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File ✓  
C-122 File

NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

RECEIVED

OCT 6 1980

|                                                                            |                    |                                 |                                 |                                             |                     |                                            |                      |                                         |                  |                  |  |
|----------------------------------------------------------------------------|--------------------|---------------------------------|---------------------------------|---------------------------------------------|---------------------|--------------------------------------------|----------------------|-----------------------------------------|------------------|------------------|--|
| <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Final |                    |                                 |                                 | Date: 9-23-80                               |                     |                                            |                      | Well No.:                               |                  |                  |  |
| Company: <b>BELCO PETROLEUM CORPORATION</b>                                |                    |                                 |                                 | Company: <b>EL PASO NATURAL GAS COMPANY</b> |                     |                                            |                      | Office: <b>O. C. D. ARTESIA, OFFICE</b> |                  |                  |  |
| Field: <b>NORTH LOVING <i>Morrow</i></b>                                   |                    |                                 |                                 | Field: <b>MORROW</b>                        |                     |                                            |                      | Field:                                  |                  |                  |  |
| Completion Date: <b>7-18-80</b>                                            |                    | Depth: <b>12,580</b>            |                                 | Depth: <b>12,539</b>                        |                     | Production: <b>3067 g</b>                  |                      | State: <b>GUITAR STATE COM.</b>         |                  |                  |  |
| 7" CSG.<br>5" LINER                                                        | Wt. 29.00<br>18.00 | d 6.184<br>4.25                 | Set 9660<br>9036-12,580         | Perforations: From 12,410 To 12,536         |                     | Well No.: <b>1</b>                         |                      |                                         |                  |                  |  |
| 2 3/8"                                                                     | Wt. 6.5<br>4.7     | d 3.093<br>2.593                | Set A8494<br>12,325             | Perforations: From OPEN To END              |                     | Unit: <b>H</b>                             |                      | Sec.: <b>19</b>                         | Twp.: <b>23S</b> | Rge.: <b>28E</b> |  |
| Type Well - Single - Broadhead - G.O. or G.O. Multiple                     |                    |                                 |                                 | Packer Set At: <b>12,325</b>                |                     |                                            |                      | County: <b>EDDY</b>                     |                  |                  |  |
| Producing Thru TUBING                                                      |                    | Reservoir Temp. °F: <b>197°</b> |                                 | Mean Annual Temp. °F: <b>60°</b>            |                     | Bare Press. - P <sub>g</sub> : <b>13.2</b> |                      | State: <b>NEW MEXICO</b>                |                  |                  |  |
| L: <b>12,283</b>                                                           | H: <b>12,283</b>   | G <sub>g</sub> : <b>.603</b>    | % CO <sub>2</sub> : <b>1.25</b> | % N <sub>2</sub> : <b>1.23</b>              | % H <sub>2</sub> S: | Prover:                                    | Meter Run: <b>4"</b> | Flange: <b>FLANGE</b>                   |                  |                  |  |

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |          |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|----------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  | Temp. °F |
| 1.        | 4 X 2,500        |   |              | 317             | 4.4                  | 62          | 3755            | 70          |                 |                  | 1 HOUR   |
| 2.        | 4 X 2,500        |   |              | 323             | 9.6                  | 60          | 3585            | 74          |                 |                  | 45 MIN.  |
| 3.        | 4 X 2,500        |   |              | 329             | 18.5                 | 55          | 3320            | 77          |                 |                  | 45 MIN.  |
| 4.        | 4 X 2,500        |   |              | 335             | 57.0                 | 52          | 3079            | 77          |                 |                  | 45 MIN.  |

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                      |                               |                                        |                        |
|---------------------------|-----------------------|------------------|-------------------------|----------------------|-------------------------------|----------------------------------------|------------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft | Gravity Factor F <sub>g</sub> | Super Compress. Factor F <sub>pv</sub> | Rate of Flow Q, Mscf/d |
| 1                         | 32.64                 | 38.12            | 330.2                   | .9981                | 1.288                         | 1.028                                  | 1644                   |
| 2                         | 32.64                 | 56.81            | 336.2                   | 1.000                | 1.288                         | 1.029                                  | 2458                   |
| 3                         | 32.64                 | 79.57            | 342.2                   | 1.005                | 1.288                         | 1.031                                  | 3466                   |
| 4                         | 32.64                 | 96.96            | 348.2                   | 1.008                | 1.288                         | 1.031                                  | 4236                   |

| NO. | P <sub>t</sub> | Temp. °F | γ <sub>g</sub> | γ <sub>l</sub> | Gas-Liquid Hydrocarbon Ratio <b>DRY</b> Mscf/bbl.                                        |  |  |  |
|-----|----------------|----------|----------------|----------------|------------------------------------------------------------------------------------------|--|--|--|
| 1   | .49            | 522      | 1.47           | .946           | App. Gravity of Liquid Hydrocarbons _____<br>Specific Gravity Separator Gas: <b>.603</b> |  |  |  |
| 2   | .50            | 520      | 1.47           | .945           | Specific Gravity Flowing Fluid: <b>X X X X X</b>                                         |  |  |  |
| 3   | .51            | 515      | 1.45           | .941           | Critical Pressure: <b>674</b> P.S.I.A.                                                   |  |  |  |
| 4   | .52            | 512      | 1.45           | .940           | Critical Temperature: <b>354</b> °R                                                      |  |  |  |

| NO. | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> - P <sub>t</sub> <sup>2</sup> | (1) $\frac{P_t^2}{P_w^2 - P_t^2} = \frac{2,726}{P_w^2 - P_t^2}$ | (2) $\left[ \frac{P_t^2}{P_w^2 - P_t^2} \right]^n = \frac{2,143}{P_w^2 - P_t^2}$ |
|-----|-----------------------------|-----------------------------|-----------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1   | 3776.0                      | 14258.2                     | 1655.5                                                    |                                                                 |                                                                                  |
| 2   | 3621.7                      | 13116.7                     | 2797.0                                                    |                                                                 |                                                                                  |
| 3   | 3385.7                      | 11463.0                     | 4450.7                                                    |                                                                 |                                                                                  |
| 4   | 3174.1                      | 10074.9                     | 5838.8                                                    |                                                                 |                                                                                  |

|                                                  |                                 |                       |
|--------------------------------------------------|---------------------------------|-----------------------|
| Absolute Open Flow: <b>9,076</b> Mscf/d @ 15.025 | Scale of Slope θ: <b>52.750</b> | Slope, n: <b>.760</b> |
|--------------------------------------------------|---------------------------------|-----------------------|

