

June 29, 1960

Rupp-Ferguson Oil Co.  
522 Union Center  
Wichita, Kansas

Rupp-Ferguson & B.O.A.  
No. 1 Freemyer  
C SW SE Section 20-27S-6W  
Kingman County, Kansas

Gentlemen:

Samples and drilling time on the captioned well were examined from 3000 feet to the total depth of 4212 feet. All formation tops and depths are with reference to Kelly bushing measurements. Following are the formation tops as determined from sample analysis and those taken from the Schlumberger log:

Elevation: 1545 Kelly Bushing  
1542 Derrick Floor  
1540 Ground

<u>Formation</u>	<u>Samples</u>	<u>Schlumberger</u>	<u>sp.</u>
Brown Lime	3072 (-1527)	3075 (-1530)	
Lansing-Kansas City	3093 (-1548)	3096 (-1551)	
Base Kansas City	3562 (-2017)	3564 (-2019)	2022
Cherokee	3728 (-2183)	3728 (-2183)	
Mississippian	3820 (-2275)	3822 (-2277)	3822
Kinderhook	4064 (-2519)	4068 (-2523)	21
Viola	4178 (-2633)	4178 (-2633)	3893
Simpson	4200 (-2655)	4200 (-2655)	
Total Depth	4212 (-2667)	4213 (-2668)	

A Schlumberger Laterolog-Sonic log was run with detail from 3000 feet to total depth. Two drill stem tests were taken, one in the Mississippian and one covering the Viola and upper Simpson.

Following is a sample description of zones carrying porosity:

LANSING-KANSAS CITY

3191-3208 Buff very finely vugular limestone to very finely sudo-oolicastic limestone, fair porosity, no staining.

3228-3237 Buff grainy fossiliferous limestone, vugular porosity, no staining.

3885-80

3862

- 3239-3248 Buff and tan mottled fossiliferous and nodular limestone, oolitic in part, fair porosity, no staining.
- 3316-3326 Buff grainy limestone, some fine vugular porosity, no staining.
- 3371-3378 Buff very finely spongy and sudo-oolitic limestone, no staining.
- 3429-3431 Buff and tan mottled oolitic limestone, few pieces show staining, questionable permeability.
- 3464-3468 Buff to grey Honeycomb oolitic limestone, few pieces show dark spotted stain, most porosity void of stain.
- 3511-3514 Buff finely oolitic limestone, pieces show fair porosity, no staining.

MISSISSIPPIAN

- 3820-3841 White tripolitic chert with sponge type porosity and very light stain, no free oil or odor in samples.
- 3841-3843 Same as above with some white vitreous chert.
- 3843-3850 White de-vitrified and tripolitic chert, some decrease in staining.

## Drill Stem Test No. 1 3823-3850

Tool open 1 hour, gas to surface in 3 minutes.

## Gas gauges:

5 minutes	1,630 M.C.F.G.
15 minutes	1,930 M.C.F.G.
30 minutes	1,930 M.C.F.G.
45 minutes	1,930 M.C.F.G.
1 hour	1,930 M.C.F.G.

Recovered 88 feet mud cut water and 62 feet of water

Initial Bottom Hole Pressure	1440 psi
Final Bottom Hole Pressure	1360 psi
Initial Flow Pressure	380 psi
Final Flow Pressure	270 psi

Pressures taken over a 20 minute interval.

- 3850-3867 White de-vitrified and tripolitic chert, some vitreous chert, decrease in staining.
- 3867-3894 White fresh to de-vitrified chert with white chalky limestone.

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3894-3922 White opaque chert, some finely sucrosic dolomite and white chalky limestone.

3922-3930 Same as above with increase of limestone.

3930-3939 White and blue white vitreous chert, some sucrosic dolomite and white chalky limestone.

3939-4064 White and buff chalky and coarse crystalline fossiliferous limestone with some white and blue white chert.

VIOLA

4178-4200 White very coarse crystalline dolomitic limestone, excellent intercrystalline porosity with gilsonite stain.

SIMPSON

4200-4204 Fine to medium grain sand imbedded in brown silty dolomite, no stain.

4204-4212 Medium grain white semi-rounded sand grains (in clusters), good porosity, no staining.

Drill Stem Test No. 2 4181-4212

Tool open 1 hour, strong blow diminishing and died in 42 minutes. Recovered 3285 feet of salt water.

