

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 Undesignated Formation Dakota County San Juan  
Purchasing Pipeline Southern Union Gas Co. Date Test Filed January 28, 1960

Operator CONSOLIDATED OIL & GAS, INC. Lease Govt. Starr Well No. 1-13  
Unit N Sec. 13 Twp. 31N Rge. 13W Pay Zone: From 6612 To 6715  
Casing: OD 7 & 5/8 WT. 20, 23 Set At 6715 Tubing: OD 1 1/2 WT. 2.4 T. Perf. 6217  
Produced Through: Casing \_\_\_\_\_ Tubing X Gas Gravity: Measured 0.684 Estimated \_\_\_\_\_  
Date of Flow Test: From 12/24/59 To 1/1/60 \* Date S.I.P. Measured 11/14/59  
Meter Run Size 4 Orifice Size 1-5/8" Type Chart Std Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) (Mesa Verde Dual) psig + 12 = - psia (a)  
Flowing tubing pressure (Dwt) 614 psig + 12 = 626 psia (b)  
Flowing meter pressure (Dwt) 518 psig + 12 = 530 psia (c)  
Flowing meter pressure (meter reading when Dwt. measurement taken:  
Normal chart reading 520 psig + 12 = 532 psia (d)  
Square root chart reading ( ) <sup>2</sup> x spring constant \_\_\_\_\_ = \_\_\_\_\_ psia (d)  
Meter error (c) - (d) or (d) - (c) ± = - 2 psi (e)  
Friction loss, Flowing column to meter:  
(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 9.6 psi (f)  
Seven day average static meter pressure (from meter chart):  
Normal chart average reading 500 psig + 12 = 512 psia (g)  
Square root chart average reading ( ) <sup>2</sup> x sp. const. \_\_\_\_\_ = \_\_\_\_\_ psia (g)  
Corrected seven day avge. meter press. (p<sub>f</sub>) (g) + (e) = 510 psia (h)  
P<sub>t</sub> = (h) + (f) = 606 psia (i)  
Wellhead casing shut-in pressure (Dwt) (Mesa Verde) psig + 12 = \_\_\_\_\_ psia (j)  
Wellhead tubing shut-in pressure (Dwt) 2004 psig + 12 = 2016 psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through = 2016 psia (l)  
Flowing Temp. (Meter Run) 65 °F + 460 = 525 °Abs (m)  
P<sub>d</sub> = 1/2 P<sub>c</sub> = 1/2 (l) = 1008 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{809}{(\text{integrated})} \times \left( \frac{\sqrt{(c)} = 23.02173}{\sqrt{(d)} = 23.06513} = .998118 \right)^* = 807 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{807}{\left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{3048192}{3592016} \right]^n} \frac{0.8486^n}{1} = 712 \text{ MCF/day}$$

SUMMARY

P<sub>c</sub> = 2016 psia  
Q = 807 Mcf/day  
P<sub>w</sub> = 687 psia  
P<sub>d</sub> = 1008 psia  
D = 712 Mcf/day

Company CONSOLIDATED OIL & GAS, INC.  
By George E. Laman  
Title Production Manager  
Witnessed by \_\_\_\_\_  
Company \_\_\_\_\_

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

REMARKS OR FRICTION CALCULATIONS

| GL   | (1-e <sup>-s</sup> ) | (F <sub>c</sub> Q) <sup>2</sup> | (F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )<br>R <sup>2</sup> | P <sub>t</sub> <sup>2</sup><br>(Column i) | P <sub>t</sub> <sup>2</sup> + R <sup>2</sup> | P <sub>w</sub> |
|------|----------------------|---------------------------------|------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------|----------------|
| 4252 | 0.266                | 394.75                          | 105.0035                                                               | 367.236                                   | 472.240                                      | 687            |



