

NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOII AND ONE POINT BACK PRESSURE TEST FOR 3 WELL

Form C-122

*C/SF*

|                                                                                                                           |               |                               |                           |                                           |                            |                                   |
|---------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------|---------------------------|-------------------------------------------|----------------------------|-----------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |               |                               |                           |                                           | Test Date<br>1/12/2000     |                                   |
| Company<br>Yates Petroleum Corp                                                                                           |               |                               |                           | Connection<br>El Paso Natural Gas Company |                            |                                   |
| Pool<br>Los Medonas                                                                                                       |               |                               |                           | Formation<br>Wolfcamp, North              |                            | Unit                              |
| Completion Date<br>11/20/1999                                                                                             |               | Total Depth<br>14300          |                           | Plug Back TD<br>12800                     |                            | Elevation<br>3351                 |
| Farm or Lease Name<br>Llama ALL Federal                                                                                   |               |                               |                           |                                           |                            |                                   |
| Csg. Size<br>7.000                                                                                                        | Wt.<br>29.000 | d<br>6.184                    | Set At<br>11250           | Perforations:<br>From 11914 To 11942      |                            | Well No.<br>1                     |
| Tbg. Size<br>2.780                                                                                                        | Wt.<br>6.500  | d<br>2.441                    | Set At<br>11250           | Perforations:<br>From 11914 To 11942      |                            | Unit Sec. Twp. Rge<br>M 7 22S 31E |
| Type Well<br>Single                                                                                                       |               |                               |                           | Packer Set At<br>11250                    |                            | County<br>Eddy                    |
| Producing Thru<br>Tubing                                                                                                  |               | Resv. Temp. °F<br>185 @ 12856 |                           | Mean Temp. °F<br>62                       |                            | Baro. Press. - Pa<br>13.2         |
| State<br>New Mexico                                                                                                       |               |                               |                           |                                           |                            |                                   |
| L<br>11250                                                                                                                | H<br>11250    | Gg<br>0.650                   | %CO <sub>2</sub><br>1.500 | %N <sub>2</sub><br>0.200                  | %H <sub>2</sub> S<br>0.000 | Prover<br>0.000                   |
| Meter Run<br>4.000                                                                                                        |               | Taps<br>Flange                |                           |                                           |                            |                                   |

| FLOW DATA |                  |   |              |                 |              | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |          |
|-----------|------------------|---|--------------|-----------------|--------------|-------------|-----------------|-------------|-----------------|------------------|----------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. in. w. | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  | Temp. °F |
| Sl.       | 0.000            | x | 0.000        | 0               | 0.0          | 0           | 1440            | 0           |                 |                  | 0        |
| 1.        | 4.026            | x | 0.500        | 360             | 12.0         | 60          | 580             | 60          |                 |                  | 24       |
| 2.        | 4.026            | x | 0.500        | 360             | 13.0         | 60          | 507             | 60          |                 |                  | 24       |
| 3.        | 4.026            | x | 0.500        | 360             | 14.0         | 60          | 433             | 60          |                 |                  | 24       |
| 4.        | 4.026            | x | 0.500        | 360             | 14.0         | 60          | 360             | 60          |                 |                  | 24       |
| 5.        |                  | x |              |                 |              |             |                 |             |                 |                  |          |

| RATE OF FLOW CALCULATIONS |                       |                |                         |                      |                               |                                         |                      |
|---------------------------|-----------------------|----------------|-------------------------|----------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{hwP_m}$ | 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, Mcfd |
| 1.                        | 1.182                 | 66.9           | 373.2                   | 1.0000               | 1.240                         | 1.037                                   | 102                  |
| 2.                        | 1.182                 | 69.7           | 373.2                   | 1.0000               | 1.240                         | 1.037                                   | 106                  |
| 3.                        | 1.182                 | 72.3           | 373.2                   | 1.0000               | 1.240                         | 1.037                                   | 110                  |
| 4.                        | 1.182                 | 72.3           | 373.2                   | 1.0000               | 1.240                         | 1.037                                   | 110                  |
| 5.                        |                       |                |                         |                      |                               |                                         |                      |

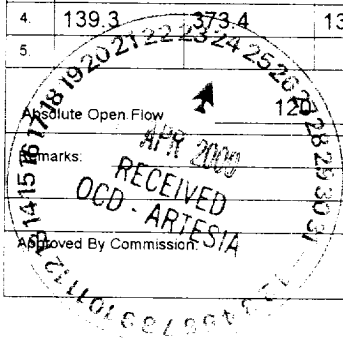
| NO. | Pr   | Temp °R | Tr   | Z     | Gas Liquid Hydrocarbon Ratio | A.P.I. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature | Mcf/bbl. | Deg. |
|-----|------|---------|------|-------|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|----------|------|
| 1.  | 0.55 | 520     | 1.41 | 0.931 | 0                            | 0.000                                 | 0.650                          | XXXXXXXXXX                     | 676               | 369                  | 0.650    |      |
| 2.  | 0.55 | 520     | 1.41 | 0.931 |                              |                                       |                                |                                |                   |                      |          |      |
| 3.  | 0.55 | 520     | 1.41 | 0.931 |                              |                                       |                                |                                |                   |                      |          |      |
| 4.  | 0.55 | 520     | 1.41 | 0.931 |                              |                                       |                                |                                |                   |                      |          |      |
| 5.  |      |         |      |       |                              |                                       |                                |                                |                   |                      |          |      |

