

Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

Oct. 1, 1975

1026 NORTH LIGHTNER
WICHITA, KANSAS 67208

Re: CORE ANALYSIS REPORT
Walters Drilling Co.
Keitzke #1 -
Ness County, Kansas

Walters Drilling Company
Insurance Building
Wichita, Kansas

Gentlemen:

The cores from your well, Keitzke #1, Ness 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.

4484' to 4496' - Oil Productive

This section of the Mississippian consisted of two distinct zones of dolomite. The upper 5' was a fairly hard finely crystalline light brown dolomite, slightly streaked toward the top with some limestone and dense dolomite, this zone having fair porosities and permeabilities and good oil saturation with fairly high waters, and the bottom zone of 6' was a soft sucrosic and slightly fossiliferous dark brown dolomite with very good permeabilities and porosities and very good oil saturation with low water percentages. The entire zone is considered oil productive, and a good, commercial well can be expected from this section.

Yours very truly,

KANSAS CORES

Ivan L. Stuber
Ivan L. Stuber

Attachments

cc: 6 copies to Walters Drlg. Co., Wichita, Ks.

Re: CORE DESCRIPTION
Walters Drilg. Co.
Keitske #1
Ness County, Ks.

- 4483--84 Hard light grey-white dense to earthy dolomite with few streaks and inclusions of light brown very finely crystalline to dense dolomite: Fair streaked stain and odor
- 4484--85 Dark brown hard very fine crystalline dolomite with few streaks of grey dolomite as above: Good slightly streaked stain
- 4485--86 Very hard light brownish-tan fine to medium crystalline limestone with some pyrite inclusions and bands, some in cubic form: Streaked stain in limestone & dolomitic limestone
- 4486--89 Brown hard very fine crystalline to slightly sugrosic dolomite with few dense grey-green dolomite laminations & inclusions: Good stain and odor
- 4489--90 Hard fine crystalline to dense light brown dolomite and some cherty dolomite with some fresh dark grey chert inclusions: Fair stain and odor
- 4490--95 Soft dark brown sugrosic clean dolomite: Good stain and odor
- 4495--96 Same dolomite with few streaks of dolomitic limestone and some shaley dolomite, bottom few inches soft rotten looking light dirty grey olacareous shale with some bright green rotten to some slickensided shale

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WICHITA, KANSAS 67208

WELL Keitske #1 COUNTY Ness STATE Kansas
 COMPANY Walters Drilling DATE 10-1-75 FILE No. S-1259
 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	4483	0.0	0.0	14.2	58.6	12.2	No Perm	
	84							
2	4484	25.8	11.2	18.7	27.7	20.7	Oil	
	85							
3	4485	0.5	0.0	11.7	59.8	22.3	No Perm	
	86							
4	4486	120	83.9	19.0	42.1	34.8	Oil	
	87							
5	4487	62.5	39.6	19.7	39.7	29.8	Oil	
	88							
6	4488	46.1	25.3	20.0	49.9	20.7	Oil	
	89							
7	4489	11.0	0.0	11.8	58.4	18.1	Low Perm	
	90							
8	4490	490	320	22.8	25.9	23.9	Oil	
	91							
9	4491	120	100	24.5	43.7	25.3	Oil	
	92							
10	4492	380	320	21.0	41.0	29.1	Oil	
	93							
11	4493	300	300	24.2	39.5	31.6	Oil	
	94							
12	4494	330	140	21.1	28.8	30.9	Oil	
	95							
13	4495	75.8	62.5	16.6	32.5	23.6	Oil	
	96							

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DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	4484'-4496'			
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	10			
AVERAGE PERMEABILITY IN MILLIDARCYS	195			
AVERAGE POROSITY, PER CENT	20.8			
AVERAGE TOTAL WATER % OF PORE SPACE	37.1			
AVERAGE RESIDUAL OIL % OF PORE SPACE	27.0			
AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE	29.7			
ESTIMATED FORMATION VOLUME FACTOR -- USED IN CALCULATING RECOVERABLE OIL	1.20			
PRODUCTIVE CAPACITY -- PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	1950			
RECOVERABLE OIL BY WATER DRIVE -- BBLs. PER ACRE FOOT	426 *			
RECOVERABLE OIL BY GAS EXPANSION -- BBLs. PER ACRE FOOT	236 ***			

* 45% of the oil in place

*** 25% of the oil in place

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WICHITA, KANSAS

COMPANY Walters Drilling DATE 10-1-75
WELL Klitzke #1 (Klitzke) ANALYST IS
FIELD _____ ELEVATION _____
COUNTY Nowe STATE Kansas GR KB 2487'

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 date. Our opinions of an analysis are placed at the discretion of the operator.

