FOSSIL ENERGY

DOE/BC/14936-10 (Appendix II)
(DE98000475)

GEOLOGIC AND ENGINEERING CHARACTERIZATION OF GERALDINE FORD FIELD, REEVES AND CULBERSON COUNTIES, TEXAS - CORE DESCRIPTION

Topical Report - 1997

By
Shirley P. Dutton
Mohammad A. Malik
George B. Asquith
Mark D. Barton
Andrew G. Cole
John Gogas
Sigrid J. Clift
Jose I Guzman

April 1998

Performed Under Contract No. DE-FC22-95BC14936

Bureau of Economic Geology
The University of Texas at Austin
Austin, Texas

National Petroleum Technology Office
U. S. DEPARTMENT OF ENERGY
Tulsa, Oklahoma

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DOE/BC/14936-10 (Appendix II)
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Prepared for
U.S. Department of Energy
Assistant Secretary for Fossil Energy

Jerry Casteel, Project Manager
National Petroleum Technology Office
P.O. Box 3628
Tulsa, OK 74101

Prepared by:
Bureau of Economic Geology
The University of Texas at Austin
University Station, Box X
Austin, TX 78713-7508

FGU3

Well RAMSEY 18-15 Core depth (+) 2666 (–) 2688 = _____ Log depth @ _____

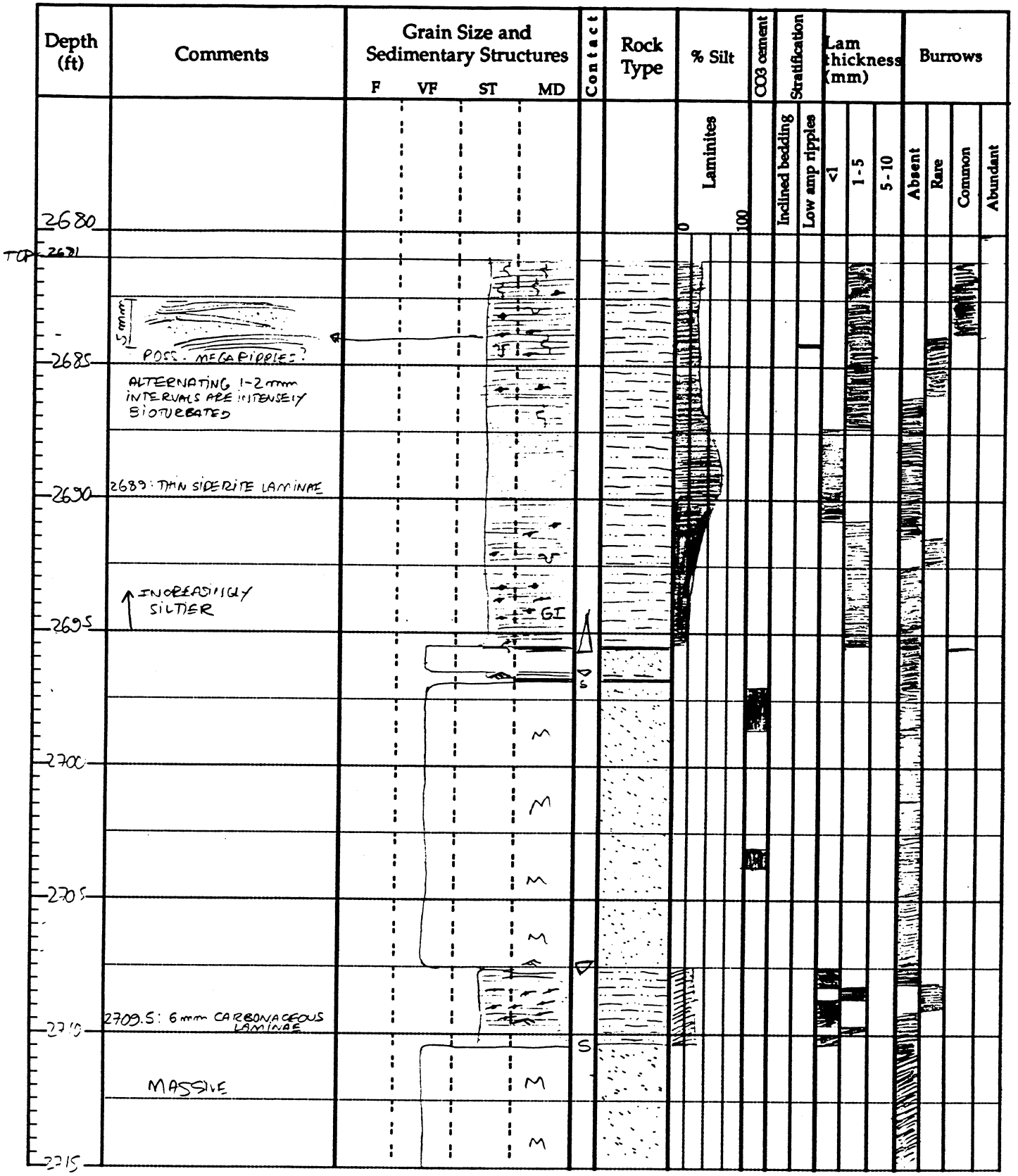
Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam Ranges (mm): <1	Lam Ranges (mm): 1-5	Lam Ranges (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2665															
	Very fine grained sandstone, mainly massive, but with localize ripples, fine lamination and contorted bedding														
2670			sf												
	Some vertical and horizontal burrows														
	Fine laminated siltstone very few bioturbated														
2675															
	Massive Lutite 2 inches thick.														
2680															
2685															
	Black shale laminae above lenticular shale fragments that decrease size and amount toward bottom.														
2688															

FGU5

Well RAMSEY 18-17 Core depth (+) 2681 (-) 2734 = 53' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 07/10



Well Ramsey 18-17 Core depth (+) 2681 (−) 2734 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 07/10

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2715	COMPLETELY MASSIVE/ STRUCTURELESS	M							
			S						
2720	2720-2728: 8' OF CORE IN A 3'-LONG BOX; MOSTLY BROKEN SS PIECES -> CHECK LOG	M	S						
		M							
2725		M							
2730									
		M							
2735									

FGU6

Well RAMSEY 18-12 Core depth (+) 2654 (−) 2697 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2650																
2654																
2655	Very fine laminated siltstone dark gray, locally redish by siderite cement.															
2660	Fine laminated siltstone, light gray in color, few to moderate bioturbation. Toward the bottom, contorted bedding, to continued out of phase wavy lamination. Sharp contact.		S													
2665	Massive Sandstone, with some soft sediment deformation structure. (0.5" thick). Friable, locally cemented by calcite.															
2670	Sediment soft deformation at the bottom.															
	Fine laminated siltstone		S													
	Massive sandstone. As Above															
2680	Black Lutite, finely laminated, with small soft deformation structure grades upward to		G													
2685	Siltstone and very fine sandstone.															

Well RAMSEY 18-12 Core depth (+) 2654 (−) 2697 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

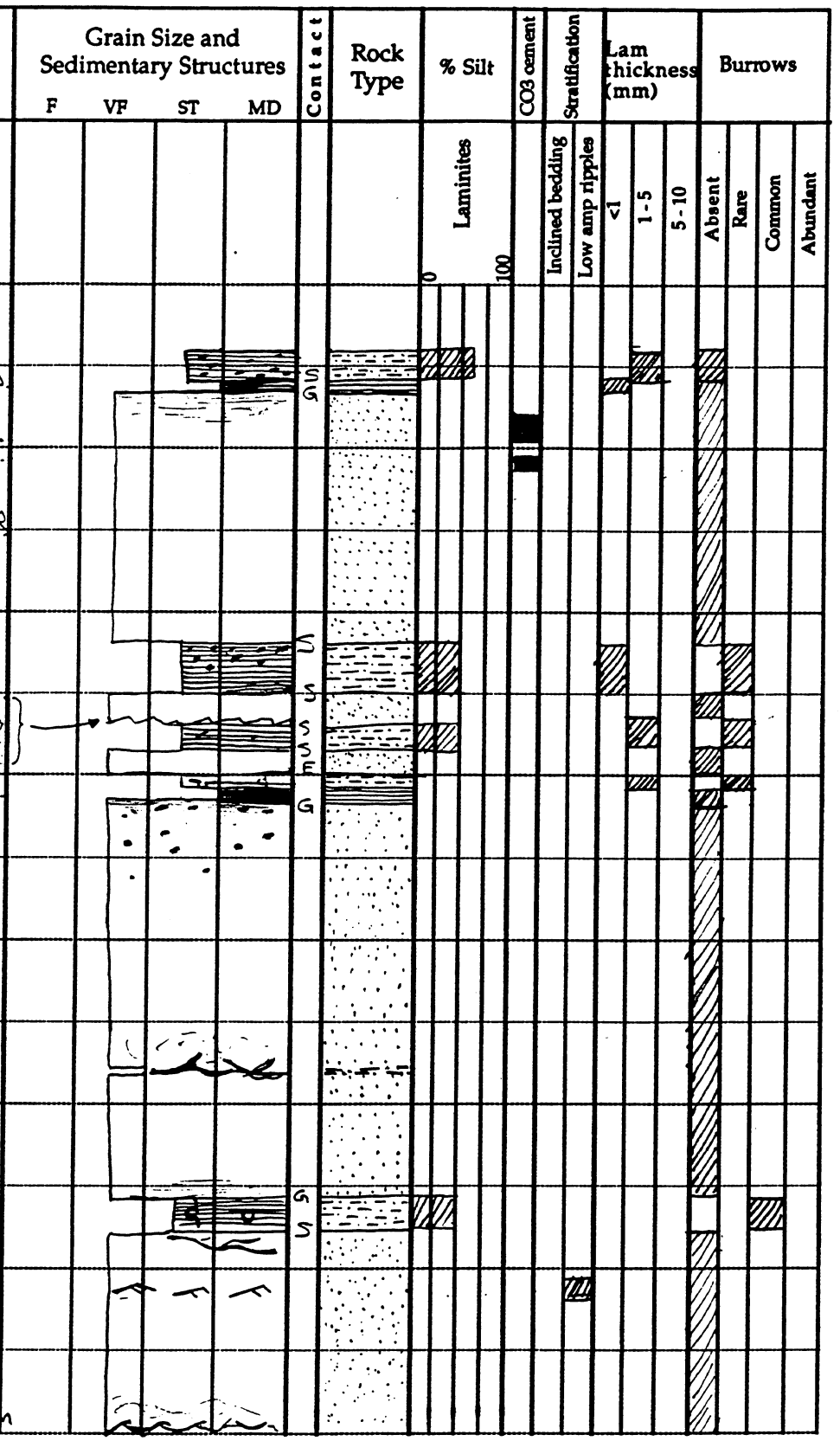
Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2685															
2690	Very fine grained		S												
	Massive Sandstone, with some ripple lamination and planar lamination where the grain becomes finer.														
2695															
← 2697															
2700															

FGU7

Well RAMSEY 18-14 Core depth (+) 2662 (−) 2756 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments
2660	
2662	Fine laminated siltstone, with many organic-rich flakes. In a sharp contact to very fine laminated mudstone, black in color.
2665	Some deformed soft sediment structures in the mudstone. Contact with underlying Massive sandstone is gradual. Massive Sd. is very fine grained, slightly friable.
2670	
2675	This lower contact between sandstone and siltstone, presents microfaulting.
2680	Massive sandstone with organic rich fragments toward the top.
2685	sediment soft deformation. 1" thick, where the grain becomes finer.
2690	
	Ripple Lamination.
2695	Continued out of phase wavy lamination. Flame structure at the bottom



Well RAMSEY 18-14 Core depth (+) 2662 (−) 2756 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2695															
	MISSED SECTION 27'														
2722															
	Very fine grained sd. good sorting, many sedimentary structures.														
2725	Ripple lamination toward top. Discontinued wavy lamination. Locally bioturbated.														
2730	The bottom could be erosive, with irregular surface and many ripup clasts.														
	Fine laminated siltstone planar lamination high angle. Ripple lamination. Highly bioturbated toward bottom.														
2735															
	MISSED SECTION 15'														
2750															
	Very fine grained sd. With many sedim. struc. Ripple lamination, parallel lamination, through cross bedding. Microfaulting toward bottom.														
2755															
2756															

FGU 14

Well Ramsey 18-9 Core depth (+) 2755.5 (−) 2703.0 = Log depth @

Formation Ramsey Location Logged by Sigrid Date 7-1-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2700									
1									
2									
3				TOP OF CORE					
4		vf d							
2705									
6		vf d							
7									
8									
9									
2710									
1									
2									
3									
4									
2715									
6									
7		vf d							
8									
9		d vf							
2720									
1									
2									
3									
4									
2725									

Well Ramsey 18-9 Core depth (+) 2755.5 - (−) 2703.0 = _____ Log depth @ _____

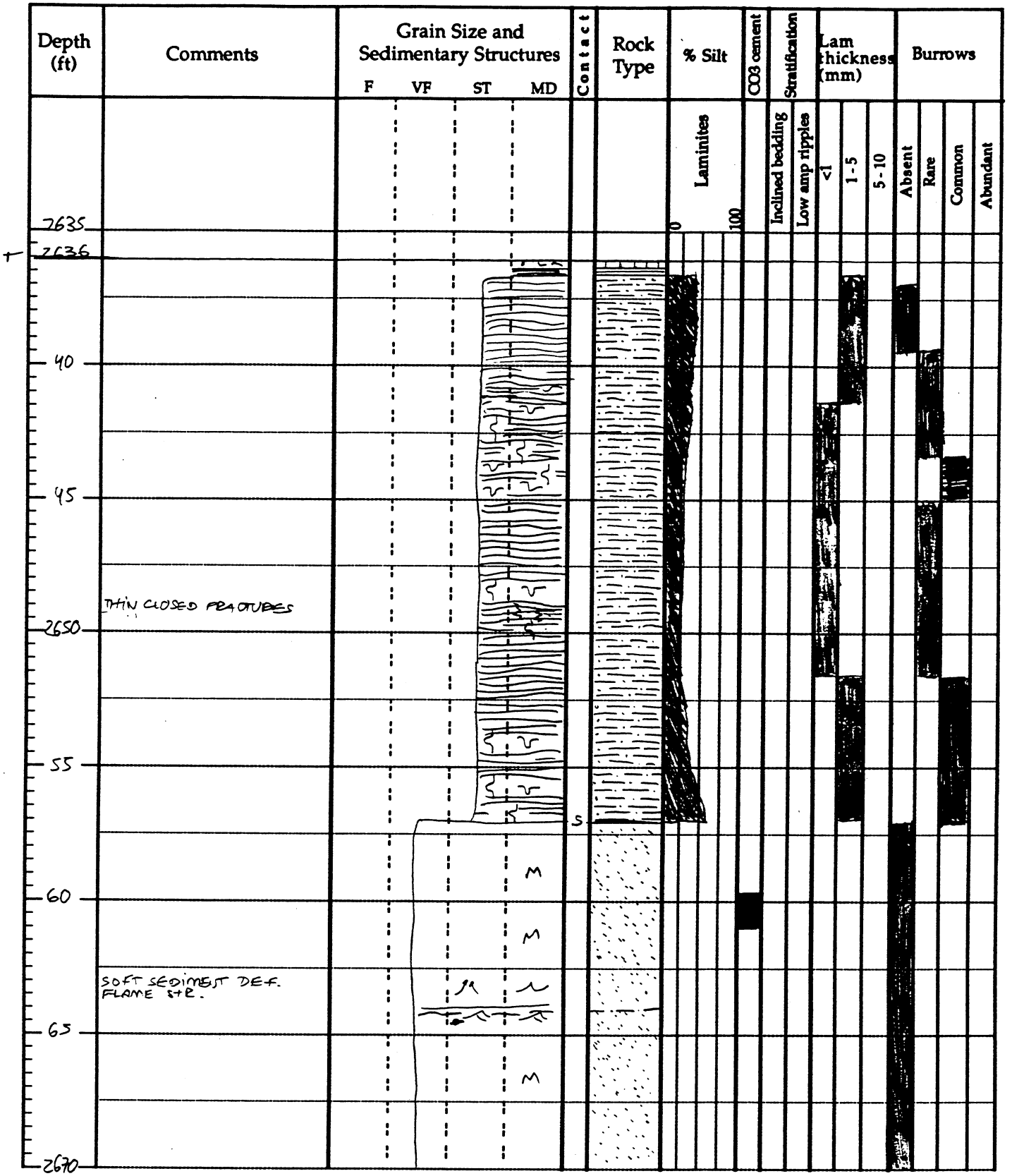
Formation Ramsey Location _____ Logged by Sigrid Date 6-28-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO_3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2725									
6	friable massive SS cm. size organic feature at 27.1 ft.								
7									
8									
9	climbing ripples. Organic debris more abundant at top & bottom of interval		L						
2730			S						
1	SS typically friable. SS color changes from tannish gray to tan at 31.0. Contact is sharp								
2									
3	CO_3 cmted zone 33.0-33.5 ft Grn size reaches uvf. Wispy low-angle lams at 33.8								
4									
2735									
6									
7	MISSING BOX from 2736-2739								
8									
9	CO_3 cmted interval from 39.0-39.7 ft								
2740									
1	SS becomes more friable moving up through interval.								
2	fining upward sequence from wavy discont. organic lams to silt size &								
3	organic cm. thick wavy lam. coarsens upward through rippled bedding to lvg with mm organic clasts to massive SS.								
4									
2745	Abundant CO_3 cmt. at 46.0								
6	Sharp boundary from silt/organic/lvf laminite to lvf/uvf massive SS. Burrow? at 47.7 & 47.9.								
7									
8			S						
9	abundant organic clasts & burrowing Laminae chewed up by burrowing								
2750									
1	Clasts are aligned horizontally with laminae. Sandier lams contain some lvf size qtz. grns.								
2									
3									
4									
2755									
	Burrowing is rare. No organic clasts								
	Bottom core								
2760									

NOTE - Laminites display "sets" of <1 mm organic/siltstone laminae with >1 mm silt/lvf ss laminae that are generally burrowed (horizontal?). Organic clasts in laminites are mm size and can be distributed

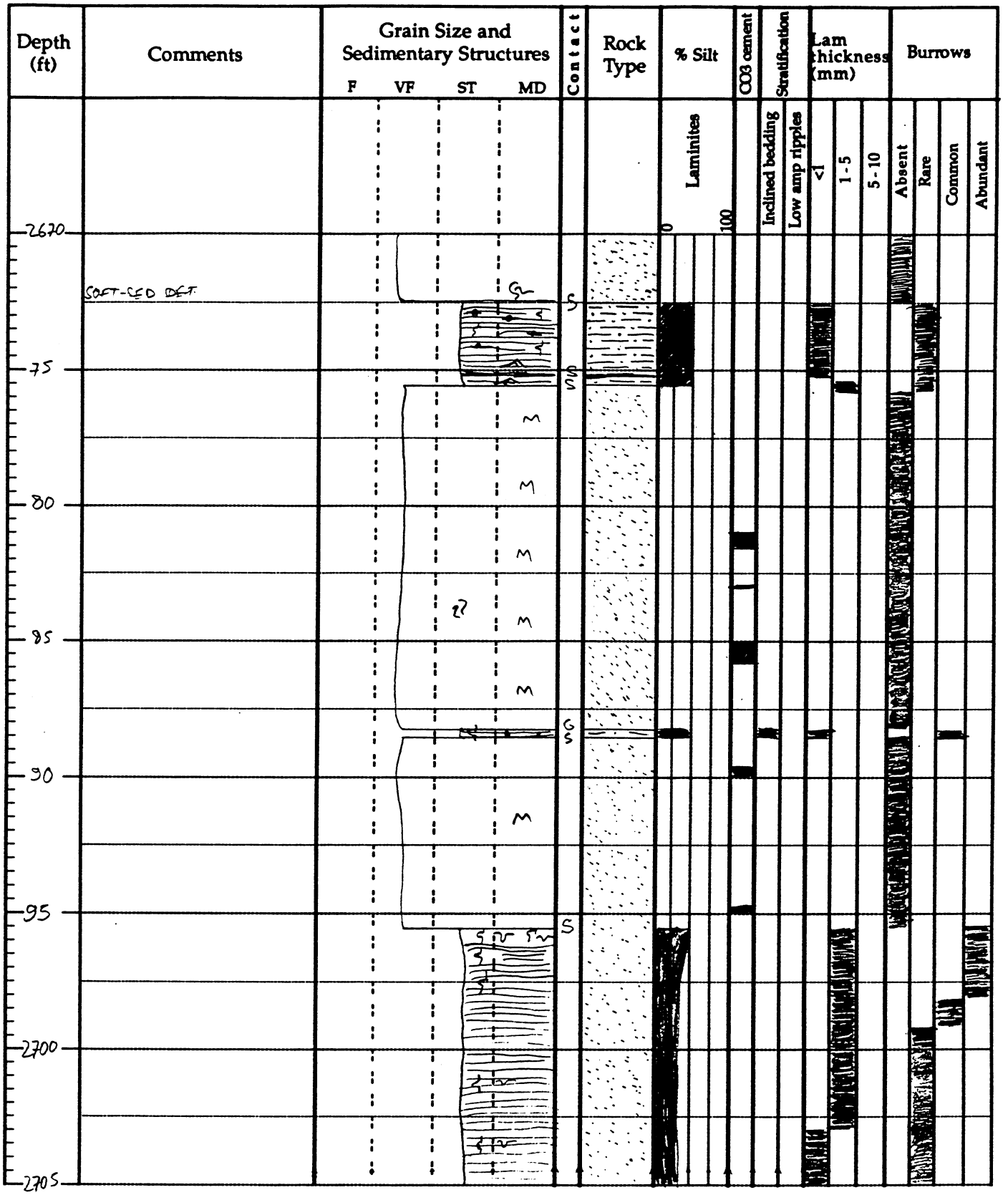
Well RAMSEY 18-7 (FGU-12) Core depth (+) 2636 (−) 2750 = 114' Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____



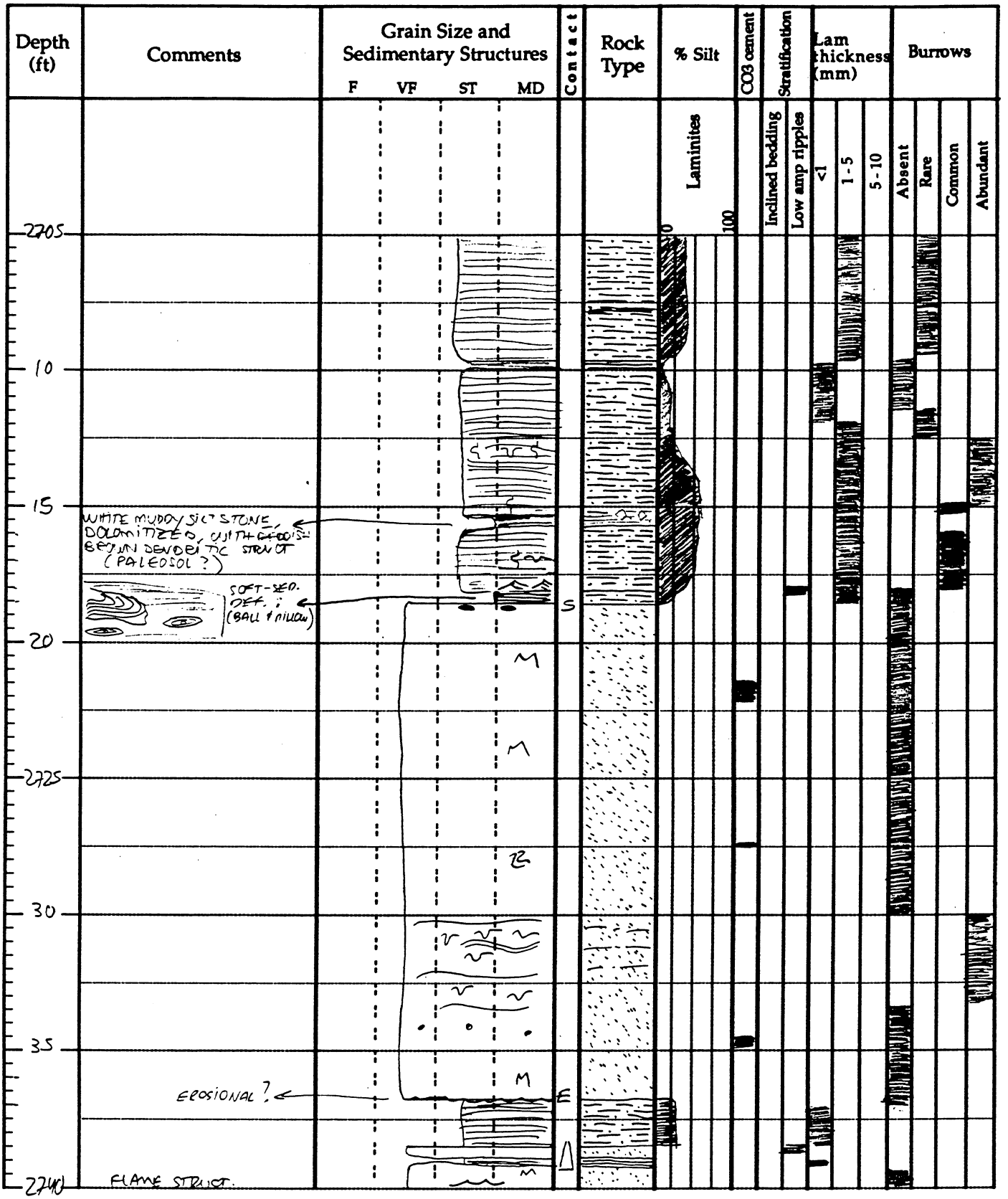
Well Ramsey 18-7 (FOU-12) Core depth (+) (−) 2636 / 2750 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____



Well Ramsey 18-7 (FGU-17) Core depth (+) 2636 / (−) 2750 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____



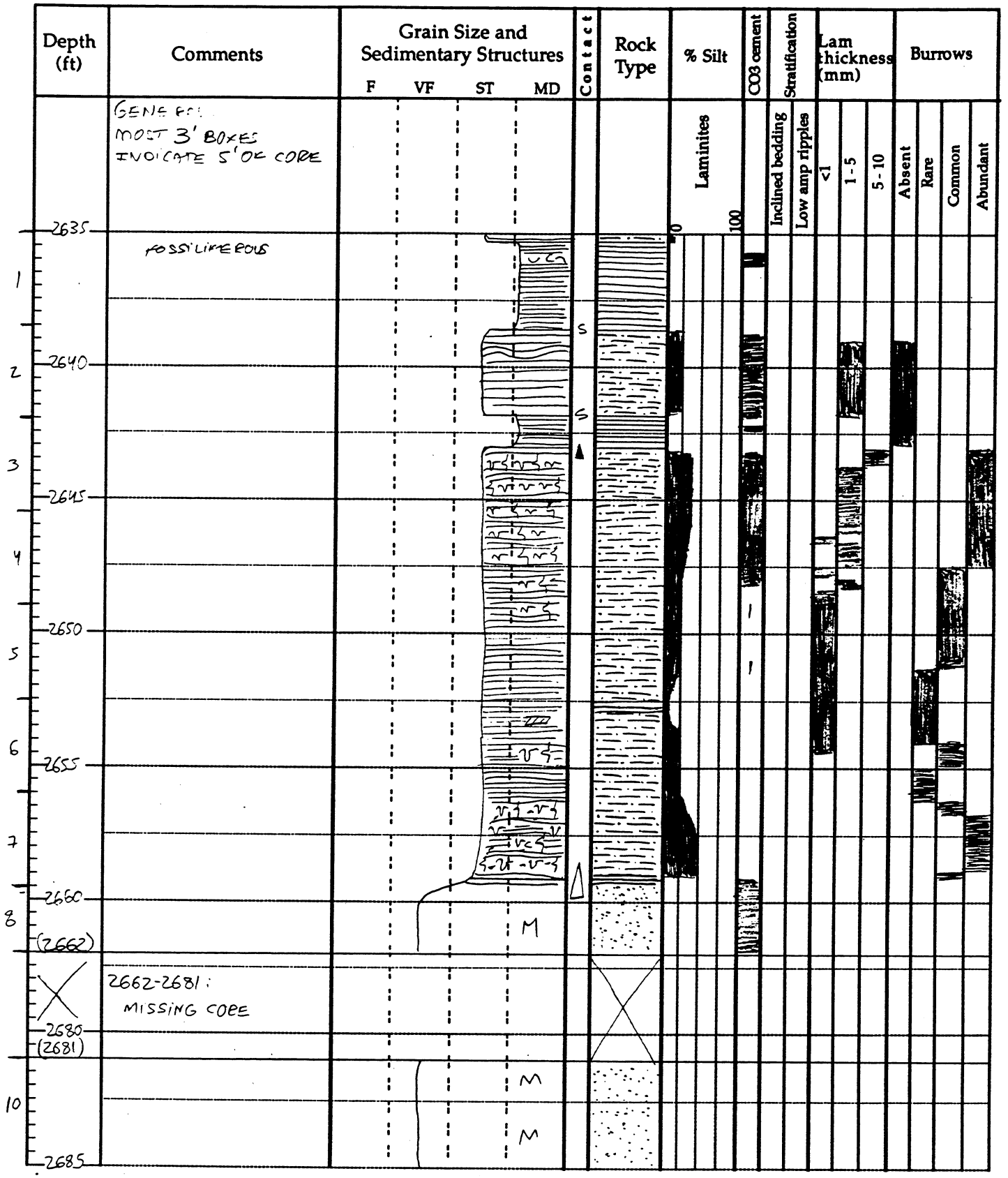
Well Ramsey 18-7 (FGU-17) Core depth (+) 2636 (−) 2750 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2740									
45									
2750									

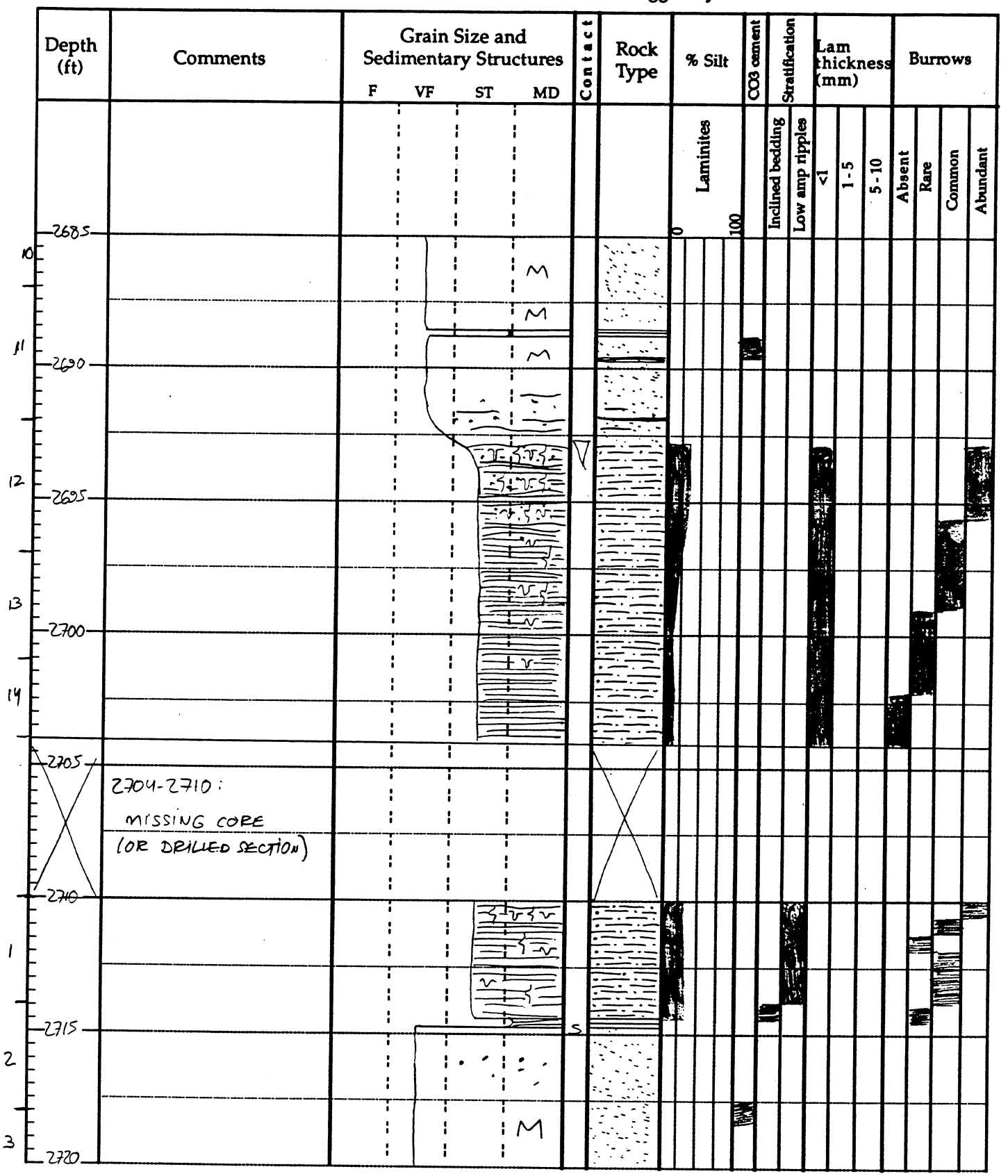
Well Ponse / 18-1 (FG420) Core depth (+) 2635 (−) 2794 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 9/20/96



