

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY **Murfin Drilling Co. Inc.**

LEASE **Slavik #1-25**

FIELD **Prairie Dog Northwest**

LOCATION **2310fsl & 2310fel**

SEC **25** TWP **5s** RGE **30w**

COUNTY **Decatur** STATE **Kansas**

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

SPUD **4/10/2013** COMP **4/18/3013**

RTD **4495'** LTD **4497'**

MUD UP **3430'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3610'** TO **4495'**

DRILLING TIME KEPT FROM **3610'** TO **4495'**

SAMPLES EXAMINED FROM **3610'** TO **4495'**

GEOLOGICAL SUPERVISION FROM **3611'**

GEOLOGIST ON WELL **Robert D. Hendrix**

FORMATION TOPS

ANHYDRITE **2592 (+266)**

TOPEKA **3714 (-856)**

HEEBNER SHALE **3887 (-1029)**

LANSING **3935 (-1072)**

STARK SHALE **4088 (-1230)**

BKC **4133 (-1283)**

PAWNEE **4252 (-1394)**

MISSISSIPPIAN **4444 (-1588)**

ELEVATIONS

KB **2858'**

DF

GL **2847'**

Measurements Are All From **Kelly Bushing**

CASING

CONDUCTOR SURFACE **8.56" at 265'**

PRODUCTION **None**

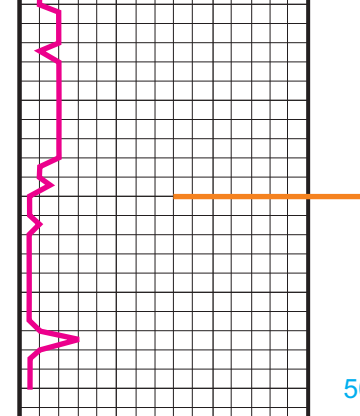
ELECTRICAL SURVEYS

Micro / Sonic

Pioneer Energy Services

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FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	2596 (+262)	2592 (+266)
Topeka	3271 (-859)	3714 (-856)
Heebner Shale	3887 (-1029)	3887 (-1029)
Lansing	3935 (-1072)	3934 (-1076)
Stark Shale	4088 (-1230)	4088 (-1230)
BKC	4136 (-1278)	4133 (-1275)
Pawnee	4248 (-1380)	4252 (-1394)
Cherokee Shale	4342 (-1484)	4341 (-1483)
Mississippian	4444 (-1588)	4446 (-1588)



REMARKS:
Due to negative results on the drillstem tests and lack of structure it is recommended that this test be plugged and abandoned.

LEGEND

	Anhydrite		Sandstone		Limestone		Shale		Carb Sh		Cherty LS		Chert		Dolomite
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DEPTH	LITHOLOGY	DRILLING TIME IN MINUTES PER FOOT	SAMPLE DESCRIPTION	REMARKS
2570				Anhydrite 2592 (+266)
2600				Base Anhydrite 2630 (+228)
50				
3600			Shale: gray, red, black Limestone: tan, fxl, granular, no vis por Limestone: tan to white, fxl, sl chalky, si fossiliferous, no vis por Limestone: lt gray to white, fxl, sl chalky, si fossiliferous, no vis por Shale: gray, red, black Limestone: lt gray to white, fxl, si fossiliferous, no vis por Limestone: lt gray to white, fxl, sl chalky, si cherty, si fossiliferous, no vis por Shale: gray, red, black Limestone: lt gray to white, fxl, sl chalky, granular, si fossiliferous, no vis por Shale: red, gray Limestone: white, f-mxn, granular, si glauconitic, fossiliferous, no vis por Shale: gray, green, red Limestone: white to gray, f-mxn, granular, fossiliferous, no vis por Shale: gray, green, red Limestone: white to gray, fxl, sl granular, fossiliferous, no vis por Shale: red, gray, green	Geologist on location at 8:13 am 4/13/2013
50				
3700				Topeka 3714 (-856)
50				
3800			Limestone: tan to white, f-mxn, granular, oolitic in part, fossiliferous, no vis por Limestone: lt gray to white, fxl, sl chalky, granular, fossiliferous, no vis por Limestone: white to lt gray, f-mxn, granular, oolitic in part, fossiliferous, no vis por Shale: red, gray Shale: black, carbonaceous Limestone: white to lt gray, f-mxn, granular, oolitic in part, fossiliferous, no vis por Shale: red, gray Limestone: tan to white, f-mxn, sl chalky, granular, fossiliferous, pr vug por, ns Shale: gray, green, red Limestone: tan to white, fxl, chalky, granular, fossiliferous, no vis por Shale: gray, green, red Limestone: tan to white, f-mxn, granular, fossiliferous, fr pp por, ns Shale: gray, green, red Limestone: tan to lt gray, f-mxn, chalky, oolitic in part, fossiliferous, fr pp por, ns Limestone: tan to lt gray, f-mxn, chalky, oolitic in part, fossiliferous, fr pp por, ns Limestone: white to lt gray, fxl, sl chalky, si fossiliferous, no vis por Shale: black carbonaceous Limestone: gray to brown, fxl, dense, si fossiliferous, no vis por Shale: gray, black, red	wt 8.6, vis, 57, lcm 2# Morgan Mud, Cade Lines
50				
3900				Heebner 3887 (-1029)
50				
4000				Toronto 3918 (-1060)
50				
4100				Lansing 3934 (-1060)
50				
4200				Stark 4088 (-1230)
50				
4300				BKC 4133 (-1245)
50				
4400				
50				
4500				Pawnee 4252 (-1394)
50				
4600				Ft Scott 4328 (-1470)
50				
4700				Cherokee Shale 4341 (-1483)
50				
4800				
4900				Mississippian 4446 (-1588) (Kinderhook)
50				
5100				RTD 4495 (-1637)
50				
5200				
5300				
5400				
5500				
5600				
5700				
5800				
5900				
6000				