

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY Gulf Oil Corporation LEASE Eddy "GF" State WELL NO. # 2 DATE 7/12/78

LOCATION: Unit K Section 16 Township 23 Range 27

L 11994 H 11994 L/H 1.000 G .573 % CO₂ % N₂ % H₂S

d 1.995 F_r .018231 GH 6873 P_{CT} 672 T_{CT} 346

TABLE IX & X

LINE	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1 Q _m	.283	.283	.421	.421	.599	.599	.823	.823		
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534		
3 T _s (B.H. °R)	640	640	640	640	640	640	640	640		
4 T = ($\frac{T_w + T_s}{2}$)	587	587	587	587	587	587	587	587		
5 Z (Est.)	.859	.856	.862	.857	.872	.864	.906	.896		
6 TZ	504.2	502.5	506.0	503.1	511.9	507.2	531.8	526.0		
7 GH/TZ	13.631	13.678	13.583	13.662	13.427	13.552	12.923	13.068		
8 e ^s (Table XIV)	1.667	1.670	1.664	1.669	1.655	1.662	1.624	1.632		
9 1 - e ^s (Table XIV)	.400	.401	.399	.401	.396	.398	.384	.387		
10 P _t	2203.2	2203.2	2120.2	2120.2	1773.2	1773.2	1133.2	1133.2		
11 P _t ² /1000	4854.1	4854.1	4495.2	4495.2	3144.2	3144.2	1284.1	1284.1		
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
3 F _c = F _r TZ	9.19	9.16	9.22	9.17	9.33	9.25	9.70	9.59		
14 F _c Q _m	2.60	2.59	3.88	3.86	5.59	5.54	7.98	7.89		
15 L/H (F _c Q _m) ²	6.8	6.7	15.1	14.91	31.25	30.67	63.67	62.27		
16 F _w = L/H (F _c Q _m) ² (1 - e ^{-s})	2.71	2.70	6.02	5.98	12.36	12.22	24.46	24.13		
17 P _w ² = P _t ² + F _w	4856.8	4856.8	4501.3	4501.2	3156.6	3156.5	1308.6	1308.3		
18 P _s ² = e ^s P _w ²	8097.3	8111.8	7491.2	7513.4	5222.7	5246.9	2124.6	2135.6		
19 P _s	2845.6	2848.1	2737.0	2744.1	2285.3	2290.6	1457.6	1461.4		
20 P = ($\frac{P_t + P_s}{2}$)	2524.4	2525.7	2428.6	2430.6	2029.3	2031.9	1295.4	1297.3		
21 P _r = (P/P _{cr})	3.76	3.76	3.61	3.62	3.02	3.02	1.93	1.93		
22 T _r = (T/T _{cr})	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70		
23 Z (Table XI)	.856	.856	.857	.857	.864	.864	.896	.896		