



LEASE CODE #: 340216  
 LEASE: BATES UNIT WELL: 1-04  
 FIELD: BATES , RESERVOIR : MISS  
 COUNTY: SUMNER , STATE: KS  
 OPERATOR: PHILLIPS PETROLEUM CO

PHILLIPS - PRODUCTION - L E D G E R

DATE	OIL, BBL	CUM-OIL	GAS, MCF	CUM-GAS	GOR, CF/BBL	WATER, BBL	WATER CUT, %	DAYS ON
PRIOR	88,696	88,696	0	0	0	58,254	39.64	6967
1/93	394	89,090	0	0	0	620	61.14	31
2/93	245	89,335	0	0	0	411	62.65	26
3/93	233	89,568	0	0	0	394	62.84	31
4/93	225	89,793	0	0	0	381	62.87	30
5/93	192	89,985	0	0	0	304	61.29	24
6/93	214	90,199	0	0	0	381	64.03	30
7/93	215	90,414	0	0	0	394	64.70	31
8/93	247	90,661	0	0	0	364	59.57	31
9/93	347	91,008	0	0	0	252	42.07	30
10/93	350	91,358	0	0	0	260	42.62	31
11/93	343	91,701	0	0	0	252	42.35	30
12/93	335	92,036	0	0	0	260	43.70	31
TOT/93	3,340	92,036	0	0	0	4,273		
1/94	180	92,216	0	0	0	941	83.94	31
2/94	3	92,219	0	0	0	1,596	99.81	28
3/94	3	92,222	0	0	0	1,539	99.81	27
4/94	13	92,235	0	0	0	718	98.22	27
5/94	29	92,264	0	0	0	1,587	98.21	31
6/94	19	92,283	0	0	0	1,180	98.42	30
7/94	15	92,298	0	0	0	887	98.34	31
8/94	20	92,318	0	0	0	784	97.51	31
9/94	93	92,411	0	0	0	845	90.09	30
10/94	164	92,575	0	0	0	961	85.42	31
11/94	161	92,736	0	0	0	930	85.24	30
12/94	165	92,901	0	0	0	961	85.35	31
TOT/94	865	92,901	0	0	0	12,929		
1/95	166	93,067	0	0	0	961	85.27	31
2/95	141	93,208	0	0	0	868	86.03	28
3/95								
4/95								
5/95								
6/95								
YTD/95	307	93,208	0	0	0	1,829		
TOTAL	93,208	93,208	0	0	0	77,285		

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 makes no representation or warrants with  
 respect to any of this information.

