COMPANY LEE PHILLIPS OIL & M.L. ADAIR OIL

WELL LADD #11

LOCATION ARTOK. S/2 NE NE 19-25-9E

COUNTY GREENWOOD

STATE KANSAS

KANSAS CORES

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

WICHITA, KANSAS

COMPANY Lee Phillips & E.H. Adair Oil DATE 10-6-66

WELL Ladd #11 ANALYST IS

FIELD

COUNTY Greenwood STATE Kansas

PERMEABILITY MILLIDARCYS O—O

200 150 100 50 0

POROSITY--% X—X

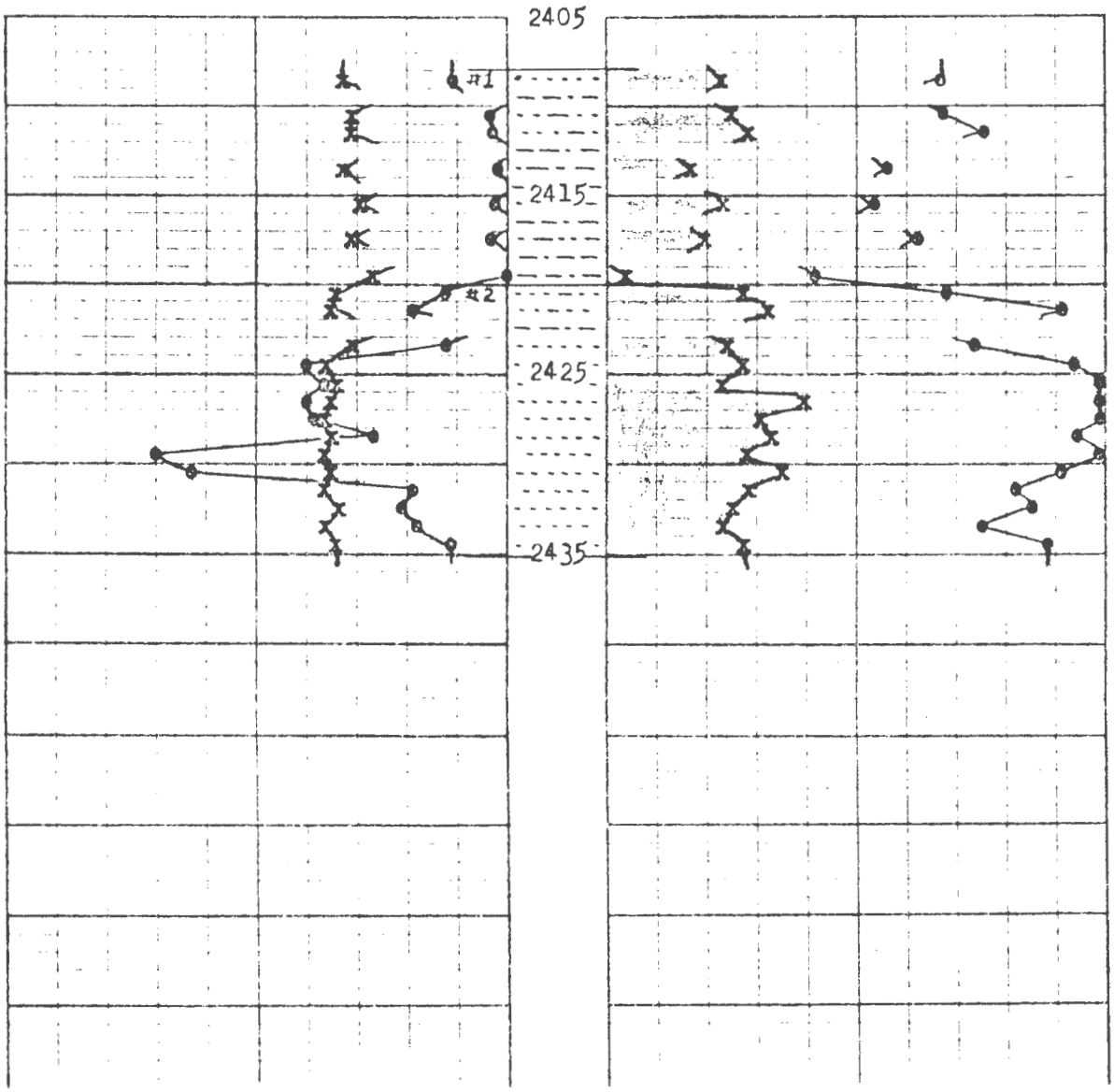
20 10 0

CONNATE WATER % SATURATION O—O

0 70 60 50 40

OIL % PORE SATURATION X—X

0 10 20



Kansas Cores
PETROLEUM RESERVOIR ENGINEERING
CORE ANALYSIS
1026 NORTH LIGHTNER
WICHITA, KANSAS 67208

Oct. 6, 1966

Re: CORE ANALYSIS REPORT
Lee Phillips Oil & Adair Oil
Ladd #11
Greenwood County, Kansas

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

Gentlemen:

The cores from your well, Ladd #11, Greenwood County, Kansas have been analysed for permeability, poresity, 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.

