

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

Form C-122  
 Revised 9-1-67

|                                                                                                                        |         |                               |                        |                                   |                         |                                    |             |                                   |          |
|------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------|------------------------|-----------------------------------|-------------------------|------------------------------------|-------------|-----------------------------------|----------|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |         |                               |                        |                                   |                         | Test Date 12-20-68                 |             | JAN 2 1969                        |          |
| Company YATES PETROLEUM CORP.                                                                                          |         |                               |                        | Connection NONE                   |                         |                                    |             | G.P.C. SANTA FE OFFICE            |          |
| Pool UNDESIGNATED                                                                                                      |         |                               |                        | Formation MORROW GAS              |                         |                                    |             | Unit 320                          |          |
| Completion Date 12-25-68                                                                                               |         | Total Depth 9415'             |                        | Plug Back TD 9415'                |                         | Elevation 3455' GL                 |             | Farm or Lease Name BOYD RANCH CO. |          |
| Csg. Size 2 7/8"                                                                                                       | Wt. 6.5 | d 2.441                       | Set At 9404'           | Perforations: From 9176' To 9196' |                         | Well No. 1                         |             |                                   |          |
| Thg. Size 2 7/8"                                                                                                       | Wt. 6.5 | d 2.441                       | Set At 9404'           | Perforations: From 9176' To 9196' |                         | Unit H                             | Sec. 15     | Twp. 19S                          | Rge. 25E |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE                                                         |         |                               |                        |                                   |                         | Packer Set At NONE                 |             | County EDDY                       |          |
| Producing Thru TUBING                                                                                                  |         | Reservoir Temp. °F 152 @ 9186 |                        | Mean Annual Temp. °F 60           |                         | Baro. Press. - P <sub>a</sub> 13.2 |             | State NEW MEXICO                  |          |
| L 9186                                                                                                                 | H -     | Gg 1.522                      | % CO <sub>2</sub> 0.72 | % N <sub>2</sub> 0.22             | % H <sub>2</sub> S 0.00 | Prover X                           | Meter Run - | Taps -                            |          |

  

| 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 |
| SI        |                  |     |              |                 |                      |             | 2925            |             |                 |                  | 41 DAYS  |
| 1.        | 2" 11/32         | 3/4 |              | 155             | -                    | 64          | 2142            | 50          | -               | -                | 2.0      |
| 2.        | 2" 10/32         | 3/4 |              | 125             | -                    | 64          | 2260            | 50          | -               | -                | 1.0      |
| 3.        | 2" 9/32          | 3/4 |              | 107             | -                    | 64          | 2355            | 50          | -               | -                | 1.0      |
| 4.        | 2" 8/32          | 3/4 |              | 80              | -                    | 66          | 2460            | 50          | -               | -                | 1.0      |
| 5.        |                  |     |              |                 |                      |             |                 |             |                 |                  |          |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                        |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1.                        | 0.453                 | -                | 138.2                   | .9962                            | 1.300                         | 1.013                                  | 2065                 |
| 2.                        | 0.453                 | -                | 138.2                   | .9962                            | 1.300                         | 1.011                                  | 1711                 |
| 3.                        | 0.453                 | -                | 120.2                   | .9962                            | 1.300                         | -                                      | 1772                 |
| 4.                        | 0.453                 | -                | 88.2                    | .9943                            | 1.300                         | -                                      | 1152                 |
| 5.                        |                       |                  |                         |                                  |                               |                                        |                      |

  

|     |                |          |                |       |                                       |              |
|-----|----------------|----------|----------------|-------|---------------------------------------|--------------|
| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio          | Mcf/bbl.     |
| 1.  | 0.25           | 524      | 1.49           | 0.970 | A.P.I. Gravity of Liquid Hydrocarbons | -            |
| 2.  | 0.30           | 524      | 1.49           | 0.970 | Specific Gravity Separator Gas        | .560         |
| 3.  | 0.18           | 524      | 1.49           | -     | Specific Gravity Flowing Fluid        | .560         |
| 4.  | 0.12           | 524      | 1.49           | -     | Critical Pressure                     | 675 P.S.I.A. |
| 5.  |                |          |                |       | Critical Temperature                  | 350 °R       |

  

|     |                             |                             |                                                           |                                           |                                                            |
|-----|-----------------------------|-----------------------------|-----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------|
| NO. | P <sub>r</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> - P <sub>r</sub> <sup>2</sup> | (1) $\frac{P_c^2}{P_r^2 - P_w^2} = 2.083$ | (2) $\left[ \frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 1.083$ |
| 1.  | -                           | 3512.2                      | 6223.6                                                    | 2.083                                     | 1.083                                                      |
| 2.  | -                           | 3432.2                      | 6221.1                                                    | 2.083                                     | 1.083                                                      |
| 3.  | -                           | 1983.2                      | 8780.8                                                    | 2.083                                     | 1.083                                                      |
| 4.  | -                           | 3000.2                      | 6605.0                                                    | 2.083                                     | 1.083                                                      |
| 5.  |                             |                             |                                                           |                                           |                                                            |

  

|                                                                                                                                                 |  |                        |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|---------------|
| Absolute Open Flow 4150 Mcfd @ 15.025                                                                                                           |  | Angle of Slope 46' 50' | Slope, n .933 |
| Remarks: * PWP @ (-5731') 9186' For Pressure Calculations                                                                                       |  |                        |               |
| Approved By Commission: <i>Joe A. Coleman</i> Conducted By: DOLEMAN PET. ENG. CO    Calculated By: JOE A. COLEMAN    Checked By: JOE A. COLEMAN |  |                        |               |