

OIL SHALE CORE DESCRIPTION

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	DEPTH	LITHOLOGY	COLOR						BEDDING		EST. RICHNESS	CALCAR- OUSNESS		ACCE- SSORY		MISC.		GULF MINERAL RESOURCES CO. WELL <u>BONANZA 13</u> LOCATION _____								
			TAN	GRAY	BROWN	GRY-BRN	BLACK	OTHER LAM.	CONTORT.	OTHER	POOR	FAIR	MOD.	RICH	SLIGHTLY	MODERATELY	VERY	PYRITE	SALINE MIN.	CARBON	FOSSILS	VUGS	FRACT.	BRECCIA	REMARKS	
Core #1 cut 20.1 Rec 20.1	341.8	oil sh	X																							
	343.8	oil sh																								
	344.1	oil sh																								
	344.9	oil sh	X																							
	345.9	oil sh																								
	346.6	marlstone		X																						
	348.7	oil sh	X																							
	352.9	marlstone		X																						
	356.6	oil sh	X																							
	357.5	marlstone		X																						
	358.1	oil sh																								
	358.5	oil sh																								
	359.4	marlstone	X																							
	361.9																									
Core #2 cut 20.1 Rec 20.0	361.9	oil sh & Tuff																								
	363	Tuff																								
	363.3	oil sh																								
	364.0	oil sh																								
	365.6	oil sh																								
	366.7	oil sh	X																							
	367.8	marlstone		X																						
	373.9	Tuff																								
	374.4	marlstone	X																							
	376.1	oil sh																								
	377.6	oil sh	X																							
	378.7	oil sh																								
	379.5	oil sh	X																							
	381.7	oil sh																								
	381.9																									
	Core #3 cut 20.2 Rec 20.2	382.0	oil sh																							
		387.7	oil sh	X																						
388.1		oil sh																								
389.1		Tuff																								
389.5		oil sh	X																							
390.6		oil sh																								
392.0		oil sh	X																							
394.7		oil sh																								
395.7		oil sh																								
397.6		oil sh																								
398		oil sh	X																							
401.6		oil sh																								
402.2																										
Core #4 cut 19.7 Rec 19.7	402.2	oil sh																								
	402.5	oil sh	X																							
	405.9	oil sh																								
	406.1	oil sh	X																							
	406.7	Tuff																								
	407	oil sh																								
	407.5	oil sh																								
	408.4	oil sh																								
	410.7																									

GULF MINERAL RESOURCES CO.
WELL BOAZZA 13
LOCATION _____

REMARKS

First 2' of Frac. cemented Tuff
FRACTURED FROM 348.5-
355. Much pyrite & minor oil

Some thin tan streaks of oil
Manganese Marker FRACTURED 372.6-374.4

FRAC 389-390.4

FRAC 397.9-400.6

FRAC 402.5-405
Several angular FRACS

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DEPTH	LITHOLOGY	COLOR					BEDDING		EST. RICHNESS		CALCAR- OUSNESS		ACCE- SSORY			MISC.		REMARKS							
		TAN	GRAY	BROWN	GRY-BRN	BLACK	OTHER	LAM.	CONTORT.	OTHER	POOR	FAIR	MOD.	RICH	SLIGHTLY	MODERATELY	VERY		PYRITE	SALINE MIN.	CARBON	FOSSILS	VUGS	FRACT.	BRECCIA
Core #4 "Cont"	910.7	O:1 sh			X			X	X				X										X		45' FRAC. 410.7-411.3
	911.1	O:1 sh	X					X	X				X												
	912.4	O:1 sh	X					X					X												
	913.3	Tuff				X			X				X												
	914.7	marlstone	X						X														X		Fractured 914.7-916.9
	916.9																								oil along fracture
Core #5 cut 20.0' Re 20.8	916.9	O:1 sh			X			X					X										X		FRAC 417-419.4
	416.3	Tuff		X									X												
	418.4	marlstone	X		X			X					X												
	420.3	Tuff			X			X																	many wh inclusions
	420.8	marlstone	X					X					X										X		FRAC 420.5-422.4
	422.8	O:1 sh		X				X																	
	423.9	marlstone	X					X					X												
	425.8	O:1 sh		X				X																	
	426.5	Tuff			X								X												
	426.7	O:1 sh	X					X																	
	426.9	Tuff			X																				
	427.0	O:1 sh			X			X																	
	428.2	Tuff	X																						
	428.4	O:1 sh			X			X																	
	429.6	Tuff	X																						
	429.8	O:1 sh	X					X																	Thin Tuff 430.9 & 431.5
	432.8	O:1 sh		X				X																	
	433.2	Tuff	X																						
	434.8	marlstone	X					X																	1799-99-49999
	434.8	O:1 sh	X					X																	
436.1	marlstone	X					X																		
436.9																									
Core #6 cut 19.4 Re 19.4	436.9	marlstone	X					X																	
	437.0	Tuff		X																					
	437.1	O:1 sh	X					X																	
	437.3	Tuff		X																					
	437.7	O:1 sh	X					X																	
	439.1	Tuff		X																					
	439.3	O:1 sh		X				X																	
	440.6	Tuff						X																	
	441.5	O:1 sh			X			X																	
	442.0	oolitic L.S.	X																						Tan-white-streaked- very contorted
	442.3	O:1 sh		X				X																	
	442.6	Tuff	X						X																
	443.4	O:1 sh		X				X																	
	444.1	B:1 SS		X																					
	445.1	Siltstone	X																						
	445.9	B:1 SS		X																					
446.5	S:1/4 SS	X																							
448.3	B:1 SS		X																						
446.3																									
Core #7 cut 20.0' Re 20.0'	456.3	B:1 SS				X																			
	458.0	B:1 SS		X																					
	459.4	B:1 SS				X																			
	461.4	B:1 SS	X																						
	464.0																								

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