

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 Basin Dakota Formation Dakota County SJ
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 3/13/61

Operator Southwest Production Co. Lease Fannie Ward Well No. 1
Unit K Sec. 18 Twp. 30N Rge. 11W Pay Zone: From 6334-60 To 6470-6504
Casing: OD 4 1/2 WT. 11.60 Set At 6600 Tubing: OD 2 3/8 WT. 4.70 T. Perf. 6480
Produced Through: Casing X Tubing X Gas Gravity: Measured .691 Estimated
Date of Flow Test: From 1/30/61 To 2/7/61 * Date S.I.P. Measured 2/14/61
Meter Run Size Orifice Size 1.000 Type Chart Type Taps

OBSERVED DATA

Flowing casing pressure (Dwt) 501 psig + 12 = 513 psia (a)
Flowing tubing pressure (Dwt) 485 psig + 12 = 497 psia (b)
Flowing meter pressure (Dwt) 485 psig + 12 = 497 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading 7.05) ² x spring constant 1.000 = 497 psia (d)
Square root chart reading (7.05) ² x sp. const. 1.000 = 497 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 = 16 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading psig + 12 = psia (g)
Square root chart average reading (7.05) ² x sp. const. 1.000 = 497 psia (g)
Corrected seven day ave. meter press. (p_f) (g) + (e) = 497 psia (h)
P_t = (h) + (f) = 513 psia (i)
Wellhead casing shut-in pressure (Dwt) 1760 psig + 12 = 1772 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1760 psig + 12 = 1772 psia (k)
P_c = (j) or (k) whichever well flowed through = 1772 psia (l)
Flowing Temp. (Meter Run) 78 °F + 460 = 538 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 886 psia (n)

Q = 393 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)} = 1.0 = 1.00} \right)^* = \underline{393} \text{ MCF/da}$
(integrated) $\sqrt{(d)} = 1.0$

DELIVERABILITY CALCULATION

D = Q 393 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \underline{341} \text{ MCF/da.}$
 $\frac{2,354,988}{2,836,999} = .8295$
 $\frac{2,873,020}{2,836,999} = .8683$
 $(.8295)^{.75} = .8614$

SUMMARY

P_c = 1772 psia
Q = 393 Mcf/day
P_w = 548 516 psia
P_d = 886 psia
D = 341 Mcf/day

Company Southwest Production Company
By George L. Hoffman, Jr.
Title Production Foreman
Witnessed by
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
4477	.277	13.652	3.796 37,816	263,169	266,964 300,985	516 548

OK

