

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

Adopted 9-1-65

DATE 1/22/90

COMPANY Yates Petroleum Corporation LEASE Amigo WT State WELL NO. 1

LOCATION: Unit L Section 16 Township 19S Range 27E

L 9515.0 H 9515.0 L/H 1.000 G .615 %CO₂ .35 %N₂ .99 %H₂S 0.00

d 1.995 Fr .017777 GH 5851.7 Pcr 671.3 Tcr 357.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.368	.410	.413	.458	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	640.0	640.0	640.0	640.0	0.0
4 T=(Tw+Ts)/2	581.0	581.0	581.0	581.0	0.0
5 Z(Est.)	.833	.834	.836	.843	0.000
6 TZ	484.1	484.6	485.8	489.7	0.0
7 GH/TZ	12.089	12.076	12.044	11.950	0.000
8 e ^s (Table XIV)	1.574	1.573	1.571	1.565	0.000
9 1-e ^{-s} (Table XIV)	.364	.364	.363	.361	0.000
10 Pt	2013.2	1939.2	1830.2	1633.2	0.0
11 Pt ² /1000	4053.0	3760.5	3349.6	2667.3	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.605	8.614	8.637	8.705	0.000
14 FcQm	3.165	3.532	3.571	3.984	0.000
15 L/H(FcQm) ²	10.019	12.472	12.749	15.869	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	3.652	4.542	4.633	5.731	0.000
17 Pw ² =Pt ² +Fw	4056.6	3765.0	3354.3	2673.1	0.0
18 Ps ² =e ^s Pw ²	6383.3	5921.6	5269.3	4184.2	0.0
19 Ps	2526.5	2433.4	2295.5	2045.5	0.0
20 P=(Pt+Ps)/2	2269.9	2186.3	2062.9	1839.4	0.0
21 Pr=(P/Pcr)	3.38	3.26	3.07	2.74	0.00
22 Tr=(T/Tcr)	1.62	1.62	1.62	1.62	0.00
23 Z(Table XI)	.833	.834	.836	.843	0.000