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 __**Basin**__ Formation __**Dakota**__ County __**San Juan**__

Purchasing Pipeline __**El Paso Natural Gas Company**__ Date Test Filed __**February 10, 1961**__

Operator __**Aztec Oil and Gas company**__ Lease __**Ingred**__ Well No. __**5**__

Unit __**P**__ Sec. __**29**__ Twp. __**29**__ Rge. __**13**__ Pay Zone: From __**6194**__ To __**6205**__

Casing: OD __**4**__ WT. __**9.50**__ Set At __**6350**__ Tubing: OD __**2 3/8**__ WT. __**4.70**__ T. Perf. __**6051**__

Produced Through: Casing _____ Tubing __**X**__ Gas Gravity: Measured __**0.653**__ Estimated _____

Date of Flow Test: From __**1/1**__ To __**1/8**__ *Date S.I.P. Measured __**4/22/60**__

Meter Run Size __**4**__ Orifice Size __**1.250**__ Type Chart __**SN**__ Type Taps __**F**__

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 _____ psig + 12 = _____ psia (g)

Square root chart average reading (__**7.05**__)^2 x sp. const. __**10**__ = __**497**__ psia (g)

Corrected seven day avge. meter press. (p$_f$) (g) + (e) = __**497**__ psia (h)

P_t = (h) + (f) = __**497**__ psia (i)

Wellhead casing shut-in pressure (Dwt) __**2035**__ psig + 12 = __**2047**__ psia (j)

Wellhead tubing shut-in pressure (Dwt) __**2032**__ psig + 12 = __**2044**__ psia (k)

P_c = (j) or (k) whichever well flowed through = __**2047**__ psia (l)

Flowing Temp. (Meter Run) __**60**__ °F + 460 = __**520**__ °Abs (m)

P_d = ½ P_c = ½ (l) = __**1024**__ psia (n)

FLOW RATE CALCULATION

$$Q = \underline{\textbf{55}} \times \left(\frac{\sqrt{(c)}}{\sqrt{(d)}} = \_\_\_\_ = \_\_\_\_ \right)^* = \underline{\textbf{55}} \ MCF/da$$

(integrated)

DELIVERABILITY CALCULATION

$$D = Q \underline{\textbf{55}} \left[\frac{\left(P_c^2 - P_d^2\right) = \textbf{3141633}}{\left(P_c^2 - P_w^2\right) = \textbf{3943900}} \right]^{n \ \textbf{0.73}}_{\textbf{0.8433}} = \underline{\textbf{46}} \ MCF/da.$$

SUMMARY

P_c = __**2047**__ psia

Q = __**55**__ Mcf/day

P_w = __**497**__ psia

P_d = __**1024**__ psia

D = __**46**__ Mcf/day

Company __**Aztec Oil and Gas Company**__

By __ORIGINAL SIGNED BY L. M. STEVENS__

Title __**L. M. Stevens, Dist. Engr.**__

Witnessed by _____

Company _____

* This is date of completion test.

* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e^{-s})	(F$_c$Q)2	$\dfrac{(F_cQ)^2 \quad (1-e^{-s})}{R^2}$	$\dfrac{P_t^2}{\text{(Column i)}}$	$P_t^2 + R^2$	P_w