C-122D
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WORKSHEET FOR CALCULATION OF ST C COLUMN WELLHEAD PRESSURE (P_w)

COMPANY The Superior Oil Co. LEASE Government "D" WELL NO. 2 DATE 3-17-75

LOCATION: Unit E Section 12 Township 21S Range 27E

L 11294 H 11294 L/H 1.00 G 0.621 % CO_2 — % N_2 — % H_2S —

d 2.441 F_r 0.010763 GH 6788 P_{cr} 671 (TABLE IX & X) T_{cr} 358 (TABLE IX & X)

LINE	1st		2nd	3rd	4th					
1 Q_m	0.397	—	0.661	0.771	0.982					
2 T_w (W.H. °R)	520	—	—	—	—					
3 T_s (B.H. °R)	640	—	—	—	—					
4 $T = (\frac{T_w + T_s}{2})$	580	—	—	—	—					
5 Z (Est.)	0.944	0.885	0.777	0.753	0.846					
6 TZ	547.5	513.3	[illegible]	[illegible]	[illegible]					
7 GH/TZ	12.398	13.224	13.421	13.720	13.834					
8 e^s (Table XIV)	1.5919	1.6420	1.6542	1.6738	1.6800					
9 $1-e^{-s}$ (Table XIV)	0.3715	0.3910	0.3955	0.4022	[illegible]					
10 P_t	3478.2	—	3288.2	3077.2	2814.2					
11 $P_t^2/1000$	12104.8	—	[illegible]	9592.6	7979.5					
12 F_r (Table XV)	0.010763	—	—	—	—					
13 $F_c = F_r TZ$	5.993	5.528	5.143	5.324	5.281					
14 $F_c Q_m$	2.331	2.173	3.515	4.212	5.186					
15 $L/H (F_c Q_m)^2$	5.433	4.910	12.948	17.738	26.878					
16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$	2.0	2.0	5.1	7.1	10.9					
17 $P_w^2 = P_t^2 + F_w$	12106.8	12106.8	[illegible]	9599.7	[illegible]					
18 $P_s^2 = e^s P_w^2$	19272.5	19588.4	[illegible]	[illegible]	13[illegible].6					
19 P_s	4390.1	4423.1	4423.9	4021.3	3689.0					
20 $P = (\frac{P_t + P_s}{2})$	3934.6	3944.9	3718.[illegible]	3552.2	3246.6					
21 $P_r = (P/P_{cr})$	5.86	5.91	5.54	5.29	4.77					
22 $T_r = (T/T_{cr})$	1.62	—	—	—	—					
23 Z (Table XI)	0.875	0.787	0.790	[illegible]	0.791					

One copy to be filed in District Office (Work copy acceptable)