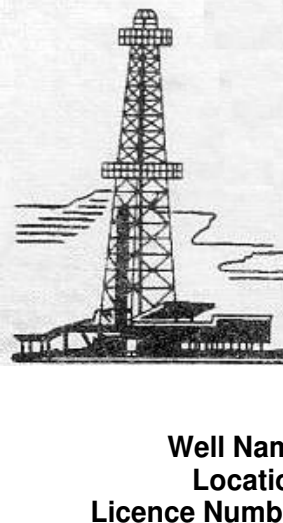


WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: LORA #1-32
Location: E2 SW SE OF SEC. 32-19S-29W
Licence Number: API: 15-101-22535
Spud Date: September 04, 2014
Surface Coordinates: 330' FSL & 865' FEL

Region: Lane Co., KS
Drilling Completed: September 15, 2014

Bottom Hole Coordinates:
Ground Elevation (ft): 2865' **K.B. Elevation (ft):** 2872'
Logged Interval (ft): 3800' **To: RTD** **Total Depth (ft):** 4675'
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 (Co. Tools)

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 556', Kelly 40.30', Tool Joint 5.5" ; Bit: JZ-HA20Q, 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 262'

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, 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, Dan Schmidt, Log total depth (4675') was three feet long to rotary total depth (4675').

DRILL STEM TEST #1:

LKC (J-zone): Interval: 4264-4285 (21') : Blow: weak incr 1-1/4" IFF, no RB, weak incr 4-1/2" FFP, no RB; Times: 5-15-30-60; Recovery: 134' TF; Grindouts: 10' WM (12%W, 88%M), 62' WM (29%W, 71%M), 62' MW (63%W, 37%M, Rw 0.494 @ 55 F, chlorides 16k); Pressures: HP: 2156-2003, SIP: 1071-1071, FP: 18-35, 37-90; BHT: 124 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

DRILL STEM TEST #2:

LKC (K-zone): Interval: 4295-4316 (21') : Blow: BOB 2 min IFF, no RB, BOB 1-3/4 min FFP, no RB; Times: 5-15-30; Recovery: 228' GIP, 1198 TF; Grindouts: 20' MUD w/oil spots (100%M), 62' SOGCM (11%G, 8%G, 39%O, 18%W, 35%M), 186' GOMCW (12%G, 20%O, 38%W, 30%M), 248' GOMCW (9%G, 15%O, 66%W, 10%M), 620' OGMCW (7%G, 3%O, 82%W, 8%M, Rw 0.327 at 56 F, chlorides 25k); Pressures: HP: 2178-2159, SIP: 1056-1048, FP: 110-243, 261-579; BHT: 130 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

DRILL STEM TEST #3:

LKC (Lower-K & Middle Creek): Interval: 4335-4352 (17') : Blow: BOB 3-1/2 min IFF, weak surf RB, BOB 4-1/4 min FFP, weak surf RB; Times: 5-15-30; Recovery: 109' GIP, 635' TF; Grindouts: 15' GMO (3%G, 75%O, 22%M, 22 grav), 62' HGOCM (14%G, 26%O, 60%M), 186' HGOCM (20%G, 32%O, 48%M), 186' GOMCW (26%G, 22%O, 38%W, 14%M), 186' GOMCW (6%G, 7%O, 76%W, 11%M, Rw 0.342 at 45 F, chlorides 31k); Pressures: HP: 2214-2138, SIP: 1058-928, FP: 54-136, 142-298; BHT: 128 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

DRILL STEM TEST #4:

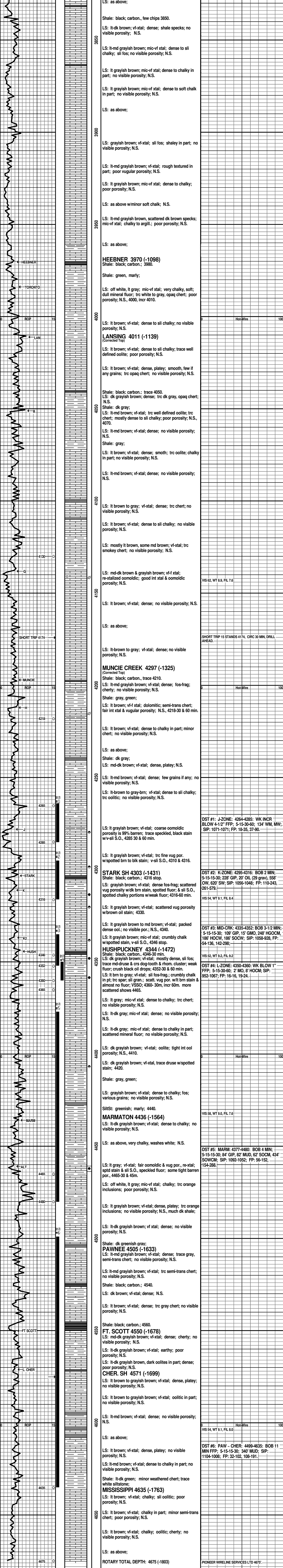
LKC (L-zone): Interval: 4350-4360 (10') : Blow: weak incr 1/2" IFF, no RB, weak incr 1" FFP, no RB; Times: 5-15-30-60; Recovery: 2' MO (77%O, 23%M, 26 grav.), 8' HOCM (29%O, 6%W, 65%M); Pressures: HP: 2235-2116, SIP: 952-1067, FP: 16-16, 19-24; BHT: 113 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

DRILL STEM TEST #5:

Marmaton: Interval: 4377-4480 (103') : Blow: BOB 4-1/2 min. IFF, no RB; BOB 5-1/4 min. FFP, no RB; Times: 5-15-30; Recovery: 84' weak GIP, 578' TF; Grindouts: 82' mud w/oil spots (100%M), 62' SOGCM (11%G, 6%O, 83%M), 186' SOGCM (9%G, 4%O, 5%W, 82%M), 62' SOGCM (15%G, 5%O, 14%W, 66%M), 186' SOGCM (6%G, 3%O, 26%W, 65%M); Pressures: HP: 2210-2172, SIP: 1092-1052, FP: 56-152, 154-288; BHT: 122 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.

DRILL STEM TEST #6:

Pawnee thru Cherokee: Interval: 4499-4635 (136') : Blow: weak incr 5-1/2" IFF, no RB, weak incr BOB 11-1/2 min FFP, no RB; Times: 5-15-30; Recovery: 340' TF; Grindouts: 92' mud (100%M), 248' SWCM (3%W, 97%M); Pressures: HP: 2274-2161, SIP: 1104-1008, FP: 32-102, 108-191; BHT: 121 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeone.



RTD 3:15 am
09-15-2014

PIONEER WIRELINE SERVICES LTD 4675'