Initial Bottom Hole Pressure	1530 psi
Final Bottom Hole Pressure	1520 psi
Initial Flow Pressure	1460 psi
Final Flow Pressure	1520 psi

Pressures taken over a 20 minute interval.

Decision was made to set casing and further test the upper Mississippian through perforations.

Yours very truly,

*Fred S. Lillibridge*  
Fred S. Lillibridge

FSL:md

DRILLING TIME LOG

Freemyer #1  
 C SW SE Sec. 20-27-6W  
 Kingman Co., Kansas

Depth		Drilling Time	Remarks
From	To		
3000	3010	2-2-1-1-2-2-1-1-1- $\frac{1}{2}$	
	3020	$\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ -1-1-1-1-1-1-1	
	3030	1- $\frac{1}{2}$ -2-1-1-2-1-1-2-1	
	3040	2-1-2-2-1-1-2-2-3-5	
	3050	4-3-4-4-4-3-5-4-2-3	
	3060	3-3-2-2-3-2-3-3-2-3	
	3070	3-3-3-3-3-3-2-3-3-2	
	3080	2-1-4-6-5-6-3-4-6-4	
	3090	3-2-2-2-2-2-2-3-5-4	
	3100	3-4-6-6-4-6-5-7-7-7	
3100	3110	4-3-4-4-4-7-7-6-7-10	
	3120	9-4-7-8-5-6-5-5-6-5	
	3130	5-7-7-7-6-4-7-7-7-6	
	3140	5-4-6-7-6-5-6-7-8-5	
	3150	6-5-7-7-8-5-6-5-5-5	
	3160	5-5-5-4-6-6-6-7-7-7	
	3170	8-8-7-7-4-3-3-8-7-6	
	3180	6-6-9-7-6-7-7-8-9-7	
	3190	7-9-8-4-7-10-11-8-10-11	
	3200	7-3-4-4-3-5-3-3-3-4	
3200	3210	3-5-3-3-4-3-5-4-5-7	
	3220	9-5-6-7-5-5-4-6-6-5	
	3230	5-5-5-6-5-8-4-6-7-6	
	3240	5-5-6-4-6-6-6-10-10-6	
	3250	2-1-3-3-3-3-5-7-6-6	
	3260	10-12-4-4-5-5-5-6-4-4	Trip
	3270	4-4-4-5-5-6-7-5-7-7	
	3280	5-6-5-6-6-5-5-6-7-8	
	3290	7-6-6-6-7-7-6-4-3-3	
	3300	3-5-4-6-6-9-10-10-4-3	
3300	3310	3-2-3-9-2-3-3-6-5-5	
	3320	5-3-3-4-5-3-3-3-3-4	
	3330	4-2-3-3-4-4-7-10-9-12	
	3340	7-6-7-7-7-4-5-4-3-8	
	3350	5-4-11-9-6-8-9-10-8-9	
	3360	9-10-8-9-7-10-7-6-7-7	
	3370	9-5-4-6-9-4-5-5-4-4	
	3380	6-3-2-1-2-3-2-2-2-5	
	3390	7-7-8-7-7-7-8-8-9-6	
	3400	7-8-8-10-11-12-12-11-9-11	

