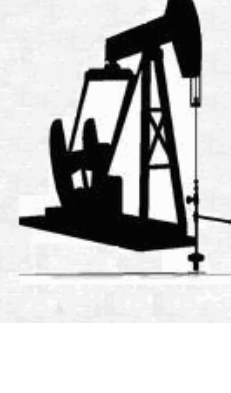


WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAAG
CONSULTANT GEOLOGIST



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

Well Name: Shapland A #1-27
Location: SW SW NE NW SEC. 27-18s-28w
Licence Number: API: 15-101-22465
Spud Date: October 19, 2013
Surface Coordinates: 1190' FNL 1414' FWL

Region: Lane Co., KS
Drilling Completed: October 30, 2013

Bottom Hole Coordinates:
Ground Elevation (ft): 2704' K.B. Elevation (ft): 2711'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4605'
Formation: Mississippian
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
Olmits, 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"; jets 15-15-14; rpm 80, WOB 35k; Kelly Bushing 7' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Set 8-5/8" casing at 256'
Set 5-1/2" prod. casing

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, displaced 3389 to 3407'; earth pits, Morgan Mud, Inc., David 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, Jerrod Long & J. Hendrickson, Log total depth (4608') was three feet long to rotary total depth (4605').

DRILL STEM TEST #1:

LKC "H-zone": Interval: 4100-4130 (30'): Blow: weak incr 1/4" IFP, no RB, no blow FFP, no RB; Times: 5-15-30; Recovery: 2' mud w/oil spots; (100%M); Pressures: HP: 1954-2006, SIP: 764-1009, FP: 17-18, 17-19; BHT: 114 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

DRILL STEM TEST #2:

LKC "J-zone": Interval: 4173-4187 (14'): Blow: weak incr 5" IFP, no RB, weak incr BOB 14 min FFP, 1/2" RB FSP; Times: 5-15-30; Recovery: 238' TF, 137' GIP, 15' GO (4%G, 96%O, 37 grav.), 37' MCO (4%G, 49%O, 14%W, 33%M), 62' OWCM (9%G, 6%O, 29%W, 56%M), 62' OMCW (5%O, 65%W, 30%M), 62' OMCW (2%O, 86%W, 12%M, Rv 0.233 at 58 F, chlorides 35k); Pressures: HP: 2148-1990, SIP: 627-624, FP: 24-67, 72-113; BHT: 126 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

DRILL STEM TEST #3:

LKC "K-zone": Interval: 4201-4215 (14'): Blow: weak incr 1/2" IFP, no RB, weak incr 1-1/2" FFP, no RB; Times: 5-15-30; Recovery: 1' oil (100%O), 29' WOGCM (6%G, 5%O, 2%W, 87%M); Pressures: HP: 2168-1984, SIP: 554-553, FP: 17-20, 21-34; BHT: 116 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

DRILL STEM TEST #4:

LKC "K-zone": Interval: 4314-4220 (6'): Blow: weak incr 3-3/4" IFP, no RB, weak incr 7-1/4" FFP, no RB; Times: 5-15-30-60; Recovery: 249' TF: 125' MW (65%W, 35%M), 124' MW (91%W, 9%M, Rv 0.186 at 60 F, chlorides 42k); Pressures: HP: 2183-2033, SIP: 544-539, FP: 32-54, 56-128; BHT: 126 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

DRILL STEM TEST #5:

LKC Middle Creek & "L-zone": Interval: 4239-4251 (12'): Blow: BOB 1-1/4 min IFP, RB 4-3/4" ISIP, BOB 2-3/4 min FFP, RB 1-3/4" FSIP; Times: 5-15-30-60; Recovery: 742' GIP, 870' TF: 250' GO (35%G, 65%O, 37 grav.), 434' MGO (40%G, 57%O, 3%M), 124' MGO (45%G, 48%O, 7%M), 62' OGCM (40%G, 15%O, 45%M); Pressures: HP: 2147-2032, SIP: 856-849, FP: 58-106, 122-260; BHT: 126 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

DRILL STEM TEST #6:

Marmaton: Interval: 4296-4390 (94'): Blow: weak incr 1/2" IFP, no RB, weak surf blow FFP, no RB; Times: 5-15-30-60; Recovery: 10' mud w/show oil on top (2%W, 98%M); Pressures: HP: 2190-2051, SIP: 304-399, FP: 20-21, 21-23; BHT: 114 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

DRILL STEM TEST #7:

Pawnee thru Cherokee: Interval: 4396-4535 (139'): Blow: weak incr 3/4" IFP, no RB, weak incr 1/4" FFP, no RB; Times: 5-15-30-60; Recovery: 15' mud w/oil spots (100%M); Pressures: HP: 2254-2134, SIP: 600-671, FP: 22-25, 27-32; BHT: 115 F; Trilobite Testing, Inc., Scott City, KS, Will MacLean.