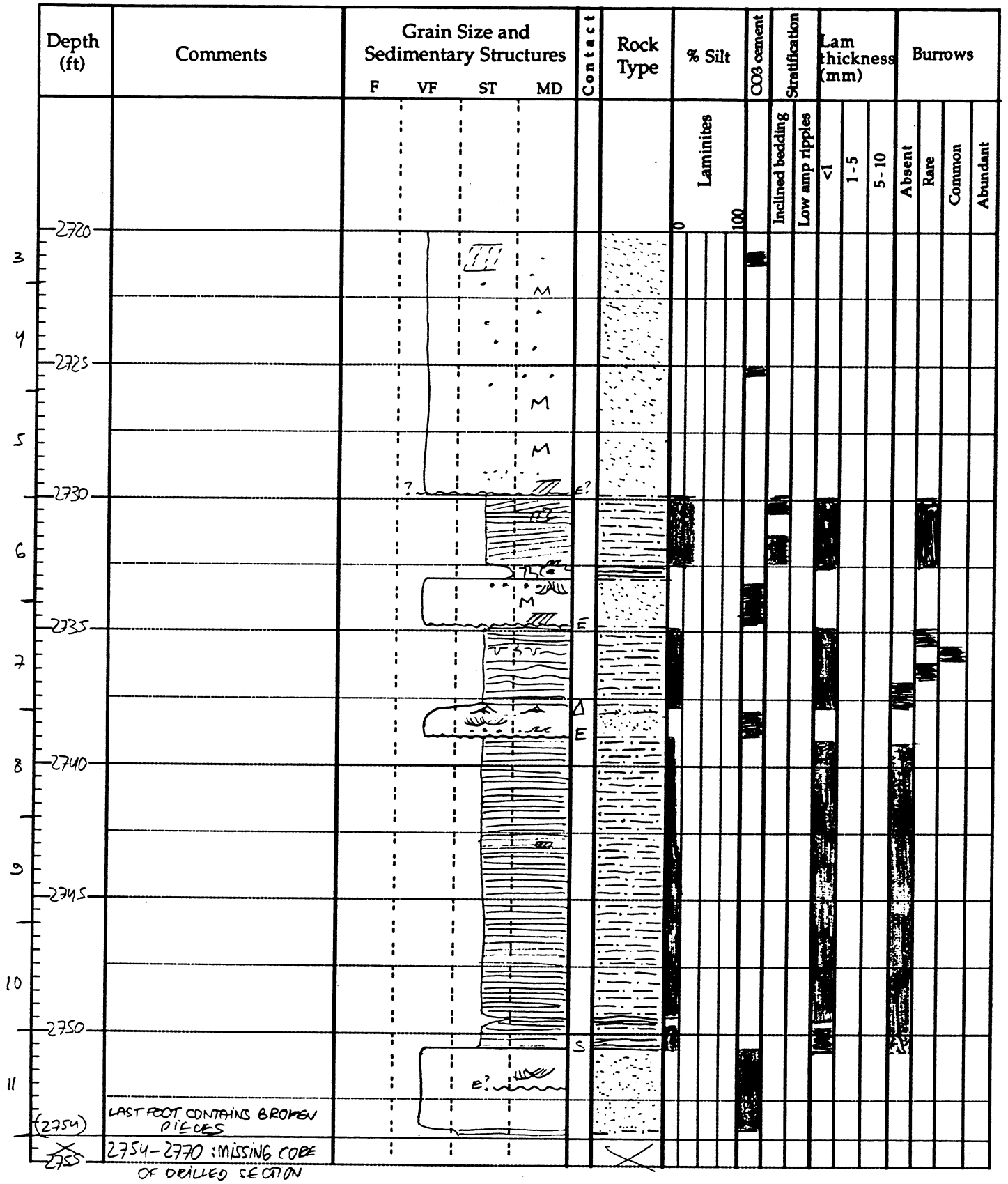
Well Ramsey 18-1 Core depth (+) 2635 (−) 2794 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 9/20/96



Well Ramsey 184 Core depth (+) 2635 (−) 2794 = _____ Log depth @ _____

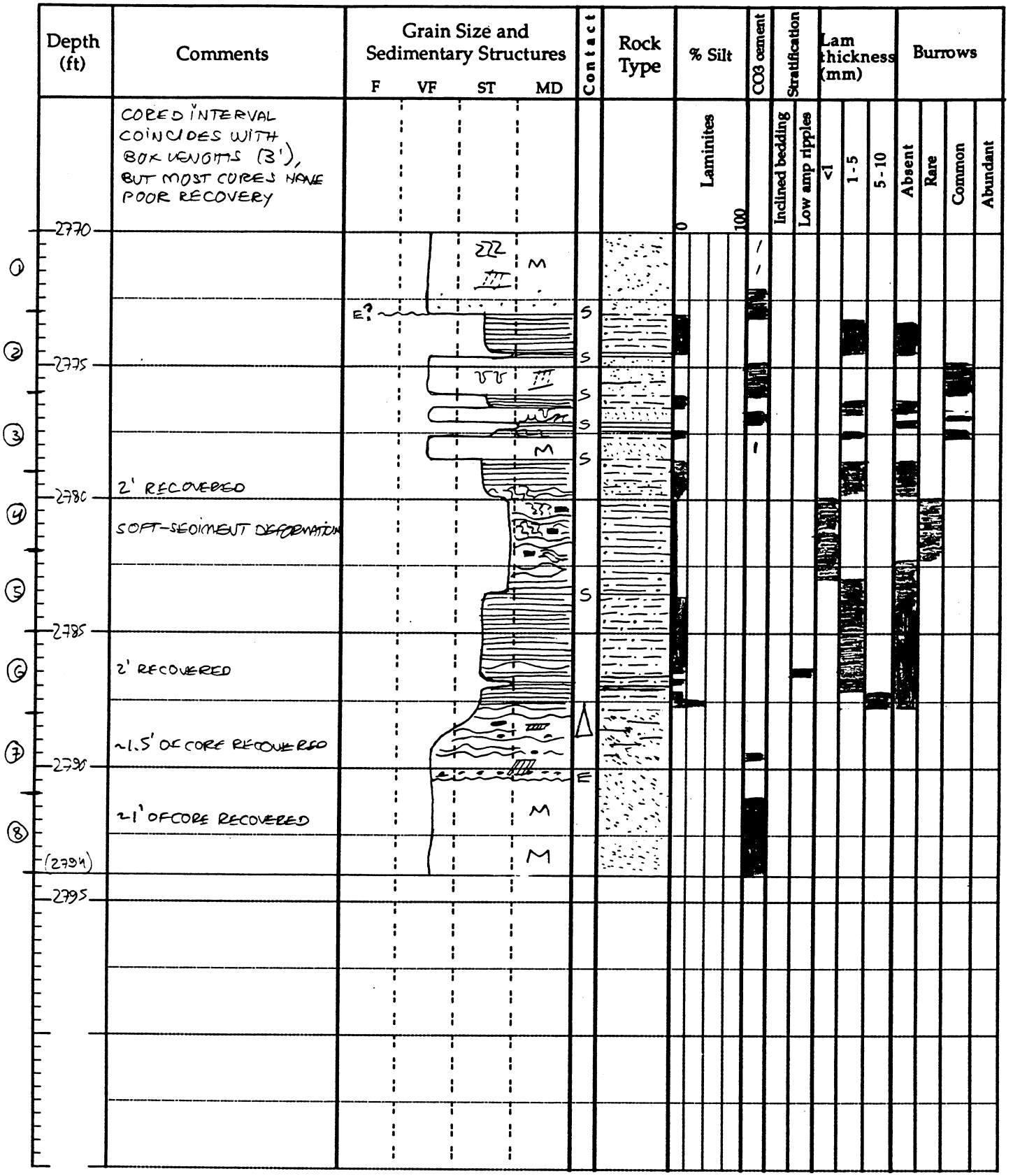
Formation _____ Location _____ Logged by Jose Date 9/20/96



Well Ramsey 18-1 Core depth (+) 2635 (−) 2794 = _____ Log depth @ _____

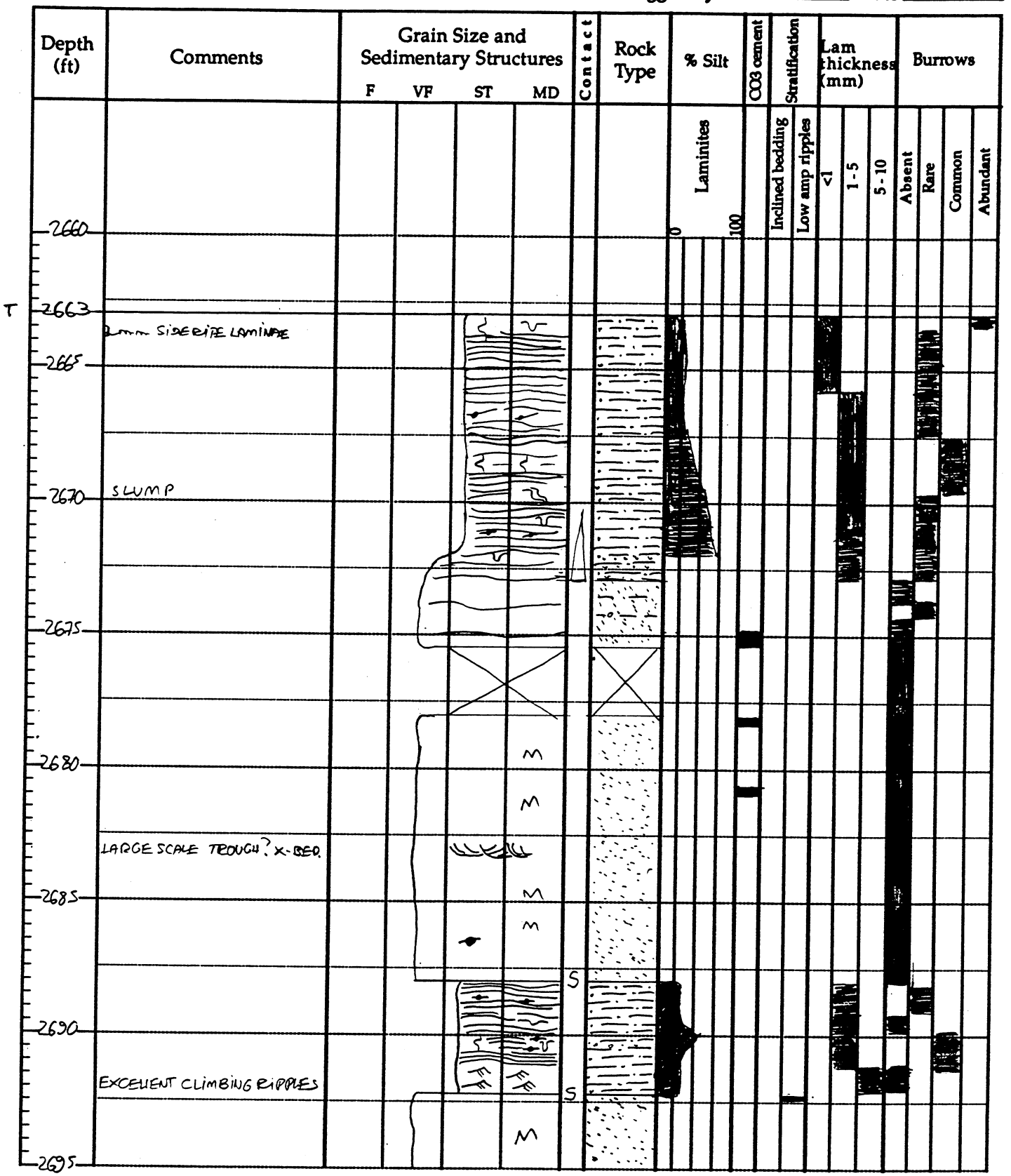
Formation _____ Location _____ Logged by JOSE Date 09/20/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification	Lam thickness (mm)	Burrows
	CORED INTERVAL COINCIDES WITH BOX VENOTTS (3'), BUT MOST CORES HAVE POOR RECOVERY				Laminites		Inclined bedding; Low amp ripples	<1; 1-5; 5-10	Absent; Rare; Common; Abundant
2770									
2775									
2780	2' RECOVERED; SOFT-SEDIMENT DEFORMATION								
2785	2' RECOVERED								
2790	~1.5' OF CORE RECOVERED								
(2794)	~1' OF CORE RECOVERED								
2795									



Well RAMSEY 18-11 (FCU-22) Core depth (+) 2663 (−) 2713 = _____ Log depth @ _____

Formation _____ Location _____ Logged by CARLOS Date _____



Well RAMSEY 18-11 Core depth (+) 2663 / (−) 2713 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – Laminites – 100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2695															
	- RIPPLE IN MD CHECK LOCATION OF THIN MD LATER WITH GR														
2700															
		M													
2705															
		M													
	SOFT-SEDIMENT DEF. WATER ESCAPE STRUCT.														
2710															
2713															
2715															

Well RAMSEY 13-4 (FGU 30) Core depth (+) (−) 2659 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2655																
← 56	TOP OF CORE.															
	Fine laminated siltstone, highly bioturbated, slightly calcareous.															
2660																
	Very fine laminated siltstone, with several reddish layers of siderite.															
2665																
	Fine laminated siltstone rarely bioturbated.															
2670	Massive black lutite, 2" thick.		S													
			S													
2675	Massive sd. Friable, locally cemented by calcite.															
2680																
	Missed Section 3'															
2685	Massive sd. As Above. Bottom is erosive, with many rip-up clasts of organic matterial.		E													
	Missed Section 1.5'															
2690	Massive lutite, siliceous, with some contorted bedding.		S G													

FGU 30

Well RAMSEY 13-4 Core depth (+) 2656 (-) 2714 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2690	Massive Sandstone Friable. Top grades to massive lutite. Bottom is probably sharp, marked by laminae of carbonaceous black shale, non calcareous.															
2695																
2700			S													
	Fine laminated siltstone, bioturbated with many organic-rich flakes															
2705																
	MISSED SECTION 3'															
2710	Very fine laminated siltstone, with some shell fragments replaced by pyrite. Bioturbation is rare to absent.															
2714	END OF CORE															

Well Ramsey 19-3 (FGU-35) Core depth (+) 2658 / (−) 2676 = 2736 / 2763 Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2655									
T 2658									
2660									
2665	SIDERITE LAMINAE								
2670									
2675									
B 2676									
2735									
T 2736									
2740									
2745									

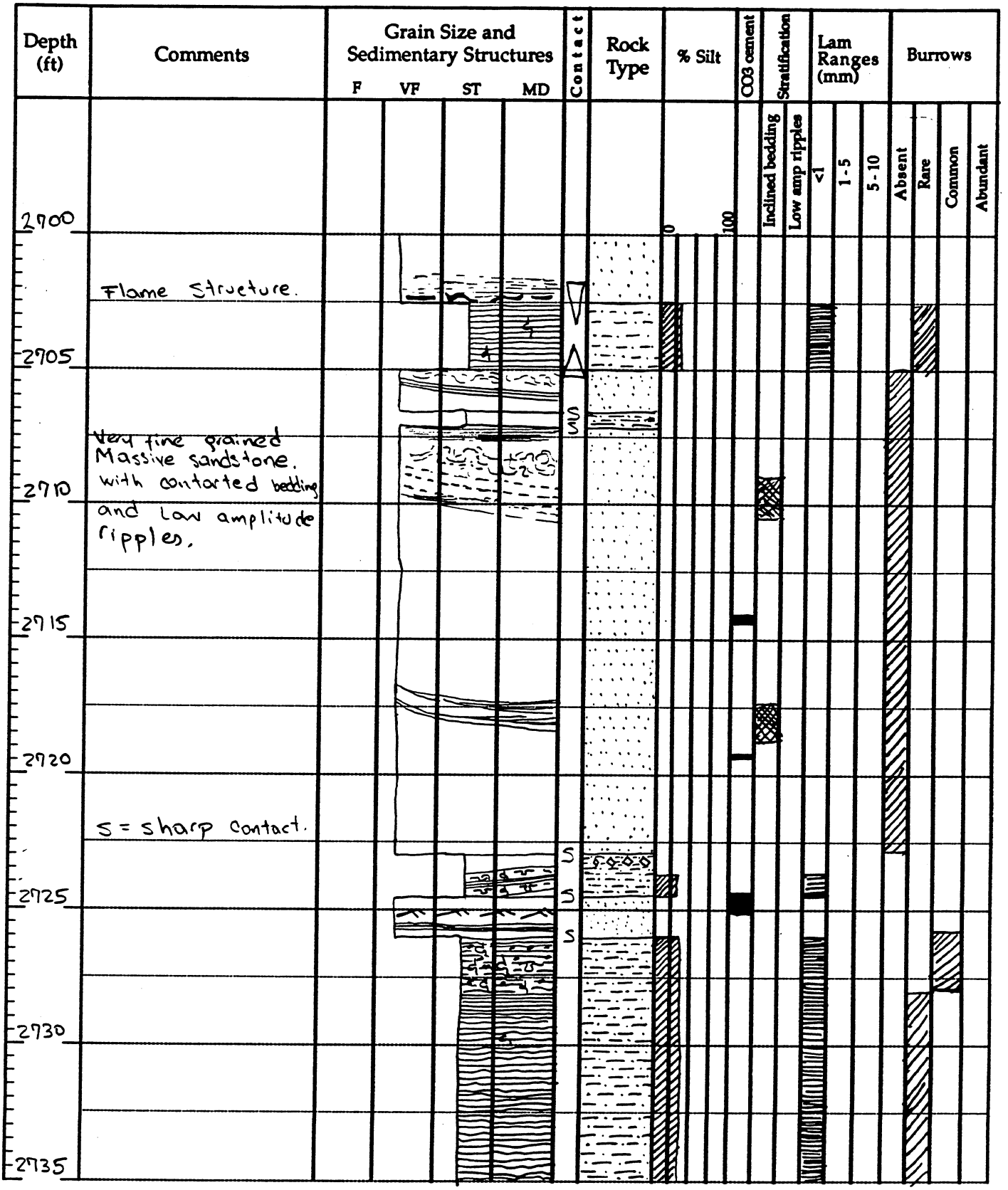
Well EGU 40 RAMSEY 19-8 Core depth (+) 2665 (−) 2781.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam Ranges (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2665	Black Mudstone (0.5') laminated, with some fossils about 1cm diameter, replaced by calcite and pyrite. To the bottom condensed section slightly calcareous about 5mm Thickness.								
2670	Fine laminated siltstone highly bioturbated, slightly calcareous. Trace fossils are Nereites.								
2675									
2680	Fine laminated siltstone, locally bioturbated. Several redish layers of siderite.								
2685									
2690	Contact section is missed Probably Gradual Very fine grained, massive sandstone Top is highly cemented by calcite.		?						
2695									
2700									

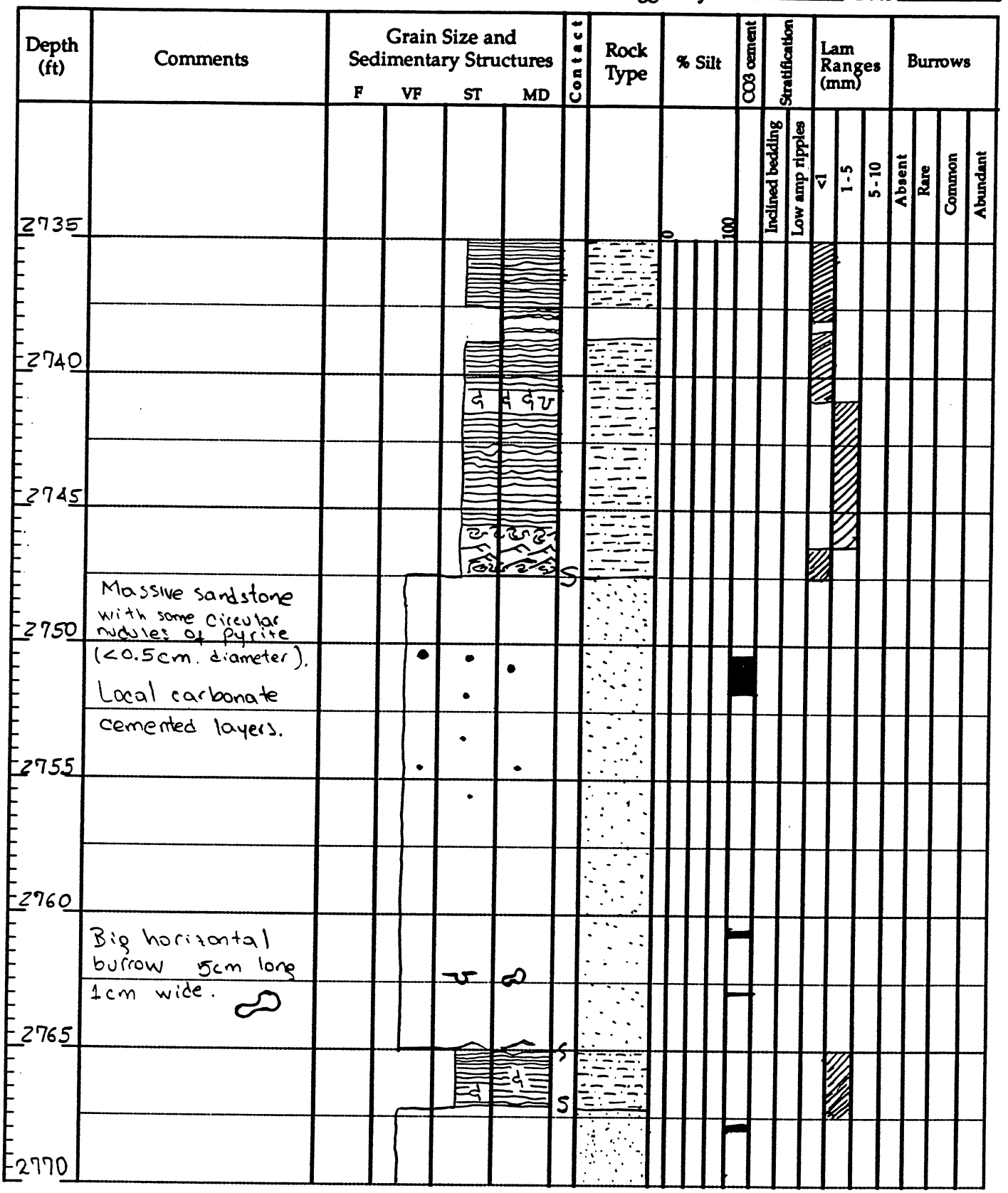
Well RAMSEY 19-8 Core depth (+) 2665 (−) 2781.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____



Well RAMSEY 19-8 Core depth (+) (−) _____ = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____



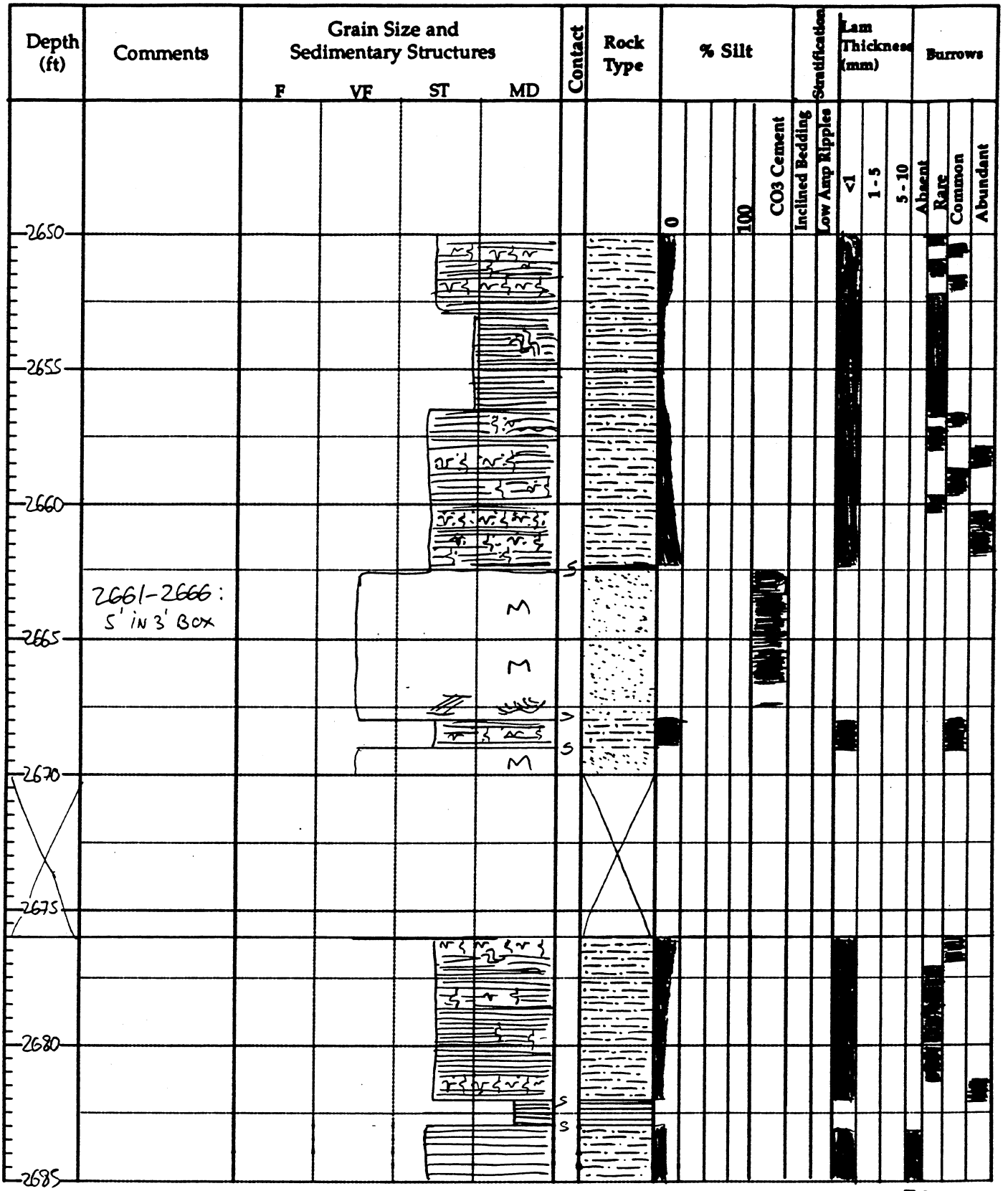
Well RAMSEY 19-8 Core depth (+) (−) _____ = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam Ranges (mm): <1	Lam Ranges (mm): 1-5	Lam Ranges (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2770															
	Vertical burrows or 'pipe' structures formed by water escape. They are 5cm long and less than 1mm. wide with a black material at the top of each one. A lot of bioturbation at the bottom.														
2775															
2780	G = Gradual contact		G												
2785															
27															

Well Ramsey 24-2/FGU-44 Core depth (+) 2650 (−) 2728 = _____ Log depth ⊙ _____

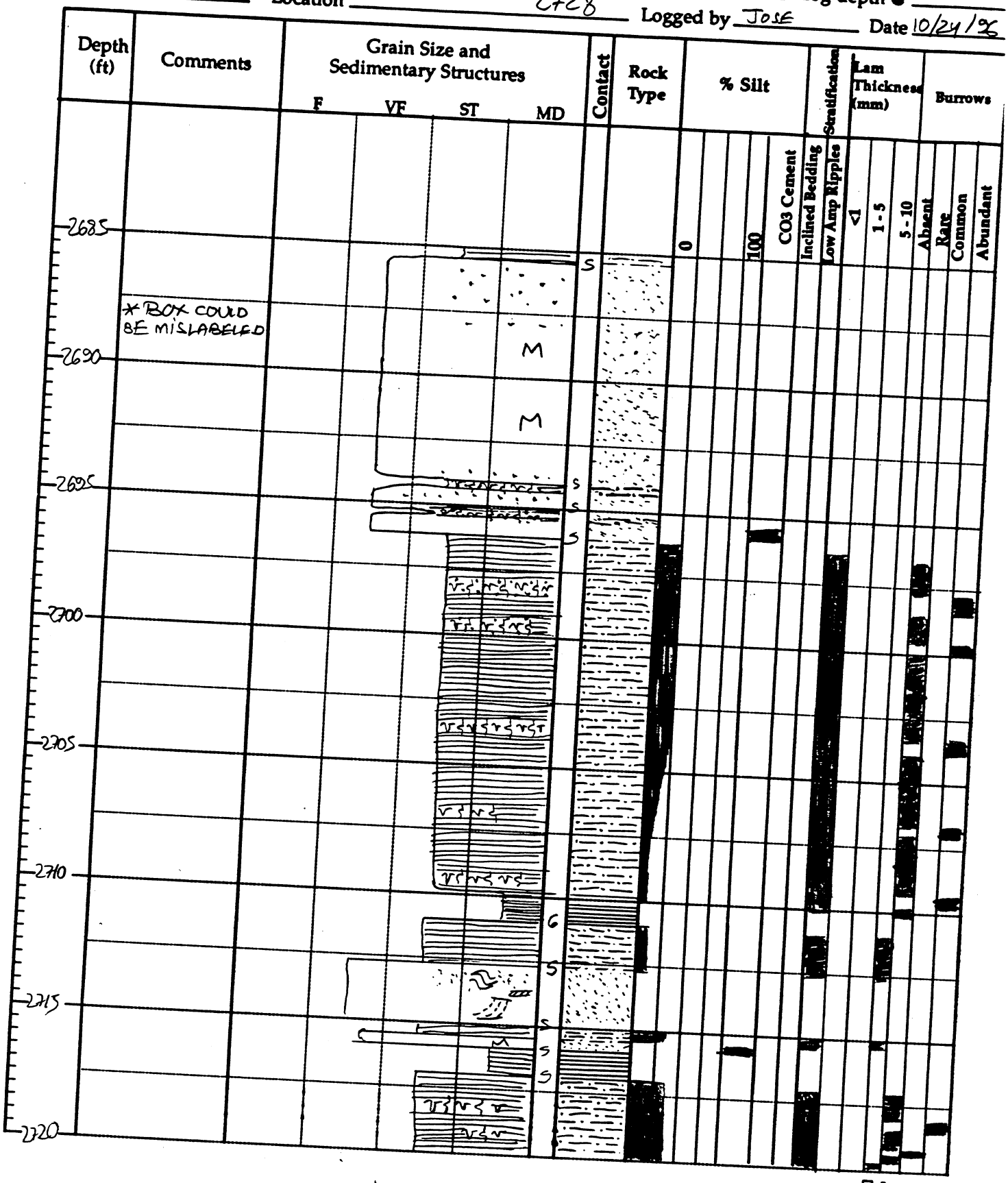
Formation _____ Location _____ Logged by JOE Date 10/24/26



