

CORE ANALYSIS REPORT

FOR

RINE DRILLING COMPANY

~~BARBY HARTER NO. O-EE-1111~~

~~CLARK COUNTY, KANSAS~~

22-34-21W

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

OKLAHOMA CITY, OKLAHOMA

June 11, 1982

REPLY TO
SUITE 133
400 SOUTH VERMONT
OKLAHOMA CITY, OK
73108

Rine Drilling Company
Suite 600
300 West Douglas
Wichita, Kansas 67202

Attn: Mr. Jack Rine

Subject: Core Analysis Data
Barby-Harper No. 6-22 Well
Clark County, Kansas
CLI File 3402-11309

Gentlemen:

Cores taken in the subject well in the Toronto Lime formation were received at the Oklahoma City laboratory for special analytical testing described on the Procedure Page.

The accompanying Coregraph presents the Surface Core-Gamma Log and binomially averaged core analysis data in graphical form to aid correlation with downhole electrical surveys.

Tabular presentation of the measured physical properties may be found on page one of this report.

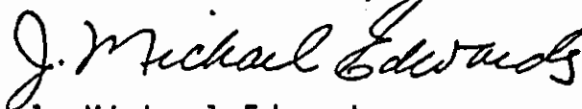
Histograms of porosity and permeability in addition to a graph of permeability versus porosity may be found on pages two and three.

We are currently awaiting additional instruction from Mr. Gary Sharpe concerning capillary pressure measurements and M & N value determination.

It is a pleasure to have this opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.



J. Michael Edwards
District Manager

5 cc - Addressee
1 cc - Mr. Gary Sharpe
Rine Drilling Company
Wichita, Kansas 67202

Rine Drilling Company
Barby-Harper No. 6-22 Well
3402-11309

Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and water base mud were used to obtain 4.0 inch diameter cores between 4,274.0 and 4,304.0 feet.

The cores were preserved at the well site in a CO₂ atmosphere by CLI personnel.

The cores were transported to Oklahoma City by CLI personnel.

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

Core analysis was made in the intervals requested on right cylinder full diameter samples.

Fluid removal was accomplished using vacuum retorts.

Porosity was determined by density balance method.

Air permeability in two horizontal directions was measured without Klinkenberg correction.

Temporary storage of cores in Oklahoma City laboratory for a period of thirty days without additional charge.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

RINE DRILLING COMPANY
 BARBY-HARPER NO. 6-22 WELL
 CLARK COUNTY, KANSAS

DATE: 6-11-82
 FORMATION: TORONTO LIME
 DRG. FLUID: WATER BASE MUD
 LOCATION:

