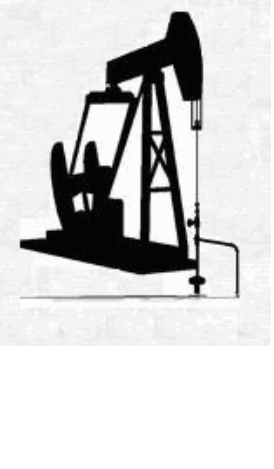


WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: HINEMAN UNIT #1-28
Location: SW NW SW NW 28-18S-28W
Licence Number: API: 15-101-22508
Spud Date: April 23, 2014
Surface Coordinates: 1975' FNL & 93' FWL

Region: Lane Co., KS
Drilling Completed: May 04, 2014

Bottom Hole Coordinates:
Ground Elevation (ft): 2715' K.B. Elevation (ft): 2722'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4611'
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
Olmits, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (Co. Tools)

DP 4.5" XH (16.6#); DC 6.25" x 2.25" x 545', 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 264'
Set 4-1/2" production casing

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60 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, Chris Desaire, Log total depth (4608') was four feet short to rotary total depth (4611').

DRILL STEM TEST #1:

LKC (H-zone): Interval: 4127-4150 (23'): Missrun: hit bridge about 5 stands off bottom; T.O.H., lay down tool, packer was torn up; T.I.H. w/bit, ream to bottom, recondition. Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #2:

LKC (H-zone): Interval: 4227-4250 (23'): Blow: weak surf IFP, no RB, weak surf died 8 min FFP, no RB; Times: 5-15-30; Recovery: 5' mud (100%M); Pressures: HP: 2037-2005, SIP: 146-87, FP: 16-17, 17-20; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #3:

LKC (K-zone): Interval: 4229-4243 (14'): Blow: weak surf IFP, no RB, weak surf FFP, no RB; Times: 5-15-30; Recovery: 30' muddy oil (80%O, 20%M); Pressures: HP: 2099-2041, SIP: 608-609; FP: 21-27, 29-41; BHT: 115 F; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #4:

LKC (L-zone): Interval: 4263-4280 (17'): Blow: none IFP, no RB, weak surf died 4 min FFP, no RB; Times: 5-15-30; Recovery: 1' mud (100%M); Pressures: HP: 2118-2128, SIP: 775-847; FP: 14-16, 16-16; BHT: 112 F; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #5:

LKC (L-zone): Interval: 4271-4285 (14'): Blow: BOB 5 min IFP, surf RB ISIP, BOB 5 min FFP, 1/8" RB FSIP; Times: 5-15-30; Recovery: 62' GIP, 433' TF: Grindouts: 30' oil (100%O, 30 grav.), 32' GOWCM (5%G, 30%O, 15%W, 50%M), 124' GOWCM (5%G, 10%O, 10%W, 75%M), 247' GOMCW (2%G, 3%O, 20%M, 75%W, Rv 0.334 at 50F, 31k Chlorides); Pressures: HP: 2128-2090, SIP: 884-857, FP: 38-100, 109-206; BHT: 130 F; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #6:

Marmaton: Interval: 4322-4413 (91'): Blow: weak incr 1" IFP, no RB, weak incr 3" FFP, no RB; Times: 5-15-30; Recovery: 30' muddy oil (80%O, 20%M); Pressures: HP: 2193-2148, SIP: 413-629, FP: 52-56, 56-67; BHT: 118 F; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #7:

Pawnee thru Ft. Scott: Interval: 4419-4500 (81'): Missrun: packer seat failure; Recovery: 450' mud; Pressures: HP: 2230-2218 psi; BHT: 119 F; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

DRILL STEM TEST #8:

Ft. Scott thru Cherokee: Interval: 4469-4555 (86'): Blow: weak surf IFP, no RB, no blow FFP, no RB; Times: 5-15-30; Recovery: 5' mud (100%M); Pressures: HP: 2293-2239, SIP: 119-115, FP: 3-53, 54-55; BHT: 120 F; Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

