



**DOWELL** DIVISION OF THE DOW CHEMICAL COMPANY

Oklahoma City, Oklahoma

FOR: Beardman Drilling Company

Date: June 28, 1966

HAINES

Haires No. 1, Sumner  
County, Kansas

36-30s-2w

O. C. L. No. 956

SUBMITTED BY: Jack Wagner  
Wichita, Kansas

Sample No. 10904

TYPE OF SAMPLE: Cores

DESCRIPTION: Sample from Haires No. 1, Mississippi Lime Formation,  
Sumner County, Kansas.

The core samples were submitted to the laboratory for analysis and treatment recommendations.

Laboratory test results show that the cores samples consists of 99 to 99.5 per cent carbonate material, and 0.5 to 1 per cent Quartz and silicates. Due to the very small amount of silicate material present, no problems with clays are expected when treating this formation with acid. An acid treatment should effectively stimulate the Mississippi Lime Formation represented by the core samples.

Acid Solubility Tests

<u>Sample Depth (feet)</u>	<u>Per Cent Soluble in 15X</u>
3738-39	99.5
3744-45	99

The above solubilities were measured gravimetrically in excess acid in order to determine the maximum amount of soluble material present.

M. L. Bishop

MLB/sla

cc: Tulsa Lab File

# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING

CORE ANALYSIS

June 21, 1966

1026 NORTH LIGHTNER  
WICHITA, KANSAS 67208

Re: CORE ANALYSIS REPORT  
Beardmore Drilling Co.  
Haines #1  
Sumner County  
Kansas

Beardmore Drlg. Co.  
One-Twenty Building  
Wichita, Kansas

Gentlemen:

The cores from your well, Haines #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 3748' - Oil Productive

The top 6' of this section of Mississippian was composed of a finely crystalline slightly dolomitic limestone, and the balance was a soft brown dolomite. Some fracturing was noted in the top 4'. Good oil saturation was found throughout, and the waters are in line for oil production. Fairly low permeabilities were measured in the limestone, and the dolomite was average. Fair to 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: 8 copies to Beardmore Drlg. Co., Wichita, Kansas

Re: CORE DESCRIPTION  
Beardmore Drilling  
Haines #1  
Sumner County  
Kansas

CORE #1

3734' to 3752'

Cut 18'

Rec. 18'

- 3734--38 Soft light grey finely crystalline slightly dolomitic limestone, vertical fractured: Good stain and odor
- 3738--40 Soft light grey-brown finely crystalline dolomitic limestone: Good stain and odor
- 3740--48 Soft brown sucresic to finely crystalline dolomite, some fossils bottom: Good stain and odor
- 3748--52 Hard dense dirty grey-brown dolomite: No show

# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS 67208

WELL Haines #1 COUNTY Sumner STATE Kansas

COMPANY Beardmore Drilling DATE 6-21-66 FILE NO. S-669

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	9.8	1.0	10.5	31.4	13.5	Oil	Vertical fractures
	35							
2	3735	12.6	1.8	9.6	28.2	12.1	Oil	Vertical fractures
	36							
3	3736	5.1	7.2	10.5	38.2	12.8	Oil	Vertical fractures
	37							
4	3737	10.0	5.0	14.3	31.0	9.3	Oil	Vertical fractures
	38							
5	3738	8.5	4.2	12.4	44.9	14.4	Oil	
	39							
6	3739	9.6	13.4	12.9	39.0	13.4	Oil	
	40							
7	3740	12.7	6.1	15.3	42.6	12.8	Oil	
	41							
8	3741	55.2	38.7	18.2	41.7	10.3	Oil	
	42							
9	3742	62.6	64.1	18.2	42.8	12.4	Oil	
	43							
10	3743	46.1	34.5	17.3	39.0	13.2	Oil	
	44							
11	3744	31.5	29.1	15.9	45.4	10.7	Oil	
	45							
12	3745	32.2	30.0	15.6	38.1	11.0	Oil	
	46							
13	3746	25.9	11.6	16.2	36.8	14.8	Oil	
	47							
14	3747	18.7	12.3	15.5	35.7	12.9	Oil	
	48							
15	3748	0.0	0.0	16.8	62.5	0.0	No Perm	
	49							
16	3749	0.0	0.0	16.5	67.7	0.0	No Perm	
	50							
17	3750	0.0	0.0	16.6	70.3	0.0	No Perm	
	51							
18	3751	0.0	0.0	15.2	66.4	0.0	No Perm	
	52							

# Kansas Cores

PETROLEUM RESERVOIR ENGINEERING  
WICHITA, KANSAS

## DATA AVERAGES AND OIL RECOVERY FIGURES

DEPTH	3734'-3748'			
FEET OF PRODUCTION FORMATION OF SECTION ANALYZED	14			
AVERAGE PERMEABILITY IN MILLIDARCYS	24.3			
AVERAGE POROSITY, PER CENT	14.5			
AVERAGE TOTAL WATER % OF PORE SPACE	38.2			
AVERAGE RESIDUAL OIL % OF PORE SPACE	12.4			
AVERAGE CONNATE WATER CALCULATED % OF PORE SPACE	30.1			
ESTIMATED FORMATION VOLUME FACTOR - USED IN CALCULATING RECOVERABLE OIL	1.20			
PRODUCTIVE CAPACITY - PRODUCTIVE FEET X AVERAGE PERMEABILITY IN MILLIDARCYS	341			
RECOVERABLE OIL BY WATER DRIVE - BBLs. PER ACRE FOOT	515			
RECOVERABLE OIL BY GAS EXPANSION - BBLs. PER ACRE FOOT	309*			

\*From original bottom hole pressure to zero

# Kansas Cores

## PETROLEUM RESERVOIR ENGINEERING WICHITA, KANSAS

COMPANY Beardmore Drilling

DATE 6-21-66

WELL Haines #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 MILLIDARCY'S  $\text{O} \leftarrow \text{O}$

200 150 100 50 0

POROSITY-%  $\text{X} \leftarrow \text{X}$

20 10 0

CONNATE WATER % SATURATION

0 70 60 50 40  $\text{O} \leftarrow \text{O}$

OIL % PORE SATURATION  $\text{X} \leftarrow \text{X}$

0 10 20