Bureau of Economic Geology

Well Ramsey 24-2 / FW-44 Core depth (+) 2650 (−) 2728 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 10/24/96

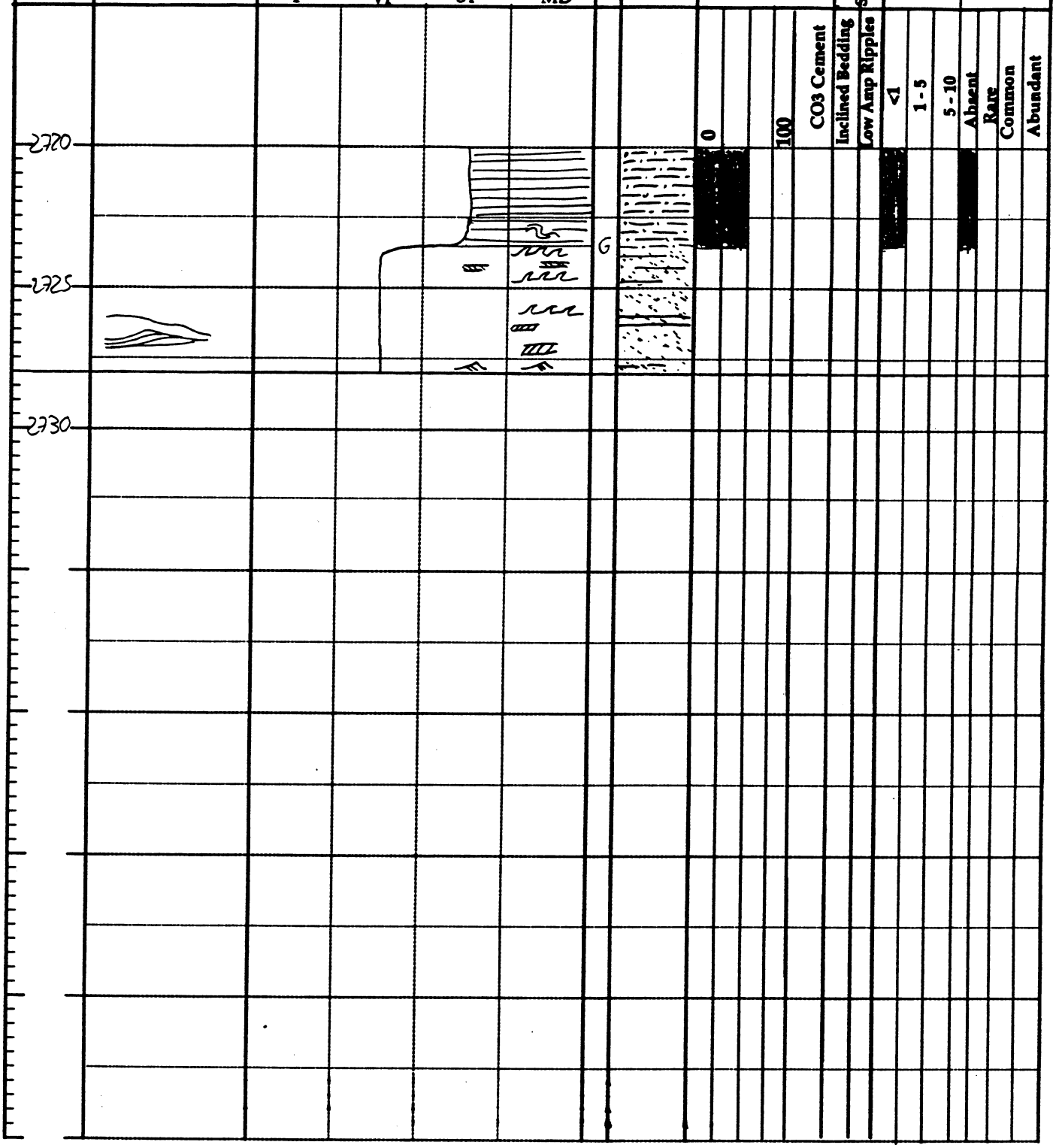


Bureau of Economic Geology

Well Ramsey 24-2 / FGU-44 Core depth (+) 2650 (−) 2728 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/28/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures	Contact	Rock Type	% Silt	Stratification	Lam Thickness (mm)	Burrows
		F VF ST MD			0 100 CO3 Cement	Inclined Bedding / Low Amp Ripples	<1 / 1-5 / 5-10	Absent / Rare / Common / Abundant



Bureau of Economic Geology

Well RAMSEY 19-6/FGU-47 Core depth (+) 2659 (-) 2710 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/24/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Inclined Bedding	Low Amp Ripples	Lam Thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
	2" CORE 4' REPORTED IN 3' BOXES									
2655										
	TOP OF CORE									
2660										
2665										
2670			S							
2675		M								
2680		M								
2685	OVERSTEEPENED X-BEDDING (>35°)	M								
2690		M	S							

Bureau of Economic Geology

Well RAMSEY 1-6 / FGU-47 Core depth (+) 2659 (−) 2710 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/24/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures	Contact	Rock Type	% Silt	Stratification	Lam Thickness (mm)	Burrows
		F VF ST MD			0 100 CO3 Cement	Inclined Bedding / Low Amp Ripples	<1 / 1-5 / 5-10	Absent / Rare / Common / Abundant
2690		ST	S					
		MD: M						
2695								
		MD: M						
2700		MD: M						
		MD: M						
2705		MD: M						
		MD: M						
2710	BASE OF CORE							

Bureau of Economic Geology

Well Ramsey 19-48 (FGU 50) Core depth (+)(−) 2649-2687 = _____ Log depth @ _____

Formation Ramsey Location _____ Logged by Sigrid Date 10-8-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2645									
6									
7									
8									
9		Top Core							
2650		CORE missing 2649-2650							
1									
2	faint lams at 2652.		S						
3		M							
4									
2655									

Well Ramsey 19-48 (FGU 50) Core depth (+) (−) 2649 - 2687 = _____ Log depth @ _____

Formation Ramsey Location _____ Logged by Sigrid Date 10-7-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification	Lam thickness (mm)	Burrows
2655									
6	Sharp contact at 2658 due to grain size change from wvf to silt	M							
7			L						
8	very indistinct lams at 2658.		S						
9									
2660	very friable SS 2658-2662	M							
2665									
6		M							
7									
8									
9									
2670									
1									
2		M							
3									
4									
2675									
6									
7		M							
8									
9									
2680									
1									
2		M							
3									
4									
2685									
6									
7		Bottom Core 1							
8									
9									
2690									

Laminites | Inclined bedding | Low amp ripples | <1 | 1-5 | 5-10 | Absent | Rare | Common | Abundant

☆ NOTE - 4 ft core labeled on each 3 ft box

71.9
72.8

Well Ramsey 19-46 (FGU 51) Core depth (+) 2670 - (-) 2738 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 7-25-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2670		TOP CORE														
1	3cm. thk lutite. Almost all mud size grns. Almost no silt		S													
2		p														
3		p														
4																
2675																
6																
7																
8			S													
9			S													
2680																
1																
2	wispy, loaded, organic-rich laminations															
3																
4	rip-up clasts 3mm thk lutite.		S													
2685																
6																
7																
8	A few organic clasts distributed in this interval.															
9																
2690																
1																
2																
3																
4																
2695																

Many 3 ft boxes were marked with 4 ft of core.

Well Ramsey 19-14 (FGU 51) Core depth (+) 2670- (−) 2738 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 7-25-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2695									
6									
7									
8									
9									
2700									
1	A patch of calcite cmt at 2700.2 patch								
2									
3	fining up to 3mm thk lutite								
4	Contorted lams due to burrowing								
2705		Bottom core							
2727		TOP CORE							
8									
9	mm size pyrite blebs	P P P							
2730									
1									
2	mm size pyrite blebs	P P							
3									
4									
2735									
6									
7	Pyrite blebs horizontally aligned	P P P							
8	Contorted features								
9		Bottom core							
2740									

Well RAMSEY 19-42/FGU-53 Core depth (+) 2640 (−) 2677 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 09/12/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2640									
2645									
2650			S						
2655			C?						
2660			S						
	MISSING CORE MATERIAL								
2665									
2670	2669-2673.5: MISSING BOX								
2675									

Well Ramsey 19-42/FGU-53 Core depth (+) 2640 (–) 2677 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 03/12/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2675		M													
	BASE OF CORE														
2680															

Well Ramsey 19-31 (FGU-54) Core depth (+) 2660 (-) 2686 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/23/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
	GENERAL: OVERALL BEDDING SLIGHTLY INCLINED: REGIONAL DIP 4'-5' OF CORE IN 3' BOXES								
2660			S						
		M							
2665									
			S						
2670									
		M							
2675									
		M							
2680	SOFT-SEDIMENT DEFORMATION								
		M							
2685									
2686	BASE OF CORE								
2690									

Well Ramsey 19-10 (FGU SS) Core depth (+)(−) 2653-2702 _____ Log depth @ _____

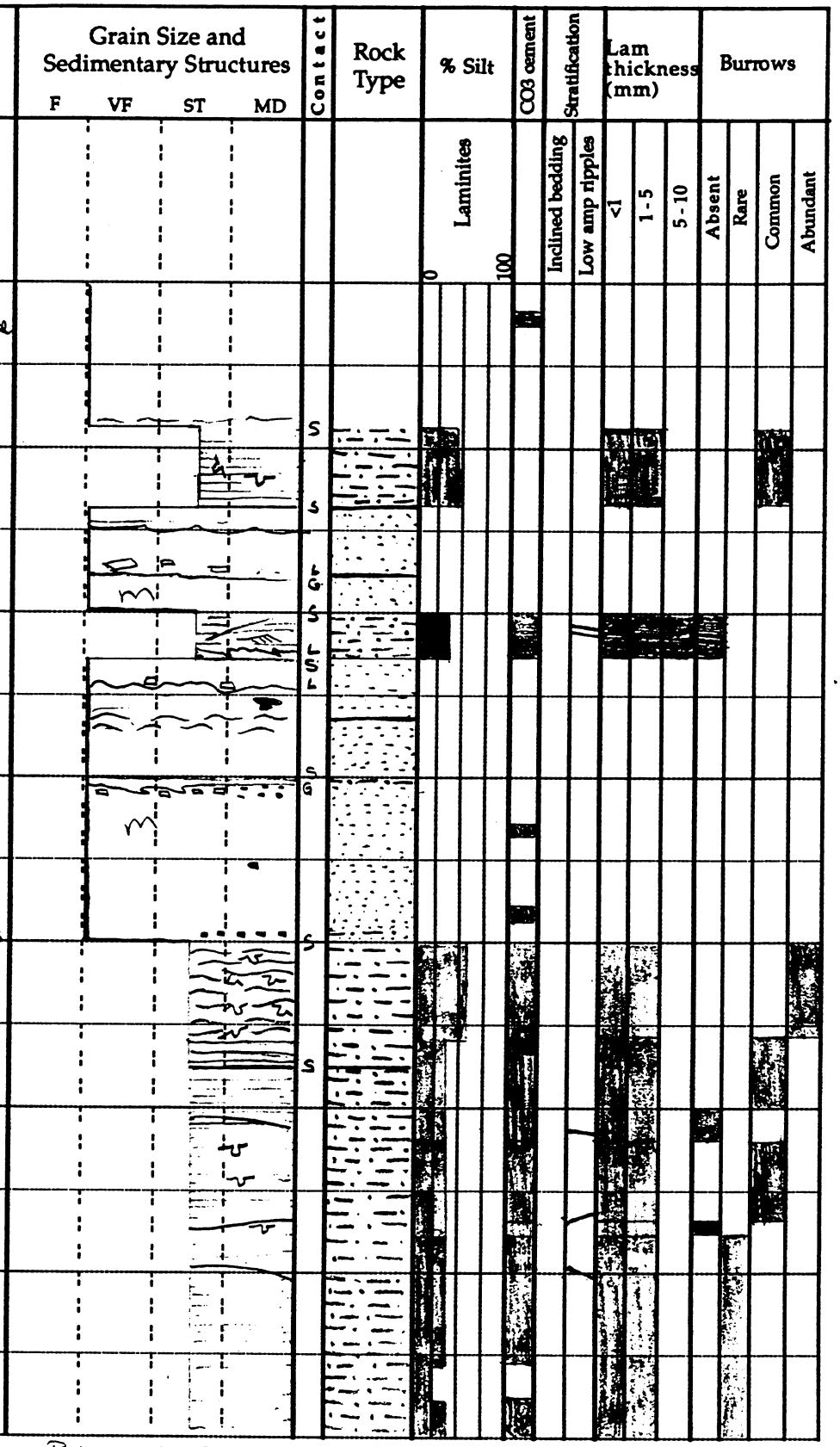
Formation Ramsey-Bell Location Culberson Co. TX Logged by Sigrid Date 10-3-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2650									
1									
2									
3				Top Core					
4									
2655									
6									
7									
8									
9									
2660									
1	wispy lams at 2661.6								
2									
3									
4	wispy lams, mm thick organic-rich lam at top overlain by more wispy lams								
2665									

Well Ramsey 19-10 (FGU 55) Core depth (+)(−) 2653-2700 Log depth @

Formation Ramsey-Bell Location Logged by Sigrid Date 10-1-96

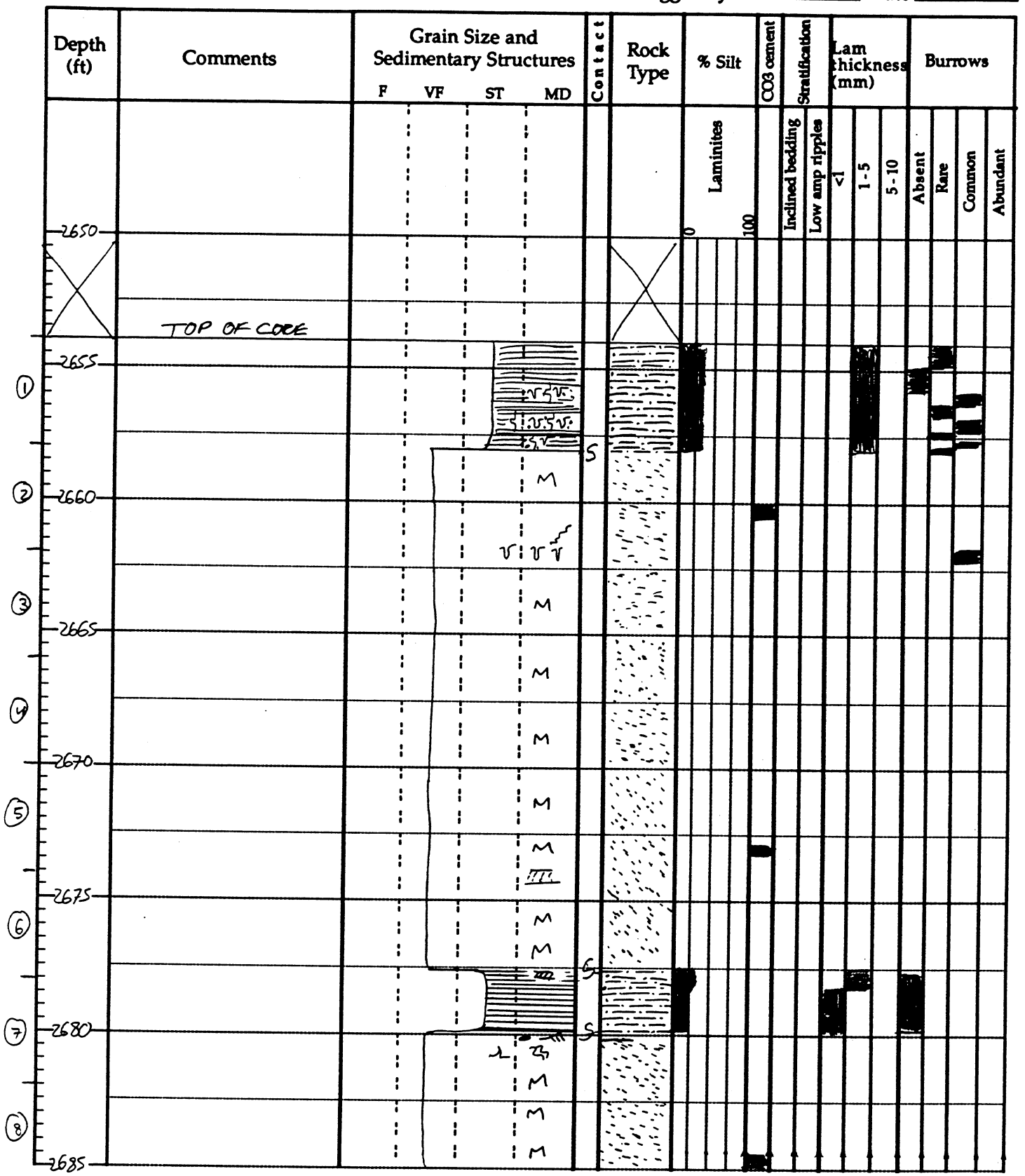
Depth (ft)	Comments
2665	
6	calcite cmted. zone is mottled throughout interval
7	
8	
9	wispy lams at base of ss
2670	
1	
2	1cm. thick lutite at 2671
3	2mm thick organic rich lam. & wispy lams
4	gradual fining up
2675	
6	faulting (photo available)
7	
8	There is some calcite cement distributed throughout interval but only heavily calcite cemented areas are noted
9	
2680	
1	
2	
3	
4	cm. thick silt/organic layer with mm size organic clasts
2685	
6	>1mm lams dominate 2685-2688 interval
7	
8	
9	4cm. thick organic-rich lam (lutite?)
2690	
1	
2	
3	
4	
2695	
6	~1cm thick interval of iron-stained lams at 2695.3
7	
8	
9	
2700	



Bottom core

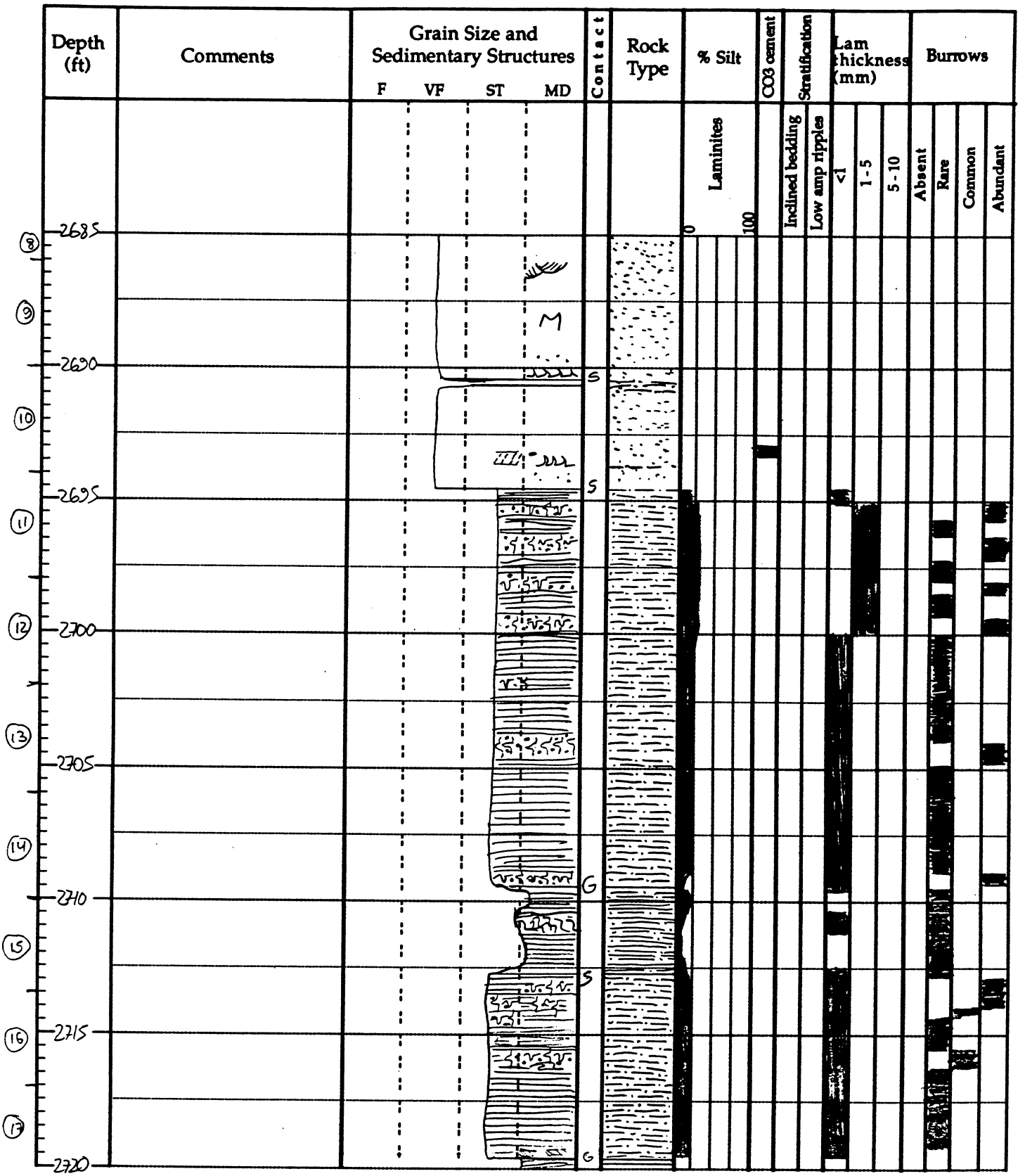
Well Ramsey 19-7 (FGU-56) Core depth (+) 2654 (-) 2765 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 09/10/96



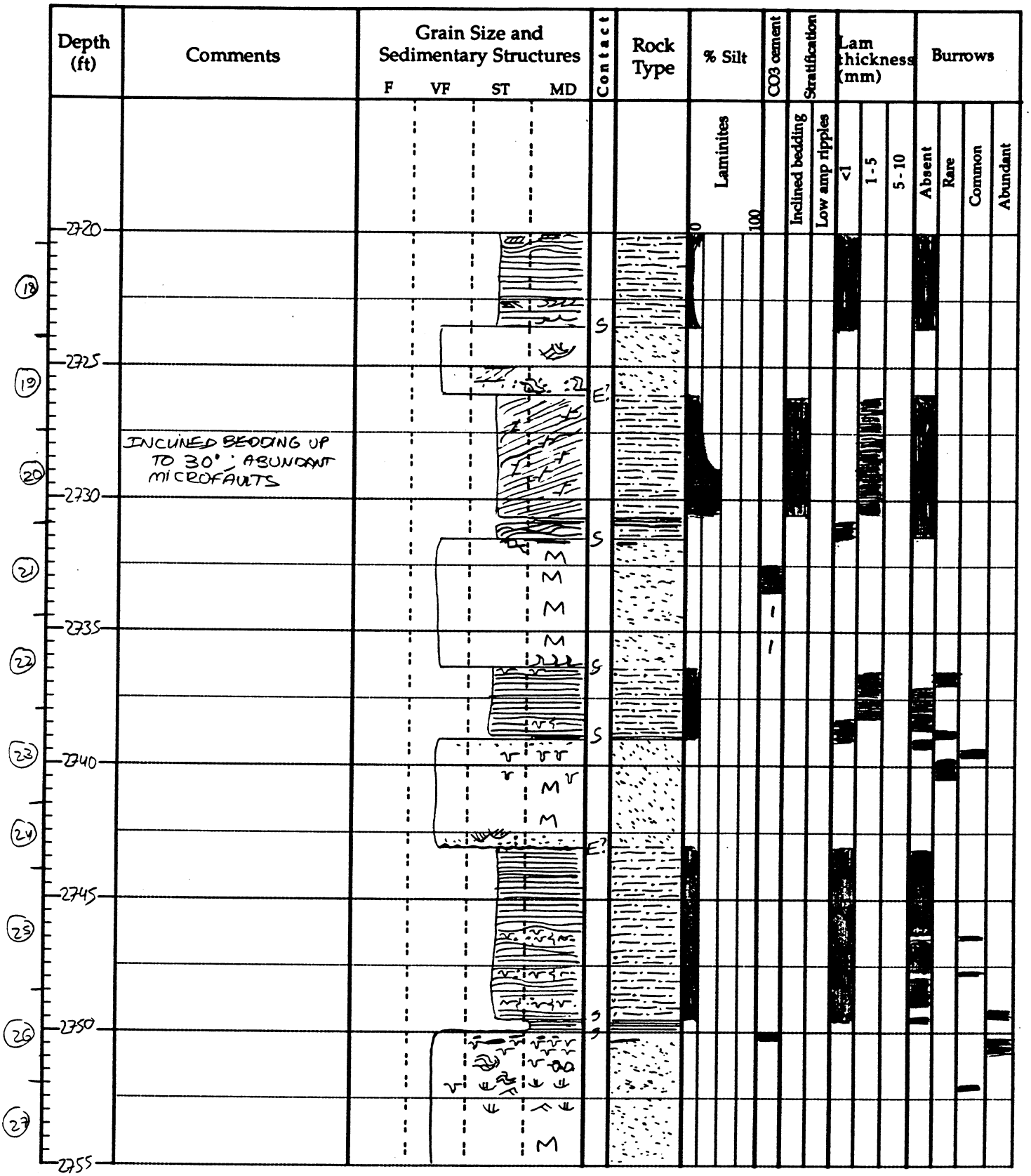
Well Ramsey 197 (FGU-56) Core depth (+) 2654 (−) 2765 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 9/10/96



Well RAMSEY 19-7 (FGU-56) Core depth (+) 2654 (−) 2765 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 09/10/95



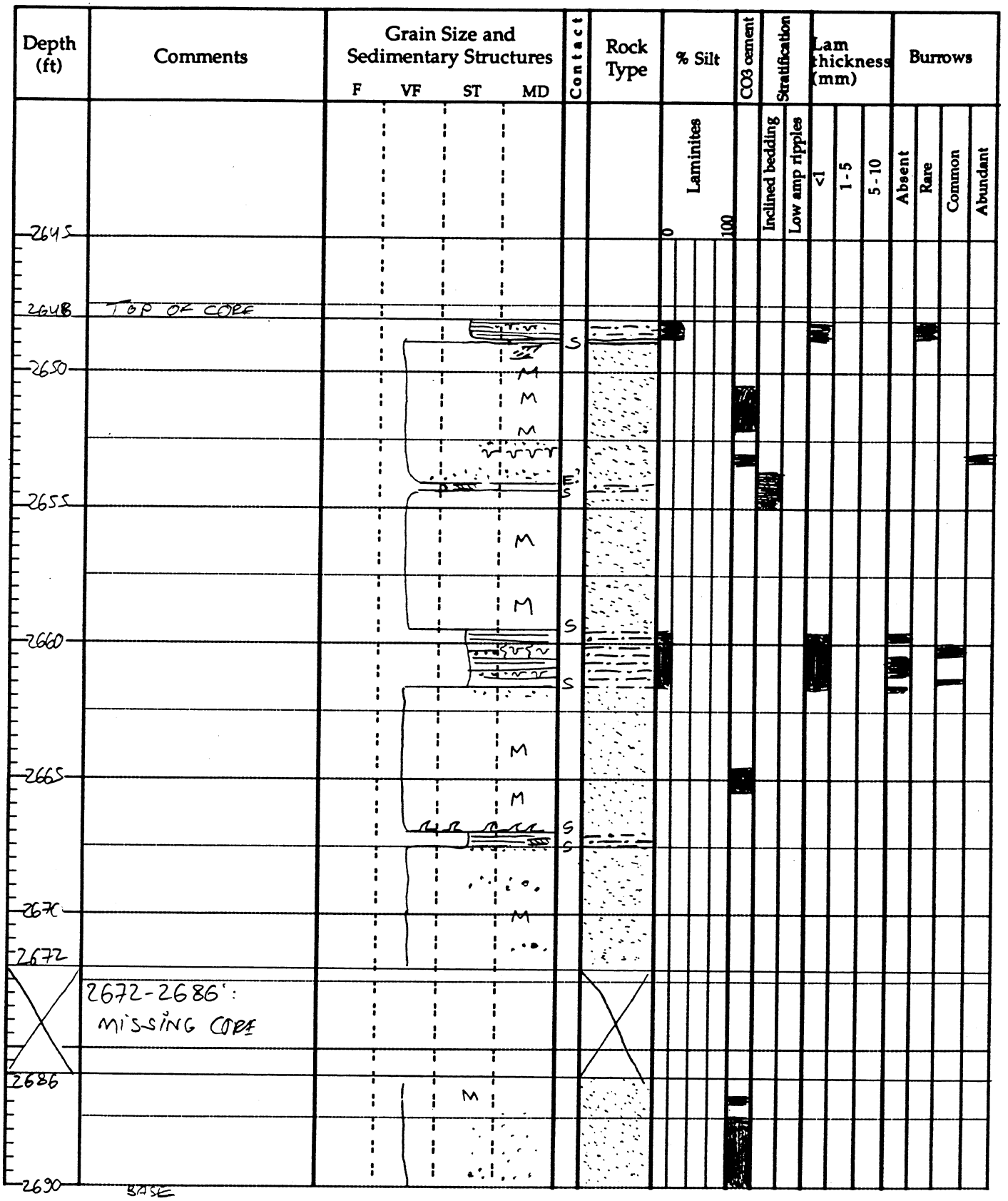
Well Ramsey 19-7 (FGU-56) Core depth (+) 2654 (−) 2765 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 09/10/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2755									
(28)		M				1			
		M				1			
2760 (29)		V V V							Abundant
(30)		M							
2765	BASE OF CORE								

Well Ramsey 19-32 (FGU-58) Core depth (+) 2648 (−) 2690 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/26



FGU 59

Well RAMSEY 19-40 Core depth (+) 2659 (−) 2680 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures: F	VF	ST	MD	Contact	Rock Type	% Silt (0 – 100)	CO3 cement	Stratification: Inclined bedding	Low amp ripples	Lam Ranges (mm): <1	1-5	5-10	Burrows: Absent	Rare	Common	Abundant
2655																		
2660																		
2665	Very fine grained massive sandstone friable. Locally cemented by carbonate.																	
2670	Toward the bottom presents a layer of about 4 inches thick with climbing ripples and continue wavy lamination.																	
2675																		
2680	Fine laminated siltstone with some organic-rich "flakes". No bioturbation.					S												

Well RAMSEY 19-37 (FGU-61) Core depth (+) 2667 (−) 2677 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 09/12/95

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
	GENERAL: 5' OF CORE REPORTED IN 3'-BOXES.															
2665																
2667	TOP OF CORE															
① 2670			S													
② 2675			S													
2677	BASE OF CORE		S													
2680																

