LEASE CODE #: 340216
LEASE: BATES UNIT WELL: 1-01
FIELD: BATES , RESERVOIR : MISS
COUNTY: SUMNER , STATE: KS
OPERATOR: PHILLIPS PETROLEUM CO

## P H I L L I P S - P R O D U C T I O N - 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 | 100,938 | 100,938 | 0 | 0 | 0 | 320,892 | 76.07 | 6942 |
| 1/93 | 121 | 101,059 | 0 | 0 | 0 | 1,693 | 93.33 | 31 |
| 2/93 | 98 | 101,157 | 0 | 0 | 0 | 1,254 | 92.75 | 26 |
| 3/93 | 121 | 101,278 | 0 | 0 | 0 | 1,349 | 91.77 | 31 |
| 4/93 | 117 | 101,395 | 0 | 0 | 0 | 1,305 | 91.77 | 30 |
| 5/93 | 104 | 101,499 | 0 | 0 | 0 | 1,083 | 91.24 | 25 |
| 6/93 | 111 | 101,610 | 0 | 0 | 0 | 1,305 | 92.16 | 30 |
| 7/93 | 112 | 101,722 | 0 | 0 | 0 | 1,349 | 92.33 | 31 |
| 8/93 | 104 | 101,826 | 0 | 0 | 0 | 1,381 | 93.00 | 31 |
| 9/93 | 69 | 101,895 | 0 | 0 | 0 | 1,446 | 95.45 | 30 |
| 10/93 | 69 | 101,964 | 0 | 0 | 0 | 1,494 | 95.59 | 31 |
| 11/93 | 68 | 102,032 | 0 | 0 | 0 | 1,446 | 95.51 | 30 |
| 12/93 | 66 | 102,098 | 0 | 0 | 0 | 1,494 | 95.77 | 31 |
| TOT/93 | 1,160 | 102,098 | 0 | 0 | 0 | 16,599 | | |
| 1/94 | 79 | 102,177 | 0 | 0 | 0 | 1,385 | 94.60 | 31 |
| 2/94 | 92 | 102,269 | 0 | 0 | 0 | 1,131 | 92.48 | 28 |
| 3/94 | 100 | 102,369 | 0 | 0 | 0 | 1,252 | 92.60 | 31 |
| 4/94 | 93 | 102,462 | 0 | 0 | 0 | 1,212 | 92.87 | 30 |
| 5/94 | 91 | 102,553 | 0 | 0 | 0 | 1,252 | 93.22 | 31 |
| 6/94 | 89 | 102,642 | 0 | 0 | 0 | 1,203 | 93.11 | 30 |
| 7/94 | 98 | 102,740 | 0 | 0 | 0 | 1,116 | 91.93 | 31 |
| 8/94 | 93 | 102,833 | 0 | 0 | 0 | 1,116 | 92.31 | 31 |
| 9/94 | 91 | 102,924 | 0 | 0 | 0 | 1,080 | 92.23 | 30 |
| 10/94 | 90 | 103,014 | 0 | 0 | 0 | 1,116 | 92.54 | 31 |
| 11/94 | 88 | 103,102 | 0 | 0 | 0 | 1,080 | 92.47 | 30 |
| 12/94 | 91 | 103,193 | 0 | 0 | 0 | 1,116 | 92.46 | 31 |
| TOT/94 | 1,095 | 103,193 | 0 | 0 | 0 | 14,059 | | |
| 1/95 | 82 | 103,275 | 0 | 0 | 0 | 1,008 | 92.48 | 28 |
| 2/95 | 71 | 103,346 | 0 | 0 | 0 | 936 | 92.95 | 26 |
| 3/95 | | | | | | | | |
| 4/95 | | | | | | | | |
| 5/95 | | | | | | | | |
| 6/95 | | | | | | | | |
| YTD/95 | 153 | 103,346 | 0 | 0 | 0 | 1,944 | | |
| TOTAL | 103,346 | 103,346 | 0 | 0 | 0 | 353,494 | | |

McGee Energy Services, Inc. and Client makes no representation or warrants w respect to any of this information.

