

Elmore #1

AL REPORT

#1

17-17-24w

C NE SW - 2 -

C SE NW

FORMATIONELMORE #1
2426 KBDICKMAN #3
2449 KB

BLAINE	1079 (1347)	1099 (1350)
STONE CORRAL	1705 (721)	1729 (720)
HEEBNER	3745 (-1319)	3762 (-1313)
LANSING	3786 (-1360)	3803 (-1354)
BASE KANSAS CITY	4076 (-1650)	4096 (-1647)
PAWNEE	4204 (-1778)	4220 (-1771)
FORT SCOTT	4283 (-1857)	4303 (-1854)
CHEROKEE SHALE	4310 (-1884)	4325 (-1876)
CONGLOMERATE CHERT	4357 (-1931)	4371 (-1922)
MISSISSIPPIAN (Spergen)	4385 (-1959)	4383 (-1934)
ROTARY TOTAL DEPTH	4395 (-1969)	4409 (-1960)

ZONES OF INTEREST:LANSING @ 3786

3788-96: Limestone, white to cream, finely to medium crystalline, slightly fossiliferous, vaguely oolitic in part; fairly dense, siliceous to part soft, flaky, with trace scattered pinpoint porosity and no staining.

3824-27: Limestone, light buff, very finely-finely crystalline, part medium crystalline, fossiliferous, vaguely oolitic; having poor, fine, vugular porosity with no staining.

3841-47: Limestone, white to light buff, very finely-finely crystalline, part coarsely crystalline, fossiliferous, fairly dense with poor to fair fine pinpoint and vugular porosity. No shows.

3895-3909: Limestone, light brown to cream, very finely to finely crystalline, slightly fossiliferous, oolitic, most fairly dense to part sub-chalky; having good fossilcast and oolitic porosity with scattered grayish-brown "earthy" discoloration or staining. No fluorescence, little to no cut.

3949-57: Limestone, brown, very finely crystalline to granular, dense, siliceous, tight; some very fine pinpoint porosity. No shows.

3972-82: Limestone, brown, finely to medium crystalline, part granular, dense, siliceous to friable; having fair to good, fine, vugular and inter-crystalline porosity, with no shows.

4009-12: Limestone, white, soft and chalky to buff, finely crystalline, fairly dense, re-crystallized, with some inter-crystalline and vugular porosity. No shows.

4062-65: Limestone, white to light buff, very finely sucrose to finely crystalline, dense, siliceous to soft and friable, much soft and chalky; trace fine pinpoint and vugular porosity. No shows.

BASE KANSAS CITY @ 4076

4076-4277: No shows of oil or zones of porosity were encountered from the Base of the Kansas City to the top of the Fort Scott.

FORT SCOTT @ 4283

Elmore #1 from 4282-4294: (Full Recovery)

DESCRIPTION:

282-83'4": Shale, dark gray, drab, compact, part slightly calcareous.

283'4"-84" Limestone, light brown to tan, medium crystalline to dense, hard, siliceous, re-crystallized, with fairly abundant secondary calcite crystals and finely disseminated pyrite crystals in lower portion of this interval. Top 3 inches with scattered poor fossil-cast and vugular porosity, spotty light brown saturation and bleeding oil. One vertical frac. throughout top 3 inches. Poor to no reservoir.

84-84'11": Limestone, tan, mottled, smoky gray, crypto-crystalline to extremely dense, hard, lithographic, occasional trace re-crystallization, part finely banded dark gray with trace pyrite crystals, some small fairly soft, flaky areas. No porosity and no shows. No reservoir.

84'11"-85'1": Shale, gray-brown, compact, drab, slightly calcareous, with some scattered fine inclusions as above.

85'1"-86: Limestone, tan to brown, finely and medium crystalline to mostly very dense, hard, siliceous, fairly abundant secondary calcite filled veins and vugs; thinly banded dark gray in part; occasional trace isolated vugs and fossil-casts with trace spotty saturation and bleeding oil and gas from last 3" of this interval. Fractured vertically throughout (fracture system consisting of 4 hair line vertical fracs), spotty light brown oil film with not much free oil or gas in fractures. Poor to no reservoir.

