

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

COMPANY Mesa Petroleum Company LEASE Diamond Federal WELL NO. # 2 DATE 7/26/78
LOCATION: Unit 8762 Section 1 Township 16 Range 27

H 8762 L/H 1.000 G .655 % CO₂ .265 % N₂ .880 % H₂S ---
d 1.995 F_r .018231 GH 5739 P_{cr} 670 T_{cr} 378

TABLE IX & X
4th

LINE	1 st	2 nd	1 st	2 nd	1 st	2 nd	1 st	2 nd
1 Q _m	.893	.893	1.137	1.137	1.640	1.640	1.956	1.956
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534
3 T _s (B.H. °R)	628	628	628	628	628	628	628	628
4 T = ($\frac{J_w + 1}{z}$)	581	581	581	581	581	581	581	581
5 Z (Est.)	.779	.772	.794	.780	.828	.811	.881	.864
6 TZ	452.6	448.5	461.3	453.2	481.1	471.2	511.9	502.0
7 GH/TZ	12.680	12.795	12.441	12.664	11.930	12.180	11.212	11.433
8 e ^s (Table XIV)	1.609	1.616	1.594	1.608	1.564	1.579	1.523	1.535
9 1-e ^s (Table XIV)	.378	.381	.373	.378	.361	.367	.343	.349
10 P _t	1938.2	1938.2	1701.2	1701.2	1293.2	1293.2	833.2	833.2
1 P _t ² /1000	3756.6	3756.6	2894.1	2894.1	1672.4	1672.4	694.2	694.2
2 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
3 F _c = F _r TZ	8.251	8.177	8.410	8.262	8.770	8.590	9.332	9.152
4 F _c Q _m	7.37	7.30	9.56	9.394	14.383	14.088	18.253	17.901
5 L/H (F _c Q _m) ²	54.3	53.3	91.4	88.2	206.8	198.5	333.2	320.4
6 F _w = L/H (F _c Q _m) ² (1-e ^s)	20.5	20.3	34.1	33.4	74.6	72.8	114.4	111.7
7 P _w ² = P _t ² + F _w	3777.2	3776.9	2928.2	2927.4	1747.0	1745.1	808.6	805.9
8 P _s ² = e ^s P _w ²	6076.8	6102.7	4668.8	4706.9	2732.6	2755.4	1231.2	1237.4
9 P _s	2465.1	2470.4	2160.7	2169.5	1653.1	1660.0	1109.6	1112.4
10 P = ($\frac{P_t + P_s}{2}$)	2201.7	2204.3	1931.0	1935.4	1473.1	1476.6	971.4	972.8
11 P _r = (P/P _{cr})	3.29	3.29	2.88	2.89	2.20	2.20	1.45	1.45
12 T _r = (T/T _{cr})	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
13 Z (Table XI)	.772	.772	.780	.779	.811	.811	.864	.864