

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 Mesaverde County Rio Arriba
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed November 24, 1959

Operator Pacific Northwest Pipeline Lease San Juan 10-8 Well No. 33-9
Unit A Sec. 9 Twp. 31N Rge. 8W Pay Zone: From 5527 To 5987
Casing: OD 5-1/2 WT. 15.5 Set At 6047 Tubing: OD 1-1/4 WT. 2.4 T. Perf. 9943
Produced Through: Casing _____ Tubing XX Gas Gravity: Measured .572 Estimated _____
Date of Flow Test: From 10-30-59 To 11-7-59 * Date S.I.P. Measured 7-22-59
Meter Run Size _____ Orifice Size _____ 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 (7.10) ² x sp. const. 10.00 _____ = 504 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = _____ psia (h)
P_t = (h) + (f) _____ = 504 psia (i)
Wellhead casing shut-in pressure (Dwt) _____ 1121 psig + 12 = _____ 1133 psia (j)
Wellhead tubing shut-in pressure (Dwt) _____ 1121 psig + 12 = _____ 1133 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 1133 psia (l)
Flowing Temp. (Meter Run) _____ 68 °F + 460 _____ = 508 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 566 psia (n)

Q = 689 (integrated) X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)}} = \frac{\text{FLOW RATE CALCULATION}}{\sqrt{(d)}}} \right)^* = \underline{689} MCF/da$

DELIVERABILITY CALCULATION

D = Q 689 $\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^n = \frac{(0.9966)^{.75}}{0.9974} = \underline{687} MCF/da.$

SUMMARY

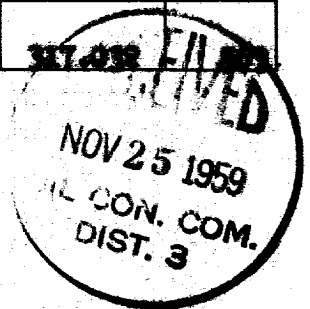
P_c = 1133 psia
Q = 689 Mcf/day
P_w = 963 psia
P_d = 566 psia
D = 687 Mcf/day

Company PACIFIC NORTHWEST PIPELINE CORPORATION
By Original signed by G. H. Pappin
Title District Production Engineer
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
3399	0.219	287.743	63.016	254.016	317.032	



OK

1950

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...