86-86'2": Shale, dark gray to black, carbonaceous, platy, calcareous in part.

86'2"-87: Limestone, cream to light grayish-brown, finely crystalline to crypto-crystalline, dense, hard, siliceous, slightly fossiliferous in part, some finely disseminated pyrite crystals and secondary calcite crystals; having no porosity and no shows. No reservoir.

87-87'10": Limestone, light gray to grayish-brown, finely and medium crystalline to dense, hard siliceous, slightly fossiliferous, vaguely oolitic in part; rare finely disseminated pyritic crystals, one small slightly argillaceous streak. No porosity and no shows. No reservoir.

87'10"-88'3": Limestone, tan, medium crystalline to dense, siliceous, re-crystallized, calcite filled veins and vugs; mostly tight to some scattered fossil-cast and vugular porosity, bleeding some light brown free oil and gas from matrix. Vertical fracture throughout with light brown oil film. Poor to no reservoir.

88'3"-89: Limestone, tan and brown mottled gray-brown, finely and medium crystalline, dense, hard, cherty, slightly fossiliferous, part very slightly argillaceous; some disseminated pyrite and secondary calcite crystals; tight, with no porosity and no shows. No reservoir.

89-90: Limestone, light brown to dark gray-brown, finely and medium crystalline to very dense, hard, siliceous, re-crystallized in part, slightly fossiliferous; tight to no porosity and no shows. No reservoir.

90'10": Limestone, light gray-buff to tan, finely crystalline to mostly crypto-crystalline, very dense, hard, siliceous, micro-fossiliferous and vaguely oolitic in part, some secondary calcite veins and finely disseminated pyrite crystals. Tight to no porosity and no shows. No reservoir.

90'10"-91': Shale, dark gray, slightly carbonaceous, very compact, hard, calcareous.

4291-91'11": Limestone, medium brown, finely crystalline to mostly extremely dense, hard, siliceous, re-crystallized in part; tight with no porosity and no shows. Vertical fracture in top 2½ inches. No reservoir.

4291'11"-92'11": Shale, black, carbonaceous, compact to platy, part calcareous, some fossiliferous limestone inclusions.

4292'11"-93': Limestone, brown, finely-medium crystalline to dense, hard, siliceous, fossiliferous, part sub-oolitic, some dark gray argillaceous lime near top of this interval; no porosity and no shows. Vertical fracture throughout. No reservoir.

4293-94': Limestone, light brown, finely crystalline to crypto-crystalline, micro-fossiliferous, vaguely oolitic, banded with thin streaks dark gray-brown lithographic lime and occasional very thin bands dark gray, compact, calcareous shale; having no porosity and no shows. No reservoir.

D.S.T. #1 - 4266-4294, Open 30', weak blow 5' and died, flushed tool @ 15 minutes, no help. Recovered 20 feet mud w/few specks oil. ISIP 39#/30", FSIP 39#/30", IFP 23#, FFP 31#.

Core #2 from 4297-4310: (Full Recovery)

CORE DESCRIPTION:

297-98'6": Shale, dark gray, slightly carbonaceous, fairly compact, fossiliferous, and slightly calcareous; becoming platy and more carbonaceous with depth.

298'6"-99'6": Shale, medium to dark gray, slightly carbonaceous, drab, compact to platy, lightly calcareous; some finely disseminated concretionary lime pebbles.

299'6"-4300: Limestone, tan to brown, finely crystalline to dense, siliceous, opaque, part sub-oolitic, very argillaceous; abundant light-dark gray and brown sub-waxy shale seams and partings, some with lime nodules. No porosity and no shows. No reservoir.

300-00'4": Limestone, cream to dirty buff, mottled, dark gray, finely crystalline to sub-crystalline, soft and flaky; part slightly fossiliferous and vaguely oolitic; last 1' with vertical frac. No porosity and no shows. No reservoir.

