

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)

Pool South Elmore Formation Pictured Cliffs County San Juan
Purchasing Pipeline Southwest Natural Gas Company Date Test Filed January 25, 1961
Operator South Elmore Oil and Gas Company Lease South Elmore Well No. 2-2
Unit 2-1 Sec. 9 Twp. 24N Rge. 10E Pay Zone: From 2400 To 2500
Casing: OD 2.70 WT. 6.70 Set At 2466 Tubing: OD 2.00 WT. 4.00 T. Perf. 2466
Produced Through: Casing X Tubing X Gas Gravity: Measured 0.400 Estimated 0.400
Date of Flow Test: From 12/30 To 12/30 * Date S.I.P. Measured 12/30
Meter Run Size 1/2 Orifice Size 1/8 Type Chart 2-2 Type Taps 1/2

OBSERVED DATA

Flowing casing pressure (Dwt) 2466 psig + 12 = 2478 psia (a)
Flowing tubing pressure (Dwt) 2466 psig + 12 = 2478 psia (b)
Flowing meter pressure (Dwt) 2466 psig + 12 = 2478 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading 2466 psig + 12 = 2478 psia (d)
Square root chart reading (2466) ² x spring constant 1.000 = 2466 psia (d)
Meter error (c) - (d) or (d) - (c) 0 ± = 0 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing 0 = 0 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading 2466 psig + 12 = 2478 psia (g)
Square root chart average reading (2466) ² x sp. const. 1.000 = 2466 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) 2466 = 2466 psia (h)
P_t = (h) + (f) 2466 = 2466 psia (i)
Wellhead casing shut-in pressure (Dwt) 2466 psig + 12 = 2478 psia (j)
Wellhead tubing shut-in pressure (Dwt) 2466 psig + 12 = 2478 psia (k)
P_c = (j) or (k) whichever well flowed through 2478 = 2478 psia (l)
Flowing Temp. (Meter Run) 115 °F + 460 = 575 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) 1239 = 1239 psia (n)

Q = 1.000 X $\left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \frac{1.000}{1.000} = 1.000$ MCF/day

DELIVERABILITY CALCULATION

D = Q 1.000 $\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^{0.85} = \frac{1.000}{1.000} = 1.000$ MCF/day.

SUMMARY

P_c = 2478 psia
Q = 1.000 Mcf/day
P_w = 2466 psia
P_d = 1239 psia
D = 1.000 Mcf/day

Company South Elmore Oil and Gas Company
By ORIGINAL SIGNED BY L. M. STEVENS
Title L. M. STEVENS, District Engineer
Witnessed by L. M. STEVENS, District Engineer
Company South Elmore Oil and Gas 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>2466</u>	<u>0.400</u>	<u>6.720</u>	<u>2.720</u>	<u>2466</u>	<u>2466</u>	<u>2466</u>

