

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 Mesa Verde Formation Mesa Verde County San Juan
Purchasing Pipeline EL PASO NATURAL GAS COMPANY Date Test Filed 11-25-57
Operator PACIFIC NORTHWEST PIPELINE Lease San Juan 32-8 Well No. 14-34
Unit K Sec. 34 Twp. 32N Rge. 8W Pay Zone: From 9792' To 9909'
Casing: OD 9 1/2" WT. 14 1/2 Set At 6075' Tubing: OD 2" WT. 4.7 T. Perf. 6084'
Produced Through: Casing _____ Tubing 1 1/2 Gas Gravity: Measured 0.95 Estimated _____
Date of Flow Test: From 9-23-57 To 10-1-57 * Date S.I.P. Measured 4-17-56
Meter Run Size 4" Orifice Size 1.000 Type Chart Sq. Ed. 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 _____ psig + 12 = _____ psia (g)
Square root chart average reading (7.10) ² x sp. const. 1.000 _____ = _____ psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = _____ psia (h)
P_t = (h) + (f) _____ = _____ psia (i)
Wellhead casing shut-in pressure (Dwt) 1117 psig + 12 = 1129 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1121 psig + 12 = 1133 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = _____ psia (l)
Flowing Temp. (Meter Run) 75 °F + 460 _____ = _____ °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 566.5 psia (n)

Q = 305 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)}} = \frac{\sqrt{(d)}}{\sqrt{(d)}} \right) =$ _____ MCF/day
(integrated)

DELIVERABILITY CALCULATION

D = Q 305 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n \frac{(0.9377)^{.75}}{0.9530} =$ 367 MCF/day

SUMMARY

P_c = 1133 psia
Q = 305 Mcf/day
P_w = 507 psia
P_d = 566.5 psia
D = 367 Mcf/day

Company PACIFIC NORTHWEST PIPELINE CORP.
By Original signed by G. H. Poppin
Title Manager Production Engineering
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>3284</u>	<u>0.286</u>	<u>13.104</u>	<u>2.962</u>	<u>254.016</u>	<u>256.978</u>	<u>507</u>

OK



Section 1.1

Quadratic Equations and Functions

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