FILE NO: 3402-11309
 ANALYST: EDWARDS
 LABORATORY: OKLAHOMA CITY

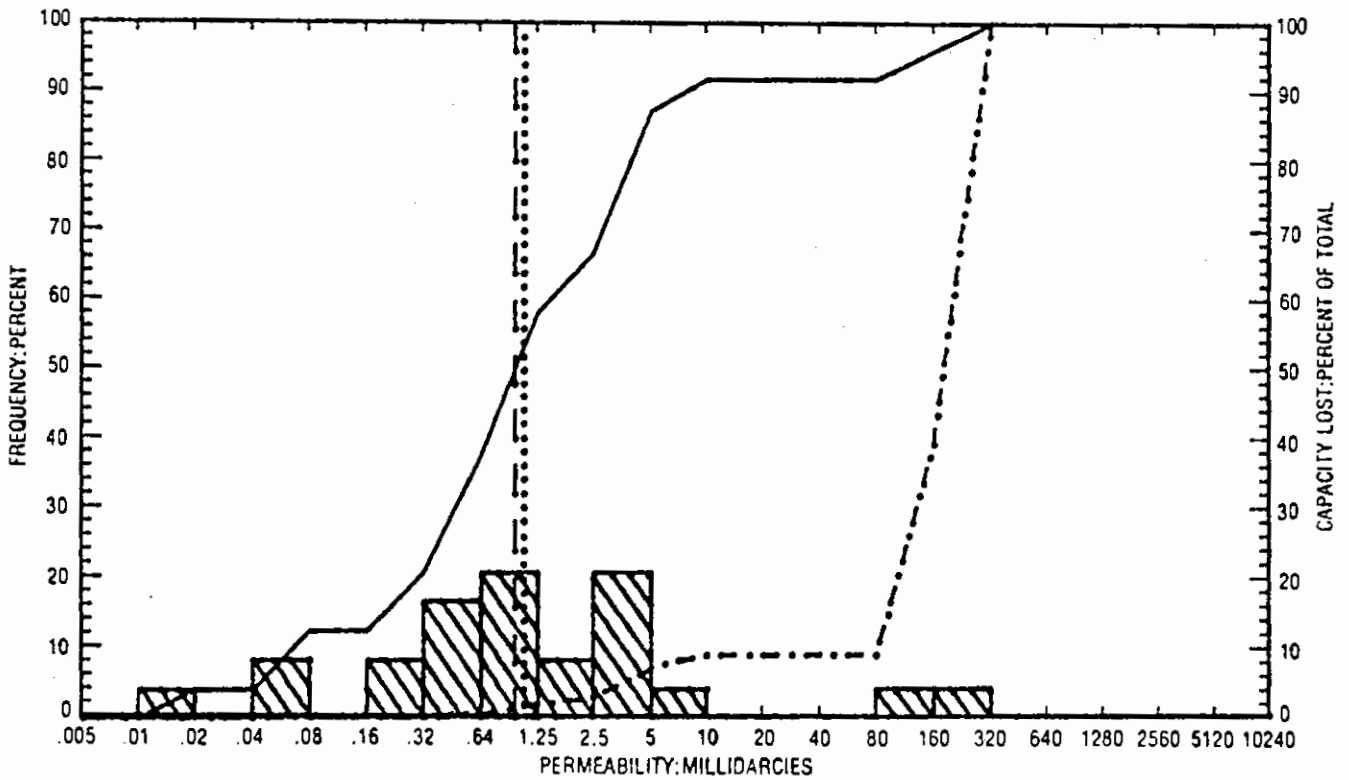
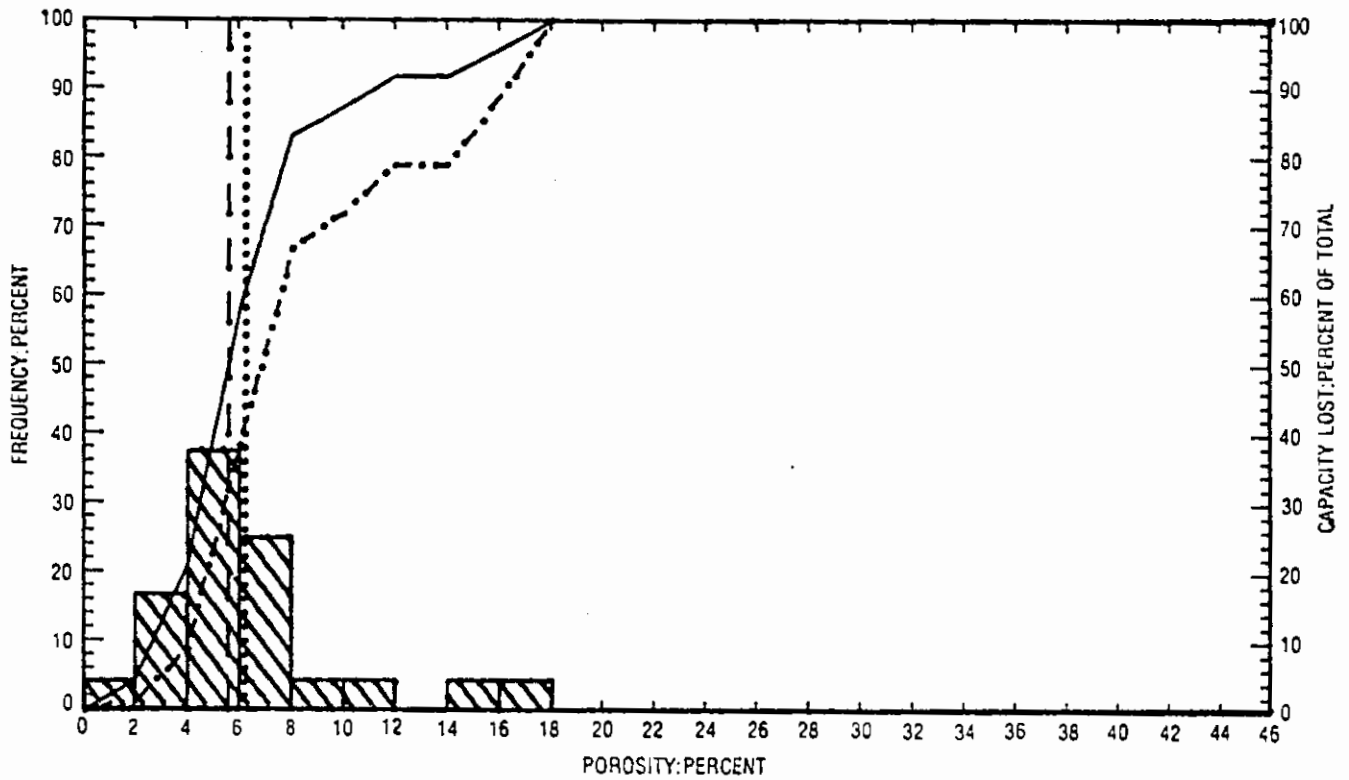
FULL DIAMETER ANALYSIS

