

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

Adopted 9-1-65

DATE 5/19/83

COMPANY Yates Petroleum Corporation LEASE Mike Harvey "TR" Fed WELL NO. 1

LOCATION: Unit 1 Section 3 Township 5S Range 24E

L 3475.0 H 3475.0 L/H 1.000 G .649 %CO2 .03 %N2 6.06 %H2S 0.00

d 1.995 Fr .017777 GH 2255.3 Pcr 660.3 Tcr 355.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.325	.418	.597	.691	0.000
2 Tw(W.H.%R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.%R)	562.0	562.0	562.0	562.0	0.0
4 T=(Tw+Ts)/2	542.0	542.0	542.0	542.0	0.0
5 Z(Est.)	.863	.882	.873	.874	0.000
6 TZ	468.0	478.0	473.4	473.7	0.0
7 GH/TZ	4.819	4.718	4.764	4.761	0.000
8 e ^s (Table XIV)	1.198	1.194	1.196	1.195	0.000
9 1-e ^s (Table XIV)	.165	.162	.164	.164	0.000
10 Pt	985.2	836.2	903.2	898.2	0.0
11 Pt ² /1000	970.6	699.2	815.8	806.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.319	8.498	8.415	8.421	0.000
14 FcQm	2.702	3.551	5.023	5.823	0.000
15 L/H(FcQm) ²	7.300	12.608	25.228	33.903	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.207	2.044	4.127	5.543	0.000
17 Pw ² =Pt ² +Fw	971.8	701.3	819.9	812.3	0.0
18 Ps ² =e ^s Pw ²	1164.3	837.0	980.3	971.1	0.0
19 Ps	1079.0	914.9	990.1	985.4	0.0
20 P=(Pt+Ps)/2	1032.1	875.5	946.6	941.8	0.0
21 Pr=(P/Pcr)	1.56	1.33	1.43	1.43	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.863	.882	.873	.874	0.000