

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 Blanco Formation Mesa Verde County Rio Arriba
Purchasing Pipeline EL PASO NATURAL GAS COMPANY Date Test Filed 1-12-59
Operator PACIFIC NORTHWEST PIPELINE Lease San Juan 28-4 Well No. 17-20
Unit A Sec. 20 Twp. 28N Rge. 4W Pay Zone: From 6454' To 6634'
Casing: OD 5 1/2" WT. Set At 6684' Tubing: OD 2" WT. 4.7# T. Perf. 6792'
Produced Through: Casing Tubing XXX Gas Gravity: Measured .678 Estimated
Date of Flow Test: From 12-7-58 To 12-15-58 Date S.I.P. Measured 9-22-58
Meter Run Size Orifice Size .750 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 (7.55) ² x sp. const. 10.00 = 570 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 570 psia (h)
P_t = (h) + (f) = 570 psia (i)
Wellhead casing shut-in pressure (Dwt) 1166 psig + 12 = 1178 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1164 psig + 12 = 1176 psia (k)
P_c = (j) or (k) whichever well flowed through = 1178 psia (l)
Flowing Temp. (Meter Run) 53 °F + 460 = 513 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 589 psia (n)

FLOW RATE CALCULATION

Q = 253 X $\left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right)^* = \underline{253}$ MCF/da
(integrated)

DELIVERABILITY CALCULATION

D = Q 253 $\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^n \frac{(0.9787)^{-75}}{0.9840} = \underline{249}$ MCF/da.

SUMMARY

P _c = <u>1166</u>	psia	Company <u>PACIFIC NORTHWEST PIPELINE</u>
Q = <u>253</u>	Mcf/day	By <u>Original signed by G. H. Peppin</u>
P _w = <u>570</u>	psia	Title <u>District Promotion Engineer</u>
P _d = <u>589</u>	psia	Witnessed by <u></u>
D = <u>249</u>	Mcf/day	Company <u></u>

* 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