Some missing section throughout

Well FGU 63 Ramsey 19-21 Core depth (+)(−) 2625 = 2673 Log depth @ _____

Formation Ramsey Location _____ Logged by Sigrid Date 6-18-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2625									
6									
7	2mm erosional lutite lam at 2626.7 ft Low amp ripples (15mm tk)		E						
8	at 26.9 ft Contorted lams at 27.3-27.5								
9									
2630									
	Distinct discolorated patches throughout ss SS becomes more friable between 37.0 - 39.0 ft								
2635									
	Contact between SS and laminites - low amp organic-rich ripples ~20 mm tk Note vertical burrowing at 38.0. clasts present		G						
2640									
1			S						
2			S						
3	some intervals very friable SS								
2645									
6	2645.0 - 2649.0 MISSING								
7									
8									
9									
2650									
1	CO3 cmted zone at 50.0-50.3 massive SS, friable								
2									
3	2651.5' 2655.0' MISSING								
4									
2655									
6	massive SS friable								
7									
8	massive SS friable								
9									
2660	Soft sed defm at 58.5-58.8 S Organic debris common in this interval								

Well FGU 63 Ramsey 19-21 Core depth (+)(−) 2625-2673 = _____ Log depth @ _____

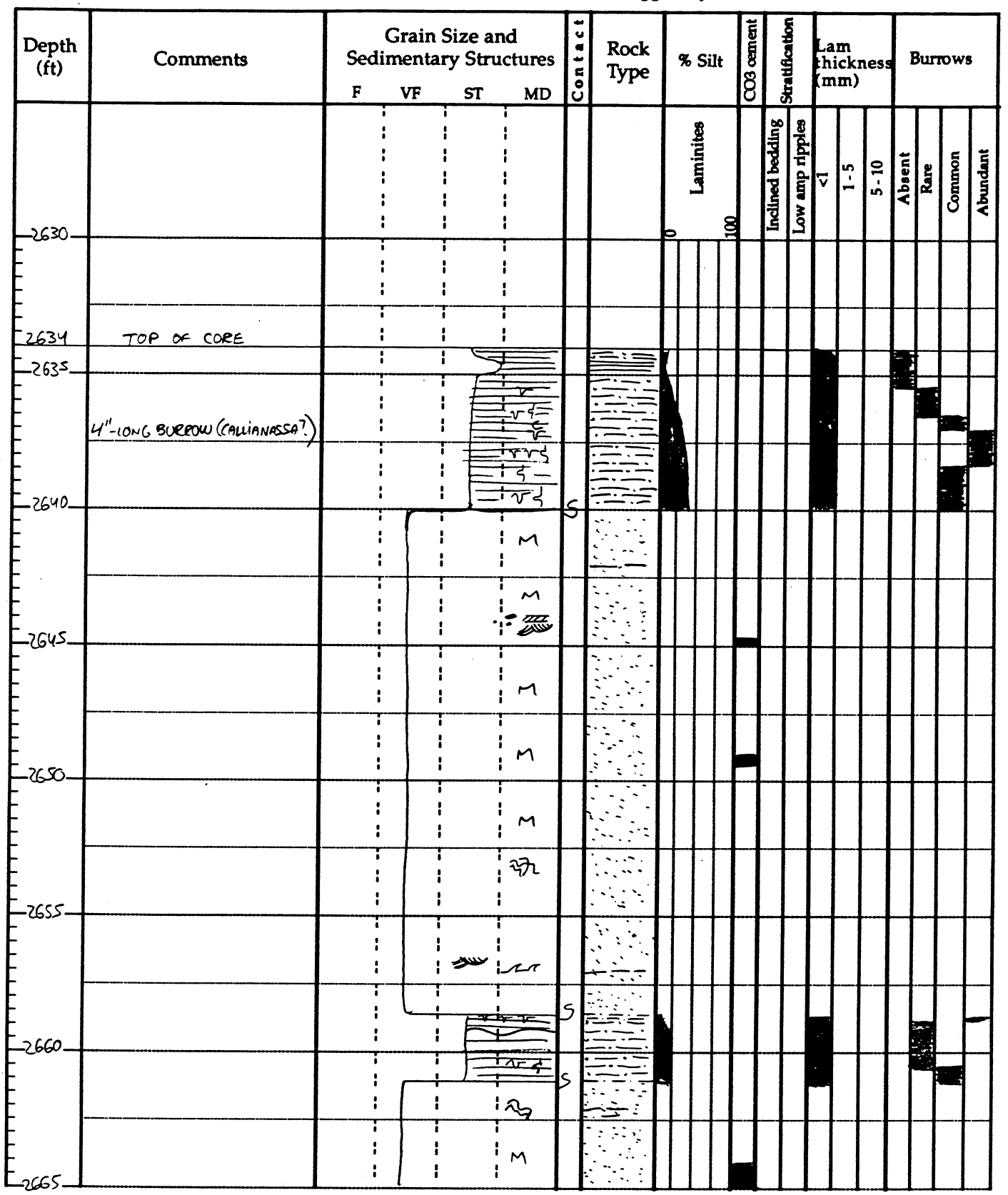
Formation Ramsey Location _____ Logged by Sigrid Date 6-19-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures: F	VF	ST	MD	Contact	Rock Type	% Silt (0 – 100)	Laminites	CO3 cement	Stratification: Inclined bedding	Low amp ripples	Lam thickness (mm): <1	1-5	5-10	Burrows: Absent	Rare	Common	Abundant
2660																			
2																			
3	laminite zone at 62.55-62.65					G													
4																			
2665	Discreet lams at 65.0																		
6	mm size organic debris at 65.8-66.0																		
7						G													
8																			
9																			
2670																			
1																			
2																			
3																			

✡ NOTE! There is one box of massive SS with no depth interval. It probably goes with one of the massive SS intervals.

Well Ramsey 19-30 / FGU-64 Core depth (+) 2634 (−) 2687 = 53' Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/15/96



Well Ramsey 19-30/FGU-64 Core depth (+) 2634 (−) 2687 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/15/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2665		M							
		M							
2670		M							
	SOFT-SEDIMENT DEFORMATION		S						
2675									
	2676-82': MISSING CORE								
2680									
2685	5' OF CORE IN 3' BOX	M							
		M							
2687	BASE OF CORE								
2690									

This core presents many missed intervals. Sections four feet long are in a three feet box.

FGU 67

Well RAMSEY 19-18 Core depth (+) 2656 (−) 2693 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2655									
←2656	Very fine grained sandstone, massive, friable, locally presents inclined bedding. With a layer or carbonate cement. The bottom presents sediment soft deformation structure.		S						
2660									
2665									
	Fine laminated siltstone, with vertical and horizontal burrows. Top and bottom contacts are sharp.		S						
2670									
2675									
	Very friable, massive sandstone, locally presents horizontal planar lamination where grain size becomes finer.								
2680									
2685									
2693									

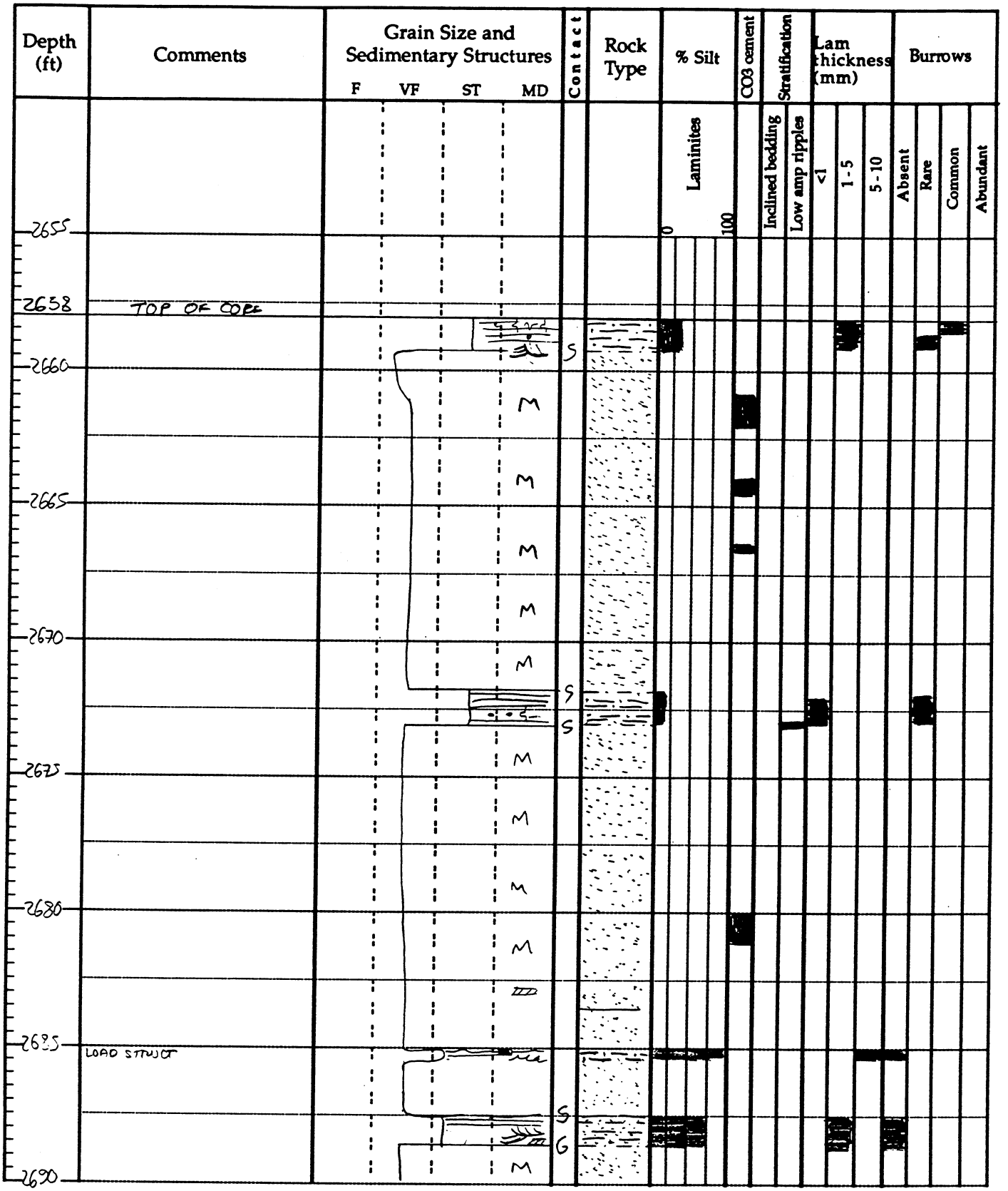
Well Ramsey 19-30-1 (FGU 68) Core depth (+)(−) 2654-2670 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 7-18-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2654				TOP CORE					
2655									
6	Grn size increases from uvf to lf at bottom of sand unit								
7		FS	L						
8									
9									
2660		MISSING CORE							
2665									
2666									
7		M							
8									
9		M							
2670		Bottom core							

Well Ramsey 19-US/FGU-79 Core depth (+) (−) 2658 = 81' Log depth @ _____

Formation _____ Location 2739 Logged by JOSE Date 08/09



Well Ransey 19-45 / FGU-79 Core depth (+) 2658 (−) 2739 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/09

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2690		M	S						
			S						
2695		M							
		M							
2700	SLIGHT EFFERVESCENCE FAINT CLIMBING RIPPLES FLAME? FLUIDIZ. STRUCTURE	?							
2702									
2720	2702'-2724': MISSING OR NOT RECOVERED								
2724									
2725									
2730		M							
		M							
2735	WARNING: 2733-39: ALL IN 1 BOX	M							
			S						
			S						
2739		M							
2740	BASE OF CORE								

Well Ramsey 19-14 (FGU 91) Core depth (+) 2633 - (-) 2661 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sgrid Date 6-25-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2630									
1									
2									
3	TOP OF CORE								
4	thicker laminae contain vfg size sand.								
2633									
6	up to 1cm thick lam area.								
7	wavy, discontinous lams 0.15 ft thick		X						
8									
9	unconformable contact at 39.8 ft, coarsening upward from 2cm		V						
2640	thick lutite into lvf ss with abundant organic clasts.								
1	Ripples at 38.9 ft a								
2									
3			E						
4						3			
2642									
6	very subtle lams. Some		S						
7	are horizontal. Some are wispy, discont. Base is		E						
8	distinctive erosional								
9	contact. Some burrowing below contact.		I						
2650			S						
1									
2			S			7			
3	mm thick lutite, becoming more silt-rich upward.								
4	Sharp contact between silt and uvf sand unit above (at 2650.0)		S			7			
2655									
6	fining upward sequence 0.1 ft								
7	thick from vf to silt dominated with organics. Distinct grn								
8	size change at top from Organic rich / silt to vf sd.								
9	Sharp contact at 51.5. mm thick lutite, becoming siltier								
2660									
1	with climbing ripples in laminae								

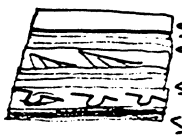
Note: Sand size grns range from lf to lvf. More indurated intervals tend to be silt to uvf. More friable intervals range from lf to lvf.

Well Ramsey 26-3 (FGU 101) Core depth (+) 2594- (-) 2614 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 8-7-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
4				TOP CORE					
2594	organic clasts are horizontally deposited.								
6									
7									
8									
9									
2600									
1									
2									
3		MISSING CORE		2601-2604					
4									
2605	Some int grns. present		SD						
6	Organic clasts abundant but some could be remnants of burrowing.								
7									
8									
9				MISSING CORE 2607-2611					
2610									
11									
12	abundant burrowing at 2612.0								
13									
14									
2615		2614.10 Bottom Core							

☆



0.2 ft at 2604.5 ft

Well Ramsey 76-1 / FGU-102 Core depth (+) 2566 (−) 2578 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 10/16/95

Depth (ft)	Comments	Grain Size and Sedimentary Structures: F	VF	ST	MD	Contact	Rock Type	% Silt: 0			100	CO3 Cement	Stratification: Inclined Bedding	Low Amp Ripples	Lam Thickness (mm): <1	1 - 5	5 - 10	Burrows: Absent	Rare	Common	Abundant
2595	2565 TOP OF CORE																				
					M																
					M																
2600	2570																				
					M																
					//																
2605	2575																				
					M																
			£?			A															
	BOTTOM OF CORE																				
2610	2580																				

Bureau of Economic Geology

Well Ramsey 19-44/FGU-209 Core depth (+) 2662 (−) 2699 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 10/22/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Stratification: Inclined Bedding	Stratification: Low Amp Ripples	Lam Thickness (mm): <1	Lam Thickness (mm): 1 - 5	Lam Thickness (mm): 5 - 10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2660															
2662															
2665		MD: M, M, M													
	PHOTO ←	VF: E; ST													
2670			S, S												
2674		MD: M													
2675															
2678															
2680		MD: M													
2682															
2685															
2686															
	SOFT-SEDIM. DEFORM.	MD: M													
2690															
2695															

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Well Ramsey 19-44/FGU-109 Core depth (+) 2662 (−) 2699 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/22/94

Depth (ft)	Comments	Grain Size and Sedimentary Structures F	VF	ST	MD	Contact	Rock Type	% Silt 0			100	CO3 Cement	Stratification Inclined Bedding	Low Amp Ripples	Lam Thickness (mm) <1	1 - 5	5 - 10	Burrows Absent	Rare	Common	Abundant
2695																					
2697																					
						G															
2699																					
2700																					

Bureau of Economic Geology

Well Ramsey 19-39 (FGU 110) Core depth (+) (−) 2652-2689 = _____ Log depth ● _____

Formation _____ Location _____ Logged by Sigrid Date 10-25-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures				Contact	Rock Type	% Silt					Stratification		Lam Thickness (mm)			Burrows			
		F	VF	ST	MD			0			100	CO3 Cement	Inclined Bedding	Low Amp Ripples	<1	1 - 5	5 - 10	Absent	Rare	Common	Abundant
2650																					
1																					
2				Top Core																	
3																					
4	∢ 12° ∢ 8° ~2.30° from horizontal																				
2655																					

Dips decrease up ward from 30° - 0°

Bureau of Economic Geology

Well Ramsey 19-39 Core depth (+) (−) 2652 - 2689 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Sigrid Date 10-22-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Stratification: Inclined Bedding	Stratification: Low Amp Ripples	Lam Thickness (mm): <1	Lam Thickness (mm): 1-5	Lam Thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2655	friable wispy lams														
6															
7															
8		M													
9															
2660															
1		M													
2															
3		missing core													
4	decreased organic clast size		L												
2665															
6	increased organic clast size														
7															
8															
9															
2670															
1															
2	wispy contorted lams														
3	2mm lutite		S Δ												
4															
2675															
6															
7	wispy		L												
8	Climbing ripples bounded on														
9	top with 3.5 cm thick lutite														
2680															
1															
2		M													
3															
4	Bounded on top & bottom														
2685	by thin horizal laminites														
6															
7		M													
8															
9															
2690		Bottom core													

☆ 8 ft boxes were labeled with 4-5 ft of core

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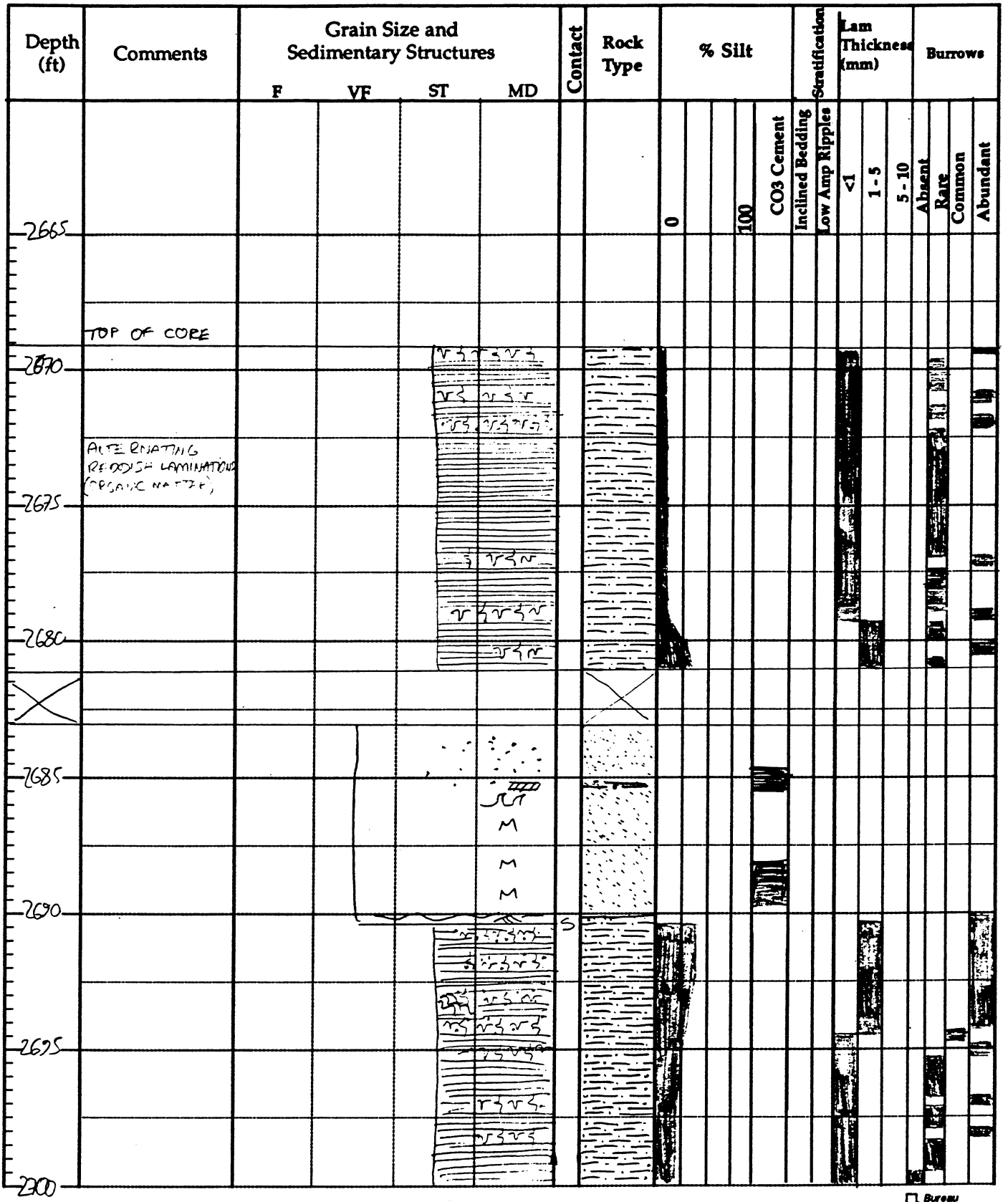
Well FGU-119 / RANSE-76-4 Core depth (+) 2669 (−) 2724.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/16/96



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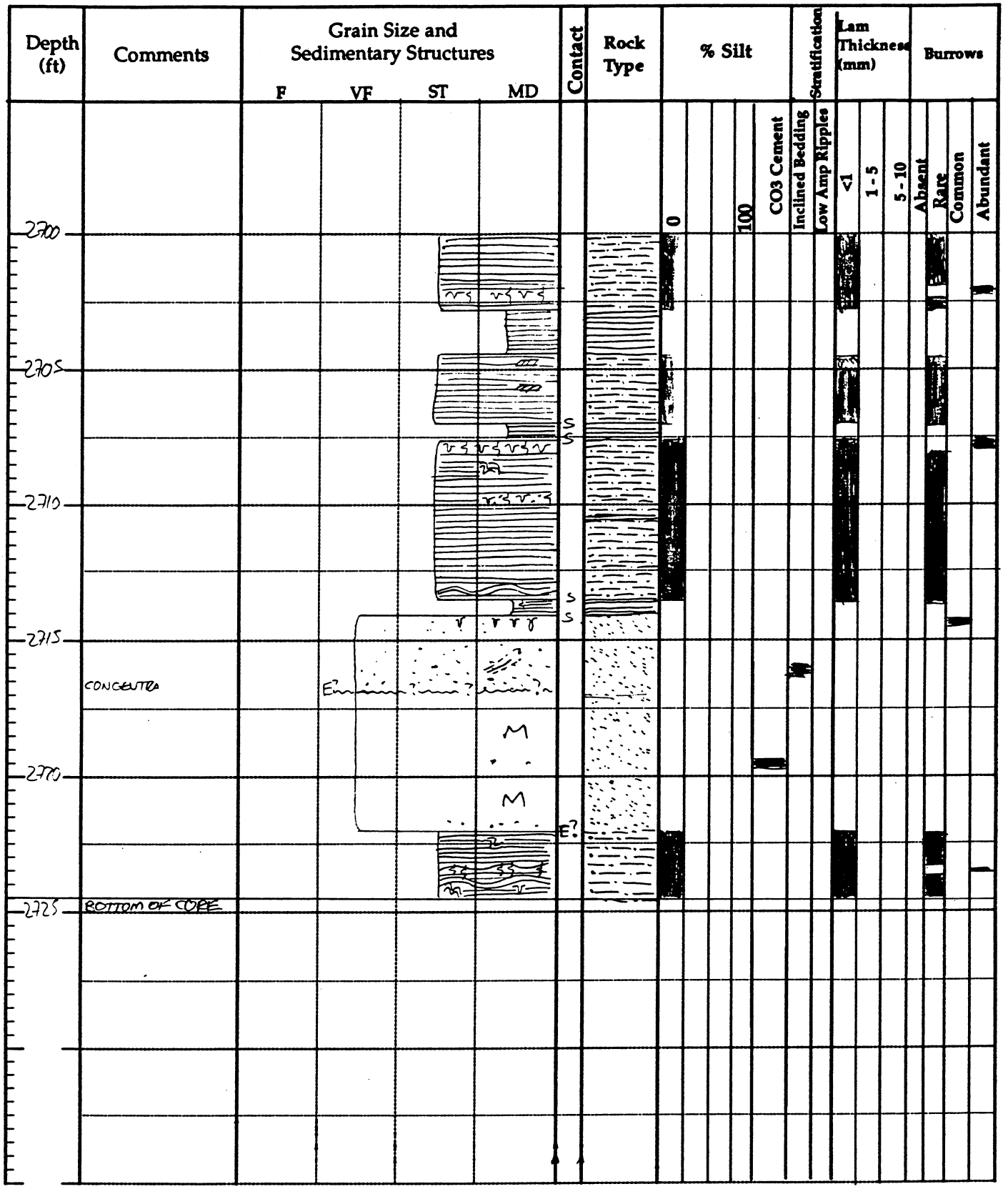
Well FQU-119/RAMSEY Core depth (+) 2669 (−) 2724.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/16/96



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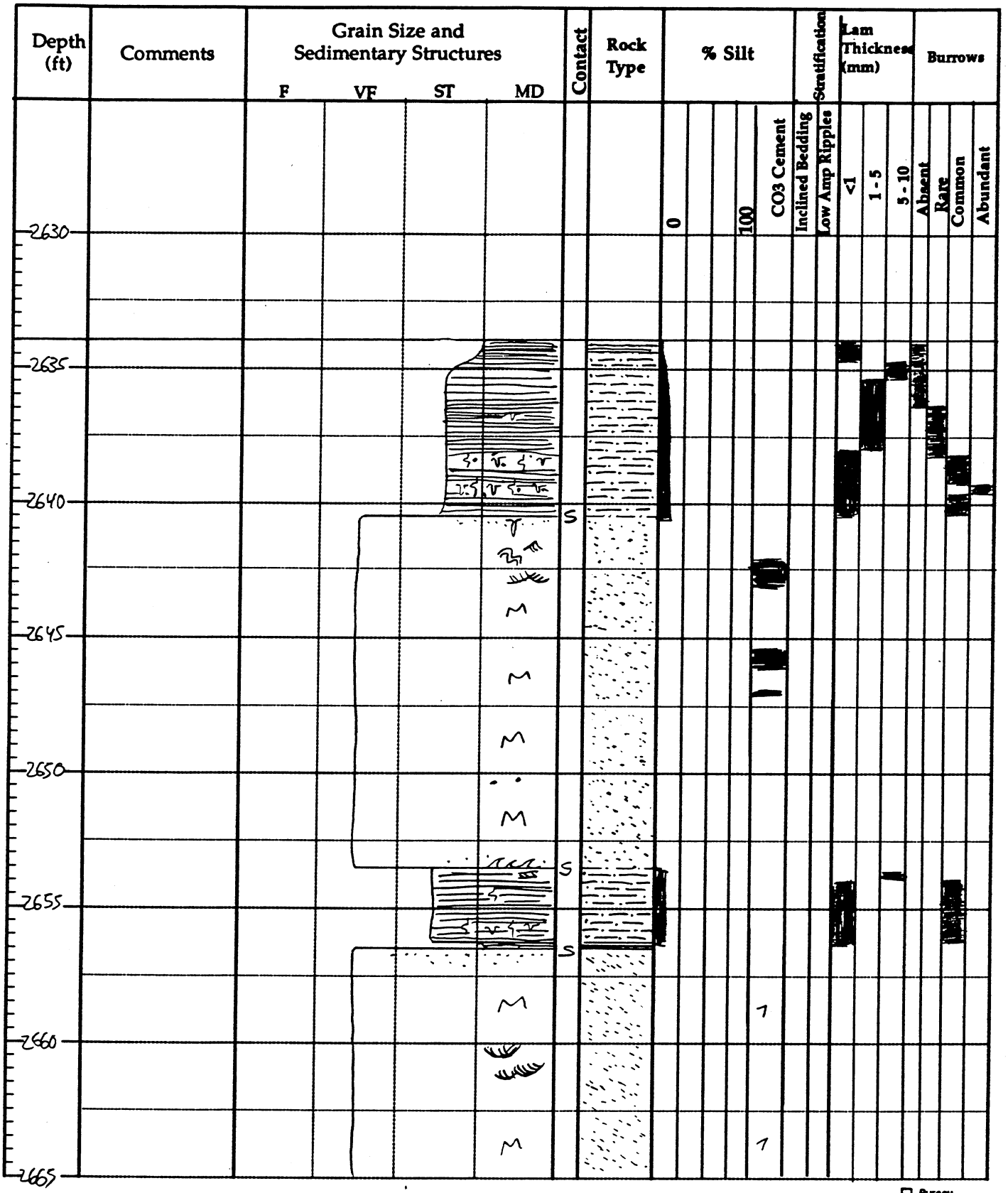
Well EGU-130/RANSE/36-14 Core depth (+) 2634 (−) 2688 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jace Date 10/18/9

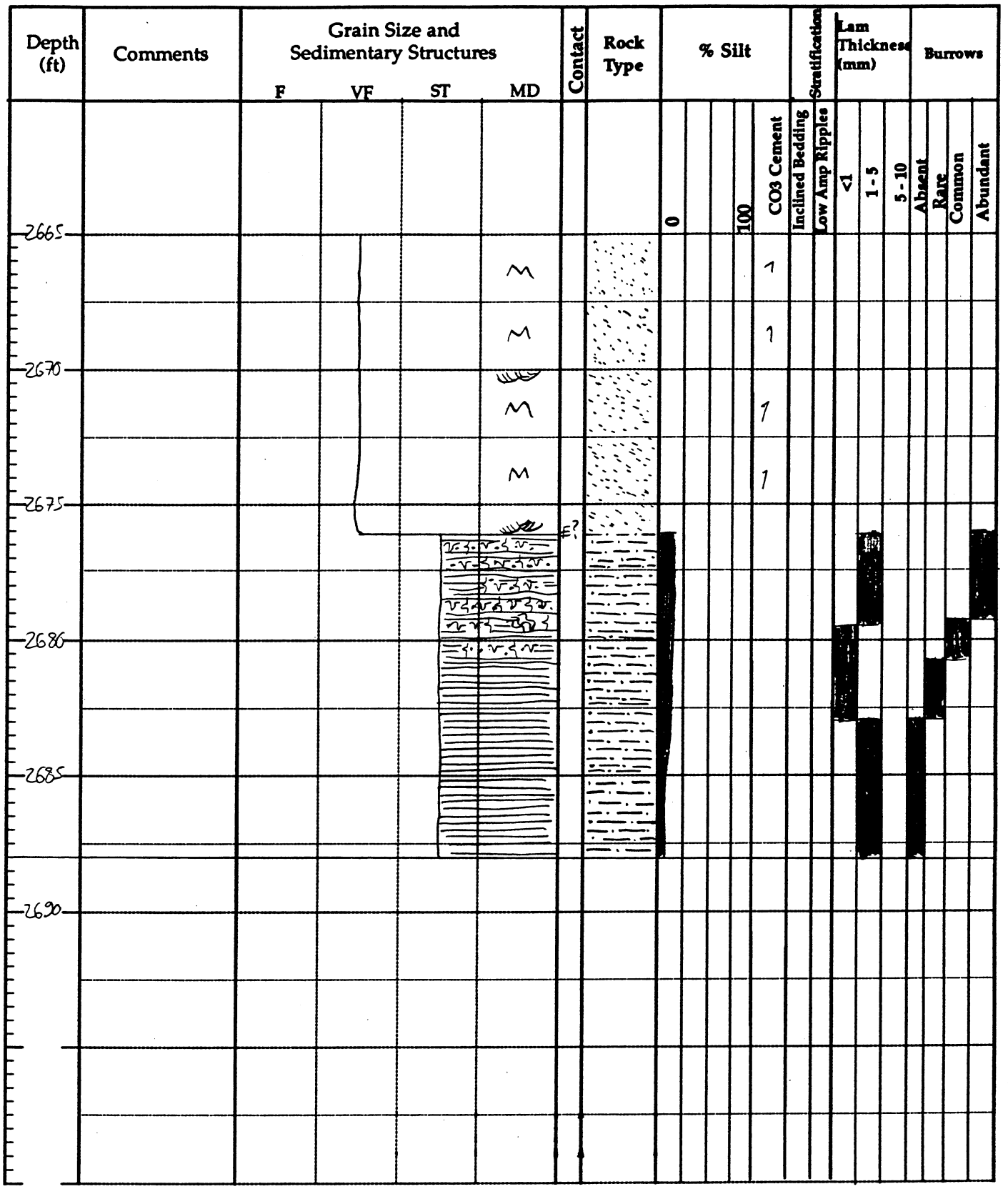


Bureau of Economic Geology

Well FGU-130/RAMSEY 36-14 Core depth (+) 2634 (−) 2688 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/18/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures	Contact	Rock Type	% Silt	Stratification	Lam Thickness (mm)	Burrows
		F VF ST MD			0 100 CO3 Cement	Inclined Bedding / Low Amp Ripples	<1 / 1-5 / 5-10	Absent / Rare / Common / Abundant



