

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)

Form C-132F
Adapted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE (P₁ or P₂)

COMPANY Phillips Petro. Co. LEASE Lusk Deep Unit A WELL NO. 5 DATE 6-13-80

LOCATION: Unit A Section 19 Township 19-S Range 32-E

L 11660 H 11660 LH 1000 G 0.662 % CO₂ .13 % N₂ 2.05 % H₂S 0

GH 9982.12 P_{CT} 666 * T_{CT} 378 * X = CORRECTED TO 290 N₂

Flowing BHP (calculated) 378 * TABLE IN 8 * 3

LINE	1	2	3	4	5	6	7	8
1	T _w (W.H. * R)	534	534	534	534	534	534	534
2	T _s (B.H. * R)	651	651	651	651	651	651	651
3	T ₁ (T _w + T _s)	592.5	592.5	592.5	592.5	592.5	592.5	592.5
4	Z (Est.)	.953	.908	.910	.872	.843	.849	.827
5	TZ	569.6	537.9	535.1	516.6	499.4	503.0	489.9
6	GH/TZ	14.083	14.781	14.748	15.391	15.920	15.808	16.228
7	e ^s (Table XIV)	1.625	1.740	1.738	1.728	1.816	1.809	1.83
8	P ₁ or P _s	4967.2	4767.2	4243.2	3760.2	3260.2	3358.2	3388
9	P ₁ or P _s ²	22726.1	22726.1	18004.7	18004.7	14139.1	11479.8	11479.8
10	P _c ² = P ₁ ² /e ^s or P _w ² = P _s ² /e ^s	13400.9	13400.9	10355.9	10109.5	7782.7	6345.7	6246.4
11	P _w	3660.5	3660.5	3218.0	3179.5	2819.4	2515.0	2499.2
12	P ₁ (P _w + P _s) or (P _c + P ₁)	4214.0	4190.2	3730.6	3711.3	3274.9	2953.6	2943.7
13	P ₁ = (P/P _{CT})	6.32	6.32	5.60	5.57	4.91	4.43	4.42
14	T ₁ = (T/T _{CT})	1.56	1.56	1.56	1.56	1.56	1.56	1.56
15	Z (Table XI)	.918	.872	.872	.872	.843	.827	.827

(142)

** Flowing BHP (calculated) 378 * TABLE IN 8 * 3