

WORKSHEET FOR CALCULATION OF ST. C COLUMN WELLHEAD PRESSURE (P_w)

COMPANY HONDO DRILLING COMPANY LEASE TR 16 65-JENNINGS FED. COM. # 1 DATE 5-24-79
 LOCATION: Unit N Section 28 Township 18 Range 29
 H 11129 LN 1.000 G 61.9 % CO₂ 58 % N₂ 32 % H₂S 34
 d 1.995 F_r 0.018231 GH 6.889 P_{cr} 671 T_{cr} 362
 TABLE IX & B

LINE	1 st RATE	2 nd RATE	3 rd RATE	4 th RATE	
1 Q _m	.415	.658	.928	1.222	1.222
2 T _w (W.H. °R)	534	534	534	534	534
3 T _s (B.H. °R)	645	645	645	645	645
4 T = $(\frac{1}{w} + \frac{1}{s})$	589.5	589.5	589.5	589.5	589.5
5 Z (Est.)	.820	.828	.840	.829	.850
6 T _Z	483.4	488	495	489	501
7 GH/TZ	14.251	14.114	13.912	14.097	13.748
8 e ^s (Table XIV)	1.7065	1.6977	1.6849	1.6966	1.6746
9 1-e ^s (Table XIV)	.414	.411	.406	.411	.403
10 P ₁	2196.2	1947.2	1671.2	1671.2	1315.2
11 P ₁ 2/1000	4823.3	3791.6	2792.9	2792.9	1729.8
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231
13 F _c = F _r T _Z	8.813	8.899	9.0276	8.9094	9.1351
14 F _c Q _m	3.657	5.855	8.378	8.268	11.163
15 L/H (F _c Q _m) ²	13.376	34.285	70.185	68.359	124.615
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	5.537	14.090	28.530	28.067	50.199
17 P _w ² = P ₁ ² + F _w	4828.8	3805.7	2821.4	2821.0	1780.9
18 P _s ² = e ^s P _w ²	8240.3	6460.8	4753.8	4786.1	2980.7
19 P _s	2870.6	2541.8	2180.3	2187.7	1726.5
20 P = $(\frac{P_1 + P_s}{2})$	2533.4	2244.5	1925.8	1929.5	1517.7
21 P _r = (P/P _{cr})	3.78	3.35	2.87	2.87	2.26
22 T _r = (T/T _{cr})	1.63	1.63	1.63	1.63	1.63
23 T _r (Table XI)	.816	.819	.829	.829	.850