

Initial Deliverability
Test

Form G-128-A
Revised April 28, 1955

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)

Poc. Angels Peak-Dakota Formation Dakota County San Juan
Purchasing Pipeline Southern Union Gas Company Date Test Filed 6-29-59

Operator Kingwood Oil Company Lease Knauff Well No. 1
Unit A Sec. 13 Twp. 27N Rge. 10W Pay Zone: From 6543 To 6670
Casing: OD 5 1/2" WT. 15.5 Set At 6681 Tubing: OD 2 3/8 WT. 4.7 T. Per. 6933
Produced Through: Casing Tubing X Gas Gravity: Measured .670 Estimated
Date of Flow Test: From 6-8-59 To 6-16-59 * Date S.I.P. Measured 6-23-59
Meter Run Size 1/2" Orifice Size 2.000 Type Chart Normal Type Taps

OBSERVED DATA

Flowing casing pressure (Dwt) 985 psig + 12 = 597 psia (a)
Flowing tubing pressure (Dwt) 905 psig + 12 = 517 psia (b)
Flowing meter pressure (Dwt) 294 psig + 12 = 306 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken: 294 psig + 12 = 306 psia (d)
Normal chart reading psig + 12 = psia (d)
Square root chart reading () ² x spring constant = psia (d)
Meter error (c) - (d) or (d) - (c) ± = psi (e)
Friction loss, Flowing column to meter: = psi (f)
(b) - (c) Flow through tubing; (a) - (c) Flow through casing = 211 psi (f)
Seven day average static meter pressure (from meter chart): 290 psig + 12 = 302 psia (g)
Normal chart average reading psig + 12 = psia (g)
Square root chart average reading () ² x sp. const. = psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = psia (h)
P_f = (h) + (f) = psia (i)
Wellhead casing shut-in pressure (Dwt) 1420 psig + 12 = 1432 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1420 psig + 12 = 1432 psia (k)
P_c = (j) or (k) whichever well flowed through = psia (l)
Flowing Temp. (Meter Run) 80 °F + 460 = 540 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 716 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1090}{\text{(Integrated)}} \times \left(\frac{\sqrt{(c)} = 17.49}{\sqrt{(d)} = 17.49} = 1.000 \right) = 1090 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1090}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^{.75}} = 986 \text{ MCF/day}$$

SUMMARY

P_c = 1432 psia
Q = 1090 Mcf/day
P_w = 544 psia
P_d = 716 psia
D = 986 Mcf/day

Company Well Production Co.
By H. H. Neely
Title Agent & Tester
Witnessed by
Company

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

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-a})	(F _c Q) ²	(F _c Q) ² (1-e ^{-a}) R ²	P _f ² (Column 1)	P _f ² + R ²	P _w
4377	.273	105022	28,671	263,169	291,840	544

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