

GEOLOGICAL REPORT

#1 STUECKEMANN
C NE SE Sec. 14-23S-19W
Edwards County, Kansas

GEOLOGICAL REPORT

COMPANY: Imperial Oil Company

Farm: #1 Stueckemann

Contractor: Imperial Oil Company, Rig #2

Pool: Badger Hill

Edwards County, Kansas

C NE SE Sec. 14-23S-19W

Elevation: 2236 K.B.

Rotary Total Depth: 4547'

Rotary Completed: August 20, 1969

Geological Data:

Samples were examined from 2200 ft. to Rotary Total Depth. One foot drilling time was kept from 2200 ft. to Rotary Total Depth. (Electric log information: A Great Guns Radiation Guard log with Caliper was run.)

Formation Tops

	<u>Sample Tops</u>	<u>Electric Log Tops</u>
Top Anhydrite	1348 (✓ 888)	1348 (✓ 888)
Base Anhydrite	1370 (✓ 866)	1371 (✓ 865)
Heebner	3862 (-1626)	3856 (-1620)
Toronto	3882 (-1646)	3874 (-1638)
Douglas Shale	3891 (-1655)	3886 (-1650)
Brown Lime	3962 (-1726)	3957 (-1721)
Lansing	3972 (-1736)	3967 (-1731)
Base Kansas City	4280 (-2044)	4273 (-2037)
Marmaton	4301 (-2065)	4297 (-2061)
Cherokee Sand	4493 (-2257)	4487 (-2251)
Mississippi	4525 (-2289)	4525 (-2289)
Rotary Total Depth	4547 (-2311)	4539 (-2303)

NOTE: All electric log tops were approximately 5-7 ft. higher than sample picks; therefore, due to this error, I will use all electric log measurements for descriptions.

Porosity and Shows of Oil

Lansing

- 3768-71 Limestone, buff to white, fine to mealy and chalky, slightly cherty. Poor porosity with no show or odor.
- 4007-11 Limestone, buff to white, finely crystalline. Fair scattered vugular porosity with no show or odor.
- 4024-31 Limestone, buff, finely crystalline. Fair to poor vugular porosity with no show or odor.
- 4066-94 Limestone, buff to white, fine to medium crystalline with some chalk, fair inter-crystalline and vugular porosity. No show or odor.

GEOLOGICAL REPORT: #1 Stueckemann

4112-22 Limestone, buff, finely crystalline, slightly oolitic and good oolitic porosity. No show or odor. NOTE: The electric log indicated this zone should be good; therefore, a straddle test was taken.

DST #3 (Straddle test) 4099-4127'. Open 60 minutes. Strong blow. Recovered 1400 ft. muddy salt water with no shows. ICIP 1306#/30", IFP 129#, FFP 762#, FCIP 1306#/30".

4141-47 Limestone, buff, finely crystalline, slightly oolitic. Fair to good oolitic porosity. No show or odor.

4163-65 Limestone, buff, fine to dense with scattered fair to poor oolitic porosity. No show or odor.

Cherokee Sand

4487-94 Sand, white, medium, round-to sub-rounded, friable, fair porosity. No show, odor or fluorescence.

DST #1 4474-99'. Open 60 minutes. Very weak blow for 5 minutes. Recovered 10 ft. mud with no show. ICIP 40#/30", IFP 35#, FFP 35#, FCIP 35#/30".

4499-4505 Limestone, shite, mealy and chalky with shale vari-colored. No show, odor or fluorescence.
NOTE: The electric log indicated this to be sand and should be tested. It calculated 26% porosity and 62% water saturation. Two straddle DST's were taken over this section. The first one had both packers fail and the second one had the bottom packer fail; however, since the recovery was less and had no show of oil and the pressures were higher than in the Mississippi, it was my assumption that the recovery came from the zone in question.

DST #4 (Straddle test) 4468-4514'. Packer failed.

DST #5 (Straddle test) 4467-4516'. Open 60 minutes. Strong blow. Recovered 495' muddy water with no show. ICIP 1329#/30", IFP 46#, FFP 293#, FCIP 1306#/30". Note: Bottom packer failed.

Mississippi Chert

4525-47 Chert, tan and white and yellow, fresh, sharp, slight, fair scattered vugular porosity with white, tripolitic chert. Fair show of free oil, fair scattered stain, faint odor. Fair to good porosity.

GEOLOGICAL REPORT: #1 STUECKEMANN

DST #2 4522-47'. Open 90 minutes. Strong blow. Recovered 680 ft.
muddy salt water, with specks of oil. ICIP 1226#/30",
IFP 70#, FFP 399#, FCIP 1169#/30".

Rotary Total Depth 4547 ft.

D & A

August 20, 1969

IMPERIAL OIL COMPANY

Charley V. Shank
Charley V. Shank
Geologist on Well

CVS:jd