

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY Mc CLELLAN OIL CORP. LEASE STATE " AR" WELL NO. # 1 DATE 1-10-79

LOCATION: Unit F Section 31 Township 18 Range 23

L 4338 H 4338 L/H 1.000 G .645 % CO₂ .156 % N₂ 1.226 % H₂S

d 1.995 1st F .018231 GH 2880 2nd 3rd P_{cr} 670 T_{cr} 378
4th TABLE IX & X TABLE IX & X

LINE	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
1 Q _m	.103	.103	.115	.115	.229	.229	.303	.303		
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534		
3 T _s (B.H. °R)	577	577	577	577	577	577	577	577		
4 T = ($\frac{1}{2}T_w + \frac{1}{2}T_s$)	555.5	555.5	555.5	555.5	555.5	555.5	555.5	555.5		
5 Z (Est.)	.849	.862	.859	.852	.868	.860	.890	.884		
6 TZ	471.6	478.8	477.2	473.3	482.2	477.7	494.4	491.1		
7 GH/TZ	6.107	6.015	6.036	6.085	5.973	6.029	5.825	5.865		
8 e ^s (Table XIV)	1.257	1.253	1.254	1.256	1.251	1.254	1.244	1.246		
9 1-e ^s (Table XIV)	.205	.202	.203	.204	.201	.202	.196	.197		
10 P _t	943.2	943.2	875.2	875.2	813.2	813.2	673.2	673.2		
11 P _t ² /1000	889.6	889.6	766.0	766.0	661.3	661.3	453.2	453.2		
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 F _c = F _r TZ	8.598	8.730	8.699	8.628	8.791	8.709	9.013	8.953		
14 F _c Q _m	.89	.90	1.00	.99	2.01	1.99	2.73	2.71		
15 L/H (F _c Q _m) ²	.78	.81	1.00	.98	4.05	3.98	7.46	7.36		
16 F _w =L/H(F _c Q _m) ² (1-e ^{-s})	.16	.16	.20	.20	.81	.80	1.46	1.45		
17 P _w ² = P _t ² + F _w	889.8	889.8	766.2	766.2	662.1	662.1	454.7	454.7		
18 P _s ² = e ^s P _w ²	1118.8	1114.9	960.8	962.6	828.3	830.0	565.7	566.5		
19 P _s	1057.7	1055.9	980.2	981.1	910.1	911.1	752.1	752.7		
20 P = ($\frac{P_t + P_s}{2}$)	1000.5	999.5	927.7	928.2	861.7	862.1	712.7	712.9		
21 P _r =(P/P _{cr})	1.49	1.49	1.38	1.39	1.29	1.29	1.06	1.06		
22 T _r = (T/T _{cr})	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47		
23 Z (Table XI)	.862	.862	.852	.851	.860	.860	.884	.884		

