CORE ANALYSIS REPORT

FOR

MURFIN DRILLING COMPANY, INC.

CARTER-COLLIVER NO. 1 CO2 I
HALL-GURNEY FIELD
RUSSELL COUNTY, KANSAS

Core Lab
PETROLEUM SERVICES

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October 31, 2000

MURFIN DRILLING COMPANY, INC.
250 N. Water
Suite 300
Wichita, Kansas 67202

File No.: 57181-18231
Subject: Core Analysis
Carter-Colliver No. 1 CO2 I
Hall-Gurney Field
Russell County, Kansas

Gentlemen:

The subject well was cored using diamond coring equipment and water base mud to obtain 4 inch diameter cores from 2871 to 2893 feet and 2954 to 2978 feet from the Lansing B/C and Lansing G formations.

Core analysis data is presented in tabular and graphical form for your convenience. A porosity vs. permeability plot was prepared for statistical evaluation. Core analysis data is contained on a 3 1/2 inch computer diskette.

We trust these data will be useful in the evaluation of your property and thank you for the opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

John Sebian
Laboratory Supervisor

JS/ym

MURFIN DRILLING COMPANY, INC.
Carter-Colliver No. 1 CO2 I
File No. 57181-18231
Procedural Page

The cores were preserved at the wellsite in aluminum liner and transported to Midland by Motor Freight.

A Core Gamma Log was recorded for downhole E-log correlation.

Core analysis was made on selected intervals requested on full diameter samples.

Fluid removal was achieved using a gas solvent extraction method.

Oil and water saturations were determined using a ratio of fluid technique.

Full diameter porosity was determined by direct pore volume measurement using Boyle's law helium expansion. Bulk volume was measured by Archimedes Principle. Grain density was calculated from dry weight, bulk volume and pore volume measurements.

$$\text{Grain Density} = \frac{\text{Dry Weight}}{\text{Bulk Vol.} - \text{Pore Vol.}}$$

Steady State Air Permeability was measured in two horizontal directions and vertically while the core was confined in a Hassler rubber sleeve.

The core was boxed after analysis.

The core will be shipped Motor Freight back to the Kansas Geological Society.

CORE LABORATORIES

Company : MURFIN DRILLING COMPANY, INC.
Well : CARTER-COLLIVER NO. 1 CO2 I
Location : 660' FSL & 1320' FEL, SEC. 28, T-14-S, R-13-W
Co,State : RUSSELL COUNTY, KANSAS

Field : HALL-GURNEY FIELD
Formation : VARIOUS
Coring Fluid : WATER BASED MUD
Elevation : 1733' KB

File No.: 57181-18231
Date : 10-30-00
API No. : 15-167-23179
Analysts: SEBIAN

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL %	SATURATION (PORE VOLUME) WATER %	GRAIN DENSITY gm/cc	DESCRIPTION
	CORE NO. 1 2871.0-2892.8								
	LANSING B/C FORMATION								
	2871.0- 72.0								No Analysis, Lim, shly, lam, no show
	2872.0- 73.0								No Analysis, Lim, shly, brec, no show
	2873.0- 75.0								No Analysis, Sh grn, lim, calc, clast, no show
1	2875.0- 76.0	121.	0.01	0.01	10.6	1.9	92.8	2.70	Sh, grn, calc, lim clast, tr% yel flu
	2876.0- 77.0								No Analysis, Sh grn blk, calc, no show
	2877.0- 79.0								No Analysis, Lim, sh lam, no show
	2879.0- 81.0								No Analysis, Sh grn, lim, lam, no show
2	2881.0- 82.0	9.16	8.55	3.35	3.2	17.0	61.4	2.69	Lim, nod, 10% dull yel flu
3	2882.0- 83.0	0.03	0.03	0.01	3.6	17.7	61.1	2.72	Lim, sh lam, 5% dull yel flu
4	2883.0- 84.0	0.07	0.05	<.01	2.3	18.6	61.9	2.72	Lim, sl frac, 5% dull yel flu in frac
5	2884.0- 85.0	0.25	<.01	<.01	2.0	18.4	63.1	2.71	Lim, foss, 10% dull yel flu
	2885.0- 91.0								No Analysis, Lim, sh lam, no show
6	2891.0- 92.0	97.2	59.6	59.9	17.9	28.3	62.9	2.67	Lim, pp, ool, 40% gld flu
7	2892.0- 92.8	194.	171.	50.3	24.0	26.9	57.2	2.67	Lim, pp, ool, 80% gld flu
	DRILLED INTERVAL 2892.8-2954.0								
	CORE NO. 2 2954.0-2977.9								

