CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS 1, TEXAS

September 3, 1957

Standard Oil Company of Texas
Box 1660
Midland, Texas

Attention: Mr. J. P. Jones

Subject: Core Analysis
Everest No. 1 Well
Wildcat
Eddy County, New Mexico
Location: Sec. 14-T18S-R26E

Gentlemen:

Diamond coring equipment and water base mud were used to core the interval, 9027 to 9112 feet, in the Everest No. 1. Samples of recovered formation on which analysis was desired were selected as directed by representatives of Standard Oil Company of Texas, were quick-frozen to preserve fluid content, and were transported to the Hobbs laboratory for analysis. Percussion type side wall samples were taken between 9076 and 9116 feet, and these samples were analyzed for porosity and fluid content at the Monahans laboratory. The results of all analyses are presented in this report.

Pennsylvanian formation analyzed between 9070 and 9084 feet exhibits favorable residual liquid saturations, and is interpreted to be gas productive at points of measurable permeability. The average permeability of the 11 gas productive feet in this zone is 51 millidarcys, and the total observed natural productive capacity is 561 millidarcy-feet, probably adequate to support satisfactory rates of production without the necessity for treatment. The average porosity of this interval is 9.5 per cent, and the average empirically calculated connate water saturation is 30 per cent of pore space. Average core analysis data for this interval have been summarized on page one.

Results of the analysis of side wall samples taken at various depths be-
tween 9076 and 9116 feet are presented in tabular and graphical form
on the lower portion of the Completion Coregraph.

We sincerely appreciate this opportunity to be of service to you and trust
that the information furnished with this report will prove useful in mak-
ing a preliminary evaluation of the Pennsylvanian formation analyzed
from this well.

Very truly yours,

Core Laboratories, Inc.

R S Bynum Jr (PS)

R. S. Bynum, Jr.,
District Manager

RSB:JDJ:sw
7 cc. - Addressee

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Page 1 of 1 File WP-3-860 FC
Well Everest No. 1

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

FORMATION NAME AND DEPTH INTERVAL: Pennsylvanian 9070.0-9084.0

FEET OF CORE RECOVERED FROM ABOVE INTERVAL	14.0	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE		30.9
FEET OF CORE INCLUDED IN AVERAGES	11.0	AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE	(c)	30
AVERAGE PERMEABILITY: MILLIDARCYS	51	OIL GRAVITY: °API		
PRODUCTIVE CAPACITY: MILLIDARCY-FEET	561	ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL		
AVERAGE POROSITY: PER CENT	9.5	ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED OIL PER BARREL STOCK-TANK OIL		
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE	0.0	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT		

Calculated maximum solution gas drive recovery is ___ barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is ___ barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (*Please refer to footnotes for further discussion of recovery estimates.*)

FORMATION NAME AND DEPTH INTERVAL:

FEET OF CORE RECOVERED FROM ABOVE INTERVAL		AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE	
FEET OF CORE INCLUDED IN AVERAGES		AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE	
AVERAGE PERMEABILITY: MILLIDARCYS		OIL GRAVITY: °API	
PRODUCTIVE CAPACITY: MILLIDARCY-FEET		ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL	
AVERAGE POROSITY: PER CENT		ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED OIL PER BARREL STOCK-TANK OIL	
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE		CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT	

Calculated maximum solution gas drive recovery is ___ barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is ___ barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (*Please refer to footnotes for further discussion of recovery estimates.*)

(c) Calculated   (e) Estimated   (m) Measured   (*) Refer to attached letter.

These recovery estimates represent theoretical maximum values for solution gas and water drive. They assume that production is started at original reservoir pressure; i.e., no account is taken of production to date or of prior drainage to other areas. The effects of factors tending to reduce actual ultimate recovery, such as economic limits on oil production rates, gas-oil ratios, or water-oil ratios, have not been taken into account. Neither have factors been considered which may result in actual recovery intermediate between solution gas and complete water drive recoveries, such as gas cap expansion, gravity drainage, or partial water drive. Detailed predictions of ultimate oil recovery to specific abandonment conditions may be made in an engineering study in which consideration is given to overall reservoir characteristics and economic factors.