

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY Gulf Oil Corporation LEASE Eddy G.L. St. C. comm WELL NO. # 1 DATE 7/27/78

LOCATION: Unit I Section 25 Township 19 Range 27

L 10946 H 10946 L/H 1.000 C .619 % CO₂ .73 % N₂ .32 % H₂S

d 1.995 F_r .018231 GH 6776 P_{ci} 671 T_{ci} 365
1 st 2 nd 3 rd 4 th TABLE IX & X

LINE	1 st	2nd	1st	2 nd	1st	2nd	1st	2nd		
1 Q _m	.420	.420	.597	.597	.698	.698	.977	.977		
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534		
3 T _s (B.H. °R)	643	643	643	643	643	643	643	643		
4 T = ($\frac{T_w + T_s}{2}$)	588.5	588.5	588.5	588.5	588.5	588.5	588.5	588.5		
5 Z (Est.)	.818	.817	.833	.822	.871	.858	.925	.915		
6 TZ	481.4	480.8	490.2	483.7	512.6	504.9	544.4	538.5		
7 GH/TZ	14.076	14.093	13.822	14.007	13.219	13.420	12.447	12.584		
8 e ^s (Table XIV)	1.695	1.696	1.679	1.691	1.642	1.654	1.595	1.603		
9 1-e ^s (Table XIV)	.410	.411	.404	.409	.391	.395	.373	.376		
10 P _t	2288.2	2288.2	1813.2	1813.2	1213.2	1213.2	653.2	653.2		
11 P _t ² /1000	5235.9	5235.9	3287.7	3287.7	1471.9	1471.9	426.7	426.7		
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
F _c = F _r TZ	8.776	8.766	8.937	8.819	9.345	9.205	9.924	9.817		
14 F _c Q _m	3.686	3.682	5.336	5.265	6.523	6.425	9.696	9.591		
15 L/H (F _c Q _m) ²	13.6	13.6	28.5	27.72	42.55	41.29	94.01	91.99		
16 F _w = L/H (F _c Q _m) ² (1-e ^{-s})	5.6	5.6	11.5	11.3	16.6	16.3	35.1	34.6		
17 P _w ² = P _t ² + F _w	5241.4	5241.4	3299.2	3299.0	1488.5	1488.2	461.7	461.3		
18 P _s ² = e ^s P _w ²	8885.7	8891.4	5540.1	5578.4	2443.6	2461.5	736.4	739.4		
19 P _s	2980.9	2981.8	2353.8	2361.9	1563.2	1568.9	858.1	859.9		
20 P = ($\frac{P_t + P_s}{2}$)	2634.5	2635.0	2083.5	2087.5	1388.2	1391.1	755.7	756.6		
21 P _r = (P/P _{ci})	3.93	3.93	3.11	3.11	2.07	2.07	1.13	1.13		
22 T _r = (T/T _{ci})	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61		
23 Z (Table XI)	.817	.817	.822	.822	.858	.858	.915	.915		