

MORGAN & TORLINE

CONSULTING GEOLOGISTS

512 CYPRESS BUILDING

TELEPHONE 247

WICHITA 2, KANSAS

GEOLOGICAL REPORT

ON

LEBEN DRILLING COMPANY, INC.

NO. 1 GARDINER

NENESW SECTION 32-29S-1E

SEDGWICK COUNTY, KANSAS

BY

MORGAN & TORLINE

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October 1, 1962

Leben Drilling Co., Inc.
905 Central Building
Wichita, Kansas

Re. No. 1 Gardiner
NENESW Sec. 32-29S-1E
Sedgwick County, Kansas

Gentlemen:

Following is our geological report on the above described well. We were present during the drilling of all critical and prospective zones from the top of the Kansas City to total depth. Samples were examined from a depth of 2700 feet to total depth. All prospective pay zones were examined wet and dry for odor, shows of oil, staining, and fluorescence.

All formation tops, depths, zones, etc., were measured from the kelly bushing elevation.

Elevation: 1278 K3 1276 DF 1273 GL

<u>Formation Tops:</u>	<u>Samples:</u>	<u>Electric Log:</u>
Kansas City	2766 (-1488)	2766 (-1488)
Base Kansas City	2986 (-1708)	2986 (-1708)
Mississippian	3336 (-2058)	3337 (-2059)
Total Depth	3435 (-2157)	3434 (-2156)

Lithology Detail:

Kansas City

2792 - 2795 Lime, light gray, fine cr stalline, trace vugular porosity, no show of oil.

2895 - 2844 Lime, white, fine cr stalline, chert, white, intercrystalline to vugular porosity, show of oil, odor, staining.

- 2830 - 2845 Drill Stem Test No. 1: Open 6 minutes, shut in 30 minutes, open 1 hour, shut in 30 minutes, strong blow, recovered 990 feet salt water, slightly oil specked, F. P. 55# - 455#. S. I. P. 1148# - 1110#.
- 2856 - 2858 Lime, white, dense, slight vugular porosity, show of oil, odor.
- 2862 - 2864 Lime, brown, oolitic, porous, trace oil odor.
- 2867 - 2871 Lime, brown, oolitic, porous, show of oil, odor.
- 2854 - 2870 Drill Stem Test No. 2: Open 5 minutes, shut in 30 minutes, open 1 hour, shut in 30 minutes, recovered 990 feet of salt water, F. P. 38# - 510#. S. I. P. 1168# - 1110#.
- 2890 - 2894 Lime, brown, finely oolitic, porous, odor, show of oil.
- 2895 - 2902 Lime, brown, finely oolitic, porous, show of oil, odor.
- 2881 - 2901 Drill Stem Test No. 3: Open 5 minutes, shut in 30 minutes, open 1 hour, shut in 30 minutes, very strong blow, recovered 225 feet of heavily gas cut, oily mud and 135 feet of salt water. F. P. 38# - 162#, S. I. P. 1148# - 1045#
- 2903 - 2905 Lime, brown, finely oolitic, porous, no show of oil.

Conclusions and Recommendations:

The No. 1 Gardiner was 8 feet higher on the Kansas City and the Mississippian than the Time Petroleum No. 1 Winderlin in the Northwest corner of Section 32-29S-1E. In the No. 1 Winderlin there was a dolomite section developed in the Mississippian that recovered oil on the Drill Stem Test. This zone was not present in the No. 1 Gardiner and no apparent zones of porosity were developed in the Mississippian. The No. 1 Gardiner did develop several zones in the Kansas City, one which recovered oil on the Drill Stem Test. Based on the electric log, calculations of this zone are as follows:

2892 - 2894	Porosity 14.4, Water 47
2994 - 2996	Porosity 15.9, Salt water 43
2996 - 2998	Porosity 15.2, Salt water 49

On the basis of the Drill Stem Test and the electric log, it appears that the water is interstitial. It would be our recommendation to perforate not more than the top 2 feet.

Leben Drilling Co., Inc.

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October 1, 1962

On the basis of the Drill Stem Test, Electric Log, and structural position, the operator elected to run casing to 3001 feet.

Yours very truly,

MORGAN & TORLINE

By 
M Eugene Torline, A. A. P. G.

MET/cjf

DRILLING DATA:

Operator: Leben Drilling Company, Inc.
 Well: No. 1 Gardiner
 Location: NENESW Section 32-29S-1E
 Sedgwick County, Kansas
 Contractor: Wilson Drilling
 Tool Pusher: Wilson
 Drillers: Waymire, Higgins, McDaniel
 Spudded: 9-18-62
 Surface Casing: 240' 85/8" W/24 Sk. Cement

Daily Drilling Progress:

9-18-62 50' at 8:00 A.M.
 9-19-62 230' at 8:00
 9-20-62 240' at 8:00 -
 9-21-62 1365' at 8:00
 9-22-62 2035' at 8:00

9-23-62 2485' at 8:00 A.M.
 9-24-62 2830' at 8:00 TOP Lens 2766
 9-25-62 2870' at 8:00
 9-26-62 2962' at 8:00
 9-27-62 3200' at 8:00
 9-28-62 3363' at 8:00

Bit Record:

No. 1	12 1/4	Hugh	OWC	RT	0 -	240
2	7 7/8	MDT	Smith	"	240 -	485
3	"	Hugh	OSC	"		775
4	"	"	"	"		1176
5	"	"	"	"		1690
6	"	"	"	"		1980
7	"	S	S	"		2195
8	"	S	S	"		2375
9	"	Reed	YT	"		2540
10	"	Hugh	OWV	"		2776
11	"	"	W-7	"		2845
12	"	"	W-7	"		2870
13	"	"	W-7	"		2901
14	"	"	OWV	"		2991
15	"	"	OSC	"		3130
16	"	V2	V2	"		3220
17	"	Hugh	OWV	"		3302
18	"	"	W-7	"		3363
19	Sec	H7	"	"		3435

Drilling Data:
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Mud Record:

Type - Gel	Water - Well	Prop.	Wt.	10
	55' deep		Vis	41
			Wtr. L	12.8
			Cake	2

Added:

Gel.	181 Sk.	Caustic	225 Lbs. & 9 1/2 Sk.
Hulls	23	Magogel	20 1/2 Sk.
Lime	2	Mago-Fiber	1 Sk.
Soda Ash	650 Lbs. & 13 Sk.	Salt Gel	7 Sk.
Tannathin	250 Lbs. & 14 1/2 Sk.	Lignite	50 Lbs.

FROM TO MINUTES

REMARKS

2700	- 20	2-2-1-2-2-2-1-2-2-1/2-3-2-2-2-2-3-2-2-2	
	- 40	2-3-1-2-1-1-2-2-1-2/2-2-2-2-2-3-2-2-2-3	
	- 60	2-2-2-3-2-2-2-3-2-2/2-2-2-2-2-2-2-2-3	
	- 80	2-2-2-2-2-2-3-3-4-7/4-4-4-6-6-7-3-3-3-3	Trip
	- 00	2-3-3-5-4-3-4-4-3-4/4-4-1-2-2-3-3-4-5-4	2776'
2800	- 20	4-4-4-4-4-4-5-5-5-5/5-7-9-9-7-7-4-5-7-8	
	- 40	5-6-7-3-3-3-5-6-3-3/4-5-4-4-4-3-3-3-4	
	- 60	3-2-3-4-6-5-5-6-5-5/5-4-4-5-5-6-4-5-6-6	
	- 80	12-9-4-1 1/2-4 1/2-6-5-3-1-1/2-4-5-7-4-4-4-3-4-6	
	- 00	6-5-5-5-5-4-4-0-6-6/2-2-3-3-7-2-1-1-2 1/2-3 1/2	
2900	- 20	1-1-3-2-2-3-3-3-3-3/3-4-5-5-4-4-3-3-3-3	Circ
	- 40	3-4-4-5-7-8-7-7-5-5/3-7-7-8-8-7-5-8-6-5	2901'
	- 60	6-7-7-9-8-8-9-6-7-5/9-7-6-7-6-7-7-8-7-6	
	- 80	5-6-7-5-7-6-6-5-4-5/7-5-5-8-7-9-8-7-8-7	Trip
	- 00	8-4-7-9-8-9-14-16-15-13/4-3-3-3-4-3-2-2-3-3	2991'
3000	- 20	3-3-2-3-3-3-3-3-3-3/3-2-2-2-2-3-3-3-1-2	
	- 40	2-2-3-3-3-3-3-3-3-3/3-3-3-3-4-3-2-2-1	
	- 60	1-3-3-4-3-2-3-3-3-3/3-3-4-3-3-3-4-4-3-4	
	- 80	4-3-4-3-3-3-4-4-5-3/3-5-5-4-4-5-3-3-4-3	
	- 00	2-2-2-3-3-4-3-4-4-5/5-4-3-4-3-4-3-4-3-3	
3100	- 20	3-3-3-4-4-4-4-6-5-6/6-5-5-4-4-5-6-7-6-4	
	- 40	5-4-5-5-4-4-5-6-8-7/4-5-5-4-5-5-3-5-3-5	Trip
	- 60	5-5-6-7-7-5-4-3-2-4/5-4-4-4-6-7-4-7-6-7	3130'
	- 80	6-6-6-5-5-5-5-5-4-4/6-7-8-6-7-7-7-4-4-5	
	- 00	4-4-5-4-4-4-5-4-4-8/8-8-9-7-7-7-8-7-8-4	
3200	- 20	4-4-6-6-11-5-4-6-7-9/9-9-9-6-7-8-9-9-10-9	
	- 40	3-2-4-4-4-4-4-4-6-5/5-4-5-5-5-5-5-5-6	Trip
	- 60	6-6-4-4-2-1-1-4-5-5/5-5-6-5-5-5-4-4-4-4	3220'
	- 80	4-5-5-6-4-4-4-4-4-5/3-5-5-5-4-3-2-4-4-5	
	- 00	4-5-4-3-5-4-5-3-3-2/1-5-6-7-8-7-8-7-11-10	
3300	- 20	10-12-2-2-3-3-3-3-5-3/3-3-4-3-5-4-3-5-8-6	Trip
	- 40	3-2-3-4-3-4-4-4-4-4/4-5-3-5-3-5-6-5-7-7	3302'
	- 60	9-8-9-10-8-6-8-9-13-9/10-5-7-10-9-10-8 1/2-12 1/2-12-18	
	- 80	15-13-14-12-8-9-10-10-10-10/13-12-10-12-11-10-11-9-6-7	Trip
	- 00	6-6-6-6-7-6-6-5-6-5/6-6-5-5-5-8-8-7-7-6	3364'
3400	- 20	8-16-7-7-7-7-8-6-10-7/7-5-7-8-11-6-10-9-15-12	
	- 35	8-6-8-10-7-6-8-6-7-11/8-7-13-8-10	

Total Depth 3435'