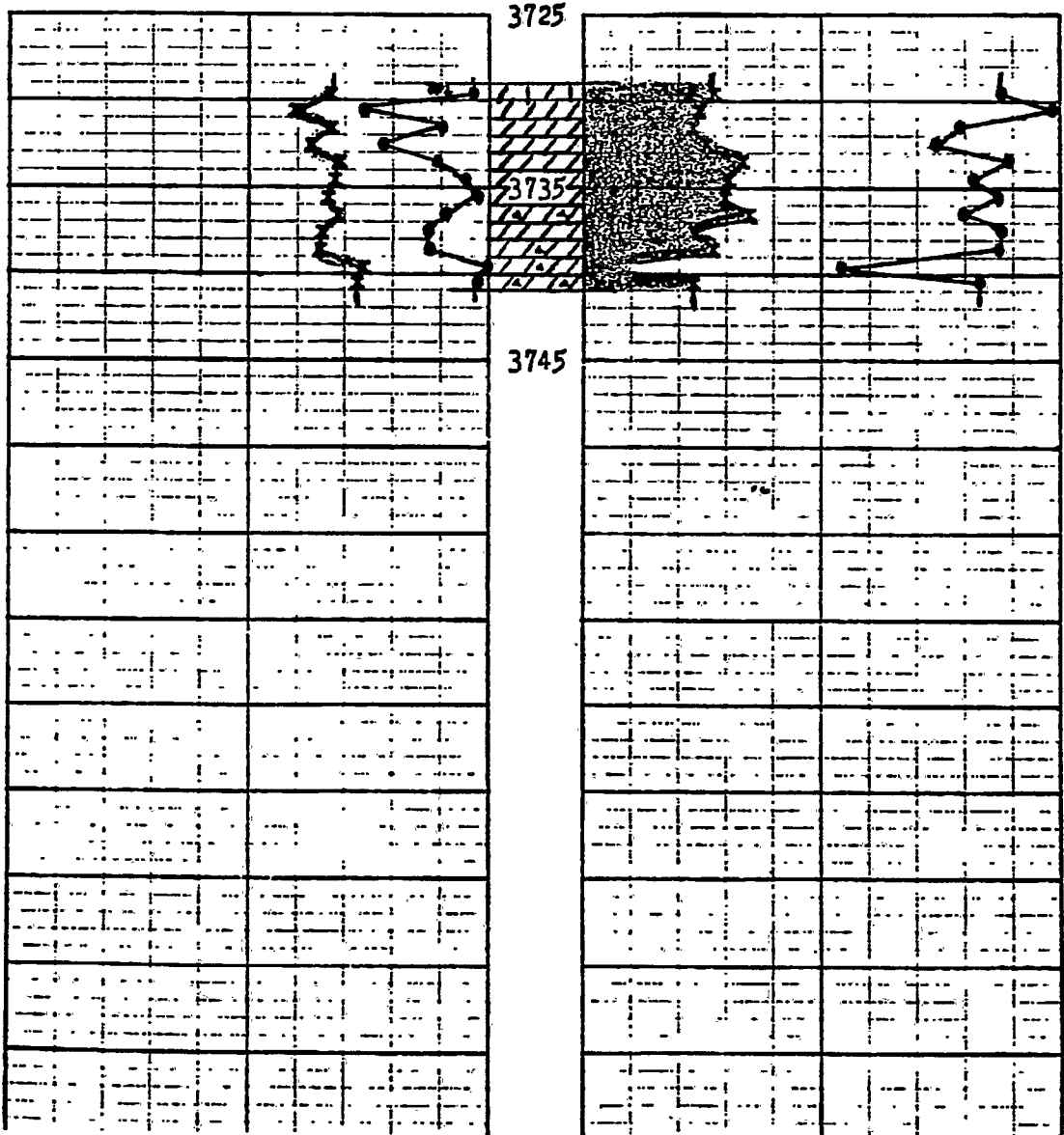
# Kansas Cores

## PETROLEUM RESERVOIR ENGINEERING WICHITA, KANSAS

COMPANY Beardmore Drilling DATE 10-25-66  
 WELL Bates #A-4 ANALYST IS  
 FIELD \_\_\_\_\_  
 COUNTY Sumner 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 interpretation and opinions of the data. Our opinions of an analysis are placed at the discretion of the operator.

PERMEABILITY MILLIDARCYS  $\text{O} \rightarrow \text{O}$  CONNATE WATER % SATURATION  
 200 150 100 50 0 0 70 60 50 40  
 POROSITY-%  $\text{X} \rightarrow \text{X}$  OIL % PORE SATURATION  $\text{X} \rightarrow \text{X}$   
 20 10 0 0 10 20



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# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

Oct. 25, 1966

1026 NORTH LIGHTNER  
WICHITA, KANSAS 67208

Re: CORE ANALYSIS REPORT  
Beardmore Drilling Co.  
Bates #A-4  
Sumner County  
Kansas

Beardmore Drilling Co.  
One-Twenty Building  
Wichita, Kansas

Gentlemen:

The cores from your well, Bates #A-4, Sumner 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.

3729' to 3741' - Oil Productive

and 3729-41. 100

The Mississippian encountered at this depth was composed for the most part of a fairly soft brown finely crystalline to slightly sugresic dolomite with some scattered chert and harder and dense on the bottom. Good oil saturation was measured, and the water percentages are well in line for water free production. The permeabilities were average or slightly lower than the field, and good porosities were measured. A good, commercial well can be expected from this zone.

Yours very truly,

KANSAS CORES

*Ivan L. Stuber*  
Ivan L. Stuber

Attachments

cc: 6 copies to Beardmore Drig. Co., Wichita, Kansas

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Re: CORE DESCRIPTION  
Beardmore Drlg. Co.  
Bates #A-4  
Sumner County  
Kansas

<u>GORE #1</u>	<u>3729' to 3741'</u>	<u>Gut 12'</u>	<u>Rec. 12'</u>
3729--30	Fairly hard finely crystalline light brown limey dolomite with few thin laminations of light grey dense limestone: Good very slightly streaked stain, good odor		
3730--35	Soft dark brown finely crystalline dolomite with some dark grey-black laminations of dolomite: Good stain and odor		
3735--37	Soft brown finely crystalline to slightly sugresic dolomite, few inclusions and streaks of light grey chert: Good stain and odor		
3737--39	Soft chocolate brown sugresic dolomite, trace blue-grey chert toward bottom: Good stain and odor		
3739--40	Very hard dirty grey to dark grey dense dolomite with few thin streaks brown dolomite: Very streaked stain		
3740--41	Streaked brown finely crystalline hard dolomite and dark grey dense dolomite, some blue-grey chert inclusions: Good streaked stain		

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# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS 67208

WELL Bates #A-4 COUNTY Sumner STATE KANSAS  
 COMPANY Beardmore Drilling DATE 10-25-66 FILE No. S-698  
 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	3729	8.1	5.1	16.2	36.6	13.8	Oil	
	30							
2	3730	65.7	31.8	20.1	29.9	12.2	Oil	
	31							
3	3731	24.6	11.0	16.2	40.7	11.2	Oil	
	32							
4	3732	53.7	49.5	18.9	43.6	13.0	Oil	
	33							
5	3733	26.7	21.2	15.5	35.7	16.5	Oil	
	34							
6	3734	12.6	8.5	15.8	39.1	15.1	Oil	
	35							
	3735	5.0	5.9	16.2	36.8	14.8	Oil	
	36							
8	3736	23.6	13.1	15.6	40.3	17.6	Oil	
	37							
9	3737	32.8	34.6	17.6	36.6	11.9	Oil	
	38							
10	3738	28.1	7.2	17.9	36.8	13.6	Oil	
	39							
11	3739	0.0	0.0	13.5	53.8	4.6	No Perm	
	40							
12	3740	4.8	4.6	14.2	38.6	11.1	Oil	
	41							

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# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS

## DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	3729'-3741'			
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	11			
AVERAGE PERMEABILITY IN MILLIDARCYS	26.0			
AVERAGE POROSITY, PER CENT	16.3			
AVERAGE TOTAL WATER % OF PORE SPACE	37.7			
AVERAGE RESIDUAL OIL % OF PORE SPACE	13.7			
AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE	30.2			
ESTIMATED FORMATION VOLUME FACTOR - USED IN CALCULATING RECOVERABLE OIL	1.24			
PRODUCTIVE CAPACITY - PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	286			
RECOVERABLE OIL BY WATER DRIVE - BBLs. PER ACRE FOOT	539			
RECOVERABLE OIL BY GAS EXPANSION - BBLs. PER ACRE FOOT	323*			

\*From original bottom hole pressure to zero

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