

El Paso Natural Gas Company

El Paso, Texas

August 7, 1958

ADDRESS REPLY TO
POST OFFICE BOX 997
FARMINGTON, NEW MEXICO



Mr. A. L. Porter
Secretary and Director
Oil Conservation Commission
Box 871
Santa Fe, New Mexico

Dear Sir:

This is a request for administrative approval for a well dually completed in the Blanco Mesa Verde Pool and Wildcat Pictured Cliffs Pool. The El Paso Natural Gas Company San Juan 28-6 Unit No. 78 (PM) is located 990 feet from the North line and 800 feet from the East line of Section 1, Township 27 North, Range 6 West, N.M.P.M., Rio Arriba County, New Mexico.

This well has been completed in the Cliff House and Point Lookout sections of the Mesa Verde formation and in the Pictured Cliffs formation. Completion has been accomplished in the following manner:

1. 10 3/4" surface casing set at 173 feet with 150 sacks of cement circulated to the surface.
2. 7 5/8" intermediate casing set at 3458 feet with 150 sacks of cement. Top of the cement is at 2410 feet, which is above the top of the Pictured Cliffs at 3270 feet.
3. 5 1/2" liner set from 3399 feet to 5688 feet with 300 sacks of cement.
4. The casing and liner were tested for leaks before perforating.
5. The Point Lookout section was perforated in five intervals and fractured with water and sand.
6. The Cliff House section was perforated in one interval and fractured with water and sand.
7. The Pictured Cliffs formation was perforated in two intervals and fractured with water and sand.
8. All perforations were cleaned out after treatment and completion was accomplished by setting a Baker Model "EGJ" production packer on 2" EUE tubing at 3453 feet with tubing perforations set opposite the Point Lookout perforations. 1 1/4" EUE tubing siphon string was run with tubing perforations set opposite the Pictured Cliffs perforations. The Point Lookout gas will be produced through the 2" tubing and the Pictured Cliffs gas through the casing.
9. Initial potential tests have been run and commercial production has been found in both zones. A packer leakage test has been run and witnessed by a member of the Aztec office of the Oil Conservation Commission. This test shows no communication in the well bore between the two producing formations.

COPY

Administrative approval is requested for the dual completion to allow production from both known producing formations, eliminating the high initial cost of drilling two separate wells.

The acreage dedicated to this well is within the San Juan 28-6 Unit, and bounded on the East by the San Juan 27-5 Unit. Since El Paso Natural Gas Company is sole operator of both units, approval has not been sought from any other operator to dually complete this well. Enclosed are:

- (a) Two copies of the schematic diagram of the mechanical installations.
- (b) Two copies of the affidavit from the packer setting company stating that the packer used was set at the depth shown.
- (c) Two copies of the packer leakage test as observed by a member of the Oil Conservation Commission.
- (d) Two copies of the initial potential test showing commercial production from the two formations.
- (e) Two plats showing the location of the well and offset operators.

Copies of the electrical and radioactive logs will be sent to you under separate cover.

It is intended to dedicate the E/2 of Section 1, Township 27 North, Range 6 West to the Mesa Verde formation and the NE/4 of Section 1, Township 27 North, Range 6 West to the Pictured Cliffs formation.

Any further information required will be furnished upon your request. Thank you for your consideration in this matter.

