Appendix A.3
Core # 3
C. C. Mogen Tract #1 Core Descriptions
153N 96W Sec 10
Core to Log = No log available

Depth (ft)	Composition	Primary Structures	Secondary Structures	Single Diagnostic Criteria	Additional Diagnostic Criteria	Facies
10,006.6' – 10,010'	Grayish black (N2) to dark black (N1) shale	Vague parallel-laminations, very thin, platy,				LBS
10,010' – 10,013'	Light green (5 G 8/1) to greenish gray (5 G 6/1) slightly dolomitic shale 40%) to very light gray silty dolomite (60%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD, dark layering	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,013' – 10,014'	Light green to greenish gray slightly dolomitic shale (50%) to very light gray silty dolomite(50%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD, dark layering	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,014' – 10,015'	Light green to greenish gray slightly dolomitic shale (40%) to very light gray silty dolomite(60%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD, dark layering	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,015' – 10,021'	Light green to greenish gray slightly dolomitic shale (50%) to very light gray silty dolomite(50%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,021' – 10,022'	Light green to greenish gray slightly dolomitic shale (40%) to very light gray silty dolomite(60%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD, dark layering	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,022' – 10,025'	Light green to greenish gray slightly dolomitic shale (40%) to very light gray silty dolomite(60%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD, dark layering	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,025' – 10,026'	Light green to greenish gray	Parallel-laminations,	Desiccation cracks, scour	-Mud drapes -Uni- and	-Flaser bedding -Herringbone x-	D

	slightly dolomitic shale (60%) to very light gray silty dolomite(40%), 66-88µ, well-sorted, tightly packed	cross-laminations, SSD	surfaces, energy decrease features, loading features, brecciation, Fluid escape structures	bidirectional reactivation surfaces -Bottom sets -Flame structures	bedding -Syneresis cracks	
10,026' – 10,027'	Light green to greenish gray slightly dolomitic shale (50%) to very light gray silty dolomite(50%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,027' – 10,028'	Light green to greenish gray slightly dolomitic shale (60%) to very light gray silty dolomite(40%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,028' – 10,029'	Light green to greenish gray slightly dolomitic shale (10%) to very light gray silty dolomite(90%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,029' – 10,030'	Light green to greenish gray slightly dolomitic shale (70%) to very light gray silty dolomite(30%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,030' – 10,032'	Light green to greenish gray slightly dolomitic shale (60%) to very light gray silty dolomite(40%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,032' – 10,033'	Light green to greenish gray slightly dolomitic shale (50%) to very light gray silty dolomite(50%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,033' – 10,034'	Light green to greenish gray slightly dolomitic shale (60%) to very light gray silty dolomite(40%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,034' – 10,035'	Light green to greenish gray slightly dolomitic shale (20%) to very	Parallel-laminations, cross-laminations,	Desiccation cracks, scour surfaces, energy decrease	-Mud drapes -Uni- and bidirectional reactivation	-Flaser bedding -Herringbone x-bedding -Syneresis	D

	light gray silty dolomite(80%), 66-88µ, well-sorted, tightly packed	SSD	features, loading features, brecciation, Fluid escape structure	surfaces -Bottom sets -Flame structures	cracks	
10,035' – 10,036'	Light green to greenish gray slightly dolomitic shale (50%) to very light gray silty dolomite(50%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, Fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,036' – 10,037'	Light green to greenish gray slightly dolomitic shale (20%) to very light gray silty dolomite(80%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, Fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,037' – 10,038'	Light green to greenish gray slightly dolomitic shale (20%) to very light gray silty dolomite(80%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, Fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,038' – 10,039'	Light green to greenish gray slightly dolomitic shale (40%) to very light gray silty dolomite(60%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, Fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,039' – 10,040'	Light green to greenish gray slightly dolomitic shale (50%) to very light gray silty dolomite(50%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, Fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,040' – 10,042'	Light green to greenish gray slightly dolomitic shale (20%) to very light gray silty dolomite(80%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, loading features, brecciation, Fluid escape structure	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,042' – 10,043'	Light green to greenish gray slightly dolomitic shale (10%) to very light gray silty dolomite(90%), 66-88µ, well-sorted, tightly packed	Parallel-laminations, cross-laminations, SSD	Desiccation cracks, scour surfaces, energy decrease features, brecciation,	-Mud drapes -Uni- and bidirectional reactivation surfaces -Bottom sets -Flame structures	-Flaser bedding -Herringbone x-bedding -Syneresis cracks	D
10,043' – 10,047.5'	Light green (5 G 8/1) to greenish	Massive cross-laminations,	Highly deformed	-Desiccation drapes		C

	gray (5 G 6/1) shale and very light gray (N8) to medium gray (N5) silty dolomite	SSD and parallel lamination in silty dolomite clasts	bedding, high amounts of brecciation			
10,047.5' – 10,052'	Dark greenish-gray (5 GY 4/1) to medium dark gray (N4) silty dolomite	Massive, rip-up clasts of varying size.	Rip-up clasts. Vague. Pyrite			B

***No Log Available