El Paso Natural Gas Company

El Paso, Texas

April 3, 1957

DIRECT REPLY TO:
P. O. 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 to request administrative approval for a well dually completed in the Blanco Mesa Verde Pool and the Aztec Pictured Cliffs Pool. The El Paso Natural Gas Company Daum No. 4 (PM) is located 1090 feet from the North line and 2240 feet from the East line, Section 32, Township 28 North, Range 9 West, N.M.P.M., San Juan County, New Mexico.

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

1. 10-3/4" surface casing set at 175' with 125 sacks of cement.
2. 7" intermediate casing set at 3954' using multi-stage cementing procedure, 150 sacks of cement at the base of the casing and 100 sacks of cement across the Pictured Cliffs formation.
3. 5-1/2" liner set from 3889' to 4673' with 60 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 water-sand fraced through the 5-1/2" liner.
6. The Pictured Cliffs formation was perforated in two intervals and water-sand fraced through the 7" casing with a temporary bridge plug isolating the perforations from the Point Lookout section.

COPY

7. After cleaning out both formations a 2" EUE tubing was run with a Baker Model "EGJ" production packer to separate the Mesa Verde and Pictured Cliffs formations. The Mesa Verde formation will be produced through the 2" tubing.
8. The Pictured Cliffs formation will be produced through the 7" casing. A syphon string consisting of 1-1/4" line pipe was run to a point opposite the Pictured Cliffs formation.
9. A Garrett circulating sleeve was installed in the 2" tubing string just below the Pictured Cliffs perforation. This sleeve will enable bottom hole pressure surveys to be taken if they are required at a future date.
10. Initial Potential tests have been run and commercial production has been found at both zones. Also a Packer Leakage test has been run and witnessed by the Aztec Oil Conservation Commission office. This test shows no communication in the well bore between the two producing formations.

Administrative approval is asked for this dual completion to allow production from both known producing formations without the high initial cost of drilling two wells.

The offset operator of this dual completion has been notified and I am enclosing a copy of the letter waiving any objection to it. Also enclosed are:

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

It is intended to dedicate the E/2 of Section 32 to the Mesa Verde formation and the NE/4 of Section 32 to the Pictured Cliffs formation.

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

Yours truly,

ORIGINAL SIGNED E. J. COEL

E. J. Coel
Senior Petroleum Engineer

EJC/gks
cc: Emery Arnold
R. L. Hamblin
Phil McGrath

ORIGINAL SIGNED B. J. COX

Form [illegible]-24 Rev. [illegible]

EL PASO NATURAL GAS COMPANY
GAS WELL TEST

To: Mr. E. E. Alsup

Date: February 20, 1957

From: Gas Engineering Department

Place: Farmington, New Mexico

DUAL COMPLETION

Subject: Test data on the El Paso Natural Gas Company Well, DAUM # 4, San Juan County, New Mexico.

Tested By: K. C. McBride. Witnessed By: Mr. A. R. Kendrick, New Mexico Oil Conservation Commission.

Location ..... Sec. 32 T. 28 R. 9 , 1090'N, 2240'E

Shut-In Pressure ..... SIPC 603 psig; SIPT 603 psig; (Shut-in 7 days)

0.750" Choke Volume ..... 1843 MCF/D @ 14.7 psia and 60° F. for 0.6 gravity gas. Flow through casing for 3 hours.

Calculated 3 Hour Absolute Open Flow ..... 1922 MCF/D

Working Pressure On tubing ..... = 123 Psig

Producing Formation ..... Pictured Cliff

Stimulation Method ..... Sand Water Frac

Total Depth ..... 4675 - Packer @ 3962

Field ..... Aztec

H_2S ..... Sweet to lead acetate.

SIPT (M.V.) - 1006 psig

Lewis D. Galloway
L. D. Galloway

cc. D. H. Tucker
~~[illegible]~~
W. T. Hollis
~~[illegible]~~
W. M. Rodgers
~~[illegible]~~
Drilling Department
B. D. Adams
Roland Hamblin
Jack Purvis
W. V. Holik
C. C. Kennedy
E. J. Coel, Jr. (6)
A. J. Dudenhoeffer
File

H. H. Lines
Bill Parrish
Dean Rittmann

Form 2-24 (Rev. 5-5)

EL PASO NATURAL GAS COMPANY
GAS WELL TEST

To: Mr. E. E. Alsup

Date: February 27, 1957

From: Gas Engineering Department

Place: Farmington, New Mexico

DUAL COMPLETION

Subject: Test data on the El Paso Natural Gas Company Well, DAUM # 4, San Juan County, New Mexico.