Remarks: **CALCULATED FROM KNOWN BOTTOM HOLE PRESSURES, MEASURED WITH A KUSTER GAUGE**

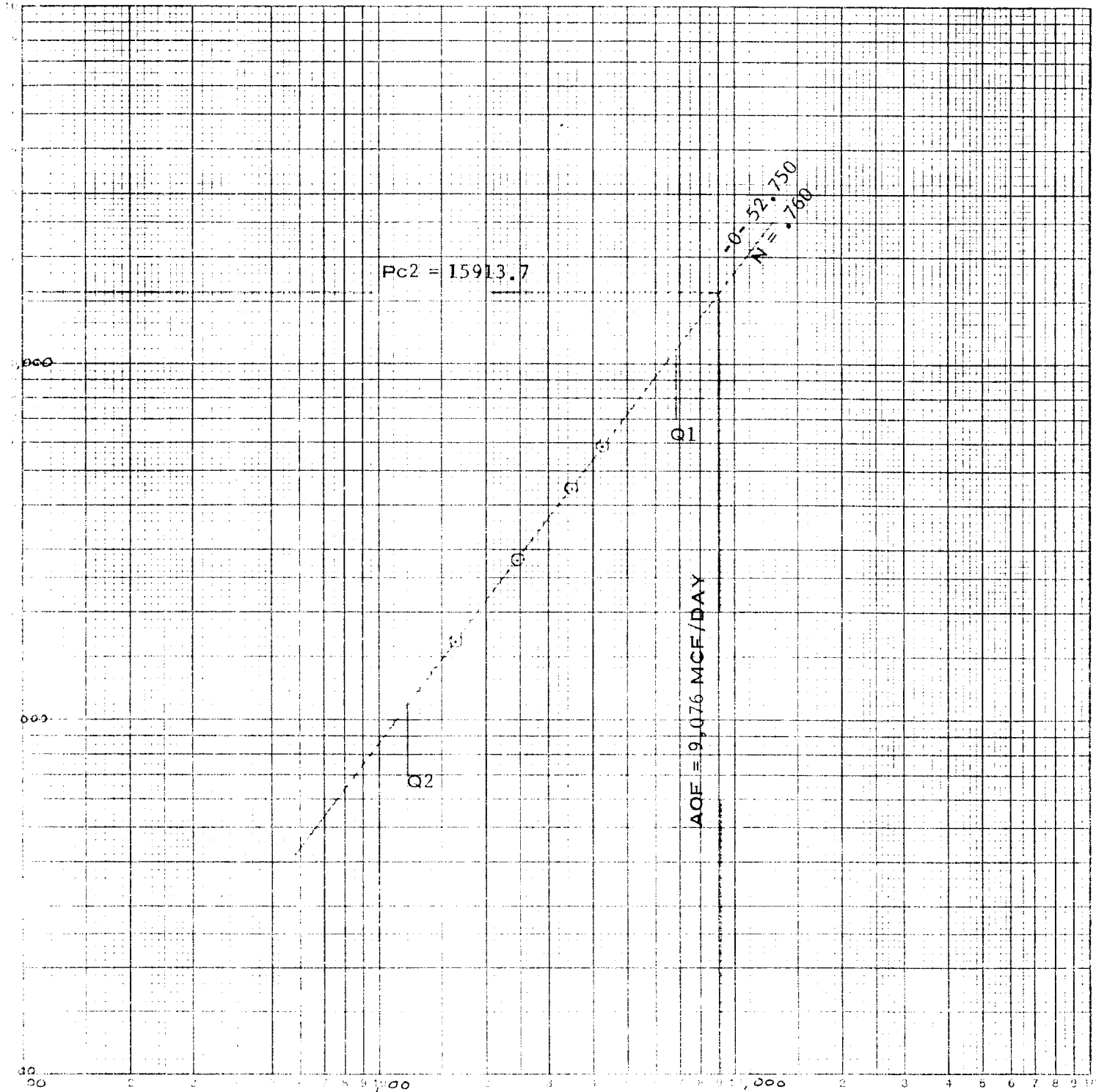
|                         |                            |                             |                             |
|-------------------------|----------------------------|-----------------------------|-----------------------------|
| Approved By Commission: | Conducted By: <b>M. B.</b> | Calculated By: <b>R. R.</b> | Checked By: <b>J. W. W.</b> |
|-------------------------|----------------------------|-----------------------------|-----------------------------|



BELCO PETROLEUM CORPORATION  
GUITAR STATE COM. No. 1

$$\begin{aligned} \text{ABS (N)} &= Q1 = 6905 = 3.839181 \\ &\quad Q2 = 1200 = 3.079181 \\ \hline N &= .760000 \end{aligned}$$

$$\text{CAOF} = 4236 \frac{(15913.7)^{.760}}{(5838.8)} = 9,076 \text{ MCF/DAY}$$



Q = MCF/DAY