

WORKSHEET FOR CALCULATION OF STIC COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 9-1-65

COMPANY YIP LEASE Tubman 11 WELL NO. 2 DATE 1-29-81

LOCATION: Unit L Section 30 Township 6S Range 26E

L 4617 H 11017 L/H 1.070 G 0.690 % CO₂ 0.32 % N₂ 5.0 % H₂S 11.1
2 7/8 - 3912 (5.58) 23500
5 1/2 - 10025 (1) 2650
3002/6469 25946
0.5415 F₁ 0.00384 GH 2977.9 P_{cr} 682.5 T_{cr} 363.5

LINE		1	2	3	4	5A	1	2	3	4
1 Q _m	-	0.235	0.314	0.415	0.541			0.514		
2 T _w (B.H. °R)	511	514	533	524	526					
3 T _s (B.H. °R)	559	559	553	557	556					
4 T _f = $(\frac{T_w + T_s}{2})$	535	534	540	540.5	541			540		
5 T _{avg}	618426	61853	618045	61826	61907			61867		
6 T ₂	450.791	462.462	466.65	472.883	490.627			463.13		
7 G ₁ TZ	6.1485	5.94336	5.9373	5.7872	5.6486			5.9202		
8 e ³ (Table XIV)	1.2593	1.2520	1.2494	1.2424	1.2359			1.2386		
9 1 - e ³ (Table XIV)		0.2013	0.1996	0.1951	0.1904			0.1991		
10 P ₁	1015.2	933.2	872.2	736.2	591.2			822.2		
11 P ₁ 2 ¹⁰⁰⁰	1030.6	976.26	769.73	542.0	347.52			760.73		
12 F ₁ (Table XV) $\frac{1030.6}{1.2593}$	123057	0.22475	0.22265	0.21704	0.21132			0.22201		
13 F ₁ = F ₁ TZ		4.1113	4.150	4.2573	4.3692			4.1621		
14 F ₁ Q _m		0.9662	1.324	1.8905	2.360			1.3277		
15 L/H (F ₁ Q _m) ²		0.9335	1.753	3.584	5.569			1.763		
16 F _w = L/H (F ₁ Q _m) ² (1-e ⁻³)		0.19	0.35	0.70	1.06			0.35		
17 P _w ² = P ₁ ² + F _w		870.05	761.08	542.7	350.58			761.08		
18 P _s ² = e ³ P _w ²	1297.9	1090.6	950.1	674.25	433.28			950.3		
19 P _s	1139.2	1044.3	975.1	821.1	658.2			974.8		
20 P = $(\frac{P_1 + P_s}{2})$	1077.2	988.7	923.7	793.9	624.7			923.5		
21 P _f = (P/P _{cr})	1.578	1.449	1.353	1.141	0.915			1.353		
22 T _f = (T/T _{cr})	1.472	1.483	1.486	1.487	1.488			1.486		
23 Z (Table XI)	0.8426	0.858	0.907	0.886	0.907			0.867		