

KCC

Geological Report

21-25-5E
ORIGINAL

APR 5 1995

OXY USA, INC.
 Chesney "A" No. 232
 2190' FNL, 1980' FEL
 Sec. 21-T25S-R5E
 Butler Co., Kansas
 El Dorado Field
 API#15-015-23432

Contractor: Allen Drilling Co., Rig #3.

Commenced: 9:30 PM March 18, 1995. Reached R.T.D. 2405' at 7 PM
 March 22, 1995.

Completed:

Elevations: 1375' K.B., 1370' G.L.

Total Depth: 2405' (-1030)

Casing; Surface-8 5/8" at 259' with 200 sacks cement.

Production-5 1/2" at 2404' with 375 sacks cement.

Testing Program: None

Logging Program: None

Samples: 10' wet and dry from 500' to 830'; 10' dry from 830' to
 1350'; 10' wet and dry from 1350' to 2350'; 5' wet and
 dry from 2350' to 2405'.

Drilling Time: one foot from 500' to 2405'.

Geologist: Herbert R. Johnson.

Vertical Deviation Survey

1 1/2	degree at	260'
1	" "	764'
1	" "	1260'
3/4	" "	1784'
1	" "	2405'

Formation Tops

Admire	612 + 763
Burlingame	758 + 617
White Cloud	841 + 534
Topeka	900 + 475
Oread	1321 + 54
Heebner	1359 + 16
Toronto	1375 - 0
Douglas Shale	1390 - 15
Douglas Sand	1437 - 62
Lansing	1626 - 251
Base Lansing	1762 - 381
Kansas City	1915 - 540
Base Kansas City	2076 - 701
Checkerboard	2146 - 771
Hepler	2178 - 803
Altamont	2200 - 825
Pawnee	2237 - 862
Cherokee Shale	2275 - 900
Conglomerate	2357 - 982
Arbuckle	2398 - 1023
R.T.D.	2405 - 1030

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Sample Description

500-612 Interbedded white to tan fine crystalline limestone and gray to green shale. Poor samples, contain 80% cement.

Admire 612 +763

612-627 Sandstone, tan, white, very fine grained, friable, poor porosity, trace fluorescence. Very poor samples, sand only 1% of sample, 90% cement.

627-645 Shale, gray.

645-758 Interbedded limestone and shale, NS.

Burlingame 758 +617

758-800 Limestone, white, tan, fine crystalline, dense, trace poor porosity with stain.

800-808 Shale, gray, green.

808-847 Interbedded shale and limestone.

White Cloud 841 +534

841-850 Sandstone, brown, very fine grained, micaceous, friable, poor to fair porosity, light stain.

850-900 Interbedded limestone and shale.

Topeka 900 +475

900-930 Limestone, white, gray, tan, fine crystalline, dense.

930-938 Shale, gray, grayish green.

938-954 Limestone, grayish brown, fine crystalline, dense.

954-967 Shale, gray.

967-980 Sandstone, tan, white, very fine grained, poor porosity, light stain, fluorescence.

980-1194 Interbedded limestone and shale, NS.

1194-1204 Limestone, tan, fine crystalline, dense.

1204-1207 Shale, black, carbonaceous.

1207-1270 Limestone, white, tan, fine to coarse crystalline, vugular, poor to fair porosity, NS.

1270-1321 Shale, gray.

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Oread 1321 +54

1321-1359 Limestone, tan, fine crystalline, dense.

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Heebner 1359 +16

1359-1363 Shale, black, carbonaceous.

1363-1365 Limestone, white, tan, fine crystalline, dense.

1365-1375 Shale, gray, grayish green.

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Toronto 1375 0

1375-1390 Limestone, white, fine crystalline, dense, trace stain and fluorescence.

Douglas Shale 1390 -15

1390-1437 Shale, gray, grayish green with interbedded very fine grained, tight sandstone.

Douglas Sand 1437 -62

1437-1484 Sandstone, gray, tan, very fine grained, calcareous cement, poor to fair porosity, faint odor, fluores-

cence, trace free oil; some interbedded gray shale.
 1484-1530 Shale, gray with interbedded gray siltstone.
 1530-1538 Shale, gray.
 1538-1544 Limestone, light tan, fine crystalline, dense.
 1544-1574 Shale, gray.
 1574-1579 Limestone, tan, fine crystalline, dense.
 1579-1626 Shale, gray, green.

