

El Paso Natural Gas Products Company  
Case No. 1596  
Exhibit No. 13  
Date February 18, 1959

HORSESHOE GALLUP FIELD  
SAN JUAN COUNTY, NEW MEXICO  
INDIVIDUAL PRODUCTION TESTS OF SANDS "A" AND "B"

Operator	Well No.	Location	Swab Test	Pump Test	Remarks
Lease		1/4 1/4 Sec. - Twn-Rng	Sand "A" : BOPD	Sand "B" : BOPD : GOR : BOPD : GOR :	
<b>El Paso Natural Gas Products Co.</b>					
Horseshoe Canyon	4	SE SW 3-30N-16W	21	TSTM 74 125	Neither sand sandoil fractured.
Horseshoe Canyon	6	NW NW 10-30N-16W	80	175 119 81	Both sands sandoil fractured.
Horseshoe Canyon	8	NE SW 4-30N-16W	109	193 89 79	Both sands sandoil fractured.
Horseshoe Canyon	2-B	NE NW 4-30N-16W	100	50	Neither sand sandoil fractured.
Horseshoe Ute	4	NE SW 33-31N-16W	203	264	Both sands sandoil fractured.
<b>Atlantic Refining Company</b>					
Navajo	1	SE SE 32-31N-16W	512	598	Both sands sandoil fractured.
<b>Pan American Petroleum Corp.</b>					
Aldin	1-A	NW NE 10-30N-16W	108	96	Both sands sandoil fractured.

DUAL COMPLETION EQUIPMENT  
HORSESHOE GALLUP OIL POOL  
San Juan County, New Mexico

**Subsurface Equipment**

1. 5-1/2", 15.50#, J-55 production casing is set through both producing zones and cemented. Cement is circulated across both zones by the single stage method.
2. 1-1/2", 2.75#, J-55, non-upset tubing will be used to produce the lower zone. A tension type retrievable production packer will be run and set on this tubing string. This will maintain separation between the two zones. A parallel tubing string anchor will be run in this tubing string to anchor the tubing string for the top zone.
3. 1-1/2", 2.75#, J-55 non-upset tubing will be used to produce the top zone. This tubing string will be latched into the parallel tubing string anchor.
4. The pumps for each zone will be a 1-1/4" common working barrel tubing pump. The pumps will be activated by separate rod strings.

**Tubing Head**

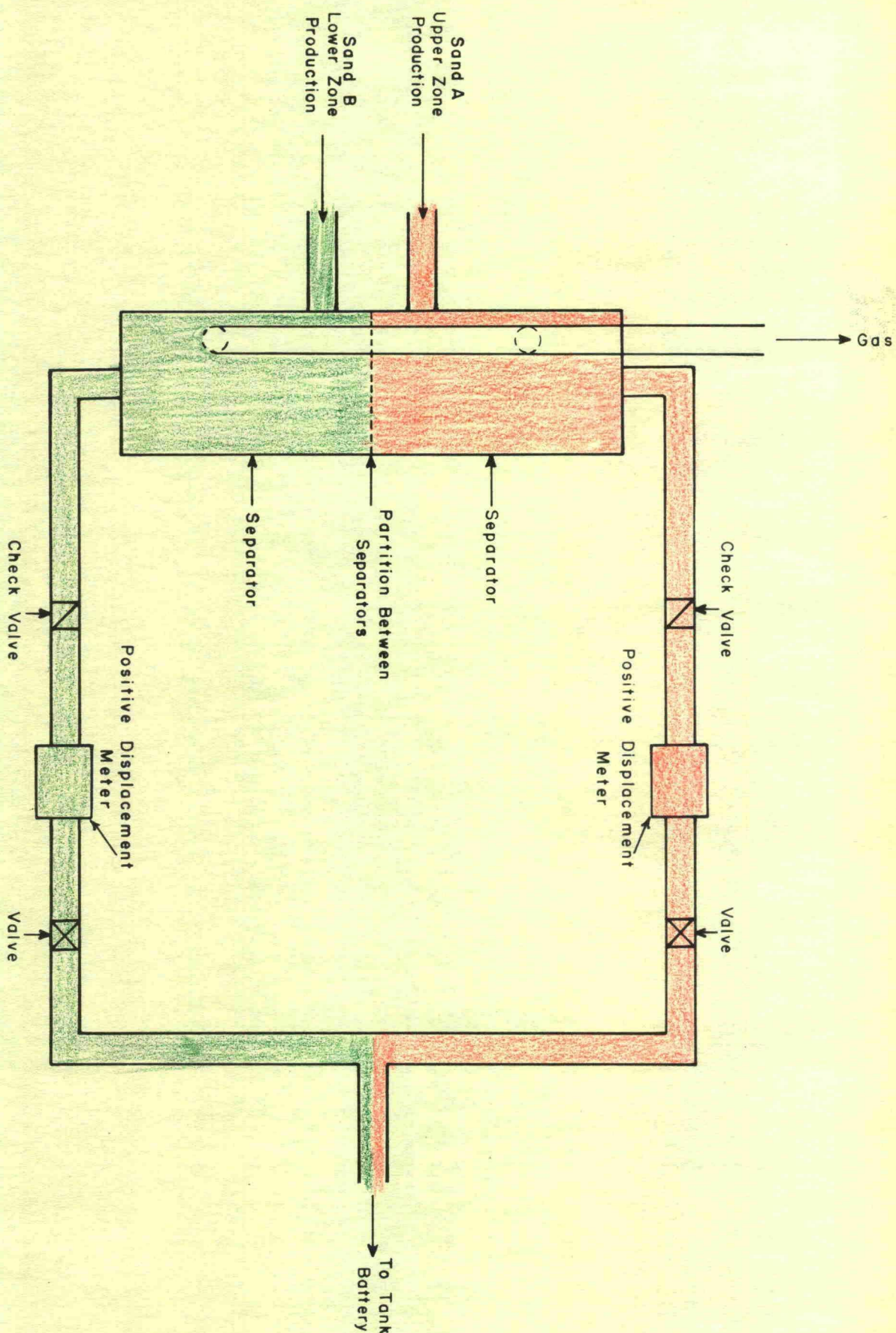
1. The tubing head will suspend the tubing strings separately.

**Pumping Unit**

1. Existing pumping units are of sufficient rating to pump both zones at the same time.
2. The pumping of both zones at the same time with the same pumping unit can be accomplished by using a dual horse's head.

**Metering of Oil**

1. Each zone will produce into a separator. The separators will consist of a single unit with a divider between the separator chambers.
2. Oil from the separator will be metered by positive displacement meters. Individual meters will be used for each zone.
3. After oil is metered it will be commingled into the existing flow line to the existing battery.
4. By metering the oil in this manner it will not be necessary to construct storage facilities and separate flow lines for each zone.



**Schematic Diagram**  
**Separating and Metering Installation**  
 Dual Completion

EL PASO NATURAL GAS PRODUCTS CO.  
 DATE: FEB. 18, 1959  
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Horseshoe Canyon-Gallup Oil Pool  
 San Juan County, New Mexico