

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_{wf} or P_w)
FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_b)

COMPANY TXO LEASE 2810 WELL NO. 1 DATE 8-10-87
LOCATION: Unit G Section 29 Township 19 Range 28
L 9990 H 9900 L/H 1.000 G .659 % CO₂ 0.00 % N₂ 0.00 % H₂S 0.00
X 2810 GH 2419 P_{cr} 2700 T_{cr} 278

LINE	1	2	3	4	5	6	7	8
1	$T_w(W.H. \cdot R)$	534	534	534				
2	$T_s(B.H. \cdot R)$	614	614	614				
3	$T = \frac{T_w + T_s}{2}$	574	574	574				
4	Z (Est.)	.726	.726	.701	.771	.812	.777	.881
5	TZ	415.6	442.8	441.4	441.4	461.8	444.8	504.3
6	GH/TZ	15.445	14.430	14.542	14.542	13.808	14.430	12.726
7	e^s (Table XIV)	1.284	1.218	1.225	1.225	1.678	1.717	1.648
8	P_f or P_s	3110.2	3110.2	2710.2	2719.2	2250.2	2250.2	1510.2
9	P_f^2 or P_s^2	9673.3	9673.3	7354.0	7354.0	5060.4	5060.4	2266.6
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	7140.1	7850.8	4285.9	4285.9	3033.0	2963.1	1341.2
11	P_{wf} or P_w	84.2	88.2	65.3	65.3	55.1	54.3	36.6
12	$P_c \cdot \left(\frac{P_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	2779.2	2779.2	2544.7	2544.7	2144.3	2144.3	1444.3
13	$P_f = (P/P_{cr})$	4.05	4.05	4.05	4.05	4.05	4.05	4.05
14	$T_f = (T/T_{cr})$	1.02	1.02	1.02	1.02	1.02	1.02	1.02
15	Z (Table XI)	.992	.992	.992	.991	.999	.999	.991