

Thomas J. Funk
Petroleum Geologist

Geologists Report
Drilling Time and Sample Log

OPERATOR Murfin Drilling Co., Inc

LEASE Frahm 'A'
FIELD Towns
LOCATION 1310' FSL & 1000' FEL
SEC. 20
COUNTY Thomas

WELL NO #2-20
API 15-193-20942
TWP 10S
RGE 34W
STATE Kansas

ELEVATION
KB 3231'
DF
GL 3220'
Measurements Are All From KB

CASING RECORD
SURFACE
8 5/8" at 263'KB w/2005x

DRILLING TIME KEPT FROM 3800' TO 4900'
SAMPLES EXAMINED FROM 3800' TO 4900'
GEOLOGICAL SUPERVISION FROM 3890' TO 4900'
MUD UP 3400' TYPE MUD Chemical

FORMATION	LOG	SAMPLE
TOP DATUM	TOP DATUM	TOP DATUM
Anhydrite	2733 (+498)	2733 (+498)
Bianhydrite	2761 (+470)	2761 (+470)
Toppekka	3897 (-664)	3897 (-666)
Heebner Sh	4111 (-880)	4109 (-878)
Lansing	4152 (-921)	4149 (-918)
Muncie Creek	4294 (-1063)	4291 (-1060)
Start Sh	4380 (-1149)	4377 (-1146)
Marmaton	4464 (-1233)	4462 (-1231)
Pawnee	4574 (-1343)	4569 (-1338)
Cherokee Sh	4659 (-1428)	4655 (-1424)
Johnson Zone	4702 (-1471)	4696 (-1465)
Mississippian	4800 (-1569)	4796 (-1565)

DATE	DEPTH	NO. STR.	MAKE	TYPE	DEPTH IN	OUT	FEET	HOURS
11/28/14	Spud	1	12 1/4" HTC	GT-C-1	263	263		3
11/29/14		2	7 7/8" HTC	DF506	3780	3617		34
11/30/14		3	7 7/8" HTC	GX20c	4900	1120		56
12/2/14								
12/3/14								
12/4/14								
12/5/14								
12/6/14								
12/7/14								

REMARKS AND RECOMMENDATIONS:
 Based on sample examination, DST results, and log analysis casing was set to further test the #2-20 Frahm 'A'.
Thomas Funk
Petroleum Geologist

