El Paso Natural Gas Company

El Paso, Texas

July 16, 1958

ADDRESS REPLY TO
POST OFFICE BOX 997
FARMINGTON, NEW MEXICO

RECEIVED
JUL 25 1958
OIL CON. COM.
DIST. 3

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 28-7 Unit No. 91 (PM) is located 836 feet from the North line and 1544 feet from the East line of Section 34, Township 28 North, Range 7 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 175 feet with 150 sacks of cement circulated to the surface.
2. 7 5/8" intermediate casing set at 2899 feet with 200 sacks of cement. Top of the cement is at 1860 feet, which is above the top of the Pictured Cliffs at 2700 feet.
3. 5 1/2" liner set from 2822 feet to 5110 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 four 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 one interval and fractured with water and sand.
8. All perforations were cleaned out after treatment and completion was accomplished by setting a Guiberson Model "Shorty" production packer on 2" EUE tubing at 2963 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.

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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 lies entirely within the boundaries of the San Juan 28-7 Unit, of which El Paso Natural Gas Company is operator, approval to dually complete this well has not been sought 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 E/2 of Section 34, Township 28 North, Range 7 West to the Mesa V rde formation and the NE/4 of Section 34, Township 28 North, Range 7 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

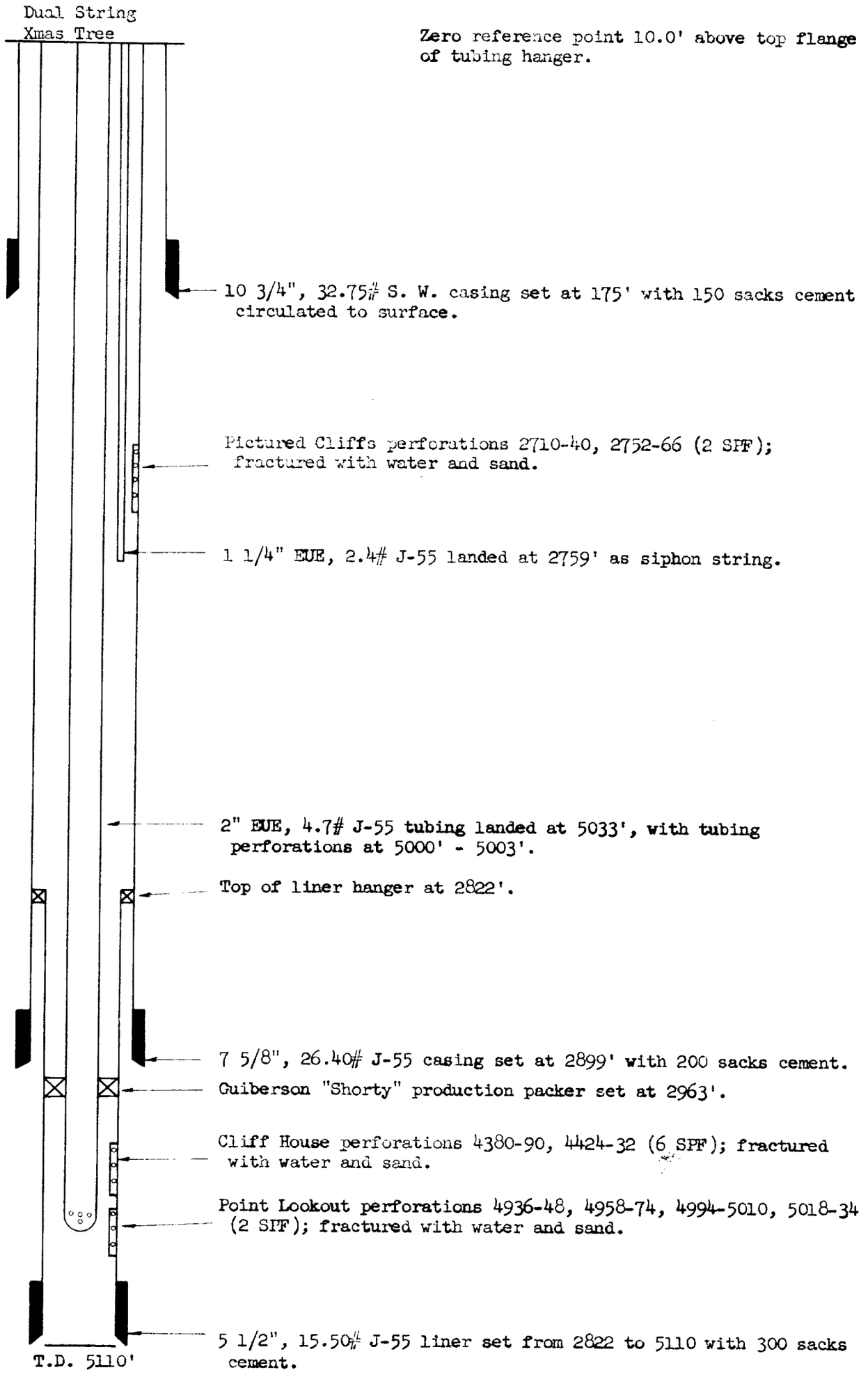
E. S. Oberly,
Division Petroleum Engineer

ESO:dgb

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

THIS BOOK SHOULD BE SLOWLY

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. San Juan 28-7 Unit No. 91 (PM)
NE/4 Section 34, T-28-N, R-7-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 11, 1956, I was called to the location of the El Paso Natural Gas Company San Juan 28-7 Unit No. 91 (PM) Well located in the NWNE/4 of Section 34, Township 28 North, Range 7 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 2963 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 11th day of July, 1956.

