

HIGGINBOTTOM ENGINEERING, INCORPORATED

2324 NORTH HIGHWAY 83

P. O. BOX 6

LIBERAL, KANSAS 67901-0006

PETROLEUM ENGINEERING
PROPERTY MANAGEMENT

DRILLING & COMPLETIONS
WELL WORKOVERS

316-624-3767

OR

316-624-1986

CHRONOLOGICAL OPERATIONS

Bartling Oil Company
Foster #1
C SE
Sec. 18-20S-39W
Greeley County, Kansas

- October 20, 1984 Waiting on cem. @ 291'. Made 291' in 2-3/4 hrs.
Spudded @ 6:30 p.m., 10-19-84 w/ 12 $\frac{1}{4}$ " bit.
Ran 7 jts. 8-5/8", 24#, ST&C J-55 csg. Tallied
283.33 set @ 290'. Howco cemented w/ 225 sx Class
C cem., 1/4# flocele, 2% gel, 3% cc. Plug down @
11:45 p.m., 10-19-84. cement circulated.
- October 21, 1984 Drilling 7-7/8" hole @ 2065'. Made 1775'/ 24 hrs.
- October 22, 1984 Logging @ 2930'. Made 865' in 24 hrs. TD @ 11:00
p.m., 10-21-84. LTD 2930', DTD 2930'.
- October 23, 1984 Rigging down. Finished logging w/ Gearhart, layed
down drill pipe. Ran 72 jts., 4 $\frac{1}{2}$ ", 10.5, J-55, ST&C
casing. Tallied 2949.09, set @ 2928'. Halco cement
with 400 sx Class C, 1/4# flocele, 4 $\frac{1}{2}$ % pre-hydrated
gel, 150 sx Class C, 1/4# flocele, 18% salt, 3/4"
CFR-2. Plug down @ 6:00 p.m., 10-22-84. Cement
circulated. Float held. Set slips, rig released
at 7:00 p.m., 10-22-84.
- November 17, 1984 MIRU Patrick Well Service Rig #9 - swabbed csg down to
2500'.
Rig 600.
Cem 7700.
Csg 9400.
Supv 200.
\$17900. DWC
- November 18, 1984 RU Rosel Well Perforators - ran GR - CCL log from 2920'
to 900'. Perf Upper Ft. Riley from 2884' to 2897 with
csg gun (14 holes) - no change in FL. Unloaded 191 jts
2 3/8" 4.7# 8R EUE J-55 tubing (new). RIH w/ 91 jts
2 3/8" tbg - tally 2888.52', 2 3/8" X 4' sub, 2 3/8" X

November 18, 1984
Continued

6' sub and SN - SN @ 2900'. Ran swab, FL @ 2460' - swabbed 2½ hrs - tubing dry. Had light gas blow last hour. TSTM - would burn, SION.

Rig	\$ 850.	
Well head equip.	2000.	
Supv.	430.	
log & perf.	1350.	
Tubing	<u>5280.</u>	
DWC	\$9910.	TWC \$27,810.

November 19, 1984 SD; Sunday.

November 20, 1984

SITP 475#, SICP 495#/44 hrs SI. Blew down w/ light mist - casing down to 20# after 10 min. RU Halliburton - Circ hole w/ 50 Bbls 2% KCI water w/ .2 of 1% HC-2. Spotted 750 gal 15% FE acid across Ft. Riley perfs 2884-2897'. Pressured up - formation broke @ 500#, displaced acid. Max trtg press 500#, ATP 400#. AIR 4 BPM, ISIP 0, 59½ BLTR. Re-set SN @ 2860'. Ran tubing swab - FL @ 900'. Swabbed 2 hrs - rec 28 BLW - well KO flowing gas to pits. Left flowing 2 hrs thru 2". Installed 3/8" choke, well stabilized after 5 hrs flowing; FCP 90#, FTP 35# w/ rate 120 mcf. Left flowing over night.

Rig	\$ 985.	
Howco	1385.	
Supv	220.	
Water	99.	
DWC	<u>\$2689.</u>	TWC \$30,499

November 21, 1984

FTP 38 psi, FCP 125 psi, estimate 120 MCF on 3/8" choke. Ran swab, recovered 75' of scattered load water. TOH w/ tbg. RU Rose1, perf lower Winfield from 2845-56', 11 holes, 2866-75, 10 holes, w/ 3 1/8" csg gun. Ran in hole w/ 4½" Arrow BP, 91 jts, BP would not set, TOH. Ran in hole w/ new BP & 91 jts tubing. Tallied 2888.52', set BP @ 2878. Ck depth w/ wireline. RU holes and circ hole w/ 2% KCL, spot 750 gals 15% Fe HCC, Max psi 250, broke @ 250. ATP 0#. AIR 4½ BPM. ISDP 0#. Total load 59½ Bbls. Ran swab, FL @ 1200'. Swab 4 hrs, well kicked off flowing. CP 50 psi, put on ½" choke & left flowing overnight. DWC \$4553. TWC \$35,052.

FTP 20 psi, FCP 140, making light mist, est. 125 MCF on ½". Prepare to move up hole.

November 22, 1984

FTP 20#, CP 140# light mist - 125 mcf on 1/2" ck. Ran swab - tbg. dry - reset BP @ 2838' - COOH w/ tbg. RU Rose1 perf. U. Winfield from 2806-22' 1 spf - 17 holes w/ 3-1/8" csg. gun - RIH w/ retrieving head & 89 jts. 2-3/8" tbg. - tally 2823.08' set @ 2827'. RU Howco - circ. hole w/ 2% KCl - spot 750 gal. 15% FE acid. Max. 500#, form. broke 500 ATP 500#, AIR 3.5 BPM, ISIP 0, BTR 59½. Ran swab - fl @ 1200'. Swab 1 hr. rec. 18 BLW - well kicked off flowing gas & load water - left flowing on 3/8" choke. DWC \$4225 TWC \$39,277.

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November 23, 1984 FTP 115#, csg. 280# on 3/8" choke.

November 24, 1984 FTP 125#, csg. 275# on 3/8" choke. Blew down retrieved bridge plug - COOH. RIH SN & 88 jts. 2-3/8" tbg. - tally 2794.00', SN @ 2797. RU 20/64" ck w/ 1/2" orifice plate - left flowing - RDMO. After 6 hrs. 20/64" ck - FTP 155#, CP 205# 1/2" orifice plate 58# gauging 370 mcf/d w/ light mist - put choke on 16/64 - left flowing overnight.

DC \$1300 AC \$40,577

November 25, 1984 FTP 140# - CP 335# - 1/2" orifice plate 39# - gauging 279 mcf/d - SI well @ 9:00 a.m., 11/24/84.