

33-15-11W
PT

GEOLOGICAL REPORT
FRONTIER OIL COMPANY

FOSTER NO. 6

SW SE SE Sec. 33-15S-11W
RUSSELL COUNTY, KANSAS

MAR 6 1984

State Geological Survey
WICHITA BRANCH

Commenced: December 28, 1983

Date of RTD: January 7, 1984

RECEIVED
STATE CORPORATION COMMISSION

MAR 05 1984

CONSERVATION DIVISION
Wichita, Kansas

Steve D. Parker

P.

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

RE: Frontier Oil Company
No. 6 Foster
SW SE SE 33-15S-11W
Russell County, Kansas

Dear Sir:

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

Drilling was supervised from 2100' to 3216', rotary total depth. Samples were examined from 2100' to rotary total depth.

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

Elevation (L&S)	1750 GL	1755 KB
Anhydrite	603	(+1152)
Brownville	2141	(- 386)
Grand Haven	2180	(- 425)
Dover	2207	(- 452)
Tarkio	2250	(- 495)
Elmont	2312	(- 557)
Howard	2450	(- 695)
Topeka	2525	(- 770)
Heebner	2774	(-1019)
Toronto	2791	(-1036)
Douglas	2805	(-1050)
Brown Lime	2867	(-1112)
Lansing-Kansas City	2881	(-1126)
Base of Kansas City	3122	(-1367)
Conglomerate	3160	(-1405)
Cherty Conglomerate	3179	(-1424)
Arbuckle Dolomite	3196	(-1441)
Quartz	3212	(-1457)
RTD	3216	(-1461)

Structurally, on top of the Lansing-Kansas City the No. 6 Foster ran 7 feet higher than H&H Blair's No. 1 Foster, an abandoned Lansing-Kansas City producer located approximately one-half location East. The Arbuckle Dolomite came in at 3196 (-1441).

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ZONES OF INTEREST

TOPEKA (Top 2525 (-770))

- 2525 to 2530 Tan sucrosic limestone with no show of oil.
- 2560 to 2568 Light tan chalky to sucrosic limestone with no show of oil.
- 2746 to 2754 Light tan oolitic to slightly oolitic limestone. Scattered spotted oil staining, trace of free oil, and a faint odor. (Included in DST No. 1).

DRILL STEM TEST NO. 1 (FOC Test)

- 2695 to 2760 60-30-60-30 First open weak increasing to fair blow. Second open fair blow. Recovered 150' mud. Initial flow pressures 57 to 92#. Final flow pressures 114 to 125#. Initial shut in pressure 759#. Final shut in pressure 680#.

TORONTO (Top 2791 (-1036))

- 2791 to 2794 Light tan sucrosic limestone. Scattered spotted oil staining, no show of free oil, and no odor.

LANSING-KANSAS CITY (Top 2881 (-1126))

- 2887 to 2890 Tan oolitic to slightly oolitic limestone. Scattered spotted oil staining, no show of free oil, and no odor. (Included in DST No. 2).

DRILL STEM TEST NO. 2 (FOC Test)

- 2872 to 2900 60-30-60-30 First open strong blow. Second open strong blow. Recovered 120' gas-in-pipe, 90' gas cut watery mud. Initial flow pressures 28 to 45#. Final flow pressures 45 to 68#. Initial shut in pressure 409#. Final shut in pressure 364#.

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2917 to 2922

Light tan very well-developed oolitic limestone. Trace of light spotted oil staining, no show of free oil, and a very faint odor. (Included in DST No. 3).

DRILL STEM TEST NO. 3 (FOC Test)

2896 to 2930

60-30-30-30 First open fair decreasing to weak blow. Second open no blow, flushed tool, no help. Recovered 65' mud. Initial flow pressures 63 to 67#. Final flow pressures 67 to 69#. Initial shut in pressure 90#. Final shut in pressure 100#.

2961 to 2966

Light tan fine crystalline limestone with no show of oil. (Included in DST No. 4).

2990 to 2998

White chalky to slightly oolitic limestone. Slight trace of light scattered oil staining, no show of free oil, and no odor. (Included in DST No. 4).

DRILL STEM TEST NO. 4 (FOC Test)

2945 to 3013

60-30-60-30 First open strong blow. Second open strong blow. Recovered 60' gas-in-pipe, 80' mud cut water, 250' salt water. Initial flow pressures 90 to 181#. Final flow pressures 181 to 238#. Initial shut in pressure 836#. Final shut in pressure 791#.

3025 to 3028

Light tan fine crystalline fair-developed oolitic limestone. No show of oil. (Included in DST No. 5).

3040 to 3043

White fine crystalline limestone with no show of oil. (Included in DST No. 5).

