

3 NMOCC —
5 Austral
1 EPNG
1 File

Initial Deliverability
Test

Form C-122-A
Revised April 20, 1955

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 - Dakota Formation Dakota County San Juan
Purchasing Pipeline El Paso Natural Gas Co. Date Test Filed 8-10-65
Operator Austral Oil Co. Lease Marshall Well No. 1
Unit F Sec. 14 Twp. 27N Rge. 9W Pay Zone: From 6574 To 6788
Casing: OD 4.5" WT. 10.5# Set At 6903 Tubing: OD 2 1/16 WT. 3.25 T. Perf. 6400
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .680 Estimated _____
Date of Flow Test: From 7-6-65 To 7-14-65 * Date S.I.P. Measured 10-28-64
Meter Run Size 4" Orifice Size 1.250 Type Chart S.P. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 558 psig + 12 = 570 psia (a)
Flowing tubing pressure (Dwt) 487 psig + 12 = 499 psia (b)
Flowing meter pressure (Dwt) 474 psig + 12 = 486 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (7.0)² x spring constant 10 = 490 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 = +13 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (_____)² x sp. const. = 490 psia (g)
Corrected seven day avge. meter press. (pf) (g) + (e) = 486 psia (h)
 $P_t = (h) + (f)$ = 499 psia (i)
Wellhead casing shut-in pressure (Dwt) 2035 psig + 12 = 2047 psia (j)
Wellhead tubing shut-in pressure (Dwt) 2035 psig + 12 = 2047 psia (k)
 $P_c = (j) \text{ or } (k) \text{ whichever well flowed through}$ = 2047 psia (l)
Flowing Temp. (Meter Run) _____ °F + 460 = _____ ° Abs (m)
 $P_d = \frac{1}{2} P_c = \frac{1}{2} (l)$ = 1024 psia (n)

FLOW RATE CALCULATION

$Q = \frac{860}{(\text{integrated})} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\sqrt{.9918}}{\sqrt{.9959}} = .9959 \right) = 856 \text{ MCF/day}$

DELIVERABILITY CALCULATION

$D = Q \frac{856}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{3,141,633}{3,906,404} \right]^{.75} \cdot .8492} = 727 \text{ MCF/day}$
(.8042)^{.75}

SUMMARY

$P_c = 2047$ psia
 $Q = 856$ Mcf/day
 $P_w = 533$ psia
 $P_d = 1024$ psia
 $D = 727$ Mcf/day

Company Austral Oil Co.
By J. A. Dwyer (J. A. D.)
Title Consulting 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
4352	.271	128.427	34.804	219,001	283,805	533

R $F_c = 13.239$