00'4"-01': Limestone, tan, very finely-finely crystalline to extremely dense, hard, siliceous, part with scattered secondary calcite filled veins and vugs; having no porosity and no shows. Fractured vertically throughout. No reservoir.

01-02'10": Limestone, cream to light tan, finely crystalline to extremely dense, hard, lithographic, very slightly fossiliferous, some secondary calcite filled vugs and veins; no porosity and no shows. Fractured vertically throughout. One thin black carbonaceous shale seam midway through this interval. No reservoir.

02'10"-03: Shale, black, carbonaceous, part calcareous, with occasional cream to white finely crystalline lime inclusions. Fractured vertically throughout.

03-03'9": Limestone, cream to light brown, finely to medium crystalline, most fairly dense, hard, siliceous, part re-crystallized; having no porosity and no shows. Vertical frac throughout (very spotty brown stain in frac), with no show oil. One very thin black carbonaceous shale streak @ 4303'5". No reservoir.

03'9"-04: Limestone, cream, finely crystalline to dense, hard, tight, siliceous; thin re-crystallized streaks with poor very scattered vugular and some inter-crystalline porosity with spotty saturation and bleeding light brown oil and gas; 1/8" and 1/4" thick @ 4303'9" and 11" respectively. Fractured vertically throughout. No reservoir.

04-05: Limestone, cream, finely to medium crystalline, dense, hard, siliceous, with occasional small isolated sucrosic re-crystallized areas with some inter-crystalline, fossiliferous, and vugular porosity and no shows oil. Most of matrix with no porosity. Vertical fracture throughout with trace light brown spotty oil stain in frac, no free oil. No reservoir.

05-06: Limestone, light gray, medium crystalline to dense, hard, siliceous, one in 1/8" re-crystallized streak @ 4305'4" with inter-crystalline and vugular porosity and slight trace bleeding oil; few other re-crystallized streaks with no shows. Most of matrix tight with no porosity. One 1/16" dark gray shale seam @ 4305'8". Some white, fresh, sharp, dime to quarter size chert inclusions in last 4" of this interval. Vertical fracture throughout with occasional trace brown, spotty oil stain. No reservoir.

06-06'5": Limestone, light gray to light brown, medium crystalline, dense, tight, siliceous, with occasional trace isolated vugs; few scattered secondary calcite crystals; fairly abundant light tan, fresh, sharp, glassy chert inclusions scattered throughout; 1/2"-1" chert seam from 4306'-06'5". Fractured vertically throughout with trace of spotty light brown staining. No reservoir.

06'6"-07'3" Limestone, light grayish-brown, thinly banded, dark gray, finely crystalline, very dense, hard, siliceous, part re-crystallized, tight with no porosity and no shows. Fractured vertically throughout with trace brown earthy staining with dendritic pattern in top 6" of frac. No reservoir.

07'3"-4": Shale, black, carbonaceous, with some cream, finely crystalline lime inclusions.

4"-08: Limestone, light tan, ^{speckled} dark gray, finely crystalline, dense, fossiliferous, highly spicular, having no porosity and no shows. One 1/4" black carbonaceous shale @ 4307'9 1/2". Vertical fracture throughout. No reservoir.

08-09: Limestone, light grayish-brown, finely crystalline to lithographic, extremely siliceous, few scattered secondary calcite crystals; having no porosity and no shows. Vertical frac throughout. One black, very thin carbonaceous shale seam at 4308' and a brownish-black calcareous shale seam 4308'3". No reservoir.

09'9": Limestone, as above, becoming somewhat more re-crystallized and coarsely crystalline near the base of this interval. Last one inch highly fossiliferous (Coquina). No porosity and no shows. Vertical fracture throughout. No reservoir.

09'10": Limestone, dark gray-brown, medium crystalline, fairly dense, fossiliferous, argillaceous, pyritic in part; with no porosity and no shows. Vertical frac. No reservoir.

10-11: Shale, dark gray to gray-brown, compact, fossiliferous, calcareous, dark.