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3059 to 3064

Light tan fairly well-developed oolitic limestone. Scattered light spotted oil staining, no show of free oil, and no odor.
(Included in DST No. 5).

DRILL STEM TEST NO. 5 (FOC Test)

3016 to 3075

30-30-30-30 First open weak blow dead in 25 minutes. Second open no blow. Recovered 5' watery mud. Initial flow pressures 45 to 45#. Final flow pressure 45 to 45#. Initial shut in pressure 216#. Final shut in pressure 108#.

3078 to 3081

Tan poorly-developed oolitic limestone with no show of oil.
(Included in DST No. 6).

3096 to 3102

Tan fine crystalline to cherty limestone with no show of oil.
(Included in DST No. 6).

DRILL STEM TEST NO. 6 (FOC Test)

3071 to 3130

30-30-30-30 First open weak blow dead in 25 minutes. Second open no blow. Recovered 5' mud. Initial flow pressures 45 to 45#. Final flow pressures 45 to 45#. Initial shut in pressure 329#. Final shut in pressure 215#.

ARBUCKLE DOLOMITE (Top 3196 (-1441))

3196 to 3201

Light tan medium crystalline dolomite. Scattered spotted oil staining, fair show of free oil, and a good odor.
(Included in DST No. 7).

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DRILL STEM TEST NO. 7 (FOC Test)

3114 to 3201

30-30-30-30 First open weak blow dead in 22 minutes. Second open no blow. Recovered 30' mud. Initial flow pressures 45 to 45#. Final flow pressures 45 to 45#. Initial shut in pressure 452#. Final shut in pressure 475#.

3201 to 3211

Tan coarse crystalline dolomite. Scattered spotted oil staining, slight show of free oil, and a good odor. (Included in DST No. 8).

DRILL STEM TEST NO. 8 (FOC Test)

3200 to 3211

60-30-60-30 First open weak increasing to good blow. Second open good blow. Recovered 90' muddy gas cut oil. Initial flow pressures 45 to 68#. Final flow pressures 79 to 90#. Initial shut in pressure 723#. Final shut in pressure 588#.

3211 to 3212

Tan coarse crystalline dolomite. Scattered spotted oil staining, no show of free oil, faint odor. (Included in DST No. 9).

QUARTZ (Top 3212 (-1457))

3212 to 3216

Clear angular quartz with no show of oil. (Included in DST No. 9).

DRILL STEM TEST NO. 9 (FOC Test)

3205 to 3216

60-30-60-30 First open fair blow. Second open fair blow. Recovered 70' gas-in-pipe, 45' heavy oil and gas cut mud, 60' oil and gas cut mud. Initial flow pressures 6 to 34#. Final flow pressures 34 to 57#. Initial shut in pressure 894#. Final shut in pressure 815#.

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ROTARY TOTAL DEPTH AT 3216

Due to insufficient drill stem test results the No. 6 Foster was plugged and abandoned, a dry hole.

Sincerely,

Steve D. Parker

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DRILLING INFORMATION ON THE NO. 6 FOSTER

Contractor: Red Tiger Drilling Co.

Drillers: Schmidt
Oden
Arnhold

Tool Pusher: Walt Oden

Spud Date: December 28, 1983

Date of RTD: January 7, 1984

Surface Pipe: 8-5/8" @ 620' w/325 sx

Casing: None

TOTAL FOOTAGE DRILLED PER DAY

Under Surface At 8:15 P.M. On December 29, 1983

1355	Feet	At	7:00 A.M.	On	December 30, 1983
2237	"	"	" "	"	December 31, 1983
2707	"	"	" "	"	January 1, 1984
2869	"	"	" "	"	January 2, 1984
2930	"	"	" "	"	January 3, 1984
3038	"	"	" "	"	January 4, 1984
3130	"	"	" "	"	January 5, 1984
3201	"	"	" "	"	January 6, 1984
3216	"	"	2:30 A.M.	"	January 7, 1984

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BIT RECORD

<u>BITS</u>	<u>TYPE</u>	<u>FOOTAGE</u>
No. 1	Smith F2	622' to 3013'
No. 2	Walker McDonald 053JFB	3013' to 3216'

MUD RECORD (Mud-Co)

Surface: 25 sx aquagel, 2 sx lime, 4 sx hulls
2237' 70 sx saltgel, 40 sx starch, 16 sx hulls; 2 sx preservatives
2707' 15 sx saltgel, 6 sx starch, 2 sx hulls
2869' 10 sx saltgel
2930' 15 sx saltgel, 1 sx hulls
3038' 25 sx saltgel, 2 sx hulls
3130' 10 sx saltgel, 6 sx starch, 1 sx hulls
3216' 7 sx starch