

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION OR RECOMPLETION FORM
ACO-1 WELL HISTORY

DESCRIPTION OF WELL AND LEASE

Operator: License # 5886
Name CHIEF DRILLING CO., INC.
Address 151 N. Main Suite #700
Wichita, Kansas 67202
City/State/Zip

Purchaser Koch Oil Co.

Operator Contact Person F.W. Shelton, Jr.,
Phone Vice President 262-3791

Contractor: License # 5883
Name Warrior Drilling Co.

Wellsite Geologist Mitch Allen
Phone 316-262-3791

Designate Type of Completion
 New Well Re-Entry Workover
 Oil SWD Temp Abd
 Gas Inj Delayed Comp.
 Dry Other (Core, Water Supply etc.)

If OWWO: old well info as follows:
Operator
Well Name
Comp. Date Old Total Depth

WELL HISTORY

Drilling Method:
 Mud Rotary Air Rotary Cable

3-18-86 3-29-86 4-16-86
Spud Date Date Reached TD Completion Date
4609 RTD 4350
Total Depth PBDT

Amount of Surface Pipe Set and Cemented at 205'
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set feet
If alternate 2 completion, cement circulated from feet depth to w/SX cmt

API NO. 15-101-21,302-0000
County Lane
NW SE SE Sec 7 Twp 17S Rge 28 East West

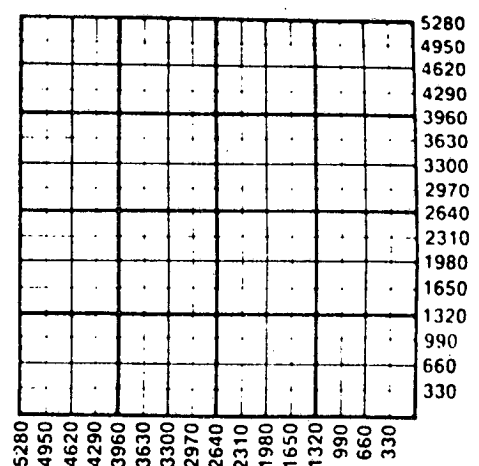
990 Ft North from Southeast Corner of Section
990 Ft West from Southeast Corner of Section
(Note: Locate well in section plat below)

Lease Name TERWILLIGER "B" Well # 3

Field Name Terwilliger S

Producing Formation Lansing

Elevation: Ground 2777 KB 2784
Section Plat



WATER SUPPLY INFORMATION

Disposition of Produced Water: Disposal Repressuring
Docket #

Questions on this portion of the ACO-1 call:
Water Resources Board (913) 296-3717

Source of Water:
Division of Water Resources Permit #

Groundwater Ft North from Southeast Corner (Well) Ft West from Southeast Corner of Sec Twp Rge East West

Surface Water Ft North from Southeast Corner (Stream, pond etc) Ft West from Southeast Corner SW/4 Sec 7 Twp 17 Rge 28 East West

Other (explain) (purchased from city, R.W.D. #)

INSTRUCTIONS: This form shall be completed in duplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 90 days after completion or recompletion of any well. Rule 82-3-130 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form. See rule 82-3-107 for confidentiality in excess of 12 months. One copy of all wireline logs and drillers time log shall be attached with this form. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature F.W. Shelton, Jr., Vice President
Title Date

Subscribed and sworn to before me this 2nd day of April 1986
Notary Public Martha E. Gustin

State Corporation Commission Expires

MARTHA E. GUSTIN
NOTARY PUBLIC
STATE OF KANSAS
MY APPT. EXPIRES 4-15-89

K.C.C. OFFICE USE ONLY
 Letter of Confidentiality Attached
 Wireline Log Received
 Drillers Timelog Received
Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other (Specify)

MAY 06 1986
CONSERVATION DIVISION
Wichita, Kansas

Sec. 7 Twp. 17 Rge. 28

STATE CORPORATION COMMISSION OF KANSAS, CONSERVATION DIVISION

PRODUCTIVITY TEST
BARREL TEST

OPERATOR Chief Drlg. LOCATION OF WELL NW-SE-SE
 LEASE Terwilliger OF SEC. 7 T 17 R 28
 WELL NO. B-3 COUNTY Lane W
 FIELD _____ PRODUCING FORMATION L.K.C.

Date Taken 6-2-86 Date Effective _____
 Well Depth 4350' Top Prod. Form 4230 Perfs 4261'-65'
 Casing: Size 4 1/2" Wt. _____ Depth 4573' Acid 4-10-86, 1000 gals
 Tubing: Size 2 3/8" Depth of Perfs 4341' Gravity 37
 Pump: Type insert Bore 2x1 1/2x12 Purchaser Koch
 Well Status Pumping
 Pumping, flowing, etc.

