

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 Elanco Formation Mesa Verde County San Juan
Purchasing Pipeline Southern Union Gathering Company Date Test Filed 2/4/58
Operator Southern Union Gas Company Lease Northern Well No. 5
Unit M Sec. 12 Twp. 31N Rge. 9W Pay Zone: From 4537 To 4645
Casing: OD 7-5/8" WT. 26.44 Set At 3147 Tubing: OD 2-3/8" WT. 4.74 T. Perf. 4537
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .662 Estimated _____
Date of Flow Test: From 1-8-58 To 1-16-58 * Date S.I.P. Measured 12-10-57
Meter Run Size 4" Orifice Size 2 1/4" Type Chart Normal Type Taps Flange

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 605 psig + 12 = 617 psia (g)
Square root chart average reading (_____) ² x sp. const. _____ = _____ psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 617 psia (h)
P_t = (h) + (f) _____ = 617 psia (i)
Wellhead casing shut-in pressure (Dwt) 888 psig + 12 = 900 psia (j)
Wellhead tubing shut-in pressure (Dwt) 888 psig + 12 = 900 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 900 psia (l)
Flowing Temp. (Meter Run) 168 °F + 460 _____ = 568 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 450 psia (n)

Q = 3065 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)}} = \frac{\text{ } }{\sqrt{(d)}} = 1.0000 \right) = \underline{\underline{3065}}$ MCF/day
(integrated)

DELIVERABILITY CALCULATION

D = Q 3065 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{0.75} = \frac{607,500}{266,831}^{0.75} = 1.8535 = \underline{\underline{5681}}$ MCF/day.

SUMMARY

P_c = 900 psia
Q = 3065 Mcf/day
P_w = 737 psia
P_d = 450 psia
D = 5681 Mcf/day

Company Southern Union Gas Company
By Bill McEwen
Title Exploration Department
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
<u>3003</u>	<u>0.196</u>	<u>830.427</u>	<u>162.764</u>	<u>380.689</u>	<u>543.411</u>	<u>737</u>

INITIAL DELIVERABILITY TEST

1578' of 5 1/2" O.D., 15.5# casing used for liner.

