

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 12-29-59

Operator CONSOLIDATED OIL & GAS Lease GOVT. LEA Well No. 1  
Unit K Sec. 30 Twp. 31N Rge. 12W Pay Zone: From 6723 To 6807  
Casing: OD 7 & 5/8 WT. 20 & 17# Set At 6824 Tubing: OD 2-7/8" WT. 6.50 T. Perf. 6638  
Produced Through: Casing    Tubing X Gas Gravity: Measured .700 Estimated     
Date of Flow Test: From 11/8/59 To 11/16/59 \* Date S.I.P. Measured 11/23/59  
Meter Run Size 4. Orifice Size 1-5/8" Type Chart Std Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 442 psig + 12 = 454 psia (a)  
Flowing tubing pressure (Dwt) 395 psig + 12 = 407 psia (b)  
Flowing meter pressure (Dwt) 391 psig + 12 = 403 psia (c)  
Flowing meter pressure (meter reading when Dwt. measurement taken:  
Normal chart reading 395 psig + 12 = 407 psia (d)  
Square root chart reading ( ) <sup>2</sup> x spring constant =    psia (d)  
Meter error (c) - (d) or (d) - (c) ± = -4 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 420 psig + 12 = 432 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) = 428 psia (h)  
P<sub>t</sub> = (h) + (f) = 432 psia (i)  
Wellhead casing shut-in pressure (Dwt) 1734 psig + 12 = 1746 psia (j)  
Wellhead tubing shut-in pressure (Dwt) 1734 psig + 12 = 1746 psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through = 1746 psia (l)  
Flowing Temp. (Meter Run) 72 °F + 460 = 532 °Abs (m)  
P<sub>d</sub> = 1/2 P<sub>c</sub> = 1/2 (l) = 873 psia (n)

FLOW RATE CALCULATION

Q = 1337 X  $\left( \frac{\sqrt{(c)} - \sqrt{(d)}}{\sqrt{(d)}} \right) = \frac{20.07486 - 20.17424}{20.17424} = \frac{.177}{20.17424} = .00877$  = 1330 MCF/da  
(Integrated)

DELIVERABILITY CALCULATION

D = Q 1330  $\left[ \frac{(P_c^2 - P_d^2) - 2286387}{(P_c^2 - P_w^2) - 2846016} \right]^n \cdot 0.803^n = \frac{2286387 - 2846016}{2846016 - 2846016} = \frac{0}{0} = 1130$  MCF/da.

SUMMARY

P<sub>c</sub> = 1746 psia  
Q = 1330 Mcf/day  
P<sub>w</sub> = 450 psia  
P<sub>d</sub> = 873 psia  
D = 1130 Mcf/day

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

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

REMARKS OR FRICTION CALCULATIONS

GL	(1-e <sup>-8</sup> )	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-8</sup> ) R <sup>2</sup>	P <sub>t</sub> <sup>2</sup> (Column i)	P <sub>t</sub> <sup>2</sup> + R <sup>2</sup>	P <sub>w</sub>
4647	0.287	54.6	15.7	186.624	202.3	450



