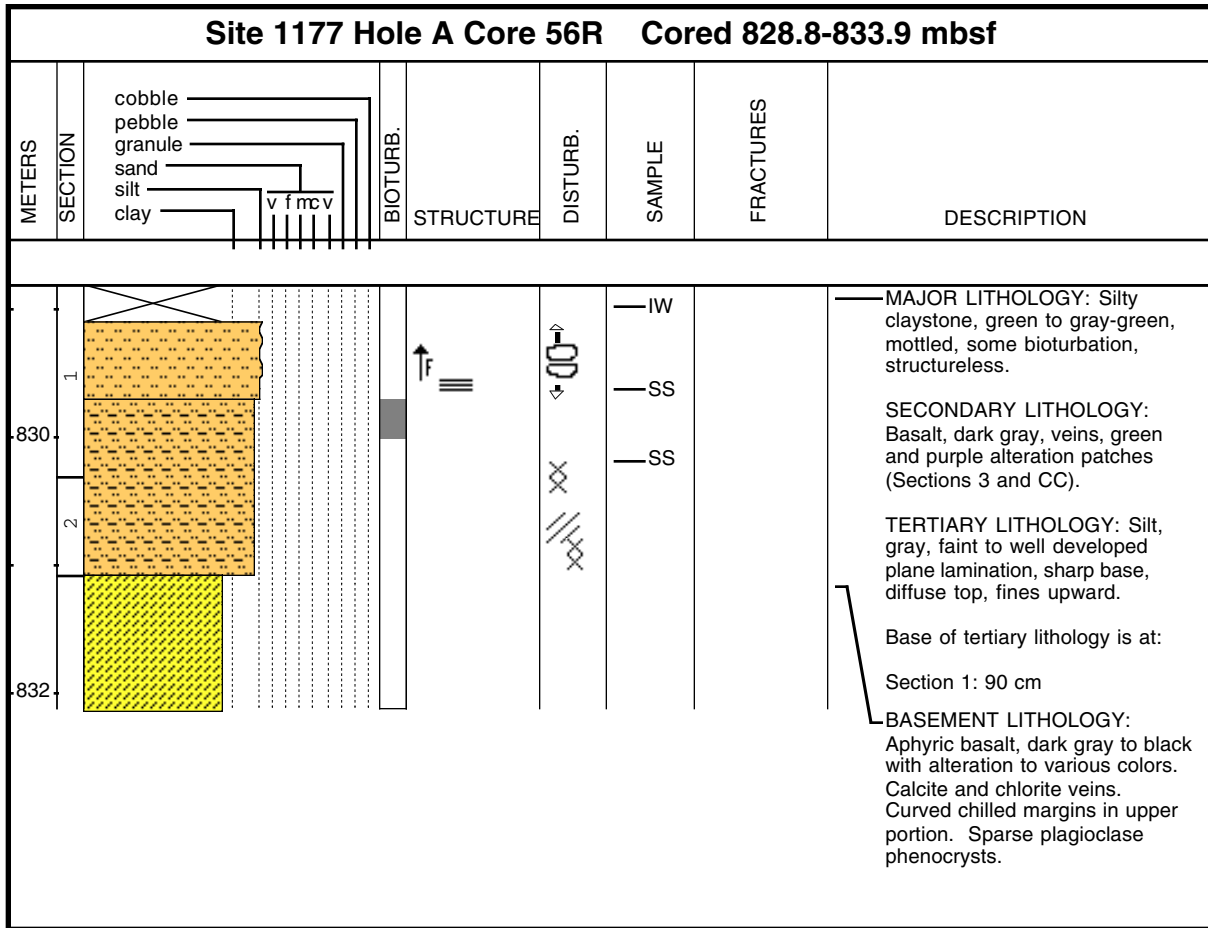
Core Photo



Core Photo



Core Photo



Sample	Texture					Mineral										Biogenic							Rock	Comments								
	Hole	Core	CT	Section	Top (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Accessory Minerals	Carbonate	Clay	Feldspar	Glauconite	Mica	Opagues	Quartz	Volcanic Glass	Zeolite	Diatoms	Foraminifers	Nannofossils		Radiolarians	Silicoflagellates	Sponge Spicules	Organic debris	Lithic Fragments			
1177																																
A 1	R	1	38	300.58	D		A	D				D	P				P	P		R		P				R		R	Silty claystone			
A 2	R	2	70	311.4	D		A	D				D					P	P				*				R			Silty claystone			
A 2	R	CC	10	313.71	M	A	D											P	D										Volcanic ash - white			
A 3	R	3	100	322.9	D		A	D				D	P				P	P				R				R		P	Silty claystone			
A 4	R	3	40	331.9	D		A	D				D	P				P					R	*						Silty claystone			
A 4	R	4	87	333.87	M		D	C	P				P			P	P	D											Volcanic ash			
A 5	R	1	38	338.48	M	A	C	A			P	A				P	P	C		P	P	P		P	P		P		Sandy claystone			
A 5	R	3	93	340.53	M	D	C						P			C	P	D									*		Volcanic ash (dark gray)			
A 5	R	CC	16	344.19	M	D	C	C				C	P			P	P	D									P		Volcanic ash (medium gray)			
A 6	R	3	36	349.56	M	C	A	A	R	P		P				P	P	D			*	P							Volcanic ash mixed with silty clay			
A 7	R	3	107	361.37	M	D	C	P				P	P			C	P	D	P										Volcanic ash			
A 7	R	4	52	362.32	D	P	C	D			P	D				P	P	P				P							Silty claystone			
A 8	R	5	99	373.99	M	D	P	P				P	P			P	P	D											Volcanic ash			
A 9	R	1	47	377.07	M	D	P	C				P				P	P	D	P										Volcanic ash			
A 9	R	3	96	380.56	D	C	C	D			P	D				P				P									P	Silty claystone		
A 10	R	3	113	390.23	D		C	D				D				P	P													P	Silty claystone	
A 10	R	4	53	391.13	D	P	C	D			P	D				P	P	P												P	Silty claystone	
A 10	R	5	78	392.88	M	D	P	P				P				P	P	D	P											Volcanic ash (pale gray)		
A 11	R	2	46	397.66	M	A	A	A					P			R	R	D											P	Volcanic ash (pale gray)		
A 11	R	3	93	399.63	D		C	D		*	D	C				R	C	R												P	Silty claystone	
A 11	R	5	5	401.75	M	C	A	D				A	P			*	P	D												Volcanic ash		
A 12	R	3	60	408.28	D	P	C	D				D					P	C				P								Silty claystone		
A 13	R	1	144	416.34	D	P	C	D	P			D	P									R								Silty claystone		