# Kansas Cores

## PETROLEUM RESERVOIR ENGINEERING

WICHITA, KANSAS

COMPANY Beardmore Drilling DATE 5-30-66

WELL Bates #A-1 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 interpretations and opinions of the data. Our opinions of an analysis are placed at the discretion of the operator.

PERMEABILITY MILLIDARCYS O—O

80 60 40 20 0

POROSITY—% X—X

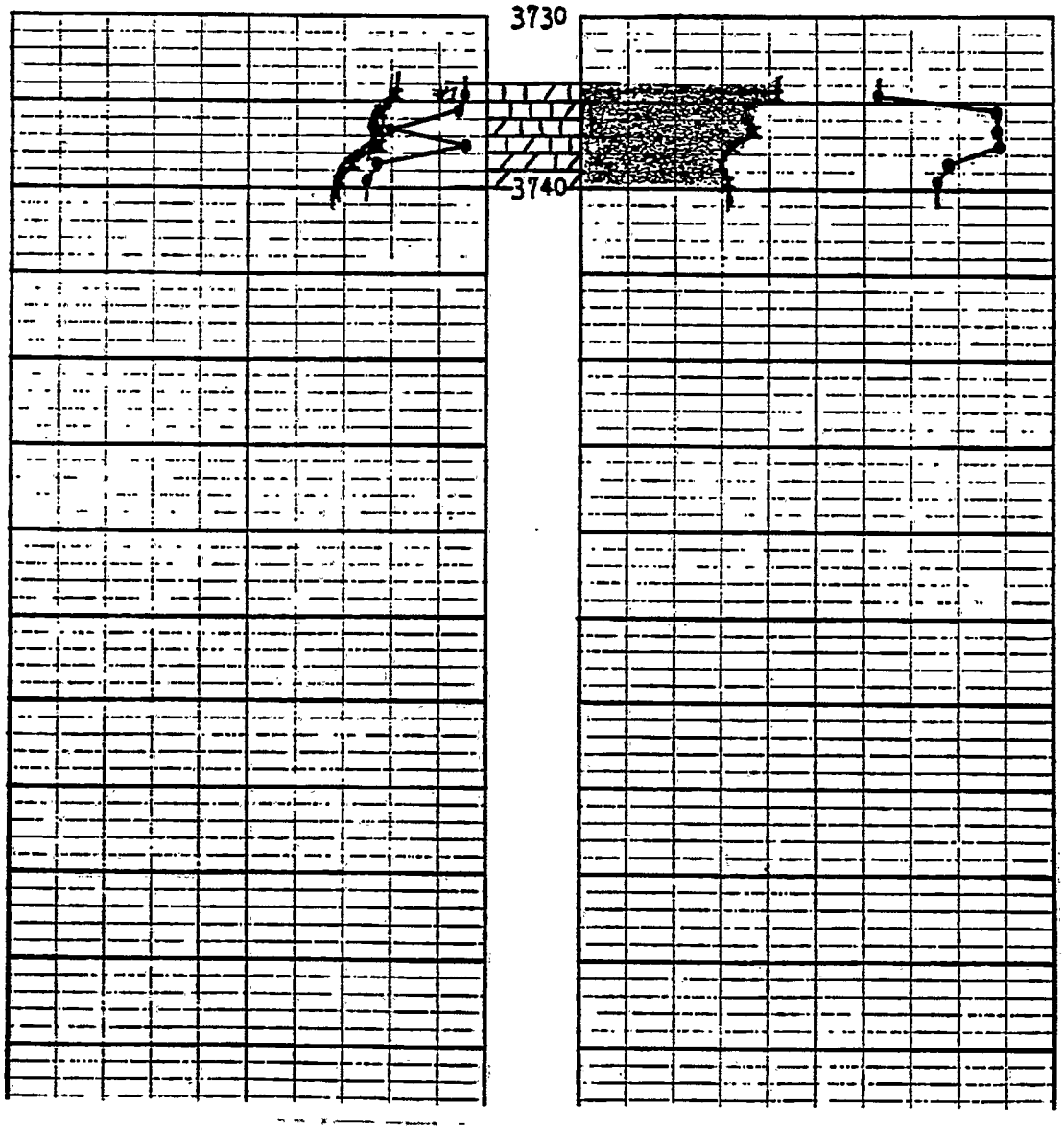
20 10 0

CONNATE WATER % SATURATION

0 70 60 50 40 O—O

OIL % PORE SATURATION X—X

0 10 20

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makes no representation or warrants with
re[illegible] any of this information.

