

El Paso Natural Gas Company

El Paso, Texas

July 16, 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 South Blanco Pictured Cliffs Pool. The El Paso Natural Gas Company San Juan 27-5 Unit No. 34 (PM) is located 1090 feet from the South line and 890 feet from the West line of Section 30, Township 27 North, Range 5 West, N.M.P.M., Rio Arriba County, New Mexico.

This well has been completed in the Point Lookout and Cliff House 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 3252 feet with 200 sacks of cement. Top of the cement is at 2200 feet, which is above the top of the Pictured Cliffs at 3083 feet.
3. 5 1/2" liner set from 3221 feet to 5439 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 two intervals and fractured with water and sand.
7. The Pictured Cliffs formation was perforated in three intervals and fractured with water and sand.
8. All perforations were cleaned out after treatment and completion was accomplished by setting a Quiberson Model "Shorty" production packer on 2" BUE tubing at 3250 feet with tubing perforations set opposite the Point Lookout perforations. 1 1/4" BUE 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 Artes office of the Oil Conservation Commission. This test shows no communication in the well bore between the two producing formations.

C O P Y

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.

Since the drilling block is entirely within the boundaries of the San Juan 27-5 Unit, of which El Paso Natural Gas Company is the operator, approval to dually complete this well has not been requested from any other operator. 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.

It is intended to dedicate the W/2 of Section 30, Township 27 North, Range 5 West to the Mesa Verde formation and the SW/4 of Section 30, Township 27 North, Range 5 West to the Pictured Cliffs formation.

