

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

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Caudill "RZ" WELL NO. 3

LOCATION: Unit L Section 9 Township 6S Range 26E

L 3808.0 H 3808.0 L/H 1.000 G .655 %CO₂ .02 %N₂ 6.55 %H₂S 0.00

d 1.995 Fr .017777 GH 2494.2 Pcr 659.2 Tcr 355.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.021	1.129	1.200	1.658	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	560.0	560.0	560.0	560.0	0.0
4 T=(Tw+Ts)/2	541.0	541.0	541.0	541.0	0.0
5 Z(Est.)	.865	.867	.869	.875	0.000
6 TZ	468.0	468.9	470.1	473.3	0.0
7 GH/TZ	5.329	5.319	5.306	5.270	0.000
8 e ^s (Table XIV)	1.221	1.221	1.220	1.218	0.000
9 1-e ^{-s} (Table XIV)	.181	.181	.180	.179	0.000
10 Pt	946.2	932.2	914.2	863.2	0.0
11 Pt ² /1000	895.3	869.0	835.8	745.1	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.320	8.336	8.357	8.419	0.000
14 FcQm	8.494	9.409	10.029	13.959	0.000
15 L/H(FcQm) ²	72.144	88.524	100.575	194.863	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	13.068	16.008	18.145	34.924	0.000
17 Pw ² =Pt ² +Fw	908.4	885.0	853.9	780.0	0.0
18 Ps ² =e ^s Pw ²	1109.3	1080.4	1041.9	950.4	0.0
19 Ps	1053.2	1039.4	1020.7	974.9	0.0
20 P=(Pt+Ps)/2	999.7	985.8	967.5	919.0	0.0
21 Pr=(P/Pcr)	1.52	1.50	1.47	1.39	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.865	.867	.869	.875	0.000