

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 MESAVERDE Formation MESAVERDE County RED ARKIA
Purchasing Pipeline PACIFIC NORTHWEST PIPELINE CORPORATION Date Test Filed JAN 17 1957

Operator Pacific Northwest Pipeline Lease San Juan Unit 23-5 Well No. 16-21
Unit N Sec. 21 Twp. 29 Rge. 5 Pay Zone: From 5840 To 6090
Casing: OD 5 1/2 WT. 14 Set At 6040 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 5960
Produced Through: Casing - Tubing - Gas Gravity: Measured - Estimated 650
Date of Flow Test: From 12-19-56 To 12-27-56 Date S.I.P. Measured 12-27-56
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. 564 = 576 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) - = - psia (h)
P_t = (h) + (f) - = 576 psia (i)
Wellhead casing shut-in pressure (Dwt) 1095 psig + 12 = 1107 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1101 psig + 12 = 1113 psia (k)
P_c = (j) or (k) whichever well flowed through - = 1113 psia (l)
Flowing Temp. (Meter Run) 83 °F + 460 - = 543 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) - = 557 psia (n)

Q = 390 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)}} = \frac{\text{FLOW RATE CALCULATION}}{\sqrt{(d)}}} \right) = \text{MCF/da}$
(integrated)

DELIVERABILITY CALCULATION

D = Q 390 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \frac{(1.0275) \cdot 75}{1.0265} = \text{MCF/da.}$
908,300
913,698

SUMMARY

P_c = 1113 psia
Q = 390 Mcf/day
P_w = 579 psia
P_d = 557 psia
D = 398 Mcf/day
Company Pacific Northwest Pipeline Corp.
By Donald G. Adams
Title Well Test 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
<u>3974</u>	<u>.245</u>	<u>13447</u>	<u>3295</u>	<u>3817</u>	<u>43501</u>	<u>579</u>

3-DOUG Adams
1-L.G. Friday
2-Wayne Smith-(Phillips)
1-File

OK



ADMINISTRATIVE

PERSONNEL

GENERAL INFORMATION

THE FOLLOWING INFORMATION IS FOR YOUR INFORMATION

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1-21	1-22	1-23	1-24	1-25	1-26	1-27	1-28	1-29	1-30
1-31	1-32	1-33	1-34	1-35	1-36	1-37	1-38	1-39	1-40
1-41	1-42	1-43	1-44	1-45	1-46	1-47	1-48	1-49	1-50
1-51	1-52	1-53	1-54	1-55	1-56	1-57	1-58	1-59	1-60
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