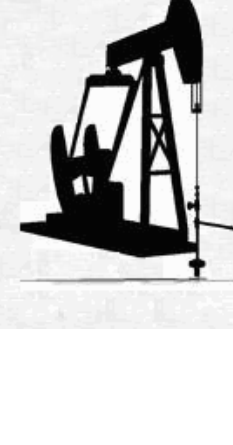
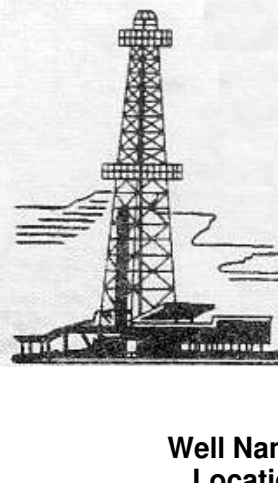


# WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG  
CONSULTANT GEOLOGIST



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

Well Name: **Eaton #1-36**  
 Location: **SW NW NE SW SEC. 36-18s-31w**  
 Licence Number: **API: 15-171-20999**      Region: **Scott Co., KS**  
 Spud Date: **December 3, 2013**      Drilling Completed: **December 12, 2013**  
 Surface Coordinates: **2265' FSL & 1641' FWL**  
    **Y= 655016, X= 1370431**

Bottom Hole Coordinates:  
 Ground Elevation (ft): **2915'**      K.B. Elevation (ft): **2922'**  
 Logged Interval (ft): **3800'**      To: **RTD**      Total Depth (ft): **4610'**  
 Formation: **Mississippi**  
 Type of Drilling Fluid: **Chemical Premix (Displaced)**

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR:

Company: **Larson Engineering Inc.**  
 Address: **562 West State Road 4**  
           **Olmitz, KS 67564-8561**

### DRILLING CONTRACTOR:

**H. D. Drilling, LLC, Rig #3**

**DP 4.5" XH (16.6#); DC 6.25" x 2.25" x 560', Kelly 40.30', Tool Joint 5.5" ; Bit: JZ-HA20-Q, 7-7/8", standard jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).**

### CASING:

Set 8-5/8" casing at 279'  
 Set 5-1/2" production casing

### CIRCULATION SYSTEM:

**Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, displaced 3262 to 3275'; earth pits, Morgan Mud, Inc., Cade Lines.**

### OPEN HOLE LOGS:

**DN, DI (SP) (Run-1); ML (Run-2); No Sonic; 5" detail LTD-3600; 2" DI to surface casing; LogTech-Pioneer Wireline, Hays, KS, D. Schmidt, Log total depth (4613') was three feet long to rotary total depth (4610').**

### DRILL STEM TEST #1:

**LKC "Middle Creek", "L-zone": Interval: 4269-4283 (14)'; Blow: weak incr to 7" IFP, no RB, weak incr to 9.5" FFP, no RB; Times: 5-15-15-30; Recovery: 310' TF: 131' WM (20%W, 80%M), 179' MW (80%W, 20%M, Rw 1.0 at 0 F, chlorides 20k); Pressures: HP: 2144-2114, SIP: 832-821, FP: 25-82, 87-160; BHT: 117 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.**

### DRILL STEM TEST #2:

**Marmaton: Interval: 4372-4390 (18)'; Missrun due to packer seat failure, Trilobite Testing, Inc., Scott City, KS, Jace McKinney.**

