

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 Elmwood Subsurface Formation Mesa Verde County San Juan
Purchasing Pipeline Public Northwest Pipeline Corporation Date Test Filed January 7, 1957
Operator Public Northwest Pipeline Lease Apco Area Unit 30-7 Well No. 12-40
Unit 1 Sec. 20 Twp. 32 Rge. 7 Pay Zone: From 2000 To 2010
Casing: OD 8 1/2 WT. 13.3 Set At 5745 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 500
Produced Through: Casing - Tubing - Gas Gravity: Measured 0.90 Estimated -
Date of Flow Test: From 12-1-56 To 12-9-56 * Date S.I.P. Measured 12-8-56
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 (-) ² x sp. const. - = - 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) 1005 psig + 12 = 1017 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1005 psig + 12 = 1017 psia (k)
P_c = (j) or (k) whichever well flowed through - = 1017 psia (l)
Flowing Temp. (Meter Run) 75 °F + 460 = 535 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) - = 508 psia (n)

Q = 700 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\frac{\sqrt{(c)}}{\sqrt{(d)}}} = \frac{\text{ }{\text{ }}}{\text{ }} = \text{ } \right)^n$ = - MCF/day
(Integrated)

DELIVERABILITY CALCULATION

D = Q 700 $\left[\frac{(P_c^2 - P_d^2) = 1,110,000}{(P_c^2 - P_w^2) = 1,183,413} \right]^n \cdot (0.902)^{75 \cdot 460} = \text{ } \cdot \text{ } = \text{ } \text{ MCF/day.}$

SUMMARY

P_c = 1017 psia
Q = 700 Mcf/day
P_w = 598 psia
P_d = 508 psia
D = 700 Mcf/day

Company Public Northwest Pipeline Corporation
By W. L. Smith
Title Geologist
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>5745</u>	<u>.45</u>	<u>39779</u>	<u>7000</u>	<u>30040</u>	<u>30740</u>	<u>598</u>

J. H. G. G. Jones
Geologist - Wayne Smith
W. L. Smith
1-2-57

OK



