

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: UNDESIGNATED Formation: DAKOTA County: RIO ARriba
Purchasing Pipeline: EL PASO NATURAL GAS CO. Date Test Filed: JULY 25, 1960
Operator: NORTHWEST PRODUCTION CORPORATION Lease: "W" Well No.: 2-5
Unit: B Sec. 5 Twp. 25N Rge. 5W Pay Zone: From 7484 To 7572
Casing: OD 2-1/2 WT. 14, 15.6 Set At 7678 Tubing: OD 1-3/8 WT. 2.7 T. Perf. 7416
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .664 Estimated _____
Date of Flow Test: From 6-22-60 To 7-7-60 * Date S.I.P. Measured 7-14-60
Meter Run Size 2 Orifice Size 0.500 Type Chart L-10 Type Taps F1

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)
Flowing tubing pressure (Dwt) 522 psig + 12 = 534 psia (b)
Flowing meter pressure (Dwt) 520 psig + 12 = 532 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (7.2)² x spring constant 10.00 = 533 psia (d)
Meter error (c) - (d) or (d) - (c) ± = -1 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing; (a) - (c) Flow through casing = 2 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (7.4)² x sp. const. 10.00 = 542 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 547 psia (h)
P_t = (h) + (f) = 549 psia (i)
Wellhead casing shut-in pressure (Dwt) _____ psig + 12 = _____ psia (j)
Wellhead tubing shut-in pressure (Dwt) 1288 psig + 12 = 1300 psia (k)
P_c = (j) or (k) whichever well flowed through = 1300 psia (l)
Flowing Temp. (Meter Run) 73 °F + 460 = 533 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 640 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{141}{(\text{Integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{23.065}{23.067} = 0.999 \right) = 141 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{141}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n} = \frac{141}{(0.92093)^2} = 164 \text{ MCF/day}$$

SUMMARY

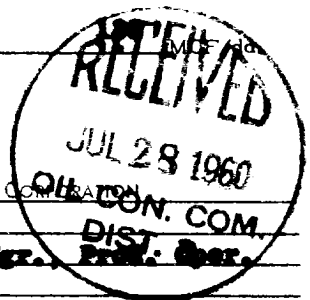
P_c = 1300 psia
Q = 141 Mcf/day
P_w = 561 psia
P_d = 640 psia
D = 133 Mcf/day
Company: NORTHWEST PRODUCTION CORPORATION
By: Ray Phillips, Mgr.
Title: Prod. Oper.
Witnessed by: _____
Company: _____

- * 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 i)	P _t ² + R ²	P _w
<u>*1756</u> <u>**3188</u>	<u>0.120</u> <u>0.206</u>	<u>1.758</u> <u>12.048</u>	<u>211</u> <u>2,482</u> <u>2,693</u>		<u>301,401</u>	<u>304,094</u>	<u>551.4</u>

*P_c = 9.402 (2645' of 2-3/8" tbg)
**P_c = 24.63 (4771' of 1-1/4" tbg)



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Pool BLANCO Formation MESAVERDE County RIO ARRIBA
Purchasing Pipeline EL PASO NATURAL GAS CO. Date Test Filed JULY 25, 1960

Operator NORTHWEST PRODUCTION CORPORATION Lease "V" Well No. 2-5
Unit B Sec. 5 Twp. 26N Rge. 5W Pay Zone: From 4820 To 5426
Casing: OD 7-5/8 WT. 14, 15.5 Set At 7878 Tubing: OD 2-7/8 WT. 6.5 T. Perf. 4820
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .653 Estimated _____
Date of Flow Test: From 6-29-60 To 7-7-60 * Date S.I.P. Measured 7-14-60
Meter Run Size 2 Orifice Size 1.000 Type Chart L-10 Type Taps F1

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)
Flowing tubing pressure (Dwt) 524 psig + 12 = 536 psia (b)
Flowing meter pressure (Dwt) 520 psig + 12 = 532 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (5.95)² x spring constant 15.00 = 531 psia (d)
Meter error (c) - (d) or (d) - (c) ± = 1 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing; (a) - (c) Flow through casing = 4 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (6.00)² x sp. const. 15.00 = 540 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 541 psia (h)
P_t = (h) + (f) = 545 psia (i)
Wellhead casing shut-in pressure (Dwt) _____ psig + 12 = _____ psia (j)
Wellhead tubing shut-in pressure (Dwt) 897 psig + 12 = 909 psia (k)
P_c = (j) or (k) whichever well flowed through = 909 psia (l)
Flowing Temp. (Meter Run) 68 °F + 460 = 528 ° Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 455 psia (n)

Q = 985 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)} = \frac{23.065}{23.043} = 1.001} \right)^* = \underline{986} MCF/day
(integrated)$

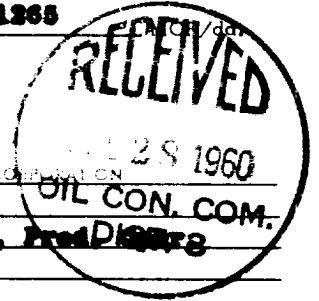
DELIVERABILITY CALCULATION

D = Q 986 $\left[\frac{(P_c^2 - P_d^2) = 619,256}{(P_c^2 - P_w^2) = 444,371} \right]^n \frac{1.2826}{(1.2826)^2} = \underline{1265} MCF/day$

SUMMARY

P_c = 909 psia
Q = 986 Mcf/day
P_w = 618 psia
P_d = 455 psia
D = 1265 Mcf/day

Company NORTHWEST PRODUCTION CORPORATION
By _____
Title Ray Phillips, Mgr., Production
Witnessed by _____
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 (1-e ^{-S})	P _t ²	P _t ² + R ²	P _w
<u>3115</u>	<u>0.203</u>	<u>418,121</u>	<u>84,879</u>			
<u>** 32</u>	<u>0.002</u>	<u>3.059</u>	<u>6</u>	<u>297,025</u>	<u>301,910</u>	<u>618</u>

**F_c = 20.738 (4771' tbg-tbg ann.)
**F_c = 1.774 (49' tbg-csg ann.)