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Consulting Geologist

33-14-22E
June 21, 1979
1721 Stagecoach Drive
Olathe, Kansas 66061

GEOLOGICAL REPORT

Fleetwood Oil Corporation #1 Hennrich
Section 33-14S-22 East
Johnson County, Kansas
Elevation: 987 Ground Level (From KGS Topographic Map)

FORMATION TOPS: Sample (Log would not go to bottom.)

Mississippian	1027(- 40)
Kinderhook Sh	1436(-449)
Viola Dolomite	1496(-509)
Simpson Sand	1570(-583)
Arbuckle Dolo.	1666(-679)
Total Depth	1690(-703)

The undersigned began watching this well at the well site just above the Mississippian formation, but microscopically examined the available samples from 500 feet to Total Depth.

- | | |
|---------|---|
| 500-20 | Gray fine crystalline limestone & gray shales. Trace of very fine grained micaeous sand. |
| 520-40 | Much white and gray fine crystalline limestone. Gray shale as above. |
| 540-60 | Same, plus white & gray fine grained micaceous sandstone. No Show. |
| 560-80 | Creamy white fine crystalline limestone plus a streak of lignite. |
| 580-600 | White & gray very fine crystalline limestones. |
| 600-20 | White & brown dense limestone & gray shales. |
| 620-40 | White & gray very fine grained, micaceous, porous sand. N.S. |
| 640-60 | Sand, as above. No show or stain. |
| 660-80 | Gray & dark gray shale. |
| 680-700 | Several clusters of fine grained micaceous sand with good light brown stain & saturation. Good fluorescence. |
| 700-20 | Trace of sand with a show, as above, but sample almost 80 percent lignite. |
| 720-40 | Lignite & dark gray shale. |
| 740-60 | Blue gray shale. |
| 760-80 | Blue-gray shale, as above, & lignite. |
| 780-800 | Lignite & gray shale, as above. |
| 802-820 | CORE #1. (This core reportedly had a thin sand which was analyzed, but I did not see it.) |
| 820-40 | Sample seems mostly caving. Quite a few pieces sandstone, very fine grained, mica., with good dark brown oil stain. (Oil appears heavy. Low gravity?) |

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GEOLOGICAL REPORT

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Page 2

- 840-60 Mostly dark gray & black shales.
- 860-80 Ditto.
- 880-900 Gray very fine grained sandstone. Good porosity, no show.
- 900-20 Sand, as above. No show, & dark gray shales.
- 920-40 Ditto.
- 940-60 Abundant white very fine grained sandstone. No fluorescence or stain, & dark gray & black shale.
- 960-65 Abundant white fine grained sandstone. Good porosity. No show, & blk & dk gry shales.
- 965-70 Ditto.
- 970-80 White very fine grained micaceous sandstone. Good porosity. No show.
- 980-90 Ditto.
- 990-1000 Black carbonaceous shale.
- 1000-10 Black shale, as above, & a trace of pale green conglomerate shale.
- 1010-20 Hard dark gray & black shale.
- Top Mississippian 1027(-40)
- 1020-30 Few pieces of dark brown hard limestone, trace of sharp chert. Shale, as above.
- 1030-40 Abundant white sharp chert, & some creamy white & tan very fine crystalline glauconitic limestone. Fair quantity of clear, quartz sand. Good porosity, no show.
- 1040-50 White & tan, fine to medium crystalline limestones, glauconitic & crinoidal in part. Much white & tan sharp chert. No fluorescence or stain.
- 1050-60 Brown & tan, very fine crystalline, very dense limestone, with brown sharp cherts.
- 1060-70 Creamy white & tan very fossiliferous limestone, & much tan dense limestone as above.
- 1070-80 Very fossiliferous tan & buff limestone. Porosity looks low. No show.
- 1080-90 Tan fossiliferous lime as above & abundant sharp tan chert.
- 1090-1100 Tan & buff limestone as above & abundant white & clear very sharp chert.
- 1100-10 Buff & white fossiliferous limestone as above & sharp tan & white chert.
- 1110-20 Tan fossiliferous limestone. Less chert than above.
- 1120-30 Tan fossiliferous limestone & much clear & blue-gray very sharp chert. No fluorescence.
- 1130-40 White sharp chert & gray sucrose vuggy dolomite.
- 1140-50 Tan sucrose dolomite & sharp chert as above.
- 1150-60 Ditto.
- 1160-70 Abundant tan sucrose dolomite as above & tan very sharp chert.
- 1170-80 Ditto.
- 1180-90 Ditto.
- 1180-90 Ditto.
- 1190-1200 Ditto.
- 1200-10 Brown mottled fossiliferous limestone & white sharp chert as above.
- 1210-20 Brown finely sucrose dolomite, vuggy. Good porosity. No show.
- 1220-30 Tan & buff dolomite & sharp tan chert.
- 1230-40 Ditto.
- 1240-50 Mostly white blocky sharp opaque chert.
- 1250-60 Ditto & buff sucrose dolomite.

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GEOLOGICAL REPORT
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Page 3

- 1260-70 Ditto
 1270-80 Gray finely sucrose dolomite & white chert as above.
 1280-90 Ditto.
 1290-1300 White coarse crystalline limestone & white chert as above.
 1300-10 Buff & gray finely sucrose dolomite & white blocky chert.
 1310-20 White & buff dolomite as above & much sharp chert.
 1320-30 Ditto.
 1330-40 Brown & gray sucrose dolomite & much sharp chert.
 1340-50 Ditto.
 1350-60 Gray sucrose dolomite & sharp gray chert.
 1360-68 Ditto.
 1368 Circ. Gray sucrose dolomite & sharp chert. No fluorescence. No stain.
 1368-80 Gray very dense dolomitic limestone & gray blocky chert, very sharp.
 1380-90 Ditto.
 1390-1400 Gray & buff dense lime & gray blocky chert as above.

- 1400-10 Same as above.
 1410-20 Brown & gray very dense limestone.
 1420-30 Ditto.
 1430-40 Ditto.
 1440-50 Sample mostly caving, but appears same as above.

Kindershook Shale 1436(-449)

- 1450-60 Samples nearly 100% shale, greenish gray & black. Much pyrite.
 1460-70 Ditto.
 1470-80 Ditto.
 1480-90 Ditto.

Viola Dolomite 1496(-509)

- 1490-1500 Samples very poor, but abundant gray dolomite, very dense. No show.
 1500-70 Ditto.

Simpson Sand 1570(-583)

- 1577 Circ. Clear & frosted, rounded quartz sandstone. Good porosity in mostly unconsolidated sand grains. No fluorescence or stain.
 1580-90 Ditto.
 1590-1600 Unconsolidated, clear, coarse quartz sand grains. No fluorescence or stain.

- 1600-30 Coarse grained clear & frosted, rounded quartz sandstone. Good porosity. No show.
 1630-40 Much sand as above, but a trace of white opaque chert. Some chert is oolitic.
 1640-60 Ditto.

Arbuckle Dolomite 1666(-679)

- 1660-70 Trace of oolitic chert, some gray very fine crystalline dolomite. Very dense. No show.
 1670-80 Circ. @ 1673. Tan & gray dolomite, poor to fair porosity. No show.
 1680-90 Total Depth. Gray and tan medium to coarse crystalline dolomite, abundant white sharp chert. No show.