

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

Re: Frontier Oil Company
Eberly No. 3
Approx. SW NW SE 14-19S-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 1600' to 3595', rotary total depth. Samples were examined from 1600' to 3595', 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	852 to 882	(+1071)
Herrington	1731	(+192)
Winfield	1821	(+102)
Ft. Riley	1916	(+7)
Council Grove	2079	(-156)
Cottonwood	2224	(-301)
Neva	2264	(-341)
Red Eagle	2332	(-409)
Brownville Lime	2492	(-569)
Tarkio Lime	2608	(-685)
Elmont Lime	2669	(-746)
Howard	2812	(-889)
Topeka	2889	(-966)
Heebner	3141	(-1218)
Toronto	3153	(-1230)
Brown Lime	3221	(-1298)
Lansing-Kansas City	3238	(-1315)
Base-Kansas City	3448	(-1525)
Conglomerate	3485	(-1562)
Arbuckle	3549	(-1626)
Quartz	3555	(-1632)
RTD	3595	(-1672)

Structurally, on top of the Lansing-Kansas City, the Eberly No. 3 ran 21' low to the Frontier Oil Company Eberly No. 1, a Kansas City producer located 550' to the south.

On top of the Quartz, the Eberly No. 3 ran 79' low to the Eberly No. 1.

ZONES OF INTEREST

14-193-15w
Eberly #3

HERRINGTON (Top 1731)
1731 to 1744

White fine crystalline limes.

WINFIELD (Top 1821)
1821 to 1830

Tan fine crystalline to silty limes with scattered pinpoint porosity.

FT. RILEY (Top 1916)
1916 to 1932

Tan silty limes with good pinpoint to vuggy porosity and a fair show of fluorescence.

COUNCIL GROVE (Top 2079)
2079 to 2105

Gray to tan fossiliferous vuggy limes with fair to good fluorescence.

2185 to 2192

Tan fossiliferous limes.

2199 to 2206

Gray slightly fossiliferous vuggy limes with a fair show of fluorescence.

2213 to 2218

Tan, slightly chalky limes with good pinpoint porosity and a fair show of fluorescence.

COTTONWOOD (Top 2224)
2224 to 2230

Gray fine crystalline lime with scattered pinpoint porosity.

2235 to 2243

White to tan slightly crystalline lime with scattered pinpoint porosity with scattered medium dark staining.

DRILL STEM TEST NO. 1
2144 to 2262

TEST: 60-30-60-30. Good blow throughout.
SI 30". Good blow throughout. SI 30".
Recovered 280' of mud.
PRESSURES: 104-124, 207-228, 270-290 Bhps.

NEVA (Top 2264)
2264 to 2274

White to tan slightly crystalline limes.

RED EAGLE (Top 2332)
2332 to 2340

Tan slightly crystalline limes.

2384 to 2392

One piece of tan lime with dark staining.

2458 to 2466

Scattered white crystalline fractured limes with fair fluorescence.

DRILL STEM TEST NO. 2
2342 to 2470

TEST: 60-30-60-30. Weak blow throughout.
SI 30". Weak blow throughout. SI 30".
Recovered 90' of mud.
PRESSURES: 83-124, 104-124, 787-787 Bhps.

BROWNVILLE LIME (Top 2492)
2492 to 2500

Tan crystalline lime.

TARKIO LIME (Top 2608)
2608 to 2614

Tan fossiliferous limes.

ELMONT LIME (Top 2669)

HOWARD (Top 2812)

TOPEKA (Top 2889)

3100 to 3120

Tan to gray slightly crystalline limes.

Fairly well developed oolitic tan limes.

HEEBNER (Top 3141)

TORONTO (Top 3153)
3153 to 3160

Tan, slightly weathered limes with scattered traces of light staining.

3194 to 3210

Fine, gray micaceous sand and barren buff oolitic limes.

BROWN LIME (Top 3221)
3221 to 3230

Tan slightly fossiliferous limes.

LANSING-KANSAS CITY (Top 3238)
3238 to 3248

Tan dense to gray cherty limes.

3258 to 3270

Scattered tan, very slightly vuggy lime with scattered light staining.

DRILL STEM TEST NO. 3
3225 to 3274

TEST: 30-30-30-30. Weak blow, flushed tool - no help. SI 30". No blow. SI 30". Recovered 5' of mud.
PRESSURES: 62-73, 73-73, 384-228 Bhps.

3279 to 3286

Tan oolitic limes with scattered spotted staining, small show of free oil and no odor.

3288 to 3294

Light tan dolomitic limes.