SHALE @ 4310

Limestone, light gray-brown, medium crystalline to dense, siliceous, fossiliferous; slightly fossiliferous; occasional trace isolated

drilling samples with few scattered vugs, trace iridescent oil film and spotty brown staining. No Reservoir. No commercial value, not worth testing.

LOMERATE CHERT @ 4357

-64: Chert, vari-colored, fresh, sharp, sub-translucent, no visible porosity no shows; vari-colored soft, finely sandy clay-shale and fine-medium individual grains quartz sand and coarse, rounded, colored quartz pebbles. No shows in or dry samples. No reservoir.

-68: Clay, vari-colored, very soft, earthy "washy", silty and finely arenaceous, fine to medium grained clear, glassy, very compact pyritic sandstone, with no shows no porosity. No reservoir.

-76: Shale, predominantly gray and gray-green, silty, finely micaceous, some colored sand size chert, fragments, quartz pebbles, and lime pebbles.

-80: Chert, white to gray and yellow, fresh, sharp, sub-opaque, fossiliferous strombolitic, part slightly leached with some scattered spicule cast porosity; no shows oil or gas in wet or dry samples. This interval also carrying abundant vari-colored shale. No reservoir.

#3 from 4380-95: (Full Recovery)

DESCRIPTION

31: (Conglomerate) Shale & Chert (50-50), Shale, greenish-gray to dark gray-sub-waxy, clayey, with chert, cream to light tan banded smoky gray, fresh, sharp, aque, rare scattered, barren fossil-cast and vugular porosity with no shows. One g chert fragment; the rest in form of 1/16" to "fist" size inclusions. No reservoir.

32: (Conglomerate) Shale and Chert as above, shale becoming slickensided and barren, chert in form of 1/4" to "fist" size as above, also occasional trace brown dense limestone fragments and scattered trace small colored quartz pebbles. No reservoir.

(Conglomerate) as above with somewhat less chert and no quartz sand; one ch thick gray, fresh, sharp, sub-translucent, glassy chert streak from 4382'5"-8" clay-shale matrix at 45 degree angle.

Clay-shale, predominantly green to greenish-brown, sub-waxy slickensided, micatized, with scattered fairly small, sub-rounded, colored chert pebbles and (1st size) gray-white, mottled, dark gray, fossiliferous, sub-opaque, fresh, part inclusions with trace isolated fossil-cast porosity and no shows. No reservoir.

Clay-shale as above with few scattered rounded red, yellow, and clear pebbles, and small quartzose chert veins; few buff, dense limestone inclusions with depth. Some elongated, blocky to sub-rounded chert inclusions as to "fist" size. No reservoir.

AN @ 4385 (Spergen)

Dolomite (45 degree angle shale-dolomite contact @ top) light gray to light finely sucrose to medium crystalline, part sugary, some fairly dense, siliceous, fair scattered fossil-cast and vugular porosity; bleeding dark brown free dark brown saturation. Part strombolitic with trace dark brown tartrate. Poor reservoir.

85'9"-86'5": Clay-shale, greenish-brown, sub-waxy, slickensided, with very abundant finely disseminated colored rounded sand grains and quartz pebbles, trace quartzose chert; this interval with fairly abundant dense, tight, slightly glauconitic dolomite inclusions and large pebbles. No shows. Poor reservoir.

86'5"-87'4": Dolomite, light greenish-gray, crypto-sucrose to finely crystalline, dense, siliceous to part flaky, argillaceous, slightly glauconitic; no porosity and no shows; interbedded @ 45 degree angle with clay-shale, light to bright green, having somewhat less quartzose chert and scattered fine rounded sand grains than above. Poor reservoir.

87'4"-88'3": Dolomite, cream to light greenish-gray, crypto-sucrose, fairly dense, siliceous, fossiliferous, slightly argillaceous, having poor to fair scattered fossiliferous and vugular porosity and spotty brown uneven saturation; bleeding oil profusely; with occasional light to bright green sub-waxy, slickensided, silicified clay-shale seams and partings with light green, flaky sub-chalky dolomite inclusions. Poor reservoir.

