

WORK SHEET FOR STEPWISE CALCULATION

(SUBSURFACE)

PRESSURE

(P<sub>f</sub> & P<sub>s</sub>)

Form C-122-E

XXXXXXXXXXXXXXXXXXXXXXX  
C W

RATE NO. 3

COMPANY Mewbourne Oil Company LEASE State E. Comm. WELL NO. 1 DATE 10-13-78

LOCATION: UNIT N SECTION 6 TOWNSHIP 16S RANGE 34E

12482 H 12482 L/H 1.00G 0.815 % CO<sub>2</sub> 0.00 N<sub>2</sub> 0.00 % H<sub>2</sub>S 0.00

d F<sub>r</sub> Q<sub>m</sub> M<sup>2</sup> cfd (L/H) (F<sub>r</sub> Q<sub>m</sub>)<sup>2</sup> 0.00 N<sub>2</sub> 665 T<sub>cr</sub> 431

| LINE | ITEM                                             | SOURCE         | 1       | 2       | 3       | 4       | 5       | 6       | 7   | 8 | 9 | 10 |
|------|--------------------------------------------------|----------------|---------|---------|---------|---------|---------|---------|-----|---|---|----|
| 1    | H                                                |                | 12482   | 6241    |         | 0       |         |         |     |   |   |    |
| 2    | GH                                               |                | 10173   | 5086    |         | 0       |         |         |     |   |   |    |
| 3    | 37.5GH                                           |                | 381481  | 190741  |         | 0       |         |         |     |   |   |    |
| 4    | P <sub>c</sub> or P <sub>n</sub>                 |                | 3424.2  | 2810.9  | 2797.2  | 2171.3  | 2139.4  | 2143.0  |     |   |   |    |
| 5    | P <sub>r</sub>                                   |                | 5.15    | 4.23    | 4.21    | 3.27    | 3.22    | 3.22    |     |   |   |    |
| 6    | T                                                |                | 649     | 591     | 591     | 532     | 532     | 532     |     |   |   |    |
| 7    | T <sub>r</sub>                                   |                | 1.51    | 1.37    | 1.37    | 1.23    | 1.23    | 1.23    |     |   |   |    |
| 8    | Z                                                |                | 0.820   | 0.708   | 0.707   | 0.574   | 0.572   | 0.572   |     |   |   |    |
| 9    | P/Z P/Z                                          | $4 \div 8$     | 4173.82 | 3970.14 | 3956.49 | 3781.48 | 3738.83 | 3745.16 |     |   |   |    |
| 10   | P/TZ                                             | $9 \div 6$     | 6.4312  | 6.7234  | 6.7002  | 7.1080  | 7.0279  | 7.0398  |     |   |   |    |
| 11   | (P/TZ <sup>2</sup> /1000                         | $(10^2/1000)$  |         |         |         |         |         |         |     |   |   |    |
| 12   | L/H(F <sub>r</sub> Q <sub>m</sub> ) <sup>2</sup> |                |         |         |         |         |         |         |     |   |   |    |
| 13   |                                                  | $11 + 12$      |         |         |         |         |         |         |     |   |   |    |
| 14   | I <sub>n</sub>                                   | $10 \div 13$   | 155.498 | 148.735 | 149.249 | 140.686 | 142.290 | 142.050 |     |   |   |    |
| 15   | M=P <sub>n</sub> -P <sub>n-1</sub>               |                |         | 613     | 627     | 626     | 658     | 654     | 655 |   |   |    |
| 16   | N=1 <sub>n</sub> +1 <sub>n-1</sub>               |                |         | 304.228 | 304.742 | 289.934 | 291.539 | 291.299 |     |   |   |    |
| 17   | M x N                                            | $15 \times 16$ |         | 186492  |         |         |         | 190510  |     |   |   |    |
| 18   | $\Sigma (M \times N)$                            | $\Sigma 17$    |         | 186492  |         |         |         | 377001  |     |   |   |    |

Delta P =  $\frac{3[381481]}{155.498 + 4[149.249] + 142.050} = \frac{1144443}{894.544} = 1279.4$  P = 3424.2 - 1279.4 = 2144.8