

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P<sub>c</sub> or P<sub>w</sub>)

FROM KNOWN BOTTOM HOLE PRESSURE (P<sub>f</sub> or P<sub>s</sub>)

DATE 7-9-86

COMPANY NO Production Co., LEASE Delta Fee WELL NO. 1 RANGE 27E  
 LOCATION: Unit B Section 2 Township 22S Range 27E % H<sub>2</sub>S 0  
 L 9723 H 9723 LH 1.044 G 673 % CO<sub>2</sub> 1.279 % N<sub>2</sub> 6.661  
 GH 5544 P<sub>cr</sub> 669 T<sub>cr</sub> 382

LINE	1	2	3	4	5	6	7	8
1	T <sub>w</sub> (W.H. °R)	534	534	534	534	534	534	534
2	T <sub>s</sub> (B.H. °R)	638	638	638	638	638	638	638
3	T = $\frac{T_w + T_s}{2}$	586	586	586	586	586	586	586
4	Z (Est.)	1.899	1.858	1.890	1.850	1.877	1.856	1.822
5	TZ	526.8	502.8	521.5	498.1	513.9	492.2	481.7
6	GH/TZ	12.4218	13.015	12.547	13.138	12.733	13.294	13.585
7	e <sup>s</sup> (Table XIV)	1.593	1.629	1.601	1.637	1.612	1.646	1.664
8	P <sub>f</sub> or P <sub>s</sub>	4426.2	4426.2	4325.2	4325.2	4191.2	4191.2	3931.2
9	P <sub>f</sub> <sup>2</sup> or P <sub>s</sub> <sup>2</sup>	19591.2	19591.2	18707.4	18707.4	17566.2	17566.2	15454.3
10	P <sub>c</sub> <sup>2</sup> = P <sub>f</sub> <sup>2</sup> /e <sup>s</sup> or P <sub>w</sub> <sup>2</sup> = P <sub>s</sub> <sup>2</sup> /e <sup>s</sup>	12295.9	12025.2	11685.9	11430.0	10896.8	10620.0	9285.3
11	P <sub>c</sub> or P <sub>w</sub>	3506.4	3467.7	3418.5	3380.8	3301.0	3266.5	3047.2
12	P <sub>f</sub> = $\frac{P_w + P_s}{2}$ or $\frac{P_c + P_f}{2}$	3966.4	3947.0	3871.8	3853.0	3746.1	3728.8	3489.3
13	P <sub>f</sub> = (P/P <sub>cr</sub> )	5.93	5.90	5.79	5.70	5.60	5.57	5.22
14	T <sub>f</sub> = (T/T <sub>cr</sub> )	1.53	1.53	1.53	1.53	1.53	1.53	1.53
15	Z (Table XI)	1.858	1.857	1.850	1.849	1.840	1.838	1.821

FLOWING  
BNP