Ida M. MacDonald
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 10, 1958

Mr. E. S. Arnold
Oil Conservation Commission
Post Rio Arriba Road
Aztec, New Mexico

Re: Packer Leakage Test on the El Paso Natural Gas Company Well, San Juan 28-7 Unit 91 (PM) 836N, 1544E; 34-28-7, Rio Arriba, New Mex.
(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 2963 feet. The Mesa Verde zone was tested through a 3/4" choke for three hours June 19, 1958 with the following data obtained:

MV SICP 938 psig; Shut-in 8 days

PC SICP 938 psig;

MV SICP 997 psig; Shut-in 8 days

Time Minutes	MV Flowing Pressure Tubing psig	PC (SI C) psig	MV Working Pressure, psig	Temp ° F
0		938		
15	441	943		68
30	427	944		69
45	417	944		70
60	408	944		70
180	359	945	Calc. 709	71

The choke volume for the Mesa Verde was 4,430 MCF/D with an AOF of 7575 MCF/D.

The Pictured Cliffs zone was tested July 7, 1958 with a 3/4" choke for 3 hours with the following data obtained:

PC SICP 939 psig; Shut-in 18 days

MV SICP 939 psig;

MV SICP 996 psig; Shut-in 7 days

Time Minutes	(PC) Flowing Pressure Casing psig	(MV) SIP (T) psig	(PC) Working Pressure, psig	Temp ° F
0		996		
15	437	996		67
30	360	997		68
45	275	998		69
60	189	999		70
180	92	1000	113	71

The above volume for the **Pictured Cliffs** test was **1241** MCF/D with an AOF of **1259** MCF/D.

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

Very truly yours,

Richard Proctor

Richard Proctor
Gas Technician

by TBG

RP/nb

cc: A. M. Hodgers
E. S. Oberly (2)
File

NATURAL GAS

OPEN FLOW TEST DATA

DUAL COMPLETION DATE June 19, 1958

Operator: El Paso Natural Gas Company	Lease: San Juan 28-7 Unit 91 (M)
Location: 836N, 1544E; 34-28-7	County: Rio Arriba; State: New Mexico
Formation: Mesa Verde	Pool: Blanco
Casing: Diameter 7-5/8"; Set At, Feet 2899	Tubing: Diameter 2"; Set At, Feet 5023
Pay Zone: From 4380; To 5034	Total Depth: 5107 c/o 5070; Shut-in 6/11/58
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 2823 - 5110	
Shut-in Pressure Casing, PSIG + 12 = PSIA: 938 (PC); 950	Days Shut-in: 8	Shut-in Pressure Tubing, PSIG + 12 = PSIA: 997 (MV); 1009	
Flowing Pressure P: 359 PSIG + 12 = PSIA: 371		Working Pressure P_w: (Calc.) PSIG + 12 = PSIA: 721	
Temperature T: 71; .75		Fpv (From Tables): 1.039	Gravity: .684

Final SIPC (PC) 945 psig

Packer at 2963
1-1/4" at 2749

CHOKE VOLUME: $Q = C \times P_t \times F_t \times F_g \times F_{pv}$

$Q = (12.365)(371)(.9896)(.9393)(1.039)$ = 4431 MCF D

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

$AOF = \left(\frac{1,018,081}{498,240}\right)^n \quad (2.0433)^{.75}\,(4431) = (1.7100)(4431)$

AOF = 7,577 MCF D

TESTED: S. V. Roberts

WITNESSED: Fred Cook (NMOCC)

L. D. Galloway by A.R.K.

L. D. Galloway

OPEN FLOW TEST DATA

DUAL COMPLETION — DATE July 7, 1958

El Paso Natural Gas		San Juan 28-7 Unit 91 (P)	
836N, 1544E; 34-28-7		Rio Arriba	New Mexico
Pictured Cliffs		Undesignated	
7-5/8	2899	1-1/4	2749
2710	2766	5107 c/o 5070	Shut-in 6/19/58
Sand Water Frac.		X	

.75	12.365		5-1/2" liner 2823 - 5110		
939	951	18	939		951
92	104		113		125
71	85		1.007		.640

Initial MV = 996
Final MV = 1000

Packer at 2963

$12.365 \times 104 \times .9896 \times 9682 \times 1.007$ = 1241 MCF D

$\frac{904401}{888776}$ $(1.0175)^{.85}$ 1241 = (1.0148) (1241)

1259

Richard Proctor

Checked By Tom Grant

Lewis D. Galloway

L. D. Galloway