

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 07/16/1992

COMPANY Yates Petroleum Corp LEASE Mescal SE Federal WELL NO. 1

LOCATION: Unit C Section 18 Township 21S Range 22E

L 5819 H 5819 L/H 1.000 G 0.659 %CO₂ 0.526 %N₂ 1.245 %H₂S 0.000

d 2.441 Fr 0.010495 GH 3834.7 Pcr 670.1 Tcr 371.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.512	0.815	1.026	1.259	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	640	640	640	640	
4 T = (Tw+Ts) / 2	580.7	580.7	580.7	580.7	
5 Z (Est.)	0.840	0.859	0.880	0.904	
6 TZ	487.9	498.7	511.2	525.0	
7 GH / TZ	7.860	7.689	7.501	7.304	
8 e ^s (Table XIV)	1.343	1.334	1.325	1.315	
9 1-e ^s (Table XIV)	0.255	0.250	0.245	0.240	
10 Pt	1338.2	1131.2	925.2	718.2	
11 Pt ² / 1000	1790.8	1279.6	856.0	515.8	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.120	5.234	5.365	5.510	
14 FcQm	2.62	4.27	5.50	6.94	
15 L / H(FcQm) ²	6.9	18.2	30.3	48.2	
16 Fw = L / H(FcQm) ² (1-e ^s)	1.75	4.56	7.42	11.54	
17 Pw ² = Pt ² +Fw	1792.5	1284.2	863.4	527.3	
18 Ps ² = e ^s Pw ²	2407.0	1713.2	1143.9	693.5	
19 Ps	1551.5	1308.9	1069.5	832.8	
20 P = (Pt+Ps) / 2	1444.8	1220.0	997.4	775.5	
21 Pr = (P / Pcr)	2.16	1.82	1.49	1.16	
22 Tr = (T / Tcr)	1.56	1.56	1.56	1.56	
23 Z (Table XI)	0.840	0.859	0.880	0.904	