

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 Anteo FORMATION Pictured Cliff COUNTY San Juan
PURCHASING PIPELINE El Paso Natural Gas Co. DATE TEST FILED 12-14-55
OPERATOR Pubco Development, Inc. LEASE State WELL NO. 23
UNIT 6 SEC. 36 TWP. 23N RGE. 12W FAIR ZONE: From 2052 To 2087
CASING: OD 5 1/2 WT. 14 SET AT 2044 Gr. TUBING: OD 1" WT. 1.7 T.Perf. 2026
PRODUCED THROUGH: CASING X TUBING GAS GRAVITY: MEASURED .640 ESTIMATED
DATE OF FLOW TEST: From 11-23-55 To 11-30-55 *Date S.I.P. MEASURED 9-22-55
METER RUN SIZE 4" ORIFICE SIZE 1.25 TYPE CHART Sq.Rt. 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 (_____) ²x 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 (8.10) ²x sp. const. _____ = 186 psia (g)
Corrected seven day avge. meter press. (pf) (g) + (e) _____ = _____ psia (h)
P_t = (h) + (f) _____ = 186 psia (i)
Wellhead casing shut-in pressure (Dwt) 690 psig + 12 = 702 psia (j)
Wellhead tubing shut-in pressure (Dwt) 690 psig + 12 = 702 psia (k)
P_c = (j) or (k) whichever well flowed through. _____ = 702 psia (l)
Flowing Temp. (Meter Run). 55 °F + 460 _____ = 515 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 351 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{451}{(\text{integrated})} \times \left(\frac{\sqrt{V(c)}}{\sqrt{V(d)}} \right) = \frac{451}{1} = 451 \text{ MCF/da.}^*$$

DELIVERABILITY CALCULATION

$$D = Q \frac{451}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right] = \frac{569,608}{458,208}}^n \frac{.85}{(.80663)} = \frac{.8330}{.80663} = 376 \text{ MCF/da.}$$

SUMMARY

P_c = 702 psia Company Pubco Development, Inc.
Q = 451 Mcf/day By N. E. Maxwell, Jr.
P_w = 186 psia Title Supt. Prod. Dept.
P_d = 351 psia Witnessed by Wayne Martin
D = 376 Mcf/day Company Pubco Development, Inc.

* 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
1308	Friction negligible through casing					34596	186

Initial production deliverability. Initial production to El Paso on 11-6-55.