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RESIDENCE
2934 EUCLID

301 BEACON BLDG.
WICHITA 2, KANSAS

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

August 13, 1958

Re: Jackson, Shear, and Parker
Ruda No. 1
C NE SW Sec. 14, T. 4S, R. 33W
Rawlins County, Kansas

Jackson, Shear, and Parker
Box 149
Duncan, Oklahoma

Gentlemen:

The following is my interpretation of the geologic data derived from the samples, drilling time log, drill stem tests, and Welex Radiation-Guard survey on the Ruda No. 1.

Formation	Sample Tops	Welex Tops
Anhydrite	2685 (+315)	2683 (+317)
Topeka	3744 (-744)	3745 (-745)
Heebner	3880 (-880)	3878 (-878)
Toronto	3909 (-909)	3908 (-908)
Lansing-Kansas City	3919 (-919)	3919 (-919)
Base Kansas City	4154 (-1154)	4154 (-1154)
Marmaton	4166 (-1166)	4167 (-1167)
Cherokee	4315 (-1315)	4326 (-1326)
Mississippian	4488 (-1488)	4491 (-1491)
Arbuckle	4628 (-1628)	4622 (-1622)
Rotary Total Depth	4680 (-1680)	4681 (-1681)

REGIONAL STRUCTURAL CORRELATIONS:

Formation	Jackson et al No. 1 Ruda C NE SW 14-4s-33w	Trans-Era No. 1 Vrbas NW NW NW 20-4s-32w D & A	J - S - F No. 1 Ackerman NE NE NE 3-4s-34w D & A
Anhydrite	+317	+292	+311
Topeka	-745	-770	-711
Heebner	-878	-912	-868
Lansing-Kansas City	-919	-956	-908
Marmaton	-1167	-1204	-1196
Cherokee	-1326	-1362	-1333
Mississippian	-1491	-1490	-1522
Arbuckle	-1622	-1638	
Total Depth	-1680	-1691	-1579

SHOWS OF OIL AND/OR GAS:

Topeka Zones:

3744-3752 Gray-white finely crystalline limestone; trace hard black residual gilsonite; no fluorescence.

3775-3786 Gray-white finely crystalline limestone; streaked pin-hole - vuggy porosity; no shows of oil and/or gas observed.

3846-3852 Gray-white finely crystalline, chalky limestone; scattered vuggy porosity; no shows of oil and/or gas observed.

3860-3870 White finely crystalline limestone; scattered vuggy and pin-hole porosity; no shows of oil and/or gas observed.

Toronto Zone:

3909-3912 Gray-white finely crystalline, slightly vuggy limestone; scattered vuggy porosity; trace heavy free oil; scattered spotted oil stain and fluorescence. Recommended drill stem testing this zone.

Lansing-Kansas City Zones:

3919-3922 & 3926-3928 Gray-white finely crystalline, slightly oolitic and vuggy limestone; scattered vuggy porosity; trace heavy free oil; scattered spotted oil stain and fluorescence. Recommended drill stem testing this zone.

No. 1 drill stem test, 3901-3930, open 1 hour, had a weak steady blow and recovered 180 feet of watery drilling mud; closed-in 20 minutes; IBHP 1290 p.s.i.; IFP - FFP 0 p.s.i.; FBHP 1205 p.s.i.

3942-3947 White finely crystalline, granular, vuggy limestone; good show free oil, good fluorescence; fair to good scattered vuggy porosity; good oil saturation. Recommended drill stem testing this zone.

3953-3957 Gray finely crystalline, vuggy limestone; poor to fair porosity; poor to fair show free oil; good fluorescence; good scattered, spotted to even oil staining. Recommended drill stem testing this zone.

No. 2 drill stem test, 3936-3961, open 1½ hours, had a weak steady blow and recovered 90 feet oil and gas cut mud; 120 feet muddy gassy oil; 60 feet muddy oil; closed-in 20 minutes; IBHP 1285 p.s.i.; IFP 0 p.s.i.; FFP 118 p.s.i.; FBHP 1020 p.s.i.

