

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 Undiscovered Pictured Cliffs Formation Pictured Cliffs County Elk
Purchasing Pipeline Pacific Northwest Pipeline Corp. Date Test Filed 6-28-57
Operator Magnolia Petroleum Co. Lease Alamogordo 77 Well No. 1 P.O.
Unit 1 Sec. 22 Twp. 27N Rge. 3E Pay Zone: From 2070' To 2090'
Casing: OD 7-5/8" WT. 20 Set At 1250' Tubing: OD 2-3/8" WT. 4.75 T. Perf. 207'
Produced Through: Casing _____ Tubing X Gas Gravity: Measured _____ Estimated 0.66
Date of Flow Test: From 5-27-57 To 5-28-57 * Date S.I.P. Measured June 28, 1956
Meter Run Size 2.000" Orifice Size 0.400" Type Chart Eq. 24 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)
Flowing tubing pressure (Dwt) 579 psig + 12 = 591 psia (b)
Flowing meter pressure (Dwt) 576 psig + 12 = 588 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (6.30)² x spring constant 15.0 = 591 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 _____ = 3 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (6.3)² x sp. const. 15.0 = 591 psia (g)
Corrected seven day avg. meter press. (P_f) (g) + (e) _____ = 588 psia (h)
P_t = (h) + (f) _____ = 591 psia (i)
Wellhead casing shut-in pressure (Dwt) _____ psig + 12 = _____ psia (j)
Wellhead tubing shut-in pressure (Dwt) 2070 psig + 12 = 2082 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 2082 psia (l)
Flowing Temp. (Meter Run) 76 °F + 460 _____ = 536 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 1041 psia (n)

Q = 96.1 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c) \ 588} = \sqrt{2.002} = .991} \right)^* = \underline{95.5} \text{ MCF/day}$
(integrated) $\sqrt{(d) \ 595}$

DELIVERABILITY CALCULATION
D = Q 95.5 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \underline{100.5} \text{ MCF/day}$
 $\left[\frac{2082^2 - 1041^2}{2082^2 - 992^2} \right]^{0.85} = 1.0925$

SUMMARY
P_c = 2082 psia
Q = 95.5 Mcf/day
P_w = 992 psia
P_d = 1041 psia
D = 100.5 Mcf/day

Company Magnolia Petroleum Company
By William D. King
Title Gas 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>2549</u>	<u>0.170</u>	<u>0.0042</u>	<u>10.24</u>	<u>20.28</u>	<u>20.42</u>	<u>992</u>



