

KCC

CONFIDENTIAL



State Geological Survey
WICHITA BRANCH

GEOLOGICAL REPORT X

RELEASED
Date: DEC 1 1984
FROM CONFIDENTIAL

AP 2# 15-195-21351

FRONTIER OIL COMPANY

STRUSS NO. 3

SW NW NE

27-11S-24W

TREGO COUNTY, KANSAS

Commenced: October 9, 1983

Completed: October 17, 1983

CONFIDENTIAL

RECEIVED
STATE CORPORATION COMMISSION

FEB 01 1984

CONSERVATION DIVISION
Wichita, Kansas

P²

Frontier Oil Company
1720 Kansas State Bank Building
Wichita, Kansas 67202

Re: Frontier Oil Company
Struss No. 3
SW NW NE 27-11S-24W
Trego County, Kansas

Dear Sir:

The following is a Geological Report with a Time Log attached on the above captioned well.

Drilling was supervised from 3400' to 4100', rotary total depth. Samples were examined from 3400' to 4100', rotary total depth.

All formation tops, zones of porosity and staining, are based on rotary bushing measurements. Any corrections in measurement during the drilling of this well have been incorporated into this report.

Elevation	2472 GL -- 2477 KB
Anhydrite	2068 to 2110 (+409)
Topeka	3585 (-1108)
Heebner	3811 (-1334)
Toronto	3832 (-1355)
Lansing-Kansas City	3846 (-1369)
Base-Kansas City	4092 (-1615)
RTD	4100 (-1623)

Structurally, on top of the Lansing-Kansas City, the Struss No. 3 ran 16' low to the Frontier Oil Company Struss No. 2 located 1980' to the east.

ZONES OF INTEREST

TOPEKA (Top 3585)
3585 to 3590

Tan fossiliferous lime with no show of oil and no odor.

3608 to 3616

Tan crystalline to tan junky lime.

HEEBNER (Top 3811)

TORONTO (Top 3832)
3832 to 3842

Tan fossiliferous limes.

CONFIDENTIAL

27-11-24W^{pl}

LANSING-KANSAS CITY (Top 3846)

3846 to 3860

Struss #3

Tan crystalline lime and white chalk.

3870 to 3880

27-11-24W

White and tan crystalline lime and tan cherts.

3900 to 3910

Tan crystalline lime and white chalk.

3918 to 3932

Tan crystalline, slightly vuggy lime and white chalky lime with a fair show of black tar oil, no odor.

3940 to 3948

Tan and gray crystalline lime and white chalk.

3960 to 3970

White dense to crystalline lime, with scattered small shows of black dead oil flakes and no odor.

3970 to 3977

Tan crystalline and white chalky limes.

3987 to 3995

Tan crystalline lime, gray junky lime and white chalky lime with light staining and a fair odor.

DRILL STEM TEST NO. 1

3974 to 4003

TEST: 30-30-15-30. No blow - flushed tool, no help. SI 30". No blow - flushed tool, no help. SI 30". Recovered 2' of mud.
PRESSURES: 20-20, 20-41, 20-30 Bhps.

4002 to 4008

Tan, cherty, crystalline lime with a trace of free oil and a faint odor.

4011 to 4017

Tan cherty, slightly vuggy lime and tan crystalline lime with a fair to good show of free oil and a faint odor.

DRILL STEM TEST NO. 2

3998 to 4027

TEST: 60-30-60-30. Weak to fair blow throughout. SI 30". Weak to fair blow throughout SI 30". Recovered 248' of gas in pipe and 64' of heavy oil and gas cut mud.
PRESSURES: 41-41, 41-41, 142-142 Bhps.

4030 to 4035

Tan crystalline limes and tan cherty limes with fair shows of free oil and a faint odor.

4038 to 4044

Tan crystalline lime with a fair show of free oil and a faint odor and white chalk.

27-11-24W

4049 to 4053

Struss #3
27-11-24W

DRILL STEM TEST NO. 3

4027 to 4053

Tan crystalline lime with a small show of free oil and no odor.

TEST: 20-30-15-30. No blow - flushed tool twice, no help. SI 30". No blow flushed tool, no help. SI 30". Recovered 14' of mud.
PRESSURES: 20-30, 40-51, 1216-1175 Bhps.

4064 to 4074

Tan cherts, tan limes and white chalk with no show of free oil and a faint odor.

4080 to 4090

Tan crystalline limes and white chalky limes.

BASE-KANSAS CITY (Top 4092)

DRILL STEM TEST NO. 4

4024 to 4100

TEST: 60-30-60-30. Weak blow throughout. SI 30". Weak blow throughout. SI 30". Recovered 66' of mud.
PRESSURES: 61-81, 102-102, 1221-1159 Bhps.

ROTARY TOTAL DEPTH @ 4100'

27-11-24W

Struss #3 27-11-24W

New 4½" 10.5# casing was set at 4099', one foot off bottom with 200 sx of common cement plus 10% salt.

A Halliburton DV Tool was set in the Anhydrite at 2093' with 550 sx of 60/40 Pozmix and circulated cement to surface.

The shoe joint is 40.99' in length and zero point is 5' AGL.

Sincerely,



Steven D. Angle

27-11-24W

DRILLING INFORMATION ON THE STRUSS NO. 3 27-11-24W

Drilling Contractor: Red Tiger Drilling Co.
Rig #7

Drillers: W. Ayers
R. Kennedy
T. Derauf

Tool Pusher: William Ayers

Spud Date: October 9, 1983

Date Of RTD: October 17, 1983

Surface Pipe: New 8-5/8" Set @ 323' w/225 sx
Common Plus 3% CC, 2% Gel. CDC.

Casing: 4 1/2" Set @ 4099' w/200 sx
Common Plus 10% Salt. DV @
2093' w/550 sx 60/40 Pozmix
Plus 4% Gel. CDC. SJ=40.99'.

TOTAL FOOTAGE DRILLED PER DAY
Under surface at 9:15 P.M. on 10-9-83

939	Feet	At	7:00 A.M.	On	10-10-83
2493	"	"	"	"	10-11-83
3059	"	"	"	"	10-12-83
3518	"	"	"	"	10-13-83
3800	"	"	"	"	10-14-83
3991	"	"	"	"	10-15-83
4027	"	"	"	"	10-16-83
4094	"	"	"	"	10-17-83
4100	Feet	At	7:27 P.M.	On	10-17-83

MUD RECORD

Surface - 41 sx premium gel, 6 sx lime, 39 sx 50# hulls.
 3362 - 70 sx salt gel, 16 sx hulls.
 3733 - 40 sx starch, 20 sx salt clay, 4 sx hulls, 2 sx preservative.
 3919 - 6 sx starch, 23 sx salt gel, 1 sx preservative, 6 sx hulls.
 4053 - 7 sx starch, 10 sx salt gel.

10