

WORKSHEET FOR CALCULATION OF ST. IC COLUMN WELLHEAD PRESSURE (P.W)

C-122D
Adopted 9-1-65

COMPANY YPC LEASE Maralo HL Fed WELL NO. 1 DATE 6.23.77

LOCATION: Unit I Section 12 Township 20 S Range 28 E

L 11482 H 11482 L/H 1.000 G 0.6115 % CO₂ 0.86 % N₂ 0.30 % H₂S 217
 2 3/8" - 11460 (3.95) = 4.5668
 18 (1.20) = 174.8
 4 (5.60) = 22.4
 1 3/8" - 4.5668 + 22.4 = 4.5668

LINE	1	2	3	4		1	2	3	4
1 Q _m	0.920	1.269	1.694	2.124	SI	0.920	1.269	1.694	2.124
2 T _w (W.H. °R)	524	520	516	512					
3 T _s (B.H. °R)	600	582	564	548					
4 T = $\frac{(T_w + T_s)}{2}$	562	551	540	530		562	551	540	530
5 Z (Est.)	.81	.785	.80	.88		.811		.781	.873
6 TZ	455.22	432.535	432.0	466.00		455.78		421.74	462.69
7 GH/TZ	17.667	16.232	16.2523	15.0576		15.404		16.648	15.174
8 e ^s (Table XIV)	1.6695	1.8381	1.8394	1.7586		1.7819		1.8669	1.7666
9 1 - e ^s (Table XIV)	0.4392	0.4559	0.4564	0.4314		0.4388		0.4464	0.4339
10 P _t	2540.2	2127.2	1618.2	658.2		2540.2	2127.2	1618.2	658.2
11 P _t ² /1000	6452.6	4524.98	2618.6	433.23		6452.6		2618.6	433.23
12 F _t (Table XV)	.59837	.60871	.60916	.56451		.59766		.62429	.56904
13 F _c = F _t TZ	8.0574	7.6559	7.6464	8.2553		8.0673		7.4648	8.1896
14 F _c Q _m	7.4128	9.7153	12.953	17.534		7.4219		12.645	17.395
15 L/H (F _c Q _m) ²	54.95	94.39	167.78	307.45		55.08		159.91	302.58
16 F _w = L/H (F _c Q _m) ² (1 - e ^s)	24.13	43.03	76.6	132.63		24.17		74.3	131.29
17 P _w ² = P _t ² + F _w	6476.75	4568.01	2695.2	565.86		6476.8		2692.9	564.52
18 P _s ² = e ^s P _w ²	11548.7	8396.5	4957.5	995.12		11541.0		5027.4	997.28
19 P _s	3398.3	2897.7	2226.5	997.6		3397.2		2242.2	998.6
20 P = $\frac{P_t + P_s}{2}$	4118.	2512.4	1922.4	827.9		4118.		2968.7	828.4
21 P _t = (P/P _{cr})	6.11	4.405	3.728	1.228		6.11		4.405	1.229
22 T _t = (T/T _{cr})	1.561	1.531	1.500	1.472		1.594	1.561	1.500	1.472
23 Z (Table XI)	.895	.785	.781	.873		.811		.781	.875