Tested By: K. C. McBride

Location ..... Sec. 32 T. 28 R. 9 , 1090'N, 2240'E

Shut-In Pressure ..... P.C. SIPC 634 psig ; (Shut-in 14 days)
M.V. SIPT 1036 psig

0.750" Choke Volume ..... 4702 MCF/D @ 14.7 psia and 60° F. for 0.6 gravity gas. Flow through tubing for 3 hours.

Calculated 3 Hour Absolute Open Flow ..... 7707 MCF/D

Working Pressure On Calculated ..... = 716 Psig

Producing Formation ..... Mesa Verde

Stimulation Method ..... Sand Water Frac.

Total Depth ..... 4675 - c/o - 4570

Field ..... Blanco

H_2S ..... Sweet to lead acetate.

Lewis D. Galloway
L. D. Galloway

cc: D. H. Tucker
~~**********~~
W. T. Hollis
~~**********~~
W. M. Rodgers
~~**********~~
Drilling Department
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Bill Parrish
Dean Rittmann

EL PASO NATURAL GAS COMPANY

P. O. Box 997
Farmington, N.M.

February 28, 1957

Mr. E. C. Arnold
Oil Conservation Commission
120 East Chaco
Aztec, New Mexico

Re: Packer Leakage Test on the El Paso Natural Gas Company Well Daum # 4, NE 32-28-9, San Juan County, New Mexico.

Dear Mr. Arnold:

This well was dually completed in the Pictured Cliffs and Mesa Verde formations. A production packer was set at 3962'. The Pictured Cliffs zone was tested February 20, 1957 with the following results:

SIPC - 603 psig (shut-in 7 days)
SIPT - 1006 psig

The casing was opened at 10:35 A.M. and flowed three hours through a 3/4" choke.

Time	Casing Choke Pressure Psig	Temp. °F	Tubing Pressure Psig
10:35	603		1006
10:50	251		1005
11:05	208		1006
11:20	184		1006
11:35	167		1006
12:05	148		1007
12:35	137		1007
1:05	127		1007
1:35	120	62°	1007

The calculated choke volume was 1843 MCF/day. After the well was shut-in 7 days, the Mesa Verde zone was tested with the following results:

Pictured Cliff - SIPC 634 psig
Mesa Verde - SIPT 1036 psig (shut-in 14 days)

OPEN FLOW TEST DATA **DUAL COMPLETION**

DATE February 20, 1957

El Paso Natural Gas Company		Daum # 4	
1090'N, 2240'E, Sec. 32-28-9		San Juan	New Mexico
Pictured Cliffs		Aztec	
7"	3944	$1\frac{1}{4}$	2199
2175	2217	Packer at 3962 in $5\frac{1}{2}$" liner	
Sand Water Frac		X	

.750	14.1605	T.D. 4675 $5\frac{1}{2}$" liner at 4673	
603 (PC) 615	7	603 (PC) 1006 (MV)	615
120	132	123	135
62	.85	1.012	.631

CHOKE VOLUME Q = C x P_t x F_t x F_g x F_{pv}

14.1605 x 132 x .9981 x .9759 x 1.012 1843 MCF D

$$\left(\frac{P_c^2}{P_c^2 - P_w^2}\right)^n$$

$$\left(\frac{378,225}{360,000}\right)^n \quad (1.0506)^{.85} \times 1843 = 1.0428 \times 1843$$

1922 MCF D

K. C. McBride

A. R. Kendrick, New Mexico Oil Conservation Commission

cc: E. J. Coel, Jr. (6)

L. D. Galloway

L. D. Galloway

OPEN FLOW TEST DATA — DUAL COMPLETION

February 27, 1957

El Paso Natural Gas Company		Daum # 4	
1090'N, 2240'E, Sec. 32-28-9		San Juan	New Mexico
Mesa Verde		Blanco	
7"	3944	2"	4560
4448	4552	4675 c/o - 4570	
Sand Water Frac			X

.750	14.1605	$5\frac{1}{2}$" liner at 4673;Packer at 3962	
634 (PC)	7	1036	1048
327	349	Calculated	728
65	.75	1.040	.710