CORE LABORATORIES

Company : MURFIN DRILLING COMPANY, INC.
Well : CARTER-COLLIVER NO. 1 CO2 I

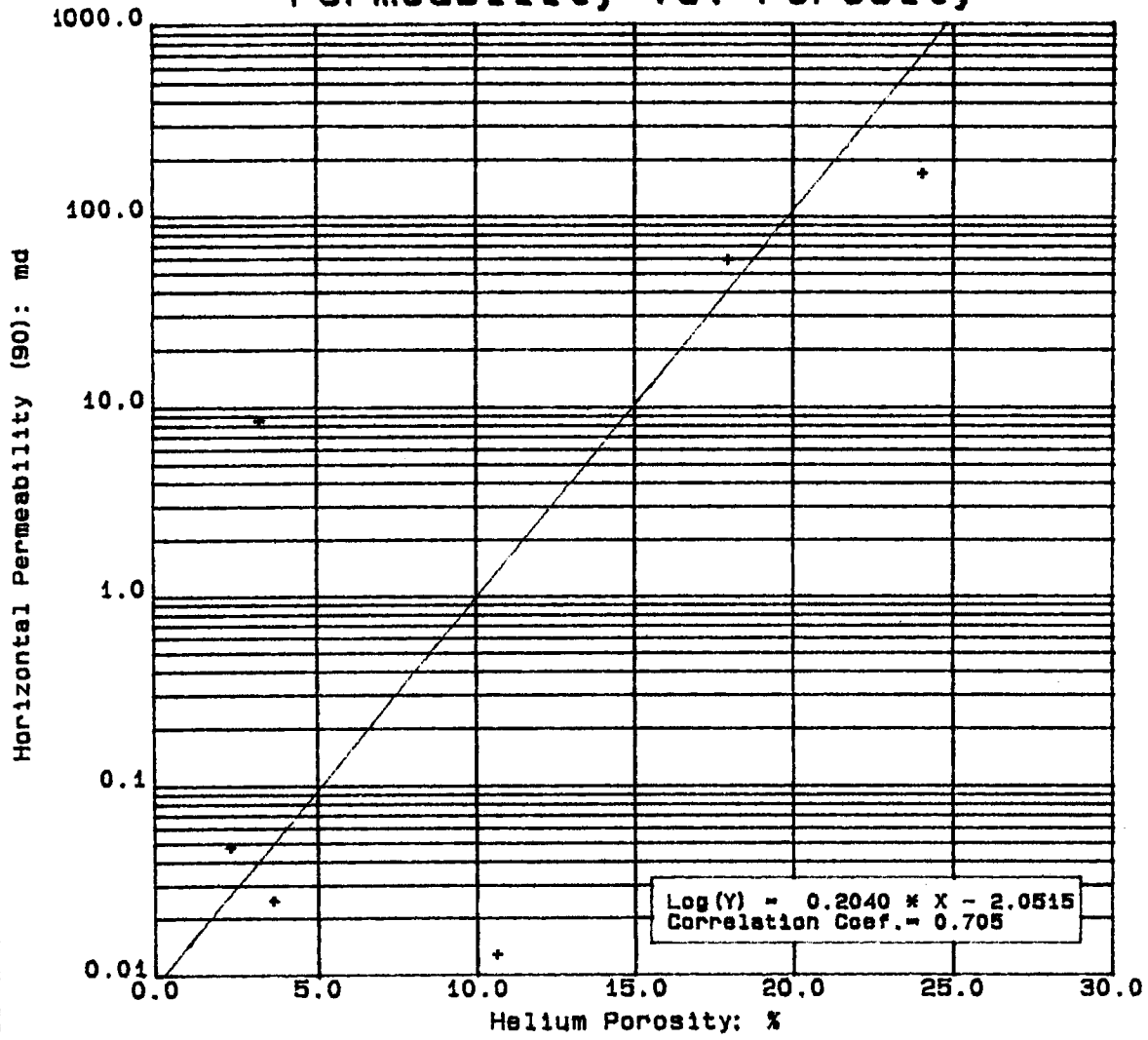
Field : HALL-GURNEY FIELD
Formation : VARIOUS

