

16-195-6W

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GEOLOGIC REPORT

L. B. Jackson No. 1 Ramage
SW SW NE Sec. 16-19S-6W
Wildcat
Rice County, Kansas

Elevation: 1589 Rotary Bushing
1587 Derrick floor
1583 Ground Level
Contractor: Company tools
Spud: 10-17-52; 194' of 8-5/8" csg
Completed 11-2-52; Dry & abandoned

The #1 Ramage was drilled with rotary tools to 3576' Total Depth. Ten-foot samples were saved from 2200 to 2500 and 5-foot samples from 2500 to Total Depth. One-foot drilling time was recorded from 2200' to Total Depth. All samples were examined with a microscope and drilling was observed from approximately 2655' to Total Depth.

The quality of the samples was poor from approximately 3390 to the top of the Arbuckle at 3538, despite the fact that the weight, viscosity and water loss of the drilling mud were within proper limitations.

FORMATION TOPS, OIL SHOWINGS AND RELATED DATA

Included below are descriptions of all porous, oil-stained or otherwise significant lithologic zones. All measurements are based on the top of the Rotary Bushing.

Note: The electric log measurements appeared to be from 1' to 3' deeper than rotary depths from the top of the Topeka to Total Depth. Electric log Total Depth was 3' deeper than Drillers Total Depth.

Formation Tops & Notable Zones (*Denotes oil staining)	Depth below	Depth below	Remarks
	Surface	Sea Level	
Light gray fine-grained micaceous soft friable sand - fair porosity; gray non-fissile marly shale	2200-25		
Ditto & light gray fine calcareous tight sand	2225-32		
TOPEKA	2232	-643	
Cream-gray finely crystalline lime, trace oolites crystalline calcite streaks - possible slight porosity; trace gray opaque chert	2268-77		
Cream to light gray & buff finely crystalline lime partly calcitic with scattered slight vuggy or finely oolitic porosity	2309-15		
Cream, gray fine to med-crystalline partly calcitic lime - traces slight vuggy porosity; gray & dull green shale	2345-51		

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16-195-6W

Page #2, Geologic Report
 L. B. Jackson #1 Ramage
 SW SW NE Sec. 16-19S-6W, Rice Co, Kans.

Light gray to white sub-crystalline to chalky calcitic lime - traces slight vuggy porosity; light gray & white fossiliferous chert	2386-96	
HEEBNER SHALE	2516	-927
DODGE LIME	2538	-949
White chalky to crystalline soft oolitic lime - no apparent porosity	2538-41	
DOUGLAS	2550	-961
Gray to dark gray, green, maroon & brown shale; streaks greenish-gray fine micaceous sand - partly shaly & tight, part friable with possible slight to fair porosity	2550-65	
DOUGLAS SAND (Good sand)	2565	-976
Light greenish-gray med-fine sand & sand & shale as above	2565-85	
Shale as before	2585-88	
Light greenish-gray fine micaceous glauconitic sand - part friable with fair porosity, part calcareous & tight	2588-2613	
"BROWN LANSING"	2674	-1085
LANSING-KANSAS CITY	2702	-1113
Light gray to white & cream oolitic lime - fair to good porosity, no show; trace gray opaque chert	2723-27	
Gray, cream & some dark brown oolitic lime - traces slight porosity; trace gray granular chert	2780-91	Circ. 1 hr 2784
Cream-buff oolitic to oolitic lime - good porosity, no show	2802-05	Circ. 1 $\frac{1}{4}$ hrs 2810
Cream-buff, oolitic lime - good porosity, no show	2805-36	Six
Cream to light gray oolitic lime - good porosity, no show; traces light gray chert	2836-48	
Ditto, partly oolitic & some cream to light gray partly oolitic lime - slight to fair porosity, no show	2848-54	

