

8-11-17W

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~~CONFIDENTIAL~~

GEOLOGICAL REPORT

FRONTIER OIL COMPANY

NO. 1 GANOUNG

(Approx.) SW SW NE
Sec. 8-11S-17W
Ellis County, Kansas

CONSERVATION DIVISION
Wichita, Kansas

RECEIVED
STATE CORPORATION COMMISSION

JUN 25 1982

CONSERVATION DIVISION
Wichita, Kansas

Spud Date: January 31, 1982
RTD Date: February 16, 1982

RECEIVED
STATE CORPORATION COMMISSION

JUN 21 1982

CONSERVATION DIVISION
Wichita, Kansas

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STATE CORPORATION COMMISSION

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CONSERVATION DIVISION
Wichita, Kansas

Frontier Oil Company
1720 Kansas State Bank Bldg,
Wichita, Kansas 67202.

Re: Frontier Oil Company
No. 1 Ganoung
SW SW NE, 8-11S-17W,
Ellis County, Kansas

Dear Sir:

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

Drilling was supervised from 2400' to 3622', rotary total depth. Samples were examined from 2400' 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)		1858 DF - - 1861 KB	
	<u>Log Tops</u>	<u>Geologist Tops</u>	
Anhydrite	1102 (+ 759)	1103	(+ 758)
Brownville	2498 (- 637)	2492	(- 631)
Tarkio	2608 (- 747)	2600	(- 739)
Howard	2780 (- 919)	2780	(- 919)
Topeka	2808 (- 947)	2805	(- 944)
Heebner	3038 (-1177)	3033	(-1172)
Toronto	3058 (-1197)	3051	(-1190)
Lansing-Kansas City	3080 (-1219)	3072	(-1211)
Base of Kansas City	3314 (-1453)	3301	(-1440)
Conglomerate	3338 (-1477)	3331	(-1470)
Simpson Dolomite	3386 (-1525)	3374	(-1513)
Sand	3406 (-1545)	3392	(-1531)
Arbuckle	3410 (-1549)	3396	(-1535)
RTD	3622 (-1761)	3605	(-1744)
5½" Pipe at	3620 (+1759)	3603	(-1742)

Structurally on top of the Lansing-Kansas City the Geologists top ran 7' higher than the Lario Gilbert well located 50' south. The log top ran flat. On top of the Arbuckle the Ganoung No. 1 ran 14' higher than the Gilbert and the log top ran flat. All tops should be corrected to the Electric Log tops.

ZONES OF INTEREST

Topeka (Top 2805 (-944))

2831 to 2839

Tan sucrosic limestone. Well developed pinpoint porosity. Good odor. Good show of oil.

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DRILL STEM TEST NO 1 (CHENEY TESTING)

2813 to 2846 60-30-60-30. First open strong blow. Second open fair decreasing blow. Recovered 130' watery mud with oil specks. Initial flow of 49 to 68. Final flow of 86 to 98. Initial shut in pressure 892. Final shut in pressure 893.

2995 to 3005 White to tan very fossiliferous limestone. Good odor. Good show of free oil. Dark stain.

3015 to 3020 White fossiliferous limestone faint odor. Slight show of free oil.

DRILL STEM TEST NO 2 (CHENEY TESTING)

2978 to 3030 60-30-60-30. First open fair blow. Second open weak blow. Recovered 80' watery mud. Initial flow of 59 to 68. Final flow of 68 to 78. Initial flow pressure of 990. Final flow pressure of 941.

TORONTO (Top 3051 (-1190))

3051 to 3055 White to tan fine crystalline vuggy limestone. No odor. Spotted stain. Fair show of free oil.

DRILL STEM TEST NO 3 (CHENEY TESTING)

3030 to 3068 60-30-15-30. First open weak blow throughout. Second open weak blow 15 minutes. Recovered 20' mud with a few specks of oil. Initial and final flow of 59. Initial shut in pressure 88. Final shut in pressure 108.

LANSING-KANSAS CITY (TOP 3072(-1212))

3072 to 3078 White fine crystalline limestone. No odor. Fair show of free oil.

3090 to 3096 Same as above.

