

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering
DALLAS, TEXAS

April 2, 1956



REPLY TO
1020 PATTERSON BLDG.
DENVER, COLORADO

Chandler & Musgrove
210 Denver Club Building
Denver, Colorado

Attention: Mr. Collis Chandler

Subject: Core Analysis
Phillips Durland No. 1 Well
Peavy Field
Logan County, Colorado

Gentlemen:

Diamond coring equipment and oil emulsion mud were used to core portions of the "D" and "J" sands penetrated by the Phillips Durland No. 1. Representatives of Chandler & Musgrove and of Core Laboratories, Inc. selected samples of recovered formation, and these samples were taken in the Kimball laboratory. The results are presented in this report. Since a complete lithological log of recovered formation was not available, portions of the log shown on the Completion Coregraph have been prepared only from the samples submitted for analysis.

From 6102 to 6104 feet, the "D" sand is impermeable and is of no productive significance in the well.

The "J" sand from 6210 to 6212 feet has zero residual oil and very high total water saturations, and the zone is believed to be water productive. However, the permeability is quite low, and it is possible that the zone is essentially impermeable at reservoir conditions.

A "J" sand zone immediately underlying the two feet of formation with zero residual oil saturation extends from 6212 to 6217 feet, and this portion of the "J" sand has residual oil and total water saturations within the range usually associated with oil productive "J" sand in this general area. However, the productive capacity of the analyzed formation between



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6212 and 6217 feet is low, and it is doubtful that satisfactory rates of fluid production would be obtained from this zone, unless the fractures observed contribute substantially to the effective productive capacity. Underlying this zone with oil productive characteristics is a four-foot zone which shows very high total water saturations. These high total water saturations are well above the range usually required for clean oil production, although the residual oil saturations are relatively favorable.

Because of the doubtful productive possibilities of this entire "J" sand interval as reflected by the core analysis data, recoverable oil estimates are withheld at this time.

"J" sand from 6232 to 6239 feet has water productive characteristics. Poor core recovery was obtained from the interval, 6232 to 6264 feet, and the last five samples analyzed, that is, Nos. 14 through 18, are shown to represent formation recovered between 6234 and 6264 feet, no definite depths having been assigned to the samples by representatives of the operator.

We sincerely appreciate the opportunity to be of service to you.

Very truly yours,

Core Laboratories, Inc.

J D Harris (✓)
J. D. Harris,
District Manager

JDH:TLK:ir

10 cc - Addressee

1 cc - Mr. H. E. Zoller, Jr.
Denver, Colorado