

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY GULF OIL CORP. LEASE PACHECO FED. WELL NO. 3 DATE 12-2-78

LOCATION: Unit E Section 31 Township 19 Range 28

L 10575 H 10575 L/H 1.000 G .667 % CO₂ 2.05 % N₂ 9.95 % H₂S

d 1.995 F_r .018231 GH 7054 P_{cr} 669 T_{cr} 382
TABLE IX & X TABLE IX & X

LINE	1st		2nd		3rd		4th			
	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
1 Q _m	.308	.308	.541	.541	.798	.798	.298	.298		
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 = ($\frac{1}{2}T_w + T_s$)	587	587	587	587	587	587	587	587		
5 Z (Est.)	.792	.810	.800	.791	.854	.837	.930	.921		
6 TZ	464.9	475.5	469.6	464.3	501.3	491.3	545.9	540.6		
7 GH/TZ	15.173	14.836	15.021	15.192	14.071	14.357	12.922	13.048		
8 e ^s (Table XIV)	1.766	1.744	1.756	1.768	1.695	1.713	1.623	1.631		
9 1-e ^s (Table XIV)	.434	.427	.431	.434	.410	.416	.384	.387		
10 P _t	2653.2	2653.2	1903.2	1903.2	1173.2	1173.2	513.2	513.2		
11 P _t ² /1000	7039.5	7039.5	3622.2	3622.2	1376.4	1376.4	263.4	263.4		
12 F _t (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 F _c = F _t TZ	8.4757	8.6683	8.5613	8.4650	9.1392	8.9572	9.952	9.8562		
14 F _c Q _m	2.611	2.670	4.632	4.580	7.293	7.148	2.966	2.937		
15 L/H (F _c Q _m) ²	6.815	7.128	21.452	20.972	53.189	51.092	8.796	8.627		
16 F _w = L/H (F _c Q _m) ² (1-e ^{-s})	2.957	3.042	9.239	9.108	21.809	21.271	3.377	3.338		
17 P _w ² = P _t ² + F _w	7042.4	7042.4	3631.4	3631.3	1398.2	1397.7	266.8	266.7		
18 P _s ² = e ^s P _w ²	12440.3	12284.1	6378.4	6419.2	2370.0	2394.6	433.1	435.1		
19 P _s	3527.1	3504.9	2525.6	2533.6	1539.5	1547.4	658.1	659.6		
20 P = ($\frac{P_t + P_s}{2}$)	3090.1	3079.0	2214.4	2218.4	1356.3	1360.3	585.6	586.4		
21 P _r = (P/P _{cr})	4.62	4.60	3.31	3.32	2.03	2.03	.88	.88		
22 T _r = (T/T _{cr})	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54		
23 Z (Table XI)	.810	.810	.791	.791	.837	.837	.921	.921		