A 13	R	3	30	418.2	M	P	C	D	P																					Volcanic ash - altered - green		
A 14	R	4	30	429.3	D		A	D				D	P				P	P												P	Silty claystone	
A 15	R	3	53	437.73	D		A	D				D			R		P	P												R	Silty claystone	
A 15	R	4	88	439.58	M	P	A	D				D	P				P													Silty claystone - altered ash		
A 16	R	4	20	448.6	D		C	D				D					P													Silty claystone		
A 16	R	4	126	449.66	M	A	D	A				C	A				A													A	Silty sand	
A 16	R	5	40	450.3	M	D	A	A				A	A				A													A	Silty sand	
A 17	R	1	55	454.05	D	A	A	A				A	P				A													A	Silty sand	
A 17	R	1	48	453.98	D		A	D				D	P				C													P	Silty claystone	
A 17	R	2	11	455.11	M		D	A				A	P				C													A	Silt	
A 17	R	2	60	455.6	D		A	D				D	P			R	P													Silty claystone		
A 19	R	1	126	474.06	M		C	D			A	D					P														Carbonate-cemented claystone	
A 19	R	4	60	477.9	D		A	D	R			D	R				P														Silty claystone	
A 20	R	2	21	484.11	D	P	A	D	P			A	C			C	A	*				R								R	Silty claystone	
A 20	R	2	91	484.81	M	D	C	C	R				C	*		P	A	P												C	Silty sandstone	
A 21	R	1	33	492.33	M	C	A	D	R			A	C			C	C					R									Sandy siltstone	
A 22	R	1	80	502.4	M	P	A	D	P	R		A	C			C	C	P			*									P	Silty sandstone	
A 22	R	CC	23	502.67	M	C	A	D	R			A	C	*		P	C	R												P	Sandy siltstone	
A 23	R	1	81	511.91	D		C	D	*			D				P	P	*	*												Silty claystone	
A 23	R	1	87	511.97	M	A	A	C	P			C	C			P	C	P												A	Silty sandstone	
A 24	R	3	147	525.17	M	A	A	A				D	P				P		P												Siliceous claystone (pale gray)	
A 24	R	5	42	526.82	D	C	A	D				D	P			P	P	P												C	Silty claystone	
A 24	R	5	60	527	M	A	D	C				D	*			A	P														Siliceous claystone (dark gray)	
A 25	R	5	108	537.48	D	C	A	D	P			D				P	P														Silty claystone	
A 25	R	6	106	538.96	D	C	A	D				D	P			P	P	P	P												P	Silty claystone
A 25	R	7	17	539.57	M	P	A	D			D	A				*	P	P													Carbonate cemented claystone	

Sample	Texture						Mineral											Biogenic						Rock	Comments					
	Hole	Core	CT	Section	Top (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Accessory Minerals	Carbonate	Clay	Feldspar	Glauconite	Mica	Opagues	Quartz	Volcanic Glass	Zeolite	Diatoms	Foraminifers	Nannofossils			Radiolarians	Silicoflagellates	Sponge Spicules	Organic debris	Lithic Fragments
