

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA  
EXCEPT BARKER DOME STORAGE AREA)

Operator Pacific Northwest Pipeline Lease 8-4-66 Unit 89-6 Well No. 10-2  
Unit B Sec. 2 Twp. 29 Rge. 6 Pay Zone: From 5448 To 5742  
Casing: OD 7 WT. 23 Set At 287 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 9655  
Produced Through: Casing - - Tubing X Gas Gravity: Measured .672 Estimated -  
Date of Flow Test: From 11-18-76 To 11-26-76 \* Date S.I.P. Measured 10-29-74  
Meter Run Size - Orifice Size - Type Chart - Type Taps -

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. _____	= 475	psia	(g)
Corrected seven day avge. meter press. (p <sub>f</sub> ) (g) + (e) _____	= _____	psia	(h)
P <sub>t</sub> = (h) + (f) _____	= 475	psia	(i)
Wellhead casing shut-in pressure (Dwt) 1099 _____	psig + 12 = 1111	psia	(j)
Wellhead tubing shut-in pressure (Dwt) 1097 _____	psig + 12 = 1109	psia	(k)
P <sub>C</sub> = (j) or (k) whichever well flowed through _____	= 1109	psia	(l)
Flowing Temp. (Meter Run) 71 °F + 460 _____	= 531	°Abs	(m)
P <sub>d</sub> = ¼ P <sub>C</sub> = ¼ (l) _____	= 277	psia	(n)

Q = 1206 X  $\left( \frac{\text{FLOW RATE CALCULATION}}{\frac{\sqrt{(c)}}{\sqrt{(d)}}} \right)^* =$  \_\_\_\_\_ MCF/day  
(integrated)

$$D = Q \frac{1206}{\left[ \begin{array}{l} (P_c^2 - P_d^2) = 971.706 \\ (P_c^2 - P_w^2) = 971.708 \end{array} \right]} \frac{(1.0106)^{-7.75} \cdot 0.612}{1} = 1179 \text{ MCF/da.}$$

Pacific Northwest Pipeline Corporation  
 Company \_\_\_\_\_  
 By Donald E. Adams  
 Title Well Test Engineer  
 Witnessed by \_\_\_\_\_  
 Company \_\_\_\_\_

RECEIVED

REMARKS OR FRICTION CALCULATIONS

GL	(1-e <sup>-S</sup> )	(F <sub>CQ</sub> ) <sup>2</sup>	(F <sub>CQ</sub> ) <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> DIST. 3	P <sub>t</sub> <sup>2</sup> DIST. 3
3017	.242	134066	31,113 30468	225.625	250,125 258,091	2507 208

3-N.M.C.C.S. - Astor -  
2-Phillips Petroleum - Wayne Smith  
1-L. C. Truly  
1-File

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