Form C-122-A
Revised April 20, 1955

Initial Deliverability Test

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 So. Blanco P.C. Formation Pictured Cliffs County San Juan

Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 1-14-59

Operator Western Natural Gas Company Lease Graham Well No. 3

Unit O Sec. 10 Twp. 27-N Rge. 8-W Pay Zone: From 2134 To 2166

Casing: OD 5½" WT. 15.5# Set At 2227 Tubing: OD 2 3/8" WT. 4.70# T. Perf. 2132'

Produced Through: Casing ____ Tubing X Gas Gravity: Measured 0.639 Estimated ____

Date of Flow Test: From 12-22-58 To 12-30-58 * Date S.I.P. Measured 10-28-58

Meter Run Size 4.026 Orifice Size 2.250" Type Chart L-10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt)	298 psig + 12 =	310	psia	(a)
Flowing tubing pressure (Dwt)	265 psig + 12 =	277	psia	(b)
Flowing meter pressure (Dwt)	263 psig + 12 =	275	psia	(c)
Flowing meter pressure (meter reading when Dwt. measurement taken:				
Normal chart reading	psig + 12 =		psia	(d)
Square root chart reading (7.33)^2 x spring constant 5	=	268.6	psia	(d)
Meter error (c) - (d) or (d) - (c)	± =	+6.4	psi	(e)
Friction loss, Flowing column to meter:				
(b) - (c) Flow through tubing: (a) - (c) Flow through casing	=	2.0	psi	(f)
Seven day average static meter pressure (from meter chart):				
Normal chart average reading	psig + 12 =		psia	(g)
Square root chart average reading (7.30)^2 x sp. const. 5	=	266.5	psia	(g)
Corrected seven day avge. meter press. (p_f) (g) + (e)	=	272.9	psia	(h)
P_t = (h) + (f)	=	274.9	psia	(i)
Wellhead casing shut-in pressure (Dwt) 795	psig + 12 =	807	psia	(j)
Wellhead tubing shut-in pressure (Dwt) 795	psig + 12 =	807	psia	(k)
P_c = (j) or (k) whichever well flowed through	=	807	psia	(l)
Flowing Temp. (Meter Run) 70 °F + 460	=	530	°Abs	(m)
P_d = ½ P_c = ½ (l)	=	403.5	psia	(n)

FLOW RATE CALCULATION

$$Q = 1,231 \text{ (integrated)} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{16.58}{16.39} = 1.012 \right)^{*} = 1246 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q\,1246 \left[\frac{P_c^2 - P_d^2 = 488,437}{P_c^2 - P_w^2 = 562,802} \right]^{n} = (0.8679)^{.85} = (0.8867) = 1,105 \text{ MCF/da.}$$

SUMMARY

P_c =	807	psia
Q =	1246	Mcf/day
P_w =	297.4	psia
P_d =	403.5	psia
D =	1,105	Mcf/day

Company Western Natural Gas Company
By Calvin M. Rayner
Title Petroleum Engineer
Witnessed by ____
Company ____

RECEIVED
JAN 15 1959
OIL CON. COM.
DIST. 3

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

REMARKS OR FRICTION CALCULATIONS

GL	$(1-e^{-s})$	$(F_cQ)^2$	$\frac{(FcQ)^2 \quad (1-e^{-s})}{R^2}$	Pt^2 (Column i)	$P_t^2 + R^2$	P_w
1362	.094	137.22	12.90	75.57	88.47	297.4