1177																														
A	26	R	1	7	540.17	M	P	A	D	P		D				P	P		P										Sand-silt-claystone	
A	27	R	1	103	550.73	D	D	A	C	P		C	P			P	A	*										A	Silty sandstone	
A	29	R	1	37	569.27	D	C	C	D		*	D				P	*											P	Silty claystone	
A	29	R	1	81	569.71	D	P	A	D	P		D				P	P	*	P										Silty claystone	
A	30	R	2	126	581.26	M		A	D			D	P			R	P												Siliceous claystone	
A	30	R	4	100	584	D		C	D			C	D				P												Silty claystone	
A	31	R	1	93	589.13	D		A	D	R		D					P						R						Silty claystone	
A	31	R	2	58	590.28	D		A	D			D					P	R											Silty claystone	
A	31	R	2	109	590.79	M		A	D		A	D																	Carbonate cemented claystone	
A	32	R	1	40	598.2	M	D	A	C				C				A											A	Silty sandstone	
A	32	R	1	62	598.42	D		C	D			D				R	P											R	Silty claystone	
A	33	R	1	61	608.11	D		C	D			D				R	P												P	Silty claystone
A	35	R	2	93	628.15	M	D	A	A	P	P	D				P	A												Silty sand	
A	35	R	CC	1	628.62	M	C	A	A	P		A	C	*		P	C					*						P	Sandstone	
A	36	R	1	40	636.7	D		P	D		*	D	P			R	P	R					P						Silty claystone	
A	36	R	1	54	636.84	D	C	A	A			A	C	R			C	P										P	Sandy siltstone	
A	36	R	CC	4	638.31	M	A	A	D			A	C			R	C					R						C	Silty sand	
A	37	R	3	150	648.9	M	C	C	D		P	A	C	*		P	C	R											P	Sandstone
A	37	R	3	37	647.77	D		P	D		P	D	P			R	P	P											P	Silty claystone
A	38	R	CC	2	656.19	M	C	A	D			A	C			P	C	C	*			P							P	Silty sandstone
A	39	R	1	78	665.98	D	P	C	D			D				P	P	P											P	Silty claystone
A	39	R	3	89	669.09	M	A	A	C			A				P	A	C											A	Silty sandstone
A	40	R	1	37	675.17	M	A	A	A			C				P	C	C	P										A	Silty sandstone
A	40	R	1	66	675.46	D	P	C	D	P		D	P			P	P	P												Silty claystone
A	42	R	1	98	694.98	M	C	A	A	P	*	A	C	R		P	C	C	*										P	Silty sandstone
A	42	R	2	33	695.83	M		P	D		D		P				P													Silty claystone, carbonate cemented
A	43	R	1	70	704.4	D	D	C	C			C	A				A						R						C	Silty sand
A	43	R	2	60	705.8	M		A	D			D				R	P											P	Silty claystone	
A	44	R	1	148	714.78	M	D	A	C			C	C				D						R						C	Silty sand
A	44	R	2	60	715.4	D		A	D			D	P				P											P	Silty claystone	
A	45	R	1	114	724.04	M	C	D	A	R	P					P	D	R										C	Organic debris	
