

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 DATE TEST FILED July 28, 1960
OPERATOR Astec Oil and Gas Co. LEASE Richardson WELL NO. 2
UNIT C SEC. 15 TWP. 31 RGE. 12 PAY ZONE: From 4900 To 5195
CASING: OD 7" WT. 20# SET AT 4895 TUBING: OD 2 WT. 4.7 T.Perf. 5200
PRODUCED THROUGH: CASING TUBING XX GAS GRAVITY: MEASURED 0.701 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 0.625 TYPE CHART SR TYPE TAPS F

OBSERVED DATA

Flowing casing pressure (Dwt) PGR psig + 12 = 553 psia (a)
Flowing tubing pressure (Dwt) 541 psig + 12 = 553 psia (b)
Flowing meter pressure (Dwt) 540 psig + 12 = 552 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading. psig + 12 = 548 psia (d)
Square root chart reading (7.40) ² x spring constant 10 = 548 psia (d)
Meter error (c) - (d) or (d) - (c). ± = plus 4 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing. . . = 1 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading. 550 psig + 12 = 562 psia (g)
Square root chart average reading (7.40) ² x sp. const. = 566 psia (g)
Corrected seven day ave. meter press. (Pf) (g) + (e) = 567 psia (h)
P_t = (h) + (f) = 567 psia (i)
Wellhead casing shut-in pressure (Dwt) PGR psig + 12 = 553 psia (j)
Wellhead tubing shut-in pressure (Dwt) 799 psig + 12 = 811 psia (k)
P_c = (j) or (k) whichever well flowed through. = 811 psia (l)
Flowing Temp. (Meter Run) 115 °F + 460 = 575 °Abs (m)
P_d = $\frac{1}{2} P_c = \frac{1}{2} (l)$ = 406 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{185}{(\text{integrated})} \times \left(\frac{\sqrt{V(c)}}{\sqrt{V(d)}} \right) = \frac{(1.0072)}{1.0036} = 1.0036 = 186 \text{ MCF/da.}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{186}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{1.3319}} = 248 \text{ MCF/da.}$$

SUMMARY

P_c = 811 psia Company Astec Oil and Gas Company
Q = 186 Mcf/day By ORIGINAL SIGNED BY L. M. STEVENS
P_w = 567 psia Title Engineer
P_d = 406 psia Witnessed by
D = 248 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	(FcQ) ² R ²	(1-e ^{-S})	P _t ² (Column 1)	P _t ² + R ²	P _w

FRICTION LOSS NEGLECTABLE



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
LABORATORY TEST REPORT

(To be filled in by the Laboratory, including all measurements & all data
except those for the test itself)

TEST NO. _____
DATE TEST FILLED _____
TESTING FIRM _____
OPERATION _____
DATE _____
TIME _____
LOCATION _____
TESTER _____
DATE OF TEST _____
TEST TYPE _____
TEST RESULT _____

TEST DATA

- (a) _____
(b) _____
(c) _____
(d) _____
(e) _____
(f) _____
(g) _____
(h) _____
(i) _____
(j) _____
(k) _____
(l) _____
(m) _____
(n) _____

TEST DATA CONTINUED

$$R = \frac{1}{1 + \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \frac{1}{R_4} + \frac{1}{R_5} + \frac{1}{R_6} + \frac{1}{R_7} + \frac{1}{R_8} + \frac{1}{R_9} + \frac{1}{R_{10}}}}$$

TEST DATA CONTINUED

$$R = \frac{1}{1 + \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \frac{1}{R_4} + \frac{1}{R_5} + \frac{1}{R_6} + \frac{1}{R_7} + \frac{1}{R_8} + \frac{1}{R_9} + \frac{1}{R_{10}}}}$$

TEST NO. _____
DATE _____
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TEST NO.	DATE	TESTING FIRM	OPERATION	DATE	TIME	LOCATION	TESTER	DATE OF TEST	TEST TYPE	TEST RESULT