TEST DATA

Permanent _____ Field _____ Special _____
 Flowing _____ Swabbing _____ Pumping X

STATUS BEFORE TEST:

PRODUCED 24 HOURS

SHUT IN 0 HOURS

DURATION OF TEST _____ HOURS _____ MINUTES _____ SECONDS

GAUGES: WATER 2.0 INCHES 20 PERCENTAGE

OIL 8.0 INCHES 80 PERCENTAGE

GROSS FLUID PRODUCTION RATE (BARRELS PER DAY) 179.04

WATER PRODUCTION RATE (BARRELS PER DAY) 63.24

OIL PRODUCTION RATE (BARRELS PER DAY) 15.80

STROKES PER MINUTE 12

LENGTH OF STROKE 54" INCHES

REGULAR PRODUCING SCHEDULE 24 HOURS PER DAY.

COMMENTS Don Goodwin

L.M. Lindermith

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STATE CORPORATION COMMISSION
JUN 09 1986
CONSERVATION DIVISION
Wichita, Kansas

Operator Name Chief Drilling Co., Inc. Lease Name Terwilliger Well # B #3

Sec 7 Twp 17S Rge 28 East West County LANE

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken [X] Yes [] No
Samples Sent to Geological Survey [X] Yes [] No
Cores Taken [] Yes [X] No

Formation Description [X] Log [X] Sample

DST #1 4130-4190 (Lane 140-160) 30-30-30-30 IF: wk bl died 30", FF: no bl, Rec. 30' M w/sp D on top, IBHP: 990# FBHP: 285# IFF: 80-80 FFP: 89-89
DST #2 4190-4222 (Lane 180) 30-30-30-30 IF: wk bl throughout, FF: no bl, tool was flushed no help, Rec. 25' M w/light skim of oil on top. IBHP: 357# FBHP: 508# IFF: 62-62 FFP: 53-53 DST #3 4225-4290 (Lane 200-220) 30-30-75-60 IB: st bl off bottom in 1" FB: st bl off bottom in 5", Rec. 2400' GIP, 640' CGO, 190' Froggy O, 180' SW, (52,000 ppm) IBHP: 526# FBHP: 553# IFF: 133-241 FFP: 285-428
DST #4 4238-4290 (Middle Cr & Lane. 220) 30-30-45-60 IB: st bk off bottom in 1" FB: st bl off bottom in 5" Rec. 2300' GIP, 380' CGO, 120' SW, (chl. 57,000 ppm) IBHP: 553# FBHP: 553# IFF: 80-98 FFP: 133-178 DST #5 4306-4340 (Marm A) 30-30-30-30 IF: wk bl died in 2" FF: no blow Rec. 2' M, IBHP: 55# FBHP: 55# IFF: 44-44 FFP: 44-44
DST #6 4375-4415 (Marm C) 30-30-30-30 IF: wk bl died in 20", FF: no bl, Rec. 20' M, IBHP: 1019# FBHP: 983# IFF: 53-53 FFP: 62-62
DST #7 4463-4500 (Ft. Scott) 30-45-75-60 IF: wk bl bldg. to fair bl, Rec. 92' GCOM, 6% O, 94% M, trace W, IBHP: 267# FBHP: 223# IFF: 89-89 FFP: 107-125
DST #8 4490-4520 (Upper Cherokee) 30-45-75-60 IF: st bl off bottom of bucket in 15", FF: st bl w/gas to surface in 10", Rec. 60' O & G M, (63% O, 37% M, trace of W) IBHP: 187# FBHP: 187# IFF: 62-62 FFP: 62-62 Ran E-log TD: 4609' Ran 118 jts. 4567' new 4 1/2", set @ 4573', centralizers @ 4558', 4479', 4285', 4230', 2181', cement control basket @ 2181', float @ 3558', 175 sks EA-2 18 bbis., salt flush 500 gallons super flush K at head of cement, plug down @ 8:00 am

FORMATION TOPS: Anhydrite 2170 + 614 B/Anhydrite 2202 + 582 Heebner 3935 - 1151 Toronto 3956 - 1172 Lansing 3971 - 1187 Muncie Cr. 4131 - 1347 Stark 4229 - 1445 BKC 4316 - 1532 Marmaton 4329 - 1545 Pawnee 4420 - 1636 Ft. Scott 4472 - 1688 Cherokee Sh 4495 - 1711 Mississippi 4556 - 1772 RTD 4609 - 1825

