



15-033-20660

26-31-16W



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GEOLOGICAL REPORT

LUFF EXPLORATION COMPANY

F-26 LGK

C E/2 SE NW Sec 26-31S-16W
COMANCHE COUNTY, KANSAS

JAN 2 1985

State Geological Survey
WICHITA BRANCH

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COMANCHE COUNTY
WICHITA BRANCH



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GEOLOGICAL REPORT

Luff Exploration Company
F-26 LGK
C E/2 SE NW Sec 26-31S-16W
Comanche County, Kansas

ELEVATIONS: 2029 Kelly Bushing
2020 Ground Level

CONTRACTOR: H-30 Drilling, Inc., Rig #12

COMMENCED: August 15, 1984
COMPLETED: August 27, 1984

ROTARY TOTAL DEPTH: 5100 feet
LOGGER TOTAL DEPTH: 5098 feet

SURFACE PIPE: 12 jts new 8 5/8" 24# @ 505' w/ 225 sx
Lite and 100 sx Class A, 2% gel and 3%
cc, each. Cement did circulate. Plug
down @ 1100, 8-17-84.

PRODUCTION PIPE: 126 jts new 5 1/2" 14# @ 5100' w/200 sx
50/50 Poxmix, plus additives.

LOGS: WELEX:
1. DIGL
2. DSN-DEN

DAILY PENETRATION RATE:

August 16, 1984	0700	275', Drlg.
August 17, 1984	"	1536', Run 8 5/8"
August 18, 1984	"	" , Rig Repairs
August 19, 1984	"	1750', Drlg.
August 20, 1984	"	2700', Drlg.
August 21, 1984	"	3460', Drlg.
August 22, 1984	"	4011', Drlg.
August 23, 1984	"	4344', Drlg.
August 24, 1984	"	4812', Drlg.
August 25, 1984	"	4944', DST #1
August 26, 1984	"	4959', DST #2
August 27, 1984	"	5100', Run 5 1/2" @ 5100'

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REMARKS:

All measurements are from Kelly Bushing (2029 feet).
RTD was 5100 feet. LTD was 5098 feet (-3069).

One foot drilling time was plotted from 4010 feet to TD.
Thirty foot samples were saved from 500 to 3200 feet and ten
foot samples were saved from 3200 feet to TD.

Two drill stem tests were taken, both being in the
Mississippian.

The drill pipe was strapped during the trip for DST No. 1.
The strap was .99 feet short of the board.

Lost circulation occurred while drilling at 4323 feet and
again at 4332 feet.

The depth of curves on the neutron-density log varies as
much as three feet compared to the gamma ray curve.

FORMATIONS:

The following are the depths and datums of formation tops
encountered as determined by sample and electrical/nuclear log
analysis.

<u>Formation</u>	<u>Sample</u>	<u>Log</u>	<u>Datum</u>
Chase	-	2409	- 380
Council Grove	-	2775	- 746
Onaga Shale	-	3218	-1189
Howard	-	3632	-1603
Topeka	-	3791	-1762
Heebner Shale	4135	4134	-2105
Douglas Shale	4174	4171	-2142
" Sand	4223	4223	-2194
Lansing	4325	4325	-2296
Base/Kansas City	4767	4765	-2736
Marmaton	4782	4781	-2752
Pawnee	4812	4811	-2782
Ft. Scott	4885	4884	-2855
Cherokee Shale	4895	4893	-2864
Mississippian	4919	4917	-2888
Kinderhook Shale	5053	5052	-3023
TD	5100	5098	-3069

CTH: 11/17/64

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DRILL STEM TESTS:

A geological log is included with this report and is considered a part of it. Refer to it for sample descriptions. The following are drill stem test results.

Mississippian (4917 EL)

DST No. 1
4883-4944 feet

Open 15 minutes, very weak 1/2" blow.
Shut-in 60 minutes. Open 90 minutes,
strong blow in 2 minutes. Shut-in 120
minutes.
Recovered 600 feet of gas-in-pipe and
80 feet of drilling mud.

Initial Flow Pressure	59-76
Initial Shut-in Pressure	195
Final Flow Pressure	76-76
Final Shut-in Pressure	929
Initial Hydrostatic	2446
Final Hydrostatic	2454
Temperature	129°

Mississippian (4917 EL)

DST No. 2
4939-4959 feet

Open 15 minutes, very weak 1/2" blow.
Shut-in 60 minutes. Open 90 minutes,
weak 3" blow. Shut-in 120 minutes.
Recovered 15 feet of slightly watery
drilling mud with a trace of oil in the
tool.

Initial Flow Pressure	51-59
Initial Shut-in Pressure	744
Final Flow Pressure	51-59
Final Shut-in Pressure	1031
Initial Hydrostatic	2463
Final Hydrostatic	2455
Temperature	129°

RECOMMENDATIONS AND CONCLUSIONS:

The following is a structural comparison of the F-26 LGK to the Luff Exploration G-26 LGK, 2026 FNL and 1961 FEL Sec 26-31S-16W, and the Mesa Petroleum 1-27 Susan, 2450 FSL and 225 FSL Sec 27-31S-16W.

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<u>Formation</u>	<u>G-26 LGK</u>	<u>F-26 LGK</u>	<u>1-27 Susan</u>
Chase	- 380	- 380	-
Council Grove	- 749	- 746	-
Onaga Shale	-1195	-1189	-
Howard	-1607	-1603	-1615
Topeka	-1767	-1762	-1782
Heebner Shale	-2105	-2105	-2124
Lansing	-2314	-2296	-2337
Base/Kansas City	-2732	-2736	-2757
Marmaton	-2745	-2752	-2769
Cherokee Shale	-2862	-2864	-2882
Mississippian	-2889	-2888	-2907
TD	-2973	-3069	-3085

At a rotary total depth of 5100 feet, the F-26 LGK was logged by Welex. No shows were noted except for the Mississippian.. Although drill stem tests and logs indicated the Mississippian to be tight, the operator chose to set pipe for further evaluation of the Mississippian, as well as the Pawnee.

Respectfully submitted,



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