88'3"-89': Dolomite, light greenish-gray, crypto-crystalline, to extremely dense, hard, siliceous, (almost lithographic) part flaky, slightly fossiliferous; very scattered isolated fossil-casts with trace brown stain, no free oil; last 3 inches 45 degree angle, light green, sub-waxy, slickensided, slightly silicified clay-shale seam. No reservoir.

89'-89'4": Shale, pale green, extremely compact, hard, silicified.

89'4"-90': Dolomite, light gray to light buff, crypto-crystalline to extremely dense, hard, siliceous, slightly glauconitic; tight with no porosity and no shows oil or gas. Poor reservoir.

90'-90'2": Shale, light gray, extremely compact, hard, silicified, almost dolomitic.

90'2"-5": Dolomite, light grayish-tan, very finely sucrose and finely crystalline to micro-crystalline, dense, hard, tight, slightly argillaceous; few thin slightly "sugary" streaks, with fair to good inter-crystalline, vugular, and fossil-cast porosity; uneven saturation, bleeding dark brown oil. Rare, pale green clay-shale partings. No reservoir.

5"-91: Dolomite, light gray, very finely to finely sucrose to crystalline, clean, dense, siliceous, part "sugary", having fair fossil-cast, vugular and inter-crystalline porosity, with fairly even brown saturation and bleeding oil. Fair reservoir.

91'-2: Dolomite, light gray to cream, very finely sucrose to finely crystalline, "sugary", fairly dense, siliceous, clean, fossiliferous, with excellent fossil-cast and inter-crystalline porosity, slightly streaked 439'13" to 6", most with even saturation, bleeding dark brown oil and water. Excellent reservoir.

2'-: Dolomite, cream to light greenish-gray, very finely sucrose to crystalline, dense, siliceous, clean, one shale lined stylolite midway through foot, slightly 92'6"-8", rest with fair to poor fossil-cast, vugular, and some inter-crystalline porosity; some scattered small sugary areas; uneven to even brown saturation and bleeding water. Fair reservoir.

8"-: Dolomite, cream to light gray, very finely to part medium crystalline, mostly "sugary", fairly dense, clean, with good inter-crystalline, vugular, fossil-cast porosity; even brown saturation, bleeding oil and water. Good

D.S.T. #2 - 4390-4395, Open 2 hours, weak increasing to good blow, recovered 120' gas in pipe, 220' clean oil (35 gravity) and 90' muddy oil. 310' total fluid or approximately 2.3 barrels. BHT 128 degrees. ISIP 1253#/30", FSIP 1125#/60", IFP 39#, FFP 122#.

ROTARY TOTAL DEPTH @ 4395

CONCLUSIONS AND RECOMMENDATIONS:

From the above it is evident that the only possible producing formation in the #1 Elmore is the Mississippian. Slight oil shows were encountered in the Ft. Scott and the first Cherokee lime. The entire Ft. Scott interval was cored in Core #1 and #2 and the upper most zone, the "pay" in most of the offsets was drill stem tested with no recovery of oil. Because the entire Fort Scott section from 4383-4410 was tight it has no commercial value at this location.

The slight show of oil encountered in the upper most Cherokee lime from 4315-17 is considered of no commercial value.

The Mississippian Dolomite was encountered at minus 1959 some 21 feet above the oil-water contact. Core #3 indicates the top 5 feet of Mississippian is broken and of no commercial value; however, the last 5 feet of core from 4390-95 is fairly uniform saturated dolomite and has approximately 4-1/2' of net pay from 4390 1/2'-95. At total depth (-1969) the Elmore #1 should be approximately 10 feet above the water. From core analysis and drill stem test information there is good probability that a commercial well can be made after stimulation (acid) and without further penetration in the Mississippian.

EST. WTR
- 1980

In view of the above, recommendation was made to set 5-1/2" production casing in the Elmore #1 at 4390 1/2', 4 1/2' off bottom on December 29th, 1962.

Respectfully submitted,

Don W. Beauchamp

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