

Initial Deliverability
Test
After workover

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 Arden Formation Richard Cliff County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 3-4-57
Operator John Petroleum Corporation Lease State Well No. 21
Unit I Sec. 36 Twp. 38N Rge. 12W Pay Zone: From 2742 To 2732
Casing: OD 2 1/2 WT. 14 & 15 Set At 2732 Tubing: OD 1" WT. 1.7 T. Perf. 2730
Produced Through: Casing Tubing I Gas Gravity: Measured .650 Estimated
Date of Flow Test: From 2-2-57 To 2-16-57 * Date S.I.P. Measured 2-23-57
Meter Run Size 1" Orifice Size 1/4 Type Chart Eq. 10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 235 psig + 12 = 247 psia (a)
Flowing tubing pressure (Dwt) 229 psig + 12 = 241 psia (b)
Flowing meter pressure (Dwt) 229 psig + 12 = 241 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading psig + 12 = psia (d)
Square root chart reading (6.65)² x spring constant 5 = 221 psia (d)
Meter error (c) - (d) or (d) - (c) ± = 0 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 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 (6.75)² x sp. const. 5 = 228 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) = 228 psia (h)
P_t = (h) + (f) = 228 psia (i)
Wellhead casing shut-in pressure (Dwt) 302 psig + 12 = 314 psia (j)
Wellhead tubing shut-in pressure (Dwt) 302 psig + 12 = 314 psia (k)
P_c = (j) or (k) whichever well flowed through = 314 psia (l)
Flowing Temp. (Meter Run) 120 °F + 460 = 580 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 157 psia (n)

Q = 90 X $\left(\frac{\text{FLOW RATE CALCULATION}}{\sqrt{(c)} = \frac{\sqrt{(d)}}{\sqrt{(d)}} = 1.0} \right)^* = \underline{90}$
(integrated)

D = Q 90 $\left[\frac{(P_c^2 - P_d^2) = \frac{10012}{10001}}{(P_c^2 - P_w^2) = \frac{10001}{10001}} \right]^n \frac{(1.105)^{.85} 1.105}{1.105} = \underline{90}$
DELIVERABILITY CALCULATION

SUMMARY
P_c = 314 psia
Q = 90 Mcf/day
P_w = 228 psia
P_d = 157 psia
D = 90 Mcf/day

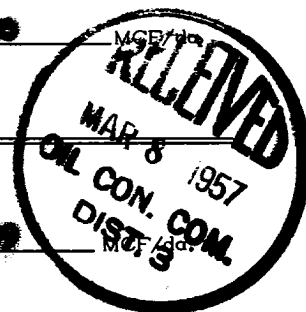
Company John Petroleum Corporation
By E. R. Russell, Jr.
Title Sgt. Tech. Insp.
Witnessed by Sam Johnston
Company John Petroleum Corp.

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

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-s})	(F _c Q) ²	(F _c Q) ² (1-e ^{-s}) R ²	P _t ² (Column i)	P _t ² + R ²	P _w
<u>157</u>	<u>.106</u>	<u>22,975</u>	<u>222</u>	<u>228</u>	<u>2365</u>	<u>233</u>

Intest after workover: to testing tubing. Well had only produced through casing prior to workover and it was logging off. It looked up flowing through tubing on this test.



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