

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 WHITE LAG PITS Formation FRUITLAND County SAN JUAN  
Purchasing Pipeline PACIFIC NORTHWEST PIPELINE CORPORATION Date Test Filed JAN 17 1957  
Operator Pacific Northwest Pipeline Lease San Juan Unit 22-7 Well No. 3-18  
Unit A Sec. 18 Twp. 34N Rge. 7W Pay Zone: From 2766 To 2806  
Casing: OD 7 WT.        Set At 4990 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 2793  
Produced Through: Casing        Tubing 2 Gas Gravity: Measured .603 Estimated         
Date of Flow Test: From 12-17-56 To 12-25-56 Date S.I.P. Measured 4-22-56  
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 (        )<sup>2</sup> 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 (        )<sup>2</sup> x sp. const. 660 = 672 psia (g)  
Corrected seven day avge. meter press. (p<sub>f</sub>) (g) + (e)        =        psia (h)  
P<sub>t</sub> = (h) + (f)        = 672 psia (i)  
Wellhead casing shut-in pressure (Dwt) 1500 psig + 12 = 1512 psia (j)  
Wellhead tubing shut-in pressure (Dwt) 1275 psig + 12 = 1287 psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through        = 1287 psia (l)  
Flowing Temp. (Meter Run) 51 °F + 460        = 511 °Abs (m)  
P<sub>d</sub> = 1/2 P<sub>c</sub> = 1/2 (l)        = 644 psia (n)

FLOW RATE CALCULATION

Q = 208 X  $\left( \frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \text{_____} = \text{_____}$  MCF/da  
(integrated)

DELIVERABILITY CALCULATION

D = Q 208  $\left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right] = \frac{1,657,633}{1,759,362} \times \frac{(0.9422)^{.85}}{.9963} = \text{199}$  MCF/da.

SUMMARY

P<sub>c</sub> = 1287 psia Company Pacific Northwest Pipeline Corp.  
Q = 208 Mcf/day By Donald E. Adams  
P<sub>w</sub> = 672 psia Title Well Test Engineer  
P<sub>d</sub> = 644 psia Witnessed by         
D = 199 Mcf/day Company       

\* This is date of completion test.  
\* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e <sup>-S</sup> )	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-S</sup> ) R <sup>2</sup>	P <sub>t</sub> <sup>2</sup> (Column i)	P <sub>t</sub> <sup>2</sup> + R <sup>2</sup>	P <sub>w</sub>
1690	.116	1870	217	1512	1512	672

3-E.E.O.C.C. - Adams  
1-E.E. & Kelly  
2-McGraw Hill (Phillips)  
1-1110

*OK*



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