

XXXXXXXXXXXX

XXXXXXXXXXXX

WORK SHEET FOR STEPWISE CALCULATION

PRESSURE

(SURFACE)

(P<sub>c</sub> & P<sub>w</sub>)

RATE NO. 2

COMPANY Monsanto Company

LEASE

Coquina Federal

WELL NO. 1

DATE 5-27-75

LOCATION: UNIT

J

SECTION

1.0

31

TOWNSHIP

20-S

RANGE

27-E

10620

H

10690

L/H

G .640

% CO<sub>2</sub>

% N<sub>2</sub>

% H<sub>2</sub>S

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>

P<sub>cr</sub>

T<sub>cr</sub>

| LINE | ITEM                                             | SOURCE | 1       | 2       | 3       | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|--------------------------------------------------|--------|---------|---------|---------|---|---|---|---|---|---|----|
| 1    | H                                                |        | 10690   | 5345    | 0       |   |   |   |   |   |   |    |
| 2    | GH                                               |        | 6842    | 3421    | 0       |   |   |   |   |   |   |    |
| 3    | 37.5GH                                           |        | 256560  | 128280  | 0       |   |   |   |   |   |   |    |
| 4    | P <sub>c</sub> or P <sub>n</sub>                 |        | 1949.2  | 1716.3  | 1484.2  |   |   |   |   |   |   |    |
| 5    | P <sub>r</sub>                                   |        | 2.91    | 2.56    | 2.21    |   |   |   |   |   |   |    |
| 6    | T                                                |        | 625     | 581     | 536     |   |   |   |   |   |   |    |
| 7    | T <sub>r</sub>                                   |        | 1.68    | 1.56    | 1.44    |   |   |   |   |   |   |    |
| 8    | Z                                                |        | .859    | .820    | .761    |   |   |   |   |   |   |    |
| 9    | O/Z P/Z                                          |        | 2269.1  | 2093.0  | 1950.4  |   |   |   |   |   |   |    |
| 0    | P/TZ                                             |        | 3.6306  | 3.6056  | 306388  |   |   |   |   |   |   |    |
| 1    | (P/TZ) <sup>2</sup> /1000                        |        |         |         |         |   |   |   |   |   |   |    |
| 2    | L/H(F <sub>r</sub> Q <sub>m</sub> ) <sup>2</sup> |        |         |         |         |   |   |   |   |   |   |    |
| 3    |                                                  |        |         |         |         |   |   |   |   |   |   |    |
| 4    | T <sub>n</sub>                                   |        | 275.435 | 277.341 | 274.813 |   |   |   |   |   |   |    |
| 5    | M=P <sub>n</sub> -P <sub>n-1</sub>               |        |         | 233     | 232     |   |   |   |   |   |   |    |
| 6    | R=1+1/n-1                                        |        |         | 550.867 | 552.775 |   |   |   |   |   |   |    |
| 7    | 15 x 16                                          |        |         | 128352  | 128244  |   |   |   |   |   |   |    |
| 8    | Σ (M x 11)                                       |        |         | 128352  | 256596  |   |   |   |   |   |   |    |

3 (256560)

769680

= 463.8

P = 1949.2 - 463.8 = 1485.4

delta P =

275.433 + 4 (277.341) + 274.813

= 1659.610

= 463.8

P = 1949.2 - 463.8 = 1485.4