A	45	R	1	123	724.13	M	D	A	A	P		A	C				A													Sandstone
A	45	R	2	80	725.2	D		A	D		P	D				P	R					*					P		Silty claystone	
A	46	R	2	23	734.23	D	C	A	D			D	P				P	R					P					P	Silty claystone	
A	46	R	2	120	735.2	M	A	A	A			A	C			R	C						P					C	Sand-silt-clay	
A	46	R	3	40	735.9	D		D	A			A	A			R	A						P					A	Clayey siltstone	
A	47	R	1	81	742.91	D		C	D		P	D				P	P						R					P	Silty claystone	
A	47	R	3	89	745.99	M	C	D	A		P	A				P	A						R					C	P	Sand-silt-clay
A	48	R	6	96	760.16	D		C	D	P		D	P	*		P	C	R	*										P	Silty claystone
A	49	R	4	66	766.46	D	C	C	D			D				P	P	P	P										P	Silty claystone
A	49	R	4	93	766.73	M	D	C		P							P	D	P											Volcanic ash (pale gray)
A	49	R	5	101	768.31	M	D	C		*						*	P	D	P											Volcanic ash (pale brown)
A	49	R	5	105	768.35	M	D	C					P			P	P	D										P	Volcanic ash (pale gray/brown)	
A	50	R	1	42	771.42	M	D	C	C			P				P	P	D	P									C	Volcanic ash	
A	50	R	1	51	771.51	M	D	C	C			C				P	P	D	P											Volcanic ash
A	50	R	1	85	771.85	D	A	A	A			D				P		C	P	*								P	Silty claystone	
A	50	R	3	49	774.47	D	A	A	A			D	P			P	P	A	P										C	Clayey siltstone
A	51	R	1	26	780.86	M	D	C	C			C				P	C	D	P	*									P	Volcanic ash
A	51	R	2	21	782.31	M	A	A	A			A				P	C	A												Volcanic ash / Silty claystone
A	52	R	1	20	790.5	M	D	C	C			*					P	D	P										C	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	Mica	Opauques	Quartz	Volcanic Glass	Zeolite	Diatoms	Foraminifers	Nannofossils	Radiolarians	Silicoflagellates	Sponge Spicules	Organic debris	Lithic Fragments		
1177																													
A	52	R	1	25	790.55	M	D	C	C			C				P	P	D	P										Volcanic ash
A	52	R	2	85	792.65	M	A	A	A			A	P			P	P	C	P									C	Volcanic ash
A	53	R	3	82	803.72	M	C	D	A			A	A			P	A											A	Sandy siltstone
A	53	R	3	103	803.93	D		C	D			D	P			R												P	Silty claystone
A	54	R	1	138	810.88	M	C	A	D			D					C	C					R	R				C	Sand-silt-claystone
A	54	R	5	30	815.8	M	C	A	D			A	A			P	A											A	Siltstone
A	55	R	1	70	819.9	D		C	D			D	P			R	P						P						Silty claystone
A	55	R	3	41	822.61	M	A	A	A			A	A				A	A					P						Silty sandstone
A	56	R	1	81	829.61	M		D	A			A	A			P	A						P						Siltstone
A	56	R	1	137	830.17	D		A	D			D					P	P					R						Silty claystone