DRILL STEM TEST NO. 4 (CHENEY TESTING)

3060 to 3100 60-30-30-30. First open weak blow, flushed tool - no help. Second open no blow. Recovered 55' muddy saltwater. Initial flow of 59 to 59. Final flow of 59 to 59. Initial shut in pressure of 68. Final shut in pressure of 78.

3107 to 3110 White chalky to fine crystalline limestone. No odor. Slight show of free oil.

3124 to 3130 White chalky cherty limestone. No odor. Slight show of free oil.

DRILL STEM TEST NO 5 (CHENEY TESTING)

3087 to 3145 60-30-60-30.
First open weak increasing to fair blow. Second opening weak blow. Recovered 30' mud. Initial flow of 59 to 59. Final flow of 68 to 68. Initial flow pressure of 677. Final flow pressure of 560.

3148 to 3153 White well developed oolitic limestone, fair odor. Fair show of free oil.

3164 to 3172 White oolitic to oolitic limestone. No odor. Slight show of free oil.

DRILL STEM TEST NO 6 (CHENEY TESTING)

3135 to 3180 60-30-60-30.
First open blow off bottom in 5 minutes. Second open blow off bottom in 15 minutes. Recovered 5' gassy oil cut muddy water, 740' gassy slightly oil cut water. Initial flow of 49 to 265. Final flow of 285 to 383. Initial shut in pressure of 707. Final shut in pressure of 677.

3208 to 3214 Tan fine crystalline limestone. No odor. No show of oil.

DRILL STEM TEST NO.7 (CHENEY TESTING)

3180 to 3225 60-30-60-30.
First open weak blow. Second open no blow, flushed tool - no help. Recovered 30' mud. Initial flow of 49 to 49. Final flow of 59 to 59. Initial shut in pressure of 79. Final shut in pressure 80.

3237 to 3244 White poorly developed oolitic to fossiliferous limestone. Faint odor. Spotted staining. Slight show of free oil.

DRILL STEM TEST NO. 8 (CHENEY TESTING)

3225 to 3250 60-30-60-30.
First open weak blow. Second open very weak blow. Recovered 30' mud. Initial flows 29 to 29. Final flows 39 to 39. Initial shut in pressure 873#. Final shut in pressure 707#.

3258 to 3262 Tan fine crystalline to fossiliferous lime with a good show of free oil. Fair spotted dark oil stain and a faint odor.

DRILL STEM TEST NO. 9 (CHENEY TEST)

3245 to 3270 60-30-60-30.
First open weak blow. Second open weak blow. Recovered 30' mud with 1' free oil on top. Initial flows 29 to 29. Final flows 39 to 39. Initial shut in pressure 108#. Final shut in pressure 98#.

3380 to 3384 Tan fine crystalline to dense lime with no show of oil. (Included in DST #10).

3304 to 3310 White chalky lime with no show of oil.

DRILL STEM TEST NO 10 (CHENEY TEST)

3264 to 3310 60-30-60-30.
First open fair blow. Second open test head broke off, could not determine blow. Recovered 90' slightly oil specked mud. Initial flows 88# to 88#. Final flows 88# to 88#. Initial shut in pressure 285#. Final shut in pressure 216#.

CONGLOMERATE (Top 3331)

3331 to 3340 Sharp, fresh, bright yellow, tan, white cherts. Junky, soft white lime and blood red shale. Traces of free oil in tray, no visible staining and no odor. (Included in DST #11).

3364 to 3370 Pale green to light grey dolomitized chert and junky soft lime with scattered pieces carrying a good show of oil. Possible light stain and no odor.

DRILL STEM TEST NO 11 (CHENEY TEST)

3294 to 3375 60-30.
Open 60 minutes with a weak blow for 35 minutes. Recovered 15' mud. Initial flows 59 to 59. Initial shut in pressure 88#.

SIMPSON DOLOMITE (Top 3374)

3374 to 3380 Pale green to pale yellow to light grey fine to medium crystalline dolomite with no show of oil and no odor.

SIMPSON SAND (Top 3392)

3392 to 3395 Clear rounded to sub-rounded sand grains in clusters. With a good show of free oil, good dark stain and a strong odor.

