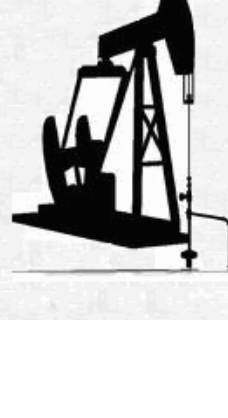




WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: EHMKE-FISHER #1-19
Location: SE SE SE NW OF SEC. 19-17S-29W
Licence Number: API: 15-101-22542
Spud Date: November 20, 2014
Surface Coordinates: 2572' FNL & 2017' FWL

Region: Lane Co., KS
Drilling Completed: December 02, 2014

Bottom Hole Coordinates:
Ground Elevation (ft): 2829' K.B. Elevation (ft): 2838'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4620'
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 9' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Set 8-5/8" casing at 253'

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 (4610') was equal to rotary total depth (4610').

DRILL STEM TEST #1:

LKC (I-zone): Interval: 4158-4185 (27'): Blow: BOB 4-3/4 min IFP, surf blow back ISIP, BOB 5 min FFP, BB incr to 1" FSIP; Times: 5-15-15-30; Recovery: 212' GIP, 470' TF; Grindout: 48' GO (6%G, 91%O, 3%M, 34 grav.), 50' GOWM (11%G, 20%O, 33%W, 46%M), 124' GOMCW (10%G, 7%O, 45%W, 38%M), 62' OGMCW (4%G, 3%O, 69%W, 24%M), 186' GMCW (4%G, 81%W, 15%M, Rw 0.313 at 30 F, chlorides 54k); Pressures: HP: 2082-1957, SIP: 1096-1090, FP: 37-115, 118-229; BHT: 122 F; Trilobite Testing, Inc., Scott City, KS, Will

DRILL STEM TEST #2:

LKC (J-zone): Interval: 4184-4210 (26'): Blow: weak incr 1/2" IFP, no RB, weak surf blow FFP, no RB; Times: 5-15-15-30; Recovery: 15' mud w/oil spots (100%M); Pressures: HP: 2092-2028, SIP: 1018-1015, FP: 19-25, 27-39; BHT: 108 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #3:

LKC (K-zone): Interval: 4219-4231 (12'): Blow: weak incr 1/2" IFP, no RB, weak incr 1/2" FFP, no RB; Times: 5-15-15-30; Recovery: 20' mud w/oil spots (100%M); Pressures: HP: 2131-2094, SIP: 958-954, FP: 18-20, 20-32; BHT: 113 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #4:

LKC (L-zone): Interval: 4255-4274 (19'): Blow: weak surf IFP, no RB, no blow at 2nd open; Times: 5-15-15-30; Recovery: 1' mud w/oil spots (100%M); Pressures: HP: 2160-2027, SIP: 25-49, FP: 16-18, 16-18; BHT: 111 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #5:

Pleasanton thru Altamont: Interval: 4295-4400 (105'): Blow: weak incr 1/2", no RB, weak surf FFP, no RB; Times: 5-15-15-30; Recovery: 5' mud w/oil spots (100%M); Pressures: HP: 2239-2083, SIP: 226-385, FP: 21-22, 22-24; BHT: 108 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

DRILL STEM TEST #6:

Cherokee: Interval: 4433-4560 (127'): Blow: BOB 2-1/4 min IFP, weak surf BB ISIP, BOB 2 min FFP, BOB BB in 12 min FSIP; Times: 5-15-15-30; Recovery: 1540' GIP, 444' TF; Grindouts: 72' GO (14%G, 86%O, grav. 35), 62' GOWM (23%G, 51%O, 26%M), 62' GOCM (45%G, 18%O, 37%M), 62' GOWCM (22%G, 15%O, 3%W, 60%M), 186' GOWCM (31%G, 18%O, 4%W, 47%M); Pressures: HP: 2288-2154, SIP: 1199-1181, FP: 52-103, 102-188; BHT: 121 F; Trilobite Testing, Inc., Scott City, KS, Will MacLeon.

