

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 Blanco Formation Mesaverde County San Juan  
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed March 10, 1964  
Operator Consolidated Oil & Gas, Inc. Lease Williams Well No. 1-24  
Unit H Sec. 24 Twp. 31N Rge. 13W Pay Zone: From 4562 To 4622  
Casing: OD 5-1/2" WT. 17 lb. Set At 6814 Tubing: OD 1" WT. 1.80 lb. T. Peri. 4503  
Produced Through: Casing          Tubing X Gas Gravity: Measured 0.680 Estimated           
Date of Flow Test: From 2/24/64 To 3/3/64 \* Date S.I.P. Measured 10/3/63  
Meter Run Size 4.026 Orifice Size 0.625 Type Chart L-10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt)          psig + 12 =          psia (a)  
Flowing tubing pressure (Dwt)          psig + 12 =          psia (b)  
Flowing meter pressure (Dwt)          psig + 12 =          psia (c)  
Flowing meter pressure (meter reading when Dwt. measurement taken:  
Normal chart reading          psig + 12 =          psia (d)  
Square root chart reading (          )<sup>2</sup> x 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 ( 7.05 )<sup>2</sup> x sp. const. 10 = 497 psia (g)  
Corrected seven day avge. meter press. (pf) (g) + (e)          = 497 psia (h)  
 $P_c = (h) \times (i)$           = 497 psia (i)  
Casing shut-in pressure (Dwt) 1119 psig + 12 = 1131 psia (j)  
Tubing shut-in pressure (Dwt) 1120 psig + 12 = 1132 psia (k)  
 $P_c = (j)$  or  $(k)$  whichever well flowed through          = 1132 psia (l)  
Flowing Temp. (Meter Run) 60 °F + 460          = 520 °Abs (m)  
 $P_c = \frac{1}{2} P_c = \frac{1}{2} (l)$           = 906 psia (n)

Q =          X  $\left( \frac{\text{FLOW RATE CALCULATION}}{\frac{\sqrt{(c)}}{\sqrt{(d)}}} = \frac{\text{        }}{\text{        }} = \text{        } \right) = \text{        }$  MCF/day  
(Integrated)

DELIVERABILITY CALCULATION

D = Q 197  $\left[ \frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)} = \frac{460,588}{1,014,698} \right]^n \cdot .553 = 109$  MCF/day

SUMMARY

$P_c =$  1132 psia  
Q = 197 Mcf/day  
 $P_w =$  517 psia  
 $P_d =$  906 psia  
D = 109 Mcf/day

Company Consolidated Oil & Gas, Inc.  
By W. J. Williams  
Title Chief Engineer  
Witnessed by           
Company         

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DIST. 3

- 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><br>R <sup>2</sup> | (1-e <sup>-S</sup> )<br>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> |
|------|----------------------|---------------------------------|---------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------|----------------|
| 3062 | 0.200                | 98.585                          | 19.717                                            | 247.009                                                           | 266.726                                      | 517            |