

# WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw)

C-122D

DATE: 8/25/98

COMPANY Fasken Oil and Ranch, Ltd. LEASE El Paso Federal WELL NO. 9

LOCATION: Unit Lot 34 Section 2 Township 21S Range 26E

L 10884 H 10884 L / H 1 G 0.618 %CO<sub>2</sub> 0.9 %N<sub>2</sub> 0.27 %H<sub>2</sub>S 0

d 2.441 Fr 0.010763 GH 6726.312 Pcr 675 Tcr 364

| LINE                                                 | 1st Rate | 2nd Rate | 3rd Rate | 4th Rate | 5th Rate |
|------------------------------------------------------|----------|----------|----------|----------|----------|
| 1 Qm                                                 | 1.201    | 2.097    | 3.199    | 4.029    | 4.433    |
| 2 Tw(W.H.DegR)                                       | 540      | 540      | 540      | 540      | 540      |
| 3 Ts(B.H.DegR)                                       | 644      | 644      | 644      | 644      | 644      |
| 4 T = (Tw+Ts) / 2                                    | 592      | 592      | 592      | 592      | 592      |
| 5 Z (Est.)                                           | 0.833    | 0.822    | 0.847    | 0.885    | 0.921    |
| 6 TZ                                                 | 493.1    | 486.6    | 501.4    | 523.9    | 545.2    |
| 7 GH / TZ                                            | 13.640   | 13.822   | 13.414   | 12.838   | 12.337   |
| 8 e <sup>s</sup> (Table XIV)                         | 1.668    | 1.679    | 1.654    | 1.618    | 1.588    |
| 9 1-e <sup>s</sup> (Table XIV)                       | 0.400    | 0.404    | 0.395    | 0.382    | 0.370    |
| 10 Pt                                                | 2,473.2  | 2,173.2  | 1,513.2  | 953.2    | 563.2    |
| 11 Pt <sup>2</sup> / 1000                            | 6,116.7  | 4,722.8  | 2,289.8  | 908.6    | 317.2    |
| 12 Fr (Table XV)                                     | 0.010763 | 0.010763 | 0.010763 | 0.010763 | 0.010763 |
| 13 Fc = FrTZ                                         | 5.308    | 5.238    | 5.397    | 5.639    | 5.868    |
| 14 FcQm                                              | 6.374    | 10.983   | 17.264   | 22.719   | 26.014   |
| 15 L / H(FcQm) <sup>2</sup>                          | 40.634   | 120.629  | 298.061  | 516.168  | 676.745  |
| 16 Fw = L / H(FcQm) <sup>2</sup> (1-e <sup>s</sup> ) | 16.270   | 48.793   | 117.827  | 197.232  | 250.646  |
| 17 Pw <sup>2</sup> = Pt <sup>2</sup> +Fw             | 6,133.0  | 4,771.6  | 2,407.6  | 1,105.8  | 567.8    |
| 18 Ps <sup>2</sup> = e <sup>s</sup> Pw <sup>2</sup>  | 10,228.5 | 8,012.6  | 3,981.6  | 1,789.7  | 901.9    |
| 19 Ps                                                | 3,198.2  | 2,830.7  | 1,995.4  | 1,337.8  | 949.7    |
| 20 P = (Pt+Ps) / 2                                   | 2,835.7  | 2,501.9  | 1,754.3  | 1,145.5  | 756.4    |
| 21 Pr = (P / Pcr)                                    | 4.201    | 3.707    | 2.599    | 1.697    | 1.121    |
| 22 Tr = (T / Tcr)                                    | 1.626    | 1.626    | 1.626    | 1.626    | 1.626    |
| 23 Z (Table XI)                                      | 0.833    | 0.822    | 0.847    | 0.885    | 0.921    |