

El Paso Natural Gas Company

El Paso, Texas

July 30, 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 South Blanco Pictured Cliffs Pool. The El Paso Natural Gas Company Florence No. 12-D (PM) is located 790 feet from the North line and 1628 feet from the East line of Section 19, 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 174 feet with 150 sacks of cement circulated to the surface.
2. 7 5/8" intermediate casing set at 2327 feet with 200 sacks of cement. Top of the cement is at 1200 feet, which is above the top of the Pictured Cliffs at 2141 feet.
3. 5 1/2" liner set from 2274 feet to 4634 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 six intervals and fractured with water and sand.
6. The Pictured Cliffs formation was perforated in two 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 2347 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

The following table shows the results of the regression analysis for the dependent variable "Number of children in the household" (N = 1,000). The independent variables are "Age of the head of household" and "Gender of the head of household". The results are presented in the following table:

[illegible]

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 offset operator to the acreage dedicated to the well, having been notified of El Paso Natural Gas Company's intention to dually complete the well, has waived all objections to such plans. Enclosed is a copy of the waiver. Also 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.

It is intended to dedicate the E/2 of Section 19, Township 27 North, Range 8 West to the Mesa Verde formation and the NE/4 of Section 19, 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 F. S. OBERLY

E. S. Oberly,
Division Petroleum Engineer

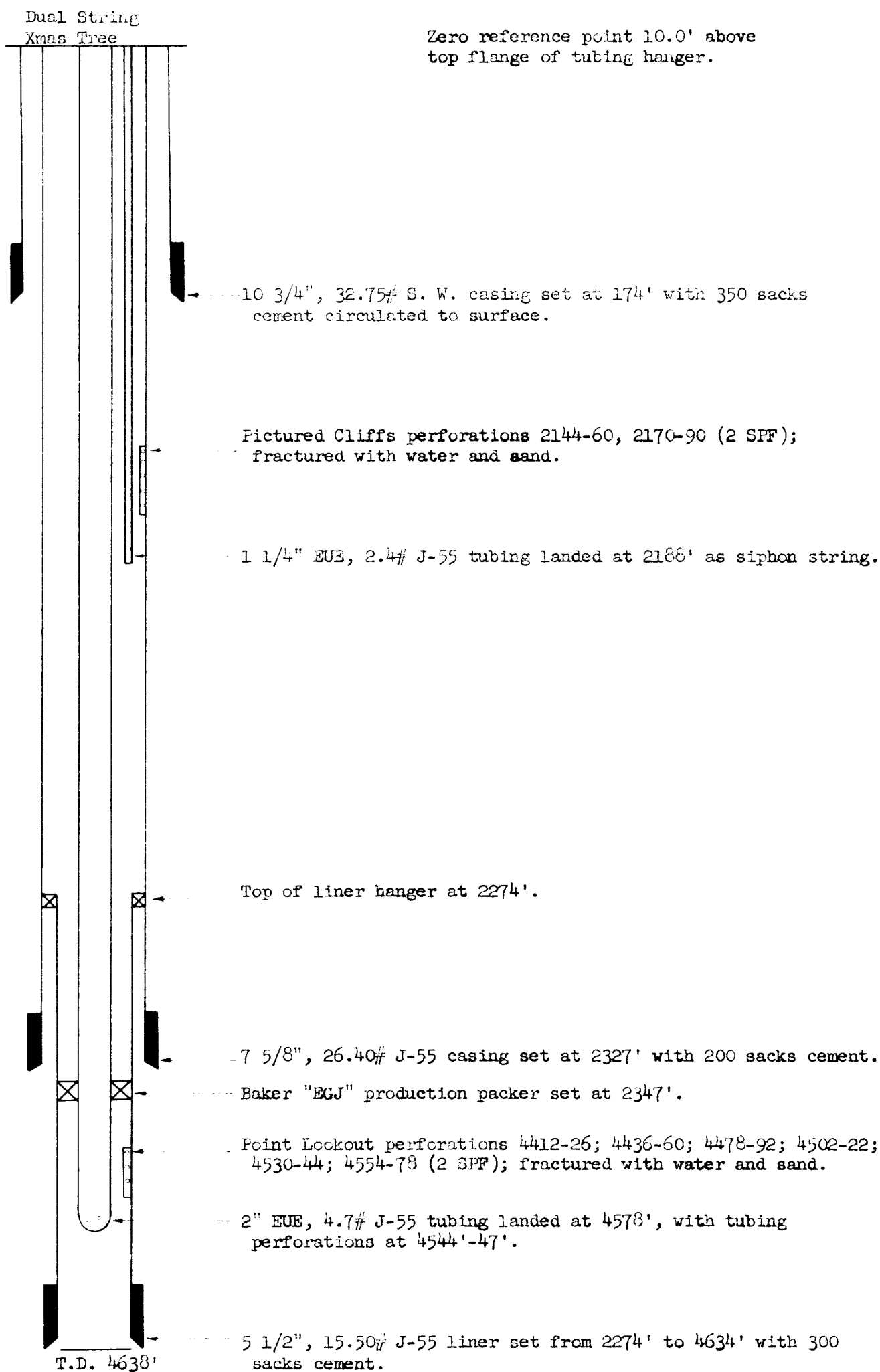
ESO:dgb

cc: NMOCC (2)(Emery Arnold) ✓
Sam Smith
USGS (Phil McGrath)

ORIGINAL SIGNED 1.1.1948

1.1.1948

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. Florance No. 12-D (PM)
NE/4 Section 19, 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 June 19, 1958, I was called to the location of the El Paso Natural Gas Company Florance No. 12-D (PM) Well located in the NWNE/4 of Section 19, 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 2347 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 31st day of July, 1958.