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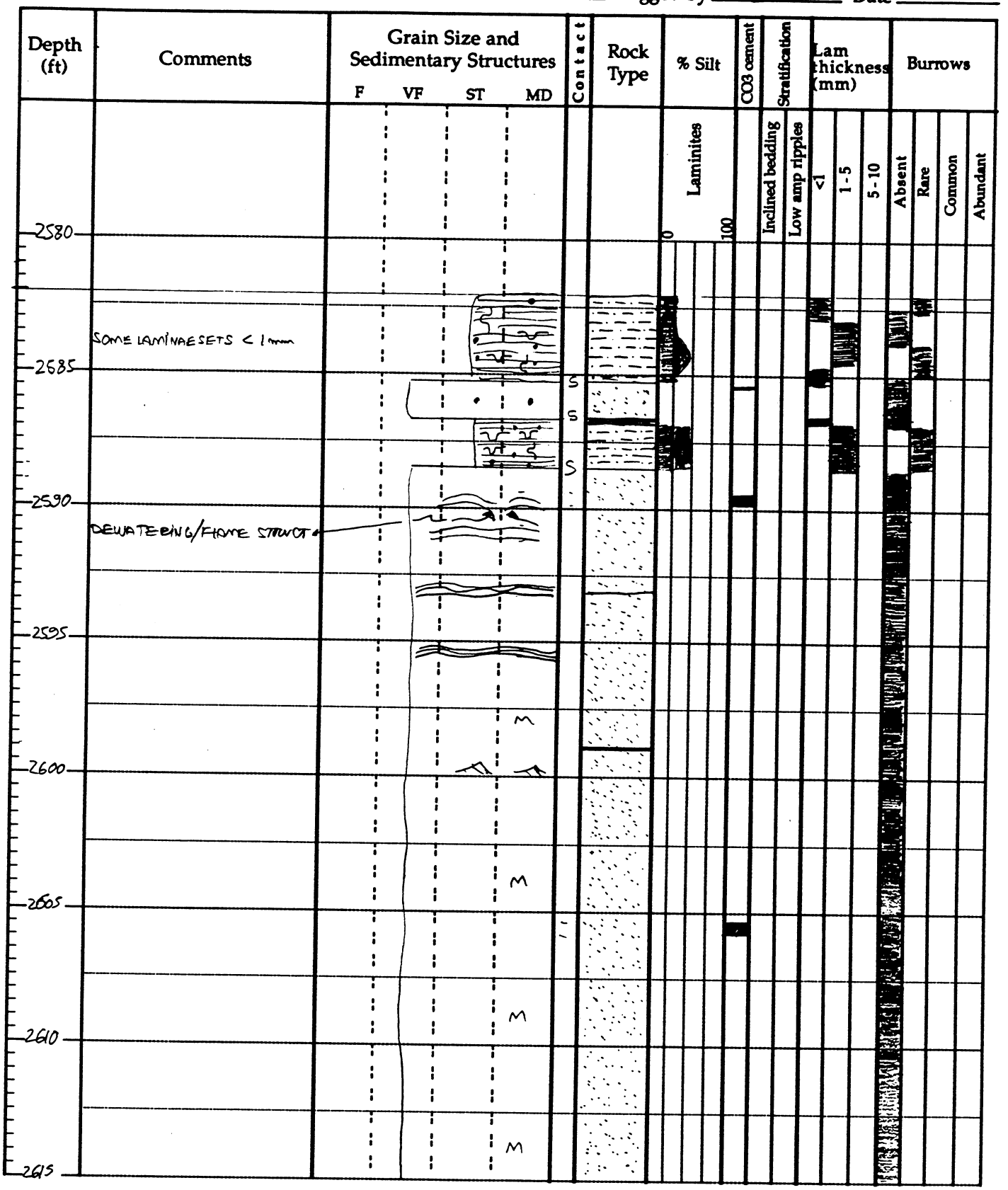
Well RAMSEY 36-6 (FGU-132) Core depth (+) 2582 (−) 2619 = 37' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date _____



Well RAMSEY 36-3/FGU-133 Core depth (+) 2581 (−) 2633 = 52' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/09

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2580									
2581	Top of core								
			S						
85									
		M							
		M							
2590									
		M							
		M							
95									
2600									
		M							
05		M							
		M							
		M							
2610									
		M							
2615									

Well Ramsey 36-3/FGU-133 Core depth (+) 2581 (−) 2633 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/09

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification	Lam thickness (mm)	Burrows
2615	2613-2619.5': 2 CORE BOXES MISSING								
20									
2625									
2630									
2633	BASE OF CORE								
2635									

Laminites; Inclined bedding; Low amp ripples; <1; 1-5; 5-10; Absent; Rare; Common; Abundant

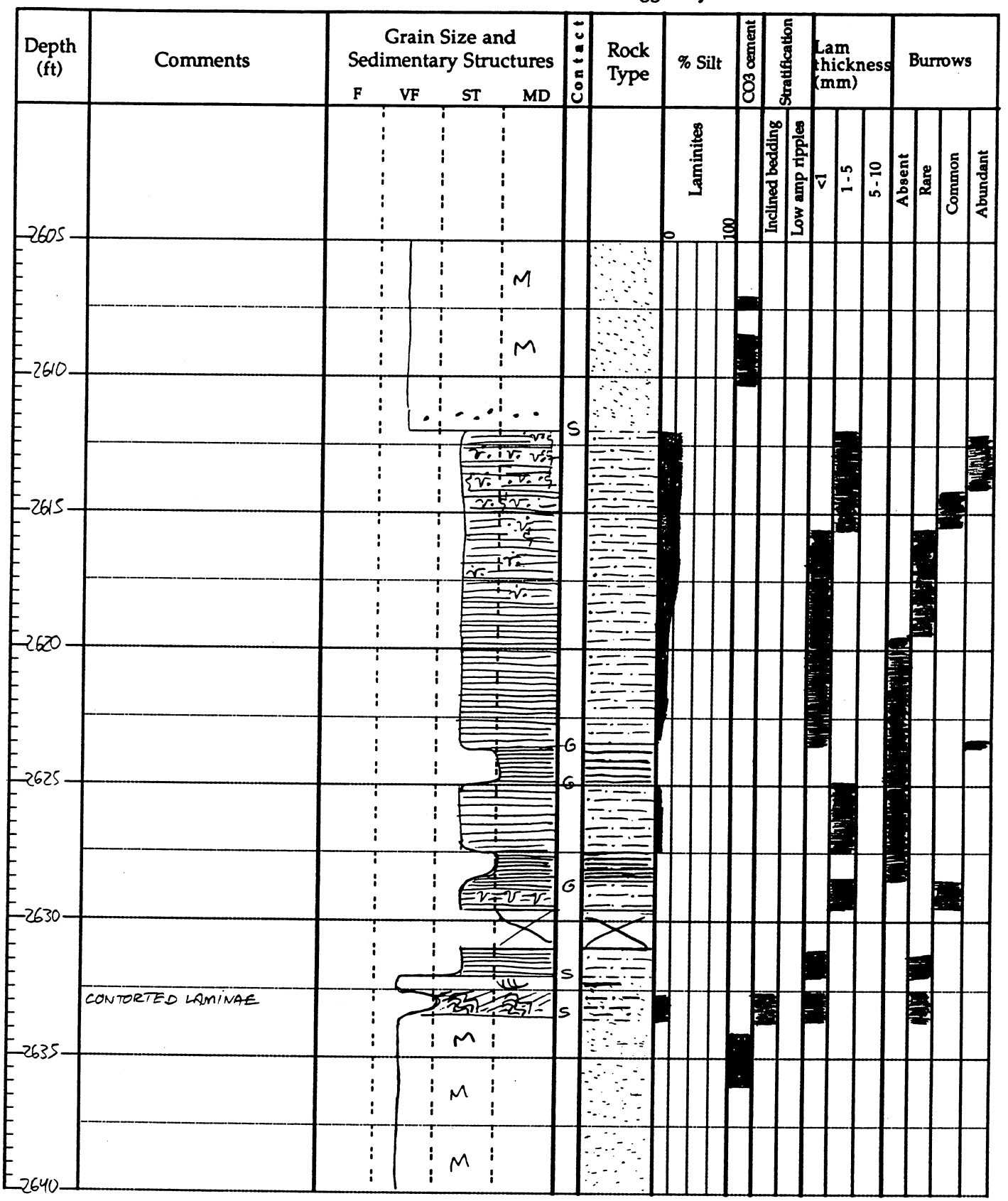
Well FGU-144/RAMSE, 36-5 Core depth (+) 2571 (−) 2644 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/10/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2570															
2571	TOP OF CORE														
2575															
2577															
	MISSING CORE														
2580		M													
		M													
2585		M													
2590		M													
2595		M													
		M													
2600															
2605		M													

Well FGU-144/RAMSEY 36-5 Core depth (+) 2571 (−) 2644 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/10/96



Well FGU-144/RAMSEY 36-5 Core depth (+) 2571 (−) 2644 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/10/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2640									
		M							
2645	BASE OF CORE-2644'								

Well FGU-143 Core depth (+) 2563 (−) 2593 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/26/9[illegible]

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
	CORES ARE 2" IN DIAM. - LAID OUT IN PAIRS IN 3' BOXES (IE, A BOX MAY HOLD UP TO 6' OF CORE) SOME BOXES CONTAIN 8' OF CORE														
2560															
2563	TOP OF CORE														
2565															
		M													
		M													
2570															
		M													
		M													
2575															
		M													
2580															
		M													
		M													
2585															
		M													
		M													
2590															
		M													
2593															
	BASE														
2595															

Well RAMSEY 36-8 (FGU-145) Core depth (+) 2616 (−) 2658 = 42' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/07

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
	GENERAL: THERE ARE 4' OF CORE REPORTED IN EACH 3' BOX.								
2615									
T	TOP OF CORE								
		M							
2620			S						
			S						
2625		M							
		M							
		M							
2630									
2635									
		M							
		M							
2640	2641–2645': ~70% OF MATERIAL IN BOX IS LOOSE SAND	M?							
		M							
2645			S S						
	UNEVEN CO_3 CEMENTATION	M							
		M							
2650									

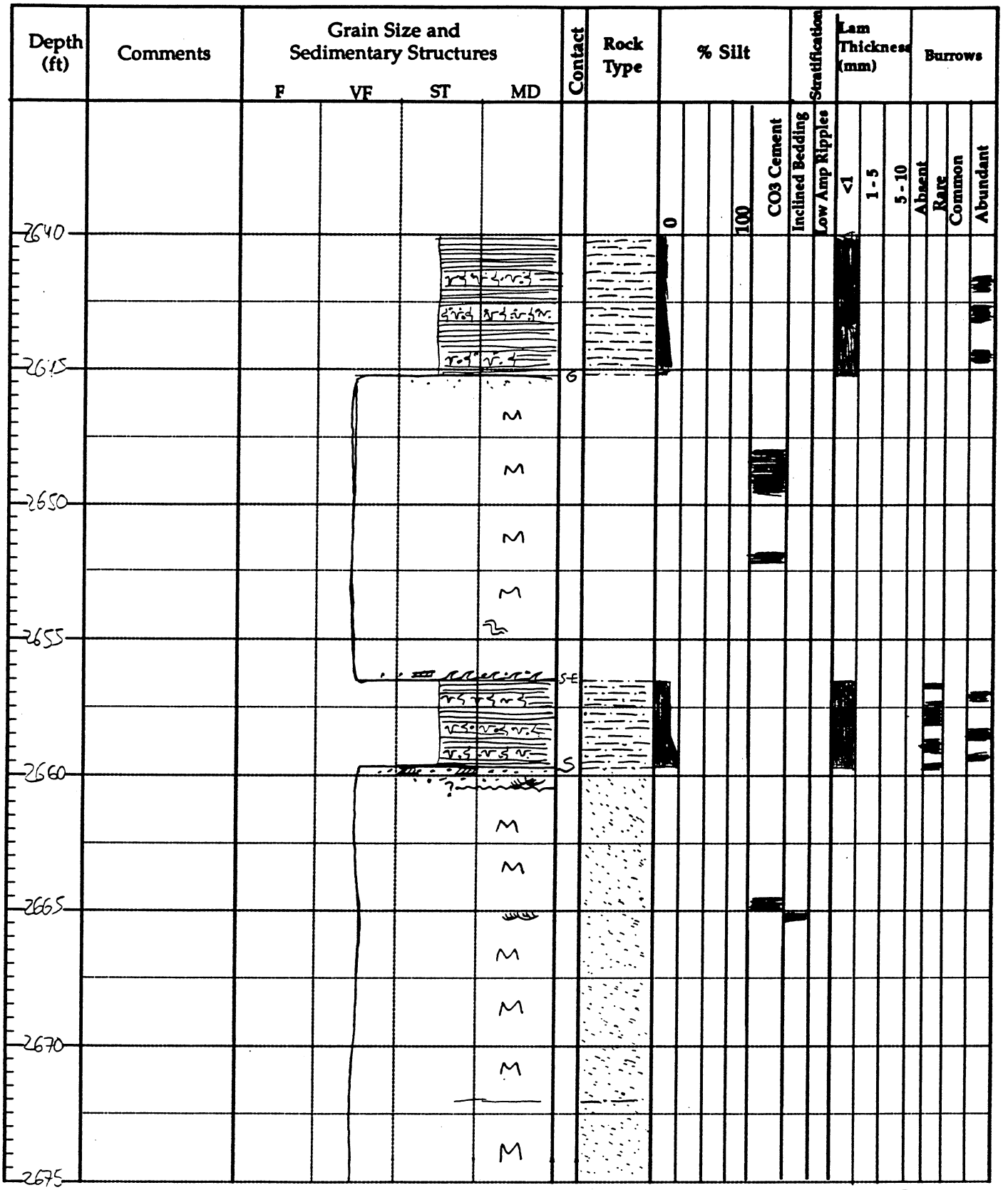
Well PONSEY 36-8 (FGU-145) Core depth (+) 2616 (−) 2658 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/02

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2650	UNEVEN CO_3 CEMENTATION (IRREGULAR BANDS)	M							
		M							
2655		M							
B 2658	FLAME STRUCTURE AT CONTACT BASE OF CORE		E						
2660									

Well EGU-146 / Ramsey / 36-12 Core depth (+) 2640 (−) 2685.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/17-18/96



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Well FGU-146/RAMSEY 36-12 Core depth (+) 2640 (−) 2685.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/17-18/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures: F	VF	ST	MD	Contact	Rock Type	% Silt: 0	100	CO3 Cement	Stratification: Inclined Bedding	Low Amp Ripples	Lam Thickness (mm): <1	1-5	5-10	Burrows: Absent	Rare	Common	Abundant
2675					M														
					M	S													
2680	25mm VERTICAL BURROW AT CONTACT					S													
2685																			
2690																			

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Well Ramsey 36-11 (FGU148) Core depth (+) 2640- (-) 2714 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 7-24-06

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2640	TOP CORE														
1	Deep Rust colored laminae 1 to 5 mm thick in 2640-2640.8 interval														
2															
3	yellow colored 6mm thick set of laminae														
4															
2645															

Well Ramsey 36-11 (FGU 148) Core depth (+) (−) _____ = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 1-24-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2645									
6	fines upward from lvf to silt to mm thick lutite. Sharp contact between lutite & laminite		G						
7									
8									
9		M							
2650									
1									
2									
3									
4			S						
2655			S						
6									
7									
8									
9	contorted lams 3mm thick lutite lam								
2660									
1									
2									
3		FS	L						
4			G						
2665									
6		M							
7									
8									
9									
2670									
1		M							
2									
3	missing core from 2672-2676								
4									
2675									
6									
7	Some faint lams								
8	Some calcite cmt throughout								
9		M							
2680	well indurated								

Many 3ft core boxes were marked having 4ft of core

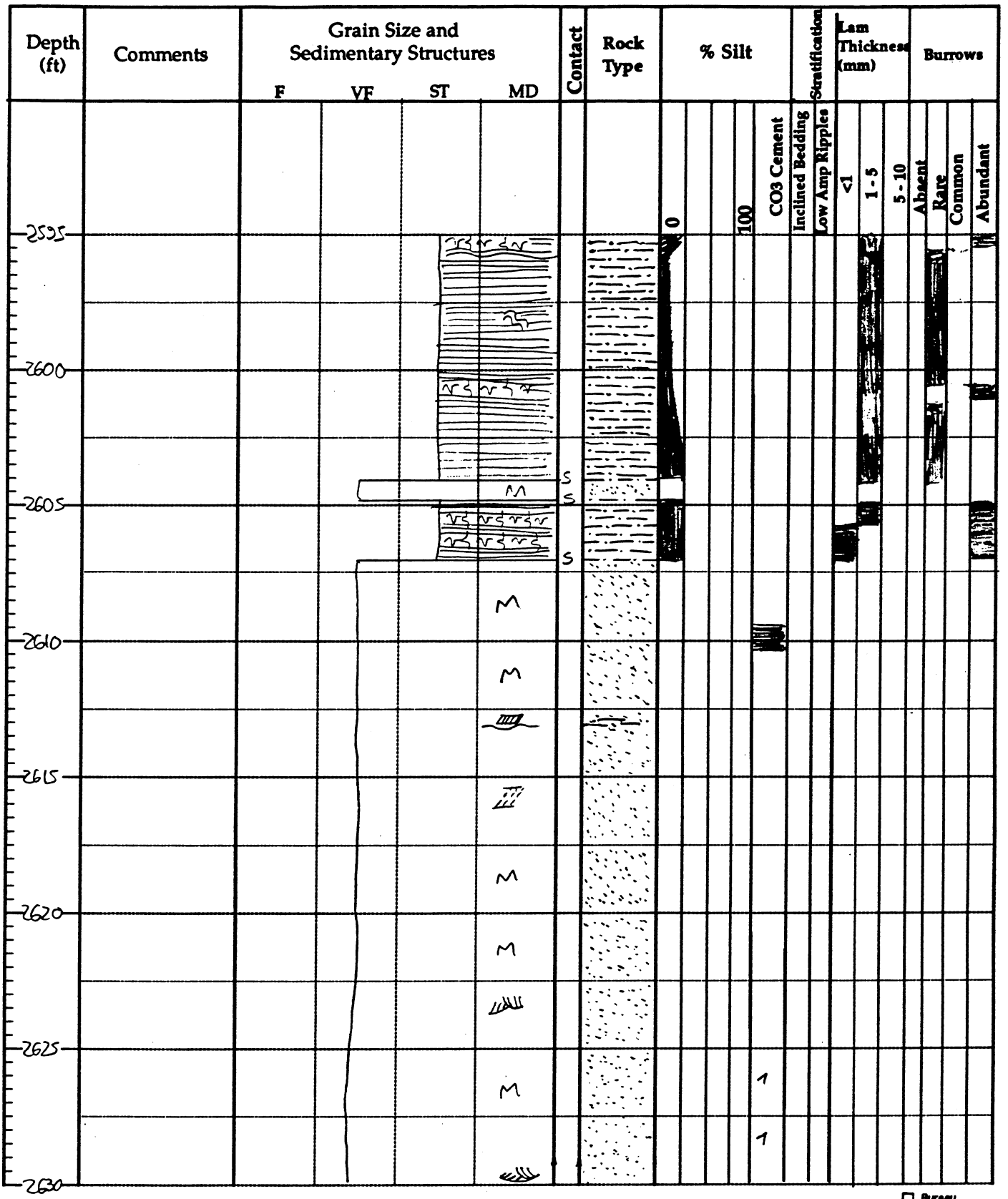
Well Ramsey 36-11 (FGU 148) Core depth (+) 2640 - (-) 2714 = _____ Log depth @ _____

Formation Bell Canyon Location _____ Logged by Sigrid Date 7-19-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2680			S						
1									
2	5 ft interval								
3	in 3 ft box								
4									
2685									
6	varying amts of								
7	calcite cmt from								
8	2680.2 - 2683 ft.								
9									
2690									
1									
2									
3	cm. thick silt lams								
4	with abundant calcite cmt								
2695									
6									
7	5mm thick lam with abundant pyrite flakes at 2696.3. Rust color								
8	mud size grns.								
9									
2700									
1									
2	fining up to lutite at 2701.35		G						
3									
4		M							
2705									
6									
7									
8									
9		M							
2710									
1									
2			E						
3	Laminites look stirred up Is it abundant burrowing?		S						
4									
2715	BOTTOM CORE								

Well FGU-149/RAMSEY 36-7 Core depth (+) 2595 (−) 2649 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/21/96



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Well FGU-149 / RAMSEY 36-7 Core depth (+) 2595 (−) 2649 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/21/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Inclined Bedding	Low Amp Ripples	Lam Thickness (mm) (<1, 1 - 5, 5 - 10)	Burrows (Absent, Rare, Common, Abundant)
2630	PATCHY NON-CALCAREOUS CEMENT									
		M								
2635										
		M								
2640		M								
			S							
2645										
2650										

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Well FGU-170 Ramsey 34-5 Core depth (+) 2533 (−) 2554 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 10/17/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Stratification: Inclined Bedding	Stratification: Low Amp Ripples	Lam Thickness (mm): <1	1 - 5	5 - 10	Burrows: Absent	Rare	Common	Abundant
2530															
			S												
2535		M													
		M													
2540		M													
		M													
		M													
2545	MISSING CORE														
			E? S												
2550		M													
		M	E?												
2555															

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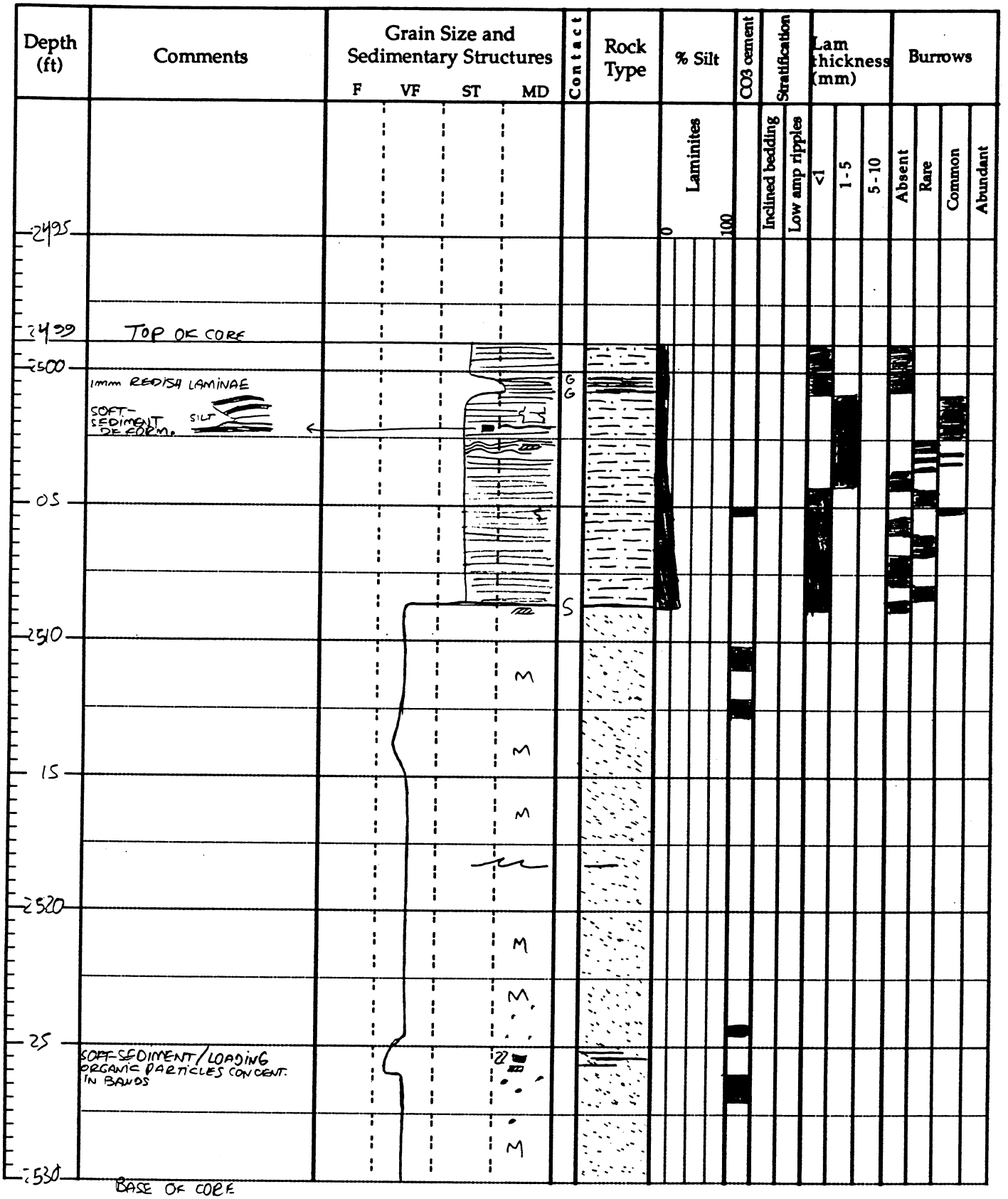
Well RAMSEY 34-6/FGU-184 Core depth (+) 2499 (−) 2530 = 31' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/08



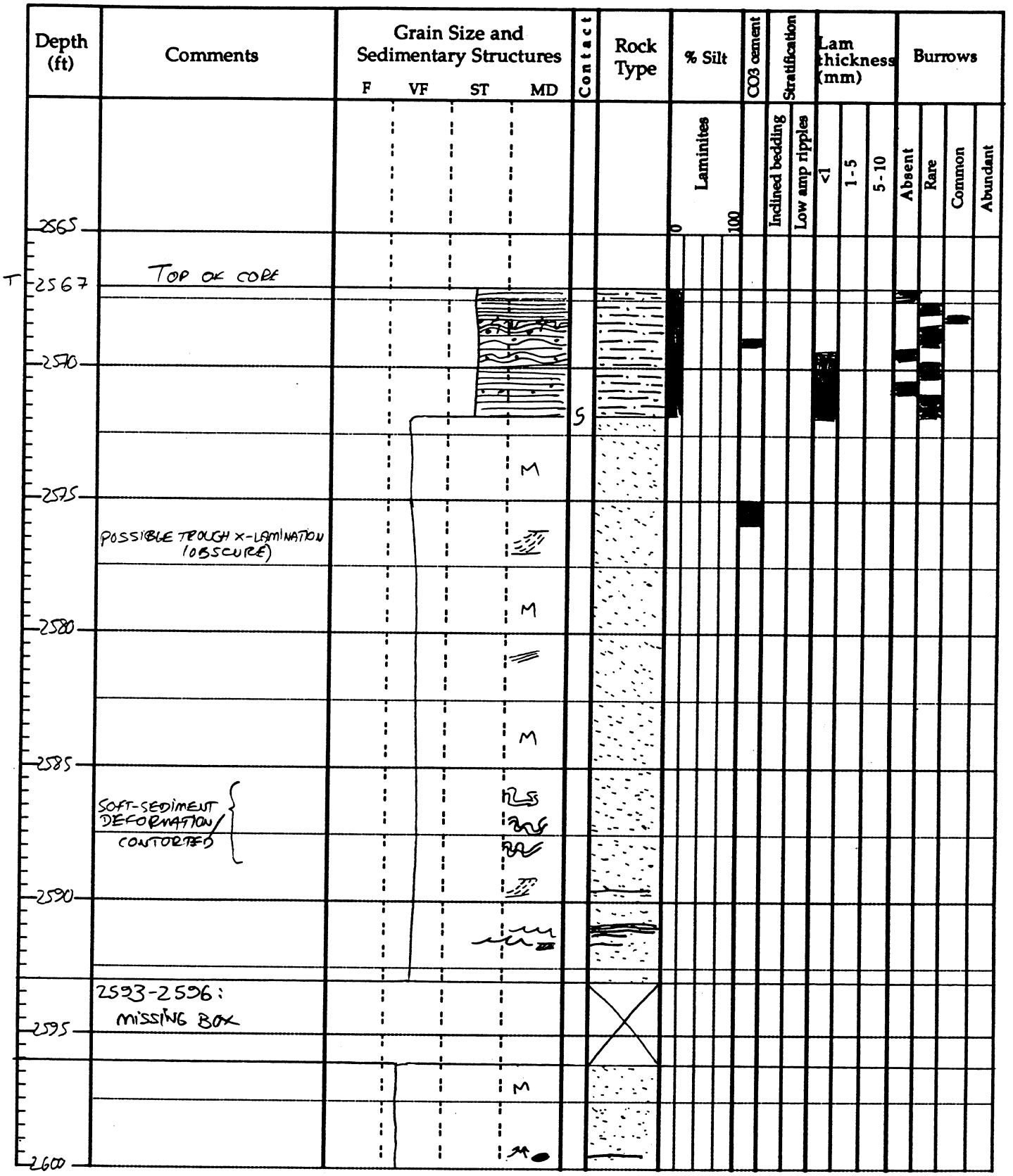
Well Ramsey 34-8/FGU-185 Core depth (+) 2500 (−) 2530 = 30' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/07-08

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
	GENERAL: 4'-5' OF CORE REPORTED IN 3' BOXES.								
	TOP								
2500									
			S						
05									
		M							
		M							
2510									
	SOFT-SEDIMENT DEFORMATION	23?							
		M							
15									
2520									
		M							
25	FLAME STRUCTURE								
		M							
2530	BASE OF CORE								

Well Ramsey 34-4 / FGU-189 Core depth (+) (−) 2567 / 2618 = 51' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/08



Well Ramsey 34-4 / FGU-189 Core depth (+) 2567 (−) 2618 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/08

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2600		M													
		M													
2605		M													
			5												
	INTENSE BIOTURBATION														
2610	2609-2612: MISSING BOX														
	SOFT-SEDIM. DEFORMATION														
2615															
B 2618	BASE OF CORE														
2620															

Well RAMSEY 34-2/FGU-190 Core depth (+) 2548 (−) 2608 = 60' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/08

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
	GENERAL: 3' BOXES CONTAIN 4' OF CORE								
2545									
T 2548	TOP OF CORE								
2550			S						
		M							
		M							
2555									
		M							
		M							
2560									
		M							
		M							
2565									
		M							
2570									
	2568-2576': 2 CORE BOXES MISSING								
2575									
		M							
		M							
2580									

Well Ramse/34-2/FGU-190 Core depth (+) 2548 (−) 2608 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/08

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2580															
		M													
2585		M													
		M													
2590															
			S												
2595															
2600															
2605															
2608'	BASE OF CORE														
2610															

