

WORKSHEET FOR CALCULATION () . IC COLUMN WELLHEAD PRESSURE (P_w)

C-123D
Revised 9-1-65

COMPANY MARSHALL PIPE SUPPLY LEASE J. T. M. Co WELL NO. 1 786 DATE 5-13-87

LOCATION: Unit B Section 27 Township 2.5 Range 29

L 2222 H 11000 L/H 11000 G 6000 % CO₂ 0.95 % N₂ 8.072 % H₂S 0

d 1.505 F_r 218731 GH 52073 P_{cr} 654 T_{cr} 379

(1) (2) (3) TABLE IX & X

LINE	101	200	151	200	151	200	151	200	151	200
1 Q _m	.222	.222	.415	.415	.758	.758	1.340	1.340	1.340	1.340
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534	534	534
3 T _s (B.H. °R)	605	605	605	605	605	605	605	605	605	605
4 T = (L _w + T _s) ²	569.5	569.5	569.5	569.5	569.5	569.5	569.5	569.5	569.5	569.5
5 Z (Est.)	.799	.792	.799	.773	.786	.776	.809	.795	.795	.795
6 T _Z	402.5	439.7	443.6	440.2	447.6	441.9	460.7	454.8		
7 GH/T _Z	11.768	11.844	11.738	11.829	11.632	11.783	11.502	11.501		
8 e ^s (Table XIV)	1.555	1.555	1.553	1.558	1.547	1.556	1.528	1.539		
9 1 - e ^s (Table XIV)	.357	.359	.356	.358	.354	.357	.345	.350		
10 P _t	1959.2	1909.2	1890.2	1890.2	1786.2	1786.2	1466.2	1466.2		
11 P _t ² /1000	3838.5	3628.5	3572.9	3572.9	3190.5	3190.5	2149.9	2149.9		
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 F _c = F _r T _Z	8.0179	8.115	8.088	8.625	8.161	8.056	7.399	8.254		
14 F _c Q _m	1.7779	1.7779	3.356	3.331	8.161	6.407	11.255	11.061		
15 L/H (F _c Q _m) ²	3.166	3.166	11.216	11.653	9.012	39.296	12.002	12.337		
16 F _w = L/H (F _c Q _m) ² (1 - e ^{-s})	1.104	1.156	4.011	3.574	13.529	11.321	43.765	32.519		
17 P _w ² = P _t ² + F _w	3933.6	3933.6	3576.9	3576.9	3204.0	3203.8	2192.5	2192.6		
18 P _s ² = e ^s P _w ²	5983.5	5986.6	5364.4	5364.4	4958.3	4780.9	3351.3	3351.3		
19 P _s	2443.2	2446.8	2316.8	2360.7	2226.3	2222.5	1820.6	1837.1		
20 P = (P _t + P _s)	2201.6	2203.6	2128.8	2128.8	2006.2	2009.5	1644.4	1651.7		
21 P _r = (P/P _{cr})	4.37	4.37	3.124	3.235	3.07	3.09	2.52	2.52		
22 T _r = (T/T _{cr})	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50		
23 Z (Table XI)	.772	.772	.773	.773	.776	.776	.795	.795		

Case cover to be filed in District Office (Work copy acceptable)