FRED S. LILLIBRIDGE

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RECEIVED
STATE CORPORATION COMMISSION
NOV 1 1962
CONSERVATION DIVISION
Wichita, Kansas
11-1-1962

DICKS: Lippy Co.

Musgrove Petroleum Corporation
520 Petroleum Building
Wichita 2, Kansas

Re: Geological Report
Musgrove and Rupp-Ferguson No. 2
Hullman, NE SE NW, Sec. 11-22-13W
Stafford County, Kansas

Gentlemen:

Samples and drilling time on the above captioned well were examined from 3100 feet to the rotary total depth of 3730 feet.

Following are the formation tops as determined from sample analysis and those taken from Schlumberger electrical survey. All measurements are from the top of the kelly bushing.

Elevation	1883 Ground
	1885 Derrick Floor
	1887 Kelly Bushing

Formation	Samples	Schlumberger
Heebner	3222 (-1335)	3220 (-1333)
Toronto	3243 (-1356)	3242 (-1355)
Brown Lime	3353 (-1466)	3352 (-1465)
Lansing-Kansas City	3371 (-1484)	3370 (-1483)
Viola (chert)	3636 (-1749)	3635 (-1748)
Simpson (shale)	3681 (-1794)	3676 (-1789)
Arbuckle	3726 (-1839)	3726 (-1839)
Rotary Total Depth	3730 (-1843)	3729 (-1842)

A detailed Schlumberger log was made covering from above the Heebner shale to total depth using the Gamma Ray, Laterolog and Microlaterolog.

One drill stem test was run in the upper Lansing-Kansas City formation.

Porous Zones and Tests

LANSING-KANSAS CITY

3391-3394 Limestone, buff to tan mottled, fragments oolitic with some staining.

3403-3408 Limestone, buff to tan mottled, fragments oolitic and oolicastic pieces show staining.

3410-3414 Limestone as above with pieces showing fair porosity and staining.

3429-3432 Limestone, buff to tan mottled nodular, pieces oolitic show some saturation.

3440-3444 Limestone, buff to tan mottled, few pieces show fair vugular porosity, pieces show good saturation.

Drill Stem Test 3390-3445.

Tool open 1 hour. Fair to strong blow diminishing slightly at the end of 1 hour. Shut in 20 minutes.

Recovered	45 feet gas and oil cut mud.
	120 feet heavy oil and gas cut mud.
	60 feet gas.
	120 feet light gassy oil.
	120 feet heavy gassy oil.
Initial flow pressure	50 p.s.i.
Final flow pressure	200 p.s.i.
Bottom hole pressure	900 p.s.i.
Hydrostatic pressure	1800 p.s.i.

3453-3457 Limestone, buff to gray tan mottled grainey, trace oolitic with slight staining.

3493-3499 Limestone, buff oolicastic, good porosity, pieces show staining, pieces barren. Questionable permeability.

3527-3530 Limestone, buff and tan mottled nodular, trace staining in oolicastic porosity.

3536-3539 Limestone, buff and tan mottled, pieces show staining in oolicastic porosity.

VIOLA

3630-3675 White china chert and buff to tan semi-viterous chert, pieces show scattered staining.

ARBUCKLE

3726-3730 Dolomite, white to buff fine grain sucrosic, free oil and fair odor in wet samples. Few fragments oolitic chert.

As compared structurally to the No. 1 Hullman, the No. 2 Hullman is flat on the Lansing-Kansas City and 10 feet higher on the Arbuckle. Decision was made to cement 5½" casing at 3727½ feet and test the Arbuckle formation through open hole.

I would recommend that an analysis of the Schlumberger log be made before perforating and testing the Lansing-Kansas City.

