

Adopted 9-1-65

DATE 1/4/83

COMPANY Yates Petroleum Corporation LEASE Tumbleweed "QM" Com WELL NO. 1

LOCATION: Unit D Section 15 Township 18S Range 25E

L 8585.0 H 8585.0 L/H 1.000 G .613 %CO₂ 3.00 %N₂ .39 %H₂S 0.00

d 1.995 Fr .017777 GH 5262.6 Pcr 683.9 Tcr 354.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.160	.222	.257	.296	0.000
2 Tw(W.H.%R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.%R)	652.0	652.0	652.0	652.0	0.0
4 T=(Tw+Ts)/2	587.0	587.0	587.0	587.0	0.0
5 Z(Est.)	.847	.856	.882	.900	0.000
6 TZ	497.3	502.6	517.8	528.4	0.0
7 GH/TZ	10.583	10.470	10.164	9.959	0.000
8 e ^{-s} (Table XIV)	1.487	1.481	1.464	1.453	0.000
9 1-e ^{-s} (Table XIV)	.328	.325	.317	.312	0.000
10 Pt	2013.2	1663.2	1203.2	972.2	0.0
11 Pt ² /1030	4053.0	2766.2	1447.7	945.2	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.840	8.935	9.204	9.394	0.000
14 FcQm	1.416	1.980	2.369	2.780	0.000
15 L/H(FcQm) ²	2.006	3.919	5.611	7.731	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.657	1.273	1.778	2.409	0.000
17 Pw ² =Pt ² +Fw	4053.6	2767.5	1449.5	947.6	0.0
18 Ps ² =e ^s Pw ²	6028.4	4098.3	2122.0	1376.6	0.0
19 Ps	2455.3	2024.4	1456.7	1173.3	0.0
20 P=(Pt+Ps)/2	2234.2	1843.8	1330.0	1072.8	0.0
21 Pr=(P/Pcr)	3.27	2.70	1.94	1.57	0.00
22 Tr=(T/Tcr)	1.66	1.66	1.66	1.66	0.00
23 Z(Table XI)	.847	.856	.882	.900	0.000