

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

Re: Frontier Oil Company
Gagleman No. 2
NW SW NE 26-19S-15W
Barton County, Kansas

Dear Sir:

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

Drilling was supervised from 3100' to 3602', rotary total depth. Samples were examined from 3100' to 3602', 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	1918 GL	--	1923 KB
Anhydrite	857	(	+1066)
Brownville	2517	(	-594)
Tarkio	2649	(	-726)
Topeka	2922	(	-999)
Heebner	3174	(	-1251)
Toronto	3189	(	-1266)
Brown Lime	3254	(	-1331)
Lansing-Kansas City	3265	(	-1342)
Base-Kansas City	3488	(	-1565)
Shaley Conglomerate	3516	(	-1593)
Cherty Conglomerate	3550	(	-1627)
Arbuckle	3575	(	-1652)
RTD	3602	(	-1679)

Structurally, on top of the Lansing-Kansas City the Frontier Oil Company Gagleman No. 2 ran 12' low to the Frontier Oil Company's Gagleman No. 1 located 660' to the east.

On top of the Arbuckle the Gagleman No. 2 ran 1' high to the Frontier Oil Company Gagleman No. 1.

ZONES OF INTEREST

TOPEKA (Top 2922)

HEEBNER SHALE (Top 3174)

TORONTO (Top 3189)

DOUGLAS (Top 3204)

BROWN LIME (Top 3254)

LANSING-KANSAS CITY (Top 3265)
3267 to 3270

Tan dense an scattered slightly cherty limes, very slight traces of oil stain.

3272 to 3276

Tan barren vuggy to oolitic limes.

3286 to 3290

Tan vuggy oolitic and scattered oolitic limes with fair to good show of free oil and no odor.

3300 to 3310

Tan chalky and scattered tan oolitic limes.

3310 to 3320

Tan cherty fossiliferous limes with small show of free oil and no odor.

3322 to 3328

Scattered tan crystalline limes and tan cherty slightly vuggy limes with a small show of free oil and no odor.

3338 to 3350

Tan well developed oolitic barren limes.

3350 to 3370

Same as above.

3402 to 3414

Tan fossiliferous cherty limes.

3420 to 3430

White crystalline fossiliferous slightly cherty limes with small to fair shows of black tar oil and a fair odor.

3440 to 3450

Tan fossiliferous limes with a small show of black tar oil.

3450 to 3460

Poorly developed oolitic limes with a few scattered white slightly crystalline, slightly vuggy limes with asphaltic oil.

3480 to 3488

Tan fossiliferous with a few scattered white fossiliferous limes with a small show of free oil.

BASE-KANSAS CITY (Top 3488)

3488 to 3498

Barren vuggy poorly developed oolitic tan limes.

SHALEY CONGLOMERATE (Top 3516)

3516 to 3530

Tan and white limes, scattered brown fossiliferous limes with small show of free oil, scattered shales and scattered sand grains.

3532 to 3537

Red shales, scattered angular to rounded clear to red loose sand grains and a few scattered sand clusters.

3540 to 3550

White, red and gray soft shales.

CHERTY CONGLOMERATE (Top 3550)

3550 to 3560

Red shales, tan and white fresh cherts.

3564 to 3570

Tan oolitic cherts, red shales and a few scattered sand clusters with fair to good show of free oil and no odor.

ARBUCKLE (Top 3575)

3575 to 3578

White medium crystalline dolomite.

3578 to 3582

White medium crystalline dolomite and glauconitic dolomite.

3582 to 3587

White medium crystalline dolomite with no show of free oil and a faint odor.

DRILL STEM TEST NO. 1 (Western)

3577 to 3587

TEST: 60-30-60-30. Gas to surface immediately.

First Opening.

5" - 1,949,000

10" - 2,380,000

20" - 2,441,000

30" - 1,887,000

40" - 1,420,000

50" - 1,123,000

60" - 1,123,000

Second Opening.

10" - 1,098,000

20" - 887,000

30" - 699,000

40" - 577,000

50" - 499,000

60" - 472,000

Recovered 60' gassy mud. Slight show of oil in tool.

PRESSURES: 737-233, 338-127, 529-349

JUL 25 1985
State Geological Survey
WICHITA BRANCH

3587 to 3597

DRILL STEM TEST NO. 2 (Western)
3587 to 3597

CONFIDENTIAL

3597 to 3602

DRILL STEM TEST NO. 3 (Western)
3597 to 3602

White medium crystalline to slightly sandy dolomite with a trace of free oil and a good odor.

TEST: 60-30-60-30. Gas to surface in 10 minutes. First Opening.

20" - 1,274,000

30" - 499,000

40" - 472,000

50" - 415,000

60" - 385,000

Second Opening.

10" - 445,000. Heavy mist to slugging oil.

Recovered 1,280' clean gassy oil.

PRESSURES: 328-233, 308-264, 768-727

White medium to coarse crystalline dolomite with scattered shows of free oil and a good odor.

TEST: 60-30-60-30. Gas to surface in 25 minutes.

30" - 58,100

40" - 56,800

50" - 56,100

60" - 56,800

Second Opening.

10" - 60,100

20" - 58,100

30" - 58,100

40" - 57,400

50" - 57,400

60" - 56,800

Recovered 850' clean gassy oil and 15' of water.

PRESSURES: 84-137, 148-201, 977-956

JUL 25 1995

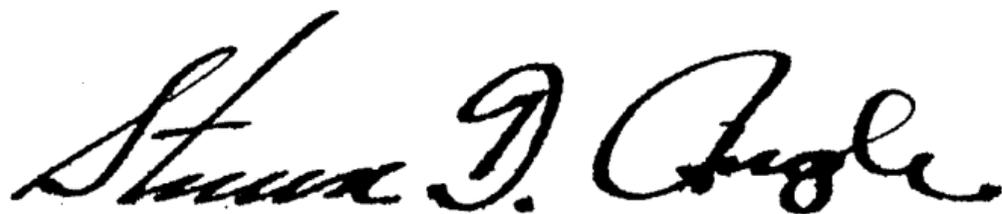
State Geological Survey
WICHITA BRANCH

ROTARY TOTAL DEPTH @ 3602'

4½" Casing was set at 3597', 5' off bottom with 150 sx common cement plus 10% salt.

The shoe joint is 41.21' in length and zero point is 5' AGL.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven D. Angle". The signature is written in a cursive, flowing style with a large initial 'S'.

Steven D. Angle