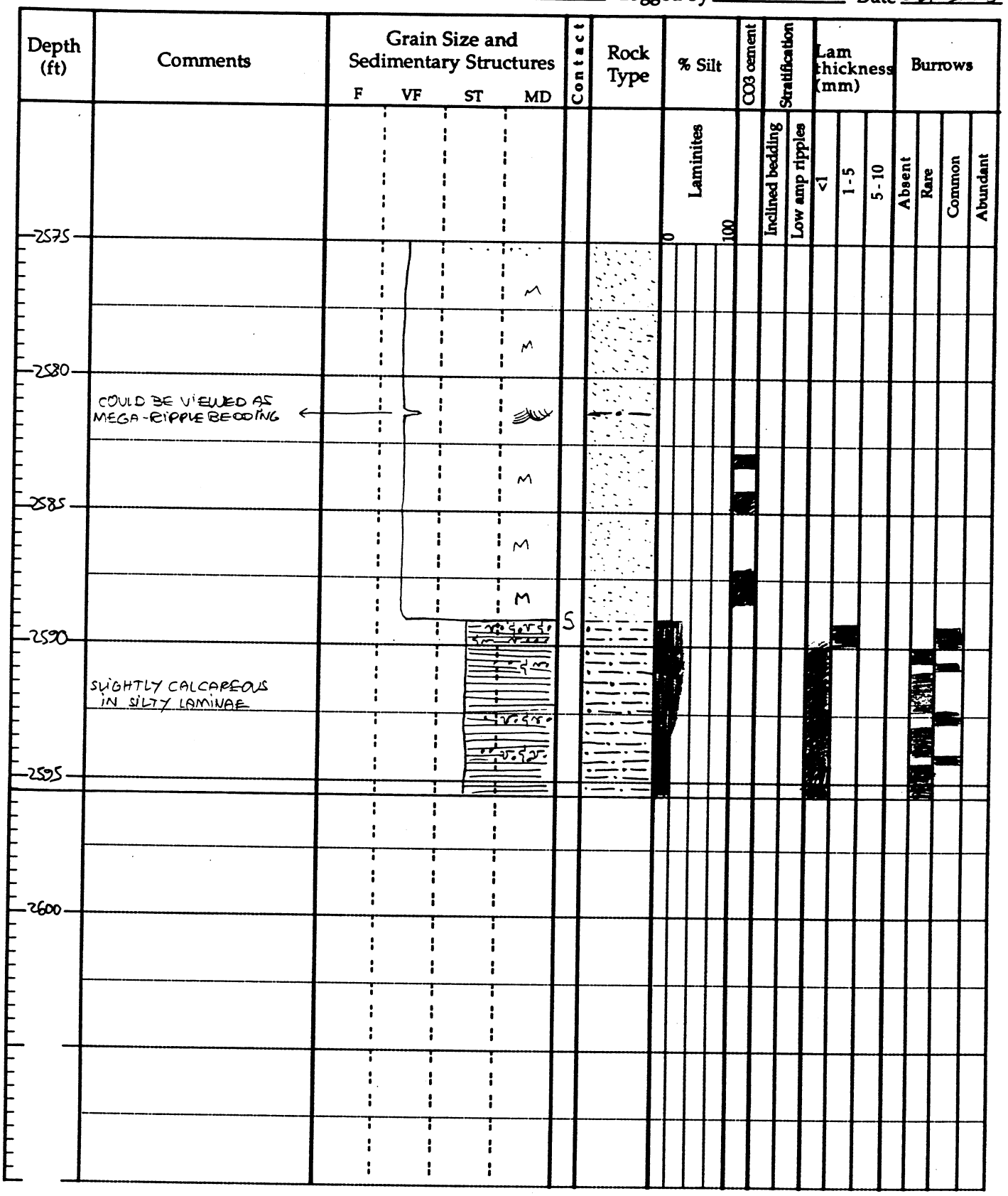
Well Ramsey 38-1 (FCU-200) Core depth (+) 2543 (−) 2595.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/23/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2540									
2543	TOP OF CORE								
	REDDISH-COLORED LAMINAE								
2545									
2550			S						
2555		M							
2560		M							
2565									
2570									
2575									

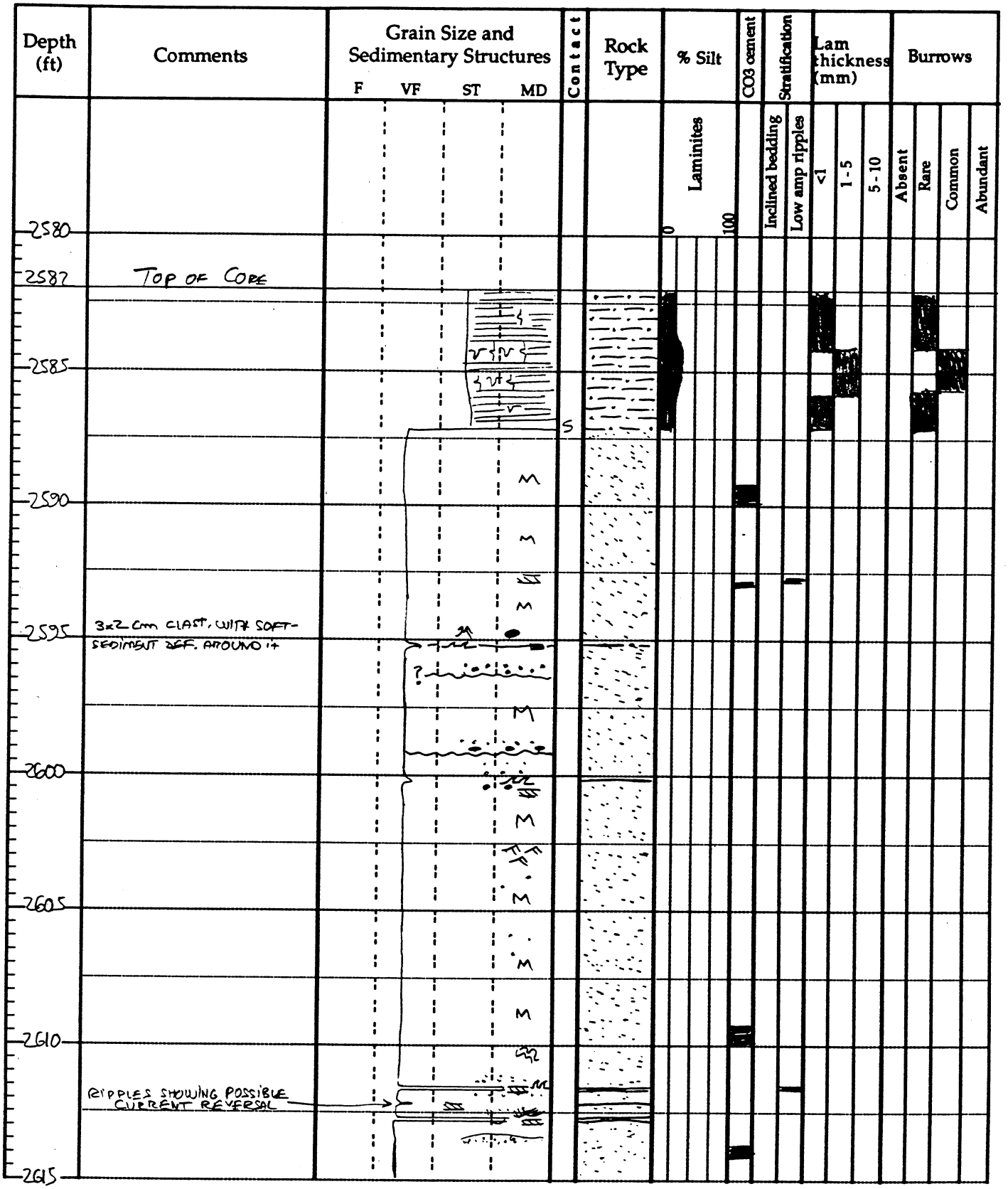
Well RAMSEY 38-1 (FGU-200) Core depth (+) 2543 (−) 2595.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/23/96



Well Ramsey 38-4 (FGU-220) Core depth (+) 2582 (−) 2632 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/23/96



Well Ramsey 38-4 (FGU-220) Core depth (+) 2582 (−) 2632 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/23/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2615									
2620		M	E						
2625									
2630									
2632	BASE OF CORE								
2635									

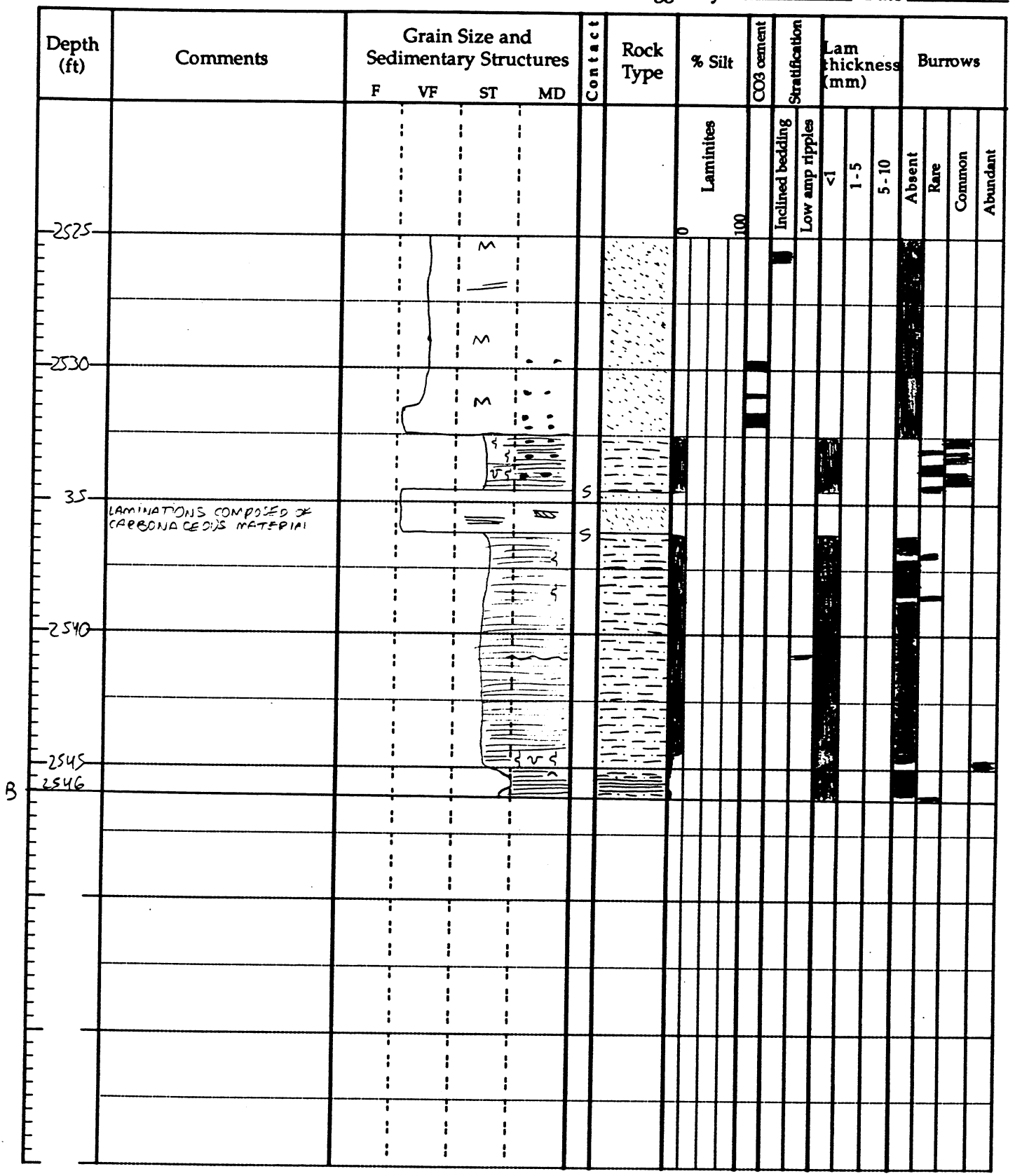
Well RAMSEY 38-8 (FGU 222) Core depth (+) 2494 (−) 2546 = 52' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/06

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
	GENERAL: BEWARE OF POSSIBLE MISPLACED INTERVALS. CHECK WITH GR-LOG.															
2490																
T 2494																
2495																
2500			S													
05	SOFT-SEDIMENT DEFORMATION															
2510																
15	SOFT-SED. DEFM.															
2520																
2525																

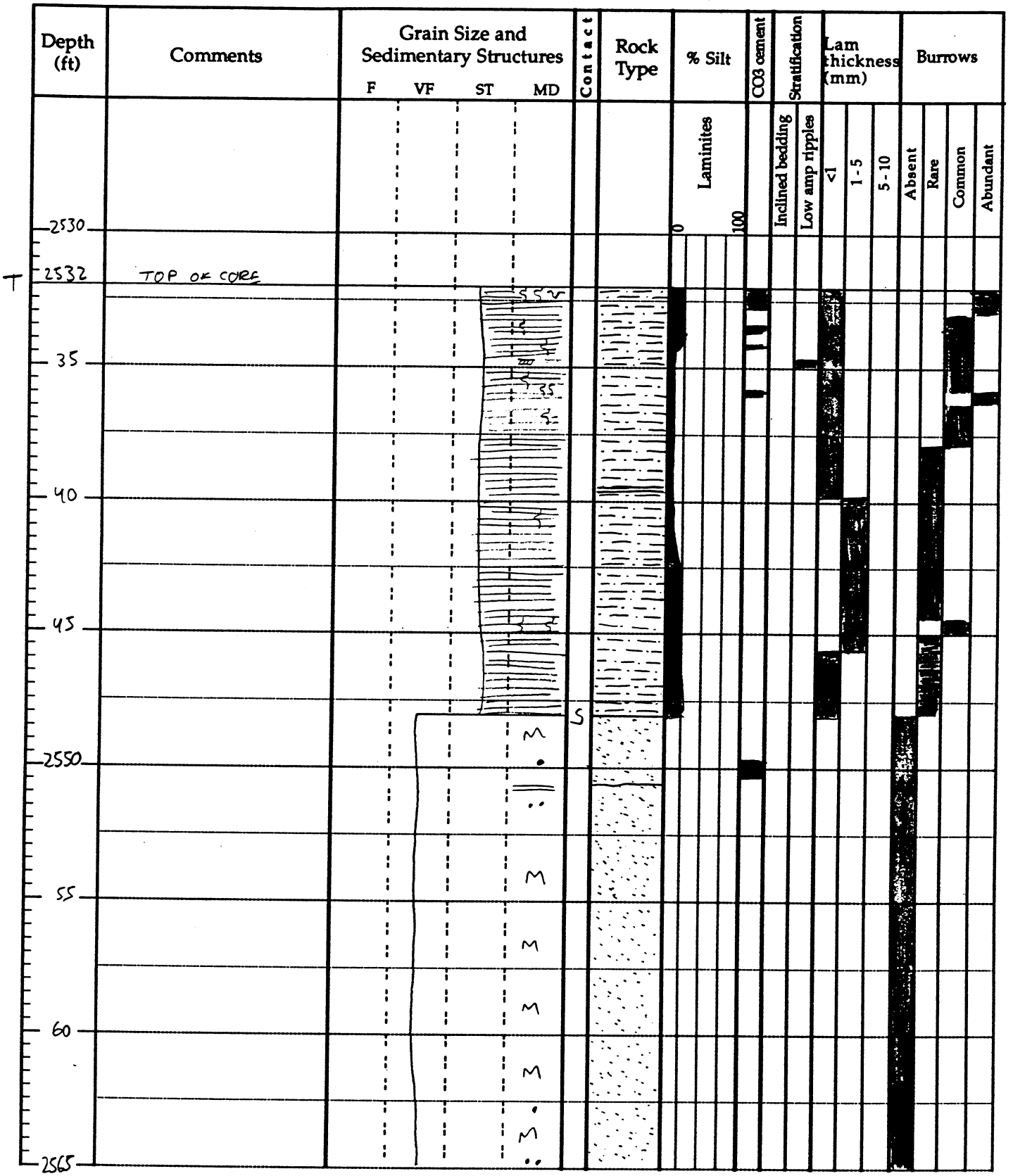
Well RAMSEY 38-8 (FCU 38-8) Core depth (+) 2494 (−) 2546 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOE Date 03/06



Well Ramsey 38-7 (FGU-228) Core depth (+) 2532 (−) 2583 = 51' Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/07



Well RAMSEY 38-7 (FGU-228) Core depth (+) 2532 (−) 2583 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/07

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2565									
70									
2575	2575-79' BOX: CONTAINS BAG OF SANDSTONE FRAGMENTS								
	ROUND SILTSTONE CLAST SOFT-SEDIMENT DEFORMATION		S						
2580									
2583	BASE OF CORE								
2585									

Well Ramsey 38-6 (FGU 230) Core depth (+) (−) 2575-2635 = _____ Log depth @ _____

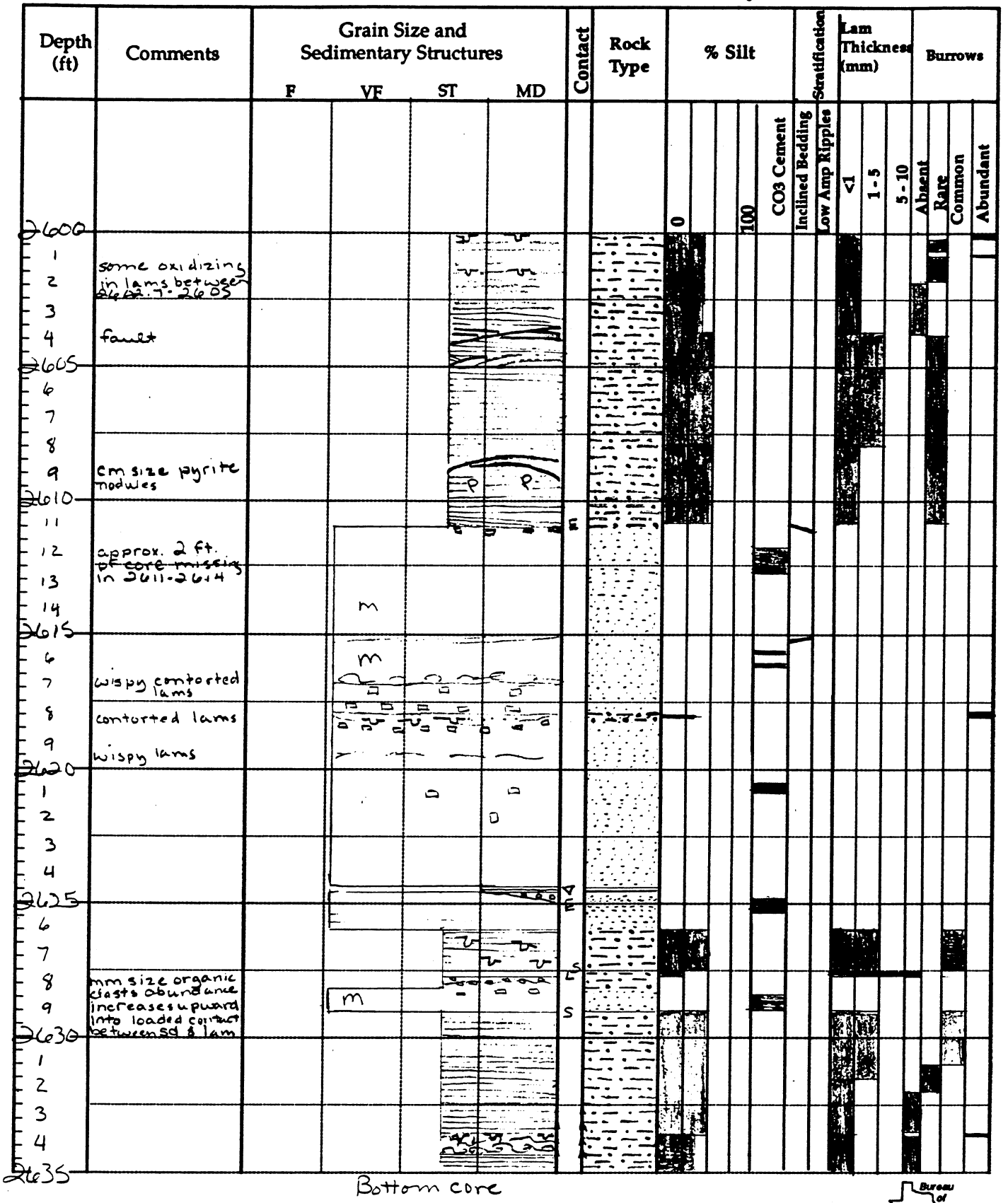
Formation _____ Location _____ Logged by Ingrid Date 10-16-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Stratification: Inclined Bedding	Stratification: Low Amp Ripples	Lam Thickness (mm): <1	Lam Thickness (mm): 1-5	Lam Thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2575		Top core													
6															
7															
8	Anhydrite xtals at 79.6														
9															
2580															
1															
2															
3	3cm thick calcite layer at 83.4														
4	Interlaminated Gypsum/calcite condensed		S												
2585	Sections at 86.25, 86.5, 87.45, 88.4, 88.75, 89.45														
6															
7															
8															
9	4.5cm thick calcite layer at 89.2														
2590			S												
1															
2															
3	7mm thick interlam gypsum/calcite layer														
4			S												
2595	at 2593.82, Pyrite also present														
6															
7															
8															
9															
2600															

Bureau of Economic Geology

Well Ramsey 38-6 (FGU 230) Core depth (+)(-) 2575-2635 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Sigrid Date 10-14-96

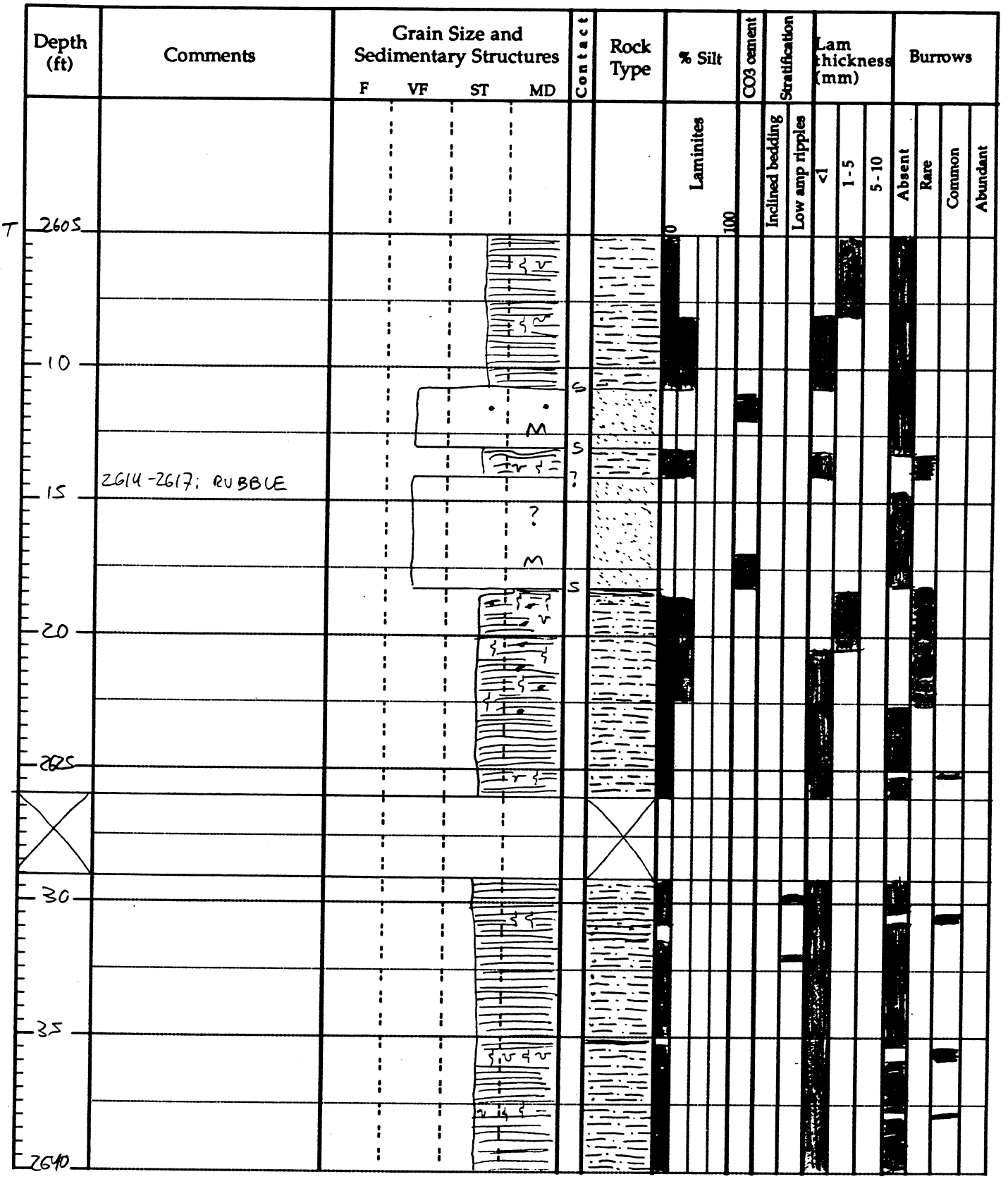


Bureau of Economic Geology

FGU 235

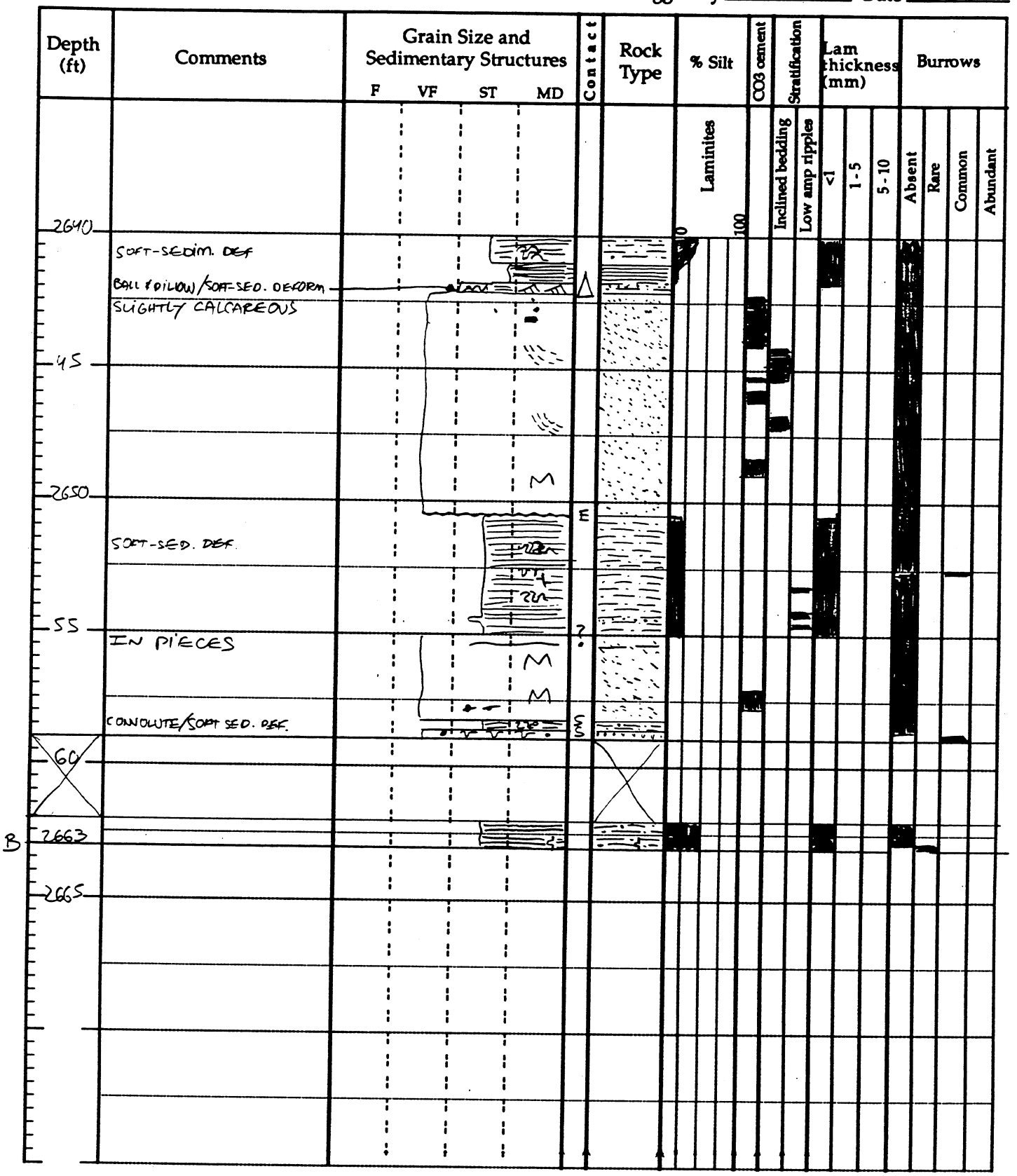
Well Ramsey 38-10 Core depth (+) 2605 (−) 2663 = 58' Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 07/16



Well RAMSEY 38-10 Core depth (+) 2605 (−) 2663 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 07/16



Well RAMSEY 38-11 / FGU-237 Core depth (+) 2523 (−) 2583.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/22/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – 100)	CO3 Cement	Stratification: Inclined Bedding	Stratification: Low Amp Ripples	Lam Thickness (mm): <1	Lam Thickness (mm): 1 - 5	Lam Thickness (mm): 5 - 10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2520															
2523															
2525		ST													
2526															
2529	missing core														
2530		ST													
2535		ST, MD	S												
2538		MD													
2540	missing core														
2541															
2544		MD													
2545															
2550	missing core														
2555															

Bureau of Economic Geology

Well Ramsey 38-11 / FGU-237 Core depth (+) 2523 (−) 2583.5 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 10/22/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0, 100)	CO3 Cement	Inclined Bedding	Low Amp Ripples	Lam Thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2555										
	MISSING CORE									
2560										
2565										
2568.5										
2570										
2571.5										
	MISSING CORE									
2575										
2577.5										
2580										
2583.5			S							
2585										

Bureau of Economic Geology

Well Ramsey 38-12 (FGU 244) Core depth (+)(−) 2559-2600 = _____ Log depth @ _____

Formation Ramsey Location Culberson Co. TX Logged by Sigrid Date 10-4-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2559				Top Core					
2560									
1									
2									
3									
4									
2565									

Well Ramsey 38-12 (FGU 244) Core depth (+)(-) 2559 - 2600 = _____ Log depth @ _____

Formation Ramsey Location _____ Logged by Sigrid Date 10-3-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2565									
6									
7			S						
8	Organic clast from 2568-2569.5		S						
9									
2570	Some wispy lams thru 2571. 1-5 mm size organic clasts		S						
1									
2									
3									
4									
2575									
6									
7									
8									
9									
2580	Interval 2581-2590 is very friable								
1									
2									
3									
4									
2585									
6									
7									
8									
9									
2590									
1									
2									
3									
4									
2595	Subtle lams at 95-95.6								
6									
7									
8	no bioturbation 25 mm below sand/laminite contact		S						
9									
2600									

Bottom core

FGU 245

Well RAMSEY 38-16 Core depth (+) 2593 (−) 2651 = 58' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 07/16

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2590									
T 2593									
95									
	SOFT-SED DEFORM.								
2600			S						
	MOSTLY CO_3-CEMENTED								
	FLAME STRUCTURE		S						
05									
10									
15									
20	MISSING CORE OR BOX								
2625									

Well RAMSE-1 38-16 Core depth (+) 2593 (-) 2651 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 07/16

