

CORE ANALYSIS REPORT

FOR

BARRON KLOD

SAMPLE NO. 15

SAWYER POOL FIELD

WETZEL COUNTY, WEST VIRGINIA

**JAMES A. LEWIS ENGINEERING, INC.**

*Petroleum Sample Analysis*

DALLAS 1, TEXAS

EVANSVILLE 8, IND.

# JAMES A. LEWIS ENGINEERING, INC.

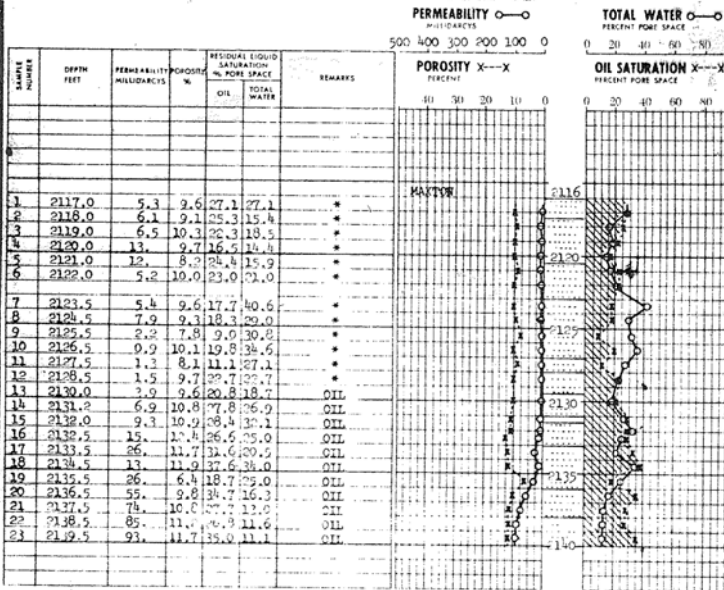
DALLAS, TEXAS  
EVANSVILLE, INDIANA — HOUSTON, ILLINOIS  
OWENSBORO, KENTUCKY — HUNTINGTON, WEST VIRGINIA

COMPANY	BARRON KIDD	DATE CORED	JUNE 27, 1957	FILE NO.	E-5048
WELL	SANTER NO. 15	DATE REPORT	JULY 1, 1957	ENGRS.	CE-BG
WILD	BAWTER POOL	FORMATION	MAXTON	ELEV.	
COUNTY	WHITFIELD	STATE	W. VA.	DRIG. FLUID	CORED IN WATER
LOCATION			REMARKS	CORES	B.C.T.

## CORE ANALYSIS REPORT



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### CORE SUMMARY

FORMATION	DEPTH	FEET CORE RECOVERED APPROXIMATE	AVERAGE PERMEABILITY MD	AVERAGE POROSITY %	AVERAGE LIQUID SATURATION %	OIL	WATER
MAXTON	2116 - 157	10.	6.5	9.4	20.3	24.7	
MAXTON	2127 - 129	..	1.4	8.9	16.9	24.9	
MAXTON	2129 - 140	11.	37.	10.7	38.7	21.3	

COPY

JAMES A. LEWIS ENGINEERING, INC.  
Petroleum Research Analysts  
REPUBLIC NATIONAL BANK BUILDING  
DALLAS 1, TEXAS

PLEASE REPLY TO:  
THE BANK STREET  
P.O. BOX 87  
EVANSVILLE, INDIANA

July 2, 1957

FILE NO. 4-2048

Barron #144  
P. O. Box 186  
Sisterville, West Virginia

Subject: Core Analysis

Section No. 15  
Santee Fuel Field  
Wetzel County, West Virginia

Conclusions:

The attached coregraph shows the Santee formation cored in subject well from 2115 to 2140 feet.

Core samples representing the Santee Sand present from 2115 to 2127 feet were not kept frozen, and therefore, an interpretation of the fluid producing capacity of this sand section can not be given. Core analysis results for 10 sand samples representing this formation show the following average characteristics:

Average permeability, 6.5 millidarcys.  
Average porosity, 9.6 per cent.  
Average residual oil saturation, 20.3 per cent of pore space.  
Average total water saturation, 26.7 per cent of pore space.

Two feet of light sandstone representing the formation present from 2127 to 2129 feet have an average permeability of 1.4 millidarcys and an average porosity of 8.9 per cent.

Eleven feet of permeable sand present in the interval from 2129 to 2140 feet are interpreted to be oil productive and have the following average characteristics:

Average permeability, 37 millidarcys.  
Average porosity, 10.7 per cent.  
Average residual oil saturation, 28.7 per cent of pore space.  
Average total water saturation, 21.3 per cent of pore space.

Assuming a primary production for this oil column of approximately 20 barrels per acre foot by normal gas expansion mechanism, the calculated additional recovery by effective water encroachment or an induced water drive is 280 barrels per acre foot to a high produced water cut. The calculated water injection rate for this sand section is 115 barrels per day under a sustained reservoir pressure differential of 1,500 psi.

July 2, 1957

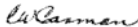
The calculated water injection rate for the sand section covered from 2115 to 2140 feet is 130 barrels per day under a sustained reservoir pressure differential of 1500 psi.

A sample of the oil which filled the hole to a depth of 600 feet was sent to our laboratory for analysis. The gravity of this crude oil sample was 44.5° API and the viscosity was determined to be 3.1 centipoise at the approximate bottom hole temperature of 66° F.

Analysis data are submitted on the attached coreograph in tabular and graphic form.

Very truly yours,

JAMES A. LEIS ENGINEERING, INC.



C. W. Carman

CWC:vc