Very truly yours,

Fred S. Lillibridge

FSL:HH

DRILLING TIME LOG

Hullman No. 2

Depth From	Depth To	Drilling Time	Remarks
3100	3110	4-8-7-10-10-6-5-4-6-5	
	3120	5-5-5-5-8-8-5-6-11-8	
	3130	6-5-4-3-3-2-4-3-3-2	
	3140	4-4-6-5-4-5-5-5-5-5	
	3150	5-5-5-2-4-3-3-3-3-3	
	3160	3-3-4-7-9-8-7-9-10-10	
	3170	10-8-4-3-4-12-12-9-5-5	Trip CWV
	3180	6-6-5-6-6-6-5-5-4-4	
	3190	4-3-4-4-4-6-5-7-5-6	
	3200	6-6-1½-1½-6-6-5-5-6-6	Conn. Hole tight.
3200	3210	5-4-4-3-5-5-6-6-6-5	
	3220	4-6-6-6-7-7-7-6-6-6	
	3230	6-2-2-2-2-6-4-9-9-8	
	3240	6-6-6-4-4-9-4-4-5-5	
	3250	5-3-3-7-4-3-4-6-5-6	
	3260	4-4-2-2-3-5-5-5-3-3	
	3270	3-3-5-4-4-4-5-5-5-4	
	3280	5-5-5-4-7-9-5-4-4-5	
	3290	4-4-4-5-5-5-5-3-4-3	
	3300	3-4-4-4-4-4-5-4-4-5	
3300	3310	3-4-4-5-5-4-4-4-3-4	
	3320	3-2-3-3-3-3-4-4-3-3	
	3330	3-3-3-4-3-3-4-4-3-4	
	3340	3-4-4-4-4-4-4-4-4-4	
	3350	3-3-4-5-4-5-4-5-4-3	
	3360	3-5-3-10-12-11-7-8-7-10	
	3370	6-6-6-6-6-6-5-6-4-5	
	3380	4-9-10-9-7-9-8-8-8-8	
	3390	8-8-8-8-4-5-5-10-9-10	
	3400	6-8-7-8-8-10-8-7-5-6	Trip W7
3400	3410	6-6-5-5-7-5-6-4-4-4	
	3420	5-8-5-4-5-6-5-7-6-7	
	3430	6-7-7-6-5-5-5-6-8-5	
	3440	8-5-7-6-4-7-6-5-6-5	
	3450	4-3-3-3-5-9-7-7-7-8	Circ. DST 3390-3445
	3460	6-8-6-5-5-5-5-6-5-7	
	3470	6-6-6-8-7-8-6-6-6-6	
	3480	6-5-5-7-7-8-7-6-8-6	
	3490	7-7-7-8-9-8-10-6-8-6	
	3500	5-4-6-1-2-2-2-2-2-5	

Depth From	To	Drilling Time	Remarks
3500	3510	9-8-7-9-7-8-8-8-9-8	
	3520	6-5-6-6-6-6-5-7-9-10	
	3530	10-10-11-9-8-9-8-7-6-7	
	3540	10-8-6-7-8-4-3-2-2-7	
	3550	8-7-8-9-9-9-10-10-9-9	
	3560	8-8-9-9-10-8-9-10-9-9	
	3570	9-10-7-7-7-8-7-7-10-7	Trip #7
	3580	9-6-7-8-8-7-6-8-6-7	
	3590	5-9-7-8-6-7-8-9-6-7	
	3600	6-8-8-6-7-7-7-7-5-4	
3600	3610	5-7-5-4-5-6-5-4-5-5	
	3620	4-6-10-9-9-7-8-7-7-7	
	3630	8-8-8-8-7-8-7-7-8-8	
	3640	8-8-8-5-6-7-6-5-5-4	
	3650	4-3-4-5-5-4-3-4-4-3	
	3660	4-4-4-5-4-4-4-5-5-4	
	3670	5-4-4-5-4-6-5-6-5-4	
	3680	6-6-6-8-11-15-12-16-8-7	Trip #7
	3690	8-8-8-10-8-8-7-10-10-10	
	3700	7-8-9-9-8-9-10-9-9-9	
3700	3710	8-7-7-8-8-9-7-8-8-9	
	3720	7-6-7-7-5-6-7-7-7-6	
	3730	6-7-7-9-8-4-6-6-6-5	