

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

## APPLICATION FOR DUAL COMPLETION

Field Name <b>Blanco M.V. &amp; Wildcat Dakota</b>		County <b>Rio Arriba</b>		Date <b>October 1, 1959</b>
Operator <b>Pacific Northwest Pipeline Corp.</b>		Lease <b>San Juan 31-6 Unit</b>		Well No. <b>16-33 (MD)</b>
Location of Well	Unit <b>N</b>	Section <b>33</b>	Township <b>31N</b>	Range <b>6W</b>

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_ ; Operator, Lease, and Well No.:

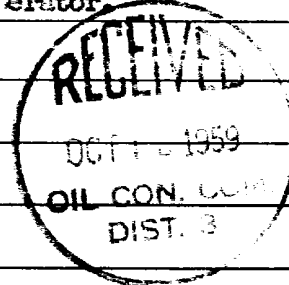
3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	<b>Mesa Verde</b>	<b>Dakota</b>
b. Top and Bottom of Pay Section (Perforations)	<b>5430-5638</b>	<b>7901-7952 (Upper Dakota)</b> <b>7970-8054 (Middle Dakota)</b>
c. Type of production (Oil or Gas)	<b>Gas</b>	<b>Gas</b>
d. Method of Production (Flowing or Artificial Lift)	<b>Flowing</b>	<b>Flowing</b>

4. The following are attached. (Please mark YES or NO)

- Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- \_\_\_\_\_ c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
- No d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

**Pacific Northwest Pipeline Corporation is 31-6 Unit Operator**



6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES \_\_\_\_\_ NO \_\_\_\_\_. If answer is yes, give date of such notification \_\_\_\_\_.

CERTIFICATE: I, the undersigned, state that I am the Division Petroleum Engr. of the El Paso Natural Gas Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

ORIGINAL SIGNED E. S. GREELY

Agent

- \* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

STATE OF NEW MEXICO     )  
COUNTY OF SAN JUAN     )



I, A. T. Fry, being first duly sworn upon my oath  
depose and say as follows:

I am an employee of Guiberson Corporation, and that  
on August 24, 1959, I was called to the location of the Pacific  
Northwest Pipeline Corporation San Juan 31-6 Unit No. 16-33(MD)  
Well located in the SESW/4 of Section 33, Township 31 North, Range  
6 West, N.M.P.M., for advisory service in connection with installation  
of a production packer. In my presence, a Guiberson Model "AG"  
Production Packer was set in this well at 7297 feet in accordance  
with the usual practices and customs of the industry.

