

32-9-19W^{P1}

State Geological Survey
WICHITA BRANCH

GEOLOGICAL REPORT

FRONTIER OIL COMPANY

ALLPHIN NO. 2

SE SE NE 32-9S-19W

ROOKS COUNTY, KANSAS

Commenced: October 3, 1983

Completed: October 15, 1983

RECEIVED
STATE CORPORATION COMMISSION

FEB 01 1984

CONSERVATION DIVISION
Wichita, Kansas

32-9-19W^{PC}

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

Re: Frontier Oil Company
Allphin No. 2
SE SE NE 32-9S-19W
Rooks County, Kansas

Dear Sir:

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

Drilling was supervised from 3000' to 3795', rotary total depth. Samples were examined from 3000' to 3795', 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	2223 GL -- 2228 KB	
Anhydrite	1626 to 1670	(+602)
Topeka	3205	(-977)
Heebner	3408	(-1180)
Toronto	3427	(-1199)
Lansing-Kansas City	3446	(-1218)
Base-Kansas City	3652	(-1424)
Cherty Conglomerate	3687	(-1459)
Arbuckle	3767	(-1539)
RTD	3795	(-1567)

Structurally, on top of the Lansing-Kansas City the Frontier Oil Company Allphin No. 2 ran 3' high to the Frontier Oil Company Allphin No. 1 located 700' to the northwest.

On top of the Arbuckle, the Allphin No. 2 ran 13' low to Allphin No. 1.

ZONES OF INTEREST

TOPEKA (Top 3205)
3205 to 3220

Gray chalky limes.

3220 to 3326

Gray and tan chalky to junky limes.

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2 Allphin

3330 to 3338

Tan fine crystalline, chalky lime with a trace of free oil and no odor.

3340 to 3348

Scattered white, cherty lime with a fair show of free oil and no odor.

3376 to 3382

White and tan cherty, junky lime, with a small show of free oil and no odor.

HEEBNER SHALE (Top 3408)

TORONTO (Top 3427)
3427 to 3434

Tan crystalline to dense lime.

3436 to 3452

White crystalline slightly chalky lime with a small show of free oil and no odor.

LANSING-KANSAS CITY (Top 3446)
3446 to 3452

White fossiliferous lime, scattered vuggy lime with a small show of free oil, tan fresh cherts with no show and no odor.

3484 to 3492

Tan fossiliferous and white chalky limes with no show of free oil and a faint odor.

DRILL STEM TEST NO. 1
3406 to 3520

TEST: 60-30-60-30. Very weak blow throughout. SI 30". Very weak blow throughout. SI 30". Recovered 65' of mud.
PRESSURES: 81-102, 102-122, 709-689 Bhps.

3521 to 3526

Few pieces of tan cherty, junky, fossiliferous lime with scattered staining and no odor.

3532 to 3540

Tan, fossiliferous, some vuggy limes with a trace of free oil, tan lime with a good show of black tar oil and no odor.

DRILL STEM TEST NO. 2
3520 to 3540

TEST: 60-30-60-30. Weak to strong blow in 20 minutes. SI 30". Weak to strong blow in 20 minutes. SI 30". Recovered 700' of salt water.
PRESSURES: 41-203, 203-345, 809-829 Bhps.

3546 to 3553

Tan cherts and cherty limes, tan crystalline limes and white chalk.

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3557 to 3564

Tan cherts and cherty limes, tan crystalline limes and white chalk.

DRILL STEM TEST NO. 3
3538 to 3572

TEST: 60-30-60-30. Weak blow throughout. SI 30". Weak blow throughout. SI 30". Recovered 75' of muddy water. PRESSURES: 51-61, 81-91, 790-749 Bhps.

3582 to 3588

Tan silty and white chalky limes with very small traces of free oil and a fair odor.

3590 to 3597

Scattered tan sandy limes with a trace of free oil and a fair odor.

DRILL STEM TEST NO. 4
3568 to 3598

TEST: 60-30-20-30. Very weak blow for 51 minutes. SI 30". No blow - flushed tool, no help. SI 30". Recovered 5' mud with a few oil specks. PRESSURES: 20-20, 41-41, 102-183 Bhps.

3604 to 3612

Tan silty lime and white chalky lime with a trace of free oil and a fair odor. Scattered white fresh cherts.

3616 to 3632

Tan, sandy to crystalline junky lime with light staining and a faint odor.

BASE-KANSAS CITY (Top 3652)
3652 to 3660

White, crystalline junky lime with a small show of free oil and a faint odor.

3662 to 3670

Soft gummy red and gray shales.

