

GEOLOGICAL REPORT

LEBEN DRILLING, INC.

NO. 1 PHELPS

NE NE NE SEC. 21-108-26W

SHERIDAN COUNTY, KANSAS

C. W. SMITH

**C. W. SMITH**  
PETROLEUM GEOLOGIST

February 20, 1958

Leben Drilling, Inc.  
905 Central Building  
Wichita, Kansas

Re: Leben Drilling, Inc.  
No. 1 Phelps  
NE NE NE Sec. 21-108-26W  
Sheridan County, Kansas

Gentlemen:

The following is a Geological Report, with a Time Log attached, on the above captioned well.

I was present during the drilling from 3780' to 4115', rotary total depth. Samples were examined from 3500' to rotary total depth.

All formation tops and zones of porosity and staining are based on rotary bushing measurements. All measurements have been corrected to the Micro Laterolog.

Elevation	2573 DF → 2576 RB
Anhydrite	2205 (✓ 371)
Topeka	3587 (-1011)
Heebner	3812 (-1236)
Toronto	3832 (-1256)
Lansing-Kansas City	3848 (-1272)
Base of Kansas City	4080 (-1504)
Rotary Total Depth	4115 (-1539)

Structurally, the No. 1 Phelps ran 27' higher, on top of the Lansing-Kansas City, than the Aurora No. 1 Custer, dry hole, 1½ miles south, 12' lower than the Leben No. 1 Deines, dry hole 2½ miles north, and 23' lower than the C-G No. 1 Flager, closest producer, 2½ miles northeast.

ZONES OF INTEREST

TOPEKA

There were no shows of oil in the Topeka formation.

LANSING-KANSAS CITY (Top 3848')

- 3890-3894 Dense grey limestone with vugular porosity. Traces of solid oil residue. (Included in DST #1)
- 3898-3903 Dense limestone with good vugular porosity and show of heavy black oil.

DRILL STEM TEST NO. 1

3884-3906. Open 1 hour. Weak blow for 8 minutes. Flushed tool at 30 minutes. Recovered 13' mud specked with thick black oil. BHP 205 lbs. FP -0- lbs.

4031-4035

White medium crystalline limestone with fair to good porosity barren of any show. This zone, which usually carries some sort of oil show in the area, was circulated for samples examination.

4050-4055

White chalky limestone. No show.

The Base of the Kansas City formation was reached at 4080'. The well was drilled to 4115', and it was recommended that the test be plugged and abandoned. A Schlumberger Electric Log was run, and the well was plugged.

Sincerely,

  
C. M. Smith

CWS:mef

DRILLING INFORMATION ON THE NO. 1 PHELPS

Contractor: Leben Drilling, Inc.  
 Tool Pusher: Dan Helmer

Drillers: Neal  
 Stanley  
 Wallace

Spud Date: 2-7-58

Date of RTD: 2-19-58

Surface Pipe: 8 5/8" " 232' w/165 sacks

Casing: None

TOTAL FOOTAGE DRILLED PER DAY

Under surface at 7:30 a.m. on 2-9-58

810'	at	7:30 a.m.	on	2-9-58
1785'	"	"	"	2-10-58
2330'	"	"	"	2-11-58
2705'	"	"	"	2-12-58
3035'	"	"	"	2-13-58
3290'	"	"	"	2-14-58
3510'	"	"	"	2-15-58
3705'	"	"	"	2-16-58
3815'	"	"	"	2-17-58
3950'	"	"	"	2-18-58
4075'	"	"	"	2-19-58
4115'	"	12:30 p.m.	"	2-19-58

BIT RECORD

<u>Bits</u>	<u>Type</u>	<u>Footage</u>
1	Sec. S-3J Retip	232-1379
2	Reed YS1 Retip	1379-1660
3	Reed YS1 Retip	1660-2130
4	HTC-W7 Retip	2130-2330
5	HTC-OWS Retip	2330-2593
6	HTC-W7 Retip	2593-2747
7	Sec. M4N	2747-3035
8	Smith 3C-SV2	3035-3290
9	Reed YS-1	3290-3570
10	Smith SV2	3570-3820
11	HTC-W7	3820-3997
12	Reed YH	3997-4115

