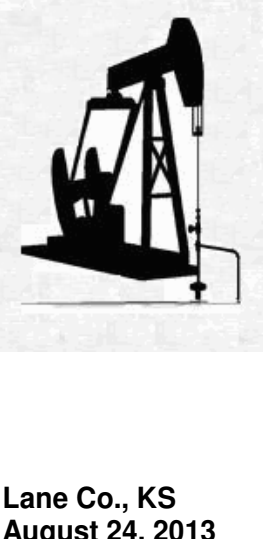


WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: **EUGENE #1-27**
 Location: **E2 SE SW SW SEC. 27-18s-28w**
 Licence Number: **API: 15-101-22455**
 Spud Date: **August 12, 2013**
 Surface Coordinates: **330' FSL & 1060' FWL**

Region: **Lane Co., KS**
 Drilling Completed: **August 24, 2013**

Bottom Hole Coordinates:
 Ground Elevation (ft): **2724'** K.B. Elevation (ft): **2731'**
 Logged Interval (ft): **3800'** To: **RTD** Total Depth (ft): **4625'**
 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 500'; 560'; Kelly 40.30'; Tool Joint 5.5" ; Bit: JZ-HA20-Q, 7-7/8" , jets 15-15-15; rpm 80, WOB 30k- 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).

Rig is short one stand of drill collars and this is the reason for the reduced weight on bit (30k) until replacement drill collars were installed at 4152' and normal weight on bit (35k) was resumed.

CASING:

Set 8-5/8" casing at 272'
 Set 5-1/2" casing at 4624' (rotary).

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60 spm, Chemical, premix, displaced 3362 to 3380'; earth pits, Morgan Mud, Inc., Cade Lines.

SPP was a little low around 650 psi.

DRILL STEM TEST #1:

LKC "H-zone": Interval: 4124-4152 (28') : Blow 1/4" IFP, no RB, surf blow FFP, no RB; Times: 5-15-15-30; Recovery: 20' thick mud (100%M); Pressures: HP: 2060-2030; SIP: 1108-1101; FP: 27-29, 32-38; BHT: 117 F; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

DRILL STEM TEST #2:

LKC "J-zone": Interval: 4199-4215 (16') : Blow: 3-1/2" IFP, no RB, BOB 10 min FFP, no RB; Times: 5-15-15-30; Recovery: 160' GIP, 140' TF: 80' GMCO (30%G, 65%O, 5%M, Grav 37), 60' GOCM (10%G, 40%O, 50%M); Pressures: HP: 2092-2026; SIP: 578-574, FP: 26-45, 48-78; BHT: 124 F; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

DRILL STEM TEST #3:

LKC "K-zone": Interval: 4226-4250 (24') : Blow: BOB 2 min IFP, 5" RB, BOB 1 min FFP, 3" RB at start, final RB unknown FFP; Times: 5-15-15-30; Recovery: 900' GIP, 490' TF: 350' GMCO (40%G, 57%O, 3%M, Grav 41), 140' GMCO (20%G, 45%O, 35%M); Pressures: HP: 2114-2048, SIP: 450-443, FP: 90-109, 132-203; BHT: 129 F; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

DRILL STEM TEST #4:

LKC "Middle Creek": Interval: 4257-4270 (13') : Blow: died in 3 min IFP, no further blows; Times: 5-15-15-30; Recovery: 2' mud w/oil spots (100%M); Pressures: HP: 2156-2060, SIP: 122-113, FP: 20-23, 23-24; BHT: 116 F; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

DRILL STEM TEST #5:

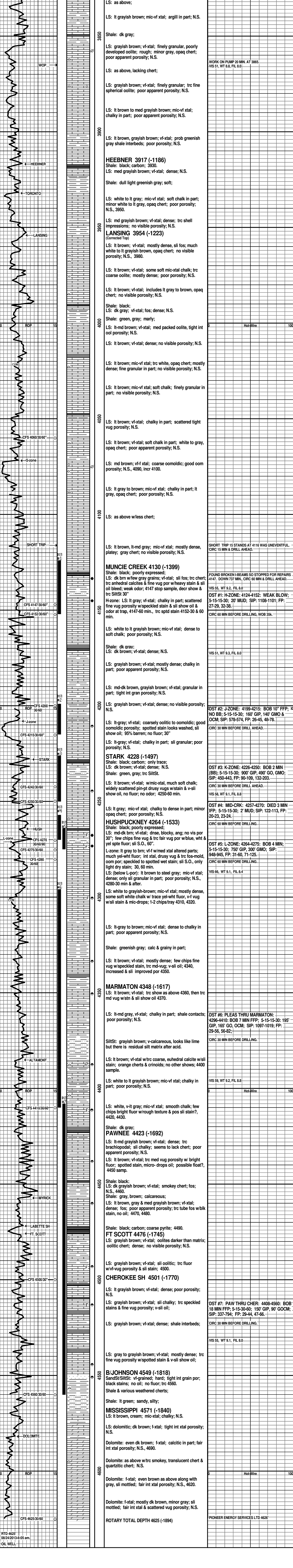
LKC "L-zone": Interval: 4264-4275 (11') : Blow: BOB 4 min IFP, no RB, BOB 4 min FFP, BOB RB 10 min FFP; Times: 5-15-15-30; Recovery: 750' GIP, 300' TF: 220' GMCO (40%G, 57%O, 3%M, Grav 37), 80' GMCO (30%G, 45%O, 25%M); Pressures: HP: 2107, 2096; SIP: 948-945, FP: 31-60, 71-125; BHT: 129 F; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

DRILL STEM TEST #6:

Pleasanton thru Marmaton "Altamont": Interval: 4296-4410 (114') : Blow: incr 4" IFP, no RB, BOB 7 min FFP, no RB; Times: 5-15-15-30; Recovery: 195' GIP, 165' TF: 30' GO (15%G, 85%O, Grav 37), 135' GOCM (20%G, 30%O, 50%M); Pressures: HP: 2133-2124, SIP: 1097-1019, FP: 29-56, 56-82; BHT: 124 F; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.

DRILL STEM TEST #7:

Lower Altamont thru Cherokee Johnson Zone: Interval: 4408-4560 (152') : Blow: weak 2" IFP, no RB, BOB 18 min FFP, no RB; Times: 5-15-15-30; Recovery: 150' GIP, 90' GOCM (30%G, 25%O, 45%M); Pressures: HP: 2212-2104, SIP: 337-794, FP: 29-44, 47-66; BHT: 121 F; Apparent multi-zone influence; Trilobite Testing, Inc., Scott City, KS, Bradley "Walt" Walter.



RTD 4625'
 08/24/2013 6:05 am.
 OIL WELL