

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

Adopted 9-1-65

DATE 4/6/89

COMPANY Yates Petroleum Corporation LEASE Sandbur ADC St Com WELL NO. 1

LOCATION: Unit M Section 23 Township 5S Range 25E

L 3685.0 H 3685.0 L/H 1.000 G .654 %CO₂ .04 %N₂ 8.71 %H₂S 0.00

d 1.995 Fr .017777 GH 2410.0 Pcr 655.7 Tcr 349.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.124	.158	.178	.185	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.)	.904	.910	.934	.940	0.000
6 TZ	488.8	492.1	505.5	508.5	0.0
7 GH/TZ	4.930	4.897	4.767	4.739	0.000
8 e ^{-s} (Table XIV)	1.203	1.202	1.196	1.194	0.000
9 1-e ^{-s} (Table XIV)	.169	.168	.164	.163	0.000
10 Pt	706.2	659.2	473.2	433.2	0.0
11 Pt ² /1000	498.7	434.5	223.9	187.7	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.694	8.752	8.987	9.041	0.000
14 FcQm	1.075	1.382	1.603	1.675	0.000
15 L/H(FcQm) ²	1.156	1.910	2.571	2.806	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.195	.320	.421	.457	0.000
17 Pw ² =Pt ² +Fw	498.9	434.9	224.3	188.1	0.0
18 Ps ² =e ^s Pw ²	600.2	522.5	268.3	224.7	0.0
19 Ps	774.7	722.8	517.9	474.0	0.0
20 P=(Pt+Ps)/2	740.5	691.0	495.6	453.6	0.0
21 Pr=(P/Pcr)	1.13	1.05	.76	.69	0.00
22 Tr=(T/Tcr)	1.55	1.55	1.55	1.55	0.00