A. T. Fry

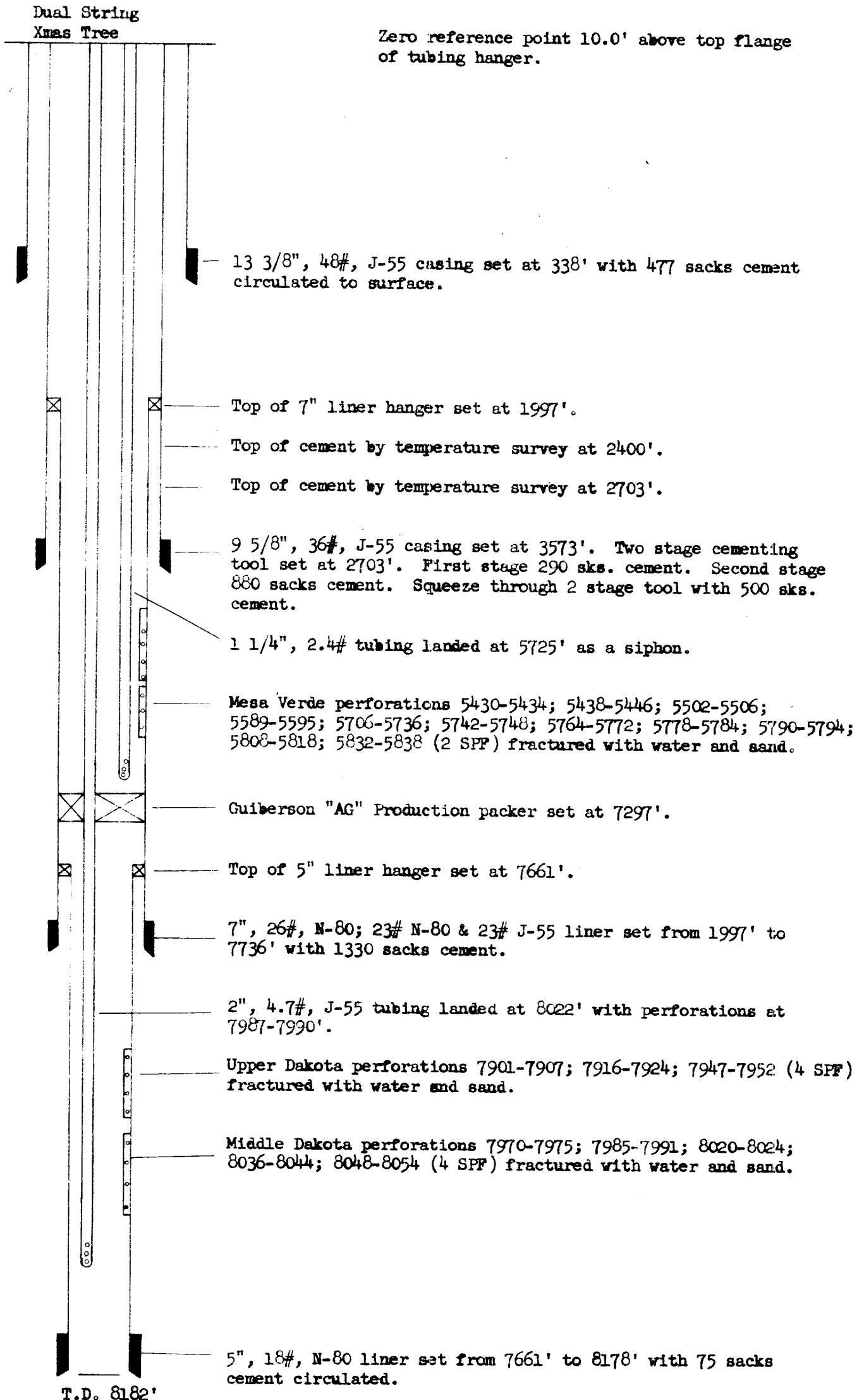
Subscribed and sworn to before me this 1st day of  
October, 1959.

