

FLOWING
ENPS CALCULATION = P_w
BASE TO SURFACE

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_{wf} or P_w)

FROM KNOWN BOTTOM HOLE PRESSURE (P_{bth} or P_b)

Form C-122F
Adopted 9-1-65

COMPANY SANTA FE ENERGY LEASE PURE GOLD FLD WELL NO. 1 DATE 10-18-90

LOCATION: Unit 17 Section 235 Township 214 Range 214

L 1222 H 1222 LH 1000 G 0.551 % CO₂ 0.63 % N₂ 0.85 % H₂S —

GH 7882.8 P_{cr} 672 T_{cr} 354

LINE	1	2	3	4	5	6	7	8
1	$T_w (W.H. \cdot R)$	534	534	534	534	534		
2	$T_g (B.H. \cdot R)$	667	667	667	667	667		
3	$T = \frac{T_w + T_g}{2}$	600.5	600.5	600.5	600.5	600.5		
4	Z (Est.)	1.107	1.104	1.108	1.078	1.060	1.057	
5	TZ	664.7	662.9	665.3	647.3	636.5	634.7	
6	GH/TZ	11.858	11.890	11.847	12.177	12.384	12.419	
7	e^s (Table XIV)	1.559	1.561	1.559	1.578	1.591	1.593	
8	P_{wf} or P_s	7193.2	7183.2	6873.2	6873.2	6668.2	6668.2	
9	P_{wf}^2 or P_s^2	51558.4	51558.4	47240.9	47240.9	44464.9	44464.9	
10	$P_c^2 = P_{wf}^2/e^s$ or $P_w^2 = P_s^2/e^s$	33075.9	33036.0	30294.8	29922.5	27946.7	27900.8	
11	P_{wf} or P_w	5751.1	5747.6	5504.0	5470.1	5286.4	5282.9	$= P_w$
12	$P_r = \frac{P_w + P_s}{2}$ or $\frac{P_c + P_f}{2}$	6467.1	6465.4	6188.6	6171.6	5977.3	5975.5	
13	$P_r = (P/P_{cr})$	9.62	9.62	9.20	9.18	8.89	8.89	
14	$T_r = (T/T_{cr})$	1.69	1.69	1.65	1.65	1.65	1.69	
15	Z (Table XI)	1.104	1.104	1.078	1.076	1.057	1.057	