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 UNDESIGNATED Formation DAKOTA County RIO ARRIBA

Purchasing Pipeline EL PASO NATURAL GAS CO. Date Test Filed JULY 25, 1960

Operator NORTHWEST PRODUCTION CORPORATION Lease "W" Well No. 2-5

Unit B Sec. 5 Twp. 26N Rge. 5W Pay Zone: From 7464 To 7572

Casing: OD 5-1/2 WT. 14, 15.5 & 17 Set At 7678 Tubing: OD 1-1/4 & 1-3/8 WT. 2.3 & 4.7 T. Perf. 7416

Produced Through: Casing ____ Tubing X Gas Gravity: Measured .664 Estimated ____

Date of Flow Test: From 6-29-60 To 7-7-60 * Date S.I.P. Measured 7-14-60

Meter Run Size 2 Orifice Size 0.500 Type Chart L-10 Type Taps F1

OBSERVED DATA

Flowing casing pressure (Dwt)	____ psig + 12 =	____	psia	(a)
Flowing tubing pressure (Dwt)	522 psig + 12 =	534	psia	(b)
Flowing meter pressure (Dwt)	520 psig + 12 =	532	psia	(c)
Flowing meter pressure (meter reading when Dwt. measurement taken):				
Normal chart reading	____ psig + 12 =	____	psia	(d)
Square root chart reading (7.3)^2 x spring constant 10.00	=	533	psia	(d)
Meter error (c) - (d) or (d) - (c) ±	=	-1	psi	(e)
Friction loss, Flowing column to meter:				
(b) - (c) Flow through tubing: (a) - (c) Flow through casing	=	2	psi	(f)
Seven day average static meter pressure (from meter chart):				
Normal chart average reading	____ psig + 12 =	____	psia	(g)
Square root chart average reading (7.4)^2 x sp. const. 10.00	=	548	psia	(g)
Corrected seven day avge. meter press. (p_f) (g) + (e)	=	547	psia	(h)
P_t = (h) + (f)	=	549	psia	(i)
Wellhead casing shut-in pressure (Dwt)	____ psig + 12 =	____	psia	(j)
Wellhead tubing shut-in pressure (Dwt)	1268 psig + 12 =	1280	psia	(k)
P_c = (j) or (k) whichever well flowed through	=	1280	psia	(l)
Flowing Temp. (Meter Run) 73 °F + 460	=	533	°Abs	(m)
P_d = ½ P_c = ½ (l)	=	640	psia	(n)

FLOW RATE CALCULATION

$$Q = 141 \text{ (integrated)} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{23.065}{23.087} = 0.999 \right)^{*} = 141 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q\,141 \left[\frac{P_c^2 - P_d^2 = 1,228,800}{P_c^2 - P_w^2 = 1,224,206} \right]^{n} \frac{0.9401}{(0.99083)^2} = \text{____ MCF/da}$$

RECEIVED
JUL 28 1960
OIL CON. COM.
DIST. 3

SUMMARY

P_c =	1280	psia	
Q =	141	Mcf/day	
P_w =	551	psia	
P_d =	640	psia	
D =	133	Mcf/day	

Company NORTHWEST PRODUCTION CORPORATION
By ____
Title Ray Phillips, Mgr., Prod. Oper.
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
*1756	0.120	1.758	211	301,401	304,094	551.4
**3168	0.206	12.048	2,482			
			2,693			

*Pc = 9.402 (2645' of 2-3/8" tbg)
**Pc = 24.62 (4771' of 1-1/4" tbg)

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GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA EXCEPT BARKER DOME STORAGE AREA)

Pool BLANCO Formation MESAVERDE County RIO ARRIBA

Purchasing Pipeline EL PASO NATURAL GAS CO. Date Test Filed JULY 25, 1960

Operator NORTHWEST PRODUCTION CORPORATION Lease "W" Well No. 2-S

Unit B Sec. 5 Twp. 26N Rge. 5W Pay Zone: From 4820 To 5426

Casing: OD 5-1/2 WT. 14, 15.5, 17 Set At 7678 Tubing: OD 1-1/4 2-7/8 WT. 2.3 6.5 T. Perf. 4820

Produced Through: Casing ____ Tubing X Gas Gravity: Measured .653 Estimated ____

Date of Flow Test: From 6-29-60 To 7-7-60 * Date S.I.P. Measured 7-14-60

Meter Run Size 2 Orifice Size 1.000 Type Chart L-10 Type Taps FL

OBSERVED DATA

Flowing casing pressure (Dwt)	____ psig + 12 =	____	psia	(a)
Flowing tubing pressure (Dwt)	524 psig + 12 =	536	psia	(b)
Flowing meter pressure (Dwt)	520 psig + 12 =	532	psia	(c)
Flowing meter pressure (meter reading when Dwt. measurement taken:				
Normal chart reading	____ psig + 12 =	____	psia	(d)
Square root chart reading (5.95)^2 x spring constant	15.00 =	531	psia	(d)
Meter error (c) - (d) or (d) - (c)	± =	1	psi	(e)
Friction loss, Flowing column to meter:				
(b) - (c) Flow through tubing: (a) - (c) Flow through casing	=	4	psi	(f)
Seven day average static meter pressure (from meter chart):				
Normal chart average reading	____ psig + 12 =	____	psia	(g)
Square root chart average reading (6.00)^2 x sp. const.	15.00 =	540	psia	(g)
Corrected seven day avge. meter press. (p_f) (g) + (e)	=	541	psia	(h)
P_t = (h) + (f)	=	545	psia	(i)
Wellhead casing shut-in pressure (Dwt)	____ psig + 12 =	____	psia	(j)
Wellhead tubing shut-in pressure (Dwt)	897 psig + 12 =	909	psia	(k)
P_c = (j) or (k) whichever well flowed through	=	909	psia	(l)
Flowing Temp. (Meter Run)	68 °F + 460 =	528	°Abs	(m)
P_d = ½ P_c = ½ (l)	=	455	psia	(n)

FLOW RATE CALCULATION

$$Q = \underset{\text{(integrated)}}{965} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{23.065}{23.043} = 1.001 \right)^{*} = 966 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{619,256}{444,371} \right]^{n} \frac{1.2826}{(1.3936)^{n}} = 1265 \text{ MCF/da}$$

RECEIVED
JUL 28 1960
OIL CON. COM.
DIST. 3

SUMMARY

P_c =	909	psia
Q =	966	Mcf/day
P_w =	618	psia
P_d =	455	psia
D =	1265	Mcf/day

Company NORTHWEST PRODUCTION CORPORATION
By ____
Title Ray Phillips, Mgr., Prod. Dept.
Witnessed by ____
Company ____

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

REMARKS OR FRICTION CALCULATIONS

GL	$(1-e^{-s})$	$(F_cQ)^2$	$\frac{(FcQ)^2}{R^2}$ $(1-e^{-s})$	Pt^2 (Column i)	$P_t^2 + R^2$	P_w
*3115	0.203	418.121	84,879			
** 32	0.002	3.059	6	297,025	381,910	618
			84,885			

*Fc = 20.738 (4771' tbg-tbg ann.)
**Fc = 1.774 (49' tbg-csg ann.)