

COMPANY Yates Petroleum LEASE Spear "OA" Fld WELL NO. 1 DATE 11/6/81
 LOCATION: Unit H Section 9 Township 9S Range 26E
 L 4690 H 4690 LH 1.000 C 642 %CO₂ 0.2 %N₂ 3.97 %H₂S 0
 d 1.955 F_r 0.018231 GH 3011 P_{CT} 663 T_{CT} 361
 TABLE IX & X

LINE	Rate #1	Rate #2	Rate #3	Rate #4	Rate #1	Rate #2	Rate #3	Rate #4
1 Q _m	361	433	483	523	361	433	483	523
2 T _w (W.H. °R)	530	530	530	530	530	530	530	530
3 T _s (B.H. °R)	580	580	580	580	580	580	580	580
4 T = $\frac{(T_w + T_s)}{2}$	555	555	555	555	555	555	555	555
5 Z (Est.)	906	909	916	924	902	904	911	919
6 TC	502.8	504.5	508.1	512.8	500.6	501.7	505.6	510.0
7 GH/TZ	5.9885	5.9683	5.9225	5.8717	6.0147	6.0014	5.9552	5.9034
8 e ^s (Table XIV)	1.252	1.251	1.249	1.246	1.253	1.252	1.250	1.248
9 1 - e ^s (Table XIV)	0.201	0.201	0.199	0.197	0.202	0.201	0.200	0.199
10 F ₁	693.2	693.2	618.2	563.2	693.2	693.2	618.2	563.2
11 P ₁ = 1000	480.5	453.2	382.2	319.2	480.5	453.2	382.2	319.2
12 F ₂ (Table XV)	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231
13 F ₂ = F _r TZ	9.1665	9.1995	9.2686	9.3787	9.1264	9.1461	9.2176	9.2998
14 F ₂ Q _m	3.31	3.98	4.48	4.89	3.29	3.96	4.45	4.86
15 L/H (F ₂ Q _m) ²	11.0	15.9	20.0	23.9	10.9	15.7	19.82	23.6
16 F _w = L/H (F ₂ Q _m) ² (1-e ^s)	2.20	3.19	3.99	4.71	2.19	3.15	3.96	4.71
17 P _w ² = P ₁ ² + F _w	482.7	456.1	386.2	321.9	482.7	456.4	386.2	321.9
18 F ₃ ² = e ^s P _w ²	604.3	570.9	482.4	401.1	604.8	571.4	482.7	401.7
19 F ₃	777.4	755.6	694.5	622.3	779.7	755.9	694.5	623.8
20 F ₃ = $\frac{F_1 + F_3}{2}$	735.3	714.4	656.4	598.3	735.5	714.6	656.6	598.9
21 F ₁ = (F ₃)	1.11	1.08	0.99	0.90	1.11	1.08	0.99	0.90
22 T ₁ = (T/T _{ct})	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
23 Z (Table XI)	902	904	911	919	902	904	911	919