

Robert D. Hendrix

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Murfin Drilling Company Inc.

LEASE Schwind Unit #1-36

FIELD Zimmer East

LOCATION 1475'N1 & 1550'W

SEC 36 TWP 15 S RGE 19 W

COUNTY Ellis STATE Kansas

CONTRACTOR Murfin Drilling Rig #2

SPUD 1/18/2013 COMP 1/23/2013

RTD 11/73' LTD 1176'

MUD UP 2682' TYPE MUD Chemical

SAMPLES SAVED FROM 2850' TO RTD

DRILLING TIME KEPT FROM 2850' TO RTD

SAMPLES EXAMINED FROM 2850' TO RTD

GEOLOGICAL SUPERVISION FROM 2880' TO RTD

GEOLOGIST ON WELL Robert D. Hendrix

FORMATION TOPS

FORMATION TOPS	ELECTRIC LOG	SAMPLE
Anhydrite	1162 (4827)	1159 (-830)
Topeka	2946 (-957)	2950 (-961)
Heebner Sh.	3241 (-1245)	3229 (-1240)
Lansing	3277 (-1289)	3277 (-1288)
Stark Sh.	3472 (-1483)	3474 (-1485)
BKC	3517 (-1528)	3517 (-1528)
Arbuckle	3572 (-1583)	3573 (-1585)

ELEVATIONS

KB 1989'

DF _____

GL 1978'

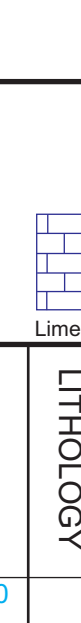
Measurements Are All From Kelly Bushings

CASING

CONDUCTOR _____

SURFACE 8.5'8" at 1193'

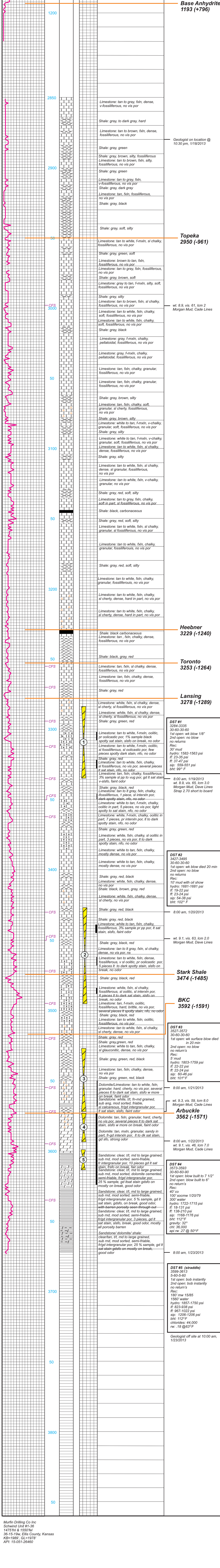
PRODUCTION none



API# 15-051-26460

REMARKS:

Due to the negative results on the DST's and poor structural position it is recommended that this hole be plugged and abandoned.



LEGEND

DRILLING TIME IN MINUTES PER FOOT	DEPTH	LITHOLOGY	SAMPLE DESCRIPTION	REMARKS
5	1150	Anhydrite	Anhydrite 1159 (+830)	
5	1200	Anhydrite	Base Anhydrite 1193 (+796)	
5	2850	Limestone	Limestone: tan to gray, fxl, dense, v-fossiliferous, no vis por	
5	2900	Shale	Shale: gray, to dark gray, hard	Geologist on location @ 10:30 pm, 1/18/2013
5	2950	Limestone	Limestone: tan to brown, fxl, dense, fossiliferous, no vis por	
5	3000	Shale	Shale: gray, green	
5	3050	Shale	Shale: gray, brown, silty, fossiliferous	
5	3100	Limestone	Limestone: tan to gray, fxl, v-fossiliferous, no vis por	
5	3150	Shale	Shale: gray, dark gray	
5	3200	Limestone	Limestone: tan, fxl, fossiliferous, no vis por	
5	3250	Shale	Shale: gray, black	
5	3300	Shale	Shale: gray, soft, silty	
5	3350	Limestone	Limestone: tan to white, f-mxl, sl chalky, fossiliferous, no vis por	
5	3400	Shale	Shale: gray, green, soft	
5	3450	Limestone	Limestone: brown to tan, fxl, fossiliferous, no vis por	
5	3500	Limestone	Limestone: tan to gray, fxl, fossiliferous, no vis por	
5	3550	Shale	Shale: gray, brown, soft	
5	3600	Limestone	Limestone: gray to tan, f-mxl, silty, soft, fossiliferous, no vis por	
5	3650	Shale	Shale: gray, silty	
5	3700	Limestone	Limestone: tan to brown, fxl, sil chalky, fossiliferous, no vis por	
5	3750	Limestone	Limestone: tan to white, fxl, chalky, soft, fossiliferous, no vis por	
5	3800	Limestone	Limestone: tan to white, fxl, chalky, soft, fossiliferous, no vis por	

DST #1
3284-3335
30-60-30-60
1st open: wk blow 1/8"
2nd open: no blow
no returns
Rec:
30' mud
hydro: 1582-1563 psi
lf: 23-35 psi
ff: 37-47 psi
sip: 559-551 psi
bht: 99° F

8:00 am, 1/19/2013
wt. 8.9, vis. 61, lcm 2
Morgan Mud, Cade Lines
Strap 2.70 short to board

DST #2
3427-3495
30-60-30-60
1st open: wk blow died 20 min
2nd open: no blow
no returns
Rec:
10' mud with oil show
hydro: 1681-1681 psi
lf: 19-22 psi
ff: 23-24 psi
sip: 54-38 psi
bht: 102° F

8:00 am, 1/20/2013

DST #3
3527-3572
30-60-30-60
1st open: wk surface blow died
in 20 min
2nd open: no blow
no return's
Rec:
5' mud
hydro: 1803-1759 psi
lf: 22-22 psi
ff: 22-24 psi
sip: 60-46 psi
bht: 101° F

8:00 am, 1/21/2013

DST #4
3573-3593
30-60-60-90
1st open: blow built to 7 1/2"
2nd open: blow built to 6"
no return's
Rec:
40' co
100' socmw 1/20/79
300' water
hydro: 1722-1715 psi
lf: 18-131 psi
ff: 138-210 psi
sip: 1168-1176 psi
bht: 112° F
gravity: 32°
chl: 36.000
api rw .27 @ 50° F

8:00 am, 1/23/2013

DST #5 (saddle)
3599-3613
5-60-5-60
1st open: bob instantly
2nd open: bob instantly
no return's
Rec:
180' mw 15/85
1560' water
hydro: 1857-1750 psi
lf: 823-938 psi
ff: 967-1022 psi
sip: 1206-1206 psi
bht: 112° F
chlides: 44,000
rw: .18 @63° F

Geologist off site at 10:00 am,
1/23/2013