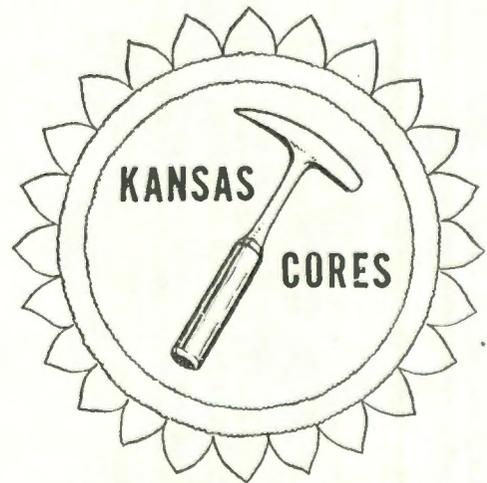


COMPANY LEE PHILLIPS OIL
WELL LADD #3
LOCATION SE NW NW 19-25-9E
COUNTY GREENWOOD
STATE KANSAS



PETROLEUM RESERVOIR ENGINEERING
CORE ANALYSIS

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

July 11, 1964

1025 NORTH LIGHTNER
WICHITA, KANSAS

Re: CORE ANALYSIS REPORT
Lee Phillips Oil Co.
Ladd #3
Greenwood County
Kansas

Lee Phillips Oil Co.
Wichita Plaza Bldg.
Wichita, Kansas

Gentlemen:

The cores from your well, Ladd #3, Greenwood County, Kansas have been analysed for permeability, porosity, and residual saturation of oil and water. The data will be found tabulated on the following pages and indicated on the coregraph. The data averages and recovery figures will be found at the end of this report.

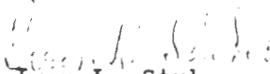
The following is a short discussion of the section cored and analysed.

2491' to 2495' - Oil Productive

A soft, clean friable sand was found at this depth, with fair permeabilities and porosities. The water percentages are higher than average, but the oil percentages are well in line for oil production. With the addition of the sand drilled before coring began, this zone can be expected to be oil productive.

Yours very truly,

KANSAS CORES


Ivan L. Stuber

Attachments

cc: 2 copies to Lee Phillips Oil Co., Wichita, Ks.
1 copy to Adair Oil Co., Wichita, Kansas
1 copy to KANSAS CORES, Wichita, Kansas

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING WICHITA, KANSAS

COMPANY Lee Phillips Oil

DATE 7-11-64

WELL Ladd #3

ANALYST IS

FIELD _____

COUNTY Greenwood

STATE Kansas

The analyses and interpretations are based on material brought to Kansas Cores by the client, and such data and interpretations are accessible only to that company which the client represents. Kansas Cores makes no warranty and makes no guarantee for the interpretations and opinions of the data. Our opinions of an analysis are placed at the discretion of the operator.

