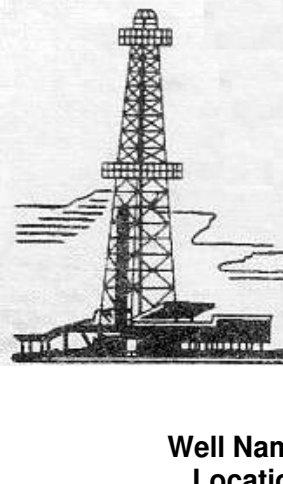


WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: **EUGENE #2-27**
 Location: **SE NW NW SW SEC. 27-18S-28W**
 Licence Number: **API: 15-101-22576**
 Spud Date: **December 10, 2015**
 Surface Coordinates: **2291' FSL & 418' FWL**

Region: **Lane Co., KS**
 Drilling Completed: **December 20, 2015**

Bottom Hole Coordinates: _____
 Ground Elevation (ft): **2737'** K.B. Elevation (ft): **2746'**
 Logged Interval (ft): **3800'** To: **RTD** Total Depth (ft): **4636'**
 Formation: **Mississippi**
 Type of Drilling Fluid: **Chemical Premix (Displaced)**

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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 9' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Ran 6 jts new 8-5/8" 20# R3 STC 8rd csg. Tallied 253.68', set @ 265' KB.

Ran 110 jts new 4-1/2" 11.6# API R3 LTC 8rd csg. Tallied 4641.70', set @ 4635' KB.

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, earth pits, Mud-Co/Service Mud, Inc., Jason Whiting.

OPEN HOLE LOGS:

DN, DI (SP), ML, No Sonic; 5" detail LTD-3600; 2" DI to surface casing; LogTech-Pioneer Wireline, Colby, KS, J. Hendrickson & D. Schmidt, LTD 4634', RTD 4636'.

DRILL STEM TEST #1:

LKC (H-zone): Interval: 4242-4270 (28'); Blow: weak incr to 3" IFP, no RB, BOB 20 min. FFP, no RB; Times: 5-15-30-60; Recovery: 186' GIP, 164' TF; Grindouts: 20' oil (100%O), 82' MCO (60%O, 40%M), 62' MGCO (20%G, 50%O, 30%M); Pressures: HP: 2007-1999, SIP: 997-986, FP: 16-36, 43-74; BHT: 118 deg. F; Trilobite Testing, Inc., Scott City, KS, Brandon Turley.

DRILL STEM TEST #2:

LKC (J-zone): Interval: 4199-4227 (28'); Blow: weak incr 1" IFP, no RB, weak incr 4", no RB; Times: 5-15-30-60; Recovery: 186' GIP, 164' TF; Grindouts: 72' OCM (20%O, 80%M), 62' OCM (10%O, 90%M); Pressures: HP: 2066-2008, SIP: 617-556, FP: 13-28, 32-75; BHT: 116 deg. F; Trilobite Testing, Inc., Scott City, KS, Brandon Turley.

DRILL STEM TEST #3:

LKC (K-zone): Interval: 4239-4251 (12'); Blow: weak incr 1/4" IFP, no RB, weak incr 1-1/2" FFP, no RB; Times: 5-15-30-60; Recovery: 2' Oil and 40' O&WCM (10%O, 10%W, 80%M); Pressures: HP: 2135-2021, SIP: 462-462, FP: 15-18, 20-36; BHT: 113 deg. F; Trilobite Testing, Inc., Scott City, KS, Brandon Turley.

DRILL STEM TEST #4:

LKC (Middle Creek / L-zone): Interval: 4270-4283 (13'); Blow BOB in 30 sec. IFP, RB BOB 12 min ISIP, BOB in 2-1/2 min. FFP, RB incr to 6" FSIP; Recovery: 935' GIP, 514' TF; Grindouts: 388' gassy oil (30%G, 70%O, grav. 38), 126' GOCM (30%G, 10%O, 60%M); Pressures: HP: 2072-2051, SIP: 1070-968, FP: 56-74, 81-87; BHT: 128 deg. F; Trilobite Testing, Inc., Scott City, KS, Brandon Turley.

DRILL STEM TEST #5:

Pleasanton thru Marmaton (Altamont): Interval: 4319-4415 (96'); Blows: weak incr 6" IFP, no RB, BOB 5 min FFP, 1/2" RB; Times: 5-15-15-30; Recovery: 270' GIP, 164' TF; Grindouts: 102' GOCM (10%G, 20%O, 70%M), 62' GOCM (20%G, 10%O, 70%M); Pressures: HP: 2103-2101, SIP: 1070-968; FP: 56-74, 81-87; BHT: 116 deg. F; Trilobite Testing, Inc., Scott City, KS, Brandon Turley.

DRILL STEM TEST #6:

Pawnee thru Cher. Sand: Interval: 4425-4572 (147'); Blows: weak incr 2-1/2" IFP, no RB, BOB 12 min. FFP, 1" RB; Times: 5-15-15-30; Recovery: 248' GIP, 174' TF; Grindouts: 112' GOCM (20%G, 10%O, 70%M), 62' GOCM (20%G, 20%O, 60%M); Pressures: HP: 2226-2122, SIP: 1200-1097, FP: 274-549 (plugging action), 59-90; BHT: 116 deg. F; Trilobite Testing, Inc., Scott City, KS, Brandon Turley.

REMARKS:

It was determined that production casing should be set for further testing.

