

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 Undersaturated Formation Pictured Cliffs County Mo Arriba
Purchasing Pipeline Pacific Northwest Date Test Filed 3-7-58
Operator Magnolia Petroleum Lease Hearilla #4 Well No. 3 P.G. 07
Unit M Sec. 35 Twp. 27N Rge. 3W Pay Zone: From 3795' To 3885'
Casing: OD 7 5/8" WT. 24# Set At 4922' Tubing: OD 2 3/8" WT. 4.7# T. Perf. 3775'
Produced Through: Casing - Tubing X Gas Gravity: Measured .680 Estimated -
Date of Flow Test: From 2-8-58 To 2-18-58 Date S.I.P. Measured 7-12-57
Meter Run Size 2.068" Orifice Size 1.000" Type Chart L-10 Type Taps Flange

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 (8.11) ² x sp. const. 10 _____ = 659 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 659 psia (h)
P_t = (h) + (f) _____ = 659 psia (i)
Wellhead casing shut-in pressure (Dwt) _____ psig + 12 = 1051 psia (j)
Wellhead tubing shut-in pressure (Dwt) _____ psig + 12 = 1051 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 1051 psia (l)
Flowing Temp. (Meter Run) 58 °F + 460 _____ = 518 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 526 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{144}{(\text{integrated})} \times \left(\frac{\sqrt{(c)} - \sqrt{(d)}}{\sqrt{(c)} - \sqrt{(d)}} \right)^* = 144 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{.85}}{1.24} = 172.4 \text{ MCF/da.}$$

SUMMARY

P_c = 1051 psia Company MAGNOLIA PETROLEUM COMPANY
Q = 144 Mcf/day By James A. Hogan, Jr.
P_w = 659 psia Title Gas Engineer
P_d = 526 psia Witnessed by _____
D = 172.4 Mcf/day 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
2567	0.170	2.8	0.3	434.3	434.6	659

OK

