

Robert L. Milford

PETROLEUM GEOLOGIST
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GEOLOGISTS REPORT
DRILLING TIME AND SAMPLE LOG

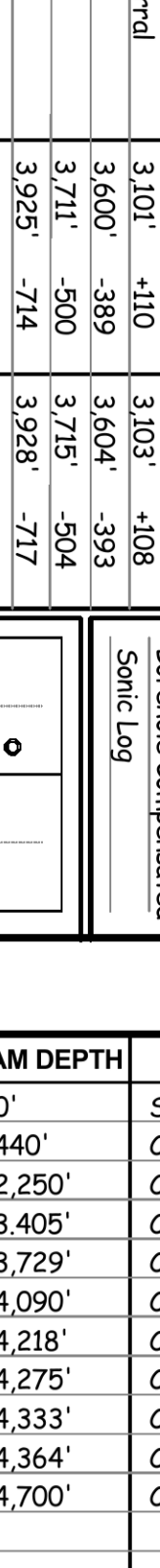
OPERATOR **Murfin Drilling Company, Inc.**
LEASE **Downing 'A' #1-19**
LOC SPOT **20 N & 80 E of S2 NE NW**
ELEVATIONS
BK **3 211'**
CL **3 206'**

LOC FOOTAGE **970' FNL 2 060' FWL**
SEC. **19** TMSIP **15** RMG **35W**
COUNTY **Rush** STATE **KANSAS**
DATE **15-15-2092 00-00**

CONTRACTOR **Murfin Drilling Co., Inc.** RIG NO. **8**
DRILLING STARTED **11-26-2013** COMPLETED **12-6-2013**
MUD DISCHARGED **3 338** MUD TYPE **Chemical**
DRILLING TIME KEPT FROM **3 480'** TO RTD
SAMPLES SAVED FROM **3 480'** TO RTD
SAMPLES EXAMINED FROM **3 480'** TO RTD
GEOLOGICAL SUPERVISION FROM **3 480'** TO RTD

FORMATION NAME TOP LOG TOP SAMPLE
NAME TOP DTLUM TOP DTLUM

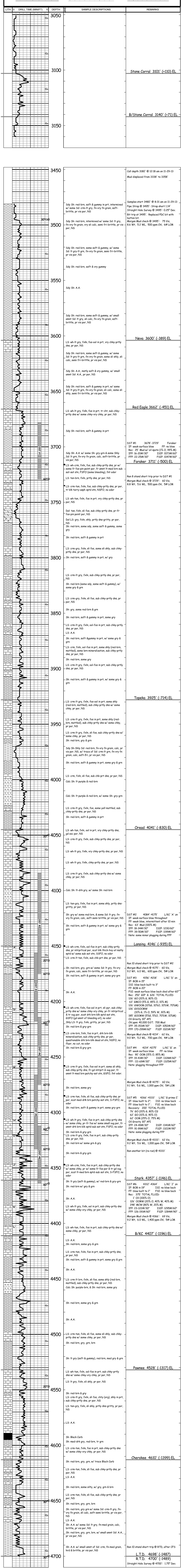
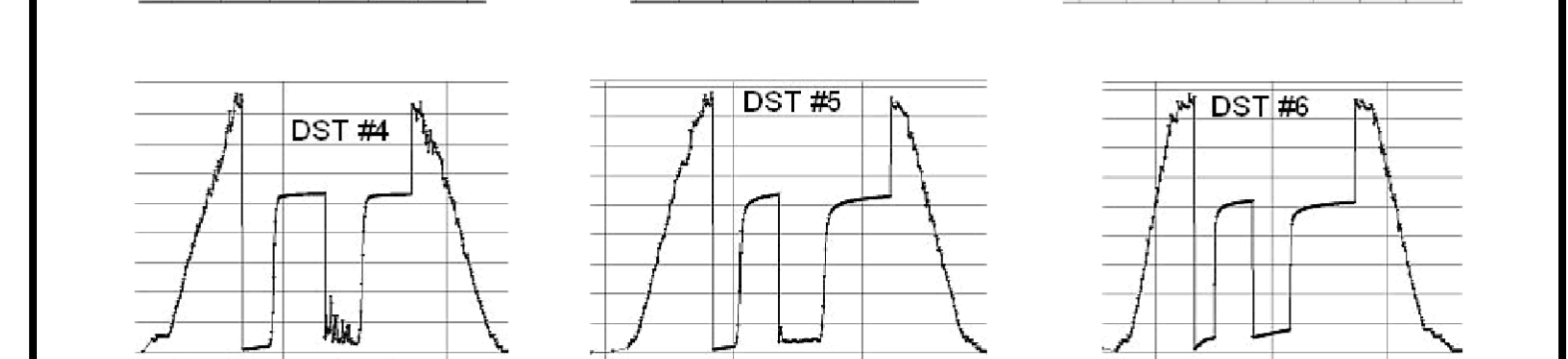
Stone Corral	3 101'	+10	3 103'	+108
Neva	3 600'	-89	3 604'	-93
Fordker	3 711'	-500	3 715'	-504
Topeka	3 925'	-714	3 928'	-717
Lansing	4 146'	-938	4 150'	-939
Stark	4 357'	-1146	4 361'	-1150
B/KC	4 407'	-1196	4 411'	-1200
Pawnee	4 528'	-1317	4 532'	-1321
Cherokee	4 610'	-1399	4 613'	-1402
Total Depth	4 698'	-1487	4 700'	-1489



MEASUREMENTS FROM K&B
CASING RECORD
CONDUIT
Surface 8.5' @ 25'
w/ 230 sacks cement
Production 1.1/2" @ 462'
w/ 480 sacks cement
ELECTRICAL SURVEYS
Pioneer Wireline
Dual Induction Log
Dual Compensated -

DATE	7:00 AM DEPTH	REMARKS
11-26-13	0'	Spud @ 10:30 am. Plug down @ 7:30 pm. Drilled out plug @ 3:30 am on 11-27 w/ PDC bit
11-27-13	440'	Cut 440' in last 24 hrs. Dev. 0.25' @ 1217'
11-28-13	2,250'	Cut 1,810' in last 24 hrs; 21 hrs drlg.
11-29-13	3,405'	Cut 1,155' in last 24 hrs; 21 hrs drlg. Bit trip @ 3495' (ran button bit). DST #1 @ 3729'
11-30-13	3,729'	Cut 324' in last 24 hrs; 9.5 hrs drlg.
12-1-13	4,090'	Cut 361' in last 24 hrs; 14.5 hrs drlg. DST #2 @ 4175'
12-2-13	4,218'	Cut 128' in last 24 hrs; 5 hrs drlg. DST #3 @ 4218', DST #4 @ 4275'
12-3-13	4,275'	Cut 57' in last 24 hrs; 2.75 hrs drlg. DST #5 @ 4333'
12-4-13	4,333'	Cut 58' in last 24 hrs; 2.5 hrs drlg. DST #6 @ 4364'
12-5-13	4,364'	Cut 31' in last 24 hrs; 1.5 hrs drlg. RTD 4700' @ 2:37 am on 12-6-13
12-6-13	4,700'	Cut 336' in last 24 hrs; 16.5 hrs drlg. Ran production casing

Remarks
The electric log measurements correlate from 2' to 4' higher to the drilling measurements.
Formation tops and lithology on this report have been corrected to the electric log.
The drilling samples were deposited at the Kansas Geological Survey office in Wichita.
Respectfully submitted,
Robert L. Milford



L.T.D. 4698' (-1487)
R.T.D. 4700' (-1489)
Straight Hole Survey @ 4700': 1.75" Dev.