

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 Blanco FORMATION Mesaverde COUNTY San Juan  
PURCHASING PIPELINE Southern Union Gathering System DATE TEST FILED July 26, 1960

OPERATOR Astec Oil & Gas Company LEASE Richardson WELL NO. 3  
UNIT C SEC. 22 TWP. 31 RGE. 12 PAY ZONE: From 5020 To 5336  
CASING: OD 7 WT. 20 SET AT 4999 TUBING: OD 2 WT. 4.7 T.Perf. 5290  
PRODUCED THROUGH: CASING \_\_\_\_\_ TUBING X GAS GRAVITY: MEASURED 0.700 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 0.500 TYPE CHART SR TYPE TAPS Flg.

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 (7.35)<sup>2</sup> x spring constant 10 = \_\_\_\_\_ 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 (\_\_\_\_\_)<sup>2</sup> x sp. const. = \_\_\_\_\_ psia (g)  
Corrected seven day avge. meter press. (P<sub>f</sub>) (g) + (e) = \_\_\_\_\_ psia (h)  
P<sub>t</sub> = (h) + (f) . . . . . = \_\_\_\_\_ psia (i)  
Wellhead casing shut-in pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (j)  
Wellhead tubing shut-in pressure (Dwt) \_\_\_\_\_ psig + 12 = \_\_\_\_\_ psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through. . . . . = \_\_\_\_\_ psia (l)  
Flowing Temp. (Meter Run) . . . . . °F + 460 . . . . . = \_\_\_\_\_ °Abs (m)  
P<sub>d</sub> = ½ P<sub>c</sub> = ½ (l) . . . . . = \_\_\_\_\_ psia (n)

FLOW RATE CALCULATION

$$Q = \frac{53}{(\text{integrated})} \times \left( \frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{(0.9981)^{0.5}}{0.9990} \right)^* = 53 \text{ MCF/da.}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{53}{\left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{711^2 - 356^2}{711^2 - 532^2} = 1.4901 \right]^{n0.75}} = 79 \text{ MCF/da.}$$

SUMMARY

P<sub>c</sub> = 711 psia Company Astec Oil & Gas Company  
Q = 53 Mcf/day By ORIGINAL SIGNED BY L. M. STEVENS  
P<sub>w</sub> = 532 psia Title L. M. Stevens, Dist. Engr.  
P<sub>d</sub> = 356 psia Witnessed by \_\_\_\_\_  
D = 79 Mcf/day Company \_\_\_\_\_

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

REMARKS OR FRICTION CALCULATIONS

GL	(1-e <sup>-S</sup> )	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> R <sup>2</sup>	(1-e <sup>-S</sup> )	P <sub>t</sub> <sup>2</sup> (Column 1)	P <sub>t</sub> <sup>2</sup> + R <sup>2</sup>	P <sub>w</sub>
Friction Loss Is Negligible							



UNIT RECORDING AND INFORMATION COMMISSION  
 GAS WELL TEST DATA SHEET - GAS BEARER

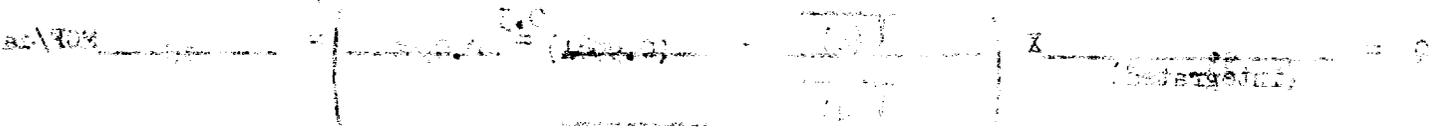
Use as a guide for recording, recording units, bearings, & all data, except where shown otherwise.

WELL NO. \_\_\_\_\_ DATE TEST BEGAN \_\_\_\_\_  
 OPERATOR \_\_\_\_\_ COMPANY \_\_\_\_\_  
 UNIT \_\_\_\_\_  
 CASING: OD \_\_\_\_\_ WT \_\_\_\_\_  
 PRODUCED THROUGH CASING \_\_\_\_\_  
 DATE OF TEST \_\_\_\_\_  
 METER RUN BY \_\_\_\_\_

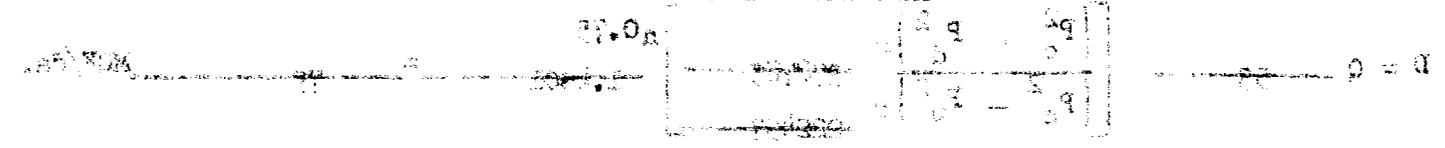
RECORDED DATA

- (a) Flowing casing pressure (lwf) \_\_\_\_\_
- (b) Flowing tubing pressure (lwt) \_\_\_\_\_
- (c) Flowing meter pressure (lmt) \_\_\_\_\_
- (d) Flowing meter pressure (meter reading) \_\_\_\_\_
- (e) Normal chert reading \_\_\_\_\_
- (f) Square root chert reading \_\_\_\_\_
- (g) Meter error (a) or (b) - (c) \_\_\_\_\_
- (h) Friction loss, flowing tubing pressure \_\_\_\_\_
- (i) Friction loss, flowing casing pressure \_\_\_\_\_
- (j) Even day average static meter pressure \_\_\_\_\_
- (k) Normal chert average reading \_\_\_\_\_
- (l) Square root chert average reading \_\_\_\_\_
- (m) Corrected even day average meter pressure \_\_\_\_\_
- (n)  $P_0 = (j) - (h)$  \_\_\_\_\_
- (o)  $P_1 = (k) - (i)$  \_\_\_\_\_
- (p) Wellhead static pressure (lws) \_\_\_\_\_
- (q) Wellhead flowing chert pressure (lwf) \_\_\_\_\_
- (r)  $P_2 = (l) - (i)$  (where well head change) \_\_\_\_\_
- (s) Flowing temp. (at test point) \_\_\_\_\_
- (t)  $P_3 = (j) - (k) - (r)$  \_\_\_\_\_

FLOW RATE CALCULATION



PERMEABILITY CALCULATION



Prepared by \_\_\_\_\_  
 Checked by \_\_\_\_\_  
 Title \_\_\_\_\_  
 Original Filed by \_\_\_\_\_  
 Filed \_\_\_\_\_  
 Company \_\_\_\_\_

TABLE OF FRICTION CALCULATIONS

Q (lwf)	(1-2)	(3-4)	(5-6)	(7-8)

