

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 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. 20
UNIT J SEC. 36 TWP. 29N RGE. 10W FAI ZONE: From 2051 To 2086
CASING: OD 5 1/2 WT. 14 SET AT 2041 Gr TUBING: OD 1" WT. 1.7 T.Perf. 2047
PRODUCED THROUGH: CASING X TUBING GAS GRAVITY: MEASURED .670 ESTIMATED
DATE OF FLOW TEST: From 11-23-55 to 11-30-55 *Date S.I.P. MEASURED 9-16-55
METER RUN SIZE 4" ORIFICE SIZE 1" TYPE CHART Sq. Rt. TYPE TAPS Flange

OBSERVED DATA

Flowing casing pressure (Dwt) -0- psig + 12 = -0- psia (a)
Flowing tubing pressure (Dwt) -0- psig + 12 = -0- psia (b)
Flowing meter pressure (Dwt) -0- psig + 12 = -0- 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 (6.20) ²x sp. const. 5 = 192 psia (g)
Corrected seven day avge. meter press. (P_f) (g) + (e) = -0- psia (h)
P_t = (h) + (f) = 192 psia (i)
Wellhead casing shut-in pressure (Dwt) 679 psig + 12 = 691 psia (j)
Wellhead tubing shut-in pressure (Dwt) 380 psig + 12 = 692 psia (k)
P_c = (j) or (k) whichever well flowed through. = 691 psia (l)
Flowing Temp. (Meter Run). 53 °F + 460 = 513 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 346 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{286}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\sqrt{-0-}}{\sqrt{-0-}} = \frac{\sqrt{-0-}}{\sqrt{-0-}} \right)^* = 286 \text{ MCF/da.}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{286}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n} = \frac{286}{\left[\frac{691^2 - 346^2}{691^2 - 192^2} \right]^{.85}} = \frac{286}{(81196)^{.85}} = 240 \text{ MCF/da.}$$

SUMMARY

P_c = 691 psia Company Pubco Development, Inc.
Q = 286 Mcf/day By H. E. Maxwell, Jr.
P_w = 192 psia Title Supt. Prod. Dept.
P_d = 346 psia Witnessed by Wayne Martin
D = 240 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
					<u>56,864</u>	<u>56,864</u>	<u>192</u>
Friction too small to measure through casing.							

Initial Production Deliverability. First delivery to El Paso on 11-7-55.



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