

CORE ANALYSIS REPORT

FOR

A. SCOTT RICHIE
MUSSELMAN NO. 1 WELL
NESS COUNTY, KANSAS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
OKLAHOMA CITY, OKLAHOMA

October 15, 1985

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

A. Scott Richie
125 North Market
Suite 950
Wichita, Kansas 67202

Attn: Mr. Galen Babcock

Subject: Core Analysis Data
Musselman No. 1 Well
Ness County, Kansas
CLI File 3402-12499

Gentlemen:

Cores taken in the subject well in the Mississippian Osage 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.

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

Very truly yours,

CORE LABORATORIES, INC.



J. Michael Edwards
District Manager

JME:jk

7 cc - Addressee

A. Scott Richie
Musselman No. 1 Well
CLI File 3402-12499

Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and water base mud were used to obtain 3.5 inch diameter cores between 4,405.0 and 4,417.2 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 low temperature extraction.

Porosity was determined by Boyle's law method.

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

Core was picked up by a representative of Wichita State University as authorized by Mr. Galen Babcock with A. Scott Richie.

A. SCOTT RICHIE
MUSSELMAN NO. 1 WELL
NESS COUNTY, KANSAS

DATE : 10-15-85
FORMATION : MISSISSIPPIAN OSAGE
DRLG. FLUID: WATER BASE MUD
LOCATION : SEC. 32-16S-22W

FILE NO. : 3402-12499
API NO. :
LABORATORY: OKLAHOMA CITY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERM MAXIMUM	PERM 90 DEG	HE POR	OIL% POR	WTR% POR	GRAIN DEN M	DESCRIPTION
	4405.0-4409.0	NO ANALYSIS						
1	4409.0-10.0	31.	26.	16.2	7.6	74.8	2.64	CHT
	4410.0-4411.0	NO ANALYSIS						
2	4411.0-12.0	14.	8.8	15.3	2.9	79.9	2.66	CHT
	4412.0-4414.0	NO ANALYSIS						
3	4414.0-15.0	35.	34.	16.4	3.3	77.8	2.65	CHT
4	4415.0-16.0	27.	23.	16.3	2.5	76.0	2.65	CHT
	4416.0-4417.2	NO ANALYSIS						

CORE LABORATORIES, INC.**Petroleum Reservoir Engineering**

COMPANY A. SCOTT RICHIE FILE NO. 3402-12499
WELL MUSSELMAN NO. 1 WELL DATE 10-15-85
FIELD _____ FORMATION MISSISSIPPIAN OSA ELEV. _____
COUNTY NESS COUNTY STATE KANSAS DRLG. FLD. WATER BASE MUD CORES _____
LOCATION SEC. 32-18S-22W

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'

Total Water _____

PERCENT PORE SPACE

100 80 60 40 20 0

Oil Saturation _____

PERCENT PORE SPACE

0 0 20 40 60 80 100

Gamma Ray

RADIATION INCREASE →

Permeability _____

MILLIDARCIES

1000 100 10 1

Porosity _____

PERCENT

Depth Feet 30 20 10 0 0 20 40 60 80 100

4350

4480

4450