Don A. Macdonald
Notary Public in and for San Juan County,
New Mexico

My commission expires February 24, 1960.

[illegible]
$$f_{\text{max}} = \frac{1}{2\pi} \left(\frac{1}{\tau_{\text{max}}} + \frac{1}{\tau_{\text{min}}} \right) = \frac{1}{2\pi} \left(\frac{1}{1.5 \times 10^{-8}} + \frac{1}{1.0 \times 10^{-8}} \right) = 1.04 \times 10^8 \text{ Hz}$$

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

THE UNIVERSITY OF CHICAGO

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (a), 10⁷ cells/ml (b), 10⁸ cells/ml (c), and 10⁹ cells/ml (d). The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (a), 10⁷ cells/ml (b), 10⁸ cells/ml (c), and 10⁹ cells/ml (d). The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (a), 10⁷ cells/ml (b), 10⁸ cells/ml (c), and 10⁹ cells/ml (d). The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml (a), 10⁷ cells/ml (b), 10⁸ cells/ml (c), and 10⁹ cells/ml (d).

July 17, 1958

July 17, 1958

Florance 12-D (P), 790M, 1628E;
19-27-8, San Juan County, New Mexico

Pictured Cliffs Mesa Verde
2347
July 8, 1958

| | | | |
|--------|-----|-----|-----------|
| 821 | 19 | | |
| 821 | 19 | | |
| 919 | 19 | | |
| MV | PC | C | Calc. |
| Tubing | PC | C | Calc. |
| 0 | | | 72 |
| 15 | 435 | 824 | 72 |
| 30 | 399 | 824 | 74 |
| 45 | 381 | 824 | 74 |
| 60 | 367 | 824 | 74 |
| 180 | 311 | 824 | 77 |
| | | | Calc. 602 |

Mesa Verde 3720
5584

Pictured Cliffs July 17, 1958
825 28
825
1088 9

July 17, 1958

| | FC | | | | |
|-----|--------|--|------|---|----|
| | Casing | | MV | T | |
| 0 | | | | | |
| 15 | 280 | | 1089 | | 61 |
| 30 | 195 | | 1092 | | 64 |
| 45 | 165 | | 1094 | | 65 |
| 60 | 146 | | 1095 | | 66 |
| 180 | 98 | | 1097 | | 67 |

Pictured Cliffs 1312

1333

Frank Clark
Gas Engineer

FC/nb

OPEN FLOW TEST DATA

DUAL COMPLETION

July 8, 1958

| | |
|----------------------|----------------------|
| El Paso Natural Gas | Florance 12-D (M) |
| 790N, 1628E; 19-27-8 | San Juan New Mexico |
| Mesa Verde | Blanco MV |
| 7-5/8 2317 | 2" 4568 |
| 4412 4578 | 4634 Shut-in 6/19/58 |
| Sand Water Frac. | X |

| | | |
|----------|--------|-------------------------|
| .75 | 12.365 | 5-1/2 liner 2274 - 4634 |
| (PC) 821 | 833 19 | (MV) 919 931 |
| 311 | 323 | 602 Calc. |
| 77 | .75 | 1.037 .720 |