DRILLING TIME LOG

Leben Drilling, Inc.  
No. 1 Phelps

NE NE NE Sec. 21-10S-26W  
Sheridan County, Kansas

Elevation: 2573 DF  
2576 RB

DEPTH	MINUTES	REMARKS
1 Foot Drilling Time from 3500' to RTD		
3500-3510	1-2-3-3-3-5-10-7-8-10	
3520	9-10-5-5-5-6-7-12-10-10	
3530	8-8-7-7-7-8-7-7-7-4	
3540	5-5-6-6-6-6-9-9-9-8	
3550	10-9-8-7-7-7-7-8-7-7	
3560	7-5-2-2-3-2-4-7-10-10	
3570	10-10-10-10-9-8-6-7-5-10	Trip @ 3570'
3580	9-7-7-6-6-5-5-7-7-4	
3590	3-5-3-4-4-4-4-5-9-7	
3590-3600	6-5-6-6-5-5-7-7-9-8	
3610	7-5-9-10-9-9-8-11-10-9	
3620	10-5-5-6-7-5-6-8-5-4	
3630	6-7-9-7-7-7-6-5-5-5	
3640	3-5-5-4-7-5-5-5-6-10	
3650	7-9-8-5-6-6-4-6-7-5	
3660	5-4-4-3-5-3-5-4-6-5	
3670	3-4-3-3-5-6-8-7-5-5	
3680	5-5-7-6-6-7-3-4-4-3	
3690	3-5-5-6-6-7-6-5-3-4	
3690-3700	5-6-7-7-7-7-7-8-8-11	
3710	10-12-7-4-8-8-8-8-7-7	
3720	5-4-4-4-5-6-7-7-7-7	
3730	7-9-8-8-6-6-9-10-7-6	
3740	6-6-5-5-9-9-9-7-7-7	
3750	7-7-7-5-6-5-5-6-7-4	
3760	5-6-6-6-6-6-6-8-6-6	
3770	10-10-10-5-5-5-5-7-7-7	
3780	5-6-6-5-3-4-7-12-10-8	
3790	11-15-10-7-7-7-10-10-9-10	
3790-3800	10-8-6-5-6-5-5-4-6-9	
3810	6-5-7-6-6-7-9-7-8-7	
3820	8-9-10-7-4-6-11-11-12-15-	Trip @ 3820
3830	10-11-10-10-9-9-10-10-9-8	
3840	8-9-9-6-7-11-12-9-6-7	
3850	8-10-11-9-8-9-9-10-8-7	
3860	7-8-7-6-7-6-7-11-11-11	
3870	7-7-8-7-10-9-9-10-10-10	
3880	10-10-13-10-9-8-8-8-8-9	
3890	10-11-11-11-11-11-10-8-6-7	

## DRILLING TIME LOG

Leben Drilling, Inc.  
No. 1 Phelps

NE NE NE Sec, 20-108-26W  
Sheridan County, Kansas

Elevation: 2573 DF  
2576 RB

DEPTH	MINUTES	REMARKS
3890-3900	9-9-10-11-12-11-11-13-9-8	
3910	9-9-9-10-10-10-12-13-11-10	Circ. 1 hr. & DST #1
3920	12-11-11-11-12-14-10-12-14-12	● 3906'
3930	9-13-15-15-13-11-11-11-11-10	
3940	10-11-12-11-10-9-13-10-11-12	
3950	10-12-12-11-10-13-10-11-12-16	
3960	13-11-11-13-12-11-11-9-7-7	
3970	7-11-11-11-10-10-10-10-10-10	
3980	14-10-10-12-12-12-10-11-10-9	
3990	9-9-9-9-12-11-9-9-10-10	
3990-4000	10-15-13-14-14-13-14-14-13-23	Trip ● 3997'
4010	9-11-13-10-10-9-9-8-10-9	
4020	8-9-9-10-9-4-4-8-9-9	
4030	6-7-8-9-9-9-9-10-10-7	
4040	7-6-3-7-8-9-8-7-8-8	Circ. ● 4035'
4050	8-8-8-11-11-10-9-12-6-3	
4060	3-4-5-8-8-9-9-9-8-10	
4070	10-9-9-10-9-9-10-9-7-10	
4080	8-9-8-7-8-8-11-10-8-10	
4090	10-10-10-8-11-10-10-10-10-10	
4090-4100	8-10-10-8-4-2-7-5-4-4	
4110	5-5-5-4-4-5-6-6-7-8	
4115	12-12-11-12-12	Circ. ● 4115'

Rotary Total Depth - 4115'