File No.: 57181-18231
Date : 10-30-00

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	SATURATION (PORE VOLUME) OIL %	SATURATION (PORE VOLUME) WATER %	GRAIN DENSITY gm/cc	DESCRIPTION
				LANSING G FORMATION					
8	2954.0- 55.0	8.71	3.62	1.40	5.2	20.4	54.5	2.69	Lim, sl frac, sl vug, 80% gld flu
9	2955.0- 56.0	13.2	10.9	3.61	21.1	12.1	44.6	2.69	Lim, foss, pp, ool, sl pyrt, 60% gld flu
10	2956.0- 57.0	26.8	18.6	1.17	20.0	12.1	49.8	2.69	Lim, foss, pp, ool, 70% gld flu
11	2957.0- 58.0	3.04	2.66	0.14	15.7	11.0	52.1	2.69	Lim, foss, pp, ool, 60% gld flu
12	2958.0- 59.0	0.07	0.07	0.07	5.6	14.9	80.6	2.70	Lim, foss, styl, 45% gld flu
13	2959.0- 60.0	0.69	0.38	0.12	13.1	4.0	89.6	2.70	Lim, foss, pp, ool, 5% dull yel flu
14	2960.0- 61.0	42.6	30.4	3.92	21.0	4.3	71.4	2.70	Lim, foss, pp, ool, 10% dull yel flu
15	2961.0- 62.0	29.6	1.70	0.95	14.2	5.4	86.6	2.70	Lim, foss, pp, ool, 20% dull yel flu
16	2962.0- 63.0	10.5	2.41	0.15	11.5	4.9	88.6	2.71	Lim, foss, pp, ool, 5% dull yel flu
17	2963.0- 64.0	0.47	0.27	0.05	17.2	2.5	86.0	2.70	Lim, foss, pp, ool, 5% dull yel flu
18	2964.0- 65.0	55.8	15.0	3.13	20.3	5.5	73.2	2.71	Lim, foss, pp, ool, 5% dull yel flu
19	2965.0- 66.0	24.4	7.28	1.07	18.2	2.9	70.0	2.70	Lim, foss, pp, ool, 5% dull yel flu
20	2966.0- 67.0	56.6	46.5	8.58	21.5	0.0	81.0	2.71	Lim, foss, pp, ool, 5% dull yel mineral flu
21	2967.0- 68.0	7.37	4.13	7.37	19.8	0.0	81.7	2.70	Lim, foss, pp, ool, 5% dull yel mineral flu
22	2968.0- 69.0	26.0	7.85	13.1	22.1	0.5	80.5	2.71	Lim, foss, pp, ool, 10% dull yel flu
23	2969.0- 70.0	298.	8.89	3.24	20.8	0.5	84.4	2.70	Lim, foss, pp, ool, 10% dull yel flu
24	2970.0- 71.0	8.60	7.38	5.40	20.9	0.4	82.2	2.71	Lim, foss, pp, ool, 5% dull yel flu
25	2971.0- 72.0	223.	17.2	6.87	22.8	0.4	79.4	2.72	Lim, foss, pp, ool, 5% dull yel flu
26	2972.0- 73.0	10.9	6.21	1.05	20.9	0.0	85.8	2.70	Lim, foss, pp, ool, 5% dull yel mineral flu
27	2973.0- 74.0	5.36	3.75	1.20	22.3	0.0	84.0	2.71	Lim, foss, pp, ool, 5% dull yel mineral flu
28	2974.0- 75.0	2.51	1.28	0.21	16.6	0.0	92.7	2.70	Lim, foss, pp, ool, 10% dull yel mineral flu
29	2975.0- 76.0	3.23	2.48	0.06	13.6	0.0	93.8	2.70	Lim, foss, pp, ool, 10% dull yel mineral flu
30	2976.0- 77.0	20.0	10.8	11.8	18.4	0.6	89.7	2.72	Lim, foss, pp, ool, 10% dull yel mineral flu
31	2977.0- 77.9	0.01	<.01	<.01	1.6	0.0	84.1	2.72	Lim, foss, styl, 10% dull yel mineral flu

