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__**Wildcat**__ Formation __**Pictured Cliffs**__ County__**San Juan**__

Purchasing Pipeline__**El Paso Natural Gas Company**__ Date Test Filed__**6-28-57**__

Operator__**Northwest Production Corp.**__ Lease__**Blanco 30-12**__ Well No.__**5-9**__

Unit__**P**__ Sec.__**9**__ Twp.__**30N**__ Rge.__**12W**__ Pay Zone: From__**1982**__ To__**1992**__

Casing: OD__**4½**__ WT.__**9.5**__ Set At__**2061**__ Tubing: OD__**1½**__ WT.__**2.3**__ T. Perf._____

Produced Through: Casing_____ Tubing__**X**__ Gas Gravity: Measured__**.660**__ Estimated_____

Date of Flow Test: From__**3-17-57**__ To__**3-24-37**__ *Date S.I.P. Measured__**3-22-57**__

Meter Run Size__**2"**__ Orifice Size__**0.625**__ Type Chart_____ Type Taps_____

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)

Flowing tubing pressure (Dwt) _____ psig + 12 = _____ psia (b)

Flowing meter pressure (Dwt) _____ psig + 12 = _____ psia (c)

Flowing meter pressure (meter reading when Dwt. measurement taken:

Normal chart reading _____ psig + 12 = _____ psia (d)

Square root chart reading (_____) ^{2} x spring constant _____ = _____ psia (d)

Meter error (c) - (d) or (d) - (c) ± = _____ psi (e)

Friction loss, Flowing column to meter:

(b) - (c) Flow through tubing: (a) - (c) Flow through casing = _____ psi (f)

Seven day average static meter pressure (from meter chart):

Normal chart average reading __**405**__ psig + 12 = __**417**__ psia (g)

Square root chart average reading (_____) ^{2} x sp. const. _____ = _____ psia (g)

Corrected seven day avge. meter press. (p_f) (g) + (e) = _____ psia (h)

P_t = (h) + (f) = __**417**__ psia (i)

Wellhead casing shut-in pressure (Dwt) __**623**__ psig + 12 = __**635**__ psia (j)

Wellhead tubing shut-in pressure (Dwt) __**624**__ psig + 12 = __**636**__ psia (k)

P_c = (j) or (k) whichever well flowed through = __**636**__ psia (l)

Flowing Temp. (Meter Run) __**59**__ °F + 460 = _____ °Abs (m)

P_d = ½ P_c = ½ (l) = __**318**__ psia (n)

FLOW RATE CALCULATION

$$Q = \underset{\text{(integrated)}}{\underline{\text{115}}} \quad X \quad \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \underline{\quad} = \underline{\quad} \right)^* = \underline{\quad} \text{MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q\,\underline{\text{115}} \left[\frac{\left(P_c^2 - P_d^2\right) = \underline{303.372}}{\left(P_c^2 - P_w^2\right) = \underline{229.939}} \right]^n \underline{1.2645} = \underline{145} \text{ MCF/da.}$$

SUMMARY

P_c = __**636**__ psia

Q = __**115**__ Mcf/day

P_w = __**417.8**__ psia

P_d = ~~318~~ __318__ psia

D = ~~145~~ __145__ Mcf/day

Company__**Northwest Production Corp.**__

By__**Ray Phillips**__ RAY PHILLIPS

Title__**Asst. Mgr. Prod Opr**__

Witnessed by_____

Company_____

* This is date of completion test.

* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	$(1-e^{-S})$	$(F_cQ)2$	$\dfrac{(F_cQ)^2}{R^2}$ $(1-e^{-S})$	Pt^2 (Column i)	$P_t^2 + R^2$	P_w
1294	0.090	8.015	.721	173.839	174.610	417.8