

# Robert D. Hendrix

Petroleum Geologist

## GEOLOGIST'S REPORT

### DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Co. Inc.**

LEASE **Walter #8-1**

FIELD **Scoda**

LOCATION **1 320' In 8: 330' Fe1**

SEC **1** TWP **1** RGE **36w**

COUNTY **Rawlins** STATE **Kansas**

CONTRACTOR **Murfin Drilling Co. Inc. Rig 2**

SPUD **1/7/2014** COMP **1/10/2014**

RTD **4:510'** LTD **4:507'**

MUD UP **3:308'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3:510'** TO **TD**

DRILLING TIME KEPT FROM **3:500'** TO **TD**

SAMPLES EXAMINED FROM **3:510'** TO **TD**

GEOLOGICAL SUPERVISION FROM **3211'**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

FORMER EMPLOYER **Robert D. Hendrix**

ELEVATIONS  
KB **3201'**

DF \_\_\_\_\_

GL **3109'**

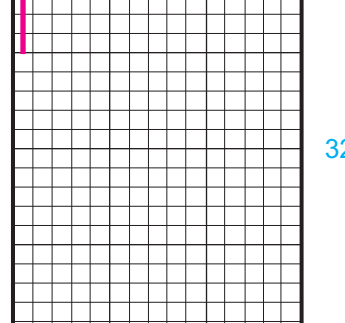
Measurements Are All From **Kelly Bushing**

CASING CONDUCTOR \_\_\_\_\_

SURFACE **8:518' at 260'**

PRODUCTION **5 1/2" @ 4500'**

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	3122 (-79)	
Neva	3615 (-414)	
Foraker	3721 (-520)	
Topeka	3934 (-733)	
Oread	4048 (-847)	
Lansing	4148 (-947)	
Stark Shale	4361 (-1159)	
BKC	4414 (-1213)	



REMARKS:

