

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 Elmco FORMATION Mesaverde COUNTY San Juan
PURCHASING PIPELINE Southern Union Gathering System DATE TEST FILED July 28, 1960
OPERATOR Artes Oil & Gas Company LEASE Thompson WELL NO. 3
UNIT B SEC. 34 TWP. 31 RGE. 12 PAY ZONE: From 4735 To 5110
CASING: OD 5 1/2 WT. 15.5 SET AT 4737 TUBING: OD 2 WT. 4.7 T.Perf. 4950
PRODUCED THROUGH: CASING TUBING X GAS GRAVITY: MEASURED 0.679 ESTIMATED
DATE OF FLOW TEST: From 5/31 To 6/7 *Date S.I.P. MEASURED 6/14/60
METER RUN SIZE 4 ORIFICE SIZE 0.375 TYPE CHART A R TYPE TAPS P

OBSERVED DATA

Flowing casing pressure (Dwt) 615 psig + 12 = 627 psia (a)
Flowing tubing pressure (Dwt) 523 psig + 12 = 535 psia (b)
Flowing meter pressure (Dwt) 523 psig + 12 = 535 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 = 523 psia (d)
Meter error (c) - (d) or (d) - (c). ± = plus 2 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing... = 0 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading. psig + 12 = 548 psia (g)
Square root chart average reading () ²x sp. const. = psia (g)
Corrected seven day avge. meter press. (pf) (g) + (e) = 550 psia (h)
P_t = (h) + (f) = 550 psia (i)
Wellhead casing shut-in pressure (Dwt) 720 psig + 12 = 732 psia (j)
Wellhead tubing shut-in pressure (Dwt) 700 psig + 12 = 712 psia (k)
P_c = (j) or (k) whichever well flowed through. = 712 psia (l)
Flowing Temp. (Meter Run) 75 °F + 460 = 535 °Abs (m)
P_d = $\frac{1}{2}$ P_c = $\frac{1}{2}$ (l) = 356 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{36}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right)^{0.5} = \frac{(1.0038)^{0.5}}{1.0019} = 1.0019 = 36 \text{ MCF/da.}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{36}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]} = \frac{36}{\left[\frac{712^2 - 356^2}{712^2 - 550^2} \right]} = \frac{36}{1.5927} = 22.6 \text{ MCF/da.}$$

SUMMARY

P_c = 712 psia Company Artes Oil & Gas Company
Q = 36 Mcf/day By ORIGINAL SIGNED BY L. M. STEVENS
P_w = 550 psia Title L. M. Stevens, Dist. Engr.
P_d = 356 psia Witnessed by
D = 22.6 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 R ²	(1-e ^{-S})	P _t ² (Column 1)	P _t ² + R ²	P _w
Friction loss is negligible							