|                       |                       |                                           |                             |                                                            |  |
|-----------------------|-----------------------|-------------------------------------------|-----------------------------|------------------------------------------------------------|--|
| P <sub>c</sub> 1453.2 | P <sub>c</sub> 2111.8 | $(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.147$ |                             | $(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.135$ |  |
| NO.                   | P <sub>i</sub>        | P <sub>w</sub>                            | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>  |  |
| 1.                    | 351.9                 | 593.3                                     | 352.0                       | 1759.8                                                     |  |
| 2.                    | 270.6                 | 520.3                                     | 270.8                       | 1841.0                                                     |  |
| 3.                    | 199.1                 | 446.4                                     | 199.3                       | 1912.5                                                     |  |
| 4.                    | 139.3                 | 373.4                                     | 139.4                       | 1972.4                                                     |  |
| 5.                    |                       |                                           |                             |                                                            |  |

|                                                                                                                       |  |              |  |                     |  |                |  |
|-----------------------------------------------------------------------------------------------------------------------|--|--------------|--|---------------------|--|----------------|--|
| Absolute Open Flow                                                                                                    |  | Mcf @ 15.025 |  | Angle of Slope θ 43 |  | Slope, n 0.925 |  |
| Approved By Commission: _____ Conducted By: Cecil Lester<br>Calculated By: Mykol Reno<br>Checked By: Pinson McWhorter |  |              |  |                     |  |                |  |



# WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 1/12/2000

COMPANY Yates Petroleum Corp LEASE Llama ALL Federal WELL NO. 1

LOCATION: Unit M Section 7 Township 22S Range 31E

L 11250 H 11250 L/H 1.000 G 0.650 %CO<sub>2</sub> 1.500 %N<sub>2</sub> 0.200 %H<sub>2</sub>S 0.000  
 d 2.441 Fr 0.010495 GH 7312.5 Pcr 676.4 Tcr 369.4

| LINE                                                  | 1st Rate | 2nd Rate | 3rd Rate | 4th Rate | 5th Rate |
|-------------------------------------------------------|----------|----------|----------|----------|----------|
| 1 Qm                                                  | 0.102    | 0.106    | 0.110    | 0.110    |          |
| 2 Tw(W.H.°R)                                          | 520      | 520      | 520      | 520      |          |
| 3 Ts(B.H.°R)                                          | 645      | 645      | 645      | 645      |          |
| 4 T = (Tw+Ts) / 2                                     | 582.2    | 582.2    | 582.2    | 582.2    |          |
| 5 Z (Est.)                                            | 0.918    | 0.928    | 0.937    | 0.947    |          |
| 6 TZ                                                  | 534.4    | 540.0    | 545.7    | 551.5    |          |
| 7 GH / TZ                                             | 13.683   | 13.542   | 13.399   | 13.259   |          |
| 8 e <sup>-s</sup> (Table XIV)                         | 1.670    | 1.662    | 1.653    | 1.644    |          |
| 9 1-e <sup>-s</sup> (Table XIV)                       | 0.401    | 0.398    | 0.395    | 0.392    |          |
| 10 Pt                                                 | 593.2    | 520.2    | 446.2    | 373.2    |          |
| 11 Pt <sup>2</sup> / 1000                             | 351.9    | 270.6    | 199.1    | 139.3    |          |
| 12 Fr (Table XV)                                      | 0.010495 | 0.010495 | 0.010495 | 0.010495 |          |
| 13 Fc = FrTZ                                          | 5.609    | 5.667    | 5.727    | 5.788    |          |
| 14 FcQm                                               | 0.57     | 0.60     | 0.63     | 0.64     |          |
| 15 L / H(FcQm) <sup>2</sup>                           | 0.3      | 0.4      | 0.4      | 0.4      |          |
| 16 Fw = L / H(FcQm) <sup>2</sup> (1-e <sup>-s</sup> ) | 0.13     | 0.14     | 0.16     | 0.16     |          |
| 17 Pw <sup>2</sup> = Pt <sup>2</sup> +Fw              | 352.0    | 270.8    | 199.3    | 139.4    |          |
| 18 Ps <sup>2</sup> = e <sup>-s</sup> Pw <sup>2</sup>  | 588.0    | 449.9    | 329.3    | 229.3    |          |
| 19 Ps                                                 | 766.8    | 670.7    | 573.9    | 478.8    |          |
| 20 P = (Pt+Ps) / 2                                    | 680.0    | 595.5    | 510.0    | 426.0    |          |
| 21 Pr = (P / Pcr)                                     | 1.01     | 0.88     | 0.75     | 0.63     |          |
| 22 Tr = (T / Tcr)                                     | 1.58     | 1.58     | 1.58     | 1.58     |          |
| 23 Z (Table XI)                                       | 0.918    | 0.928    | 0.937    | 0.947    |          |

Company  
Well  
Location  
10^5

Company  
Well  
Location  
10^5

County  
Date

Eddy  
1-12-2000

Q, Mcfd

10^4

Pe-Pwf

10^3

10^2

10^3

10^4

AOF = 120

