

3 NMOCC ✓
6 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 Charles Well No. 2
Unit F Sec. 12 Twp. 27N Rge. 9W Pay Zone: From 6422 To 6650
Casing: OD 4 1/2" WT. 10.5# Set At 6735 Tubing: OD 1 1/2" WT. 2.1# T. Perf. 6362
Produced Through: Casing _____ Tubing X Gas Gravity: Measured .640 Estimated _____
Date of Flow Test: From 7-6-65 To 7-14-65 * Date S.I.P. Measured 3-18-65
Meter Run Size 4" Orifice Size 1.250 Type Chart S.R. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 595 psig + 12 = 607 psia (a)
Flowing tubing pressure (Dwt) 482 psig + 12 = 494 psia (b)
Flowing meter pressure (Dwt) 469 psig + 12 = 481 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) ± = -9 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. (p_f) (g) + (e) = 481 psia (h)
P_t = (h) + (f) = 494 psia (i)
Wellhead casing shut-in pressure (Dwt) 2106 psig + 12 = 2118 psia (j)
Wellhead tubing shut-in pressure (Dwt) 2102 psig + 12 = 2114 psia (k)
P_c = (j) or (k) whichever well flowed through = 2118 psia (l)
Flowing Temp. (Meter Run) _____ °F + 460 = _____ °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 1059 psia (n)

FLOW RATE CALCULATION
Q = 815 x $\left(\frac{\sqrt{P_c} - \sqrt{P_d}}{\sqrt{P_c} - \sqrt{P_w}} \right)^2 = \frac{815}{\sqrt{2118} - \sqrt{1059}} = \frac{815}{\sqrt{.9816}} = \frac{815}{.9908} = \underline{808} \text{ MCF/day}$
(Integrated)

DELIVERABILITY CALCULATION
D = Q 808 $\left[\frac{(P_c^2 - P_d^2)^{.75}}{(P_c^2 - P_w^2)^{.75}} \right] = \frac{808 \cdot 3,364,443^{.75}}{4,140,581^{.75}} = \frac{808 \cdot .8559}{(.8126)^{.75}} = \underline{692} \text{ MCF/day}$

SUMMARY
P_c = 2118 psia
Q = 808 Mcf/day
P_w = 588 psia
P_d = 1059 psia
D = 692 Mcf/day

Company Austral Oil Co.
By T. A. Dugan Jr.
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
4072	.256	395.729	101.307	244.036	345,343	588

F_c = 24.62

