

## WORK SHEET FOR STEPWISE CALCULATION (SURFACE) PRESSURE (Pc &amp; Pw)

Form C-122E

stabalized point Pg #2

|           |        |       |           |          |           |       |         |      |
|-----------|--------|-------|-----------|----------|-----------|-------|---------|------|
| Company   | Unocal | Lease | Red Hills | Well no. | 28-2      | Date: | 11/1/95 |      |
| Location: | Unit   | 0     | Section:  | 28       | Township: | 25-S  | Range:  | 33-E |

|       |       |                     |         |                            |         |            |
|-------|-------|---------------------|---------|----------------------------|---------|------------|
| L :   | 13521 | G :                 | 0.76137 | d :                        | 2.323   |            |
| H :   | 13521 | %CO <sub>2</sub> :  | 0.2     | Fr :                       | 0.01194 | (table XV) |
| L/H : | 1.00  | %N <sub>2</sub> :   | 1.9     | Qm :                       | 0       |            |
|       |       | %H <sub>2</sub> S : | 0.0     | (L/H)(FrQm) <sup>2</sup> : | 0.00000 |            |
|       |       |                     |         | Pcr :                      | 664     |            |
|       |       |                     |         | Tcr :                      | 405     |            |

|                 |     |       |
|-----------------|-----|-------|
| T @ 0' :        | 554 | deg R |
| T @ mid point : | 600 | deg R |
| T @ H :         | 646 | deg R |

| Line | Item                      | source                | 1       | 2       | 3       | 4       | 5       | 6       | 7       |
|------|---------------------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|
| 1    | H                         |                       | 13521   | 6760.5  |         |         | 0       |         |         |
| 2    | GH                        |                       | 10294.5 | 5147.25 |         |         | 0       |         |         |
| 3    | 37.5 GH                   |                       | 386,044 | 193,022 |         |         | 0       |         |         |
| 4    | Pc or Pn                  |                       | 1357.35 | 1121.3  | 1131.9  | 1130.7  | 904.2   | 926.5   | 923.1   |
| 5    | Pr                        |                       | 2.04    | 1.69    | 1.70    | 1.70    | 1.36    | 1.40    | 1.39    |
| 6    | T                         |                       | 646     | 600     | 600     | 600     | 554     | 554     | 554     |
| 7    | Tr                        |                       | 1.60    | 1.48    | 1.48    | 1.48    | 1.37    | 1.37    | 1.37    |
| 8    | Z                         | Table 11              | 0.859   | 0.836   | 0.836   | 0.836   | 0.819   | 0.813   | 0.814   |
| 9    | P/Z                       | 4/8                   | 1580.0  | 1341.3  | 1355.6  | 1354.1  | 1104.1  | 1139.6  | 1134.0  |
| 10   | P/TZ                      | 9/6                   | 2.4458  | 2.2354  | 2.2593  | 2.2568  | 1.9929  | 2.0570  | 2.0469  |
| 11   | (P/TZ) <sup>2</sup> /1000 | 10 <sup>2</sup> /1000 |         |         |         |         |         |         |         |
| 12   | L/H*FrQm <sup>2</sup>     |                       |         |         |         |         |         |         |         |
| 13   |                           | 11 + 12               |         |         |         |         |         |         |         |
| 14   | ln                        | 1000/#10              | 408.86  | 447.34  | 442.62  | 443.10  | 501.78  | 486.14  | 488.55  |
| 15   | M = Pn-P(n-1)             |                       |         | 236.1   | 225.4   | 226.7   | 226.4   | 204.2   | 207.6   |
| 16   | N = ln+l(n-1)             |                       |         | 856.195 | 851.472 | 851.962 | 944.888 | 929.240 | 931.651 |
| 17   | M x N                     | 15*16                 |         |         |         | 193,133 |         |         | 193,411 |
| 18   | sum of (MxN)              | sum of 17             | 386,044 |         |         | 192,911 |         |         |         |

|              |            |
|--------------|------------|
| Ps =         | 1357.35    |
| delta P =    | 433.8      |
| Pw = Ps - dP | Pw = 923.6 |

## Summary of data for stabalized point

|                 |                 |                                   |        |                 |         |
|-----------------|-----------------|-----------------------------------|--------|-----------------|---------|
| Pt <sup>2</sup> | Pw <sup>2</sup> | Pc <sup>2</sup> - Pw <sup>2</sup> | Pc     | Pc <sup>2</sup> | 55103.9 |
| 833.9           | 853.0           | 54250.9                           | 7423.2 |                 |         |

