

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

Adopted 9-1-65

DATE 2/14/85

COMPANY Yates Petroleum Corporation LEASE MOORE "FQ" WELL NO. 1

LOCATION: Unit F Section 19 Township 20S Range 25E

L 9024.0 H 9024.0 L/H 1.000 G .674 %CO₂ 2.14 %N₂ 19.75 %H₂S 0.00

d 1.995 Fr .017777 GH 6082.2 Pcr 645.6 Tcr 321.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.025	.026	.034	.042	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	666.0	666.0	666.0	666.0	0.0
4 T=(Tw+Ts)/2	594.0	594.0	594.0	594.0	0.0
5 Z(Est.)	.914	.912	.910	.908	0.000
6 TZ	542.7	541.9	540.7	539.3	0.0
7 GH/TZ	11.206	11.223	11.248	11.277	0.000
8 es(Table XIV)	1.522	1.524	1.525	1.527	0.000
9 1-e ^{-s} (Table XIV)	.343	.344	.344	.345	0.000
10 Pt	2520.2	2466.2	2377.2	2243.2	0.0
11 Pt ² /1000	6351.4	6082.1	5651.1	5031.9	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	9.648	9.627	9.607	9.584	0.000
14 FcQm	.241	.255	.328	.399	0.000
15 L/H(FcQm) ²	.058	.065	.107	.159	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.020	.022	.037	.055	0.000
17 Pw ² =Pt ² +Fw	6351.4	6082.1	5651.1	5032.0	0.0
18 Ps ² =e ^s Pw ²	9668.9	9267.5	8618.3	7681.8	0.0
19 Ps	3109.5	3044.3	2935.7	2771.6	0.0
20 P=(Pt+Ps)/2	2814.8	2755.2	2656.5	2507.4	0.0
21 Pr=(P/Pcr)	4.36	4.27	4.11	3.88	0.00
22 Tr=(T/Tcr)	1.85	1.85	1.85	1.85	0.00
23 Z(Table XI)	.914	.912	.910	.908	0.000