

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form G-122D
Adopted 9-1-65

COMPANY SANTA FE ENERGY LEASE WALKER WELL NO. 1 DATE 9-2

LOCATION: Unit I Section 21 Township 22S Range 27E

L 9402 H 9402 L/H 1.000 G MIX = .891 % CO₂ .57 % N₂ .76 % H₂S ---

d 1,995 F₁ 018231 GH 8377.2 P_{cr} 662 T_{cr} 454

LINE	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 Q _m	.202	.202	.276	.276	.393	.393	.581	.581
2 T _w (W.H. °R)	534	534	534	534	534	534	534	534
3 T _g (B.H. °R)	630	630	630	630	630	630	630	630
4 T = $\frac{T_w + T_g}{2}$	582	582	582	582	582	582	582	582
5 Z (Est.)	.609	.678	.598	.662	.588	.644	.580	.617
6 TZ	354.4	394.5	348.0	385.2	342.2	374.8	337.5	359.0
7 GH/TZ	23.635	21.229	24.069	21.742	24.479	22.350	24.816	23.328
8 e ^s (Table XIV)	2.426	2.216	2.466	2.259	2.504	2.312	2.536	2.398
9 1-e ^s (Table XIV)	.587	.548	.594	.557	.600	.567	.605	.583
10 P ₁	2392.2	2392.2	2268.2	2268.2	2131.2	2131.2	1918.2	1918.2
11 P ₁ ² /1000	5722.6	5722.6	5144.7	5144.7	4542.0	4542.0	3679.5	3679.5
12 F ₁ (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
13 F ₁ = F ₁ TZ	6.461	7.193	6.345	7.024	6.238	6.833	6.154	6.546
14 F ₁ Q _m	1.305	1.453	1.757	1.938	2.451	2.685	3.575	3.803
15 1/H (F ₁ Q _m) ²	1.703	2.111	3.066	3.758	6.011	7.211	12.784	14.467
16 F _w = L/H (F ₁ Q _m) ² (1-e ^s)	1.001	1.159	1.823	2.095	3.611	4.092	7.743	8.435
17 P _w ² = P ₁ ² + F _w	5723.6	5723.7	5146.5	5146.8	4545.6	4546.1	3687.2	3687.9
18 P _w ² = e ^s P _w ²	13886.5	12689.1	12691.7	11631.7	11383.1	10510.9	9351.2	8845.3
19 F ₂	3726.4	3562.1	3562.5	3410.5	3373.8	3242.0	3057.9	2974.1
20 P = $\sqrt{\frac{P_1^2 + F_2}{2}}$	3054.3	2977.1	2915.3	2839.3	2752.5	2686.6	2488.0	2446.7
21 P ₁ = (P/P _{cr})	4.62	4.49	4.40	4.28	4.15	4.05	3.75	3.69
22 T ₁ = (T/T _{cr})	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
23 Z (Table XI)	.678	.669	.662	.653	.644	.636	.617	.613