

**CORE LABORATORIES, INC.**

*Petroleum Reservoir Engineering*

**DALLAS, TEXAS**

May 22, 1964

**RESERVOIR FLUID DIVISION**

Texaco Inc.  
P. O. Box 810  
Farmington, New Mexico

**BEFORE EXAMINER UTZ**  
**OIL CONSERVATION COMMISSION**

Texaco EXHIBIT NO. C  
CASE NO. 3073

Attention: Mr. A. G. Walsh

**Subject: Reservoir Fluid Study**  
**Navajo "AL" No. 1 Well**  
**Undesignated (Tocito Dome) Field**  
**San Juan County, New Mexico**

Gentlemen:

Samples of separator liquid and vapor were collected from the subject well on May 6, 1964. These samples, together with a sample of stock tank liquid, were shipped to our Dallas laboratory for studies. The results of these studies are presented to you in this report.

The producing gas-liquid ratio measured in the field and after correction for the factors shown on page one of the report was 3290 cubic feet of separator gas at 14.7 psia and 60° F. per barrel of stock tank liquid at 60° F. In the laboratory this ratio was found to be equivalent to 3238 standard cubic feet of separator gas per barrel of separator liquid. The separator products were then physically recombined in this ratio and examined in a visual cell at the reservoir temperature of 159° F. The mixture exhibited a bubble point pressure of 5320 psig. This value is considerably above the reservoir pressure. When viewed at the reservoir pressure of approximately 3200 psig the system was found to be in two phases. Approximately 42 per cent of the system volume was liquid.

These results have been previously transmitted by telephone. The composition of the separator products and the stock tank liquids are presented on the following pages with the calculated composition of the producing

*Exhibit "C"*  
*Page 1*

Texaco Inc.  
Navajo "AL" No. 1 Well

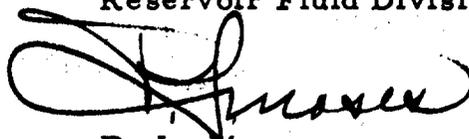
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well stream at the time the well was tested.

It was a pleasure to perform these tests for you. Should you have any questions, please do not hesitate to contact us.

Very truly yours,

Core Laboratories, Inc.  
Reservoir Fluid Division



P. L. Moses  
Operations Supervisor

PLM:jr

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

Company	Texaco Inc.	Date Sampled	May 6, 1964
Well	Navajo "AL" No. 1	County	San Juan
Field	Undesignated (Tocito Dome)	State	New Mexico

**FORMATION CHARACTERISTICS**

Formation Name	Pennsylvanian-Barber Creek
Date First Well Completed	May 3, 1964
Original Reservoir Pressure	3214 PSIG @ 6285 Ft.
Original Produced Gas-Liquid Ratio	2911 SCF/Bbl
Production Rate	Bbls/Day
Separator Pressure and Temperature	PSIG ° F.
Liquid Gravity at 60° F.	° API
Datum	Ft. Subsea

**WELL CHARACTERISTICS**

Elevation	5763 DF	Ft.
Total Depth	6910	Ft.
Producing Interval	6275-6302 Ft.	
Tubing Size and Depth	2 - 3/8 In. to 6189 Ft.	
Open Flow Potential	MMSCF/Day	
Last Reservoir Pressure	3206 PSIG @ 6288 Ft.	
Date	May 6, 1964	
Reservoir Temperature	157 ° F. @ 6150 Ft.	
Status of Well		
Pressure Gauge		

**SAMPLING CONDITIONS**

Flowing Tubing Pressure	1892	PSIA
Flowing Bottom Hole Pressure	2778 @ 6288 Ft. PSIA	
Primary Separator Pressure	55	PSIG
Primary Separator Temperature	43 ° F.	
Secondary Separator Pressure	PSIG	
Secondary Separator Temperature	° F.	
Field Stock Tank Liquid Gravity	° API @ 60° F.	
Primary Separator Gas Production Rate	962.1 MSCF/Day	
Pressure Base	14.7	PSIA
Temperature Base	60 ° F.	
Compressibility Factor ( $F_{pv}$ )	1.012	
Gas Gravity (Laboratory)	0.724	
Gas Gravity Factor ( $F_g$ )	1.1753	
Stock Tank Liquid Production Rate @ 60° F.	292.5	Bbls/Day
Primary Separator Gas/ Stock Tank Liquid Ratio	3290 SCF/Bbl	
or	304.0 Bbls/MMSCF	

Core Laboratories, Inc., Engineer

REMARKS:

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