

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 Mesa Verde Formation Mesa Verde County San Juan
Purchasing Pipeline Southwest Pipeline Corp. Date Test Filed 6-28-57
Operator Magnolia Petroleum Co. Lease Marilla T. Well No. 1 E.V.
Unit 8 Sec. 22 Twp. 23N Rge. 10W Pay Zone: From 5120' To 6240'
Casing: OD 2-1/8" WT. 26.50 Set At 6240' Tubing: OD 2-3/8" WT. 16.75 T. Perf. 5,177'
Produced Through: Casing _____ Tubing X Gas Gravity: Measured _____ Estimated 0.660
Date of Flow Test: From 5-27-57 To 5-27-57 * Date S.I.P. Measured June 28, 1957
Meter Run Size 2.000" Orifice Size 1.000" Type Chart Sp. 10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)
Flowing tubing pressure (Dwt) 283 psig + 12 = 295 psia (b)
Flowing meter pressure (Dwt) 283 psig + 12 = 295 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (1.65)² x spring constant 20.0 = 295 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 (1.67)² x sp. const. 20.0 = 295 psia (g)
Corrected seven day avg. meter press. (P_f) (g) + (e) _____ = _____ psia (h)
P_t = (h) + (f) _____ = _____ psia (i)
Wellhead casing shut-in pressure (Dwt) _____ psig + 12 = _____ psia (j)
Wellhead tubing shut-in pressure (Dwt) 283 psig + 12 = 295 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = _____ psia (l)
Flowing Temp. (Meter Run) 66 °F + 460 _____ = _____ °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = _____ psia (n)

FLOW RATE CALCULATION

$$Q = \frac{2897}{(\text{Integrated})} \times \left(\frac{\sqrt{(P_c - P_d)} = \sqrt{2.000} = 1.414}{\sqrt{(P_c - P_w)}} \right) = 1300 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^{1/n}}{\left[\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} \right]^{1/n}} = 770 \text{ MCF/da.}$$

SUMMARY

P_c = 295 psia
Q = 1300 Mcf/day
P_w = 283 psia
P_d = 283 psia
D = 770 Mcf/day

Company Magnolia Petroleum Co.
By Robert W. Ray
Title 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>283</u>	<u>0.982</u>	<u>206.9</u>	<u>203.9</u>	<u>295.6</u>	<u>295.6</u>	<u>283.1</u>



