

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

Form C-122F
Adopted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE (P_b or P_s)

COMPANY Phillips LEASE GAD ST. WELL NO. 1-2 DATE 9-8-83

LOCATION: Unit 2 Section 2 Township 19 Range 32

L 13,000 H 13,000 LH 100 G 1,688 %CO₂ 1.382 %N₂ 2.871 %H₂S

GH 8944 P_{cf} 668 T_{cf} 375
TABLE IX & X

DATE 1 DATE 2 DATE 3 DATE 4

LINE	1	2	3	4	5	6	7	8
1	$T_w(W.H. \cdot R)$	534	534	534	534	534	534	534
2	$T_s(B.H. \cdot R)$	664	664	664	664	664	664	664
3	$T = \left(\frac{T_w + T_s}{2} \right)$	599	599	599	599	599	599	599
4	Z (Est.)	933	1,888	860	832	819	818	827
5	TZ	558.9	531.9	515.1	498.4	490.6	490.6	502.6
6	GH/TZ	16.0	16.81	17.36	17.95	18.23	18.25	18.05
7	e^s (Table XIV)	1.82	1.88	1.92	1.96	1.98	1.98	1.97
8	P_f or P_s	4543.2	4543.2	3564.2	3564.2	2707.2	2707.2	1772.2
9	P_f^2 or P_s^2	20640.7	20640.7	12703.5	12703.5	7328.9	7328.9	3885.6
10	$P_c^2 = P_f^2 / e^s$ or $P_w^2 = P_s^2 / e^s$	11326.2	10986.9	6624.6	6481.1	3699.3	3696.2	1976.3
11	P_c or P_w	3365.4	3314.7	2573.8	2545.8	1923.4	1922.6	1405.8
12	$P_c \left(\frac{P_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	3954.3	3928.9	3065.0	3054.9	2315.3	2314.9	1685.0
13	$P_r = (P/P_{cr})$	5.92	5.88	4.59	4.57	3.47	3.47	2.53
14	$T_r = (T/T_{cr})$	1.60	1.60	1.60	1.60	1.60	1.60	1.60
15	Z (Table XI)	1.888	1.886	1.832	1.831	1.818	1.818	1.839

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