

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

Adopted 9-1-65

DATE 5/2/88

COMPANY Yates Petroleum Corporation LEASE Erickson KY State WELL NO. 2

LOCATION: Unit A Section 2 Township 10S Range 25E

L 4020.0 H 4020.0 L/H 1.000 G .645 %CO₂ .05 %N₂ 5.78 %H₂S 0.00

d 1.995 Fr .017777 GH 2592.9 Pcr 661.0 Tcr 354.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.263	.436	.512	.577	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	564.0	564.0	564.0	564.0	0.0
4 T=(Tw+Ts)/2	543.0	543.0	543.0	543.0	0.0
5 Z(Est.)	.890	.910	.929	.936	0.000
6 TZ	483.1	494.0	504.2	508.3	0.0
7 GH/TZ	5.367	5.249	5.142	5.101	0.000
8 e ^s (Table XIV)	1.223	1.217	1.213	1.211	0.000
9 1-e ^{-s} (Table XIV)	.182	.179	.175	.174	0.000
10 Pt	784.2	633.2	496.2	443.2	0.0
11 Pt ² /1000	615.0	400.9	246.2	196.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.593	8.785	8.966	9.037	0.000
14 FcQm	2.257	3.826	4.588	5.217	0.000
15 L/H(FcQm) ²	5.093	14.638	21.052	27.215	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.923	2.615	3.691	4.738	0.000
17 Pw ² =Pt ² +Fw	615.9	403.6	249.9	201.2	0.0
18 Ps ² =e ^s Pw ²	753.1	491.3	303.0	243.6	0.0
19 Ps	867.8	700.9	550.5	493.5	0.0
20 P=(Pt+Ps)/2	826.0	667.1	523.3	468.4	0.0
21 Pr=(P/Pcr)	1.25	1.01	.79	.71	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.890	.910	.929	.936	0.000