DRILL STEM TEST NO 12 (Cheney Test)

3379 to 3395 60-30-30-30.
First open weak blow. Second open weak blow for 25 minutes. Recovered 44' slightly oil specked mud with 1' free oil on top. Initial flows 31 to 31. Final flows 31 to 31#. Initial shut in pressure 363. Final shut in pressure 72#.

ARBUCKLE (Top 3396)

3396 to 3400 White coarse crystalline dolomite with a scattered show of free oil, good spotted oil stain and a strong odor.

DRILL STEM TEST NO 13 (Cheney Test)

3379 to 3400 60-30-60-30.
First open weak blow. Second open weak blow. Recovered 60' slightly oil specked mud. Initial flows 82 to 82. Final flows 82 to 82. Initial shut in pressure 979. Final shut in pressure 928#.

3400 to 3410 White to light tan coarse crystalline dolomite with good intercrystalline to vuggy porosity. Good show of free oil, good spotted light stain and a strong odor.

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DRILL STEM TEST NO 14 (FOC TEST)

- 3379 to 3410 60-30-60-30.
First open strong blow. Second open strong
blow. Recovered 2300' black sulfur water
with 3% oil mixed throughout the water.
Initial flow 726 to 1068. Final flows
1068 to 1068. Initial and final shut in
pressures 1068#.
- 3464 to 3470 Tan to pink dense dolomite with no show
of oil.
- 3522 to 3526 White to light tan coarse crystalline
dolomite with a trace of free oil, and
no odor.
- 3560 to 3568 Light brown coarse crystalline dolomite
with no show of oil, questionable odor.

Using the electric log as true rotary total depth, 5½" pipe was set at
3620', 2' off bottom and 212' in the Arbuckle with 250 sacks common
cement. Zero point is 5' AGL and the shoe joint is 37-50' long.

Sincerely.

Richard D. Parker
RICHARD D. PARKER *RD*

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DRILLING INFORMATION ON THE NO 1 GANOUNG

Contractor: Red Tiger Drilling (Rig 7) Drillers: Wintz, Willis
 Tool Pusher: Ayres, Bill. Ayres, Bill
 Kennedy, Bob.

Spud Date: January 31, 1982 RTD Date: February 16, 1982
 Surface Casing: 8-5/8" @ 1129'/450sx. Production Casing: 5 1/2" @ 3620'/250sx.

TOTAL FOOTAGE DRILLED PER DAY

Under Surface at 9.00 p.m. on Feb. 2, 1982

Feet	At	7.00 a.m.	on	
1132	"	"	"	2-2-82
1470	"	"	"	2-3-82
2225	"	"	"	2-4-82
2625	"	"	"	2-5-82
2846	"	"	"	2-6-82
3005	"	"	"	2-7-82
3068	"	"	"	2-8-82
3104	"	"	"	2-9-82
3165	"	"	"	2-10-82
3225	"	"	"	2-11-82
3270	"	"	"	2-12-82
3310	"	"	"	2-13-82
3395	"	"	"	2-14-82
3410	"	"	"	2-15-82
3605	"	1.10 p.m.	"	2-16-82

BIT RECORD

<u>Bits</u>	<u>Type</u>	<u>Footage</u>
#1	Reed - H5-51	1132 to 3410
#2	Smith - F2 (Rerun)	3410 to 3605

MUD RECORD

Surface - 40sx aquagel, 20 sx zeogel, 8 sx hulls.
 2503 - 60 sx zeogel, 35 sx starch, 6 sx hulls, 2 sx aldacide
 2846 - 65 sx zeogel, 11 sx starch, 2 sx hulls
 2926 - 8 sx starch
 3048 - 25 sx zeogel, 10 sx starch
 3100 - 25 sx zeogel, 17 sx starch, 4 sx hulls, 1 sx aldacide
 3145 - 12 sx zeogel, 6 sx starch
 3195 - 12 sx zeogel, 6 sx starch
 3310 - 35 sx zeogel, 10 sx starch, 2 sx hulls.
 3395 - 20 sx zeogel, 10 sx starch, 2 sx hulls, 1 aldacide
 3410 - 10 sx starch, 5 sx hulls, 1 aldacide
 3500 - 2 sx zeogel, 10 sx starch, 18 sx hulls, 1 sx aldacide
 3550 - 12 sx zeogel, 6 sx starch, 5 sx hulls.