PERMEABILITY MILLIDARCYS 

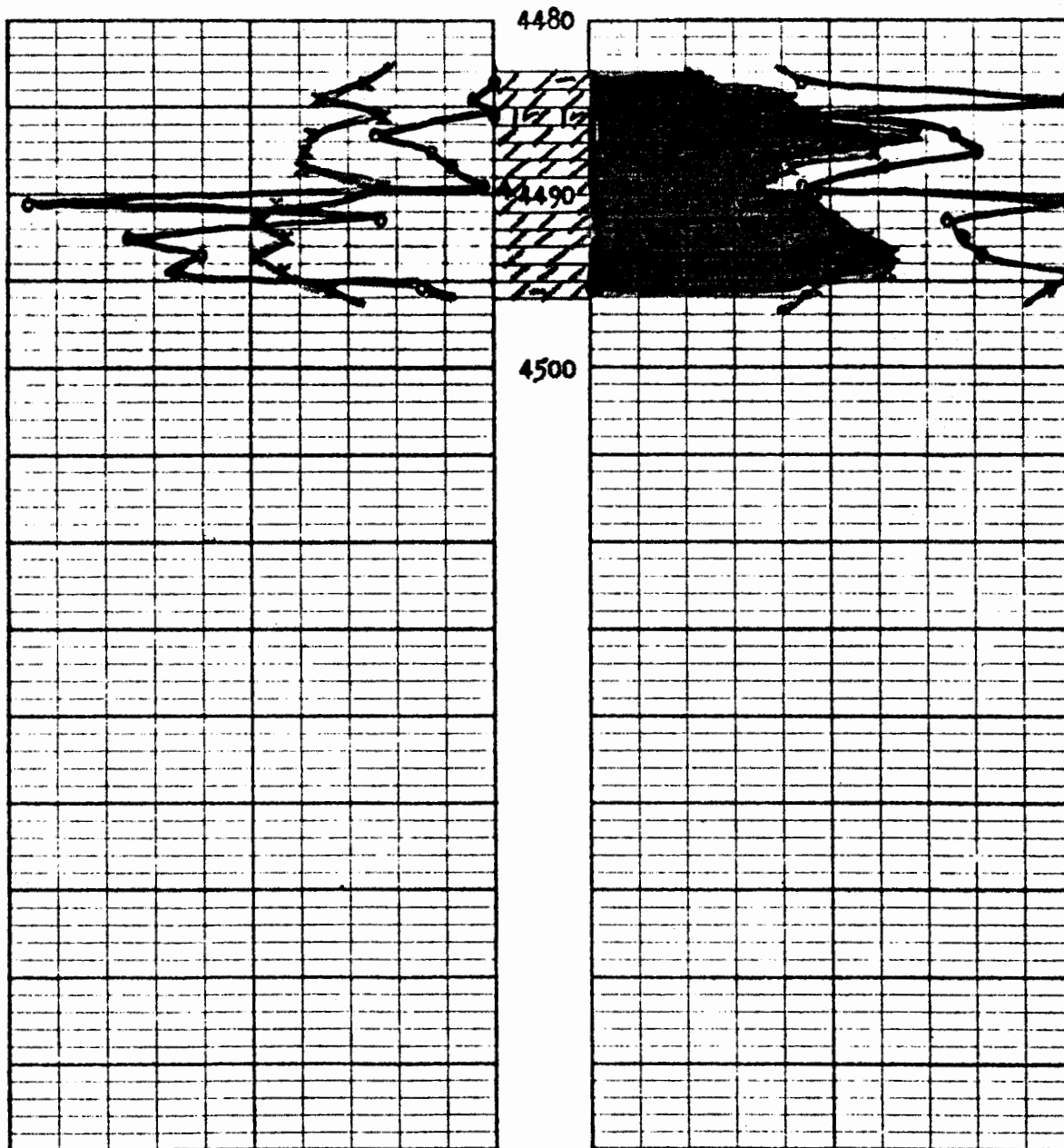
400 300 200 100 0

POROSITY-% 
20 10 0

CONNATE WATER % SATURATION

0 70 60 50 40 

OIL % PORE SATURATION 
0 10 20 30



LOG

COMPANY WALTERS DRILLING CO.

