

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 Alamosa Formation Mesa Verde County Rio Arriba
Purchasing Pipeline EL PASO NATURAL GAS COMPANY Date Test Filed 1-12-58
Operator PACIFIC NORTHWEST PIPELINE Lease San Juan 29-6 Well No. 61-19
Unit K Sec. 19 Twp. 23N Rge. 6W Pay Zone: From 4854' To 5434'
Casing: OD 5 1/2" WT. Set At 5485' Tubing: OD 1 1/2" WT. 2.44 T. Perf. 5433'
Produced Through: Casing Tubing xxx Gas Gravity: Measured .687 Estimated
Date of Flow Test: From 12-7-58 To 12-15-58 * Date S.I.P. Measured 9-5-58
Meter Run Size Orifice Size 1.750 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 7.35) ² x sp. const. 10.00 = 540 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = psia (h)
P_t = (h) + (f) = 540 psia (i)
Wellhead casing shut-in pressure (Dwt) 1113 psig + 12 = 1125 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1113 psig + 12 = 1125 psia (k)
P_c = (j) or (k) whichever well flowed through = 1125 psia (l)
Flowing Temp. (Meter Run) 85 °F + 460 = 545 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 562.5 psia (n)

FLOW RATE CALCULATION

$$Q = \underset{\text{(Integrated)}}{1,096} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\text{ }}{\text{ }} = \text{ } \right) = \underset{\text{MCF/da}}{1,096}$$

DELIVERABILITY CALCULATION

$$D = Q \underset{1,096}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n} \underset{1.136}{(1.185)^{.75}} = \underset{\text{MCF/da}}{1,245}$$

SUMMARY

P_c = 1125 psia
Q = 1096 Mcf/day
P_w = 682 psia
P_d = 562.5 psia
D = 1245 Mcf/day

Company PACIFIC NORTHWEST PIPELINE
By Original signed by G. H. Peppin
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
3732	0.238	728.136	173.296	391.600	464.896	682



