

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 Astec FORMATION Pictured Cliffs COUNTY San Juan
PURCHASING PIPELINE Southern Union Gas Company DATE TEST FILED May 1, 1957

OPERATOR Astec Oil & Gas Company LEASE Reid WELL NO. 3
UNIT M SEC. 7 TWP. 28 RGE. 9 PAY ZONE: From 1992 To 2050
CASING: OD 5 1/2" WT. 11# SET AT 1988 TUBING: OD 1" WT. 1.7# T. Perf. 2006
PRODUCED THROUGH: CASING x TUBING GAS GRAVITY: MEASURED .667 ESTIMATED
DATE OF FLOW TEST: From 3-31 To 4-8 *Date S.I.P. MEASURED 4-15-57
METER RUN SIZE 1 ORIFICE SIZE 3/4" TYPE CHART Normal TYPE TAPS Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 232 psig + 12 = 244 psia (a)
Flowing tubing pressure (Dwt) 232 psig + 12 = 244 psia (b)
Flowing meter pressure (Dwt) 232 psig + 12 = 244 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading. 220 psig + 12 = 232 psia (d)
Square root chart reading () ² x spring constant = - - psia (d)
Meter error (c) - (d) or (d) - (c) ± = +12 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing. . . = 24 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading. 197 psig + 12 = 209 psia (g)
Square root chart average reading () ² x sp. const. = - - psia (g)
Corrected seven day avge. meter press. (P_f) (g) + (e) = 221 psia (h)
P_t = (h) + (f) = 221 psia (i)
Wellhead casing shut-in pressure (Dwt) 162 psig + 12 = 374 psia (j)
Wellhead tubing shut-in pressure (Dwt) 363 psig + 12 = 375 psia (k)
P_c = (j) or (k) whichever well flowed through. = 374 psia (l)
Flowing Temp. (Meter Run) 60 °F + 460 = 520 °Abs (m)
P_d = $\frac{1}{2}$ P_c = $\frac{1}{2}$ (l) = 187 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{161}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{1.052}{1.026} \right)^* = \underline{165} \text{ MCF/da.}$$

DELIVERABILITY CALCULATION

$$D = Q \underline{165} \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{.85} = \frac{104,907}{91,035}^{.85} \times 1.1261 = \underline{186} \text{ MCF/da.}$$

SUMMARY

P_c = 374 psia Company ASTEC OIL & GAS COMPANY
Q = 165 Mcf/day By
P_w = 221 psia Title Production Engineer
P_d = 187 psia Witnessed by
D = 186 Mcf/day Company

* This is date of completion test.
* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-s})	(F _c Q)Z	(F _c Q) ²	R ²	(1-e ^{-s})	P _t ² (Column 1)	P _c ² + R ²	P _w

Friction loss negligible

