

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

COMPANY YPC LEASE AREO EC State WELL NO. 1 DATE 7-19-79

LOCATION: Unit B Section 36 Township 17S Range 2SE
 L 6655 8436 H 6655 8436 L/H 1.000 G 733 % CO₂ 0.15 % N₂ 0.76 % H₂S N/A
 d 2.455 F_r 0.09727 GH 1878 P_{Cr} 668 T_{Cr} 400

8 6498 (5.958) = 38715
57 (2.455) = 1396
6255 (6.072) = 40111

LINE	S ₁	1	2	3	4	S ₁	1	2	3	4
1 Q _m		0.127	0.173	0.238	0.322		0.127	0.173	0.238	0.322
2 T _w (W.H. °R)	581	535	538	541	543					
3 T _s (B.H. °R)	581	581	581	580	580					
4 T = ($\frac{T_w + T_s}{2}$)	581	558	559.5	560.5	561.5		558	559.5	560.5	561.5
5 Z (Est.)	1701	1708	1716	1727	1751		1707	1717		
6 TZ	389.514	395.06	400.6	407.48	421.76		394.51	401.16		
7 GH/TZ	12.513	12.347	12.177	11.971	11.566		12.365	12.160		
8 e ^s (Table XIV)	1.5988	1.5889	1.5787	1.5666	1.5430		1.5899	1.5777		
9 1 - e ^s (Table XIV)		0.3706	0.3666	0.3617	0.3519		0.3710	0.3662		
10 P _t	1728.2	1659.2	1600.2	1496.2	1305.2		1659.2	1600.2		
11 P _t ² /1000		2752.9	2560.6	2238.6	1711.4		2752.9	2560.6		
12 F _r (Table XV) $\frac{0.446925}{0.0375 \times 2}$	0.446925	0.46303	0.45663	0.44891	0.43372		0.46368	0.45599		
13 F _c = F _r TZ		3.8427	3.8966	3.9636	4.1025		3.8374	3.902		
14 F _c Q _m		0.488	0.674	0.943	1.321		0.487	0.675		
15 L/H (F _c Q _m) ²		0.238	0.454	0.890	1.745		0.238	0.456		
16 F _w = L/H (F _c Q _m) ² (1 - e ^{-s})		0.1	0.2	0.3	0.6		0.1	0.2		
17 P _w ² = P _t ² + F _w		2753.0	2560.8	2238.9	1712.0		2753.0	2560.8		
18 P _s ² = e ^s P _w ²	4775.1	4374.2	4042.7	3507.5	2641.6		4377.0	4040.2		
19 P _s	2185.2	2091.5	2010.7	1872.8	1625.3		2092.1	2010.0		
20 P = ($\frac{P_t + P_s}{2}$)	1956.7	1875.3	1805.4	1684.5	1466.8		1875.7	1805.1		
21 P _r = (P/P _{Cr})	2.925	2.807	2.703	2.522	2.196		2.808	2.702		
22 T _r = (T/T _{Cr})	1.390	1.395	1.399	1.401	1.404		1.395	1.399		
23 Z (Table XI)	701	707	717	727	751		707	717		