

HIGGINBOTTOM ENGINEERING, INCORPORATED

PETROLEUM ENGINEERING
PROPERTY MANAGEMENT

P. O. BOX 6
LIBERAL, KANSAS 67901

316-624-3767

DRILLING & COMPLETIONS
WELL WORKOVERS

CHRONOLOGICAL OPERATIONS

received
1-5-81

Bartling Oil Company
Buehne #1
C NE/4; Section 32-19S-40W
Greeley County, Kansas

Elevation: 3613[±] GL - 3620[±] KB (All measurements are KB)
API Number: 15-071-20,215

- November 2, 1980 Drilling 7-7/8" hole @ 440[±] (440[±]/24 hrs.); sh
Mud properties: fresh water & native mud.
Lakin Drilling Company Rig #1 MIRU - spud @ 4:00 p.m.,
11/1/80 - drilled 12-1/4" hole to 287[±] - ran 7 jts. 8-5/8"
20#, 8Rd csg. (tally thds. off - 278.65[±]) - set csg. @
287[±] - cement w/ 225 sx Class H, 1/4#/sx flocele, 3% CaCl
- plug down @ 8:45 p.m., 11/1/80 - WOC 8 hrs. 3/4⁰ @
287[±].
- November 3, 1980 Drilling 7-7/8" hole @ 2255[±] (1777[±]/24 hrs.)
- November 4, 1980 2965[±] RTD; stuck DP while on short trip (710[±]/24 hrs.)
Mud wt. 10.0# - vis 39 - WL 11.1 cc.
- November 5, 1980 2965[±]; cond. mud & hole w/ bit @ 2525[±]. Mud wt 8.5# -
vis 42 - WL 4 cc - 2# LCM - 4½% oil.
RU Halliburton N₂ truck - circ. hole from 2525[±] w/ drilling
mud w/ 300 scf/bbl. N₂ - salt water flow when reduced mud
wt w/ N₂ - filled hole w/ drilling mud - spotted 80 bbl.
oil OB - moved up hole 10 bbl. per hr. - pipe free @ 8:00 a.m.
11/5/80.
- November 6, 1980 2965[±] RTD; WOC.
Ran open hole logs - layed down DP. Ran 74 jts. 4½" 9.50#
ST&C casing - 3000# test (total tally 2978.78[±]); set @ 2970[±].
Cemented w/ 400 sx Class "H" cement w/ 4½% pre-hydrated gel
and 1/4# Flocele plus 150 sx 50/50 Pozmix w/ 18% salt,
1/4# flocele and 3/4 of 1% CFR-2. Cement circ. to surface
- plug down 2:00 a.m. 11/6/80 - set slips and jet pits.
Release rig 3:00 a.m. 11/6/80 - WOC. PBD est. 2968[±].

- December 2, 1980 MI & RUCT, Patrick Well Service of Liberal, Ks. - csg swab FL down to 2000' - RU Rosel & ran GR-CCL cased hole logs - perf Ft. Riley zone fr 2923 to 2930', 1 spf (8 holes) - RIH 93 jts, 2-3/8"-4.7#, 8 rd EUE tbg (tally 2973.07') to PBD. SION. Prepare to acidize.
- December 3, 1980 SITP 0#, CP 0#/15 hrs. SI - LD 1 jt tbg, SN @ 2945' - RU Halliburton to acidize w/500 gal. 15% HCl - formation broke @ 500#, max press 500#, ATP 400# @ AIR 6 BPM, ISIP 200#, 2 min. SI vacuum - 54 BLTR - ran tbg swab, found FL @ 1100' - rec 32 BLW/21 BLTR - swabbing 1 BPH salt water w/no sho gas, CP 0# at end of day - pH 6.0, SpGr 1.105, Cl 87,000 ppm. SION. Prepare to plug Ft. Riley zone & perf L. Winf.
- December 4, 1980 SITP 0#, CP 0#/15 hrs. SI, FL @ 2400' - made 1 swab run & rec 2 bbls. salt water - SpGr 1.125, Cl 102,740 ppm, pH 6.0 - POOH w/tbg. RU GO Wireline - set CIBP on wireline @ 2920' & perf L. Winf fr 2895 to 2901', 1 spf (7 holes total) w/3-1/8" csg gun - RIH w/91 jts tbg & SN (tally 2908.26') - RU Halliburton to acidize w/500 gal 15% HCl - formation broke @ 1000#, max press 1000#, ATP 425# @ AIR 5 BPM, ISIP vacuum - 54 BLTR. Ran tbg swab, found FL @ 700' - rec 44 BLW/10 BLTR, tbg dry no sho. SION.
- December 5, 1980 SITP 20#, CP 30#/15 hrs. SI, FL @ 2700' - ran tbg swab, rec 1 BLW/9 BLTR w/good sho gas ahead of swab - LD 1 jt tbg, SN @ 2878' - RD & MO completion unit. Prepare to frac.
- December 6, 1980 SITP 275#, CP 300#/21 hrs. SI - RU Halliburton to frac down tbg & annulus w/15,000 gal. gelled 2% KCl water commingled w/22 tons CO₂ & 20,000# 20-40 mesh sand - max press 900#, ATP 800# @ AIR 7.5 BPM (fluid)/2 BPM (CO₂), ISIP 290#, 5 min. SI 300#, 10 min. SI 330#, 15 min. SI 360# - 357 BLTR - SI 2 hrs. following frac - flow to pit thru 5/8" choke - left flowing overnite.
- December 7, 1980 Found well dead, CP 400# - equalized csg & tbg, flowed to pit thru 12/48" choke - well died after flowing 1 hr. SION.
- December 8, 1980 SD for Sunday, no crews.
- December 9, 1980 SITP 185#, CP 200# - MI & RUCT - ran tbg swab & rec 51 BLW. SION.
- December 10, 1980 SITP 180#, CP 290#/15 hrs. SI - ran tbg swab, rec 112 BLW/ swabbing 6 hrs. - well KO flowing GCSW, left flowing to pit on 1/2" choke overnite - RD & MO completion unit.

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December 11, 1980 FTP 55#, CP 365# on 1/2" choke - flowing GCSW (est 3 BPH salt water). SI awaiting separator & test.

December 13, 1980 SITP 410#, CP 450#/SI 41 hrs. SI awaiting separator & test.