Final SIPC (PC) 824

Packer at 2347

THREE VOLUME

(12.365)(323)(.9840)(.9129)(1.037)

3720

FOUR VOLUME

866761
504357

(1.7185)^{.75} (3720) = (1.5010)(3720)

5584

R. R. Davis

L. D. Galloway
L. D. Galloway

OPEN LOG TEST DATA

DUAL COMPLETION

DATE July 17, 1958

| | | | |
|----------------------|------|-------------------|-----------------|
| El Paso Natural Gas | | Florance 12-D (P) | |
| 790N, 1628E; 19-27-8 | | San Juan | New Mexico |
| Picutred Cliffs | | South Blanco P.C. | |
| 7-5/8 | 2317 | 1-1/4 | 2178 |
| 2144 | 2190 | 4634 | shut-in 6/19/58 |
| Sand Water Frac. | | X | |

| | | | |
|---------|--------|-------------------------|------|
| .75 | 12.365 | 5-1/2 liner 2274 - 4634 | |
| 825 | 837 | 28 | 825 |
| (PC) 98 | 110 | (PC) 102 | 114 |
| 67 | .85 | 1.007 | .646 |

Initial (MV) SIPT = 1089 psig
 Final (MV) SIPT = 1097 psig

Packer at 2347

$$12.365 \times 110 \times .9933 \times .9645 \times 1.007$$

1312

700569
 687573

$$1.0189^{.85} \times 1312 = 1.0160 \times 1312$$

1333

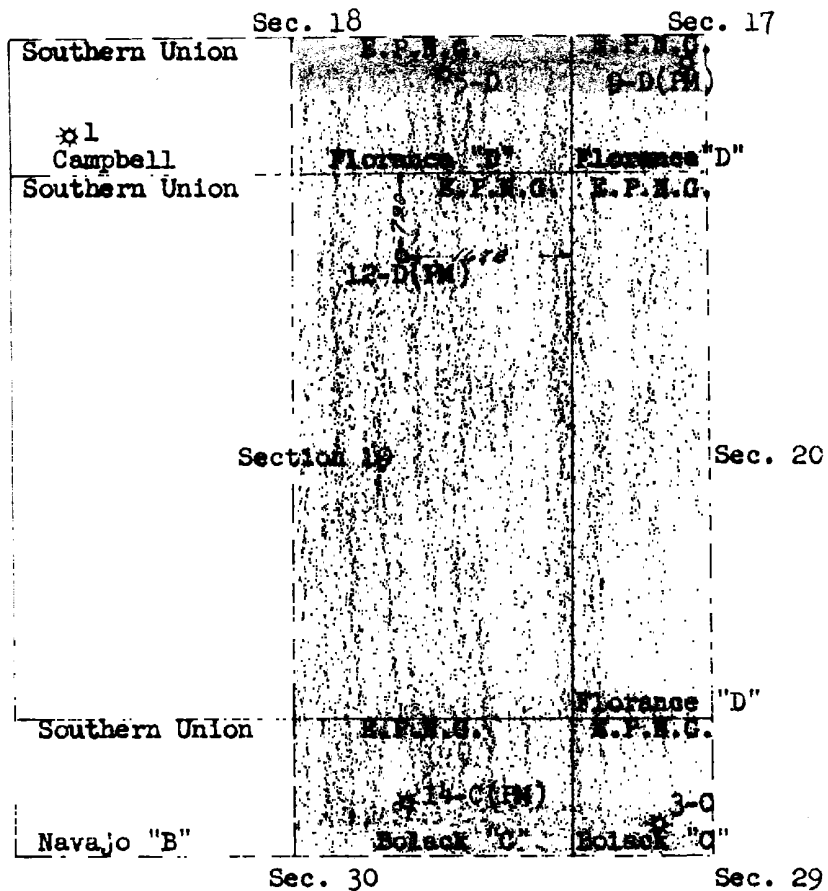
Frank Clark

Checked By Tom Grant

Lewis D. Galloway
 L. D. Galloway

PLAT SHOWING LOCATION OF DUALY COMPLETED
El Paso Natural Gas Co. Florance No. 12-D (PM)
and Offset Acreage

T-27-N, R-8-W



EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

| | | |
|----------|------------|-----|
| SCALE | DATE | No. |
| DRAWN BY | CHECKED BY | |