



CORE ANALYSIS REPORT

FOR

J. M. HUBER CORPORATION
SMITH NO. 19-3 WELL
MORTON COUNTY, KANSAS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

OKLAHOMA CITY, OKLAHOMA

January 9, 1984

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

J. M. Huber Corporation
7120 I-40 West
Amarillo, Texas 79106

Attn: Mr. Bud Larsen

Subject: Core Analysis Data
Smith No. 19-3 Well
Morton County, Kansas
CLI File 3402-11904

Gentlemen:

Cores taken in the subject well in the Morrow Sand formation were received in 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 pages one and two of this report.

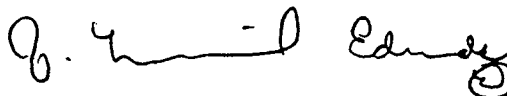
Histograms of porosity and permeability in addition to a graph of permeability versus porosity may be found on pages three and four.

Due to mud filtrate invasion on the outer periphery of the core, the whole core permeabilities do not reflect the true matrix permeability. Plug permeabilities taken through the interval more clearly reflect matrix permeability.

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

Very truly yours,

CORE LABORATORIES, INC.



J. Michael Edwards
District Manager

10 cc - Addressee

J. M. Huber Corporation
Smith No. 19-3 Well
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Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and water base mud were used to obtain 4.0 inch diameter cores between 5,010.0 and 5,070.0 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.

Cores were slabbed for future geological study.

Cores and slab segments have been shipped to:

J. M. Huber Corporation
7120 I-40 West
Amarillo, Texas 79106
Attn: Mr. Bud Larsen

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

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M. HUBER CORPORATION
 41TH NO. 19-3 WELL
 JRTON COUNTY, KANSAS

DATE: 1-5-84
 FORMATION: MORROW SAND
 DRLG. FLUID: WATER BASE MUD
 LOCATION: SEC. 19-31S-40W

FILE NO: 3402-11904
 ANALYST: EDWARDS
 LABORATORY: OKLAHOMA CITY

FULL DIAMETER ANALYSIS

SMP. NO.	DEPTH FEET	PERM. TO AIR MD. 90 DEG.	MAXIMUM	PLUG	POROSITY PERCENT	FLUID OIL	SATS. WATER	GRAIN DEN.	DESCRIPTION
1	5010.0-29.5	1.70	1.10	0.16	5.1	17.7	55.9	3.29	SH
2	5029.5-30.0	12	11	15	14.3	19.3	34.5	2.67	SD, SLTY, SL/DOL, SID, SHY
3	5030.0-31.0	8.20	5.90	8.20	13.0	36.4	21.7	2.67	SD, SL/DOL, SH LAMS
4	5031.0-32.0	0.46	0.41	0.44	10.0	28.1	26.9	2.97	SD, SLTY, SL/DOL, SH LAMS
5	5032.0-33.0	0.27	0.21	0.21	6.9	16.7	49.2	2.80	SD, SLTY, SL/DOL, SID, SH
6	5033.0-34.0								LAMS
7	5034.0-35.0	133	131	208	20.0	18.5	38.8	2.66	SD, SL/DOL
8	5035.0-36.0	145	136	387	19.7	31.0	27.4	2.69	SD, SL/DOL
9	5036.0-37.0	69	56	255	21.7	32.3	34.2	2.65	SD, SL/DOL, SH LAMS
10	5037.0-38.0	50	48	92	14.4	26.4	37.7	2.76	SD, SL/DOL, SID, SH LAMS
11	5038.0-39.0	58	56	43	22.2	34.7	30.7	2.67	SD, SL/DOL
12	5039.0-40.0	114	95	430	21.7	22.7	40.4	2.65	SD, SL/DOL
13	5040.0-41.0	117	99	580	21.4	22.7	41.9	2.65	SD, SL/DOL
14	5041.0-42.0	94	83	140	22.2	27.1	38.6	2.66	SD, SL/DOL
15	5042.0-43.0	68	59	132	22.1	25.9	41.0	2.66	SD, SL/DOL
16	5043.0-44.0	129	122	521	21.1	31.9	32.7	2.66	SD, SL/DOL
17	5044.0-45.0	99	96	264	21.8	31.8	34.1	2.65	SD, SL/DOL
18	5045.0-46.0	109	83	273	20.8	26.0	40.3	2.64	SD, SL/DOL
19	5046.0-47.0	139	129	442	21.6	24.0	41.9	2.65	SD, SL/DOL
20	5047.0-48.0	238	230	599	22.3	25.0	43.5	2.65	SD, SL/DOL
21	5048.0-49.0	130	126	309	18.4	23.3	39.3	2.67	SD, SL/DOL
22	5049.0-50.0	92	81	285	16.2	21.4	39.7	2.68	SD, SL/DOL
23	5050.0-51.0	138	134	318	17.7	22.0	39.9	2.65	SD, SL/DOL
24	5051.0-52.0	107	71	136	14.0	20.7	37.9	2.67	SD, SL/DOL
25	5052.0-53.0	255	245	217	21.2	21.9	42.7	2.66	SD, SL/DOL
26	5053.0-54.0	270	250	137	20.5	32.5	34.8	2.68	SD, SL/DOL