2408' to 2412' - Oil Productive

The Bartlesville found at this depth was composed of a fine grained light grey-brown slightly friable sand with fair oil saturation. The permeabilities and porosities were lower than average, and the zone was somewhat streaked with grey shale, but the sand is considered to be oil productive.

2420' to 2435' - Oil Productive

This sand was separated from that above by grey shale with a few tight sand and silty sand streaks. The sand here was a medium grained dark brown soft and friable clean sand. Good oil saturation was measured, along with low water percentages. The permeabilities were very good, along with good porosities. A commercial well can be expected from this zone.

Yours very truly,

KANSAS CORES

Ivan L. Stuber

Attachments
cc: 3 copies to Lee Phillips Oil Co., Wichita, Ks.
3 copies to E.H. Adair Oil Co., Wichita, Ks.

Re: CORE DESCRIPTION
Lee Phillips & Adair Oil
Ladd #11
Greenwood County
Kansas

CORE #1 2408' to 2420' Cut 12' Rec. 12'

2408--09 Soft fine grained light grey-brown friable sand, slightly silty in part: Good stain and oder

2409--10 Hard grey shale with few silty sand streaks and laminations: No show

2410--12 Fine grained friable grey-brown sand with few thin shale laminations, trace carbonaceous material bottom: Good stain, bleeding oil

2412--19 Streaked sand and grey shale with silty sand streaks, sand very fine grained and silty: Streaked bleeding oil

2419--20 Hard grey shale with 4" streak of silty grey sand with black shale laminations bottom: Trace brown sand bottom with stain

CORE #2 2420' to 2435' Cut 15' Rec. 15'

2420--22 Fine grained light grey-brown friable sand with few streaks of grey shale: Good stain and oder

2422--23 Hard grey shale with few thin sand streaks: Stain in sand

2423--33 Soft medium grained friable dark brown sand: Good stain and oder

2433--35 Medium grained sand, brown top and dark grey-black bottom 1': Bleeding oil and trace salt water

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS 67208

WELL Ladd #11 COUNTY Greenwood STATE Kansas

COMPANY Lee Phillips & E.H. Adair Oil DATE 10-6-66 FILE NO S-692

FIELD TYPE CORES Diamond ANALYST IS

ANALYSIS DATA AND INTERPRETATIONS

SAMPLE N	DEPTH	PERMEABILITY MILLIDARCYS HORIZONTAL	PERMEABILITY MILLIDARCYS VERTICAL	POROSITY %	SATURATION WATER % PORE SPACE	SATURATION OIL % PORE SPACE	PROBABLE PRODUCTION	REMARKS
1	2408 09	26.1	23.8	16.1	46.7	11.4	Oil	
2	2410 11	8.9	4.6	15.8	46.3	12.5	Oil	
3	2411 12	5.3	5.1	15.8	42.1	14.8	Oil	
4	2413 14	2.1	0.0	16.1	52.2	8.4	Low Perm	
5	2415 16	4.5	2.8	14.9	53.9	11.2	Low Perm	
	2417 18	7.2	3.9	15.7	48.5	9.8	Low Perm	
7	2419 20	0.0	0.0	13.0	59.7	2.0	Low Perm	
8	2420 21	28.2	26.7	17.1	46.1	13.8	Oil	
9	2421 22	47.3	39.8	17.5	34.5	16.1	Oil	
10	2423 24	27.9	12.1	15.8	43.1	11.5	Oil	
11	2424 25	100	89.6	17.9	33.6	13.5	Oil	
12	2425 26	92.3	78.9	17.1	27.8	11.5	Oil	
13	2426 27	100	74.3	17.6	30.0	19.9	Oil	
14	2427 28	98.5	66.0	18.5	27.7	15.4	Oil	
15	2428 29	68.2	61.5	17.6	33.4	16.2	Oil	
16	2429 30	175	175	18.6	27.5	14.2	Oil	
17	2430 31	155	125	17.9	34.4	17.7	Oil	
18	2431 32	47.2	38.7	18.5	39.6	14.3	Oil	
19	2432 33	52.8	47.1	17.2	37.5	12.6	Oil	
[redacted]	2433 34	46.0	39.3	18.5	42.8	11.2	Oil	
21	2434 35	27.4	21.8	17.5	35.4	13.9	Oil	

Ladd 11
A-255-E

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS

DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	2408'-2412'	2420'-2435'
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	3	14
AVERAGE PERMEABILITY IN MILLIDARCYS	13.4	76.1
AVERAGE POROSITY, PER CENT	15.9	17.7
AVERAGE TOTAL WATER % OF PORE SPACE	45.0	35.2
AVERAGE RESIDUAL OIL % OF PORE SPACE	12.9	14.4
AVERAGE CONNATE WATER CALATED % OF PORE SPACE	36.0	28.2
ESTIMATED FORMATION VOLUME FACTOR — USED IN CALCULATING RECOVERABLE OIL	1.20	1.20
PRODUCTIVE CAPACITY — PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	40.3	1,066
RECOVERABLE OIL BY WATER DRIVE — BBLS. PER ACRE FOOT	499	623
RECOVERABLE OIL BY GAS EXPANSION — BBLS. PER ACRE FOOT	299*	374*

54.1
1119.5
247.8
94.4
342.2
289.7
492.8
782.5

*From original bottom hole pressure to zero