

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

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY Thompson LEASE 816/1-1747 WELL NO. 1 DATE 9-16-86
 LOCATION: Unit 10 Section 10 Township 23S Range 10N
 L 1082 H 1082 L/H 1000 G 0.000 % CO₂ 0.0 % N₂ 0.0 % H₂S 0

LINE	1	2	3	4	5	6	7	8
1	$T_w(W.H. °R)$	532.2	532.2	532.2	532.2	532.2	532.2	532.2
2	$T_s(B.H. °R)$	648	648	648	648	648	648	648
3	$T = \frac{T_w + T_s}{2}$	591	591	591	591	591	591	591
4	Z (Est.)	.816	.791	.783	.785	.773	.772	.773
5	TZ	482.3	469.5	479.6	463.5	463.8	463.8	463.8
6	GH/TZ	12.921	11.115	13.960	14.328	14.495	14.512	14.512
7	e^s (Table XIV)	1.672	1.701	1.688	1.710	1.707	1.723	1.722
8	P_f or P_s	3433.2	3433.2	3433.2	3433.2	3433.2	3433.2	3433.2
9	P_f^2 or P_s^2	11786.9	11786.9	10427.7	8387.2	8387.2	8387.2	8387.2
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	17843.2	17843.2	17843.2	4900.0	4900.0	3540.0	3540.0
11	P_c or P_w	2643.6	2643.6	2643.6	2643.6	2643.6	2643.6	2643.6
12	$P \cdot \left(\frac{P_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6	3042.6
13	$P_f = (P/P_{cr})$	4.84	4.84	4.84	4.84	4.84	4.84	4.84
14	$T_f = (T/T_{cr})$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15	Z (Table XI)	.791	.791	.783	.783	.773	.773	.773