Yours very truly,

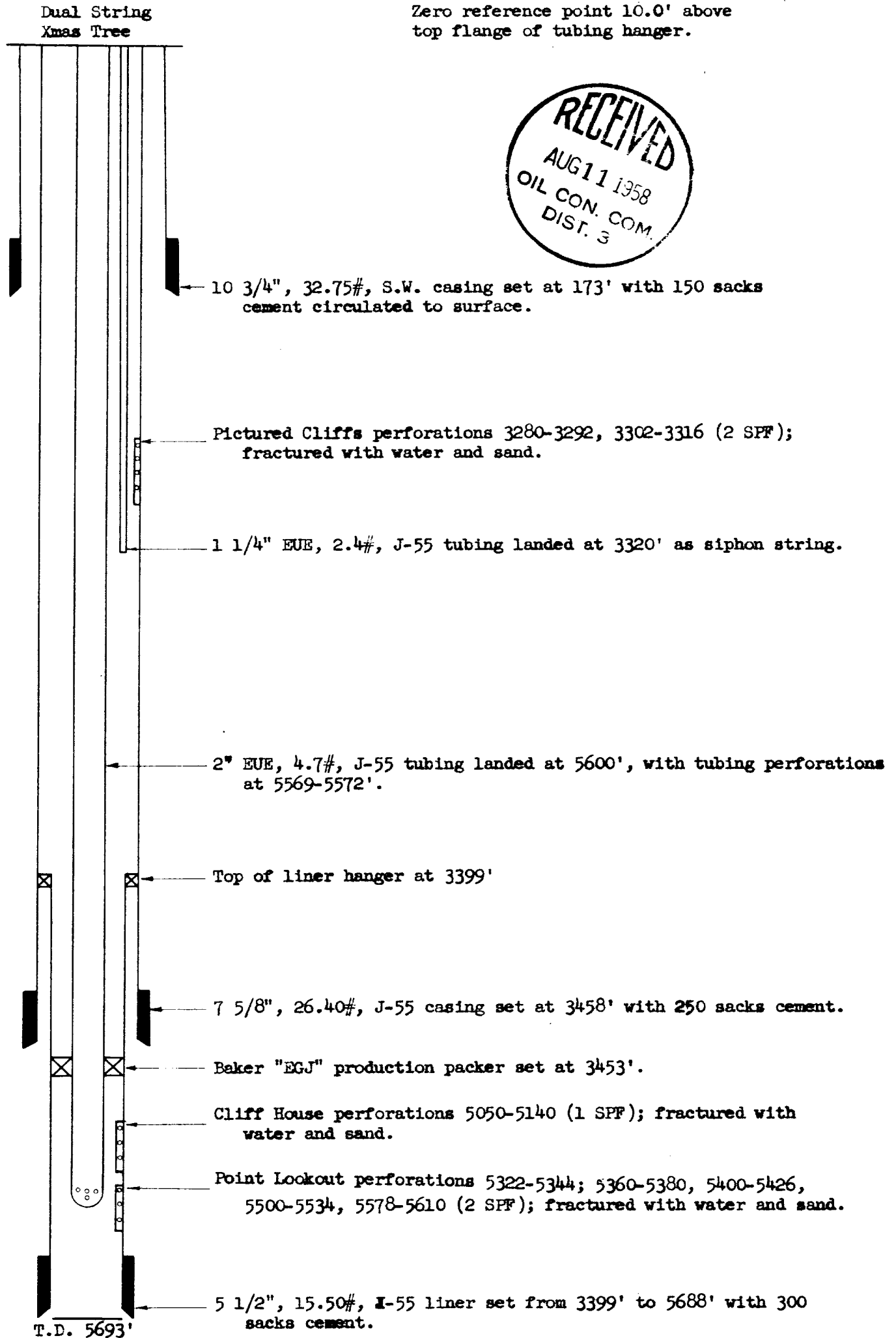
ORIGINAL SIGNED E. S. OBERLY

E. S. Oberly
Division Petroleum Engineer

ESO:bjn

cc: NMCCC (2) (Emery Arnold)
Sam Smith
USGS (Phil McGrath)
File

SCHEMATIC DIAGRAM OF DUAL COMPLETION
EL PASO NATURAL GAS COMPANY SAN JUAN 28-6 UNIT NO. 78 (PM)
NE/4 Section 1, T-27-N, R-6-W



STATE OF NEW MEXICO

COUNTY OF SAN JUAN

I, Mack M. Mahaffey, being first duly sworn upon my oath depose
and say as follows:

I am an employee of Baker Oil Tools, Inc., and that on March 15,
1958, I was called to the location of the El Paso Natural Gas Company
San Juan 28-6 Unit No. 78 (PM) Well located in the NENE/4 of Section 1,
Township 27 North, Range 6 West, N.M.P.M., for advisory service in connection
with installation of a production packer. In my presence, a Baker Model
"EGJ" Production Packer was set in this well at 3453 feet in accordance
with the usual practices and customs of the industry.

Mack M. Mahaffey

Subscribed and sworn to before me, a Notary Public in and for San Juan
County, New Mexico, the 9 day of Aug, 1958.

Paul MacLachlan
Notary Public in and for San Juan County,
New Mexico

My commission expires February 24, 1960.

