

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 Tapacito Formation Picture Cliffs County Rio Arriba  
Purchasing Pipeline Southern Union Gas Co. Date Test Filed 4-1-57  
Operator Honolulu Oil Corporation Lease Mearilla Apache Well No. 4  
Unit K Sec. 4 Twp. 26N Rge. 4W Pay Zone: From 3945 To 3970  
Casing: OD 5 1/2 WT. 11 1/4 Set At 4031 Tubing: OD 2 WT. 4.7 T. Perf. 3944  
Produced Through: Casing                      Tubing X Gas Gravity: Measured .655 Estimated                       
Date of Flow Test: From 2-7-57 To 2-14-57 \* Date S.I.P. Measured 2-21-57  
Meter Run Size 4 Orifice Size 1.250 Type Chart Sq. Rt. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 596 psig + 12 = 608 psia (a)  
Flowing tubing pressure (Dwt) 582 psig + 12 = 594 psia (b)  
Flowing meter pressure (Dwt) 580 psig + 12 = 592 psia (c)  
Flowing meter pressure (meter reading when Dwt. measurement taken:  
Normal chart reading                      psig + 12 =                      psia (d)  
Square root chart reading (7.73)<sup>2</sup> x spring constant 10 = 597 psia (d)  
Meter error (c) - (d) or (d) - (c) ± = -5 psi (e)  
Friction loss, Flowing column to meter:  
(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 2 psi (f)  
Seven day average static meter pressure (from meter chart):  
Normal chart average reading                      psig + 12 =                      psia (g)  
Square root chart average reading (7.73)<sup>2</sup> x sp. const. 10 = 597 psia (g)  
Corrected seven day ave. meter press. (p<sub>f</sub>) (g) + (e) = 592 psia (h)  
P<sub>t</sub> = (h) + (f) = 594 psia (i)  
Wellhead casing shut-in pressure (Dwt) 1034 psig + 12 = 1046 psia (j)  
Wellhead tubing shut-in pressure (Dwt) 1034 psig + 12 = 1046 psia (k)  
P<sub>c</sub> = (j) or (k) whichever well flowed through = 1046 psia (l)  
Flowing Temp. (Meter Run) 46 °F + 460 = 506 °Abs (m)  
P<sub>d</sub> = 1/2 P<sub>c</sub> = 1/2 (l) = 523 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{775}{(\text{integrated})} \times \left( \frac{\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{24.34}{24.43} = .9958}{\sqrt{d}} \right)^* = 772 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{772}{\left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{820587}{732271} \right]^n \cdot 1.1011} = 850 \text{ MCF/da.}$$

SUMMARY

P<sub>c</sub> = 1046 psia  
Q = 772 Mcf/day  
P<sub>w</sub> = 601 psia  
P<sub>d</sub> = 523 psia  
D = 850 Mcf/day

Company HONOLULU OIL CORPORATION  
By 223 Evans  
Title Division Oil Engineer  
Witnessed by Carl Jerson  
Company Southern Union Gas Company

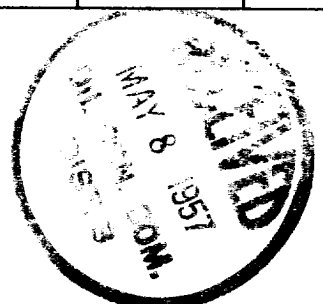
- \* This is date of completion test.
- \* Meter error correction factor

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> |
|------|----------------------|---------------------------------|------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------|----------------|
| 5283 | .171                 | 52.68                           | 9.008                                                                  | 352.836                                   | 361.844                                      | 601            |

P<sub>o</sub> - 9.402  
P<sub>o</sub> x Q - 7,258

*Handwritten signature*



| OIL CONSERVATION COMMISSION |                  |   |
|-----------------------------|------------------|---|
| AZTEC DISTRICT OFFICE       |                  |   |
| No. Copies Received         |                  | 3 |
| DISTRIBUTION                |                  |   |
|                             | NO.<br>FURNISHED |   |
| Operator                    |                  |   |
| Santa Fe                    | 1                |   |
| Proration Office            | 1                |   |
| State Land Office           |                  |   |
| U. S. G. S.                 | 1                |   |
| Transporter                 |                  |   |
| File                        | 1                | ✓ |