Permeability vs. Porosity



MURFIN DRILLING COMPANY, INC.
CARTER-COLLIVER NO. 1 CO2 I
HALL-GURNEY FIELD

LANSING B/C (2871.0-2892.8 feet)
ZONE 1

Core Laboratories 10-30-00

- LEGEND -
LANSING B/C

CORE LABORATORIES

Company : MURFIN DRILLING COMPANY, INC.
Well : CARTER-COLLIVER NO. 1 CO2 I

Field : HALL-GURNEY FIELD
Formation : LANSING B/C

File No.: 57181-18231
Date : 10-30-00

TABLE I

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA

ZONE:

Identification	LANSING B/C
Top Depth	2871.0 ft
Bottom Depth	2892.8 ft
Number of Samples	7

DATA TYPE:

Porosity	(HELIUM)
Permeability	(90 DEG) Kair

CUTOFFS:

Porosity (Minimum)	0.0 %
Porosity (Maximum)	100.0 %
Permeability (Minimum)	0.0100 md
Permeability (Maximum)	1000. md
Water Saturation (Maximum)	100.0 %
Oil Saturation (Minimum)	0.0 %
Grain Density (Minimum)	2.00 gm/cc
Grain Density (Maximum)	3.00 gm/cc
Lithology Excluded	NONE

CHARACTERISTICS REMAINING AFTER CUTOFFS

ZONE:

Number of Samples	6
Thickness Represented	5.8 ft

POROSITY:

Storage Capacity	56.8 ϕ-ft
Arithmetic Average	9.8 %
Minimum	2.3 %
Maximum	24.0 %
Median	7.1 %
Standard Deviation	±9.0 %

GRAIN DENSITY:

Arithmetic Average	2.70 gm/cc
Minimum	2.67 gm/cc
Maximum	2.72 gm/cc
Median	2.70 gm/cc
Standard Deviation	±0.02 gm/cc

PERMEABILITY:

Flow Capacity	204.7 md-ft
Arithmetic Average	35.3 md
Geometric Average	0.88 md
Harmonic Average	0.04 md
Minimum	0.01 md
Maximum	171. md
Median	4.30 md
Standard Dev. (Geom)	$K \cdot 10^{\pm 1.838}$ md

