

WORKSHEET FOR CALCULATION OF 10" COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 8-1-85

COMPANY MARSHALL PIPE SUPPLY LEASE PERRY WELL NO. 1 (766) DATE 10-12-88

LOCATION: Unit M1 Section 23 Township 2-S Range 29

L 7606 H 7006 L/H 1.000 G 670 % CO₂ .48 % N₂ 7.62 % H₂S 0

Corrected to 7.6270 N2 1.9945 F₁ .018231 GH 4694.0 P_{CT} 457 T_{CT} 362

① F₁ .018231 ② GH 4694.0 ③ P_{CT} 457 T_{CT} 362

LINE	1st	2nd	1st	2nd	1st	2nd	1st	2nd
1 Q _m	4.153	4.153	3.019	3.019	1.764	1.764	.908	.908
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534
3 T _g (B.H. °R)	605	605	605	605	605	605	605	605
4 T = ($\frac{1}{w} + \frac{1}{s}$)	568.5	568.5	568.5	568.5	568.5	568.5	568.5	568.5
5 Z (Est.)	.805	.787	.791	.779	.786	.777	.783	.775
6 TZ	484.2	474.5	476.9	465.7	473.9	468.5	472.1	467.3
7 GH/TZ	9.694	9.891	9.841	9.992	9.903	10.018	9.941	10.044
8 e ^s (Table XIV)	1.438	1.449	1.446	1.454	1.449	1.456	1.451	1.457
9 1-e ^s (Table XIV)	.304	.309	.308	.312	.310	.313	.311	.313
10 P ₁	1539.2	1539.2	1705.2	1705.2	1789.2	1789.2	1838.2	1838.2
11 P ₁ ² /1000	2369.1	2369.1	2907.7	2907.7	3201.2	3201.2	3379.0	3379.0
12 F ₁ (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
13 F ₁ = F ₁ TZ	8.827	8.451	8.695	8.583	8.640	8.541	9.607	8.515
14 F ₁ Q _m	36.66	35.9	26.2	25.8	15.2	15.0	7.8	7.7
15 L/H (F ₁ Q _m) ²	1344.0	1291.0	489.1	668.4	232.3	227.0	61.0	59.8
16 F _w = L/H (F ₁ Q _m) ² (1-e ^s)	409.6	400.0	212.6	208.9	72.0	71.1	19.0	18.7
17 P _w ² = P ₁ ² + F _w	2778.7	2769.2	3120.3	3116.6	3273.3	3272.3	3397.9	3397.7
18 P _s ² = e ^s P _w ²	3996.9	4012.7	4513.1	4533.4	4745.4	4764.5	4933.2	4951.5
19 P _s	1949.2	2003.1	2124.4	2129.1	2178.4	2182.7	2221.0	2225.2
20 P = ($\frac{P_1 + P_s}{2}$)	1769.2	1771.1	1914.8	1917.1	1983.8	1985.9	2029.6	2031.7
21 P _r = (P/P _{cr})	2.69	2.69	2.91	2.91	3.02	3.02	3.09	3.09
22 T _r = (T/T _{cr})	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57
23 Z (Table XI)	.787	.787	.779	.779	.777	.777	.775	.775