

# Kansas Cores

Box 811  
El Dorado 67022

## PETROLEUM RESERVOIR ENGINEERING WICHITA, KANSAS

COMPANY K-3 Energy Corporation DATE 1-20-84  
 WELL Gilbert-Mitchell #10 ANALYST IS  
 FIELD \_\_\_\_\_ ELEVATION \_\_\_\_\_  
 COUNTY Greenwood STATE Kansas GR 1086' KB 1091'

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PERMEABILITY MILLIDARCYS  $\circ \leftarrow$

400 200 100 50 0

CONNATE WATER % SATURATION

0 70 60 50 40  $\circ \leftarrow$

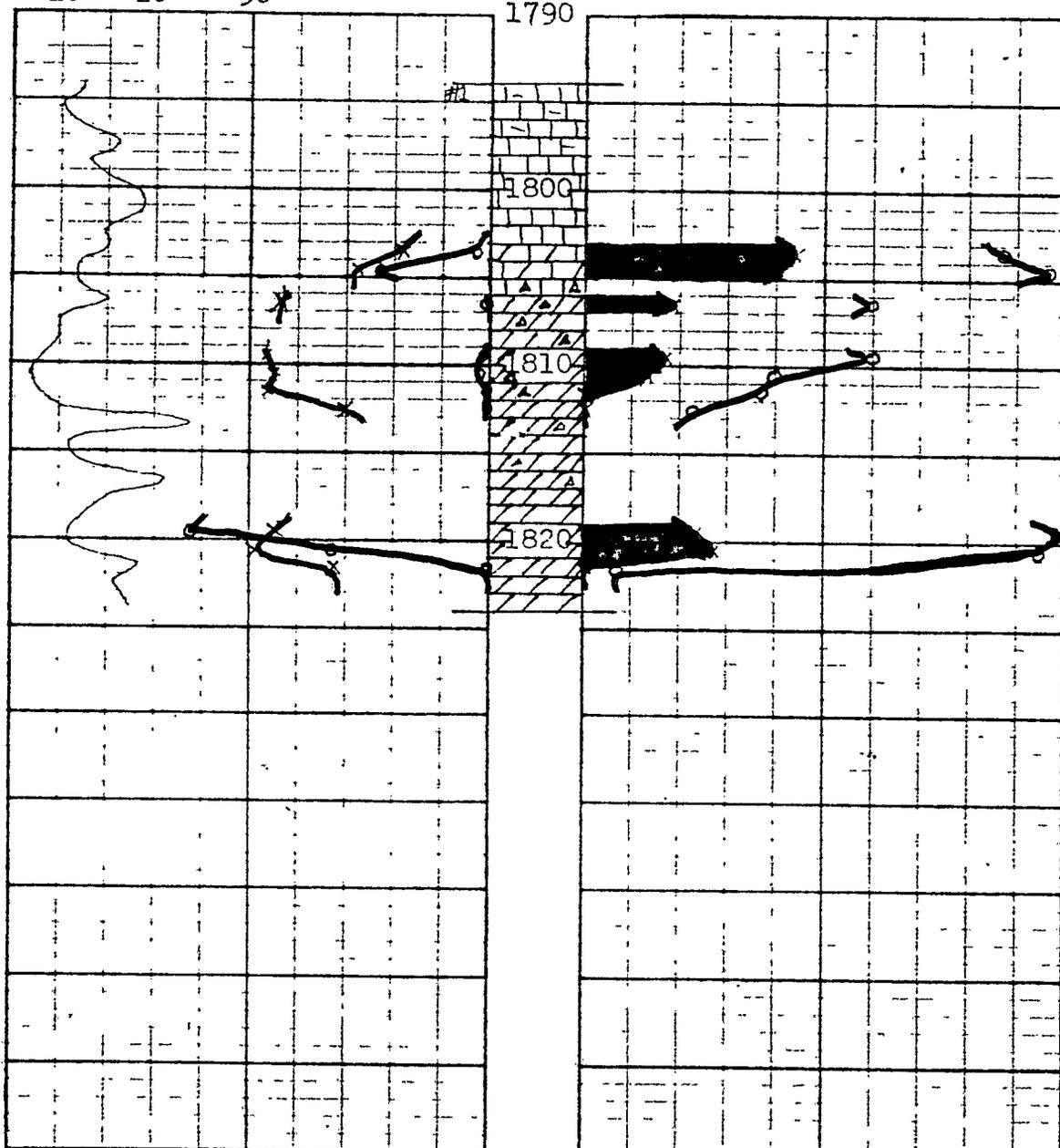
POROSITY-%  $\times \leftarrow$

OIL % PORE SATURATION  $\times \leftarrow$

CORING TIME 20 10 0 0

MIN/FT

10 20 30



# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

Jan. 20, 1984

1026 NORTH LIGHTNER  
WICHITA, KANSAS 67208

Re: CORE ANALYSIS REPORT  
K-3 Energy Corporation  
Gilbert-Mitchell #10  
915' FSL, 825' FWL SW/4  
Section 4-24-12E'  
Greenwood County, Kansas

K-3 Energy Corporation  
P.O. Box 89  
El Dorado, Kansas 67042

Gentlemen:

The cores from the captioned well 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 discussion of the section cored & analysed:

1803' to 1805' - Oil Productive

This section toward the top of the Mississippian consisted of a fairly hard slightly dolomitic and fossiliferous limestone with good oil saturation and waters in line for oil production. The porosities were average for this limestone, and fair permeabilities were measured.

