

LITHOLOGY STRIP LOG
WellSight Systems

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

Well Name: **Murfin Drilling Company, Inc. Ruder 'A' #1-1**
Location: **Approx. NW SE NW Section 1-T11S-R24W**
License Number: **API: 15-195-22747**
Spud Date: **January 23, 2012**
Surface Coordinates: **1800' FSL & 1870' FEL Section 1-T11S-R24W**
Drilling Completed: **Tregco Co, KS**
January 31, 2012

Bottom Hole Coordinates: **2288**
Ground Elevation (ft): **3270**
Logged Interval (ft): **To: 3990**
Formation: **Marmaton, RTD 3990 (-1697), LTD 3990 (-1697).**
Type of Drilling Fluid: **Chemical. Displaced at 3165'**
K.B. Elevation (ft): **2293**
Total Depth (ft): **3990**

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

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 @ 220' w/150sx. Comm, (3%CC 2% Gel).
Production Casing: 5 1/2" Csg set @ 3986'. PC @ 1929'. Swift cmt w/150 sx using EA-2. RH 30 SX. PD @ 6:30 am 2/01/2012.
Deviation Surveys: 1/4 @ 222', 1/4 @ 3675'. 1 @ 3990'.
Pipe Strap @ 3700'. Strap 3687.61. Board 3686.61. Strap long to Board 1 foot.

Murfin Drilling Rig #16 Bit Record:
#1 12 1/4" HJC MXGI in @ GL, out @ 222'.
#2 7 7/8" HTC GX20C in @ 222', out @ 3990'.

Mud System: **Morgan Mud, Inc.**
DSTs: **Trilobite Testing Inc. (5 Dsts)**

Correlation of the OH Log with the drilling time indicates the depths are approximately equal. The Gamma ray curve was imported directly into this log without any depth adjustment.
OH Log Formation Tops: **Anhydrite 1889 (+404), Base Anhydrite 1930 (+363), Topeka 3381 (-1088), Heebner 3604 (-1311), Toronto 3624 (-1331), Lansing 3638 (-1345), BKC 3876 (-1583), Lenapah 3904 (-1611), RTD 3990 (-1697), LTD 3990 (-1697).**

DSTs

DST #1 (Toronto, LKC 'A', 'B' & 'D') 3603-3683/30-60-60-90. 1st Op: BOB/6 min. 2" RB. 2nd Op: BOB/5 min. 10" RB/65 min. Recover: 1200' GIP, Total Fluid 750'. 255' CO (100% Oil, Gty 32), 310' GCMCO (10% Gas, 70% Oil, 20% Mud), 125' GOCWM (10% Gas, 20% Oil, 30% Wtr, 40% Mud), 60' OCMW (5% Oil, 55% Wtr, 40% Mud). API RW .28 @ 26 F, Chl 70,000. IH 1773#, IFP 44-162#, ISIP 1106#, FFP 173-313#, FSIP 1080#, FH 1731#, BHT 110 F.

DST #2 (LKC 'D') 3683-3700/30-60-30-60. 1st Op: WB 1 inch. No RB. 2nd Op: WSB. No RB. Recover: Total Fluid 20' Mud w/oil spks in tool. IH 1802#, IFP 16-24#, ISIP 972#, FFP 26-28#, FSIP 893#, FH 1759#, BHT 103 F.

DST #3 (LKC 'E' & 'F') 3702-3736/30-60-60-90. 1st Op: BOB/10 min. 1 1/2" RB/20 min, decrease. 2nd Op: BOB/10 min. 1" RB, died/30 min. Recover: 180' GIP. Total Fluid 560'. 10' Oil (Gty 33), 550' Wtr. API RW .20 @ 26 F, Chl 100,000. IH 1839#, IFP 27-136#, ISIP 1017#, FFP 141-296#, FSIP 998#, FH 1800#, BHT 115 F.

