

Robert L. Milford

PETROLEUM GEOLOGIST

Wichita, Kansas

GEOLOGISTS' REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR **Murfin Drilling Company, Inc.**
 LEASE **Legleiter #1-36**
 LOC. SPOT **60 S & 40 W of C SE SE**

LOC. FOOTAGE **600' FSL 700' FEL**
 SEC. **36** TWP. **15S** R. **19W**
 COUNTY **Ellis** STATE **Kansas**

API **15-051-26491-00-00**
 CONTRACTOR **Murfin Drilling Co., Inc.** RIG NO. **16**
 DRILLING STARTED **3-5-2013** COMPLETED **3-17-2013**
 MUD REPLACED **2,668** MUD TYPE **Chemical**
 DRILLING TIME KEPT FROM **2,860'** TO **RTD**
 SAMPLES SAVED FROM **2,860'** TO **RTD**
 SAMPLES EXAMINED FROM **2,860'** TO **RTD**
 GEOLOGICAL SUPERVISION FROM **2,745'** TO **RTD**

NEAREST TOWN **Wichita**
 CASING RECORD
 Conductor
 Surface **8.5/8" @ 965'**
 w/ 680 sticks cement
 Production none

ELECTRICAL SURVEYS
 Pioneer Wireline
 Dual Induction Log
 Dual Compensated -
 Geological Supervision

FORMATION NAME LOG TOP DATUM TOP SAMPLE DATE
 Stone Corral 1174' +819 1177' +816
 Base Stone Corral 2,964' -971 2,965' -972
 Heebner 3,233' -1240 3,235' -1242
 Lansing 3,283' -1290 3,285' -1292
 Stark 3,477' -1484 3,478' -1485
 B/KC 3,521' -1528 3,522' -1529
 Arbuckle Sand 3,585' -1592 3,586' -1593
 Reagan Sand 3,614' -1621 3,615' -1622
 Total Depth 3,680' -1687 3,680' -1687

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DATE	7:00 AM DEPTH	REMARKS
3-9-13	0'	Spud @ 7:30 pm.
3-10-13	640'	Cut 640' in last 24 hrs. Lost circ @ 875'. Water flowed @ 976'. Ran surface csg @ 976'
3-11-13	976'	Cut 336' in last 24 hrs. Logged for cement bond. Drilled out plug @ 8:30 pm.
3-12-13	1,620'	Cut 644' in last 24 hrs; 10 hrs drlg.
3-13-13	2,720'	Cut 1,100' in last 24 hrs; 21 hrs drlg. DST #1 @ 3318'
3-14-13	3,318'	Cut 598' in last 24 hrs; 14.75 hrs drlg. DST #2 @ 3366'
3-15-13	3,390'	Cut 72' in last 24 hrs; 2.75 hrs drlg. DST #3 @ 3500'
3-16-13	3,580'	Cut 190' in last 24 hrs; 6.25 hrs drlg. DST #4 @ 3590'. RTD 3680' @ 12:54 am 3-17-13
3-17-13	3,680'	Cut 100' in last 24 hrs; 3.25 hrs drlg. P&A

Remarks

The electric log measurements correlate from 1' to 3' 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

