

RICHARD G. SMITH

PETROLEUM GEOLOGIST

RESIDENCE
2934 EUCLID

301 BEACON BLDG.
WICHITA 2, KANSAS

OFF. AM 5-9626
RES. WH 3-0703

September 25, 1958

Westheimer - Neustadt & Shear
Box 974
Ardmore, Oklahoma

Re: Westheimer - Neustadt & Shear
Cahoj No. 1
NW NW NE Sec. 13-2s-36w
Rawlins County, Kansas

Gentlemen:

The following is my interpretation of the geologic data derived from the samples, drilling time log, and Schlumberger electrical log and microlog on the Cahoj No. 1.

<u>Formation</u>	<u>Sample Tops</u>	<u>Schlumberger Tops</u>
Anhydrite	3180 (/127)	3182 (/125)
Topeka	4152 (-845)	4162 (-855)
Lansing-Kansas City	4308 (-1001)	4322 (-1015)
Base Kansas City	4549 (-1242)	4550 (-1243)
Marmaton	4595 (-1288)	4612 (-1305)
Cherokee	4732 (-1475)	4766 (-1459)
Mississippian	4938 (-1631)	4934 (-1629)
Arbuckle	5037 (-1730)	5036 (-1729)
Rotary Total Depth	5090 (-1783)	5089 (-1782)

REGIONAL STRUCTURAL CORRELATIONS:

<u>Formation</u>	<u>Westheimer et al</u> No. 1 Cahoj NW NW NE 13-2s-36w D - A	<u>Miami</u> No. 1 Brumma "A" NE SE SW 7-2s-36w Oil	<u>Ashland</u> No. 1 Kacirek NE SE SW 8-2s-36w D - A
Anhydrite	/125	/105	/100
Topeka	-855	-845	-860
Lansing-Kansas City	-1015	-989	-1006
Marmaton	-1305	-1273	-1293
Cherokee	-1459	-1443	-1471
Mississippian	-1629	-1636	-1631
Arbuckle	-1729	-1787	

SHOWS OF OIL AND/OR GAS:

Topeka Zones:

4161-4168 Cream medium crystalline limestone with pinhole to good vuggy porosity. No shows of oil and/or gas observed.

4228-4237 Red silty fine size rounded sand. No shows of oil and/or gas observed.

Lansing-Kansas City Zones:

4329-4338 Gray white finely crystalline chalky limestone. No shows of oil and/or gas observed. Schlumberger, from 4328 to 4337, indicates approximately 17% porosity; 63% water saturation.

4380-4390 Cream fine to medium crystalline limestone with scattered vuggy porosity. No shows of oil and/or gas observed. Schlumberger, from 4385 to 4393, indicates approximately 13% porosity; 72% water saturation.

4422-4430 Gray - white finely crystalline slightly vuggy limestone, trace pinhole to vuggy porosity. No shows of oil and/or gas observed. Schlumberger, from 4426 to 4430, indicates approximately 9% porosity; 60% water saturation.

4464-4473 Gray finely crystalline slightly vuggy limestone; trace brown residual oil staining; no fluorescence; no free oil. Recommended not testing this zone. Schlumberger indicates zone of very little or no porosity.

Marmaton Zones:

Samples and Schlumberger indicated no porous zones with shows of oil and/or gas in the rather poorly developed limestones encountered in this section.

Cherokee Zones:

4890-4906 Clear, glassy fine size angular to sub-rounded sand. No shows of oil and/or gas observed. Schlumberger, from 4888 to 4906, indicates approximately 20% porosity; 100% water saturation.

Mississippian Zones:

4938-4950 White, spongy fossiliferous, vuggy chert; abundant large rounded clear to frosted sand; good vuggy porosity; no shows of oil and/or gas observed. Schlumberger, from 4945 to 4954, indicates approximately 24% porosity; 100% water saturation.

Arbuckle Zones:

5037-5072 Gray to tan, medium to coarsely crystalline, glauconitic, pyritic dolomite; fair to good intercrystalline and vuggy porosity. No shows of oil and/or gas observed.

5075-5090 Pink fine to coarsely very glauconitic, sandy, vuggy dolomite; excellent porosity; no shows of oil and/or gas observed.

In view of the absence of commercial showings of oil being indicated in the potentially productive formations, it was recommended and approval granted for the No. 1 Cahoj to be plugged as dry and abandoned.

All measurements were taken from the kelly bushing and Schlumberger measurements of tops, zones, and rotary total depth are taken as correct.

Very truly yours,

RICHARD G. SMITH
Petroleum Geologist

RGS/cs