3 NMOCC
5 Austral
1 El Paso
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. 3

Unit F Sec. 1 Twp. 27N Rge. 9W Pay Zone: From 6419 To 6634

Casing: OD 4½" WT. 10.5 Set At 6682 Tubing: OD 2 1/16" WT. 3.25# T. Perf. 6400

Produced Through: Casing ____ Tubing X Gas Gravity: Measured .658 Estimated ____

Date of Flow Test: From 7-6-65 To 7-14-65 * Date S.I.P. Measured 2-27-65

Meter Run Size 4" Orifice Size 1.250 Type Chart S.R. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt)	561 psig + 12 =	573	psia	(a)
Flowing tubing pressure (Dwt)	492 psig + 12 =	504	psia	(b)
Flowing meter pressure (Dwt)	475 psig + 12 =	487	psia	(c)
Flowing meter pressure (meter reading when Dwt. measurement taken:				
Normal chart reading	psig + 12 =		psia	(d)
Square root chart reading (6.95)² x spring constant 10	=	483	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	=	+17	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.	=	483	psia	(g)
Corrected seven day avge. meter press. (p_f) (g) + (e)	=	487	psia	(h)
P_t = (h) + (f)	=	504	psia	(i)
Wellhead casing shut-in pressure (Dwt) 2137	psig + 12 =	2149	psia	(j)
Wellhead tubing shut-in pressure (Dwt) 2141	psig + 12 =	2153	psia	(k)
P_c = (j) or (k) whichever well flowed through	=	2153	psia	(l)
Flowing Temp. (Meter Run) ____ °F + 460	=		°Abs	(m)
P_d = ½ P_c = ½ (l)	=	1076	psia	(n)

FLOW RATE CALCULATION

$$Q = 875 \text{ (integrated)} \times \left(\frac{\sqrt{h_w}}{\sqrt{(d)}} = \frac{\sqrt{1.0083}}{\quad} = 1.0041 \right)^{*} = 879 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q\,879 \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{3,477,633}{4,345,642} \right]^{n} \quad n = .75$$

$$\frac{.8461}{(.8003)^{.75}} = 744 \text{ MCF/da.}$$

SUMMARY

P_c =	2153	psia
Q =	879	Mcf/day
P_w =	538	psia
P_d =	1076	psia
D =	744	Mcf/day

Company Austral Oil Co.
By J. A. Unger (JAU)
Title Consulting Engineer
Witnessed by ____
Company ____

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

REMARKS OR FRICTION CALCULATIONS

GL	$(1-e^{-s})$	$(F_cQ)^2$	$\frac{(FcQ)^2 (1-e^{-s})}{R^2}$	Pt^2 (Column i)	$P_t^2 + R^2$	P_w
4211	.264	135.421	35.751	254.016	289.767	538

Fc = 13.239

RECEIVED
AUG 11 1965
OIL CON. COM.
DIST. 3