1809' to 1813' - Non-Productive

A soft mostly dense to traces fine crystalline dolomite with good porosities was found in this interval. Although some oil was noted in the top, this section is considered to be non-productive.

1819' to 1821' - Oil Productive

A vugular to sucrosic dolomite was found here with very good porosities and permeabilities. The water percentages are low, indicating along with the lower oils that the zone will be higher than average in the GOR. It is expected that a commercial well can be made from this zone in combination with that above.

Yours very truly,

KANSAS CORES  
*Ivan L. Stuber*  
Ivan L. Stuber

Attachments

cc: 3 copies to K-3 Energy Corp., El Dorado, Ks.

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PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS

## DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	1803'-1805'	1819'-1821'
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	2	2
AVERAGE PERMEABILITY IN MILLIDARCYS	34.0	152
AVERAGE POROSITY, PER CENT	12.1	24.2
AVERAGE TOTAL WATER % OF PORE SPACE	34.4	31.5
AVERAGE RESIDUAL OIL % OF PORE SPACE	21.7	12.0
AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE	27.5	25.2
ESTIMATED FORMATION VOLUME FACTOR - USED IN CALCULATING RECOVERABLE OIL	1.18	1.18
PRODUCTIVE CAPACITY - PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	68.0	304
RECOVERABLE OIL BY WATER DRIVE - BBLs PER ACRE FOOT	259 *	536 *
RECOVERABLE OIL BY GAS EXPANSION - BBLs. PER ACRE FOOT	144 *	298 *

\* 45% of the oil in place

\*\* 25% of the oil in place

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Re; CORE DESCRIPTION  
K-3 Energy Corp.  
Gilbert-Mitchell #10,  
Greenwood Co., Kansas

<u>CORE #1</u>	<u>1794' to 1824'</u>	<u>Cut 30'</u>	<u>Rec. 30'</u>
1794--98	Dense grey limestone with dark grey shale streaks:	No show	
1798--1803	Hard dense light grey limestone with some tan limestone, trace fossils in part:	No show	
1803--05	Grey slightly fossiliferous to trace vugular slightly dolomitic limestone:	Good stain and odor, bleeding oil	
1805--06	Dense grey limestone with traces grey chert streaks and inclusions:	No show	
1806--09	Dense brown dolomite with few fresh grey chert streaks:	No show	
1809--11	Dense to very slightly fine crystalline brown dolomite with traces grey chert & black stylolytes:	Poor odor with slight fluorescence & slight oil	
1809--13-	Dense grey dolomite with traces grey chert inclusions:	No show	
1813--19	Dense brown dolomite:	No show	
1819--21	Soft brown slightly vugular to sucrosic dolomite:	Good stain and odor, slight bleeding oil	
1821--24	Dense grey dolomite:	No show	

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PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS 67208

WELL Gilbert-Mitchell #10 COUNTY Greenwood STATE Kansas  
 COMPANY K-3 Energy Corp. DATE 1-20-84 FILE NO. S-1587  
 FIELD \_\_\_\_\_ TYPE CORES Diamond ANALYST IS

## ANALYSIS DATA AND INTERPRETATIONS

SAMPLE No.	DEPTH	PERMEABILITY MILLIDARCYs		POROSITY %	SATURATION WATER % PORE SPACE	SATURATION OIL % PORE SPACE	PROBABLE PRODUCTION	REMARKS
		HORIZONTAL	VERTICAL					
1	1803 04	3.8	2.3	9.7	36.6	22.0	Oil	
2	1804 05	64.2	46.1	14.4	32.1	21.4	Oil	
3	1806 07	0.0	0.0	21.7	48.8	9.6	No Perm	
4	1809 10	2.1	0.0	24.2	50.0	9.1	Low Perm	
5	1810 11	2.8	0.0	23.1	58.4	7.0	Low Perm	
6	1811 12	0.0	0.0	23.7	61.2	0.0	No Perm	
7	1812 13	0.0	0.0	14.8	68.2	0.0	No Perm	
8	1819 20	220	115	23.7	30.4	10.7	Oil	
9	1820 21	83.9	67.4	24.6	32.7	13.4	Oil	
10	1821 22	0.0	0.0	16.6	89.2	0.0	No Perm	