

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Adopted 9-1-65

COMPANY Y (IC) LEASE Aliso State EC WELL NO. 2 DATE 1-24-77

LOCATION: Unit I Section 36 Township 17.5 Range 25E

L 7977 H 7977 L/H 1.000 G 0.1657 %CO₂ 0.57 %N₂ 0.33 %H₂S N/I

7930' - 1492' d 2.0127 F_i 0.017251 GH 5243.9 P_{cr} 692 T_{cr} 275.5
47 4.00

LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 Q _m	51	3169	3317	3449	3564	36	31	31.32	0.317														
2 T _w (H.H. °R)	512	512	514	515	516																		
3 T _s (B.H. °R)	592	591	590	589	588																		
4 T = (T _w + T _s)	552	552	552	552	552																		
5 Z (E _{st})	761	761	754	754	753																		
6 T ₂	412.072	416.208	416.208	415.106	418.416																		
7 GH/T ₂	12.592	12.592	12.592	12.6255	12.526																		
8 e ^s (Table XIV)	1.5965	1.6034	1.6034	1.6065	1.5995																		
9 1-e ^s (Table XIV)		0.59763	0.39703	0.39171	0.39448																		
10 P ₁	2428.2	2237.2	2165.2	2030.2	1882.2																		
11 P ₁ (2/1000)	2428.2	2237.2	2165.2	2030.2	1882.2																		
12 F ₁ (Table XV)																							
13 e = F ₁ T ₂	9.2216	7.2216	7.2216	7.2216	7.2216																		
14 F ₂ Q _m	1.222	1.222	1.222	1.222	1.222																		
15 L/H (F ₂ Q _m) ²	1.49	5.141	10.458	6.55	6.55																		
16 F _w = L/H (F ₂ Q _m) ² (1-e ^s)	0.53	1.99	3.94	6.55	6.55																		
17 P _w = P ₁ + F _w	5277.69	4090.0	4125.65	3592.55	3592.55																		
18 P _w = e ^s P _w	9413.21	8462.25	7522.0	6622.74	5912.74																		
19 P _s	3263.1	2909.0	2902.2	2593.9	2331.1																		
20 P = (P ₁ + P _s)	2748.1	2603.1	2453.7	2301.9	2182																		
21 P ₁ = (P/P _{cr})	4.09	3.894	3.65	3.426	3.183																		
22 T ₂ = (T/T _{cr})	1.470	1.470	1.470	1.470	1.470																		
23 Z (Table XI)	0.761	0.755	0.753	0.752	0.751																		

$$f_v = \frac{1.63292}{\frac{15-1603+4\log d}{16.3754}} = 1017351$$

$$f_v = \frac{.66198}{1.007598} = .657$$

$$4595(7543)$$

$$g_{max} = \frac{.623 + 1}{1 + 1}$$