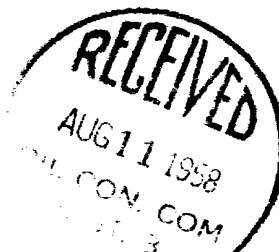


EL PASO NATURAL GAS COMPANY

P. O. Box 997
Farmington, New Mexico

July 30, 1958

Mr. E. C. Arnold
Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico



Re: Packer Leakage Test on the El Paso Natural Gas
Company Well, San Juan 28-6 Unit 78 (PM)
990N, 800E; 1-27-6; Rio Arriba, New Mexico.
(Name - Location - Company)

Dear Mr. Arnold:

The subject well was dually completed in the Pictured Cliffs and Mesa Verde zones and a packer was set at 3453 feet. The Pictured Cliffs zone was tested through a 3/4" choke for three hours July 10, 1958 with the following data obtained:

PC SIPC 1108 psig; Shut-in 16 days
PC SIPT 1108 psig;
MV SIPT 1098 psig; Shut-in 16 days

Time Minutes	(PC) Flowing Pressure Casing Psig	(MV) SIP (T) Psig	(PC) Working Pressure, Psig	Temp ° F
0		1098		
15	667	1098		70
30	532	1100		72
45	486	1101		73
60	448	1102		74
180	292	1103	Calc. 303	75

The choke volume for the Pictured Cliffs was 3541 MCF/D with an AOF of 3771 MCF/D.

The Mesa Verde zone was tested July 30, 1958 with a 3/4" choke for 3 hours with the following data obtained:

PC SIPC 1105 psig; Shut-in 20 days
PC SIPT 1105 psig;
MV SIPT 1096 psig; Shut-in 36 days

July 30, 1958

Time Minutes	(MV) Flowing Pressure Tubing Psig	(PC) SIP (C) Psig	(MV) Working Pressure, Psig	Temp ° F
0		1105		
15	533	1108		62
30	482	1109		64
45	465	1110		65
60	455	1110		65
180	394	1110	Calc. 807	70

The choke volume for the Mesa Verde test was 4854 MCF/D with an AOF
of 8786 MCF/D.

The results of the above tests indicate there is no packer leakage.

Very truly yours,

S. V. Roberts

S. V. Roberts
Gas Engineer

SVR/nb

cc: W. M. Rodgers
E. S. Oberly (6)
File



OPEN FLOW TEST DATA

DUAL COMPLETION

July 30, 1958

El Paso Natural Gas

990N, 800E; 1-27-6

Mesa Verde

7-5/8

5322

Sand Water Frac

San Juan 28-6 Unit 78 (M)

Rio Arriba

New Mexico

Blanco MV

2

5590

5690 c/o 5645

Shut-in 6/24/58

X

.75

12.365

5-1/2 liner 3399 - 5688

1105 (PC)

1117

36 (MV)

1096 (MV)

1108

394 (MV)

406

Calc.

819

70

.75

1.043

.689

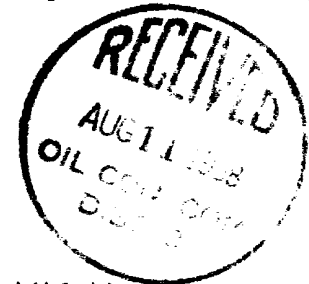
Initial SIPT (PC) = 1105 psig

Final SIPC (PC) = 1110 psig

Packer 3453

(12.365)(406)(.9905)(.9359)(1.043)

4854



1,227,664
556,903

(2.2044)^{.75} (4854) = (1.8100)(4854)

8786

S. V. Roberts

Lewis D. Galloway
L. D. Galloway

OPEN FLOW TEST DATA

DUAL COMPLETION

DATE July 10, 1958

El Paso Natural Gas Company		San Juan 28-6 No. 78 (P)	
990N, 800E; 1-27-6		Rio Arriba New Mex.	
Pictured Cliffs		Undesignated	
7-5/8	3446	1-1/4	3310
3280	3316	5690 c/o 5645	Shut-in 6/24/58
Sand Water Frac.		X	