AP# 15-153-20970

DEPTH	LITHOLOGY	SAMPLE DESCRIPTION	REMARKS
3100	Anhydrite		<b>Anhydrite 3122 (+79)</b>
50			<b>Base Anhydrite 3158 (+56)</b>
3200			
3500		Shale/Sandstone - red, silty, fr-mdgrm, submd, poorly sorted, calcareous, no vis por, ns	8:00am, 1/9/2014
50		Shale: red, silty	
3600		Shale: red, gray, silty	
50		Shale: red, silty	
3650		Limestone: white to tan, f-mxn, chakly, oolitic in part, fossiliferous, no vis por	<b>Neva 3615 (-414)</b>
50		Shale: red, silty, sl sandy	
3700		Sandstone: gray, friable, soft in part, v-frgm, md, well sorted, calcareous cmnt, no vis por	<b>Red Eagle 3679 (-478)</b>
50		Limestone: gray to brown, f-xn, fossiliferous, no vis por	
3750		Shale: red, gray, green, silty	<b>Foraker 3721 (-520)</b>
50		Limestone: white to brown, f-xn, sl chalky, fossiliferous, no vis por	
3800		Dolomite: tan, f-xn, sl chalky, no vis por	
50		Siltstone/Shale: gray, blocky, hard, silty, calcareous	
3850		Shale: red, gray, silty	
50		Limestone: gray to tan, f-xn, chalky, sl fossiliferous, sl vug por, ns	
3900		Shale: gray, red, silty	
50		Limestone: gray to white, f-xn, dense, hard, pyritic, no vis por	
3950		Shale: red, silty	
50		Limestone: tan to gray to white, f-xn, fossiliferous, no vis por, 1% sample dead oil stain, nfo, no odor	
4000		Shale: dark gray, green, red	
50		Limestone: white to gray, f-xn, no vis por, spotty to sat dark stain, nfo, no odor	
4050		Shale: gray, green, red, soft, silty	
50		Limestone: tan to white, f-xn, garnular, fossiliferous, no vis por, ns	
4100		Shale: gray, red, silty	
50		Limestone: tan to white, f-mxn, sl chalky, fossiliferous, no vis por	
4150		Shale: gray, red, silty	
50		Limestone: white, f-xn, sl chalky, sl fossiliferous, no vis por, ns	
4200		Shale: gray, red, silty	
50		Limestone: white, f-mxn, sl chalky, fossiliferous, pyritic, no vis por, 1% sample dead oil stain, nfo, no odor	<b>Topeka 3934 (-733)</b>
4250		Shale: gray, red, silty	
50		Limestone: tan to white, f-xn, chalky, no vis por	
4300		Shale: red, gray, silty	
50		Limestone: white, f-xn, dense, sl chalky, sl fossiliferous, no vis por	
4350		Limestone: white to brown, f-xn, silty, sl chalky, sl pyritic, no vis por	
4400		Shale: red, brown, silty	
50		Shale: red, brown, gray, silty	
4450		Limestone: white, f-mxn, chakly, v-fossiliferous, pr vug por, 5% sample black spotty oil stain, slsfo (heavy), faint odor	<b>Oread 4048 (-847)</b>
50		Limestone: white to lt gray, v-f-xn, sl chalky, dense, sl fossiliferous, no vis por	wiper trip 40 stands
4500		Shale: gray, green, some red, silty, hard	
50		Limestone: brown to white, f-xn, chalky, no vis por	
4550		Shale: gray, red, brown, silty, pyritic	
50		Shale: gray, sandy, silty, pyritic	
4600		Limestone: tan, f-xn, sl chalky, dense, sl fossiliferous, no vis por	<b>Lansing 4148 (-947)</b>
50		Limestone: tan, f-xn, dense, sl fossiliferous, sl vug por, 1% sample dark tarry stain, nfo, no odor	
4650		Sandstone: gray to white, friable, frgm, md, mod sorted, calcareous, no vis por, several pieces dark stain, slsfo, no odor	
50		Shale: gray, dark gray, red, silty	
4700		Limestone: tan, f-xn, m-bxn, sl chalky, fossiliferous, fr interxn por, 20% sample lt sat stain, frsfo, good odor	
50		Shale: gray, black, red	
4750		Limestone: white to tan, f-mxn, sl chalky, fossiliferous, sl vug por, lt spotty stain, slsfo, faint odor	
4800		Shale: red, brown, gray, silty	
50		Limestone: white to gray, f-xn, fossiliferous, fr interxn por, 10% black spotty to sat stain, slsfo on break, faint odor	
4850		Shale: gray, brown, purple, red, silty, blocky	
50		Limestone: tan to gray, f-xn, sl fossiliferous, no vis por, 5% sample black spotty stain, nfo, no odor	
4900		Shale: gray, black	
50		Limestone: white, f-xn, sl chalky, no vis por, 1% sample dark sat stain, slsfo on break, no odor	
4950		Shale: gray, black, red	
50		Limestone: tan, f-mxn, sl chalky, oolitic in part, fossiliferous, no vis por, 7 pieces black stain, nfo, no odor	
5000		Shale: gray, black, red, silty	
5050		Limestone: white, f-bxn, sl oolitic, fossiliferous, fr interxn por, 20% sample dark sat stain, frsfo, good odor	
5100		Limestone: white to tan, f-xn, dense, no vis por, ns	<b>Stark 4360 (-1159)</b>
5150		Shale: gray, dark gray, red, silty	
5200		Shale: gray, dark gray, red, silty	
5250		Limestone: white to tan, f-xn, sl chalky, fossiliferous, sl vug por, 1% sample dark spotty stain, slsfo on break, no odor	
5300		Shale: gray, red	
5350		Limestone: white, f-xn, chalky, sl pyritic, sl fossiliferous, no vis por	<b>BKC 4414 (-1213)</b>
5400		Limestone: white to tan, f-xn, chalky, fossiliferous, no vis por, ns 4 pieces it to dark stain, nfo, no odor	
5450		Shale: red, gray, sandy, silty	
5500		Limestone: tan, f-mxn, chalky, fossiliferous, no vis por	
5550		Shale: red, gray, silty	
5600		Shale: gray, red, brown, silty	
5650		Limestone: white, v-f-xn, sl chalky, dense, sl fossiliferous, no vis por	<b>RTD 4510 (-1309)</b>
5700			8:00am, 1/10/2014 Geologist off location at 5:00pm, 1/10/2014