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

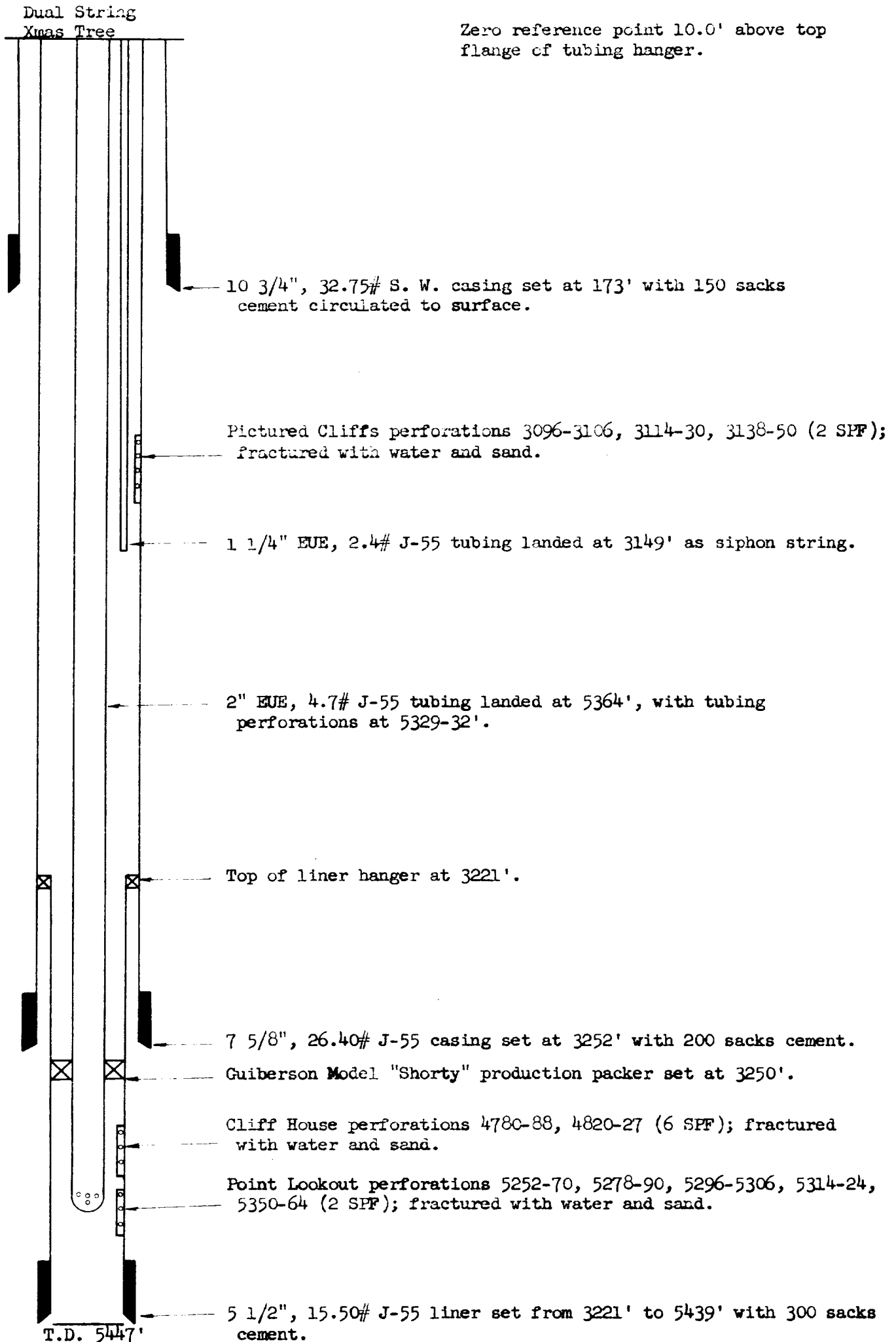
Yours very truly,

OR'G'NAL SIGNED E. S. OBERLY
E. S. Oberly,
Division Petroleum Engineer

ESO:dgb

cc: NMOCC (Emery Arnold) ✓
Sam Smith
USGS (Phil McGrath)

SCHEMATIC DIAGRAM OF DUAL COMPLETION
 El Paso Natural Gas Co. San Juan 27-5 Unit No. 34 (PM)
 SW/4 Section 30, T-27-N, R-5-W



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
June 7, 1958, I was called to the location of the El Paso Natural
Gas Company San Juan 27-5 Unit No. 34 (PM) Well located in the
SWSW/4 of Section 30, Township 27 North, Range 5 West, N.M.P.M., for
advisory service in connection with installation of a production
packer. In my presence, a Guiberson Model "Shorty" Production Packer
was set in this well at 3250 feet in accordance with the usual practices
and customs of the industry.

A. T. Fry

Subscribed and sworn to before me, a Notary Public in and for
San Juan County, New Mexico, the 16th day of July, 1958.

Paul MacCallister
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 9, 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 27-5 Unit 34, 9908,
990W; 30-27-5, 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 3250 feet. The Mesa Verde zone was tested through a $3/4$ " choke for three hours June 16, 1958 with the following data obtained:

PC SIIP 877 psig; Shut-in 10 days

PC SIPT 877 psig;

MV SIPT 1018 psig; Shut-in 10 days

Time Minutes	(MV) Flowing Pressure Tubing Psig	(PC) SIIP (C) Psig	(MV) Working Pressure, Psig	Temp ° F
0	-	877		-
15	471	880		68
30	424	881		68
45	402	881		69
60	390	881		71
180	333	882	Calc. 670	71

The choke volume for the Mesa Verde was 4.115 MCF/D with an AOP of 6,343 MCF/D.

The Pictured Cliffs zone was tested July 8, 1958 with a $3/4$ " choke for 3 hours with the following data obtained:

PC SIIP 958 psig; Shut-in 8 days

PC SIPT 958 psig;

MV SIPT 1064 psig; Shut-in 8 days

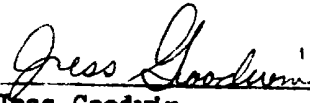
Page Two

<u>Time</u> <u>Minutes</u>	(PC) Flowing Pressure <u>Casing</u> <u>sig</u>	(MV) SIP (T) Paig	(PC) Working Pressure, Paig	<u>Temp</u> ° F
15	438	1064	461	61
30	320	1065	337	62
45	261	1066	273	63
60	227	1066	237	64
180	132	1067	140	70

The choke volume for the Pictured Cliffs test was 1691 MCF/D with an AQF
of 1727 MCF/D.