3400	3410	10-10-8-11-11-8-7-10-10-10	
	3420	7-11-12-10-6-7-5-7-5-9	
	3430	10-11-11-12-10-12-10-10-4-4	
	3440	4-7-8-8-7-7-9-10-12-15	
	3450	14-12-14-18-13-12-17-9-9-10	Trip
	3460	11-9-9-10-8-12-3-3-7-5	
	3470	6-6-7-4-1-1-1-2-7-9	
	3480	11-9-11-11-12-9-7-6-10-10	
	3490	11-11-12-11-9-11-11-7-10-10	
	3500	10-10-10-11-11-12-10-4-7-13	
3500	3510	1-8-3-8-12-7-6-7-7-9	
	3520	11-7-5-6-9-13-13-6-11-9	
	3530	9-7-5-6-5-5-9-10-11-10	
	3540	10-10-10-10-11-13-14-17-17-15	
	3550	10-12-13-13-15-13-11-13-12-17	
	3560	16-10-13-11-13-14-13-5-7-7	
	3570	5-8-5-4-3-4-5-5-5-6	
	3580	7-9-6-6-7-8-8-6-6-8	Trip
	3590	8-6-8-7-6-6-8-7-6-6	
	3600	7-12-10-12-9-10-10-9-8-9	
3600	3610	7-10-7-2-2-2-6-4-10-9	
	3620	6-6-8-6-7-5-5-8-9-8	
	3630	9-8-9-10-9-8-7-8-11-9	
	3640	9-5-7-6-6-6-9-9-8-8	
	3650	7-4-4-3-8-8-7-9-10-10	
	3660	10-6-10-6-6-8-9-8-7-7	
	3670	8-7-7-7-8-8-4-6-9-10	
	3680	5-4-2-9-10-6-7-5-5-4	
	3690	3-4-4-3-6-12-10-10-9-9	
	3700	8-9-7-6-8-7-5-3-2-4	
3700	3710	5-6-8-8-6-6-5-7-8-6	
	3720	5-4-6-7-6-8-9-8-6-6	
	3730	7-6-7-6-6-7-5-5-4-3	
	3740	3-3-4-3-6-4-4-4-4-5	
	3750	7-7-6-5-5-4-5-5-8-5	
	3760	7-6-6-6-6-7-6-6-6-7	Trip
	3770	3-4-4-5-6-6-6-5-7-7	
	3780	11-5-5-6-10-9-10-10-9-9	
	3790	8-7-7-6-4-4-5-5-4-5	
	3800	8-5-3-3-4-6-6-8-7-8	
3800	3810	7-4-4-4-6-6-4-4-8-8	
	3820	4-5-3-4-4-4-6-4-6-5	
	3830	2-1-2-1-1-1-1- $\frac{1}{2}$ - $\frac{1}{2}$ -1	
	3840	1-1-1-1-1-1-1-1- $\frac{1}{2}$ - $\frac{1}{2}$	
	3850	3-5-3-2-2-1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -2-2-1	
	3860	2-4-3-1-1-1-2-2-1-1	
	3870	2-2-1-1-1-1-1-6-10-7	
	3880	6-2-4-14-16-9-9-14-12-6	
	3890	7-9-7-12-7-4-3-3-3-9	
	3900	7-9-5-11-5-5-5-5-4-6	

3900	3910	7-3-5-11-7-6-4-6-5-3	
	3920	13-16-8-8-20-10-19-18-18-9	
	3930	13-19-21-28-14-14-14-16-20-9	Trip
	3940	11-9-11-7-9-9-12-15-10-16	
	3950	18-8-10-12-12-8-11-10-14-13	
	3960	8-17-16-15-15-13-12-12-12-17	
	3970	12-18-10-16-16-18-15-16-18-17	
	3980	17-15-15-18-15-17-15-19-17-17	
	3990	18-12-8-10-11-12-11-10-10-9	Trip
	4000	12-11-11-10-11-11-16-15-15-14	
4000	4010	17-15-14-11-16-16-16-15-12-12	
	4020	13-15-9-12-15-15-19-11-21-14	
	4030	15-13-26-28-9-7-9-10-14-14	Trip
	4040	11-12-17-13-13-17-18-14-12-17	
	4050	15-16-14-16-11-20-14-15-17-18	
	4060	12-15-15-15-20-9-14-13-14-18	
	4070	16-14-11-12-8-6-7-8-8-8	
	4080	7-8-7-8-8-7-6-9-8-8	Trip
	4090	8-7-8-7-9-9-8-8-6-8	
	4100	8-5-8-7-8-8-8-8-7-7	
4100	4110	5-7-6-6-6-6-7-6-5-6	
	4120	7-5-6-6-6-6-6-6-6-6	
	4130	6-7-6-6-5-6-5-6-5-6	
	4140	5-6-5-5-5-5-5-5-5-6	
	4150	4-4-4-4-5-4-4-5-5-5	
	4160	5-8-7-6-5-5-6-5-5-6	
	4170	7-5-7-8-7-5-8-9-8-7	
	4180	3-6-7-8-11-9-6-4-10-8	
	4190	6-8-10-10-7-10-10-8-10-9	
	4200	11-5-12-5-5-5-4-4-4-4	
4200	4210	7-7-7-6-5-8-8-8-10-6	
	4212	10-6	