DST #4 (LKC 'H', 'I' & 'J') 3760-3828/30-60-45-90. 1st Op: BOB/1 min. RB BOB/10 MIN, GTS/20 min TSTM. 2nd Op: BOB/1 min. GTS TSTM. Recover: Total Fluid 3550'. 3430' CGO (20% Gas, 80% Oil) GTY 31, 60' GOCM (10% Gas, 20% Oil, 70% Mud), 60' GOCM (10% Gas, 10% Oil, 80% Mud). IH 1889#, IFP 310-882#, ISIP 1356#, FFP 888-1216#, FSIP 1352#, FH 1875#. BHT 116 F.

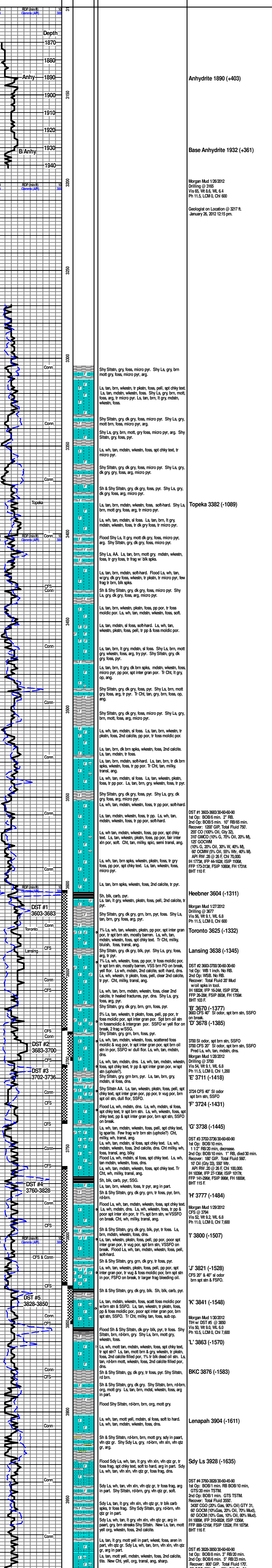
DST #5 (LKC 'K') 3828-3850/30-60-60-90. 1st Op: BOB/8 min. 3" RB/20 min, steady. 2nd Op: BOB/6 min. 5" RB/23 min, steady. Recover: 800' GIP. Total Fluid 170'. 50' GCO (20% Gas, 80% Oil) Gty 34, 120' HOCGM (20% Gas, 30% Oil, 50% Mud). IH 1883#, IFP 23-48#, ISIP 1259#, FFP 51-81#, FSIP 1227#, FH 1853#, BHT 110 F.

ROCK TYPES

- | | | | |
|-------|----------|-------|----------|
| Anhy | Congl | Lmst | Black sh |
| Bent | Sdy dolo | Mrst | Gry sh |
| Brec | Dol | Salt | Shale |
| Cht | Gyp | Shale | Shylst |
| Clyst | Sdy lmst | Silt | Stlysh |
| Coal | | | |

ACCESSORIES

- | | | | |
|----------|---------------|-----------------|----------------|
| MINERAL | Chlorite | Peloid | Grysl |
| Anhy | Dol | Pelloidal | Lms |
| Arg | Sand | Pisolite | Sandylys |
| Bent | Silty | Plant | Sh |
| Bit | | Strom | Sitstn |
| Brecfrag | | Fuss | |
| Calc | FOSSIL | Oomoldic | |
| Carb | Algae | | TEXTURE |
| Chtdk | Amph | STRINGER | Boundst |
| Chtlt | Belm | Anhy | Chalky |
| Dol | Bioclst | Arg | Cryxin |
| Ferrpel | Brach | Bent | Earthy |
| Ferr | Bryozoa | Coal | Finexin |
| Glau | Coral | Dol | Grainst |
| Gyp | Echin | Gyp | Lithogr |
| Marl | Fish | Ls | Microxin |
| Nodule | Foram | Mrst | Mudst |
| Phos | Fossil | Sstrg | Packst |
| Pyr | Gastro | Carbsh | Wackest |
| Salt | Oolite | Clystn | |
| Sandy | Ostra | Dol | |
| Silt | | | |



RTD 3990 (-1697)
LTD 3990 (-1697)