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

Very truly yours,



Jess Goodwin
Gas Technician by TBG

JG/nb

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

**EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA**

DUAL COMPLETION

DATE **June 17, 1958**

Operator El Paso Natural Gas Company		Lease San Juan 27-5 Unit 34 (M)	
Location 990S, 990W; 30-27-5		County Rio Arriba	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 7-5/8	Set At: Feet 3242	Tubing: Diameter 2"	Set At: Feet 5354
Pay Zone: From 4780	To 5364	Total Depth: 5447 c/o 5393	Shut-in 6/7/58
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .75	Choke Constant: C 12.365	5-1/2 liner 3821 - 5429	
Shut-In Pressure, Casing, PSIG 877 (PC)	PSIA 889	Days Shut-In 10	Shut-In Pressure, Tubing, PSIG 1018 (MV)
Flowing Pressure: P, PSIG 333	PSIA 345	Working Pressure: P _w , PSIG Calc.	PSIA 682
Temperature: T 71	F .75	F _{pv} (From Tables) 1.034	Gravity .679

Final SIPC (PC) 882 PSIG
**Packer at 3250
1-1/4" at 3139**

CHOKE VOLUME $Q = C \times P_f \times F_c \times F_g \times F_{pv}$

$$Q = (12.365)(345)(.9896)(.9427)(1.034) \quad \underline{4,115} \quad \text{MCF/D}$$

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

REMARKS: Making some distillate

$$A_{of} = \left(\frac{1,060,900}{596,105} \right)^n \quad (1.7797)^{.75} (4115) = (1.5415)(4115)$$

$$A_{of} = \underline{6,343} \quad \text{MCF/D}$$

TESTED BY **S. V. Roberts**

WITNESSED BY **Fred Cook, N;M.O.C.C.**

Lewis D. Galloway
L. D. Galloway

EL PASO NATURAL GAS COMPANY OPEN FLOW TEST DATA

DUAL COMPLETION

DATE July 8, 1958

Operator El Paso Natural Gas Company		Lease San Juan 27-5 Unit 34 (P)	
Location 9908, 990W; 30-27-5		County Rio Arriba	State New Mexico
Formation Pictured Cliffs		Pool Undesignated	
Casing Diameter 7-5/8	Set At: Feet 3242	Tubing Diameter 1-1/4	Set At: Feet 3139
Pay Zone From 3096	To 3150	Total Depth 5447	Shut-in 6/7/58 Re-Shut-in 6/30/58
Completion Method Sand Water Frac		Flow Through Casing X	Flow Through Tubing

Casing Size, Inches .75		Casing Length, Feet 12.365		(MV) re-shut-in 6/30/58	
Shut-in Pressure, PSIG 958	Flow Pressure, PSIG 132	Flow Pressure, PSIA 970	Flow Pressure, PSIA 144	Shut-in Pressure, Tubing, PSIG 958	Flow Pressure, Tubing, PSIG 140
Temperature, °F 70	Gravity .85	Flow From Tables 1.013	Gravity .670	Flow From Tables 1.013	Gravity .670

Initial SIPC (PC) = 877
Final SIPC (PC) = 882

Packer at 3250
2" at 5354

CHOKE VOLUME $Q = C \times P_1 \times F_1 \times F_2 \times F_3$

$$Q = 12.365 \times 144 \times .9905 \times .9463 \times 1.013$$

1691

MCF/D

$$Q = C \times \left(\frac{P_1^2 - P_2^2}{P_1} \right)^n$$

$$\left(\frac{940900}{917796} \right)^n$$

$$1.0251^{.85} \times 1691 = 1.0213 \times 1691$$

Act 1727

MCF/D

F. M. Clark

Witnessed By

Checked By Tom Grant

Lewis D. Galloway
L. D. Galloway