Samuel MacCallister  
Notary Public in and for San Juan County,  
New Mexico

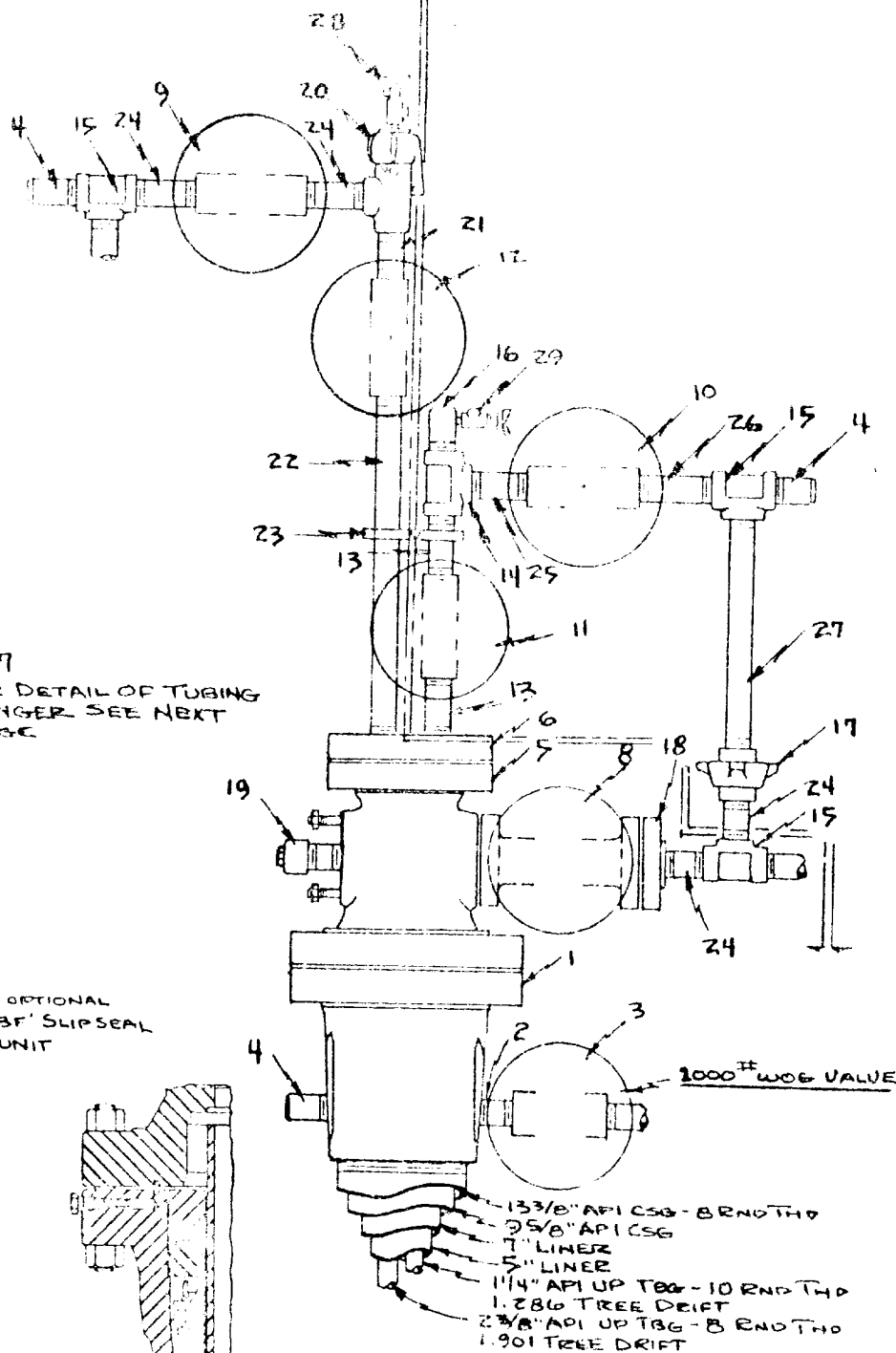
My commission expires February 24, 1960.



**SCHEMATIC DIAGRAM OF DUAL COMPLETION**  
**Pacific Northwest Pipeline Corp. San Juan 31-6 Unit No. 16-33 (MD)**  
**SW/4 Section 33, T-31-N, R-6-W**