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

May 30, 1966

Re: CORE ANALYSIS REPORT
Beardmore Drilling Co.
Bates #A-1
Sumner County
Kansas

Beardmore Drilling Co.
One-Twenty Building
Wichita, Kansas

Gentlemen:

The cores from your well, Bates #A-1, 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.

3734' to 3740' - Oil Productive

The upper 4' of this Mississippian section was composed of a soft light grey slightly dolomitic limestone, with the bottom a limey dolomite. Good oil saturation was noted throughout, and the water percentages are well in line for water free production. The porosities were fairly low, and the permeabilities were lower than average and erratic. This zone is considered to be commercially oil productive with the added pay expected below.

Yours very truly,

KANSAS CORES

Ivan L. Stuber

Ivan L. Stuber

Attachments
cc: 8 copies to Beardmore Drlg. Co., Wichita, Kansas

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Re: CORE DESCRIPTION
Beardmore Drlg. Co.
Bates #A-1
Sumner County
Kansas

| CORE #1 | 3734' to 3740' | Cut 6' | Rec. 6' |
|---|---|---|---|

3734--38 Soft light grey very finely crystalline dolomitic limestone with few very thin laminations of dark green-brown shaley dolomite: Good stain and oder

3738½-40 Soft light grey-brown finely crystalline limey dolomite, few calcite crystals in part: Good stain and oder

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# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS 67208

WELL Bates #A-1 COUNTY Sumner STATE Kansas

COMPANY Beardmore Drilling DATE 5-30-66 FILE No. S-666

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 | 3734-35 | 5.2 | 1.0 | 9.9 | 48.6 | 20.8 | Oil | |
| 2 | 3735-36 | 7.4 | 1.0 | 11.7 | 36.2 | 17.3 | Oil | |
| 3 | 3736-37 | 21.6 | 9.8 | 11.2 | 35.8 | 18.1 | Oil | |
| 4 | 3737-38 | 4.6 | 6.2 | 11.3 | 35.5 | 15.9 | Oil | |
| 5 | 3738-39 | 23.1 | 5.8 | 14.5 | 41.7 | 14.9 | Oil | |
| 6 | 3739-40 | 26.7 | 21.5 | 15.2 | 42.6 | 15.7 | Oil | |

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# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING
WICHITA, KANSAS

## DATA AVERAGES AND OIL RECOVERY FIGURES

| | | | | |
|---|---|---|---|---|
| DEPTH | 3734'-3740' | | | |
| FEET OF PRODUCTION FORMATION OF SECTION ANALYZED | 6 | | | |
| AVERAGE PERMEABILITY IN MILLIDARCYS | 14.8 | | | |
| AVERAGE POROSITY, PER CENT | 12.3 | | | |
| AVERAGE TOTAL WATER % OF PORE SPACE | 40.1 | | | |
| AVERAGE RESIDUAL OIL % OF PORE SPACE | 17.1 | | | |
| AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE | 32.1 | | | |
| ESTIMATED FORMATION VOLUME FACTOR — USED IN CALCULATING RECOVERABLE OIL | 1.20 | | | |
| PRODUCTIVE CAPACITY — PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS | 88.6 | | | |
| RECOVERABLE OIL BY WATER DRIVE — BBLS. PER ACRE FOOT | 377 | | | |
| RECOVERABLE OIL BY GAS EXPANSION — BBLS. PER ACRE FOOT | 226* | | | |

*From original bottom hole pressure to zero

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