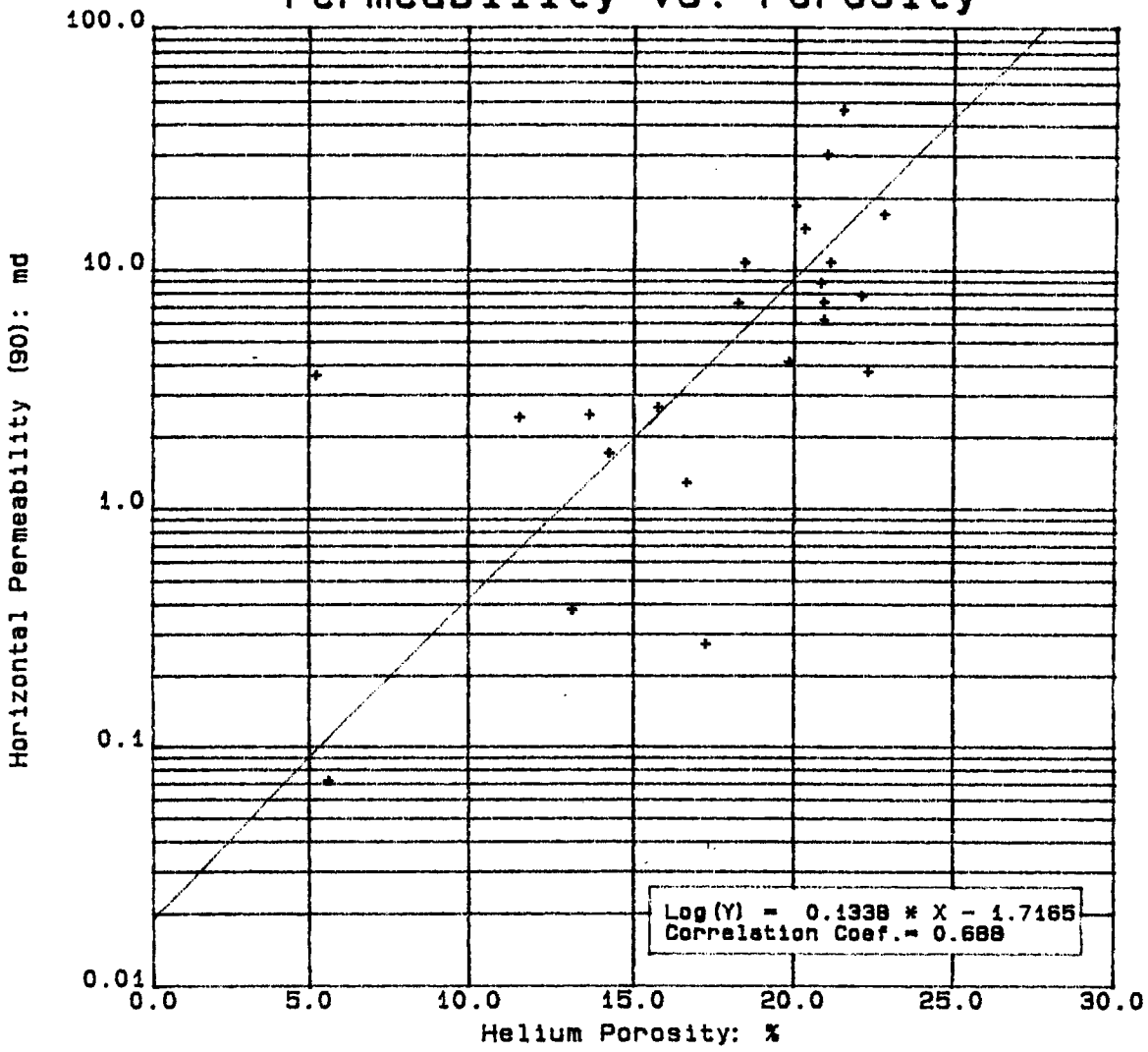
HETEROGENEITY (Permeability):

Dykstra-Parsons Var.	0.986
Lorenz Coefficient	0.496

AVERAGE SATURATIONS (Pore Volume):

Oil	21.2 %
Water	66.3 %

Permeability vs. Porosity



MURFIN DRILLING COMPANY, INC.
CARTER-COLLIVER NO. 1 CO2 I
HALL-GURNEY FIELD

LANSING G (2954.0-2977.9 feet)
ZONE 2

Core Laboratories 10-30-00

- LEGEND -
LANSING G

CORE LABORATORIES

Company : MURFIN DRILLING COMPANY, INC.
Well : CARTER-COLLIVER NO. 1 CO2 I

Field : HALL-GURNEY FIELD
Formation : LANSING G

File No.: 57181-18231
Date : 10-30-00

TABLE II

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA

ZONE:

Identification	LANSING G
Top Depth	2954.0 ft
Bottom Depth	2977.9 ft
Number of Samples	24

DATA TYPE:

Porosity	(HELIUM)
Permeability	(90 DEG) Kair

CUTOFFS:

