

Jeff Christian

PETROLEUM GEOLOGIST
Wichita, Kansas

GEOLOGISTS' REPORT

DRILLING TIME AND SAMPLE LOG

OPERATOR **MURFIN DRILLING COMPANY**
LEASE **LOHOEFENER # 1-18**
LOCATION **2300' FNL & 2300' FEL**

ELEVATIONS
KB **2786'**
GL **2781'**

SEC. **18** TWP. **2 S** R. **29 W**
COUNTY **DECATUR** STATE **KANSAS**

FIELD **MAY**
API **15-039-21149**

CONTRACTOR **AMBERTIN** RIG NO. **8**
DRILLING STARTED **09/26/2012** COMPLETED **09/20/2012**
MUD DISPLACED **2944** MUD TYPE **CHEMICAL**
DRILLING TIME KEPT FROM **3100'** TO **RTD**
SAMPLES SAVED FROM **3100'** TO **RTD**
SAMPLES EXAMINED FROM **3100'** TO **RTD**
GEOLOGICAL SUPERVISION FROM **3490'** TO **RTD**

MEASUREMENTS FROM KB
Surfaces **8.5' @ 263.1'**
w/ 200 SX
Production **5.12" @ 4096'**
w/ 150 SX

ELECTRICAL SURVEYS:
LOG TECH, INC.
DIL
CML/COL

FORMATION NAME LOG DATE TOP DATUM TOP DATUM SAMPLE BHC'S

ANHYDRITE 2536' (+250) 2533' (-251)
NEVA 3200' (-414) 3198' (-412)
FORAKER 3200' (-414) 3198' (-412)
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LANSING 3792' (-1171) 3792' (-1169)
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| DATE | 7:00 AM DEPTH | REMARKS |
|---------|---------------|---|
| 5/26/12 | MIRT | SPUD 4:00 pm |
| 5/27/12 | 288' | DRLG. dev. 1 1/4 deg. |
| 5/28/12 | 2275' | DRLG. |
| 5/29/12 | 3285' | DRLG. |
| 5/30/12 | 3802' | CFS dev. 1/2 deg. |
| 5/31/12 | 3890' | TOH for DST #2 |
| 6/1/12 | 3955' | DST #3 |
| 6/2/12 | 4070' | LOGGING RTD 4070' @ 1:00 am dev. 1/2 deg. |

Remarks
5 1/2" production casing set to further test the Lansing / KC 'J' zone.
Electric log measurements correlate about even compared to rotary measurements.
Sample tops adjusted to the electric log.
Samples deposited at the Kansas Geological Survey.
Respectfully Submitted,
Jeff Christian
Jeff Christian

| LITH | 0 | DRILL TIME (MIN:FT) | 10 | DEPTH | SAMPLE DESCRIPTIONS | REMARKS |
|------|---|---------------------|----|-------|---------------------|---------|
|------|---|---------------------|----|-------|---------------------|---------|