14.1605 x 349 x .9952 x .9193 x 1.040 4702

1,098,304
568,320

$(1.9325)^{.75}$ x 4702 = 1.639 x 4702

7707

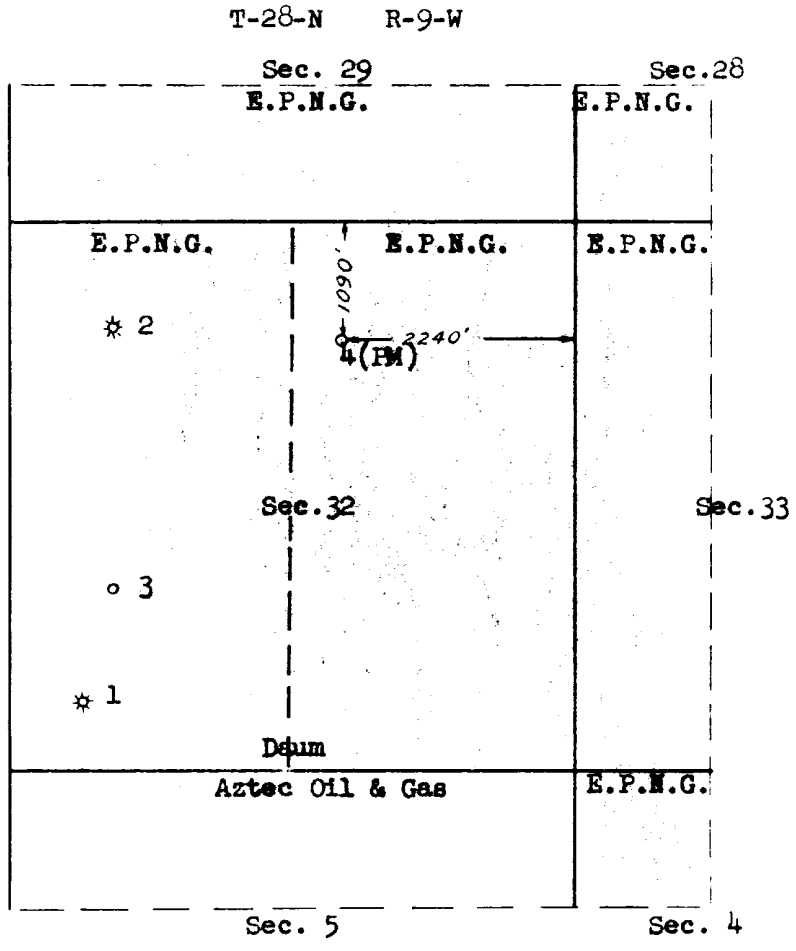
K. C. McBride

cc: E. J. Coel, Jr. (6)

L. L. Galloway

L. L. Galloway

PLAT SHOWING LOCATION OF DUAL COMPLETED
EL PASO NATURAL GAS DAUM #4 (PM)
AND OFFSET ACREAGE



EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

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 February 13, 1957, I was called to the location of the El Paso Natural Gas Company Daum #4 (PM) Well located in the NE/4 of Section 32, Township 28 North, Range 9 West, N.M.P.M. for the purpose of installing a production packer. Under my direct supervision a Baker Model "EGJ" production packer was set at 3962 feet. The production packer was properly set in accordance with the usual practices and customs of the industry.

Mack M. Mahaffey

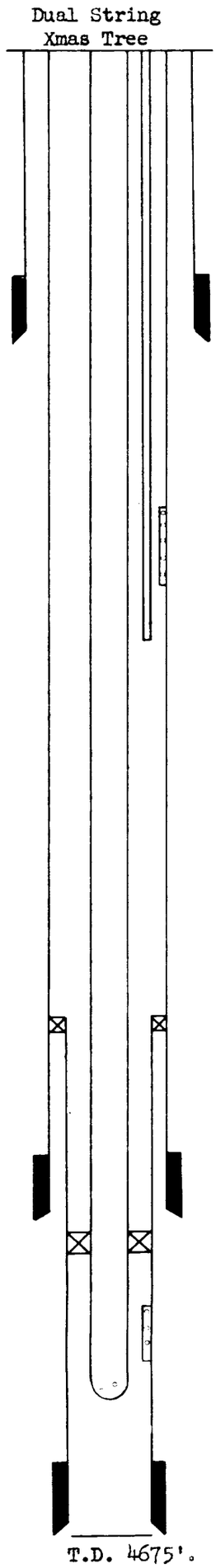
Subscribed and sworn to before me, a Notary Public in and for San Juan County, New Mexico, the 19th day of February, 1957.

Notary Public in and for San Juan County,

MY COMMISSION EXPIRES FEB. 24, 1960

SCHEMATIC DIAGRAM OF DUAL COMPLETION
EPNG DAUM NO. 4
(NE Section 32-29N-9W)

Measurement reference point is
9' above top of tubing hanger



10-3/4", 32.75# S.W. Casing set at 175' with 125 sacks cement.

Pictured Cliffs perf. 2175'-2188', 2199'-2217' sand-water fraced.
1-1/4" tubing set at 2199'.

Garrett circulating sleeve at 2247' (for BHP tests).

Burns liner hanger at 3899'.

Baker Model "EGJ" Packer set at 3962'.

7", 23#, J-55 casing set at 3954' with 150 sacks cement.

Point Lookout perf. at 4448-4470, 4480-4500, 4516-4526, 4532-4552, sand-water fraced.

2" EUE, 4.7# tubing at 4571' with tbg. perf. 4536'-4539'.

5-1/2", 15.5#, J-55 liner set at 3899' to 4673' with 60 sacks cement.