Light gray to white sub-chalky & gray non-oolicastic lime - no porosity; some oolicastic lime as before - probably lag	2854-66	
Cream, light gray oolitic to slightly oolicastic lime - scattered slight porosity	2893-95	
Cream, light gray oolicastic lime - good porosity, no show	2895-98	Circ. 1 $\frac{1}{4}$ hrs 2899
Cream to buff oolicastic to partly oolitic lime - good porosity, no show; trace light gray chert	2924-30	Circ. 1 $\frac{1}{4}$ hrs 2927
Traces oolicastic to oolitic lime as above; sample mostly gray, red, green & brown non-fissile silty shale	2930-38	Circ. 1 $\frac{1}{4}$ hrs 2958 Circ. 1 $\frac{1}{4}$ hrs 3028 Circ. 1 $\frac{1}{2}$ hrs 3031 D.S.T. #1 3010-32, open 1 hr weak blow 8 min; recover 25' drlg mud, no show; 15-min Bottom Hole Pressure 12 lbs.
Cream finely succrose to semi-chalky lime - no apparent porosity	2954-60	
*White finely oolitic lime with slight porosity & small to fair shows free oil, fair stain	3019-29	
*Light gray to gray & some cream chalky to brittle lime with dark gray oolites & fossils - no show; traces light gray to cream finely oolitic lime with slight porosity and slight to fair oil stain; traces cream oolicastic lime - no show	3039-49	Circ. 1 $\frac{1}{2}$ hrs 3056 D.S.T. #2 3038-57 open 1 $\frac{1}{2}$ hrs good blow decreasing to fair blow throughout test; recover 185' muddy salt wtr, no show; Initial flow press. 40 lbs; Final flow press 105 lbs. 15-min Bottom
*Buff to gray oolitic lime with some inter-crystalline calcite - slight to fair scattered porosity & small to fair shows free oil, fair stain, slight odor	3049-54	Hole Press. 1020 lbs.
BASE KANSAS CITY	3077	-1488
*Light gray finely lime - some oolitic & fossiliferous, tight; trace gray finely crystalline lime with slight porosity and stain - apparently came from one of previous saturated zones; traces light gray oolicastic lime probably came - no show	3112-16	
MISSISSIPPIAN	3158	-1569
Amber to orange semi-translucent chert with black mottling - tight; dark bluish-gray to black mottled fossiliferous chert with black mineral streaks - tight	3158-61	Circ. 1 $\frac{1}{2}$ hrs 3158
White to light gray semi-translucent to opaque fossiliferous & spicular partly devitrified chert - tight; some cream to amber to orange chert - tight	3161-69	

Ditto, and increase in amber to orange & yellow finely speckled chert - tight; also some purple or lavender semi translucent chert - tight	3169-74	
Ditto & some light gray pseudo-crystalline chert - traces slight pin hole porosity; traces green opaque chert - tight	3174-81	
KINDERHOOK SHALE	3181	-1592
MISENER SAND	3390	-1801
Brown medium sub-angular sand with brown residual stain & brown shaly partings - part tight, part with possible slight to fair porosity	3390-96	
White medium to coarse poorly sorted sub-angular to rounded sand aggregates - some friable with fair porosity, no show	3396-3401	Circ. 1½ hrs 3401
*Some white medium to coarse sub-angular sand with fair porosity - 2 pieces with very small shows free oil; brown medium sand - no show	3403-10 3401-03	
Light gray to brown medium sand with brown residual stain - possible slight porosity, no show	3403-10	
*Ditto, traces slight porosity and asphaltic semi-dead sticky oil residue	3410-12	
Brown to gray medium very impure sand with brown micaceous carbonaceous shale partings - tight	3412-15	Circ. 1½ hrs 3415
*Ditto & white to light gray med to coarse sand - tight to slightly porous, 2 or 3 pieces with slight to fair porosity and small to fair shows heavy free oil	3415-22	
MAQUOKETA SHALE	3422	-1833
VIOLA	3441	-1852
Gray to dark gray mottled medium to coarsely crystalline dolomite & lime - tight; light gray to orange-gray semi-opaque chert	3441-48	
Light gray, gray med to coarsely crystalline lime - tight; light gray to buff mottled medium crystalline lime & dolomite - tight	3448-54	
Light gray to white med to coarsely crystalline lime - tight; light gray to buff & brown med crystalline dolomitic - lime & dolomite; considerable white chalky lime; traces light gray greasy chert	3454-66	