PERMEABILITY MILLIDARCY'S O—O

400 300 200 100 0

POROSITY—% X—X

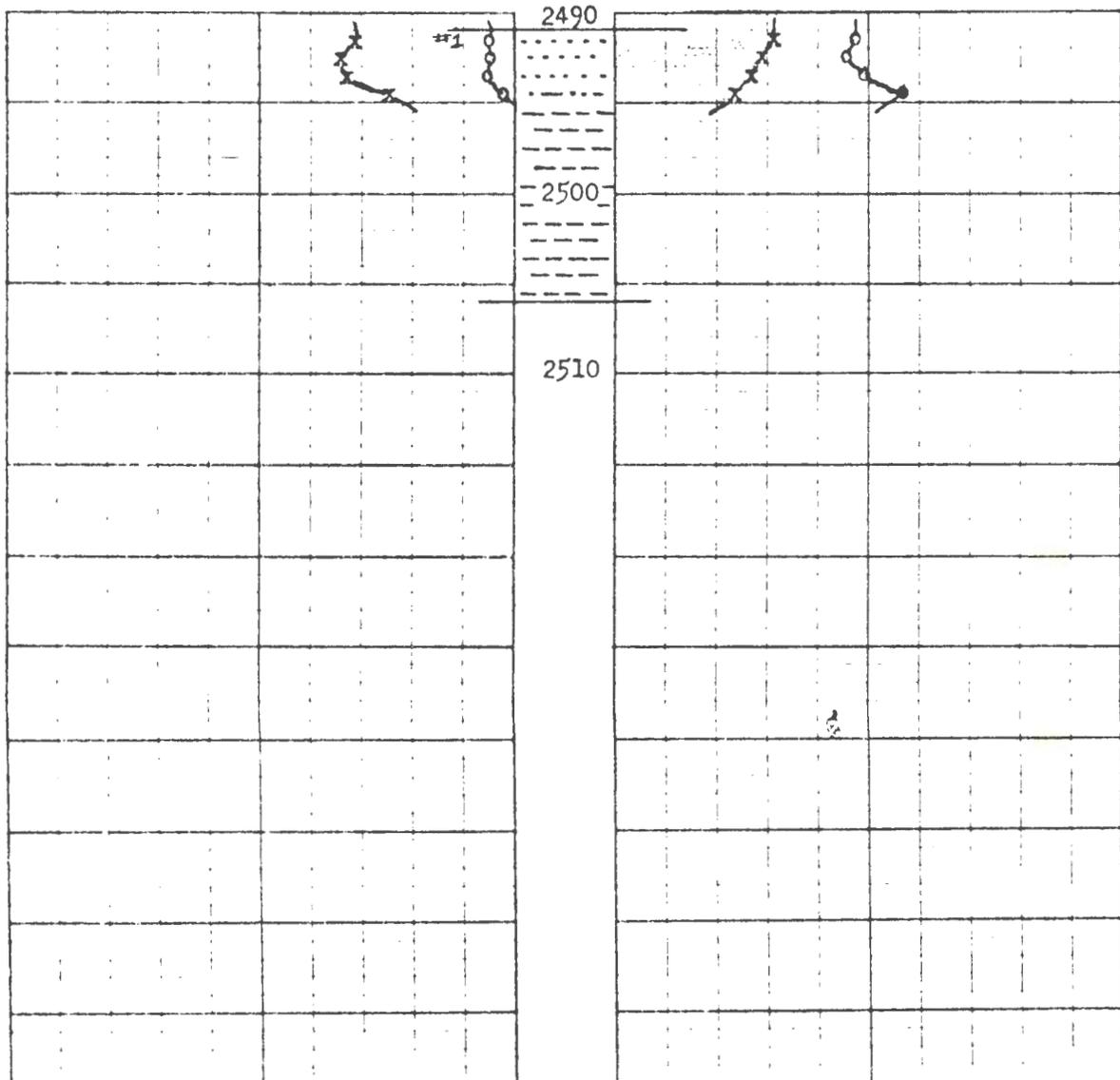
20 10 0

CONNATE WATER % SATURATION

0 70 60 50 40

OIL % PORE SATURATION X—X

0 10 20



Re: CORE DESCRIPTION
Lee Phillips Oil Co.
Ladd #3
Greenwood County
Kansas

CORE #2

2491' to 2506' Cut 15' Rec. 15'

- 3' Fine grained light brown soft friable sand:
 Good stain and odor
- 1' Fine grained hard sand with numerous green to
 black shale laminations & inclusions: Good
 odor, bleeding oil
- 11' Hard green to black shale

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS

WELL Ladd #3	COUNTY Greenwood	STATE Kansas
COMPANY Lee Phillips Oil	DATE 7-11-64	FILE NO. S-560
FIELD	TYPE CORES Diamond	ANALYST IS

ANALYSIS DATA AND INTERPRETATIONS

SAMPLE No.	DEPTH	PERMEABILITY MILLIDARCY S		POROSITY %	SATURATION WATER % PORE SPACE	SATURATION OIL % PORE SPACE	PROBABLE PRODUCTION	REMARKS
		HORIZONTAL	VERTICAL					
1	2491 92	28.6	27.1	15.3	56.7	15.3	Oil	
2	2492 93	27.0	36.9	17.1	57.0	14.3	Oil	
3	2493 94	27.5	26.5	16.4	55.6	13.6	Oil	
4	2494 95	6.1	4.4	12.6	51.9	12.2	Oil	

19-255-9E
 Ladd
 3

DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	2491'-2495'
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	4
AVERAGE PERMEABILITY IN MILLIDARCYS	22.3
AVERAGE POROSITY, PER CENT	15.4
AVERAGE TOTAL WATER % OF PORE SPACE	55.3
AVERAGE RESIDUAL OIL % OF PORE SPACE	13.9
AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE	44.2
ESTIMATED FORMATION VOLUME FACTOR - USED IN CALCULATING RECOVERABLE OIL	1.18
PRODUCTIVE CAPACITY - PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	89.2
RECOVERABLE OIL BY WATER DRIVE - BBLs. PER ACRE FOOT	399
RECOVERABLE OIL BY GAS EXPANSION - BBLs. PER ACRE FOOT	239*

*From original bottom hole pressure to zero