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2625																
	2626-2632: 6' OF CORE IN 3' OF BOX! CHECK CALCAREOUS INT. AGAINST MICROLOG FOR DEPTH CALIBRATION	M	S													
30		M														
		M														
35		M														
			S													
40	SILTY MUDSTONE, BLACK,		C S													
		M														
45	MISSING INTERVAL OR BOX															
2650																
2651																

Well Ramsey 38-13 (FGU 249 Core depth (+)(−) 2557-2591 / 2411-2614 = _____ Log depth @ _____

Formation Ramsey Location Culberson Co. Tx Logged by Sigrid Date 10-7-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2565															
6															
7		Top Core 1													
8															
9	friable ss 2568.5-71.0	M													
2570															

*Note - 3 ft boxes were labeled with 4 ft core/box

Well Ramsey 38-13 (FGU 249) Core depth (+) 2567-2591 (−) 2611-2614 = _____ Log depth @ _____

Formation Ramsey Location _____ Logged by Sigrid Date 10-7-96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2570		M							
2575	some calcite cmt present 2575-2579.	M							
2580									
1									
2									
3		M							
4									
2585									
6									
7									
8	wispy lams present at base of calcite cmted zone	M							
9									
2590									
1		Bottom Core 1	S						
2									
3									
4									
2595									
2610									
11				Top Core 2					
12	9mm thick lutite at base of laminite interval		S						
13		M							
14		Bottom core 2							
2615									

Well Ramsey 38-14 (FGU-256) Core depth (+) 2592-2614 (−) 2644-2662 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/23/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2590															
	TOP OF CORE														
			S												
2595															
2600															
2605															
2610															
			S												
	BASE OF CORE														
2615															
	2614'-2644': MISSING CORE														

Well Ramsey 38-14 (FGU-256) Core depth (+) 2592-2614 (−) 2644-2662 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/23/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
	4' OF CORE IN 3' BOXES														
2640															
2645															
2650															
2655															
2660															
	BASE OF CORE														
2665															

Well Ramsey 46-6 (FGU-266) Core depth (+) (−) 2545 / 2599 = 54' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/13

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2545	~2' OF BROKE MATERIAL		?						
	~1.5' OF BROKEN MATERIAL								
2550									
	2551 - 2557': MISSING CORE BOXES								
2555									
2560									
	2560 - 2563': MISSING CORE BOX								
2565	FAINT RIPPLES		E						
2570									
2575									
2580			G G						

Well Ramsey 46-6 (FGU-266) Core depth (+) 2545 (−) 2599 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/13

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2580									
			G						
			S						
2585									
	SMALL-SCALE TROUGH X-LAMINATION		S						
	2587-2590: MISSING CORE BOX								
2590									
	VERY FAINT LAMINATIONS, OF CARBONACEOUS MATERIAL								
2595		M							
		M							
2599		M							
	BASE OF CORE								
2600									

Well Ramsey 46-11 (FGU-262) Core depth (+) 2543 (−) 2597 = 54' Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/13

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
	GENERAL NOTE: THERE ARE 4' OF CORE IN EACH 3' BOX															
2540																
2543	TOP OF CORE															
2545		M														
2550		M														
2555		M														
2560		M														
2565		M														
		M														
2570		S														
	2570'-2589.5': MISSING CORE															

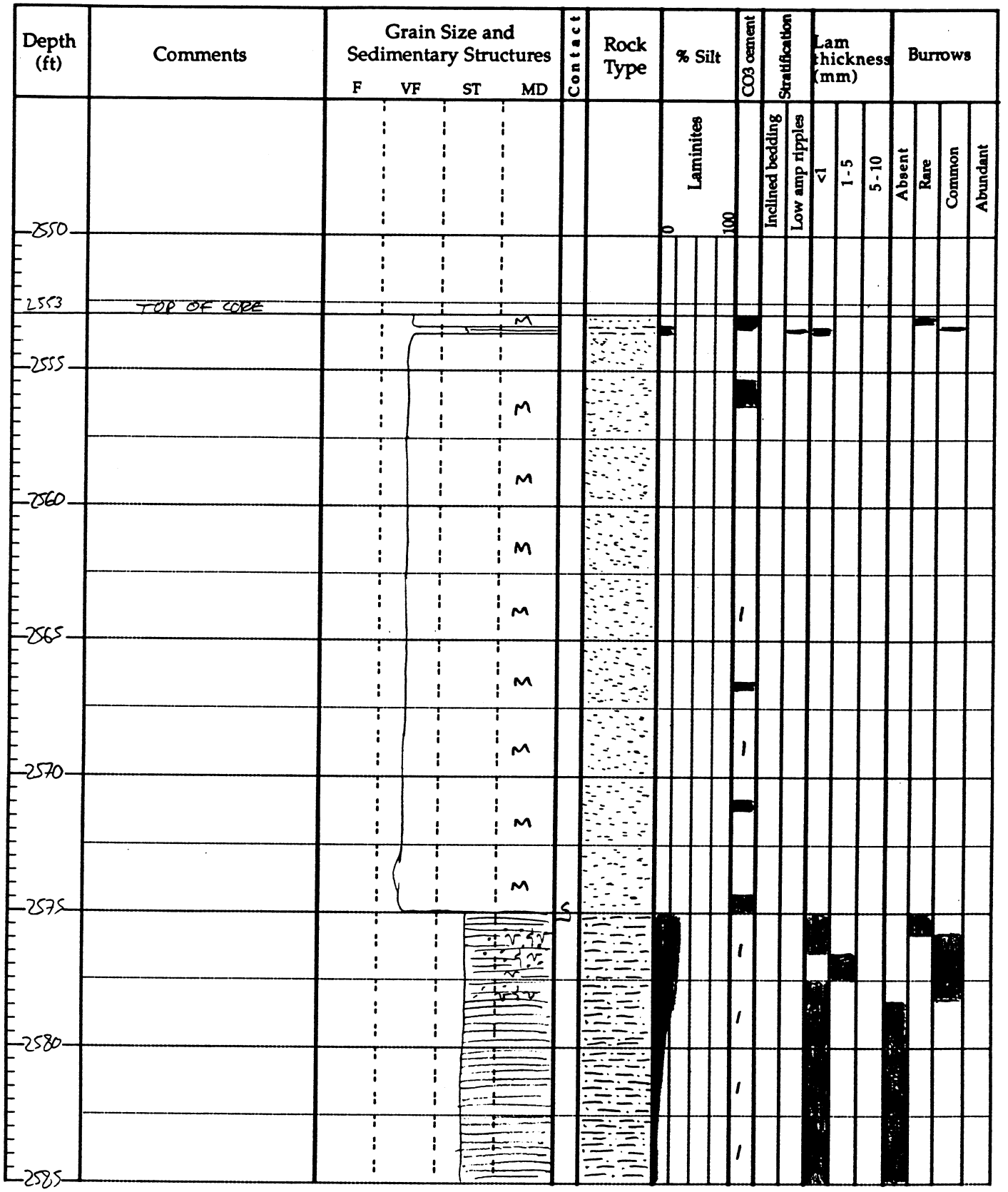
Well Ramsey 46-11 (FGU-262) Core depth (+) 2543 (−) 2597 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/13

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2585															
2590															
		M													
		M													
2595															
2597		M													
	BASE OF CORE														
2600															

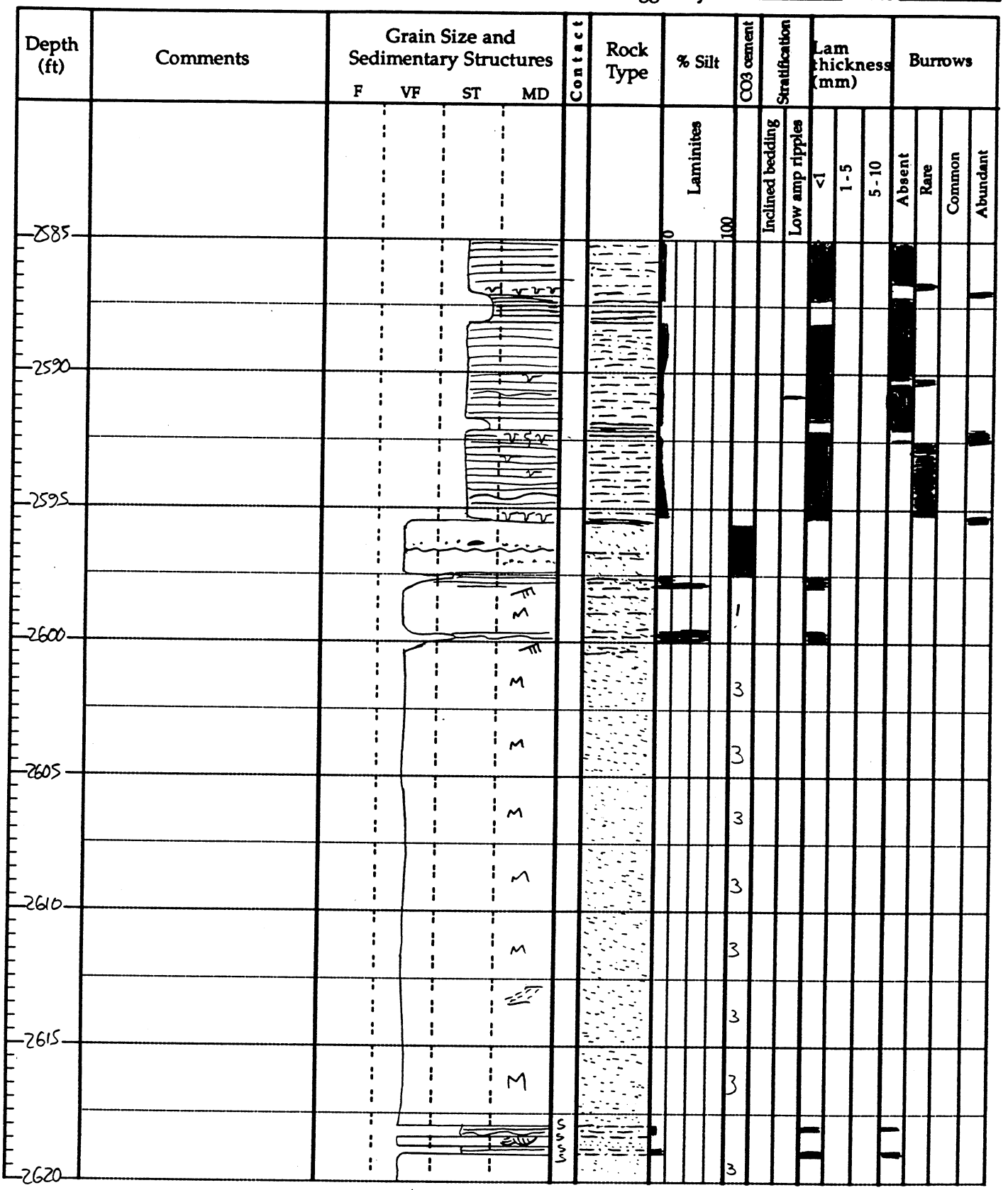
Well RAMSEY 46-7/FGU-270 Core depth (+) 2553 (−) 2661 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/16/96



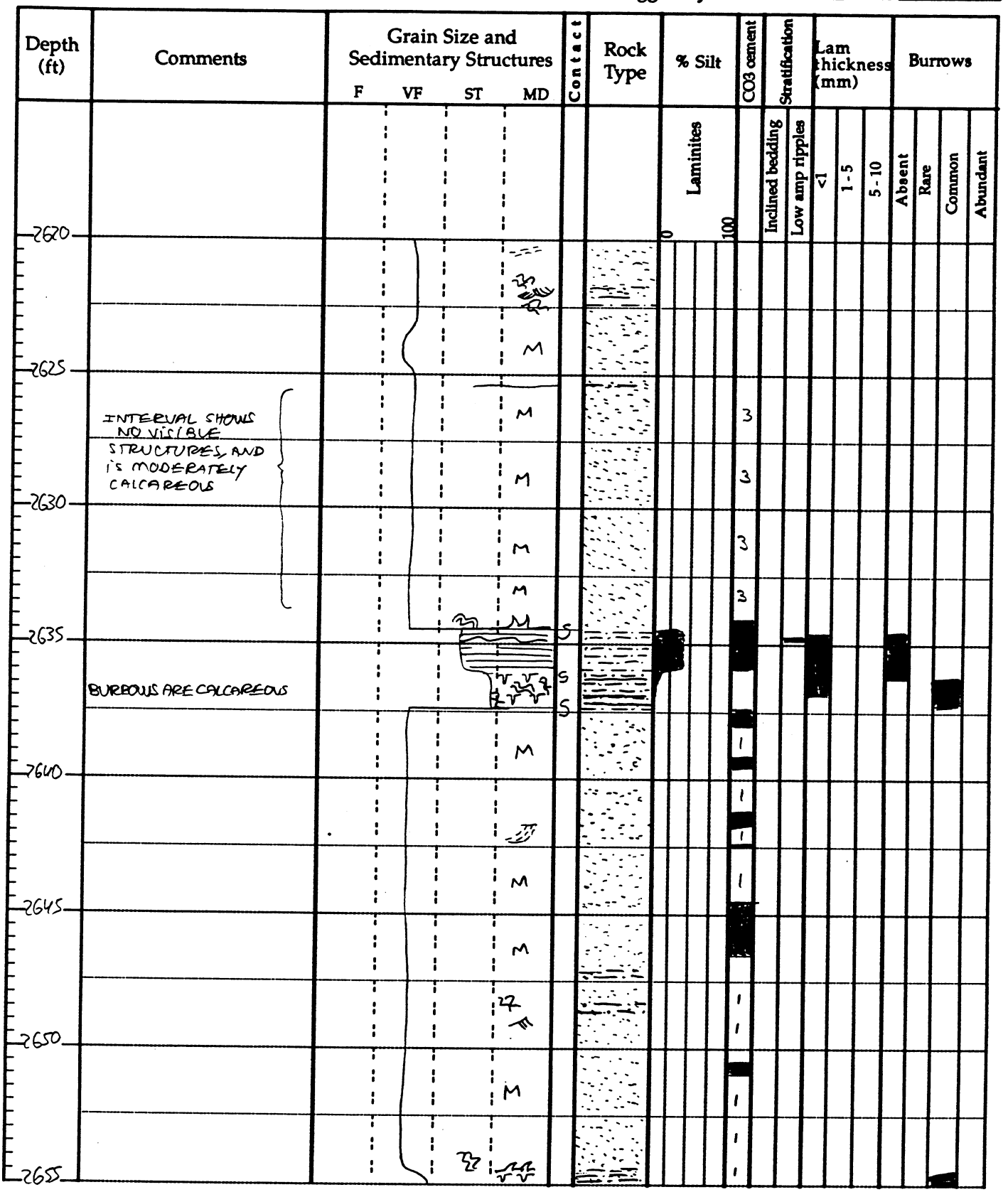
Well RAMSEY 46-7/FGU-270 Core depth (+) 2553 (−) 2661 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/16



Well RAMSEY 46-7/FGU-270 Core depth (+) 2553 (−) 2661 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/16



Well RAMSEY 46-7/FGU-270 Core depth (+) 2553 (−) 2661 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/16

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2655																
	DARK BANDING, PROBABLY DUE TO CONCENTRATION OF CARBONACEOUS MATERIAL	MD					I									
	SLIGHTLY CALCAREOUS	MD					I									
2660							I									
2661	BASE OF CORE	MD														
2665																

Well Ramsey 46-4 / FGU-272 Core depth (+) 2571 (−) 2625 = 54' Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/15

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2570									
2571	TOP OF CORE								
2575			S						
2580									
2585									
2590	FAINT RIPPLES								
2595									
2600									
2605									

Well RAMSEY UG-4/FGU-272 Core depth (+) 2571 (−) 2625 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/15

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
2605																
2610	2610-13': MISSING BOX															
2615			S													
2620	2619-2622: MISSING BOX															
2625	BASE OF CORE	M														

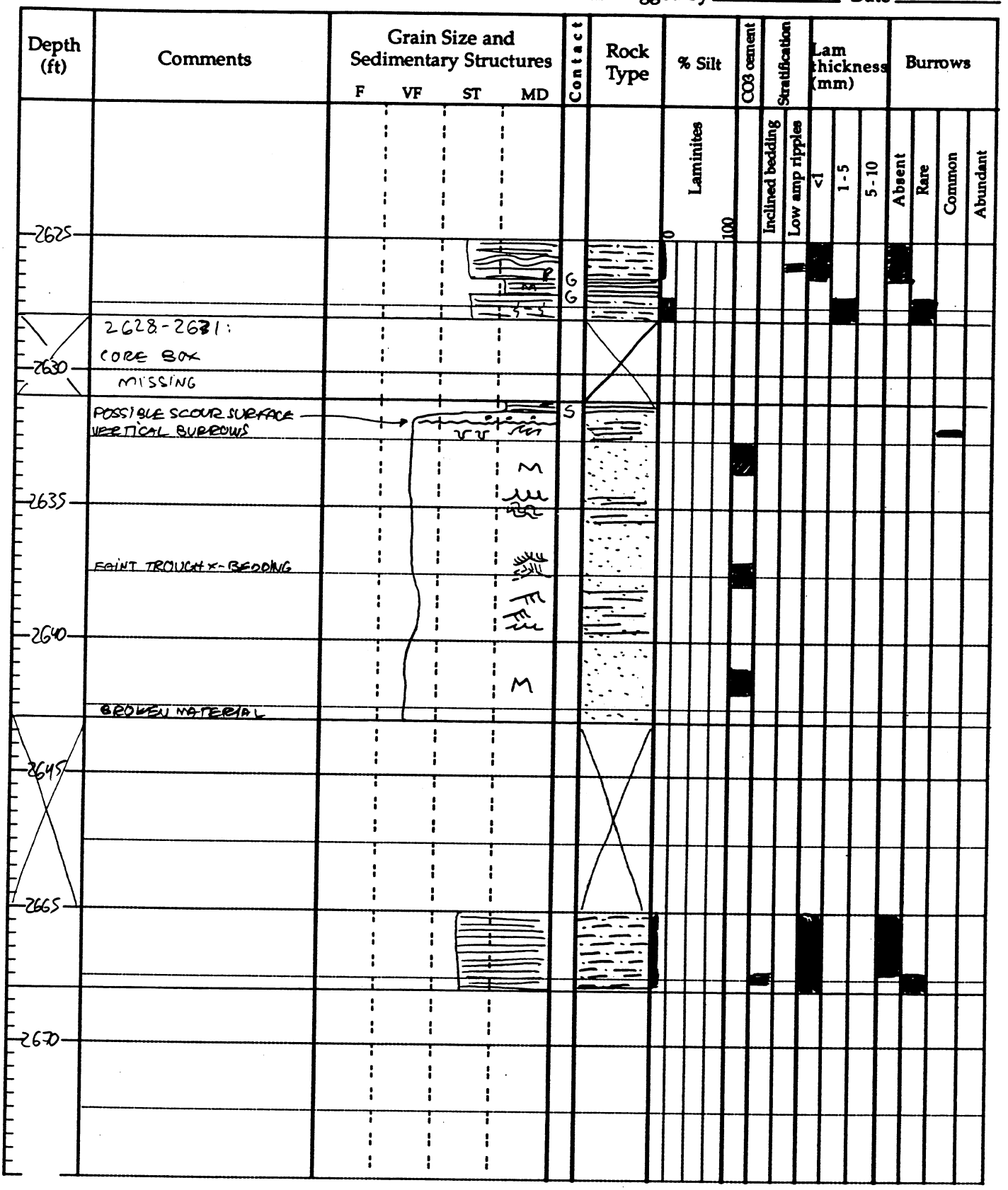
Well Ramsey 46-1 (FGU-281) Core depth (+) 2590 (−) 2645/65-68 = 58' Log depth @ ___

Formation ___ Location ___ Logged by JOSE Date 08/13

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
	GENERAL NOTE: SOME 3' CORE BOXES REPORT 4' OF CORE														
2590															
2593	TOP OF CORE														
2595															
2600															
2605															
2610			S												
2615	2613-2616: CORE BOX MISSING														
2620															
2625			S												

Well _____ Core depth (+) (−) _____ = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____



Well RAMSEY 19-47/FGU-291 Core depth (+) 2675 (–) 2713 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/10/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification	Lam thickness (mm)	Burrows
	GENERAL: 4' OF CORE REPORTED IN 3' BOXES				Laminites	Inclined bedding	Low amp ripples	<1, 1-5, 5-10	Absent, Rare, Common, Abundant
2675	TOP OF CORE								
	6' REPORTED IN 3' BOX	MD							
		MD							
2680			S						
	MISSING CORE								
2685		MD							
2690	MISSING CORE								
2695			S						
		MD							
2700		MD							
2705		MD							
		MD							
2710		MD							

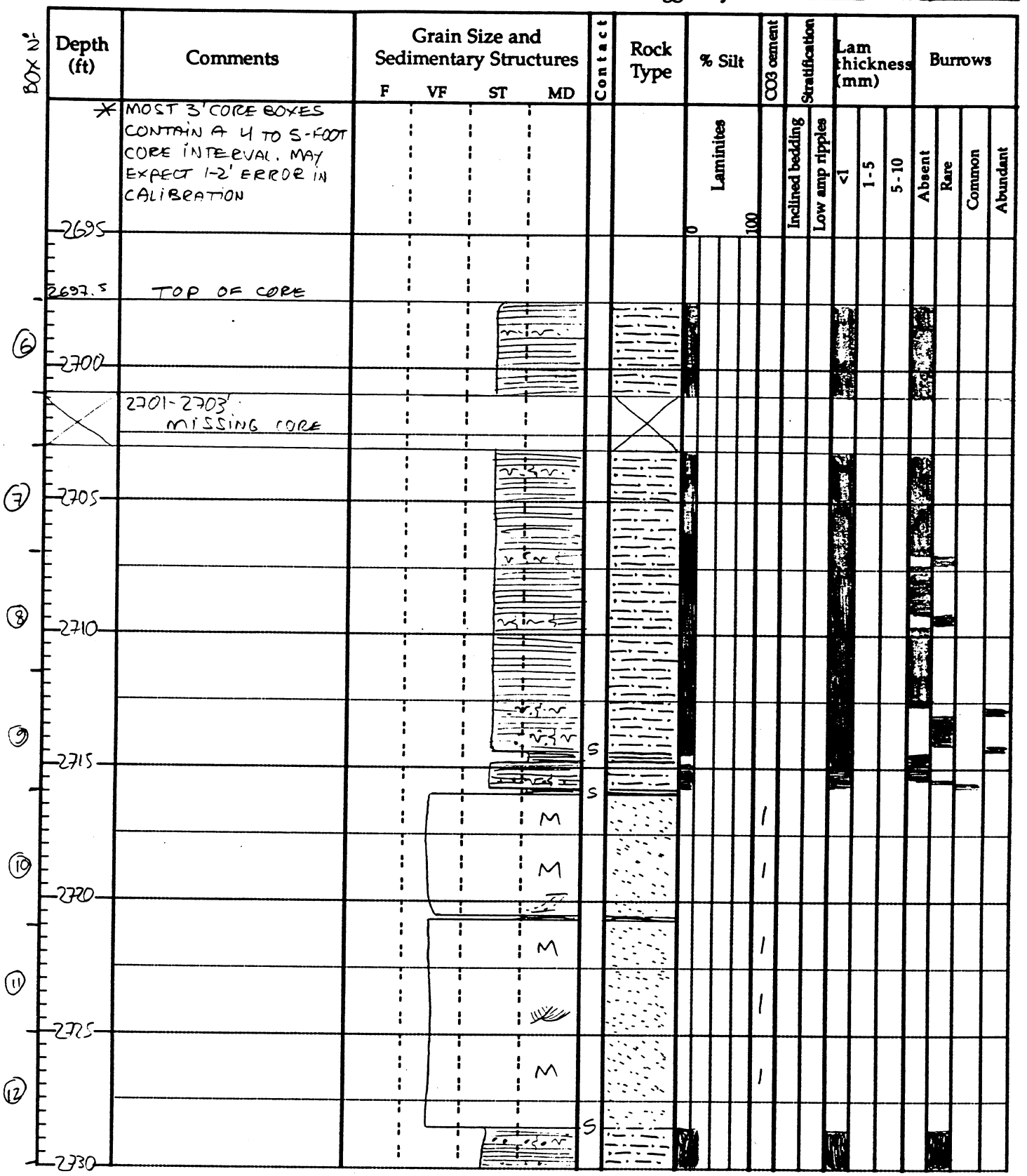
Well RAMSEY 19-47 / FGU-291 Core depth (+) 2675 (–) 2713 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOE Date 10/10/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1 - 5	Lam thickness (mm): 5 - 10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2710			S												
	BASE OF CORE @ 2713'														
2715															

Well Ramsey 24-1 (FGU-292) Core depth (+) 2697.5' (−) 2888 = _____ Log depth @ _____

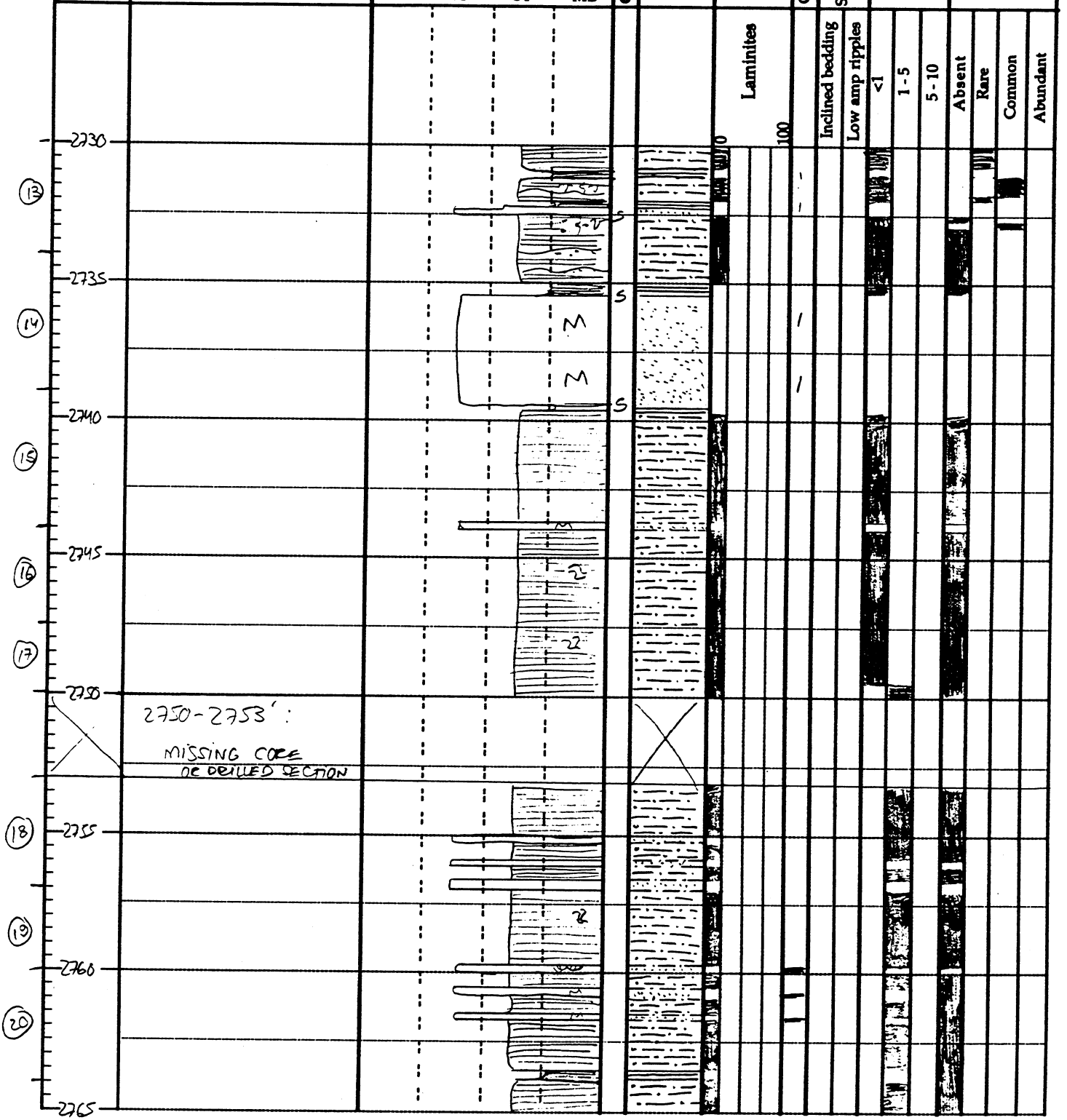
Formation _____ Location _____ Logged by José Date 08/26-28/96



Well RAMSEY 24-1 (FGU-292) Core depth (+) 2697.5' (−) 2888 = _____ Log depth @ _____

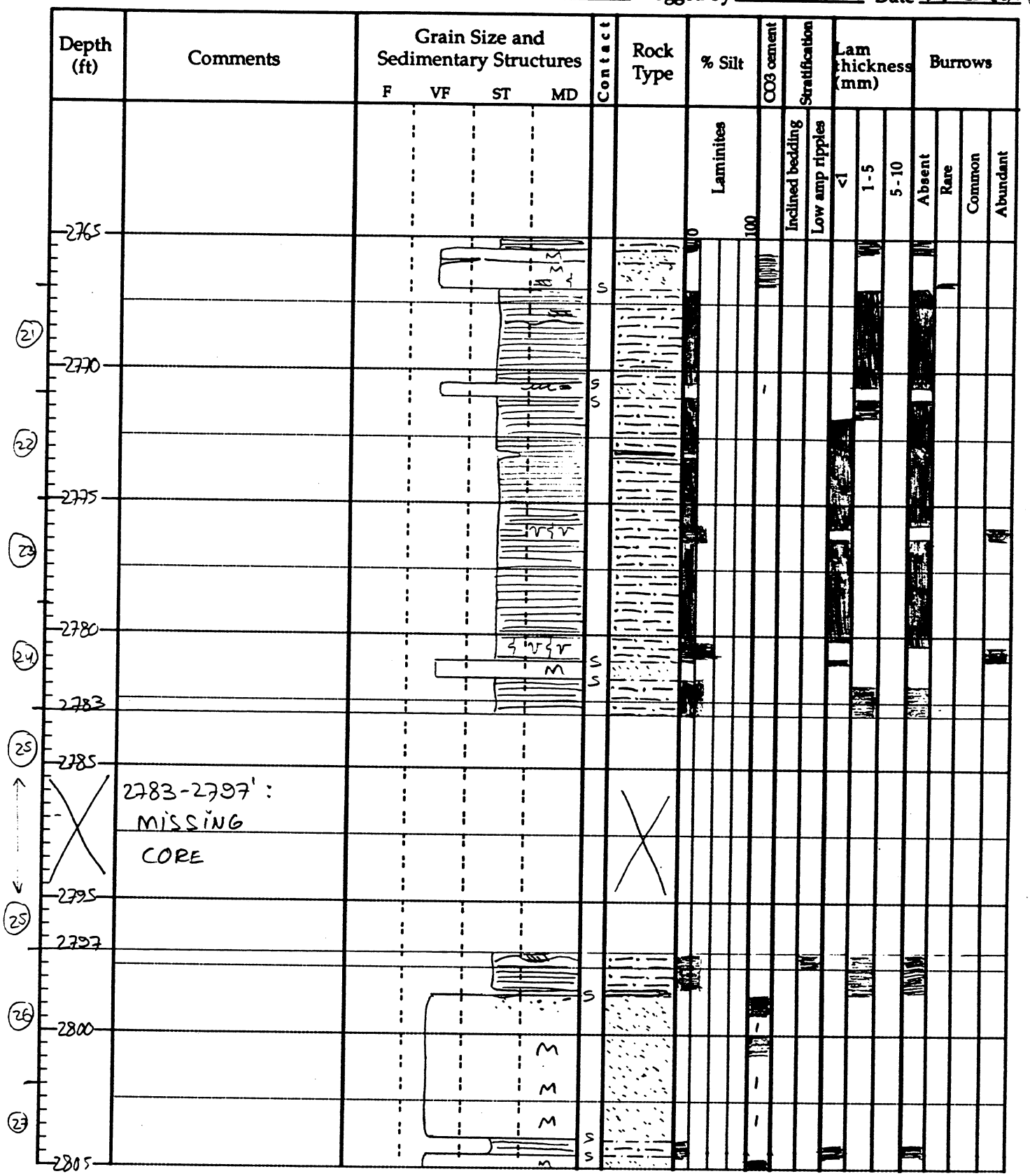
Formation _____ Location _____ Logged by JOSE Date 08/26-28/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2730									
2735									
2740									
2745									
2750	2750-2753': MISSING CORE OR DRILLED SECTION								
2755									
2760									
2765									