SMP. NO.	DEPTH FEET	PERM. TO AIR MD. MAXIMUM	PERM. 90 DEG.	POROSITY PERCENT	FLUID OIL	FLUID WATER	SATS. WATER	GRAIN DEN.	DESCRIPTION
1	4274.0-79.0	0.10	0.01	1.6	0.0	0.0	92.9	2.71	SH, LMY, SLTY
+	4279.0-80.0	0.98	0.26	3.3	0.0	0.0	87.8	2.72	LM
+	4280.0-81.0	0.29	0.04	2.4	0.0	0.0	92.6	2.73	LM
+	4281.0-82.0	3.10	0.26	2.4	0.0	0.0	88.9	2.74	LM, SL/SHY
+	4282.0-83.0	0.42	0.39	5.0	0.0	0.0	84.5	2.73	LM, PP VGS
+	4283.0-84.0	3.10	2.60	4.8	0.0	0.0	87.0	2.73	LM, SL/SHY, PP VGS
+	4284.0-85.0	4.20	3.30	5.0	0.0	0.0	91.6	2.73	LM, SL/SHY, VGY
+	4285.0-86.0	1.10	0.98	4.3	0.0	0.0	89.5	2.73	LM, SL/SHY, VGY
+	4286.0-87.0	*	0.32	7.5	0.0	0.0	85.6	2.73	LM, SL/SHY, VGY
+	4287.0-88.0	1.40	0.88	4.1	0.0	0.0	82.9	2.73	LM, SL/SHY, VGY
+	4288.0-89.0	0.62	0.59	3.5	0.0	0.0	81.7	2.73	LM, SL/SHY, VGY
+	4289.0-90.0	*	0.07	4.3	0.0	0.0	87.1	2.72	LM, VGY, VF
+	4290.0-91.0	*	211	14.5	4.3	4.3	73.5	2.75	LM, SL/DOL, VGY
+	4291.0-92.0	*	105	16.7	2.6	2.6	71.6	2.74	LM, SL/DOL, VERY VGY
+	4292.0-93.0	*	0.94	6.0	4.9	4.9	71.1	2.75	LM, SL/DOL
+	4293.0-94.0	7.80	7.00	8.0	6.9	6.9	59.9	2.75	LM, SL/DOL, PP VGS
+	4294.0-95.0	2.50	2.50	7.7	7.7	7.7	64.5	2.75	LM, SL/DOL, PP VGS
+	4295.0-96.0	4.20	3.30	6.8	7.4	7.4	68.5	2.73	LM, SL/DOL, PP VGS
+	4296.0-97.0	4.70	3.40	7.3	0.0	0.0	67.8	2.75	LM, SL/DOL, PP VGS
+	4297.0-98.0	0.90	0.85	10.3	0.0	0.0	46.3	2.72	LM, PP VGS
+	4298.0-99.0	0.50	0.43	5.7	0.0	0.0	87.2	2.72	LM, PP VGS
+	4299.0-0.0	1.60	1.50	6.4	0.0	0.0	80.9	2.73	LM, PP VGS
+	4300.0-1.0	*	1.30	5.3	0.0	0.0	84.7	2.73	LM, PP VGS, VF
+	4301.0-2.0	1.20	1.10	5.3	0.0	0.0	75.4	2.73	LM, PP VGS, STY
+	4302.0-3.0								

4303.0-4304.0 LIME - TOO BROKEN FOR ANALYSIS

* DENOTES PLUG PERM
 + DENOTES HORIZONTAL CRACKS

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PERMEABILITY AND POROSITY HISTOGRAMS

