

NEWFIELD OIL CONSERVATION COMPANY GAS WELL TEST DATA SHEET

DESIGNED FOR FRUITLAND, PICTURED CLIPAL, AND OTHERS, EXCEPT MARKER DOME STORMING

Pool W. 1/4 Sec. 34, T. 12N, R. 10E Formation W. 1/4 Sec. 34, T. 12N, R. 10E
 Purchasing Agency Continental Oil Company Date Test Made 2-11-42
 Operator Continental Oil Co. Lease W. 1/4 Sec. 34, T. 12N, R. 10E
 Unit 1 Sec. 34 Twp. 12N Rge. 10E Pay Zone From 100'
 Casing OD 2-1/2" WT. 7.30 Set At 3861 Tubing OD 2-1/2" WT. 7.30
 Produced Through: Casing XX Tubing XX Gas Gravity: Measured 0.75
 Date of Flow Test: From 2-3-42 To 2-11-42 Date S.I.P. Measured 2-11-42
 Meter Run Size 1.500 Orifice Size 1.500 Type Chart 1.500

OBSERVED DATA

Flowing casing pressure (Dwt) 547 psig + 12 = 559
 Flowing tubing pressure (Dwt) 511 psig + 12 = 523
 Flowing meter pressure (Dwt) 510 psig + 12 = 522
 Flowing meter pressure (meter reading when Dwt. measurement taken):
 Normal chart reading 7.2 psig + 12 = 534
 Square root chart reading (7.2)² x spring constant 1.5 = 77.76
 Meter error (c) - (d) or (d) - (c) ± 1.5
 Friction loss, Flowing column to meter:
 (b) - (c) Flow through tubing; (e) - (c) Flow through casing ± 1.5
 Seven day average static meter pressure (from meter chart):
 Normal chart average reading 7.2 psig + 12 = 534
 Square root chart average reading (7.2)² x sp. const. 1.5 = 77.76
 Corrected seven day avge. meter press. (p_g) (g) + (e) 534
 P_g = (g) + (e) 534
 Wellhead casing shut-in pressure (Dwt) 551 psig + 12 = 563
 Wellhead tubing shut-in pressure (Dwt) 550 psig + 12 = 562
 P_o = (1) or (2) whichever well flowed through 562
 Flowing Temp. (Meter Run) 64 °F + 460 = 524
 P_g = 1/2 P_o = 1/2 (1) 281

FLOW RATE CALCULATION

Q = 214 (Integrated) x $\left(\frac{\sqrt{(c)} - \sqrt{(d)}}{\sqrt{(d)}} \right) = \frac{22.247 - 1.003}{22.760} = \frac{21.244}{22.760} = 0.933$

DELIVERABILITY CALCULATION

D = Q 214 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \frac{21.244}{(1.146)} = 18.54$

SUMMARY

P_c 559 psia
 Q 214 Mcf/day
 P_w 562 psia
 P_d 562 psia
 D 18.54 Mcf/day
 Company Continental Oil Company
 By W. J. Smith
 Title Geologist
 Witnessed by W. J. Smith
 Company Continental Oil Company

* This is a test of the well.
 * Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

Q	(Q _o) ²	(FQ) ²	(FQ) ² (1 - e ⁻²)	R ²
214	45796	22.247	22.247	22.247



Initial Deliverability
TestForm C-122-A
Revised April 20, 1955NEW 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 Tropic Pictured Cliffs Formation Pictured Cliffs County Rio Arriba
Purchasing Pipeline Southern Union Gas Company Date Test Filed _____
Operator Southern Union Prod. Co. Lease Martinez Well No. 1
Unit N Sec. 2 Twp. 25-N Rge. 3-W Pay Zone: From 3781 To 3811
Casing: OD 3-1/2 WT. 9.30 Set At 3861 Tubing: OD 1-1/2" WT. 2.75 T. Perf. 3846
Produced Through: Casing _____ Tubing xx Gas Gravity: Measured .692 Estimated _____
Date of Flow Test: From 2-3-62 To 2-11-62 Date S.I.P. Measured 2-19-62
Meter Run Size 4.026 Orifice Size 1.500 Type Chart L-20 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 567 psig + 12 = 579 psia (a)
Flowing tubing pressure (Dwt) 513 psig + 12 = 525 psia (b)
Flowing meter pressure (Dwt) 510 psig + 12 = 522 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (7.2)² x spring constant _____ = 510 psia (d)
Meter error (c) - (d) or (d) - (c) _____ ± _____ = + 1 psi (e)
Friction loss, Flowing column to meter: _____ = + 3 psi (f)
(b) - (c) Flow through tubing: (a) - (c) Flow through casing
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. _____ = 518 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = 521 psia (h)
P_t = (h) + (f) _____ = 524 psia (i)
Wellhead casing shut-in pressure (Dwt) 851 psig + 12 = 863 psia (j)
Wellhead tubing shut-in pressure (Dwt) 850 psig + 12 = 862 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 862 psia (l)
Flowing Temp. (Meter Run) 64 °F + 460 _____ = 504 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) _____ = 431 psia (n)

$$Q = \frac{914}{(\text{integrated})} \times \left(\frac{\text{FLOW RATE CALCULATION}}{\frac{\sqrt{(c)}}{\sqrt{(d)}} = \frac{22.847}{22.760} = 1.0038} \right) = 917 \text{ MCF/day}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{917}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{557283}{\quad} \right]^n \frac{.85}{1.3348} = 1224 \text{ MCF/day}}$$

SUMMARY

P_c = 862 psia
Q = 917 Mcf/day
P_w = 508 psia
P_d = 431 psia
D = 1224 Mcf/day

Company Southern Union Production Company
By Verne Rockhold Original Signed By
Title Jr. Engineer VERNE ROCKHOLD
Witnessed by Verne Rockhold
Company Southern Union Gas Co.

- * 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
2537	.168	227.829	38.275	308.025	346.300	508