E-LOG TOPS: Anhydrite 2175 + 609 B/Anhydr. 2205 + 579 Heebner 3938 - 1154 Toronto 3956 - 1172 Lansing 3975 - 1191 Muncie Cr. 4134 - 1350 Stark 4231 - 1447 BKC 4315 - 1531 Marmaton 4329 - 1545 Pawnee 4424 - 1636 Ft. Scott 4475 - 1691 Mississippi 4564 - 1780 Cherokee Sh 4498 - 1714 Mississippi 4564 - 1780 LTD 4612 - 1828

RELEASED

AUG 13 1987

FROM CONFIDENTIAL

Well Log Sand Clay 0 645 Shale 645 2170 Anhydrite 2170 2202 Shale 2202 4316 Lime 4316 4609 RTD

LOG RECORD [X] New [] Used

conductor, surface, intermediate, production, etc.

Table with 8 columns: Purpose of String, Size Hole, Size Casing, Weight, Setting, Type of Cement, #Sacks, Type and Percent Additives. Includes data for Surface production.

PERFORATION RECORD and Acid, Fracture, Shot, Cement Squeeze Record. Includes data for 4 sh acid w/500 gal 15% SGA 3 bbl min @ 400# max press.

TUBING RECORD Size 2 3/8" Set At 4341.38 Packer at Liner Run [] Yes [X] No

Date of First Production 4-16-86 Producing Method [] Flowing [X] Pumping [] Gas Lift [] Other (explain).....

Table with 6 columns: Oil, Gas, Water, Gas-Oil Ratio, Gravity. Includes data for Estimated Production Per 24 Hours: 80 Bbls MCF -0 Bbls CFPB 36

METHOD OF COMPLETION Production Interval

Disposition of gas: [] Vented [] Sold [] Used on Lease [] Open Hole [X] Perforation [] Other (Specify) 4512-4516 4261 -4265 [] Dually Completed [] Commingled [X] Single

3-10-2

CHIEF DRILLING CO., Inc.

Drilling Contractors - Oil Producers

151 N. MAIN BUILDING

SUITE 700

WICHITA, KANSAS 67202

V. RICHARD HOOVER
PRESIDENT

DAILY DRILLING REPORT
API: 15-101-21,302
RIG #2

(316) 262-3791

TERWILLIGER "B" #3
NW SE SE 7-17S-28W
LANE COUNTY, KANSAS

CONFIDENTIAL

ELEVATION: 2777 GR
2781 DF
2784 KB

3-17-86 Moving in on location.
3-18-86 Finished moving in on location, spudded
in @ 1:00 pm, ran 7 jts. new 8 5/8" 20#
207' set @ 205', cem w/180 sx 60/40 pos-
mix, 3% cc, 2% gel plug down 5:15 pm
3-19-86 Drilling @ 1300'
3-20-86 Drilling @ 2540'
3-21-86 Drilling @ 3220'
3-22-86 Drilling @ 3935'
3-23-86 DST #1 4130-4190 (Lans 140-160) 30-30-30-
30 IF: wk bl died 30", FF: no bl, Rec. 30'
M w/sp 0 on top, IBHP: 990# FBHP: 285#
IFP: 80-80 FFP: 89-89
3-24-86 DST #2 4190-4222 (Lans 180) 30-30-30-30
IF: wk bl throughout, FF: no bl, top was
flushed no help, Rec. 25' M w/light skim of
oil on top. IBHP: 357# FBHP: 508# IFP: 62-62
FFP: 53-53 DST #3 4225-4290 (Lans 200-220)
30-30-75-60 IB: st bl off bottom in 1" FB:
st bl off bottom in 5", Rec. 2400' GIP, 640'
CGO, 190' Froggy O, 180' SW, (52,000 ppm)
IBHP: 526# FBHP: 553# IFP: 133-241
FFP: 285-428
3-25-86 DST #4 4258-4290 (Middle Cr & Lans. 220)
30-30-45-60 IB: st bk off bottom in 1" FB:
st bl off bottom in 5" Rec. 2300' GIP, 380'
CGO, 120' SW, (chl. 57,000 ppm) IBHP: 553#
FBHP: 553# IFP: 80-98 FFP: 133-178 DST #5
4306-4340 (Marm A) 30-30-30-30 IF: wk bl
died in 2" FF: no blow Rec. 2' M, IBHP: 55#
FBHP: 55#, IFP: 44-44 FFP: 44-44
3-26-86 DST #6 4375-4415 (Marm C) 30-30-30-30 IF:
wk bl died in 20", FF: no bl, Rec. 20' M,
IBHP: 1019# FBHP: 983# IFP: 53-53 FFP: 62-62
3-27-86 DST #7 4463-4500 (Ft. Scott) 30-45-75-60 IF:
wk bl bldg. to fair bl, Rec. 92' GCOM, 6% O,
94% M, trace W, IBHP: 267# FBHP: 223# IFP:
89-89 FFP: 107-125

