

# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

Aug. 26, 1965

1026 NORTH LIGHTNER  
WICHITA, KANSAS 67208

Re: CORE ANALYSIS REPORT  
Mull Drlg. & Walters Drlg.  
Brensing #G-1  
Kiowa County  
Kansas

Mull Drilling Co.  
Wichita Plaza Bldg.  
Wichita, Kansas

Gentlemen:

The cores from your well, Brensing #G-1, Kiowa 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.

## 4879' to 4892' - Oil Productive

This section of the Mississippian was composed for the most part of a soft light grey to brown fossiliferous slightly limey dolomite with good oil saturation throughout. The permeabilities and porosities were average for this zone. The water percentages are well in line for water free production.

## 4894' to 4903' - Oil Productive

A dolomitic limestone was found at this depth, with subsequent lower porosities and lower permeabilities. Good oil saturation was measured, along with low waters. A good, commercial well can be expected from these two zones.

Yours very truly,

KANSAS CORES

*Ivan L. Stuber*  
Ivan L. Stuber

Attachments

cc: 3 copies to Mull Drlg. Co., Wichita, Kansas  
3 copies to Walters Drlg. Co., Wichita, Kansas

NW-SE  
20 27 20

# Kansas Cores


PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS

COMPANY Mull Drilling & Walters Drilling DATE 8-26-65  
WELL Brenging #G-1 ANALYST IS  
FIELD \_\_\_\_\_  
COUNTY Kiowa STATE Kansas

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PERMEABILITY MILLIDARCS 

200 150 100 50 0

POROSITY-% 

20 10 0

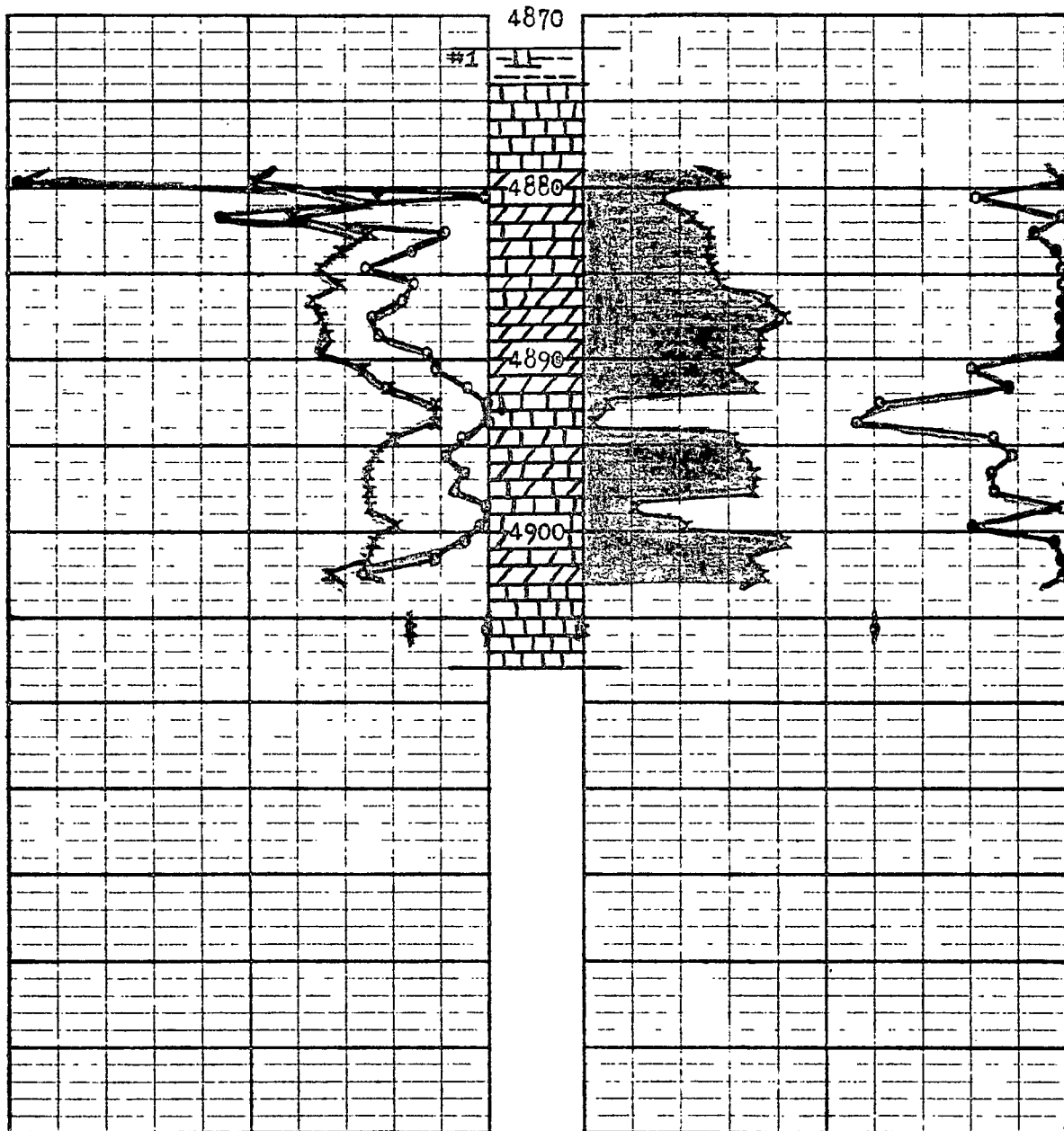
CONNATE WATER % SATURATION 

0 70 60 50 40

OIL % PORE SATURATION 

0 10 20

11874  
-2313  
-2561



Re: CORE DESCRIPTION  
Mull Drlg. & Walters Drlg.  
Brensing #G-1  
Kiowa Co., Kansas