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DALLAS, TEXAS

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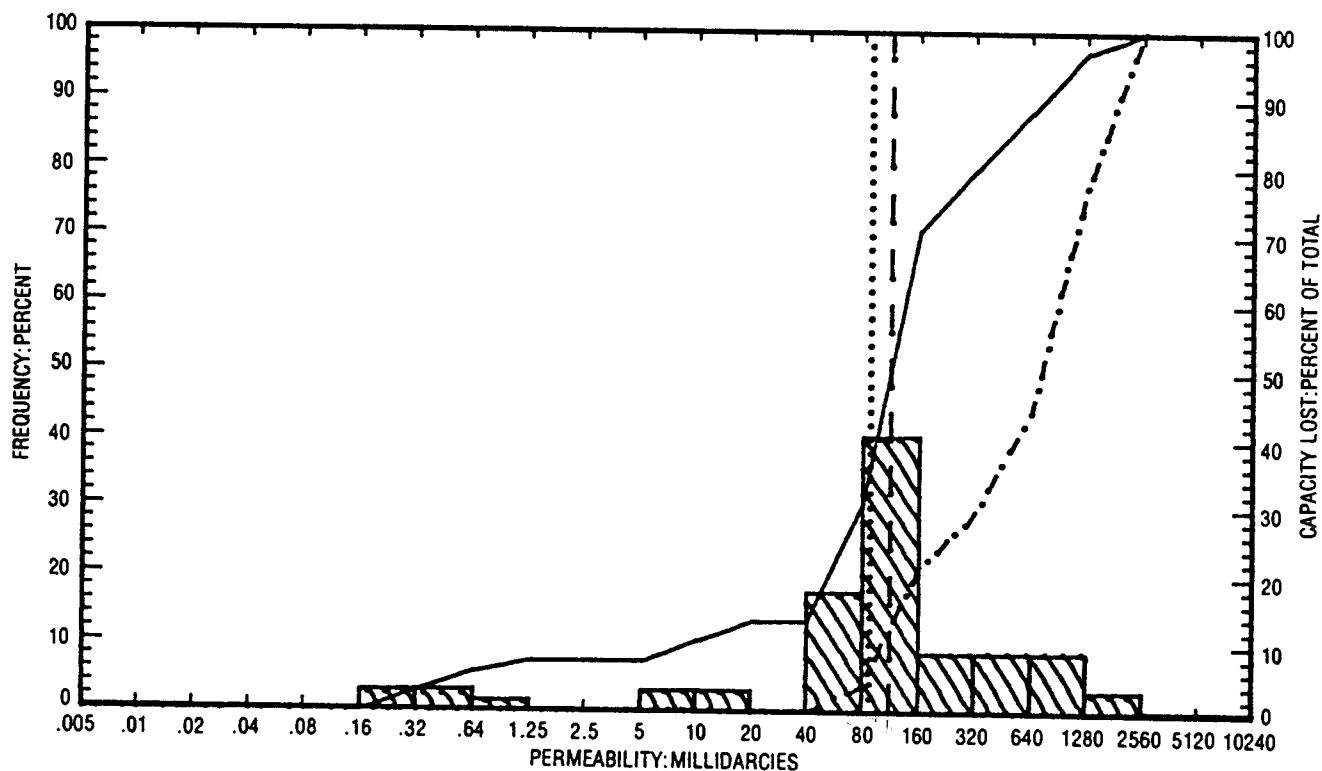
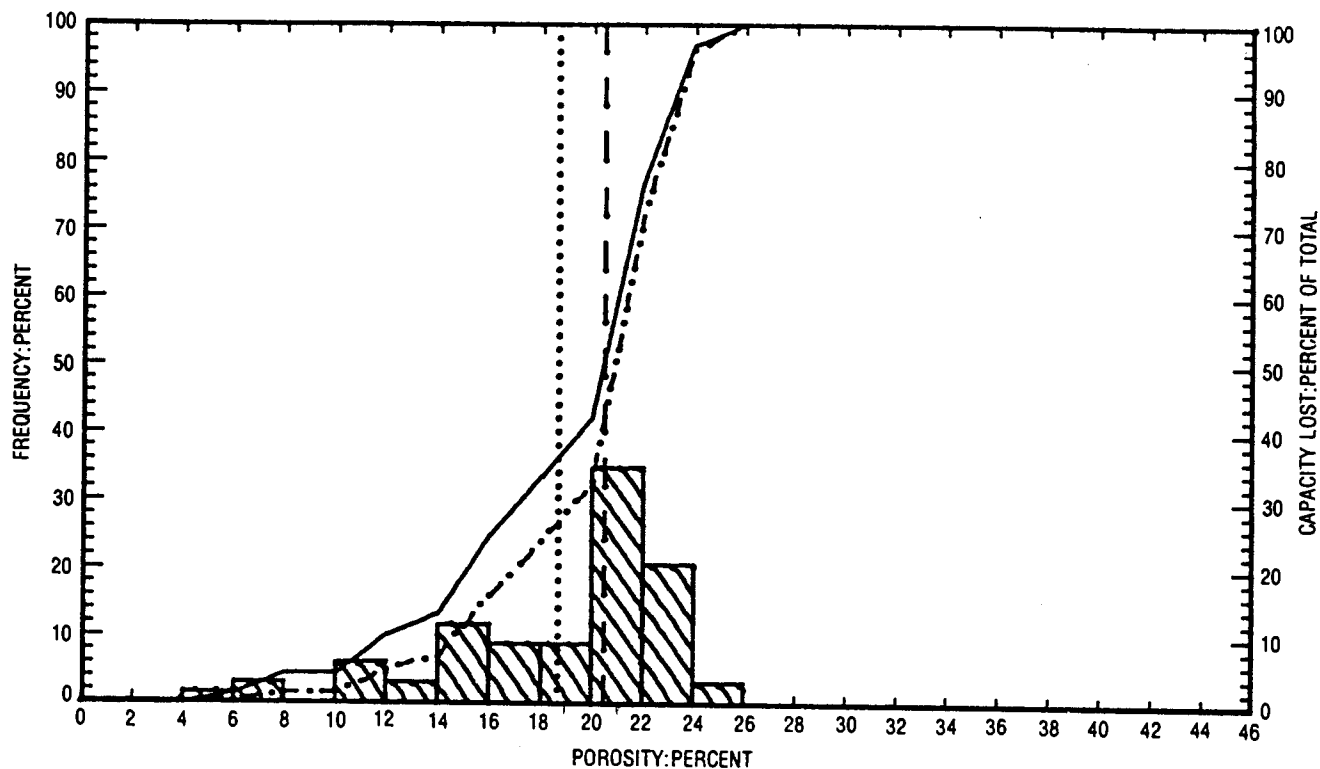
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FULL DIAMETER ANALYSIS

