

# LITHOLOGY STRIP LOG

WellSight Systems  
Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: **Murfin Drilling Company, Inc. Shaw #1-29**  
 Location: **Approx. SW 1/4 NWNE NW Section 29-T5S-R30W**  
 License Number: **API: 15-039-21146**  
 Spud Date: **March 10, 2012**  
 Surface Coordinates: **380' FNL 1400' FWL Section 29-T5S-R30W**

Region: **Decatur Co, KS**  
 Completed: **March 20, 2012**

Bottom Hole Coordinates: 2921  
 Ground Elevation (ft): 2921  
 Logged Interval (ft): 3600 To: 4550 Total Depth (ft): 4550  
 Formation: RTD 4550 (-1624), LTD 4550 (-1624).  
 Type of Drilling Fluid: **Chemical. Displaced at 3,260'.**

## OPERATOR

Company: **Murfin Drilling Company, Inc.**  
 Address: **250 N Water STE 300  
 Wichita, KS 67202-1216**

## GEOLOGIST

Name: **Mikeal K. Maune**  
 Company: **Petroleum Geologist - Kansas Licensed No. 210**  
 Address: **Wichita, Kansas  
 Office: 316-722-8173**

## COMMENTS

Surface Casing: 8 5/8" Csg set @ 282' w/225x. **COMM, (3%CC 2% Gel).**  
 D&A. Plugging complete @ 6:30 pm 3/21/2012.  
 Deviation Surveys: 1/4 @ 282', 1/4 @ 1284', 1/4 @ 2297', 3/4 @ 3489', 3/4 @ 3988', 3/4 @ 4550 RTD.  
 Pipe Strap @ 3988'. Strap 3999.24', Board 3999.23', Strap long to Board .01'.

Murfin Drilling Rig #16 Bit Record:  
 #1 12 1/4" GT-C1 RR in @ GL, out @ 282'.  
 #2 7 7/8" Smith F124 in @ 222', out @ 4249'.  
 #3 7 7/8" HC GX20C in @ 4249', out @ 4550'.

Mud System: Morgan Mud, Inc.  
 DSTs: Trilobite Testing Inc. (5 DSTs)  
 OH Logging: Log-Tech, DIL, MEL, CNL/CDDL, BHCS.

Correlation of the OH Log with the Drilling Time indicates OH Log depths & Drilling Time formation depths are approximately equal. The Gamma ray curve was imported directly into this log without any depth adjustments.

OH Log Formation Tops: Anhydrite 2626 (+300), Base Anhydrite 2660 (-266), Topoka 3734 (-808), Heebner 3906 (-980), Toronto 3939 (-1013), Lansing 3955 (-1029), Stark 4121 (-1195), BKC 4172 (-1246), Marmaton 4200 (-1274), Pawnee 4277 (-1351), L Pawnee 4319 (-1393), FT Scott 4350 (-1424), Cherokee 4362 (-1436), Sst 4381 (-1455), Miss Cht 4498 (-1572), RTD 4550 (-1624), LTD 4550 (-1624).

## DSTs

DST #1 (Toronto, LKC 'A' & 'B') 3906-3988/30-60-30-60. Slid Tool 10' to bottom. 1st Op: Weak SB increase to 1/2 inch. 2nd Op: No Blow. Recover: 60' Oil specked Mud. IH 1915#, IFP 22-47#, ISIP 1260#, FFP 51-73#, FSIP 1245#, FH 1860#, BHT 115 F.

DST #2 (LKC 'F') 4009-4025/30-60-30-60. 1st Op: Weak SB increase to 1/8 inch. 2nd Op: No Blow. Recover: 5' Oil specked Mud. IH 1994#, IFP 18-20#, ISIP 46#, FFP 20-20#, FSIP 32#, FH 1995#, BHT 116 F.

DST #3 (LKC 'J') 4084-4124/30-60-30-60. 1st Op: Weak SB increase to 1/4 inch. 2nd Op: No Blow. Recover: 5' Mud. IH 2034#, IFP 22-23#, ISIP 40#, FFP 25-25#, FSIP 36#, FH 2059#, BHT 116 F.

DST #4 (LKC 'K' & 'L') 4118-4180/30-60-30-60. 1st Op: Weak SB increase to 1/2 inch. 2nd Op: No Blow. Recover: 5' Oil spkd Mud. IH 2060#, IFP 22-24#, ISIP 61#, FFP 24-25#, FSIP 44#, FH 2011#, BHT 115 F.

DST #5 (Celia Sst) 4356-4390/30-60-30-60. 1st Op: 1/4" Blow increase to 1 inch. 2nd Op: Surface Blow increase to 1/4". Recover: 1 ft FO, 24' OCM (5%Oil, 95% M). IH 2152#, IFP 21-30#, ISIP 1023#, FFP 33-38#, FSIP 854#, FH 2193#, BHT 119 F.