White & white very chalky soft banded lime	3466-72	
SIMPSON (Sandy lime & dolomitic sand)	3472	-1883
Cream-gray sub-crystalline lime with imbedded enohedral brown quartz crystals	3472-74	Circ. 1½ hrs 3472
Cream to brown medium to coarse dolomitic sand & sandy dolomite; traces gray medium crystalline lime with imbedded coarse sand grains - no apparent porosity	3474-82	
Gray, light gray med to coarse crystalline to granular mottled impure speckled tight dolomite; gray non- vitreous chert with brown spots	3482-90	
White fine to coarse sand aggregates with dark gray shale partings - possible slight porosity	3503-06	Circ. 1 hr 3513
SIMPSON SAND	3514	-1925
White med sub-angular sand aggregates, friable in part - possible fair porosity; green & gray-green shale streaks	3514-24	
Some white med to coarse glauconitic sand aggregates - tight to possibly slightly porous	3527-30	
Traces white to light gray medium to coarse sand aggregates - possible slight to fair porosity in part; mostly green, gray-green, dark gray & red-green mottled shale	3532-38	
ARBUCKLE	3538	-1949
Light buff and light gray to white medium to coarse crystalline dolomite - trace oolites - traces slight vugular porosity; some with white chalky inter- crystalline material - probably some porosity; some pinkish-buff medium to coarsely crystalline dolomite; white, light gray translucent oolitic chert chert	3538-49	
Buff to pinkish-buff coarse crystalline dolomite, finely oolitic in part - fair amount fair vugular porosity; light gray to white & brown to gray to amber oolitic chert	3549-56	
Cream-buff oolitic to oolitic dolomite - fair to good porosity; cream to white medium-fine succrose dolomite - some fair vugular porosity; light gray oolitic chert	3556-61	Circ. 1½ hrs 3562

Cream to buff medium to coarse crystalline dolomite, finely oolitic in part - some slight to fair vugular porosity; white to cream medium-fine succrose tight dolomite; light gray to white & light brown oolitic chert; trace cream medium crystalline dolomite with imbedded coarse rounded sand grains 3561-69

Buff & cream medium to coarsely crystalline slightly oolitic dolomite - tight; some cream-brown & gray oolitic chert 3569-73

Ditto, some rhombic - some fair vugular porosity chert as above 3573-76 Circ. 1 hr 3576

ROTARY TOTAL DEPTH 3576 -1987

Dry and Abandoned

Schlumberger Tops

Elevation 1589 (Rotary Bushing)	Kinderhook shale 3189 (-1600)
Topeka 2233 (-644)	Misener sand 3398 (-1809)
Heebner 2517 (-928)	Maquoketa shale 3428 (-1839)
Dodge 2532 (943)	Viola 3443 (-1854)
Douglas 2547 (-943) (-958)	Simpson sandy lime & Dolomitic sand 3475 (-1886)
Douglas sand 2565 (-976)	Simpson shale 3479 (-1890)
"Brown-Lansing" 2677 (-1088)	Simpson Dolomite 3481 (-1892)
Lansing-Kansas City 2703 (-1114)	Simpson sand 3516 (-1927)
Base Kansas City 3076 (-1487)	Arbuckle 3540 (-1951)
Mississippian 3160 (-1571)	Total Depth 3579 (-1990)

PRODUCTION POSSIBILITIES

The #1 Ramage is considered condemned from the production standpoint. The only oil-stained zones encountered were in the lower part of the Kansas City between 3019-29, 3039-49 and 3049-54. The first-mentioned zone was evaluated by the drill stem test from 3010-32 which recovered only 25' of drilling mud with no oil showings. The 2 last mentioned zones were evaluated by the drill stem test from 3038-57 which recovered 185' of muddy salt water with no oil showings. The zone from 3049-54 is correlative with the "pay" in the Odessa South Pool in the NW cor. Sec. 9 and SW $\frac{1}{4}$ Sec. 4-19S-6W and the "pay" in the Operator's Johanson wells in 18S-6W.
with

The traces of slight staining previously described between 3112-16 are believed to be cavings from the saturated zones tested and therefore non-prospective.

STRUCTURAL COMPARISONS

Although non-productive, the #1 Ramage is a relatively high well structurally. On the top of the Lansing formation it is only 6' lower than the J. M. Huber Corp. #1 Suns, NW NW NW Sec. 9-19S-6W, closest producer in the Odessa South Pool (Lansing production). It is 30' lower on the Arbuckle than #1 Sims.

Page #7, Geologic Report
L. B. Jackson #1 Ramage
SW SW NE Sec. 16-19S-6W, Rice Co., Kansas

On the Lansing the subject well is 32' higher than the dry well in the SE SE NE Sec. 20, 11' higher than the dry hole in the SE SE SW Sec. 21 and 18' higher than the dry hole in the NE NE SW Sec. 22. It is from 8' to 51' higher on the same formation than the reported tops on the wells in Sections 11, 14 and 23-19S-6W to the east.

The #1 Ramage also is higher by varying amounts on the successively deeper formations down to and including the Arbuckle than the wells to the south and east described above, with one exception. The reported Viola, Simpson and Arbuckle tops for the wells in Sec. 22 are 49', 41' and 36' higher respectively than in #1 Ramage. However, the tops mentioned appear somewhat questionable and may actually be lower than reported.

Yours very truly,



Don H. Smith *Dms*

DHS:RMS