SMP. NO.	DEPTH FEET	PERM. TO AIR MD.		POROSITY PERCENT	FLUID SATS.		GRAIN DEN.	DESCRIPTION
		MAXIMUM	90 DEG.		OIL	WATER		
26	5054.0-55.0	105	103	23.2	30.7	39.3	2.66	SD,SL/DOL
27	5055.0-56.0	119	117	16.6	27.4	35.3	2.68	SD,SL/DOL
28	5056.0-57.0	583	486	14.8	20.3	39.8	2.68	SD,SL/DOL
29	5057.0-58.0	498	377	19.3	19.8	44.7	2.66	SD,SL/DOL
30	5058.0-59.0	988	884	22.2	18.4	51.4	2.64	SD,SL/DOL
31	5059.0-60.0	473	467	22.4	22.9	44.8	2.65	SD,SL/DOL
32	5060.0-61.0	1105	1072	24.1	11.7	57.0	2.64	SD,SL/DOL
33	5061.0-62.0	2110	2048	21.4	15.9	52.1	2.66	SD,SL/DOL
34	5062.0-63.0	1090	1012	20.0	21.4	42.7	2.69	SD,SL/DOL
35	5063.0-64.0	50	42	11.8	22.2	35.2	2.72	SD,SL/DOL
	5064.0-70.0							SH,SLTY



PERMEABILITY AND POROSITY HISTOGRAMS

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J. M. HUBER CORPORATION
SMITH NO. 19-3 WELL

MORTON COUNTY, KANSAS

LEGEND

ARITHMETIC MEAN POROSITY
GEOMETRIC MEAN PERMEABILITY
MEDIAN VALUE
CUMULATIVE FREQUENCY
CUMULATIVE CAPACITY LOST
.....

PERMEABILITY: MILLIDARCIES

1000.

100.

10.

1.0

0.1

0.0

4.0

8.0

12.0

16.0

20.0

24.0

PERMEABILITY VS. POROSITY

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MORTON COUNTY, KANSAS