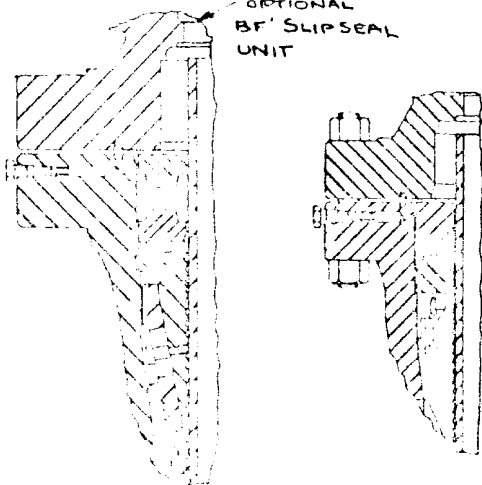


- 3000 LBS. - 2000 LBS. -

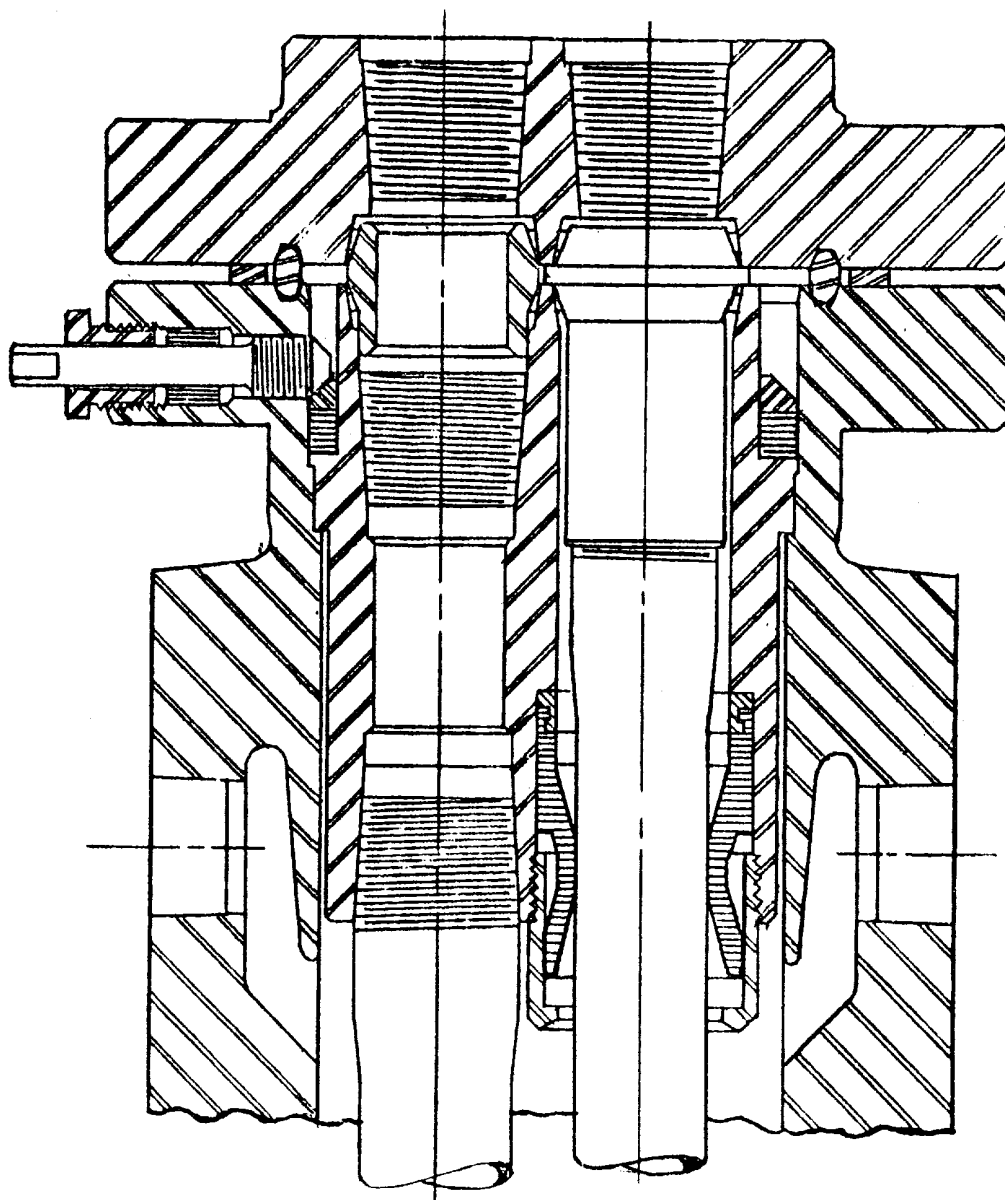


NO 9  
 FOR DETAIL OF TUBING  
 HANGER SEE NEXT  
 PAGE

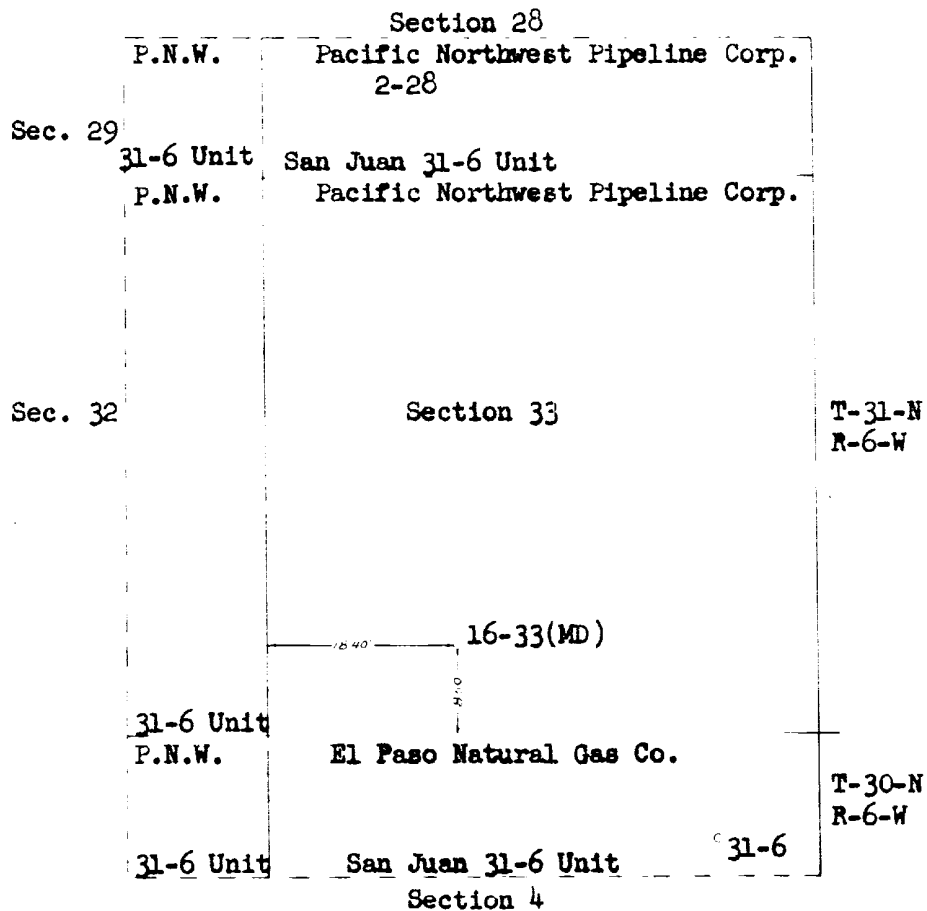
OPTIONAL  
 BF' SLIP SEAL  
 UNIT



THE NATIONAL SUPPLY CO. HOUSTON PLANT DIVISION	
EL PASO NATURAL GAS CO.	
SCALE 3/4" = 1'-0"	SUPPLEMENTARY 35690
DRAWN D. J. A.	



PLAT SHOWING LOCATION OF DUALY COMPLETED  
Pacific Northwest Pipeline Corp. San Juan 31-6 Unit No. 16-33 (MD)  
and Offset Acreage



EL PASO NATURAL GAS COMPANY  
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DUAL COMPLETION

DATE September 8, 1959

Operator <b>El Paso Natural Gas Company</b>		Lease <b>San Juan 31-6 No. 16-33 (M)</b>	
Location <b>850S, 1840W; 33-31-6</b>		County <b>Rio Arriba</b>	State <b>New Mexico</b>
Formation <b>Mesa Verde</b>		Pool <b>Blanco</b>	
Casing: Diameter <b>9-5/8</b>	Set At: Feet <b>3572</b>	Tubing: O.D. <b>1-1/4</b>	Set At: Feet <b>5725</b>
Pay Zone: From <b>5430</b>	To <b>5838</b>	Total Depth <b>8182</b>	Shut In: <b>8/24/59</b>
Stimulation Method <b>Water Frac.</b>		Flow Through Casing <b>X</b>	Flow Through Tubing

Choke Size, inches <b>.75</b>		Choke Constant, C <b>14.1605</b>		7" at 7736 5" at 7661-8178	
Shut-In Pressure, (MV) <b>883</b>	PSIG <b>895</b>	12 PSIA <b>15</b>	Shut-In Pressure, (MV) <b>884</b>	PSIG <b>896</b>	12 PSIA <b>896</b>
Flowing Pressure <b>126</b>	PSIG <b>138</b>	12 PSIA	Working Pressure: P <sub>w</sub> <b>180</b>	PSIG <b>192</b>	12 PSIA <b>192</b>
Temperature: T <b>64</b>	F <b>.75</b>		Flow Factor <b>1.011</b>		Gravity <b>.614</b>

