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O. C. D.
ARTESIA, OFFICE

NEW MEXICO OIL CONSERVATION COMMSSION

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

| | | | | | |
|---|---|---|---|---|---|
| Type Test: ☐ Initial ☐ Annual ☒ Special | | | | Test Date: 8-31-82 | |
| Company: CITIES SERVICE COMPANY | | | Connection: EL PASO | | |
| Pool: BURTON FLAT Morrow | | | Formation: MORROW | | Unit |
| Completion Date: 4-8-82 | Total Depth: 11,205 | | Plug Back TD: 11165' | Elevation: 3284.8 | Farm or Lease Name: GOVERNMENT "AO" Com |
| Csg. Size: 5½" / Wt.: 17# 20# / d: 4.892 4.778 / Set At: 11,205 | | | Perforations: From 10,870 To 11074' | | Well No.: 1 |
| Tbg. Size: 2 7/8" / Wt.: 6.5# / d: 2.441 / Set At: 10,783 | | | Perforations: From OPEN To ENDED | | Unit: N / Sec.: 8 / Twp.: 20S / Rge.: 28E |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE | | | Packer Set At: 10,775' | | County: Eddy |
| Producing Thru: Tubing | Reservoir Temp. °F: 184 @ 11,018 | Mean Annual Temp. °F: 60° | Baro. Press. – $P_a$: 13.2 | | State: N.M. |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| 10783 | 10783 | .6217 | 1.455 | .464 | | | 4.026 | Flg. |

| | FLOW DATA | | | | | TUBING DATA | | CASING DATA | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NO. | Prover Line Size | X Orifice Size | Press. p.s.i.g. | Diff. $h_w$ | Temp. °F | Press. p.s.i.g. | Temp. °F | Press. p.s.i.g. | Temp. °F | Duration of Flow |
| SI | | | | | | 3190# | | PKR. | | 24 HRS. |
| 1. | 4.026 | x .500 | 578# | 42" | 98° | 3153 | 60° | | 60° | 1 HR. |
| 2. | 4.026 | x .500 | 578 | 53 | 100 | 3141 | 60 | | 60 | 1 Hr. |
| 3. | 4.026 | x .500 | 578 | 64 | 99 | 3136 | 60 | | 60 | 30 Min. |
| 4. | 4.026 | x .500 | 578 | 100 | 99 | 3123 | 60 | | 60 | 30 Min. |
| 5. | | | | | | | | | | |

## RATE OF FLOW CALCULATIONS

| NO. | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure $P_m$ | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
|---|---|---|---|---|---|---|---|
| 1 | 1.182 | 157.58 | 591.2# | .9653 | 1.268 | 1.046 | 238 |
| 2. | 1.182 | 177.01 | 591.2 | .9636 | 1.268 | 1.046 | 267 |
| 3. | 1.182 | 194.52 | 591.2 | .9645 | 1.268 | 1.046 | 294 |
| 4. | 1.182 | 243.15 | 591.2 | .9645 | 1.268 | 1.046 | 368 |
| 5. | | | | | | | |

| NO. | $P_t$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1. | .873 | 558 | 1.541 | .914 |
| 2. | .873 | 560 | 1.547 | .914 |
| 3. | .873 | 559 | 1.544 | .914 |
| 4. | .873 | 559 | 1.544 | .914 |
| 5. | | | | |

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .6217 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 675 P.S.I.A. P.S.I.A.
Critical Temperature: 364 R R

* $P_c$ 3252.0 $P_c^2$ 10608.0

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | 4152.2 | 3231.8 | 10444.5 | 163.5 |
| 2 | 4143.2 | 3224.8 | 10399.3 | 208.7 |
| 3 | 4135.2 | 3217.7 | 10353.6 | 254.4 |
| 4 | 4125.2 | 3208.9 | 10297.0 | 311.0 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 64.881$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 8.055$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.917$

Absolute Open Flow: 1,917 Mcfd @ 15.025 | Angle of Slope θ: 63.5 | Slope, n: .500

Remarks: Bottom Hole Pressures measured with a Kuster Gauge
Static B.H. Shut-in 4182.2
* Calculated from known bottom hole pressures.

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | J. Walker | R.R. | R.R. |