CORE #1

4872' to 4908'

Cut 36'

Rec. 36'

- 2' Soft green slickensided shale with few dense to slightly crystalline limestone inclusions: No show
- 4' Hard medium crystalline brown to light grey limestone: No show
- 1' Same as above with few stylolites: No show
- 1' Soft brown vugular dolomite, some finely crystalline: Good stain and odor
- 1' Hard slightly dolomitic & crystalline limestone, vertically fractured: Spotted stain, oil in fractures
- 1' Hard slightly glauconitic slightly vugular vertically fractured dolomite: Good stain and odor
- 4' Soft light grey-brown crystalline dolomitic fossiliferous limestone: Good slightly spotted stain, good odor
- 4' Soft brown fossiliferous crystalline dolomite, some large rounded calcite inclusions: Good stain and odor
- 2' Very fossiliferous dolomite: Good stain and odor
- 2' Hard light grey coarsely crystalline limestone, slight vertical fractures bottom: Trace stain, slight odor
- 4' Hard brown crystalline dolomitic fossiliferous limestone: Fair to good staining, good odor
- 2' Hard coarsely crystalline limestone, trace streaked dolomite, slight vertical fractures: Poor streaked stain
- 3' Hard brown limey dolomite, good dolomite bottom 1': Good stain and odor
- 5' Fairly soft light grey finely crystalline to slightly chalky limestone: No show

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WICHITA, KANSAS 67208

WELL Brensing #G-1 COUNTY Kiowa STATE Kansas  
 COMPANY Mull Drlg. & Walters Drlg. DATE 8-26-65 FILE NO. S-617  
 FIELD \_\_\_\_\_ TYPE CORES Diamond ANALYST IS

## ANALYSIS DATA AND INTERPRETATIONS

*factor low avg  $\phi = \frac{22.6}{16.6}$*

SAMPLE No.	DEPTH	PERMEABILITY MILLIDARCYS		POROSITY %	SATURATION WATER % PORE SPACE	SATURATION OIL % PORE SPACE	PROBABLE PRODUCTION	REMARKS		
		HORIZONTAL	VERTICAL							
1	4879	320	2.5	210	2.32	24.7 P	21.0	14.3	Oil	
2	4880	2.0	0.30	0.0	0	11.3 W	39.8	8.2	Oil	Vertical fractures
3	4881	140	2.15	90.9	1.96	20.2 W	22.3	11.1	Oil	Vertical fractures
4	4882	23.4	1.37	8.8	0.94	13.3 P	33.6	12.9	Oil	
5	4883	41.6	1.62	26.9	1.43	15.5 P	31.1	12.5	Oil	
6	4884	66.9	1.83	50.6	1.70	17.0 P	29.8	13.1	Oil	
7	4885	38.9	1.59	35.2	1.55	15.2 P	29.4	14.4	Oil	
8	4886	46.8	1.67	31.7	1.50	18.7 P	28.7	19.1	Oil	
9	4887	62.4	1.80	46.0	1.66	18.0 P	24.7	20.8	Oil	
10	4888	55.9	1.75	38.7	1.59	17.0 P	29.2	18.2	Oil	
11	4889	32.5	1.51	12.9	1.11	17.2 P	30.3	17.9	Oil	
12	4890	27.2	1.43	6.8	0.83	13.4 P	39.8	15.2	Oil	
13	4891	12.3	1.09	2.8	0.44	10.6 P	35.6	16.7	Oil	
14	4892	0.0	0	0.0	0	5.6 P	49.8	2.8	No Perm	
15	4893	0.0	0	0.0	0	5.5 P	51.6	1.0	No Perm	Vertical fractures
16	4894	16.9	1.23	10.2	1.01	10.0 P	37.8	15.1	Oil	
17	4895	21.2	1.32	6.9	0.83	11.9 P	35.6	16.0	Oil	
18	4896	13.7	1.14	8.1	0.90	12.8 P	38.3	17.3	Oil	
19	4897	18.0	1.25	8.0		12.6 P	38.1	17.1	Oil	
20	4898	0.8	0.09	0.0		12.9 W	29.1	5.8	No Perm	
21	4899	3.2	0.50	0.8	0.96	9.9 W	39.6	10.9	No Perm	Vertical fractures
22	4900	12.7	1.10	5.2	0.71	12.2 W	30.9	20.6	Oil	
23	4901	26.9	1.43	14.8	1.17	13.0	28.7	16.5	Oil	
24	4902	68.7	1.84	32.5	1.5	16.8 W	22.3	18.8	Oil	
25	4905	0.0	0.0	8.3		16.8 W	49.8	0.0	No Perm	

*avg S<sub>o</sub> = 13.7*

*11.3 avg  $\phi$*

*12.2*

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WICHITA, KANSAS

## DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	4879'-4903'			
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	20			
AVERAGE PERMEABILITY IN MILLIDARCYS	52.4			
AVERAGE POROSITY, PER CENT	15.1			
AVERAGE TOTAL WATER % OF PORE SPACE	31.4			
AVERAGE RESIDUAL OIL % OF PORE SPACE	15.8			
AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE	25.1			
ESTIMATED FORMATION VOLUME FACTOR - USED IN CALCULATING RECOVERABLE OIL	1.30			
PRODUCTIVE CAPACITY - PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	1,048			
RECOVERABLE OIL BY WATER DRIVE - BBLs. PER ACRE FOOT	489			
RECOVERABLE OIL BY GAS EXPANSION - BBLs. PER ACRE FOOT	293*			

\*From original bottom hole pressure to zero

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