FORMATION TOPS:

Anhydrite 2170 + 614
B/Anhydrite 2202 + 582
Heebner 3935 - 1151
Toronto 3956 - 1172
Lansing 3971 - 1187
Muncie Cr. 4131 - 1347
Stark 4229 - 1445
BKC 4316 - 1532
Marmaton 4329 - 1545
Pawnee 4420 - 1636
Ft. Scott 4472 - 1688
Cherokee Sh 4495 - 1711
Mississippi 4556 - 1772
RTD 4609 - 1825

E-LOG TOPS:

Anhydrite 2175 + 609
B/Anhydr. 2205 + 579
Heebner 3938 - 1154
Toronto 3956 - 1172
Lansing 3975 - 1191
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Pawnee 4424 - 1636
Ft. Scott 4475 - 1691
Mississippi 4564 - 1780
Cherokee Sh 4498 - 1714
Mississippi 4564 - 1780
LTD 4612 - 1828

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CONSERVATION DIVISION
Wichita, Kansas
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CHIEF DRILLING CO., Inc.

Drilling Contractors - Oil Producers

151 N. MAIN BUILDING

SUITE 700

WICHITA, KANSAS 67202

V. RICHARD HOOVER
PRESIDENT

(316) 262-3791

Page Two Continued

Terwilliger "B" #3
NW SE SE 7-17S-28W
Lane County, Ks.

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3-28-86 DST #8 4490-4520 (Upper Cherokee) 30-45-75-60
IF: st bl off bottom of bucket in 15", FF: st
bl w/gas to surface in 10", Rec. 60' O & G M,
(63% O, 37% M, trace of W) IBHP: 187#, FBHP:
187#, IFP: 62-62 FFP: 62-62 Ran E-log TD: 4609'
3-29-86 Ran 118 jts. 4567' new 4 1/2", set @ 4573', cen-
tralizers @ 4558', 4479', 4285', 4230', 2181', cement
control basket @ 2181', float @ 3558', 175 sks
EA-2 18 bbls., salt flush 500 gallons super flush
K at head of cement, plug down @ 8:00 am

MAY 06 1986

KANSAS GEOLOGICAL SURVEY
WICHITA BRANCH

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AUG 13 1987
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CHIEF DRILLING CO., Inc.

Drilling Contractors - Oil Producers

151 N. MAIN BUILDING

SUITE 700

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DAILY COMPLETION REPORT

TERWILLIGER "B" #3
NW SE SE 7-17S-28W
LANE COUNTY, KANSAS

CONFIDENTIAL

4-02-86 Pressure casing to 500#, mix & pump 200 sks ATC cement behind csg. on top of basket @ 2181'

4-07-86 Moved in Warrior double drum, rigged up and swab casing to 3000'

4-08-86 ran correlation cement top and collar log. perf. 4 sh per ft. 4512-4516 (Cherokee) 1/2 hr. test dry, acidized w/250 gallons 15% INS 1 1/2 bbl per min @ 1500# max pressure, swab down 61.80 bbls.
1/2 hr test 1.74 bbls., 50% O
1/2 hr test .58 bbls., 65% O

4-09-86 105' fill up Trace of W
1/2 hr test .58 bbls., trace W
total swabbed back 66.34 bbls., acidized w/500 gal 15% SGA 3 BPM @ 400# max. pressure, total load 89 bbls., swab down 79.86
1 hr. test 3.19 bbls., Water
2 hr. test 1.45 bbls., 30% O
3 hr. test .87 bbls., 39% O
4th hr. test dry

4-10-86 30' fill up all O, perf 4 sh per ft. KC 4261-4265 set perm plug @ 4350', swab down casing
1/2 hr. test dry
1/2 hr. test dry
acidized w/250 gal 15% INS, 2 1/2 BPM @ 700# max press. total load 74 bbls., swab down 93.28 bbls.,
1/2 hr. test 3.48 bbls., 60% O
1/2 hr. test 6.96 bbls., 83% O
2 hr. test 12.18 bbls. 80% O
3 hr. test 11.60 bbls. 82% O

4-11-86 1030' fill up, 880' O, 150' W,
Mud anchor
142 jts. 2 3/8 tubing
1 - 8' sub

TOTAL
171 3/4 sucker rods
1 - 4' pony rod
1- 16' polish rod
2 x 1 1/2 x 12 THD insert pump

29.00
4304.38
8.00

4341.38

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CONSERVATION DIVISION
Wichita, Kansas

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