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33-15-11W

Ind

State Geological Survey
WICHITA BRANCH

★

GEOLOGICAL REPORT

FRONTIER OIL COMPANY

FOSTER "A" NO. 3

NW NE SW SE Sec. 33-15S-11W

RUSSELL COUNTY, KANSAS

Commenced: June 9, 1983

Date of RTD: June 15, 1983

Completed: June 16, 1983

RECEIVED
STATE CORPORATION COMMISSION

AUG 09 1983

CORPORATION DIVISION

Steve D. Parker

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

RE: Frontier Oil Company
No. 3 Foster "A"
NW NE SW 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 3244', rotary total depth. Samples were examined from 2100' to rotary total depth.

All formation tops, zones of porosity, and staining 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)	1774 GL	--- 1779 KB
Anhydrite	648	(+1131)
Brownville	2178	(- 399)
Grandhaven	2217	(- 438)
Dover	2242	(- 463)
Tarkio	2287	(- 508)
Elmont	2346	(- 567)
Howard	2484	(- 705)
Topeka	2562	(- 783)
Heebner	2815	(-1036)
Toronto	2833	(-1054)
Douglass	2845	(-1066)
Brown Lime	2906	(-1127)
Lansing-Kansas City	2927	(-1148)
Base of Kansas City	3170	(-1391)
Arbuckle	3236	(-1457)
RTD	3244	(-1465)
5" Casing	3238	(-1459)

Structurally, on top of the Lansing-Kansas City the Foster "A" No. 3 ran 7' lower than the Foster "A" No. 2, located approximately one location (660') Northwest. The Arbuckle on the No. 3 Foster "A" came in at 3236 (1457), 16' higher than the Foster "A" No. 2, an Arbuckle producer.

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3 'A' Foster

ZONES OF INTEREST

TOPEKA (Top 2562)

2562 to 2566

Tan fine crystalline to dense limestone. No show of oil.

2760 to 2763

Light tan oolitic to sucrosic limestone. Trace of light spotted staining, no free oil, and a faint odor.

2776 to 2781

Light tan sucrosic limestone. Trace of light spotted oil staining, no free oil, and a faint odor.

TORONTO (Top 2833)

2833 to 2836

White fine crystalline limestone. No show of oil and no odor.

LANSING-KANSAS CITY (Top 2927)

2930 to 2932

Light tan oolitic to oolitic limestone. Light spotted oil staining, slight show of free oil, and a fair odor.

2955 to 2965

Tan well-developed oolitic limestone. Good light oil staining, fair show of free oil, and a fair odor.
(Included in DST No. 1.)

DRILL STEM TEST NO. 1 (FOC TEST)

2940 to 2975

30-30-30-30 First open weak blow dead in 10 minutes. Second open no blow, flushed tool, no help. Recovered 30' mud. Initial flows of 41 to 82#. Final flows of 72 to 92#. Initial shut in pressure of 805#. Final shut in pressure of 654#.

3005 to 3009

White to light tan sucrosic limestone. No show of oil and no odor.

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3 'A' Foster

- 3048 to 3053 Tan poorly-developed oolitic limestone. Slight trace of light spotted oil staining, no free oil, and no odor.
- 3072 to 3075 White oolitic limestone with no show of oil and no odor.
- 3090 to 3094 Tan oolitic to poorly-developed oolitic limestone. No oil staining, a trace of free oil, and no odor.
- 3113 to 3116 White fine crystalline to chalky limestone. Trace of light spotted oil staining, no free oil, and no odor.
- 3132 to 3136 Tan fine crystalline to oolitic limestone. No show of oil and no odor.
- 3149 to 3152 White chalky limestone with a trace of light spotted oil staining, no free oil, and no odor.

ARBUCKLE DOLomite (TOP 3236)

- 3238 to 3240 Tan medium crystalline dolomite with good intercrystalline porosity. Good saturated oil staining, good show of free oil, and a strong odor. (Included in DST No. 2 & 3.)

DRILL STEM TEST NO. 2 (FOG TEST)

- 3166 to 3240 30-30-30-30 First open very weak blow dead in 5 minutes, flushed tool, no help. Second open no blow, flushed tool, no help. Recovered 20' oil spotted mud. Initial flows of 72 to 82#. Final flows of 72 to 82#. Initial shut in pressure of 755#. Final shut in pressure of 534#.
- 3240 to 3244 Tan medium crystalline dolomite with good intercrystalline porosity. Good show of oil staining, good show of free oil, and a very strong odor. (Included in DST No. 3)

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3 'A' Foster

DRILL STEM TEST NO. 3 (FOC TEST)

3168 to 3244

60-30-60-30 First open good blow. Second open good blow. Recovered 75' slightly oil and gas cut mud, and 305' heavy oil and gas cut mud. Initial flows of 81 to 183#. Final flows of 183 to 254#. Initial shut in pressure of 799#. Final shut in pressure of 799#.

ROTARY TOTAL DEPTH @ 3244'

5" Casing was set at 3238', 6' off bottom, 2' in the Arbuckle with 190 sx cement. The shoe joint is 42.05' long and zero point is 5' AGL.

Sincerely,



Steve D. Parker

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DRILLING INFORMATION ON THE FOSTER "A" NO. 3

Contractor: Red Tiger Drilling Co.

Drillers: Shrout

Fickel

Tool Pusher: Bruce Fickel

Bailey

Spud Date: June 9, 1983

Date of RTD: June 15, 1983

Surface Pipe: 8-5/8" @ 655' w/325 sx

Casing: 5" set 6' off bottom
@ 3238' w/190 sx cement.
SJ 42.05'.

TOTAL FOOTAGE DRILLED PER DAY

Under Surface at 5:30 P.M. On June 10, 1983

1605	Feet	At	7:00 A.M.	On	June 11, 1983
2400	"	"	" "	"	June 12, 1983
2835	"	"	" "	"	June 13, 1983
3010	"	"	" "	"	June 14, 1983
3240	"	"	" "	"	June 15, 1983
3244	Feet	At	3:25 P.M.	On	June 15, 1983

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3 A Foster

BIT RECORD

<u>BITS</u>	<u>TYPE</u>	<u>FOOTAGE</u>
No. 1	Walker-McDonald 052 (Rerun)	658' to 2975'
No. 2	Smith F2 (Rerun)	2975' to 3240'
No. 3	Smith F2 (Rerun)	3240' to 3244'

MUD RECORD (MUD-CO)

Surface:	20 sx premium gel, 5 sx hulls, 2 sx lime
1870	9 sx premium gel, 45 sx salt clay, 5 sx hulls
2400	40 sx starch, 2 sx preservatives
2660	5 sx premium gel, 25 sx salt clay
2835	30 sx salt clay, 5 sx starch
3010	20 sx salt clay
3105	20 sx salt clay, 5 sx hulls