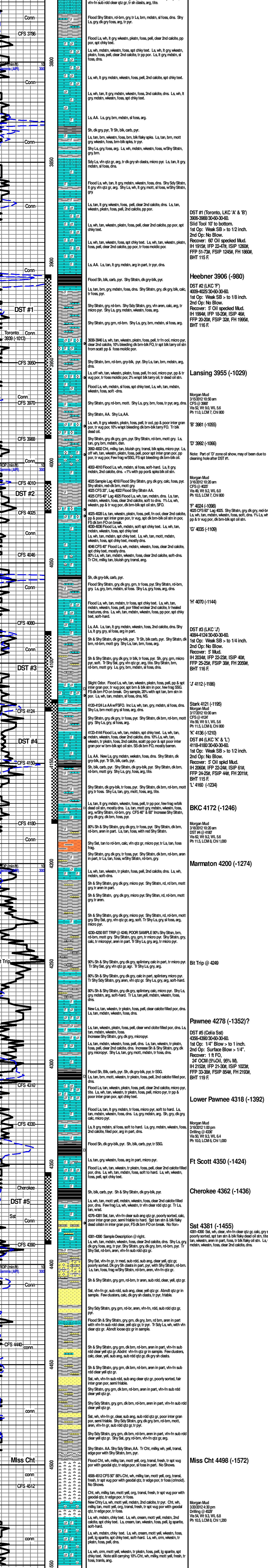
## ROCK TYPES

- |       |           |       |           |
|-------|-----------|-------|-----------|
| Anhy  | Congl     | Lmst  | Black sh  |
| Bent  | Sdy dolo  | Salt  | Gry sh    |
| Brec  | Dol       | Shale | Shy sltst |
| Cht   | Gyp       | Sst   | Sitysh    |
| Clyst | Sdy lmsst |       |           |
| Coal  |           |       |           |

## ACCESSORIES

- |          |           |          |
|----------|-----------|----------|
| Chlorite | Pelec     | Grysh    |
| Dol      | Pelloidal | Gryslt   |
| Sand     | Pisolite  | Lms      |
| Silty    | Plant     | Sandylms |
|          | Strom     | Sht      |
|          | Fuss      | Shtstn   |
|          | Oomoldic  |          |

- |                  |                  |          |
|------------------|------------------|----------|
| MINERAL Anhy     | STRINGER Anhy    | BOUNDST  |
| MINERAL Arg      | STRINGER Arg     | CHALKY   |
| MINERAL Bent     | STRINGER Bent    | CRYXIN   |
| MINERAL Bit      | STRINGER Coal    | EARTHY   |
| MINERAL Brecfrag | STRINGER Dol     | FINEXIN  |
| MINERAL Calc     | STRINGER Gyp     | LITHOGR  |
| MINERAL Carb     | STRINGER Ls      | MICROXIN |
| MINERAL Chtdk    | STRINGER Mrst    | MUDST    |
| MINERAL Chtl     | STRINGER Sststrg | PACKET   |
| MINERAL Dol      | STRINGER Sststrg | WACKEST  |
| MINERAL Ferrpel  | STRINGER Carbsh  |          |
| MINERAL Ferr     | STRINGER Dol     |          |
| MINERAL Glau     |                  |          |
| MINERAL Gyp      |                  |          |
| MINERAL Marl     |                  |          |
| MINERAL Nodule   |                  |          |
| MINERAL Phos     |                  |          |
| MINERAL Pyr      |                  |          |
| MINERAL Salt     |                  |          |
| MINERAL Sandy    |                  |          |
| MINERAL Silty    |                  |          |



Geologist on Location  
 10:00 pm 3/13/2012 Depth 3431  
 Bit Trip @ 3489'

Morgan Mud  
 3/13/2012 10:55 am  
 Drilling @ 3387'  
 Vis 52, Wt 8.0, WL 5.2  
 Ph 11.5, LCM 7, Chl 8.0

Morgan Mud  
 3/13/2012 10:50 am  
 CFS @ 3887'  
 Vis 49, Wt 8.0, WL 6.0  
 Ph 10.5, LCM 7, Chl 8.0

Morgan Mud  
 3/13/2012 10:50 am  
 CFS @ 3988'  
 Vis 49, Wt 8.0, WL 6.0  
 Ph 11.5, LCM 7, Chl 8.0

Morgan Mud  
 3/13/2012 10:50 am  
 CFS @ 4025'  
 Vis 49, Wt 8.0, WL 6.0  
 Ph 11.5, LCM 7, Chl 8.0

Morgan Mud  
 3/13/2012 10:50 am  
 CFS @ 4124'  
 Vis 52, Wt 8.0, WL 5.6  
 Ph 11.5, LCM 7, Chl 8.0

Morgan Mud  
 3/13/2012 10:50 am  
 CFS @ 4180'  
 Vis 52, Wt 8.0, WL 5.6  
 Ph 11.5, LCM 7, Chl 8.0

Morgan Mud  
 3/13/2012 10:50 am  
 CFS @ 4362'  
 Vis 52, Wt 8.0, WL 6.4  
 Ph 10.0, LCM 6, Chl 1.000

Morgan Mud  
 3/20/2012 4:30 pm  
 Drilling @ 4267'  
 Vis 52, Wt 8.3, WL 6.8  
 Ph 10.0, LCM 6, Chl 1.200