

Sharifaie  
Data

GEOLOGIST'S REPORT																																																																																																																							
DRILLING TIME AND SAMPLE LOG																																																																																																																							
COMPANY	Murfin Drilling Co., Inc.																																																																																																																						
LEASE	Brown-Engle Unit #1-6																																																																																																																						
FIELD	Elna East																																																																																																																						
LOCATION	405' FSL & 1320' FEL																																																																																																																						
SEC	6	TWSP	5S	RGE	30W																																																																																																																		
COUNTY	Decatur																																																																																																																						
CONTRACTOR	Murfin Drilling #7																																																																																																																						
SPUD	09/29/14	COMP	10/08/14																																																																																																																				
RTD	4430'	LTD	4433'																																																																																																																				
MUD UP	3223'	TYPE MUD	Chemical																																																																																																																				
SAMPLES SAVED FROM	3600'	TO	RTD																																																																																																																				
DRILLING TIME KEPT FROM	3600'	TO	RTD																																																																																																																				
SAMPLES EXAMINED FROM	3600'	TO	RTD																																																																																																																				
GEOLOGICAL SUPERVISION FROM	3300'																																																																																																																						
REFERENCE WELL	MDCI - Juennemann #1-7																																																																																																																						
<b>Formation</b>	<b>Sample Tops</b>	<b>E-log Tops</b>	Struct																																																																																																																				
Anhydrite	2630 (+244)	2607 (+267)	-6																																																																																																																				
Base Anhydrite	2650 (+224)	2743 (+231)	-36																																																																																																																				
Topeka	3703 (-829)	3701 (-827)	+2																																																																																																																				
Heebner	3872 (-998)	3871 (-997)	+4																																																																																																																				
Lansing	3918 (-1044)	3921 (-1047)	-1																																																																																																																				
Stark	4084 (-1210)	4085 (-1211)	+1																																																																																																																				
BKC	4132 (-1258)	4133 (-1259)	+2																																																																																																																				
Ft Scott	4317 (-1443)	4320 (-1446)	+3																																																																																																																				
Cherokee	4328 (-1454)	4331 (-1457)	+4																																																																																																																				
<b>ELEVATIONS</b>																																																																																																																							
LEAVE	KB 2874'																																																																																																																						
FIELD	DF																																																																																																																						
LOCATION	GL 2869'																																																																																																																						
SEC	Measurements Are All																																																																																																																						
COUNTY	From Kelly Bushing																																																																																																																						
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MUD UP																																																																																																																							
SAMPLES SAVED FROM	CONDUCTOR																																																																																																																						
DRILLING TIME KEPT FROM	SURFACE 8-5/8" at 223',																																																																																																																						
SAMPLES EXAMINED FROM	PRODUCTION 5-1/2" at 4429',																																																																																																																						
GEOLOGICAL SUPERVISION FROM	ELECTRICAL SURVEYS																																																																																																																						
REFERENCE WELL	CND; DIL; MEL; Sonic Pioneer Wireline																																																																																																																						
REMARKS Due to fair shows of oil in multiple pay zones and positive DST results, it is recommended and agreed upon by all parties that production casing be set to further evaluate this well.																																																																																																																							
Respectfully Submitted,																																																																																																																							
Saman Sharifaie Petroleum Geologist																																																																																																																							
*Tops have been adjusted to electric logs																																																																																																																							
<table border="1"> <thead> <tr> <th colspan="2">Curve Track 1</th> <th colspan="3">Geological Descriptions</th> <th>Engineering Data</th> </tr> <tr> <th>ROP (Min/Ft)</th> <th></th> <th colspan="3"></th> <th></th> </tr> </thead> <tbody> <tr> <td>2600</td> <td></td> <td colspan="3">Anhydrite 2607 (+267)</td> <td></td> </tr> <tr> <td>2650</td> <td></td> <td colspan="3">Base 2743 (+231)</td> <td></td> </tr> <tr> <td>3550</td> <td></td> <td colspan="3">Geological Descriptions</td> <td>Engineering Data</td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">Lithology</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">DAILY PENETRATION @ 7:00 AM</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">09/29/14 - Spudded at 4:45 PM</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">09/30/14 - WOC at 223'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/01/14 - Drilling at 2570'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/02/14 - Drilling at 3610'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/03/14 - TIH after DST#1 at 3920'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/04/14 - TIH after DST#2 at 3950'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/05/14 - Drilling at 4050'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/06/14 - Drilling at 4135'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">10/07/14 - TIH after DST#5 at 4358'</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">Ls., crm/gry, fn xln, foss IP, pr por, pyrc IP, shly, n/s</td> <td>Deviation Survey @ 3579°. ¾"</td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">Sh., gry/varic, slty IP, fri to sft</td> <td></td> </tr> <tr> <td>3600</td> <td></td> <td colspan="3">Ls., crm/lt gry/tan, fn xln, foss, pr pp micr-Oolc por, pt dns, sli fri, sbang to blky, n/s</td> <td></td> </tr> </tbody> </table>						Curve Track 1		Geological Descriptions			Engineering Data	ROP (Min/Ft)						2600		Anhydrite 2607 (+267)				2650		Base 2743 (+231)				3550		Geological Descriptions			Engineering Data	3600		Lithology				3600		DAILY PENETRATION @ 7:00 AM				3600		09/29/14 - Spudded at 4:45 PM				3600		09/30/14 - WOC at 223'				3600		10/01/14 - Drilling at 2570'				3600		10/02/14 - Drilling at 3610'				3600		10/03/14 - TIH after DST#1 at 3920'				3600		10/04/14 - TIH after DST#2 at 3950'				3600		10/05/14 - Drilling at 4050'				3600		10/06/14 - Drilling at 4135'				3600		10/07/14 - TIH after DST#5 at 4358'				3600		Ls., crm/gry, fn xln, foss IP, pr por, pyrc IP, shly, n/s			Deviation Survey @ 3579°. ¾"	3600		Sh., gry/varic, slty IP, fri to sft				3600		Ls., crm/lt gry/tan, fn xln, foss, pr pp micr-Oolc por, pt dns, sli fri, sbang to blky, n/s			
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<p>The geological log diagram consists of three vertical columns representing different tracks. The left column shows ROP (Min/Ft) and Gamma (API) curves. The middle column shows Depth (ft) and Geological Descriptions (Lithology). The right column shows Engineering Data, specifically Deviation Survey measurements. The formations listed from top to bottom are Anhydrite, Base Anhydrite, Topeka, Heebner, Lansing, Stark, BKC, Ft Scott, and Cherokee. The lithology descriptions include Anhydrite (2607 ft), Base (2743 ft), Limestone, Shale, and various dolomitic facies. The engineering data shows a deviation survey angle of 3579°. ¾".</p>																																																																																																																							

3650

blky, scat gryblk Sh, n/s

Sh., rd;brn/gn, slyt to gmy/sft

Ls., crm/tan, fn xln, foss IP, pr vis por, dolc IP, dns to to sli fri, sub-chky IP, blky, n/s

Ls., a.a, lt gry IP, sli mott, calc

Ls., crm/gry, fn xln, foss IP, Tr micr-Oolc & intfoss por, pt dns,

Conn

1

Ls., crm/tan, sing,  
sub-chkly IP, sbang

Sh., brn, sft to gmr

