

DATE 4/5/89

COMPANY Yates Petroleum Corporation LEASE Savage NI Federal WELL NO. 3LOCATION: Unit B Section 30 Township 6S Range 26EL 3653.0 H 3653.0 L/H 1.000 G .638 %CO₂ .12 %N₂ 4.79 %H₂S 0.00d 1.995 Fr .017777 GH 2330.6 Pcr 663.2 Tcr 354.9

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.069	.085	.095	.104	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	555.0	555.0	555.0	555.0	0.0
4 T=(Tw+Ts)/2	538.5	538.5	538.5	538.5	0.0
5 Z(Est.)	.908	.913	.944	.970	0.000
6 TZ	488.8	491.7	508.1	522.2	0.0
7 GH/TZ	4.768	4.740	4.587	4.463	0.000
8 e ^s (Table XIV)	1.196	1.194	1.188	1.182	0.000
9 1-e ^{-s} (Table XIV)	.164	.163	.158	.154	0.000
10 Pt	631.2	594.2	384.2	213.2	0.0
11 Pt ² /1000	398.4	353.1	147.6	45.5	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.693	8.743	9.034	9.284	0.000
14 FcQm	.596	.745	.862	.964	0.000
15 L/H(FcQm) ²	.355	.555	.743	.930	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.058	.090	.117	.143	0.000
17 Pw ² =Pt ² +Fw	398.5	353.2	147.7	45.6	0.0
18 Ps ² =e ^s Pw ²	476.4	421.8	175.4	53.9	0.0
19 Ps	690.3	649.5	418.9	232.2	0.0
20 P=(Pt+Ps)/2	660.7	621.8	401.5	222.7	0.0
21 Pr=(P/Pcr)	1.00	.94	.61	.34	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.908	.913	.944	.970	0.000