Porosity (Minimum)	0.0 %
Porosity (Maximum)	100.0 %
Permeability (Minimum)	0.0100 md
Permeability (Maximum)	1000. md
Water Saturation (Maximum)	100.0 %
Oil Saturation (Minimum)	0.0 %
Grain Density (Minimum)	2.00 gm/cc
Grain Density (Maximum)	3.00 gm/cc
Lithology Excluded	NONE

CHARACTERISTICS REMAINING AFTER CUTOFFS

ZONE:

Number of Samples	23
Thickness Represented	23.0 ft

POROSITY:

Storage Capacity	402.8 ϕ-ft
Arithmetic Average	17.5 %
Minimum	5.2 %
Maximum	22.8 %
Median	19.8 %
Standard Deviation	±5.0 %

GRAIN DENSITY:

Arithmetic Average	2.70 gm/cc
Minimum	2.69 gm/cc
Maximum	2.72 gm/cc
Median	2.70 gm/cc
Standard Deviation	±0.01 gm/cc

PERMEABILITY:

Flow Capacity	209.8 md-ft
Arithmetic Average	9.12 md
Geometric Average	4.24 md
Harmonic Average	0.93 md
Minimum	0.07 md
Maximum	46.5 md
Median	6.21 md
Standard Dev. (Geom)	$K\text{-}10^{\pm 0.667}$ md

HETEROGENEITY (Permeability):

Dykstra-Parsons Var.	0.709
Lorenz Coefficient	0.492

AVERAGE SATURATIONS (Pore Volume):

Oil	3.5 %
Water	77.5 %

CORE LABORATORIES

LITHOLOGICAL ABBREVIATIONS

Anhy, anhy	Anhydrite (-ic)
Ark, ark	arkos (-ic)
bnd	band (-ed)
brec	breccia
Calc, calc	calcite (-ic)
carb	carbonaceous
crs gr	course grained
Chk, chky	chalk (-y)
Cht, cht	chert (-y)
Cgl, cgl	conglomerate (-ic)
crs xln	coursely crystalline
dns	dense
Dol, dol	dolomite (-ic)
Frac	randomly oriented fractures
frac	slightly fractured
f gr	fine grained
foss	fossil (-iferous)
f xln	finely crystalline
Gil, gil	gilsonite
Glauc, clauc	glauconite (-itic)
Grt	granite
Gyp, gyp	gypsum (-iferous)
hor frac	perdominantly horizontally fractured
incl	inclusion (-ded)
intbd	interbedded
lam	lamina (-tions,-ated)
Lim, lim	limestone
med gr	medium grain
Mtrx	matrix
NA	interval not analyzed
Nod, nod	nodules (-ar)
Ool, ool	oolite (-itic)
Piso, piso	pisolite (-itic)
pp	pin-point (porosity)
Pyr, pyr	pyrite (-itized, itic)
Sd, sdy	sand (-y)
Shr	solid hydrocarbon residue
sli/	slightly
Sltstn, slty	siltstone, silty
styl	stylolite (-itic)
suc	sucrosic
Su, su	sulphur, sulphurous
TBFA	TOO BROKEN FOR ANALYSIS
Trip, trip	tripolitic
v/	very
vert frac	perdominantly vertically fractured
vug	vuggy
xbd	crossbedded
xln	medium crystalline
xtl	crystal

THE FIRST WORD IN THE DESCIPTION COLUMN OF THE CORE ANALYSIS REPORT DESCIBES THE ROCK TYPE. FOLLOWING ARE ROCK MODIFIERS IN DECREASING ABUNDANCE AND MISCELLANEOUS DESCRIPTIVE TERMS.

COMPLETION COREGRAPH

MURFIN DRILLING COMPANY, INC.

CARTER-COLLIVER NO. 1 CO2 I

HALL-GURNEY FIELD

LANSING B/C (2871.0-2892.8 feet)

LANSING G (2954.0-2977.9 feet)

Core Laboratories 10-30-00

Vertical Scale
5.00 in = 100.0 ft