3 NMOCC
1 Austral
1 El Paso (Kendrick)
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 ~~#1~~ El Paso Natural Gas Co. Date Test Filed 9/22/65

Operator Austral Oil Co. Lease Bunny Well No. 2

Unit O Sec. 11 Twp. 27N Rge. 9W Pay Zone: From 6394 To 6604

Casing: OD 4½" WT. 10.5# Set At 6624 Tubing: OD 2 1/16 WT. ____ T. Perf. 6500

Produced Through: Casing ____ Tubing X Gas Gravity: Measured .660 Estimated ____

Date of Flow Test: From 8-31-65 To 9-8-65 * Date S.I.P. Measured ~~8~~ 2-26-65

Meter Run Size 4" Orifice Size 1.500 Type Chart S.P. Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt)	600 psig + 12 =	612 psia	(a)
Flowing tubing pressure (Dwt)	502 psig + 12 =	514 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 (7.0)² x spring constant 10	=	490 psia	(d)
Meter error (c) - (d) or (d) - (c) ±	=	-3 psi	(e)
Friction loss, Flowing column to meter: (b) - (c) Flow through tubing: (a) - (c) Flow through casing	=	+27 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)	=	487 psia	(h)
P_t = (h) + (f)	=	514 psia	(i)
Wellhead casing shut-in pressure (Dwt) 2126	psig + 12 =	2138 psia	(j)
Wellhead tubing shut-in pressure (Dwt) 2120	psig + 12 =	2132 psia	(k)
P_c = (j) or (k) whichever well flowed through	=	2138 psia	(l)
Flowing Temp. (Meter Run) ____ °F + 460	=	°Abs	(m)
P_d = ½ P_c = ½ (l)	=	1069 psia	(n)

FLOW RATE CALCULATION

$$Q = 961 \text{ (integrated)} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{\sqrt{.9939}}{\quad} = .9969 \right)^{*} = 958 \text{ MCF/da.}$$

DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{3,428,283}{4,263,738} \right]^{n} = 958 \times \frac{.8491}{(.8041)^{.75}} = 813 \text{ MCF/da.}$$

n = .75

SUMMARY

P_c =	2138	psia
Q =	958	Mcf/day
P_w =	554	psia
P_d =	1069	psia
D =	813	Mcf/day

Company Austral Oil Co.
By J. D. Duggan
Title Consulting Engineer
Witnessed by ____
Company ____

RECEIVED
SEP 23 1965
OIL CON. COM.
DIST. 3

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

REMARKS OR FRICTION CALCULATIONS

GL	$(1-e^{-s})$	$(F_cQ)^2$	$\frac{(FcQ)^2 \quad (1-e^{-s})}{R^2}$	P_t^2 (Column i)	$P_t^2 + R^2$	P_w
4290	.268	160.857	43.110	264.196	307.306	554

Fe = 13.239