5-1/2 liner 3399 - 5688	
(PC) 1108	1120 16
292	304
75	1.032
303	315
	700

Final SIPT (MV) 1103

Initial SIPT (MV) 1098

Packer at 3453

2" at 5590

CHOKE VOLUME $C \times P_1 \times \dots \times P_n \times P_{n+1}$

$12.365 \times 304 \times 9859 \times 9258 \times 1.032$

3541

MCF D

$\left(\begin{matrix} n \\ n \end{matrix} \right)$

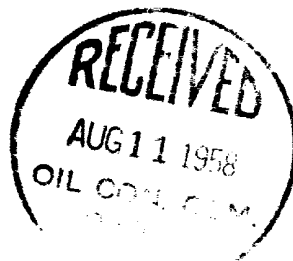
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$\frac{1.0875}{1.0650}$

3771

MCF D

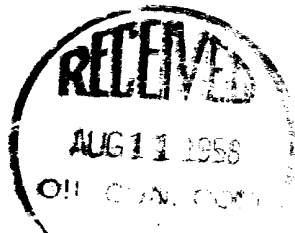
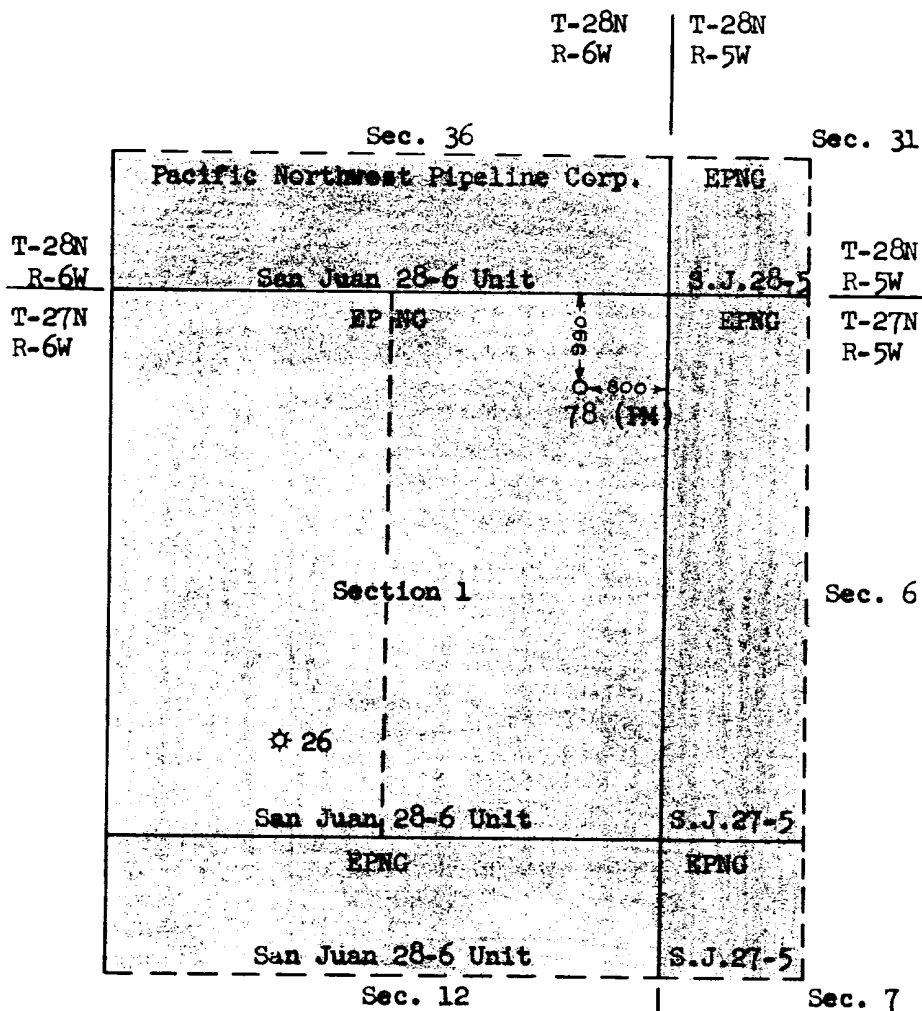
Richard Proctor



Checked By Tom Grant

Lewis D. Galloway
L. D. Galloway

PLAT SHOWING LOCATION OF DUALY COMPLETED EPNG
 SAN JUAN 28-6 UNIT NO. 78 (PM)
 AND OFFSET ACREAGE



EL PASO NATURAL GAS COMPANY
 EL PASO, TEXAS