

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 South Plains Formation Pictured Cliffs County Santa Fe
Purchasing Pipeline Southern Plains Gas Company Date Test Filed February 1, 1956
Operator Archer Oil & Gas Company Lease Archer-Blanchard Well No. 8
Unit 2 Sec. 25 Twp. 23N Rge. 1E Pay Zone: From 345 To 345
Casing: OD 4 1/2 WT. 9.30 Set At 350 Tubing: OD 2 WT. 4.7 T. Perf. 345
Produced Through: Casing 1 Tubing 1 Gas Gravity: Measured 0.661 Estimated 0.661
Date of Flow Test: From 1/16 To 1/16/56 * Date S.I.P. Measured 9/15/50
Meter Run Size 1 Orifice Size 1.000 Type Chart 2.2 Type Taps 2

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 (7.30)² x sp. const. 10 = 730 psia (g)
Corrected seven day avge. meter press. (P_f) (g) + (e) _____ = 730 psia (h)
P_t = (h) + (f) _____ = 730 psia (i)
Wellhead casing shut-in pressure (Dwt) 900 psig + 12 = 900 psia (j)
Wellhead tubing shut-in pressure (Dwt) 700 psig + 12 = 700 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 900 psia (l)
Flowing Temp. (Meter Run) 70 °F + 460 _____ = 530 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 450 psia (n)

FLOW RATE CALCULATION

Q = 230 X $\left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \frac{230}{1.000} = 230$ MCF/da
(integrated)

DELIVERABILITY CALCULATION

D = Q 230 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{0.85} = \frac{230}{1.376} = 167$ MCF/da.

SUMMARY

P_c = 900 psia
Q = 230 Mcf/day
P_w = 563 psia
P_d = 450 psia
D = 167 Mcf/day

Company Archer Oil & Gas Company
By ORIGINAL SIGNED BY L. M. STEVENS
Title L. M. Stevens, Dist. 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 R ²	(1-e ^{-S})	P _t ² (Column i)	P _t ² + R ²	P _w
<u>230</u>	<u>0.154</u>	<u>1.000</u>	<u>0.772</u>		<u>345.34</u>	<u>346.03</u>	<u>345.1</u>

* tubing loaded up. MSF used in calculation

OK

