El Paso Natural Gas Company

El Paso, Texas

June 10, 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 Extension and in the South Blanco Pictured Cliffs Pool. The El Paso Natural Gas Company Florance No. 9-D (PM) is located 1090 feet from the South line and 1090 feet from the West line of Section ~~16~~, 17 Township 27 North, Range 8 West, N.M.P.M., San Juan County, New Mexico.

This well has been completed in the Point Lookout section 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 4929 feet and cemented with a two stage cementing procedure; 200 sacks at the base of the casing and 150 sacks across the Pictured Cliffs formation.
3. 5 1/2" liner set from 4853 feet to 5353 feet with 200 sacks of cement.
4. The casing and liner were tested for leaks before perforating.
5. The Point Lookout section was perforated in seven intervals and fractured with water and sand.
6. The Pictured Cliffs formation was perforated in three intervals and fractured with water and sand.
7. All perforations were cleaned out after treatment and completion was accomplished by setting a Baker Model "EGJ" production packer on 2" EUE tubing at 4870 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.
8. 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.

Since El Paso Natural Gas Company holds all leases immediately adjacent to the drilling block, no other operators have been notified of intentions 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.

It is intended to dedicate the W/2 of Section 18, Township 27 North, Range 8 West to the Mesa Verde formation and the SW/4 of Section 18, Township 27 North, Range 8 West to the Pictured Cliffs formation.

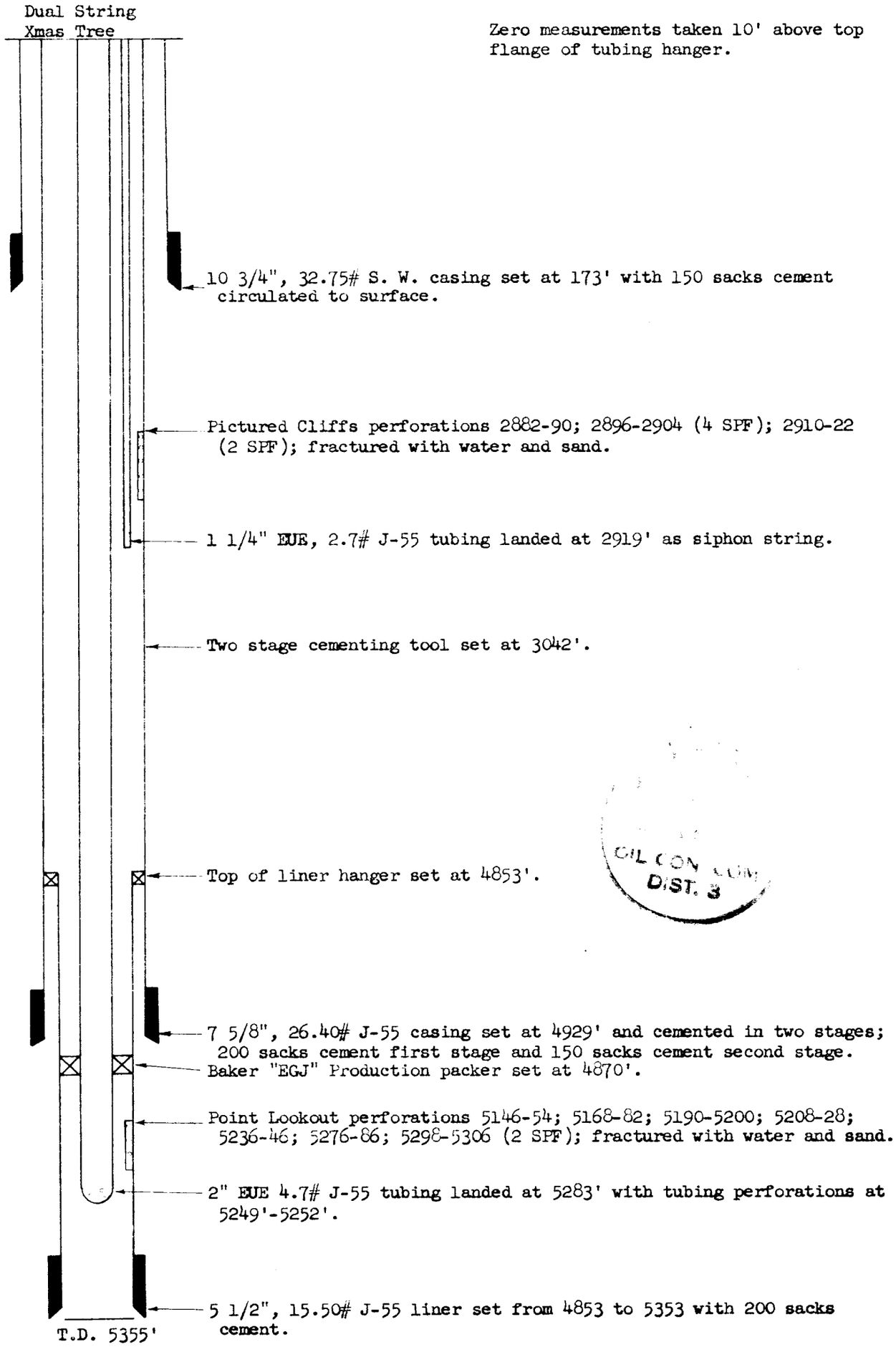
Any further information required will be furnished upon your request. Thank you for your consideration in this matter.