3987-3990, 3993-3998, & 4008-4010 Gray finely crystalline limestone with scattered, poor intercrystalline - vuggy porosity; poor show free oil; fair, scattered spotted oil staining and fluorescence. Recommended drill stem testing these zones.

No. 3 drill stem test, 3982-4018, open 1 hour, had a weak to fair blow and recovered 390 feet salt water; closed-in 20 minutes; IBHP 1365 p.s.i.; IFP 0 p.s.i.; FFP 210 p.s.i.; FBHP 1255 p.s.i. in 30 minutes.

4089-4096 Gray finely crystalline slightly vuggy limestone; poor pin-hole to vuggy porosity; trace light free oil; fair scattered oil staining and fluorescence. Recommended drill stem testing this zone.

No. 4 drill stem test, 4089-4104, open 30 minutes, had a weak blow for 10 minutes and recovered 40 feet mud; closed-in 20 minutes; IBHP 1285 p.s.i.; IFP - FFP 0 p.s.i.; FBHP 1065 p.s.i.

Marmaton Zones:

4278-4285 Gray to white, finely crystalline to chalky, cherty, limestone; slightly oolicastic; no shows of oil and/or gas observed.

4306-4310 Gray finely crystalline - chalky limestone; poor to fair intercrystalline to slightly vuggy porosity; trace light free oil; scattered spotted flourescence and oil staining; few pieces with good oil saturation. Recommended drill stem testing this zone.

No. 5 drill stem test, 4295-4320, open 1½ hours, had a weak to fair blow and recovered 70 feet mud; 330 feet slightly oil cut mud; 180 feet oil and gas cut salt water. (Total fluid estimated to be about 15% oil.) Closed-in 20 minutes; IBHP equalled hydrostatic head (false); IFP 175 p.s.i.; FFP 278 p.s.i.; FBHP 1182 p.s.i. in 30 minutes.

Cherokee Zones:

4364-4372 Glassy, fine size, calcareous, shaley sand; no shows of oil and/or gas observed.

Mississippian Zones:

Samples indicated the section to consist of dense cherty limestone and coarsely crystalline limestone. No shows of oil and/or gas were indicated by the samples or Welex.

Arbuckle Zones:

4640-4669 Gray medium crystalline dolomite with good to excellent vuggy porosity; no free oil; no fluorescence; no odor or taste; slight stain in scattered vugs resulting from drilling fluid (oil emulsion).

Four and one-half inch production casing has been set and cemented at 4370 (-1370) feet, drillers' rotary bushing measurement. All measurements were taken from the kelly bushing and Welex measurements of tops, zones, and rotary total depth are taken as correct.

Recommendations for completion are:

1. Perforate casing opposite the Marmaton limestone from 4312 feet to 4315 feet.

   (a) Test zone
   (b) Treat zone with initial acid treatment of 250 to 500 gallons.
   (c) Test zone; treat with larger acid treatments if necessary.

2. Perforate casing opposite Lansing-Kansas City limestone from 4085 feet to 4095 feet.

   (a) Test zone
   (b) Treat zone with initial acid treatment of 1000 gallons.
   (c) Test zone; treat with larger acid treatments if necessary.

3. Perforate casing opposite Lansing-Kansas City limestone from 3946 feet to 3950 feet.

   (a) Test zone
   (b) Treat zone with initial acid treatment of 1000 gallons.
   (c) Test zone; treat with larger acid treatments if necessary.

The samples and Welex indicate there are no possible commercial oil producing zones behind the casing above the Marmaton and Lansing-Kansas City. It is recommended that the hole be plugged as dry and abandoned when the subject Marmaton and Lansing-Kansas City zones have been fully tested for commercial oil production and/or are depleted.

Very truly yours,

Richard G. Smith
Petroleum Geologist

RGS/cs