

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

Adopted 9-1-65

DATE 11/09/82

COMPANY Yates Petroleum Corporation LEASE Redman "OY" State WELL NO. 3

LOCATION: Unit 0 Section 26 Township 4S Range 24E

L 3660.0 H 3660.0 L/H 1.000 G .652 %O₂ .05 %N₂ 6.57 %H₂S 0.00

d 1.995 Fr .017777 GH 2386.3 Per 658.0 Tcr 355.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.409	.495	.528	.665	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	556.0	556.0	556.0	556.0	0.0
4 T=(Tw+Ts)/2	539.0	539.0	539.0	539.0	0.0
5 Z(Est.)	.893	.905	.914	.941	0.000
6 TZ	481.2	488.0	492.6	507.5	0.0
7 GH/TZ	4.959	4.890	4.845	4.703	0.000
8 e ^{-s} (Table XIV)	1.204	1.201	1.199	1.193	0.000
9 1-e ^{-s} (Table XIV)	.170	.168	.166	.162	0.000
10 Pt	734.2	643.2	583.2	392.2	0.0
11 Pt ² /1000	539.0	413.7	340.1	153.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.559	8.675	8.759	9.021	0.000
14 FcQm	3.498	4.296	4.628	6.001	0.000
15 L/H(FcQm) ²	12.234	18.457	21.422	36.011	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.075	3.092	3.558	5.822	0.000
17 Pw ² =Pt ² +Fw	541.1	416.8	343.7	159.6	0.0
18 Ps ² =e ^s Pw ²	651.7	500.7	412.1	190.4	0.0
19 Ps	807.3	707.6	642.0	436.4	0.0
20 P=(Pt+Ps)/2	770.7	675.4	612.6	414.3	0.0
21 Pr=(P/Per)	1.17	1.03	.93	.63	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.893	.905	.914	.941	0.000