Yours very truly,

ORIGINAL SIGNED E. S. OBERLY
E. S. Oberly,
Division Petroleum Engineer

ESO:dgb
Encl.
cc: NMOCC (Emery Arnold)
Sam Smith
USGS (Phil McGrath)

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. Florance No. 9-D (PM)
NE/4 Section 18, T-27-N, R-8-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 April 13, 1958, I was called to the location of the El Paso Natural Gas Company Florance No. 5-B (PM) Well located in the SWSW/4 of Section 17, Township 27 North, Range 8 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 4070 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 4th day of June, 1958.

Noel L. Blackaby
Notary Public in and for San Juan County, New Mexico

My commission expires February 24, 1960.

RECEIVED
JUN 16 1958
OIL CON. COM.
DIST. 3

EL PASO NATURAL GAS COMPANY

Box 997
Farmington, New Mexico

June 3, 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, Florence No. 5-D (PM, 1093S, 1092W; 27 29 8, San Juan County, New Mexico.

Dear Mr. Arnold:

The subject well was dually completed in the Pictured Cliffs and Mesa Verde zones and a packer was set at 4870 feet. The Mesa Verde zone was tested through a 3/4" choke for three hours May 15, 1958 with the following data obtained:

PC SIPC 815 psig;) shut-in 31 days

PC SIPT 813 psig;) shut-in 31 days

MV SIPT 1034 psig;) shut-in 31 days

Time Minutes	MV Flowing Pressure Tubing Psig	PC SIPC Psig	MV Working Pressure, Psig	Temp ° F
0	-	813		-
15	441	815		54
30	392	815		54
45	366	815		64
60	342	815		54
180	297	815	Calc. 59%	56

The choke volume for the Mesa Verde was 3398 MCF/D with an AOF of 4818 MCF/D.

The Pictured Cliffs zone was tested May 28, 1958 with a 3/4" choke for 3 hours with the following data obtained:

PC SIPC 815 psig;) shut-in 39 days

PC SIPT 817 psig;) shut-in 39 days

MV SIPT 1000 psig;) shut-in 0 days

OIL CON. DIST. 3

Time Minutes	PC Flowing Pressure Casing Psig	MV SIPT Psig	PC Working Pressure, Psig	Temp. °F
[illegible]	-	1060		-
15	404	1061		56
[illegible]	342	1061		58
[illegible]	331	1062		61
[illegible]	324	1062		62
1[illegible]	1[illegible]9	10[illegible]3	104 (tbg.)	[illegible]

The choke volume for the Pictured Cliffs test was 2,[illegible]38 MCF/D with an AOF of 2,[illegible] MCF/D.

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

Very truly yours,

S. V. Roberts
Gas Engineer

SVR/nb

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

DUAL COMPLETION

May 23, 1958

El Paso Natural Gas		Florence No. 9-D (P)	
1090S, 1090W; 17-27-8		San Juan	New Mexico
Pictured Cliffs		South Blanco	
6-5/8"	4916	1-1/4"	2909
2882	2904	5352 c/o 5330	Shut-in 4/14/58
Sand Water Frac		X	

.75	14.1605	5-1/2" liner 4859-5353	
815 (PC)	827 39 (PC)	817 (PC)	829
179	191	184	196
66	.85	1.017	.046

Initial SIPT (TV) 1860 psig
Final SIPT (TV) 1863 psig

2" at 5273
Packer at 4870

(14.1605) (191) (.9943) (.9845) (1.017) 2,638

387241
348225

$(1.0592)^{.85}$ (2,638) = (1.0501) (2,638)

2,770

S. V. Roberts and M. W. Rischard

Lewis D. Galloway
L. D. Galloway

FORM 23-75 5-56

EL PASO NATURAL GAS COMPANY

OPEN FLOW TEST DATA

DUAL COMPLETION

DATE May 15, 1958

Operator: El Paso Natural Gas Company		Lease: Florence No. 9-D (M)	
Location: 1090S, 1090W; 17-27-8		County: San Juan	State: New Mexico
Formation: Mesa Verde		Pool: Blanco	
Casing: Diameter: 7-5/8"	Set At: Feet: 4916	Tubing: Diameter: 2"	Set At: Feet: 5273
Pay Zone: From: 5146	To: 5177	Total Depth: 5352 c/o 5330	Shut-in 4/14/58
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 4859 - 5353	
Shut-In Pressure, Casing, PSIG: 813 (PC)	+ 12 = PSIA: 825 / Days Shut-In: 31	Shut-in Pressure, Tubing PSIG: 1064 (MV)	+ 12 = PSIA: 1076
Flowing Pressure: P PSIG: 297	+ 12 = PSIA: 309	Working Pressure: P_w PSIG: (Calc.)	+ 12 = PSIA: 609
Temperature: T °F: 66	n: .75	Fpv (From Tables): 1.036	Gravity: .717

Initial SIPC (PC) 813 PSIG 1-1/4 at 2909 Packer at 4870
Final SIPC (PC) 815 PSIG

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

$Q = (12.365)(309)(.9943)(.9161)(1.036) =$ 3,606 MCF/D

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

Aof $\left(\frac{1157776}{786895} \right)^n$ $(1.4713)^{.75}(3606) = (1.336)(3606)$

Aof 4,818 MCF/D

JUN 16 1958
OIL CON. COM.
DIST. 3

TESTED BY S. V. Roberts and Frank Clark

WITNESSED BY

Lewis D. Galloway
L. D. Galloway