

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

C-122D
Adopted 9-1-65

COMPANY YPC LEASE 14000 R.R. 122 WELL NO. 1 DATE 4-22-69

LOCATION: Unit H Section 23 Township 14S Range 27E

L 5000 H 31840 L/H 1000 G 0.601 % CO₂ 1.01 % N₂ 0.69 % H₂S 1.1

d 2.011 F_r 0.016336 GH 5558 P_{Cr} 2755 T_{Cr} 83.5

23- 31840 31840
4000 1000 700
5000 1000 5000

TABLE IX & X

LINE	51	1	2	3	4				
1 Q _m	-	0.256	0.342	0.477	0.607				
2 T _w (W.H. °R)	545	547	548	549	550				
3 T _s (B.H. °R)	578	578	577	597	596				
4 T = (T _w + T _s)	5715	572.5	572.5	573	573				
5 Z (Est.)	0.767	0.7665	0.769	0.773	0.781				
6 TZ	438.34	438.82	440.25	442.93	447.51				
7 GH/TZ	12.679	12.666	12.625	12.548	12.420				
8 e ^s (Table XIV)	1.6087	1.6080	1.6055	1.6009	1.5932				
9 1-e ^s (Table XIV)		0.3781	0.3771	0.3753	0.3723				
10 P _t	2241.2	2020.2	1908.2	1788.2	1636.2				
11 P _t ² /1000	5023.0	4081.2	3641.2	3197.7	2677.2				
12 F _r (Table XV)	0.47546	0.47407	0.47342	0.47056	0.46574				
13 F _c = F _r TZ		7.169	7.192	7.236	7.3105				
14 F _c Q _m		1.835	2.460	3.451	4.437				
15 L/H (F _c Q _m) ²		3.368	6.050	11.91	19.69				
16 F _w = L/H (F _c Q _m) ² (1-e ^s)		1.3	2.3	4.5	7.3				
17 P _w ² = P _t ² + F _w		4082.5	3643.5	3202.2	2684.5				
18 P _s ² = e ^s P _w ²	8080.4	6564.7	5849.6	5126.4	4276.9				
19 P _s	2842.2	2562.2	2418.6	2264.2	2068.1				
20 P = (P _t + P _s)	2565.2	2291.2	2163.4	2026.2	1852.2				
21 P _r = (P/P _{Cr})	3.797	3.392	3.203	3.000	2.742				
22 T _r = (T/T _{Cr})	1.490	1.493	1.493	1.494	1.494				
23 Z (Table XI)	0.967	0.7665	0.769	0.773	0.781				