DRILL STEM TEST NO. 4
3270 to 3294

3303 to 3327

3334 to 3342

3360 to 3370

DRILL STEM TEST NO. 5
3348 to 3374

3384 to 3391

DRILL STEM TEST NO. 6
3372 to 3392

3394 to 3400

3402 to 3408

DRILL STEM TEST NO. 7
3392 to 3410

3412 to 3418

DRILL STEM TEST NO. 8
3408 to 3420

TEST: 60-30-60-30. Weak blow throughout.
SI 30". Weak blow throughout. SI 30".
Recovered 75' of mud.
PRESSURES: 31-41, 52-52, 1055-1035 Bhps.

Tan, very well developed oolitic limes.

Tan fine crystalline limes.

Tan, fairly well developed oolitic limes
with scattered dark staining.

TEST: 30-30-30-30. Weak blow for 20 minutes.
SI 30". No blow. SI 30". Recovered 8' of mud.
PRESSURES: 31-31, 31-31, 41-41 Bhps.

Tan oolitic, slightly oolitic limes with
good dark spotted staining, fair show of free
oil and a faint odor.

TEST: 60-30-60-30. Weak blow throughout.
SI 30". Weak blow throughout. SI 30".
Recovered 28' of mud with a few specks of oil.
PRESSURES: 31-31, 31-31, 41-41 Bhps.

Scattered very poorly developed oolitic
to slightly vuggy white crystalline lime
with a trace of light staining.

White chalk, 1 piece of chalky oolitic
lime with light staining in casts.

TEST: 60-30-30-30. Weak blow for 55 minutes.
SI 30". No blow. SI 30". Recovered 21' of
mud with a few specks of oil.
PRESSURES: 31-31, 31-31, 31-31 Bhps.

White chalk, white chalky limes, scattered
white crystalline limes with no show of oil.
Few pieces of chalky limes with spotted
staining.

TEST: 60-30-30-30. Weak blow for 45 minutes.
SI 30". Few bubbles - died. SI 30". Recovered
15' of mud.
PRESSURES: 21-21, 21-21, 21-23 Bhps.

3430 to 3440

Gray shales, white chalky and slightly crystalline limes.

BASE-KANSAS CITY (Top 3448)

DRILL STEM TEST NO. 9

3420 to 3454

TEST: 60-30-30-30. Weak blow for 25 minutes - flushed tool, very weak blow for 4 minutes. SI 30". No blow. SI 30". Recovered 25' of mud. PRESSURES: 30-30, 30-30, 80-80 Bhps.

3474 to 3482

Multi-colored shales, scattered angular, slightly rounded clear quartz grains.

CONGLOMERATE (Top 3485)

3485 to 3510

Dark green and red shales.

DRILL STEM TEST NO. 10

3441 to 3510

TEST: 60-30-30-30. Weak blow throughout. SI 30". No blow, flushed tool @ 10" - weak blow for 7 minutes, died. SI 30". Recovered 15' of mud. PRESSURES: 70-70, 62-62, 117-207 Bhps.

3510 to 3520

Scattered tan cherts.

3520 to 3530

Tan cherts, oolitic cherts, soft red shales and dark green shales.

CFS @ 3535

3530 to 3540

Red and green shales and tan cherts.

CFS @ 3545

ARBUCKLE (Top 3549)

White medium crystalline dolomite.

CFS @ 3555

QUARTZ (Top 3555)

3555 to 3564

Clear angular quartz.

CFS @ 3564

DRILL STEM TEST NO. 11

3441 to 3564

TEST: 45-30-30-30. Weak blow for 25 minutes. Flushed tool, weak blow for 6 minutes. SI 30". No blow. SI 30". Recovered 75' of mud. PRESSURES: 103-110, 103-110, 110-197 Bhps.

3570 to 3585

Clear fractured quartz.

DRILL STEM TEST NO. 12
3442 to 3595

ROTARY TOTAL DEPTH @ 3595'

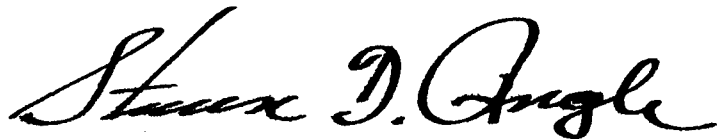
Eberly 3
14-19-15W

TEST: 60-30-30-30. Weak blow for 50 minutes.
SI 30". Few bubbles, flushed tool, very weak
blow for 5 minutes. SI 30". Recovered 65' of
mud.

PRESSURES: 104-104, 228-249, 321-290. Bhps.

Due to negative drill stem tests and its low structural position, the Frontier Oil Company Eberly No. 3 was plugged and abandoned a dry hole.

Sincerely,

A handwritten signature in black ink, reading "Steven D. Angle". The signature is written in a cursive style with a large, sweeping initial "S".

Steven D. Angle