DRILL STEM TEST NO. 5
3596 to 3682

TEST: 60-30-60-30. Weak to fair blow. SI 30". Weak to fair blow. SI 30". Recovered 30' of mud. PRESSURES: 41-41, 61-61, 749-548 Bhps. (Some plugging action throughout)

3674 to 3684

Multi-colored soft shales.

CHERTY CONGOMERATE (Top 3687)
3687 to 3700

Soft red shales and cherty limes.

3704 to 3712

Multi-colored cherts with a good show of black tar oil and no odor.

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3720 to 3728

Multi-colored cherts with a good show of black tar oil and no odor.

3746 to 3756

Multi-colored shales and cherts with good show of black dead oil, clear medium large clear quartz sand clusters with a show of black dead oil, pale green and brown soft shales and a faint odor.

3758 to 3762

Clear, loosely bonded quartz sand clusters with black dead oil, multi-colored cherts and shales.

ARBUCKLE (Top 3767)
3767 to 3774

Tan and white fine crystalline dolomite with a fair to good show of free oil and a fair odor.

DRILL STEM TEST NO. 6
3644 to 3774

TEST: 60-30-30-30. Weak decreasing blow throughout. SI 30". No blow - flushed tool, no help. SI 30". Recovered 20' of mud. PRESSURES: ISI 264, FSI 285, Severe plugging action throughout. IF & FF unreadable.

DRILL STEM TEST NO. 7
3644 to 3774

TEST: 60-30-60-30. Weak blow throughout. SI 30". Very weak blow throughout. SI 30". Recovered 60' of mud. PRESSURES: 50-50, 60-60, 160-140 Bhps.

3778 to 3785

Pyritized shales, multi-colored shales and tan dense dolomite and tan crystalline dolomite with scattered shows of free oil and no odor.

DRILL STEM TEST NO. 8
3771 to 3785

TEST: 30-30-15-30. Weak blow for 15 minutes. SI 30". No blow - flushed tool, no help. SI 30". Recovered 3' of mud. PRESSURES: 30-30, 30-30, 30-30 Bhps.

3785 to 3795

Multi-colored cherts and shales, tan and white medium to large crystalline dolomite with a fair show of tar oil and a fair odor. Scattered clear sand clusters with black dead oil and scattered pyritized dolomite.

DRILL STEM TEST NO. 9
3771 to 3795

TEST: 60-30-60-30. Good blow throughout. SI 30". Fair blow throughout. SI 30". Recovered 310' muddy water, no oil. PRESSURES: 80-100, 130-160, 1173-1173 Bhps.

ROTARY TOTAL DEPTH @ 3795'

32-9-19w^{pl}

Due to negative drill stem tests, the Frontier Oil Company Allphin No. 2 was plugged and abandoned a dry hole.

Sincerely,

A handwritten signature in cursive script that reads "Steven D. Angle". The signature is written in dark ink and is positioned above the printed name.

Steven D. Angle

DRILLING INFORMATION ON THE ALLPHIN NO. 2

Drilling Contractor: Red Tiger Drilling Co.
Rig #8

Tool Pusher: Kenneth Lyle

Spud Date: October 3, 1983

Surface Pipe: New 8-5/8" 24# Set @ 361'
w/200 sx common, 3% CC,
2% Gel. CDC.

Drillers: K. Lyle
P. Waggoner
T. Koehler

Date Of RTD: October 15, 1983

Casing: None - Plugged & Abandoned

TOTAL FOOTAGE DRILLED PER DAY
Under surface at 5:30 A.M. on 10-4-83

1851	Feet	At	7:00 A.M.	On	10-5-83
2530	"	"	"	"	10-6-83
3000	"	"	"	"	10-7-83
3283	"	"	"	"	10-8-83
3500	"	"	"	"	10-9-83
3540	"	"	"	"	10-10-83
3586	"	"	"	"	10-11-83
3680	"	"	"	"	10-12-83
3757	"	"	"	"	10-13-83
3774	"	"	"	"	10-14-83
3795	Feet	At	2:35 A.M.	On	10-15-83

MUD RECORD

Surface - 30 sx gel, 4 sx lime, 10 sx hulls.

1652 - 2 sx hulls.

2355 - 2 sx hulls.

2865 - 6 sx hulls.

3230 - 46 sx starch, 40 sx gel, 10 sx salt gel, 15 sx hulls, 3 sx preservative.

3430 - 15 sx salt clay, 4 sx hulls.

3520 - 6 sx starch, 15 sx salt clay, 4 sx hulls.

3572 - 5 sx gel, 12 sx salt clay, 4 sx hulls.

3632 - 6 sx starch, 10 sx salt clay.

3774 - 7 sx starch, 7 sx hulls.

3785 - 1 sx preservative.

3795 - 8 sx starch, 12 sx salt clay, 6 sx hulls.