### DRILL STEM TEST #3:

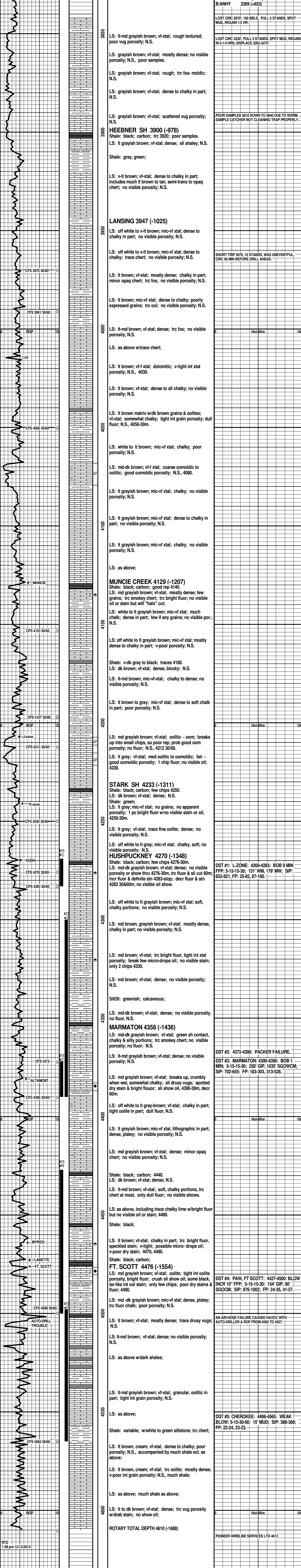
**Marmaton: Interval: 4300-4390 (90)'; Blow: BOB in 1 min IFP, no RB, BOB in 1.5 min FFP, RB 1" FSIP; Times: 5-15-15-30; Recovery: 258' GIP, 1035' TF: 179' OGCWM (10%G, 5%O, 55%W, 30%M, Rw 0.25 at 60F, chlorides 32k), 186' OGCWM (30%G, 5%O, 20%W, 35%M), 186' OGCWM (10%G, 10%O, 20%W, 60%M), 248' OGCWM (10%G, 5%O, 35%W, 50%M), 236' GOCWM (5%G, 10%O, 40%W, 45%M); Pressures: HP: 2163-2130, SIP: 702-655, FP: 183-303, 313-528; BHT: 135 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.**

### DRILL STEM TEST #4:

**Pawnee, Ft. Scott: Interval: 4427-4500 (73)'; Blow: weak incr 2.5" IFP, no RB, weak incr 10" FFP, no RB; Times: 5-15-15-30; Recovery: 154' GIP, 90' TF: 30' GOCM (5%G, 10%O, 85%M), 90' GOCM (30%G, 20%O, 50%M); Pressures: HP: 2223-2124, SIP: 976-1002, FP: 24-35, 41-57, BHT: 120 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.**

### DRILL STEM TEST #5:

**Cherokee: Interval: 4498-4565 (67)'; Blow: weak 1/2" IFP, no RB, weak 3/4" FFP, no RB; Times: 5-15-30-60; Recovery: 15' mud w/oil scum (100%M); Pressures: HP: 2290-2265, SIP: 388-368, FP: 22-24, 23-23; BHT: 120 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.**



Hot-Wire 100

Hot-Wire 100

CALL GEO 3400 12/06-2:00 AM

DRY SAMPLES WERE REQUESTED BY STATE SURVEY, SUPERVISED BY WELLSITE GEO FOR ACCURATE MARKINGS AND SUBMITTED.

REFERENCE WELL: ABERCROMBIE ENERGY, LLC, GOERING #1-36, SE NE SW NW 36-18S-31W, DN LOG.

ANHDRITE 2206 (+716)  
B/ANHY 2269 (+653)

LOST CIRC 2670, 100 BBLs. PULL 5 STANDS, SPOT MUD, REGAIN 1/2 HR.

LOST CIRC 3230, PULL 5 STANDS, SPOT MUD, REGAIN IN 2-1/4 HRS, DISPLACE 3262-3275

POOR SAMPLES 3810 DOWN TO 3840 DUE TO WORM SAMPLE CATCHER NOT CLEANING TRAP PROPERLY.

Hot-Wire 100

Hot-Wire 100

Hot-Wire 100

DST #1: L-ZONE: 4269-4283; BOB 9 MIN FFP; 5-15-15-30; 131' WM, 179' MW; SIP: 832-821, FP: 25-82, 87-160.

DST #2: 4372-4390; PACKER FAILURE.

DST #3: MARMATON: 4300-4390; BOB 1 MIN; 5-15-15-30; 258' GIP, 1035' SGOWCM; SIP: 702-655; FP: 183-303, 313-528.

DST #4: PAW, FT SCOTT: 4427-4500; BLOW INCR 10' FFP; 5-15-15-30; 154' GIP, 90' SGOCM; SIP: 976-1002; FP: 24-35, 41-57.

AN AIR-HOSE FAILURE CAUSED HAVOC WITH AUTO-DRILLER & ROP FROM 4500 TO 4507.

DST #5: CHEROKEE: 4498-4565; WEAK BLOW: 5-15-30-60; 15' MUD; SIP: 388-368; FP: 22-24, 23-23.

PIONEER WIRELINE SERVICES LTD 4613

RTD 1:58 pm 12/12/2013