

Initial Deliverability
Test

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 Basin Formation Dakota County San Juan
Purchasing Pipeline Southern Union Gas Co. Date Test Filed November 6, 1961
Operator Consolidated Oil & Gas, Inc. Lease O'Shea Well No. 1-3
Unit K Sec. 3 Twp. 31N Rge. 13W Pay Zone: From 6670 To 6875
Casing: OD 5 1/2 WT. 15.5 & 17 Set At 6900 Tubing: OD 1.99 WT. 2.75 T. Perf. 6617
Produced Through: Casing Tubing X Gas Gravity: Measured .684 Estimated
Date of Flow Test: From 10-16-61 To 10-24-61 * Date S.I.P. Measured 10-31-61
Meter Run Size 4.000 Orifice Size 1.000 Type Chart L-10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) Mesaverde psig + 12 = psia (a)
Flowing tubing pressure (Dwt) 503 psig + 12 = 515 psia (b)
Flowing meter pressure (Dwt) 502 psig + 12 = 514 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading psig + 12 = psia (d)
Square root chart reading (7.19)² x spring constant 10 = 517 psia (d)
Meter error (c) - (d) or (d) - (c) ± = - 3 psi (e)
Friction loss, Flowing column to meter: = 1 psi (f)
(b) - (c) Flow through tubing: (a) - (c) Flow through casing
Seven day average static meter pressure (from meter chart):
Normal chart average reading psig + 12 = psia (g)
Square root chart average reading (7.2)² x sp. const. = 518 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 515 psia (h)
= 516 psia (i)
P_t = (h) + (f) = psia (j)
Wellhead casing shut-in pressure (Dwt) Mesaverde psig + 12 = psia (j)
Wellhead tubing shut-in pressure (Dwt) 1368 psig + 12 = 1380 psia (k)
= 1380 psia (l)
P_c = (j) or (k) whichever well flowed through = psia (l)
Flowing Temp. (Meter Run) 69 °F + 460 = 529 °Abs (m)
= 690 psia (n)
P_d = 1/2 P_c = 1/2 (l) = psia (n)

FLOW RATE CALCULATION

$$Q = \frac{280}{(\text{integrated})} \times \left(\frac{\sqrt{(c)} = 2267157}{\sqrt{(d)} = 2273763} = .9971 \right) = 279 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{279}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{1428300}{1632239} \right]^n .9050} = 252 \text{ MCF/da.}$$

SUMMARY

P_c = 1380 psia
Q = 279 Mcf/day
P_w = 522 psia
P_d = 690 psia
D = 252 Mcf/day

Company Consolidated Oil & Gas, Inc.
By [Signature]
Title Chief Engineer
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}) R ²	P _t ² (Column i)	P _t ² + R ²	P _w
4526	.280	21.090	5.905	266.256	272161	522