Initial SIPT (D) = 2672psig  
Final SIPT (D) = 2683 psig

Packer at 7297

CHOKE VOLUME  $Q = C \times P_1 \times E_1 \times F_g \times F_{gv}$ 

$$Q = 14.1605 \times 138 \times .9962 \times .9918 \times 1.011 \times 1952 \text{ MCF/D}$$

$$\text{OPEN FLOW } A_{of} = Q \left( \frac{P_1^2 - P_2^2}{P_1^2 - P_{wf}^2} \right)^n$$

$$A_{of} = \left( \frac{802816}{765952} \right)^n \quad 1.0481^{.75} \times 1952 = 1.0358 \times 1952$$

$$A_{of} = 2022 \text{ MCF/D}$$

TESTED BY **W. D. Dawson**WITNESSED BY **W. B. Smith (Phillips) (C. Wagner, PNW)**

*L. D. Galloway*  
L. D. Galloway



EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DUAL COMPLETION

DATE **September 1, 1959**

Operator <b>El Paso Natural Gas</b>		Lease <b>San Juan 31-6 No. 16-33 (D)</b>	
Location <b>8508, 1840W; 33-31-6</b>		County <b>Rio Arriba</b>	State <b>New Mexico</b>
Formation <b>Dakota</b>		Pool <b>Undesignated</b>	
Casing Diameter <b>9-5/8</b>	Set At: Feet <b>3572</b>	Tubing Diameter <b>2"</b>	Set At: Feet <b>8011</b>
Pay Zone From <b>7901</b>	To <b>8054</b>	Total Depth <b>8182</b>	Shut in: <b>8/24/59</b>
Stimulation Method <b>Sand Water Frac.</b>		Flow Through Casing	Flow Through Tubing <b>X</b>

Choke Size: inches <b>.75</b>	Choke Constant <b>14.1605</b>	<b>7" at 7736, 5" liner 7661-8178</b>
Shut-in Pressure, Casing (MV) <b>820</b>	PSIG <b>832</b>	PSIG <b>2268</b>
Flowing Pressure: P <sub>1</sub> <b>112</b>	PSIG <b>124</b>	Working Pressure: P <sub>w</sub> <b>Calc. 309</b>
Temperature: T <b>70</b>	<b>.75</b>	Flow From Tables <b>1.008</b>
		Gravity <b>.581</b>

Initial SIPT (MV) = 821 psig

Packer at 7297

Final SIPC (MV) = 827 psig

CHOKE VOLUME =  $Q = C \times P_1 \times F_1 \times F_g \times F_{pv}$ 

$$Q = 12.1605 \times 124 \times .9905 \times 1.017 \times 1.008 = 1783 \text{ MCF/D}$$

$$\text{OPEN FLOW } Aof = Q \left( \frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

SIPT (D) = 1184 psig originally. Well was blown 10 minutes and re-shut-in. Then SIPT = 2268 psig after unloading slug of water.

$$Aof = \left( \frac{5198400}{5102919} \right)^n \cdot 1.0187^{.75} \times 1783 = 1.0140 \times 1783$$

$$Aof = 1808 \text{ MCF/D}$$

TESTED BY **W. D. Dawson**WITNESSED BY **W. B. Smith (Phillips) C. Wagner (PNW)**

*Lewis D. Galloway*  
L. D. Galloway

OIL CONSERVATION COMMISSION  
1000 Rio Brazos Rd.  
Aztec, New Mexico

OIL CONSERVATION COMMISSION  
BOX 871  
SANTA FE, NEW MEXICO

DATE 10-21-59

RE: Proposed NSP \_\_\_\_\_

Proposed NSL \_\_\_\_\_

Proposed NFO \_\_\_\_\_

Proposed DC ✓

Gentlemen:

I have examined the application dated 10-1-59  
for the PNW SJU 31-6 # 16-33(MD) 33-31N-6W  
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

Approve  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours very truly,

OIL CONSERVATION COMMISSION

*A. R. Kendrick*