Lansing 1626 -251

1626-1634 Limestone, white, tan, fine crystalline, 10% poor porosity with stain and fluorescence, fair odor.
 1634-1675 Limestone, white, tan, fine crystalline, dense, trace fluorescence..
 1675-1685 Limestone, tan, fine crystalline, fair to good porosity, well stained, fluorescence, good odor.
 1685-1690 Limestone, tan, fine crystalline, poor to fair porosity, light stain and fluorescence.
 1690-1696 Limestone, tan, fine crystalline, fair porosity, light stain and fluorescence, trace odor.
 1696-1720 Limestone, off white, light tan, fine crystalline, dense.
 1720-1750 Limestone, tan, fine crystalline, dense.
 1750-1762 Limestone, buff, gray, fine crystalline, dense.
 Base Lansing 1762 -387

1762-1830 Shale, gray, silty.
 1830-1915 Shale, gray, pyritic.

Kansas City 1915 -540

1915-1922 Limestone, off white, tan, fine crystalline, partly oolitic, dense.
 1926-1936 Limestone, off white, tan, 30% poor to fair porosity with stain and fluorescence, fair odor, trace free oil.
 1936-1946 Limestone, off white, fine crystalline, dense.
 1946-1960 Limestone, off white, tan, fine crystalline, poor to fair porosity, 60% fluorescence, fair to good odor, fair show free oil. 5% Chert, white.
 1960-1973 Limestone, light tan, fine crystalline, dense.
 1980-1988 Limestone, buff, fine crystalline, fair porosity, light stain, good odor, no show free oil.
 1988-2016 Limestone, off white, buff, fine crystalline, dense, 5% fluorescence.
 2016-2020 Shale, black, carbonaceous.
 2020-2040 Limestone, off white, fine crystalline, dense, trace fluorescence; 10% Chert, white.
 2040-2042 Shale, black, carbonaceous.
 2042-2058 Limestone, off white, buff, fine crystalline, dense.
 2058-2066 Siltstone, gray & gray shale.
 2066-2076 Limestone, tan, brown, fine crystalline, oolitic, dense.

Base Kansas City 2076 -701

2076-2110 Shale, gray, grayish green.
 2110-2144 Shale, gray, silty.
 2144-2146 Shale, black, carbonaceous.

Cherokee 2146 -771

2146-2158 Limestone, light tan, buff, fine crystalline, dense.

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2158-2178 Shale, grayish green, silty with interbedded gray siltstone.

Hepler 2178 -803

2178-2200 Sandstone, gray, very fine grained, argillaceous, friable, micaceous, poor porosity, trace stain and fluorescence.

Altamont 2200 -825

2200-2206 Limestone, off white, buff, fine crystalline, dense.

2206-2207 Shale, black, carbonaceous.

2207-2209 Limestone, AA.

2209-2220 Shale, grayish green, gray.

2220-2237 Shale, gray, dark gray, pyritic.

Pawnee 2237 -862

2237-2256 Limestone, tan, buff, fine crystalline, dense.

2256-2258 Shale, black, carbonaceous.

2258-2275 Limestone, white, buff, tan, fine crystalline, dense.

Cherokee 2275 -900

2275-2278 Shale, black, carbonaceous.

2278-2281 Limestone, tan, fine crystalline, dense.

2281-2282 Shale, black, carbonaceous.

2282-2315 Shale, gray, grayish green, pyritic.

2315-2320 Siltstone, gray, micaceous, firm.

2320-2341 Shale, gray, greenish gray, pyritic.

2341-2348 Limestone, tan, fine crystalline, dense.

2348-2352 Shale, black, carbonaceous.

2352-2357 Shale, gray, green.

Conglomerate 2357 -982

2357-2359 Chert, white, tan.

2359-2365 Siltstone, gray, off white, micaceous, poor porosity, trace odor.

2365-2372 Chert, white, gray, buff, partly oolitic with abundant loose, fine to medium grained, well rounded clear quartz grains, faint odor, trace free oil.

Circulated for samples 30 minutes at 2372'.

2372-2380 Chert, AA, trace free oil.

Circulated for samples 30 minutes at 2380'.

2380-2390 Chert, AA.

Circulated for samples 30 minutes at 2390'.

2390-2396 Chert, AA, trace free oil.

Circulated for samples 30 minutes at 2396'.

2396-2398 Chert, AA.

Arbuckle 2398 -1023

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2398-2405 Dolomite, tan, buff, fine crystalline, pyritic, dense,
10% poor porosity with stain and fluorescence, fair
odor, trace free oil.
20% Chert, white, oolitic.

Circulated for samples 45 minutes at 2405'.

R.T.D. 2405 (-1030)

Strap	2434.25'
Board	2431.77
Strap long to board	<u>2.48'</u>

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