

**WORK SHEET FOR STEPWISE CALCULATION**  
(SURFACE) PRESSURE (P<sub>c</sub> & P<sub>w</sub>) 4th

Form C-122-E  
Adopted 9-1-65

COMPANY MESA PETROLEUM COMPANY LEASE RIO STATE WELL NO. # 1 DATE 5-24-79

LOCATION: Unit K Section 36 Township 18 Range 24

L 8701 H 8701 L/H 1.000 G .595 % CO<sub>2</sub> .53 % N<sub>2</sub> .39 % H<sub>2</sub>S       

d 1.995 F<sub>0</sub> 18231 Q<sub>m</sub> 0 M<sup>2</sup> cfd (L/H) (F<sub>1</sub>Q<sub>m</sub>)<sup>2</sup> 0 P<sub>cr</sub> 671 T<sub>cr</sub> 358  
TABLE IX & X TABLE IX & X

| LINE | ITEM                                             | SOURCE | 1                               | 2       | 3       | 4       | 5       | 6       | 7       | 8                | 9      | 10 |
|------|--------------------------------------------------|--------|---------------------------------|---------|---------|---------|---------|---------|---------|------------------|--------|----|
| 1    | H                                                |        | 8701                            | 4350.5  |         | 0       |         |         |         |                  |        |    |
| 2    | GH                                               |        | 5177                            | 2588.5  |         | 0       |         |         |         |                  |        |    |
| 3    | 37.5GH                                           |        | 194141                          | 97071   |         | 0       |         |         |         |                  |        |    |
| 4    | P <sub>c</sub> or P <sub>n</sub>                 |        | 1644.3                          | 1497.9  | 1497.1  | 1349.9  | 1348.6  | 1348.6  |         | P <sub>w</sub> = | 1348.5 |    |
| 5    | P <sub>r</sub>                                   |        | 2.45                            | 2.23    | 2.23    | 2.23    | 2.01    | 2.01    |         |                  |        |    |
| 6    | T                                                |        | 621                             | 577.5   | 577.5   | 534     | 534     | 534     |         |                  |        |    |
| 7    | T <sub>r</sub>                                   |        | 1.73                            | 1.61    | 1.61    | 1.49    | 1.49    | 1.49    |         |                  |        |    |
| 8    | Z                                                |        | .878                            | .850    | .850    | .823    | .823    | .823    |         |                  |        |    |
| 9    | P/Z P/Z                                          |        | 4.8                             | 1872.8  | 1762.3  | 1761.3  | 1640.2  | 1638.6  | 1638.7  |                  |        |    |
| 10   | P/TZ                                             |        | 9.6                             | 3.0157  | 3.0515  | 3.0498  | 3.0716  | 3.0685  | 3.0687  |                  |        |    |
| 11   | (P/TZ) <sup>2</sup> /1000                        |        | (10) 2/1000                     |         |         |         |         |         |         |                  |        |    |
| 12   | L/H(F <sub>1</sub> Q <sub>m</sub> ) <sup>2</sup> |        |                                 |         |         |         |         |         |         |                  |        |    |
| 13   |                                                  |        | I <sub>1</sub> + I <sub>2</sub> |         |         |         |         |         |         |                  |        |    |
| 14   | I <sub>n</sub>                                   |        | I <sub>0</sub> ÷ I <sub>3</sub> | 331.593 | 327.702 | 327.891 | 325.563 | 325.890 | 325.872 |                  |        |    |
| 15   | M = P <sub>n</sub> - P <sub>n-1</sub>            |        |                                 | 146     | 147     | 147     | 149     | 148     |         |                  |        |    |
| 16   | N = I <sub>n</sub> + I <sub>n-1</sub>            |        |                                 | 659.295 | 659.484 | 653.453 | 653.781 | 653.763 |         |                  |        |    |
| 17   | M x N                                            |        | I <sub>5</sub> x I <sub>6</sub> |         |         | 97099   |         | 97039   |         |                  |        |    |
| 18   | Σ (M x N)                                        |        | Σ I <sub>7</sub>                |         |         | 97043   |         |         |         |                  |        |    |