

Initial Deliverability
Test

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA
EXCEPT BARKER DOME STORAGE AREA)

72930

Pool _____ Basin Dakota Formation Dakota County San Juan

Purchasing Pipeline El Paso Natural Gas Date Test Filed _____

Operator El Paso Natural Gas Lease Deam Well No. 5

Unit K Sec. 32 Twp. 28 Rge. 9 Pay Zone: From 6498 To 6716

Casing: OD 5-1/2 WT. 17 Set At 6748 Tubing: OD 2-3/8 WT. 4.7 T. Perf. 6668

Produced Through: Casing _____ Tubing X Gas Gravity: Measured .674 Estimated _____

Date of Flow Test: From 5/29/61 To 6/6/61 * Date S.I.P. Measured 9/23/60

Meter Run Size _____ Orifice Size _____ Type Chart _____ Type Taps _____

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)

Flowing tubing pressure (Dwt) _____ psig + 12 = _____ psia (b)

Flowing meter pressure (Dwt) _____ psig + 12 = _____ psia (c)

Flowing meter pressure (meter reading when Dwt. measurement taken:

Normal chart reading _____ psig + 12 = _____ psia (d)

Square root chart reading () ² x spring constant _____ = _____ psia (d)

Meter error (c) - (d) or (d) - (c) ± _____ = _____ psi (e)

Friction loss, Flowing column to meter:

(b) - (c) Flow through tubing: (a) - (c) Flow through casing _____ = _____ psi (f)

Seven day average static meter pressure (from meter chart):

Normal chart average reading _____ psig + 12 = _____ psia (g)

Square root chart average reading () ² x sp. const. _____ = 511 psia (g)

Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 511 psia (h)

P_t = (h) + (f) _____ = 511 psia (i)

Wellhead casing shut-in pressure (Dwt) 2033 psig + 12 = 2045 psia (j)

Wellhead tubing shut-in pressure (Dwt) 2054 psig + 12 = 2066 psia (k)

P_c = (j) or (k) whichever well flowed through _____ = 2066 psia (l)

Flowing Temp. (Meter Run) 96 °F + 460 _____ = 556 °Abs (m)

P_d = 1/2 P_c = 1/2 (l) _____ = 1033 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1}{\left(\frac{V(c)}{V(d)} \right)^2} \times \left(\frac{V(c)}{V(d)} \right)^2 = \frac{V(c)}{V(d)} = \frac{2331}{1} = 2331 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{2331}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n} = \frac{2331}{\left[\frac{2066^2 - 1033^2}{2066^2 - 629^2} \right]^n} = \frac{2331}{\left[\frac{3201267}{3873228} \right]^n} = \frac{2331}{.8265} = 2821 \text{ MCF/da}$$

SUMMARY

P_c = 2066 psia
Q = 2331 Mcf/day
P_w = 629 psia
P_d = 1033 psia
D = 2821 Mcf/day

Company El Paso Natural Gas
By _____
Title Original signed by
Witnessed by H. I. Kendrick
Company _____

* This is date of completion test.
* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(F _c Q) ²	(F _c Q) ² (1-e ^{-S}) R ²	P _t ² (Column i)	P _t ² + R ²	P _w
<u>4494</u>	<u>0.279</u>	<u>480311</u>	<u>134007</u>	<u>261121</u>	<u>395128</u>	<u>629</u>

D at 500 = 2331



U. S. CONSERVATION COMMISSION

P. O. BOX 871
SANTA FE, NEW MEXICO

June 26, 1961



El Paso Natural Gas Company
Box 1492
El Paso, Texas

Attention: Mr. Sam Smith

Administrative Order NWU-422

Gentlemen:

Reference is made to your application for approval of a 342.86-acre non-standard gas proration unit in the Basin-Dakota Gas Pool consisting of the following acreage:

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
Section 32: S/2

It is understood that this unit is to be dedicated to your Daum Well No. 5 located 1800 feet from the South line and 1650 feet from the West line of said Section 32.

By authority granted me under the provisions of the Special Rules and Regulations for the Basin-Dakota Gas Pool, as set forth in Order R-1670-C, you are hereby authorized to operate the above described acreage as a non-standard gas proration unit, with allowable to be assigned thereto in accordance with the pool rules, based upon the unit size of 342.86 acres.

Administrative Order NWU-397 establishing a 328.7-acre non-standard gas proration unit consisting of the W/2 of said Section 32 was rescinded by Administrative Order NWU-397-A.

Very truly yours,

A. L. PORTER, Jr.,
Secretary-Director