WELL NAME KLITZKE NO 1

FIELD

LOCATION C SE SE

SEC. 12 TWP. 17 RGE. 24 W

COUNTY NESS

STATE KANSAS

OPERATOR SAME

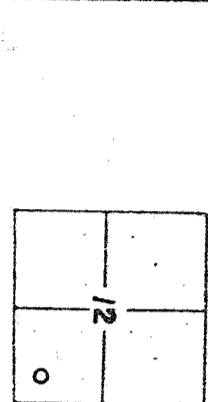
CONTRACTOR DNB RIG 2

COMM. 9-22-75 COMP. 9-30-75

SURFACE PIPE 259' of 8 5/8" w/ 175 Sx

PRODUCTION PIPE 447' of 5 1/2" w/ 125 Sx

Drillers TD 4496 Log TD 4495



PRODUCTION

ELEVATION KB 2487

DF 2484

GL 2482

Drilling Measured from 2487 KB

Samples Saved From 3800 To RTD

Drilling Time From 3800 To RTD

Samples Examined From 3800 To RTD

Geological Supervision From 3940 To RTD

Wellsite Geologist GERALD B. BECKER

Electrical Surveys PETRO-LOG

RADIATION GUARD

FORMATION TOPS & STRUCTURAL POSITION

FORMATION	Sample		Elec Log		Reference	
	Tops	Sub-Sea Datum	Tops	Sub-Sea Datum	A	B
ANHYDRITE	1805	+684	1802	+685	+682	+684
HEBNER	3862	-1375	3862	-1375	-1379	-1372
LANSING	3902	-1415	3902	-1415	-1420	-1414
MARMATON	4270	-1783	4270	-1783	-1795	-1782
FORT SCOTT	4395	-1908	4395	-1908	-1924	-1912
CHEROKEE SH	4418	-1931	4418	-1931	-1948	-1934
MISSISSIPPIAN	4475	-1988	4475	-1988	-2007	-1992
TD	4496	-2009	4495	-2008	-2099	-2017

REFERENCE WELL FOR STRUCTURE (A) HULL KLITZKE-HARKNESS #1 CNESE
12-17-24W (B) WALTERS LYNCH #1 CNESE 13-17-24W

Walters 1 - Klitzke 12-17-24W DST 1 Rec. 60' OIL

AA	300' HQCO 2.0
(4376-4428)	60' MGCO .5
AA	120' HQCM 1.0
AA	40 GRAVITY
AA	PRESS.: 30" IFP 51-101
AA	30" ISIP 838
AA	60" FFP 111-173
AA	60" FSIP 580
AA	TEMP.: 97°
LS BF & TAN DNS INC IN SH BLK & GY	
AA	
SH BLK CARB	FT. SCOTT 4395
	-1908
LS TAN FOSS DNS SFO G IN P. PP & P-F VUG & FL ODOR YEL FLOR	
LS WH CKY CNTY & BF & TAN DNS	CHEROKEE 4418
	-1931
SH BLK CARB	DST #2 4440-4496
LS TAN FOSS DNS	OPEN: 90 MIN.
LS BF FOSS CKY VSSFO NO ODOR	BLOW: STRONG
LS BF & TAN DNS	REC.: 290' OIL 2.4 BBL
	575 MO 4.8 "
SH BLK CARB	PRESS.: 30" IFP 101-182
LS WH BF DNS	30" ISIP 952
	60" FFP 213-355
SH GR GY GR RED GR & RED	60" FSIP 943
LS WH CKY & BF & TAN DNS	TEMP.: 99°
GRY BF TAN GY	
SH VARI-COLOR	MISSISSIPPIAN 4475
DOL TAN FYL P-F VUG & G SFO G. ODOR YEL. FLOR.	-1988
	RTD 4496
	-2009

CORE DISCRIPTION

- 4483-84 DOL LT GR FYL DNS FEW LG VUGS BLEEDING
- 4484-85 1/2 DOL LT GR FYL DNS MANY SH VUGS BLEEDING SH GR
- 4485 1/2-86 DOL LT GR FYL SCT SH 1 LG VUGS FEW VER. FRAC BLEEDING
- 4486-84 DOL LT GR FYL DNS FEW

