



## GEOLOGIST'S REPORT

OPERATOR MURFIN DRILLING COMPANY, INC.  
LEASE ORTH 'E' #9  
LOCATION 1350 FNL & 1050 FWL  
SEC. 3 TWSP. 14S RGE. 19W  
COUNTY ELLIS STATE KANSAS

FIELD STADELMAN  
CONTRACTOR Murfin Drilling Company RIG NO. 8  
COMMENCED 1 Nov. 2011 COMPLETED 11 Nov. 2011  
MUD DISPLACED 2929 MUD TYPE Chemical  
DRILLING TIME KEPT FROM 3090 TO 3835  
SAMPLES SAVED FROM 3090 TO 3835  
GEOLOGIST ON WELL Paul Gruenzenleer

ELEVATIONS  
KB 2184 Ft. GL 2179 Ft.  
ALL MEASUREMENTS FROM KB.

CASING RECORD  
Conductor: None  
Surface: 8.58' @ 220'  
Production: 5 1/2" @ 3930'

SAMPLE DESCRIPTIONS

REMARKS

FORMATION	NAME	LOG	SAMPLE
Stone Corral	1469	+7.15	475 +7.09
Base/Anhydrite	1514	+6.70	1511 +6.73
Topeka	3188	-10.04	3185 -10.01
Heeberger Shale	3431	-12.48	3426 -12.42
Toronto	3452	-12.68	3450 -12.66
Lansing	3474	-12.90	3472 -12.88
Bass/Kansas City	3728	-15.44	3724 -15.40
Arbuckle	3818	-16.34	3816 -16.32
Total Depth	3940	-17.56	3925 -17.51

### REMARKS

API 15-051-26208-00-00

Drilling Fluids: Morgan Mud, Inc. (David Lines, engineer)

Drill Stem Testing: Trilobite Testing, Inc. (Cody Bloodorn, tester)

Gas Trailer: No Gas Trailer

Reserve Pit Chlorides: 19,500 ppm.

### DRILL TIME (MIN/FT)

### DEPTH

### SAMPLE DESCRIPTIONS

### REMARKS

### ELECTRICAL SURVEYS:

### Log-Tech, Inc.

### LITHOLOGY

### SIMONS

### REMARKS

### TOPEKA

### 3185 (-1001)

### DST # 1 3210 - 3223

### 30°-60°-60°-90°

### IF: Fair blow, incr to 7 inches

### FF: Good blow, BOB in 49 min.

### RECOVERY:

### 279 Ft. Muddy Water

### (Chlor: 19,000 ppm)

### IHP: 1561 psi. FHP: 1534 psi.

### IFP: 15-85 psi. ISIP: 988 psi.

### FPP: 94-145 psi. FSIP: 961 psi.

### BHT: 110 deg. F.

### Morgan Mud check @ 3223'

### Vis: 70, Wt: 8.8, WL: 7.6

### Chlor: 12,800 ppm, LCM: 1#

### TOEKA

### 3185 (-1001)

### DST # 2 3431 - 3513

### 30°-60°-60°-90°

### IF: Strong blow, BOB in 9 min.

### FF: Strong blow, BOB in 14 min.

### RECOVERY:

### 62 Ft. Watery Mud

### (40%Wtr, 60%Mud)

### 434 Ft. Muddy Water

### (Chlor: 16,000 ppm)

### 107 Ft. Watery Mud

### (10%Wtr, 90%Mud)

### IHP: 1733 psi. FHP: 1629 psi.

### IFP: 58-219 psi. ISIP: 365 psi.

### FPP: 221-334 psi. FSIP: 365 psi.

### BHT: 118 deg. F.

### 9:17 PM, 4 November 2011

### STONE CORRAL

### 1475 (+709)

### BASE/ANHYDRITE

### 1511 (+673)

### REMARKS

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