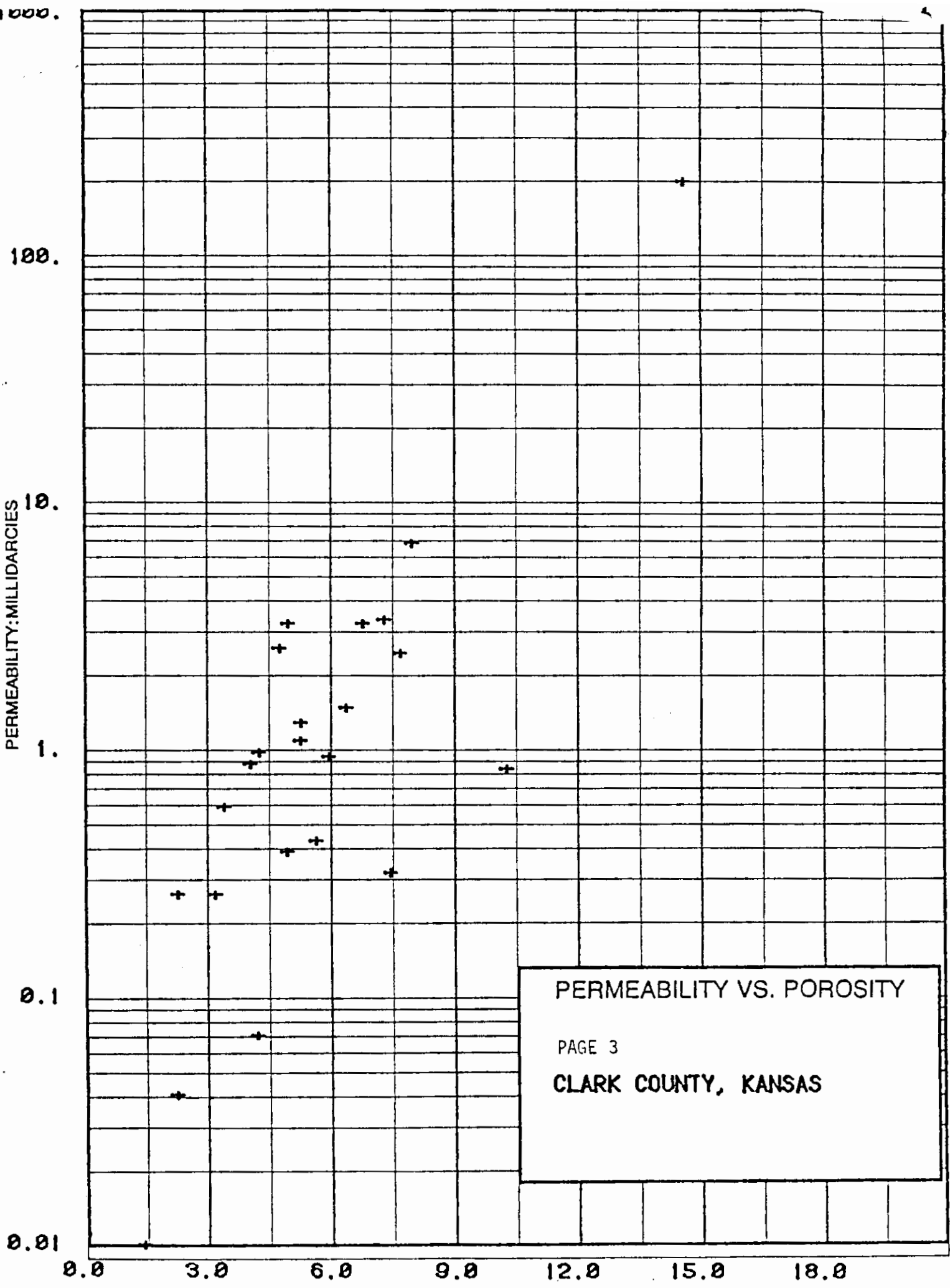
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RINE DRILLING COMPANY
 BARBY-HARPER NO. 8-22 WELL

CLARK COUNTY, KANSAS

LEGEND

- ARITHMETIC MEAN POROSITY (dotted line)
- GEOMETRIC MEAN PERMEABILITY (dotted line)
- MEDIAN VALUE ----- (dashed line)
- CUMULATIVE FREQUENCY _____ (solid line)
- CUMULATIVE CAPACITY LOST -.-.-.-.- (dash-dot line)



PERMEABILITY VS. POROSITY
PAGE 3
CLARK COUNTY, KANSAS



CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

COMPANY PRINE DRILLING COMPANY FILE NO. 3402-11309
 WELL BARBY-HARPER NO. 6-22 DATE 6/11/82
 FIELD _____ FORMATION TORONTO LIME ELEV. _____
 COUNTY CLARK STATE KANSAS DRLG. FLD. WATER BASE MUD CORES _____
 LOCATION _____

CORRELATION COREGRAPH

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc., (all errors or omissions excepted), but Core Laboratories, Inc., and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or land in connection with which such report is used or relied upon.

VERTICAL SCALE: 5" = 100'