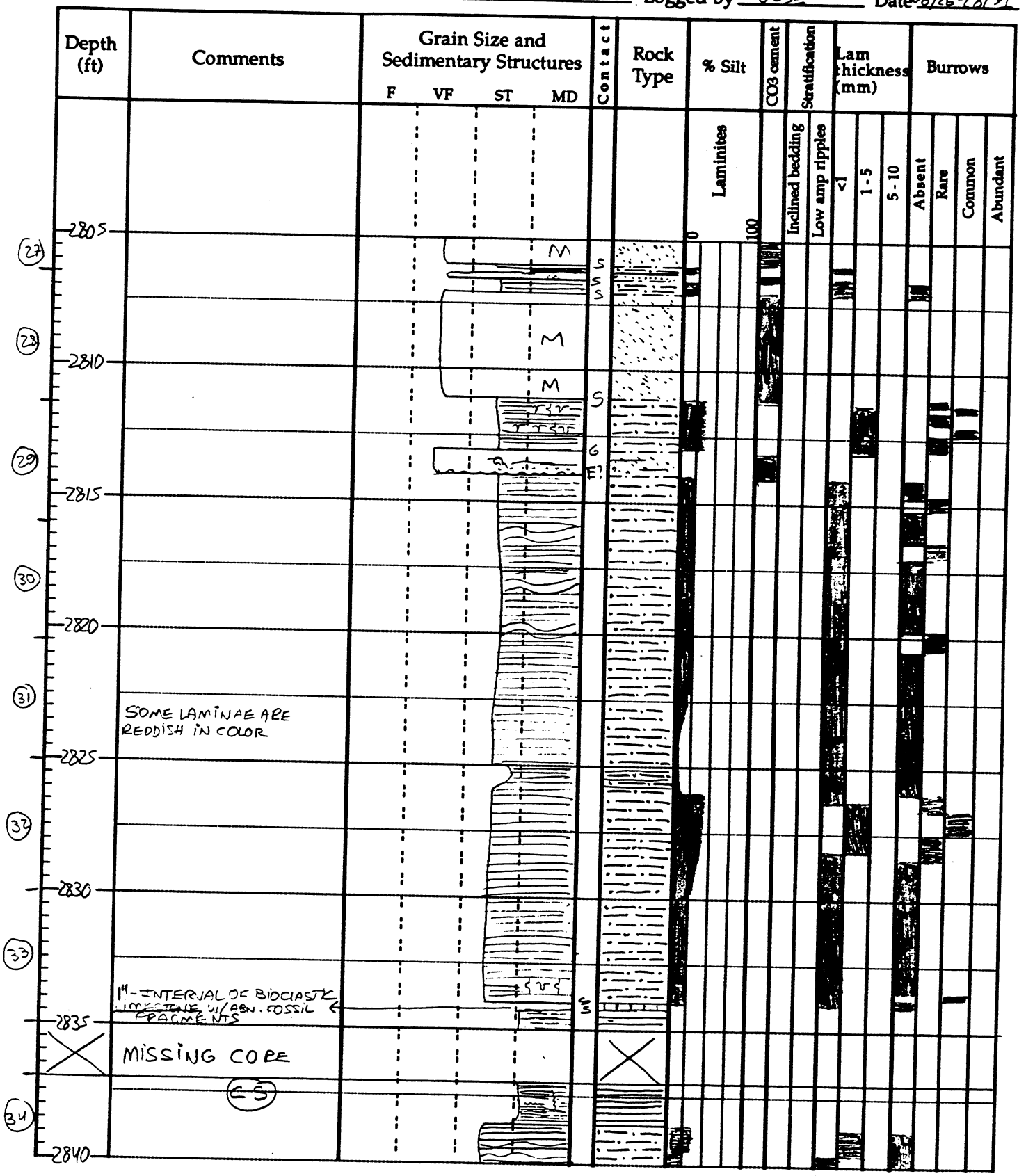
Well RAMSEY 24-1 (FGU-292) Core depth (+) (−) 2697.5' / 2888 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/26-28/96



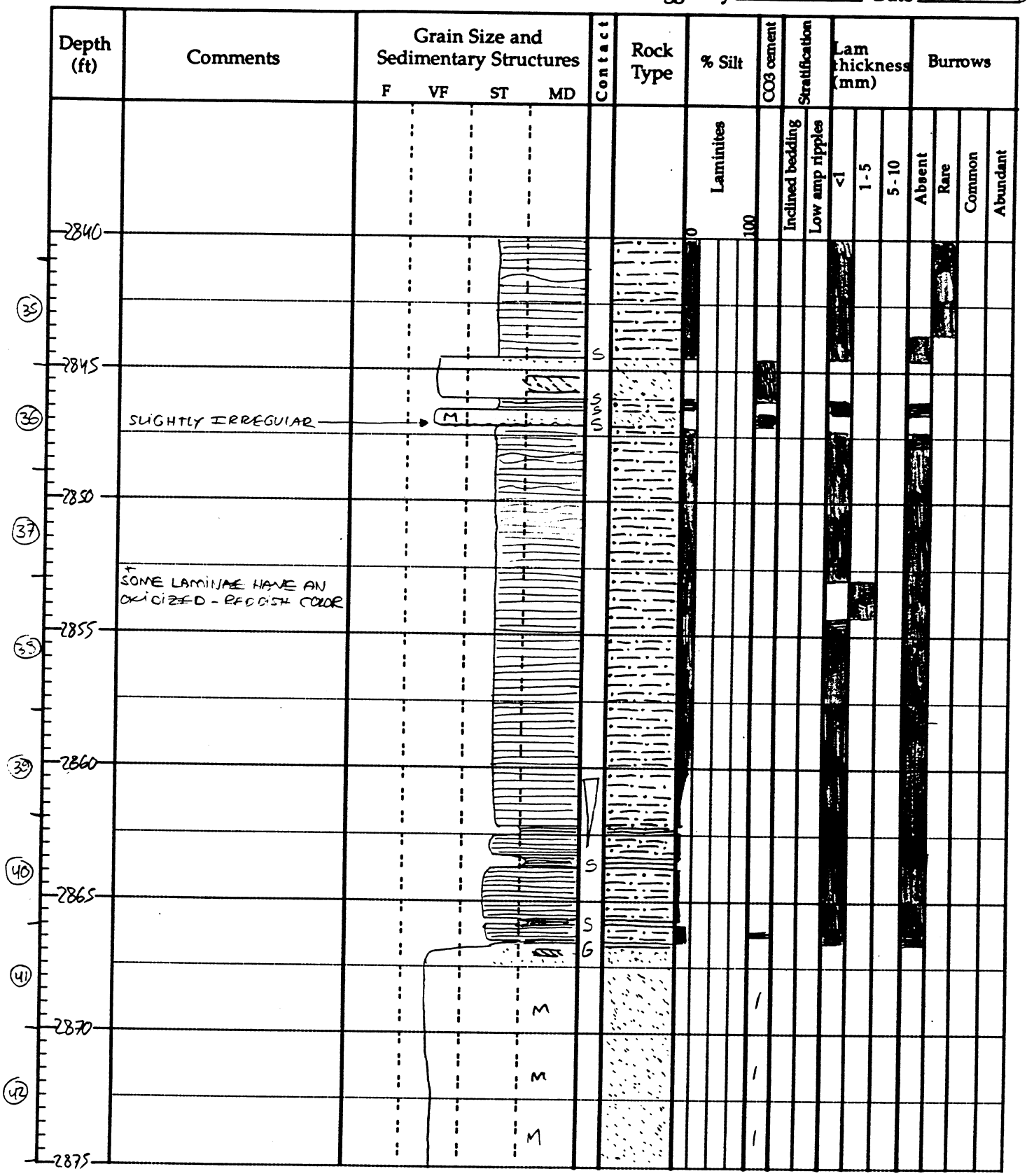
Well RAMSEY 24-1 (FGU-292) Core depth (+) 2697.5 (−) 2888 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/26-28/96



Well RAMSEY 24-1 (FGU-292) Core depth (+) 2697.5 (–) 2888 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/26-28/96



Well Ramsey 24-1 (FGU-292) Core depth (+) (−) 2697.5 2888 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/26-28/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100) Laminites	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
2875															
(43)						1									
		M													
		M				1									
2880															
(44)															
						1									
2885															
(45)						1									
2888	BASE OF CORE														
2890															

Well FGU-306 Core depth (+) 2686 (−) 2746 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0 – Laminat. – 100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam Ranges (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2685									
← 86 →	Fine laminated siltstone, with many Rip-up clasts of clay,								
	small size (1-2 mm), organic rich. (Flakes).		S						
2690	The contact is not								
	present but looks sharp.								
	Massive Sandstone very fine grained,								
	poorly cemented,								
2695	locally very friable.								
	Some Layers of highly cemented with carbonate.								
2700									
	Contact is apparently erosive. Below contact, fine laminated siltstone,		E						
	Slightly bioturbated by horizontal burrows, some vertical.		S						
2705	Massive and very								
	friable sandstone.		S						
	Fine laminated siltstone upper contact is								
	sharp, lower is gradual and finning upward.		A						
2710	Massive sandstone								
	with some organic flakes toward Top.								
2715	Soft Deformation								
	structure (Flame structure) in a friable sandstone								
2720									

Well FGU-306 Core depth (+) 2686 (−) 2746 = _____ Log depth @ _____

Formation _____ Location _____ Logged by _____ Date _____

Depth (ft)	Comments	Grain Size and Sedimentary Structures: F	VF	ST	MD	Contact	Rock Type	% Silt (0–100)	CO3 cement	Stratification: Inclined bedding	Low amp ripples	Lam Ranges (mm): <1	1-5	5-10	Burrows: Absent	Rare	Common	Abundant
2720																		
	Very fine grained, massive sandstone																	
	Compact, Not cemented.																	
2725																		
2730																		
	Soft sediment deformation, about																	
	1.5 inches thick, formed by contorted bedding and wavy																	
2735	laminations, with many rip-up clasts organic rich.																	
	Contact is gradual																	
2740																		
	Fine laminated siltstone, locally bioturbated. Many																	
	organic rip-up clasts.																	
2745																		
←2746																		

Well EGU-318 Core depth (+) 2470 (−) 2518 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/11/96

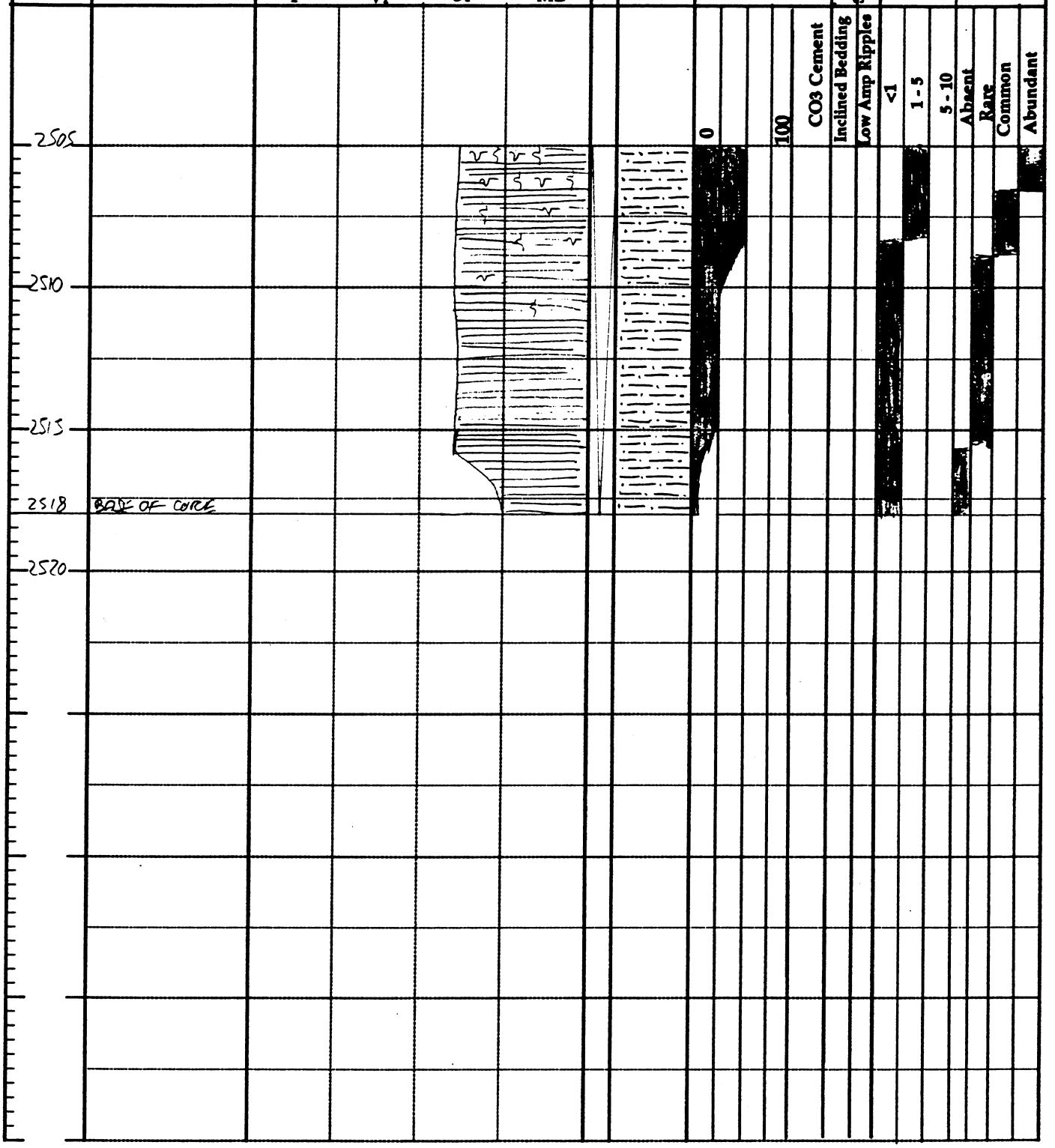
Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2470									
2475									
2480									
2485			E?						
2490									
2495									
2500									
2505			G						

NEED TO FINISH
J.C. 10/11

Well FGU-318 Core depth (+) 2470 (−) 2518 = _____ Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 10/16/91

Depth (ft)	Comments	Grain Size and Sedimentary Structures				Contact	Rock Type	% Silt					Stratification		Lam Thickness (mm)			Burrows			
		F	VF	ST	MD			0			100	CO3 Cement	Inclined Bedding	Low Amp Ripples	<1	1 - 5	5 - 10	Absent	Rare	Common	Abundant
2505																					
2510																					
2515																					
2518	BASE OF CORE																				
2520																					



Bureau of Economic Geology

Well FORD WEST / RAMSEY 14-3 Core depth (+) 3552 (−) 3587 = 35' Log depth @ _____

Formation _____ Location _____ Logged by JOSE Date 08/08

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows: Absent	Rare	Common	Abundant
	NOTE: ROCKTYPE DENOTED BY INDICATES LAMINATED VF TO SILTY SS															
3550																
T 3552	TOP OF CORE															
		M														
3555			S													
	ALTERNATING BANDS OF SLIGHT CO_3 CEMENTED (LIGHT GRAY)	M														
		M														
3560		F														
3565	SLIGHT CO_3 CEMENT						1									
		M														
3570		M														
			S													
	NOTE: SANDIER THAN GERALDINE WELLS: LAMINATED VF/ST SANDSTONES															
3575																
	LENTICULAR															
	PROBABLY BEST DESCRIBED AS HETEROLITHIC, WITH >50% SLT															
3580																
3585																

Well Ramsey 14-3 Core depth (+) 3552 (−) 3587 = _____ Log depth @ _____

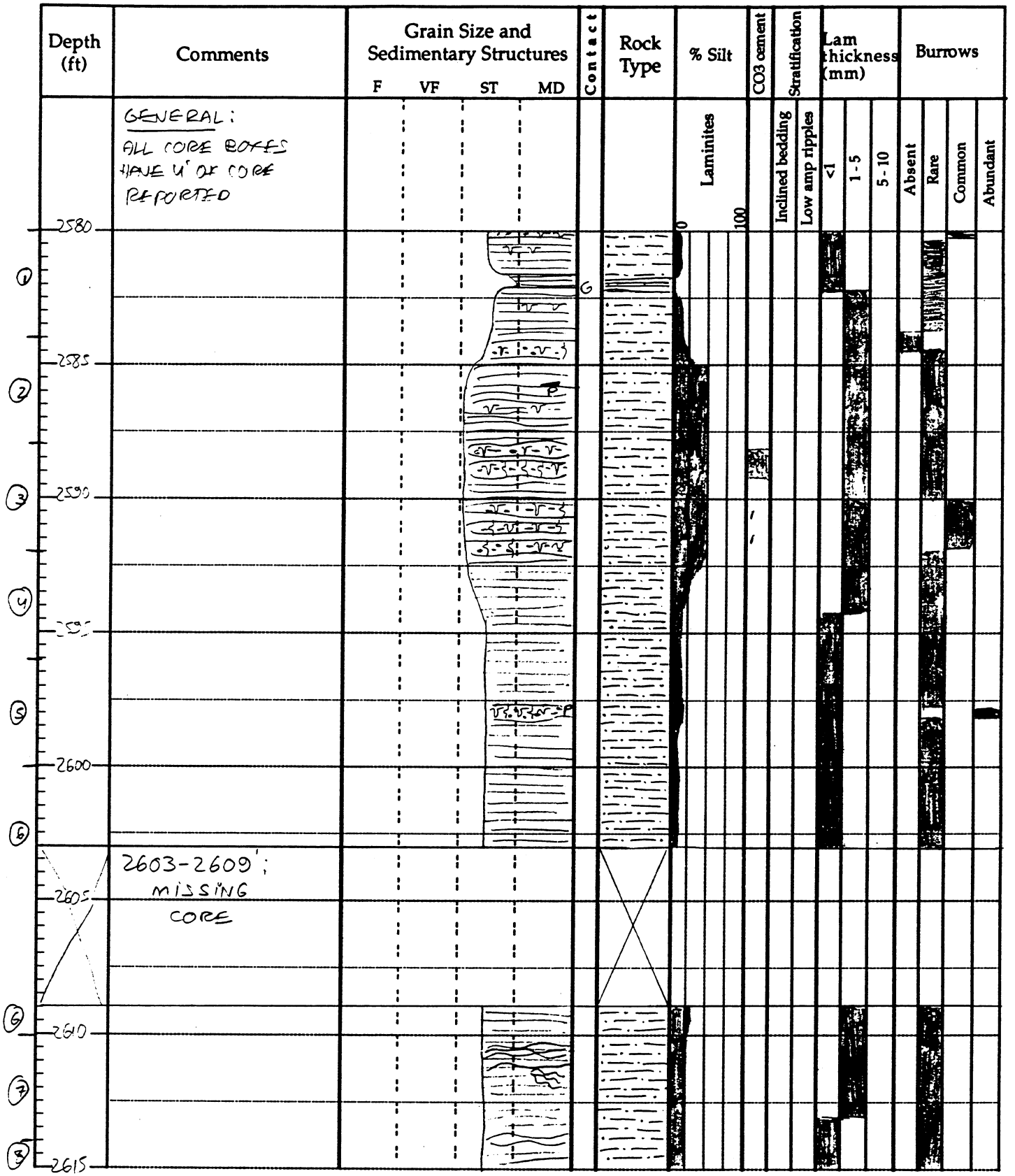
Formation _____ Location _____ Logged by JOSE Date 08/08

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (0–100)	Laminites	CO3 cement	Inclined bedding	Low amp ripples	Lam thickness (mm) <1	1-5	5-10	Burrows Absent	Rare	Common	Abundant
3585	SAME AS ABOVE															
3587	BASE OF CORE															
3590																

B

Well Ramsey 22-1 Core depth (+) 2580 (−) 2630 = _____ Log depth @ _____

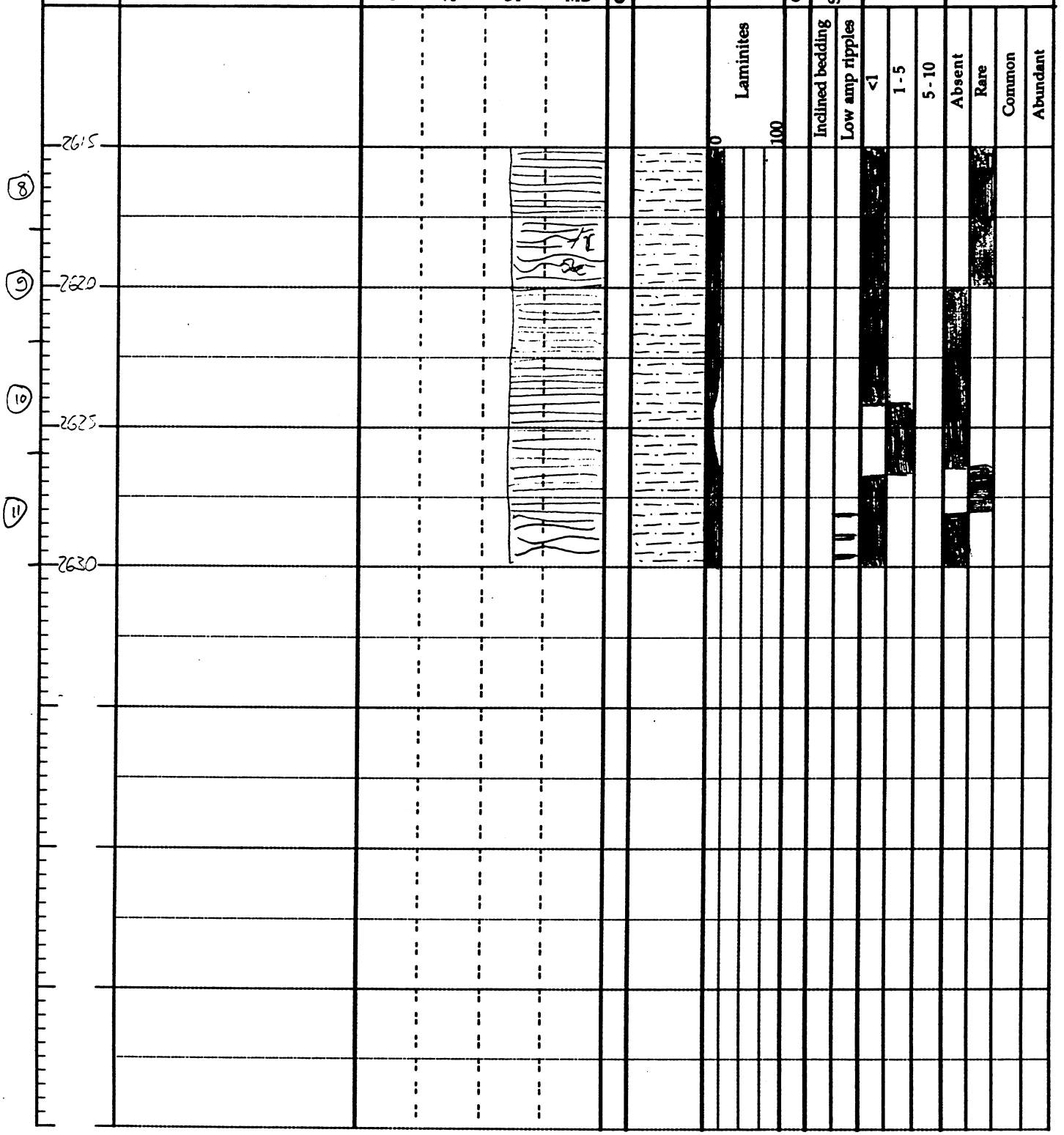
Formation _____ Location _____ Logged by JOSE Date 09/19/96



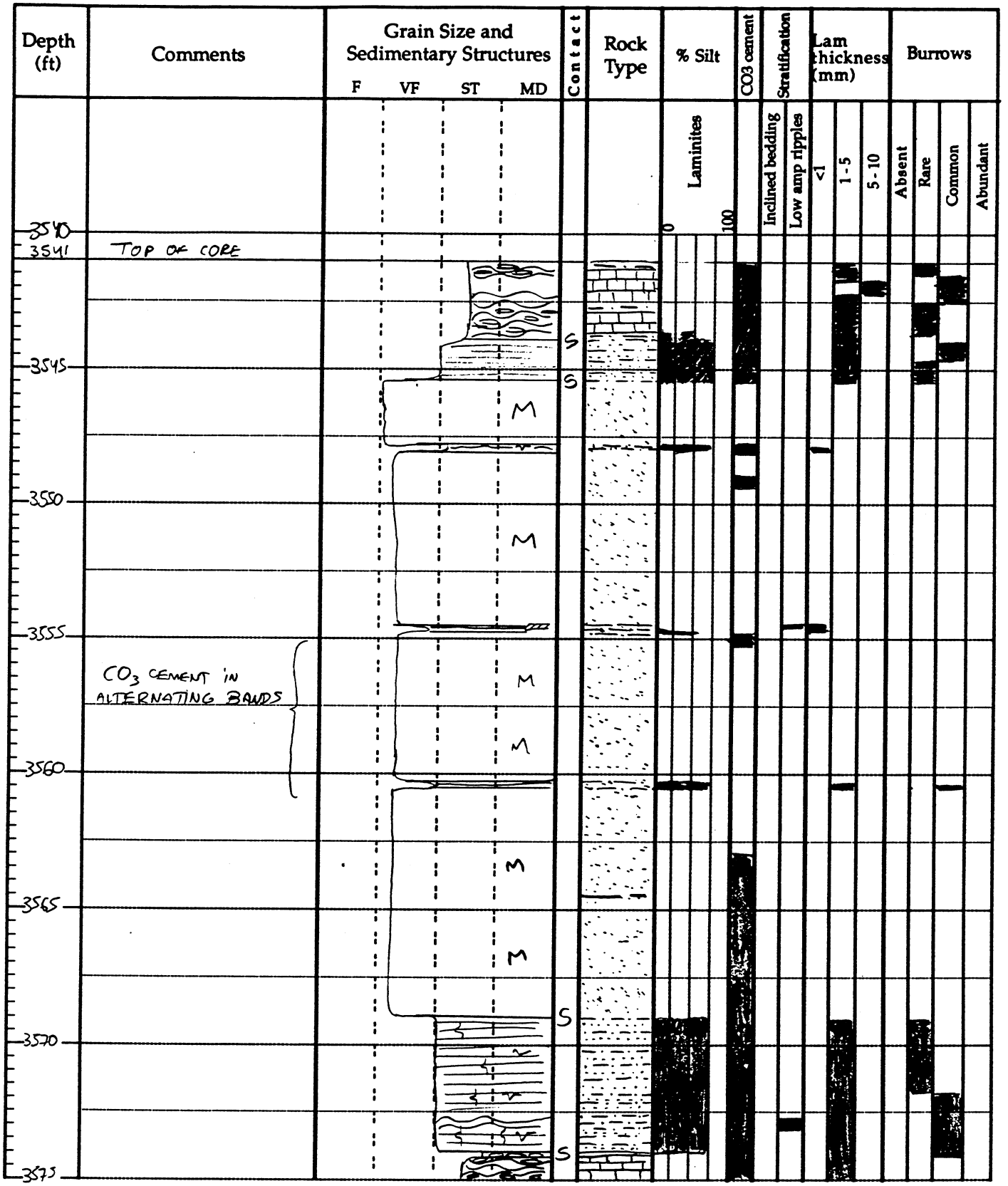
Well Ramsey 22-1 Core depth (+) 2580 (–) 2630 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 09/19/95

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
2615									
2620									
2625									
2630									



Well RANSEY 22-3 Core depth (+) 3541 = 57' Log depth @ _____
(−) 3598
Formation _____ Location FORD-GERALDINE Logged by JOSE Date 08/15



Well Ramsey 22-3 Core depth (+) 3541 (−) 3598 = _____ Log depth @ _____

Formation _____ Location _____ Logged by Jose Date 08/15

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F, VF, ST, MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification (Inclined bedding, Low amp ripples)	Lam thickness (mm) (<1, 1-5, 5-10)	Burrows (Absent, Rare, Common, Abundant)
3575									
3580									
3585									
3590			S						
3595			S						
3598	BASE OF CORE								
3600									

Well CONOCO RAMSEY 22-11 Core depth (+) (−) 3552' = 3552' Log depth @ _____

Formation PCC Location FORD WEST FIELD, CULBERSON CO., TX Logged by DICKERSON Date 6/28/96

Depth (ft)	Comments	Grain Size and Sedimentary Structures (F VF ST MD)	Contact	Rock Type	% Silt (Laminites 0–100)	CO3 cement	Stratification: Inclined bedding	Stratification: Low amp ripples	Lam thickness (mm): <1	Lam thickness (mm): 1-5	Lam thickness (mm): 5-10	Burrows: Absent	Burrows: Rare	Burrows: Common	Burrows: Abundant
3550															
3552 TOP	THIN (<1 mm) LAMINAE; WISPY DISCONTIN.; HORIZONTALLY BURROWED; LAMINAE IN SETS THAT DECREASE UPWARD FROM 8-10 mm AT BASE TO 5 mm THICK AT TOP		G			3			✓	✓				✓	
3555	FRIABLE, BIMODAL		S			3								✓	
3560						1									
3565	2-CM LAYER - MORE ORGANIC MATTER, CALCAREOUS V. THIN DARK LAMINA W/ FLAME STRUCTURE		S			3	GI								
3570	2-4 mm ORGANIC INTVL., GENTLY INCLINED LAM., SHALE BREAK ON LOG (SUBTLE)		S S			1	GI								
	CALCAREOUS ABOVE 3 TO 4 mm DARK LAMINAE ZONE W/ LOAD STRUCTURE					3			✓						
3575	3576.7 - BIMODAL LVF SD, SLT; A FEW FINE DARK CLASTS; RIPPLED; DARK MATERIAL W/ COARSEST (LVF) SAND		S			3		✓							
	INCR. GYP. OR ANHYDRITE BLEBS (4-5 mm DIAM); PACKETS OF LAMINAE THICKEN DOWNWD. FR. 5-7 TO 15-18 mm	G/A G/A	S							✓					
3580	V. FINE SHELL FRAGMENTS, WISPY DISCONT. LAMINAE, H. BURROWS; G/A FOLLOWS LAMIN.; INDIV. LAM ~1 mm	G/A G/A G/A				3				✓ ✓				✓	
BOTTOM	NOTE: G/A = GYPSUM OR ANHYDRITE BLEBS/PATCHES														

TS MAX PERM AND POR

SEM I.D. OF G/A

TS MEDIAN POR/PERM

TS "TYPICAL" C

L

TS - MIN POR/PERM

SEM - I.D. OF DARK FINES

TS & SEM I.D. OF G/A PATCHES