

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY Gulf Oil Exploration & Prod. G Z State WELL NO. 1 DATE 12-14-81

LOCATION: Unit P Section 12 Township 19s Range 27e

L 10265 H 10265 L/H 1.000 G_{mix} .938 % CO₂ .605 % N₂ 3.035 % H₂S

d 1.995 F_r .018231 GH 9629 P_{cr} 661 T_{cr} 471
1st Rate 2nd Rate 3rd Rate 4th Rate

LINE	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1 Q _m	.211	.211	.399	.399	.517	.517	.733	.733
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534
3 T _s (B.H. °R)	636	636	636	636	636	636	636	636
4 T = ($\frac{1}{2}T_w + T_s$)	585	585	585	585	585	585	585	585
5 Z (Est.)	.657	.762	.651	.754	.625	.719	.591	.662
6 T _Z	384.3	445.8	380.8	441.1	365.6	420.6	345.7	387.3
7 GH/T _Z	25.05	21.60	25.28	21.830	26.34	22.89	27.85	24.864
8 e ^s (Table XIV)	2.559	2.248	2.581	2.267	2.685	2.360	2.842	2.541
9 1-e ^s (Table XIV)	.609	.555	.613	.559	.628	.576	.648	.606
10 P _t	2863.2	2863.2	2808.2	2808.2	2563.2	2563.2	2163.2	2163.2
11 P _t 2/1000	8197.9	8197.9	7886.0	7886.0	6570.0	6570.0	4679.4	4679.4
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
13 F _c = F _r T _Z	7.007	8.127	6.943	8.042	6.666	7.668	6.303	7.060
14 F _c Q _m	1.478	1.715	2.770	3.209	3.446	3.964	4.620	5.175
15 L/H (F _c Q _m) ²	2.186	2.940	7.674	10.295	11.876	15.717	21.346	26.783
16 F _w = L/H (F _c Q _m) ² (1-e ^{-s})	1.332	1.632	4.701	5.754	7.453	9.056	13.834	16.241
17 P _w ² = P _t ² + F _w	8199.2	*8199.5	7890.7	*7891.7	6577.4	*6579.1	4693.3	*4695.7
18 P _s ² = e ^s P _w ²	20979.2	18432.4	20365.3	17893.6	17658.8	15523.7	13336.9	11929.7
19 P _s	4580.3	4293.3	4512.8	4230.1	4202.2	3940.0	3652.0	3453.9
20 P = ($\frac{P_t + P_s}{2}$)	3721.8	3578.2	3660.5	3519.1	3382.7	3251.6	2907.6	2808.6
21 P _r = (P/P _{cr})	5.63	5.41	5.54	5.32	5.12	4.92	4.40	4.25
22 T _r = (T/T _{cr})	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
23 Z (Table XI)	.762	.743	.754	.736	.719	.703	.662	.651