

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 9-1-65

COMPANY Yates Petroleum Corp LEASE Ross 1Z Com WELL NO. 1 DATE 11-3-78

LOCATION: Unit F Section 28 Township 19S Range 25E

L 9160 H 9160 L/H 1.000 G 1.000 % CO₂ 2.40 % N₂ 0.50 % H₂S NH

d 2.0156 F_r 0.017286 GH 5600 P_{Cr} 680 T_{Cr} 255

TABLE IX & X

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 Q _m		10.47	10.67	10.77																			
2 T _w (W.H. °R)	524	525	526	527																			
3 T _s (B.H. °R)	610	608	606	604																			
4 T = $(\frac{T_w + T_s}{2})$	567	566.5	566	565.5																			
5 Z (Est.)	0.928	0.942	0.952	0.958																			
6 TZ		0.941	0.958	0.975																			
7 GH/TZ		10.183	10.393	10.537																			
8 e ^s (Table XIV)	1.422	1.4516	1.4766	1.4935																			
9 1-e ^s (Table XIV)		0.3250	0.3228	0.3213																			
10 P _t	552.2	423.2	349.2	304.2																			
11 P _t 2/1000	304.92	179.18	121.94	92.54																			
12 F _r (Table XIV)	0.375	0.37310	0.38972	0.38762																			
13 F _c = F _r TZ		0.2254	0.3142	0.3647																			
14 F _c Q _m		0.434	0.587	0.768																			
15 L/H (F _c Q _m) ²		0.188	0.344	0.590																			
16 F _w = L/H (F _c Q _m) ² (1-e ^s)		0.06	0.11	0.19																			
17 P _w ² = P _t ² + F _w		179.24	122.05	92.73																			
18 P _s ² = P _w ²		265.56	180.22	136.64																			
19 P _s (-215* W.H.)		515.3	424.5	369.6																			
20 P = $(\frac{P_t + P_s}{2})$		613.2	467.2	380.9																			
21 P _t = (P/P _{Cr})		0.922	0.569	0.496																			
22 T _r = (T/T _{Cr})		1.584	1.582	1.581																			
23 Z (Table XI)		0.928	0.943	0.952																			

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

P_{Cr} = 19.14 (Table XI) 589.2 (730.3) (639.5) (584.6) (465.2)