WORKSHEET FOR CALCULATION OF ST. C COLUMN WELLHEAD PRESSURE (P_w)

COMPANY PenRoc LEASE Foxy FED WELL NO. 1 DATE [illegible]

LOCATION: Unit F Section 18 Township 20 Range 28

L 10,790 H 10,790 L/H 1.000 G-MIX .744 % CO_2 ____ % N_2 ____ % H_2S ____

d 1.995 F_r .018231 GH 8028 P_{cr} 667 (TABLE II & III) T_{cr} 465 (TABLE II & III)

LINE										
1 Q_m	1.256	1.256	1.036	1.036	.809	.809	.716	.716	.544	.544
2 T_w (W.H. °R)	534	534	534	534	534	534	534	534	534	534
3 T_s (B.H. °R)	644	644	644	644	644	644	644	644	644	644
4 $T = (\frac{T_w + T_s}{2})$	589	589	589	589	589	589	589	589	[illegible]	[illegible]
5 Z (Est.)	.779	.754	.780	.756	.776	.752	.757	.741	.742	[illegible]
6 TZ	458.8	444.1	459.4	445.3	451.2	442.9	445.9	434.4	440.6	[illegible]
7 GH/TZ	17.50	18.08	17.47	18.03	17.79	18.12	18.01	18.33	18.22	[illegible]
8 e^S (Table XIV)	1.927	1.970	1.926	1.966	1.949	1.973	1.964	1.982	1.981	[illegible]
9 $1-e^{-S}$ (Table XIV)	.4811	.4923	.4807	.4914	.4869	.4932	.4909	.4955	.4951	[illegible]
10 P_t	1518.2	1518.2	1509.2	1509.2	1551.2	1551.2	1781.2	1781.2	[illegible]	[illegible]
11 $P_t^2/1000$	2304.9	2304.9	2277.7	2277.7	2406.2	2406.2	3201.2	3201.2	[illegible]	[illegible]
12 F_r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	[illegible]	[illegible]
13 $F_c = F_r TZ$	8.365	8.096	8.376	8.118	8.225	8.175	8.179	8.057	8.032	7.945
14 $F_c Q_m$	10.506	10.169	8.677	8.410	6.654	6.533	5.720	5.687	4.[illegible]	4.317
15 $L/H (F_c Q_m)^2$	110.324	103.413	75.299	70.752	44.280	42.[illegible]	[illegible]	32.457	[illegible]	[illegible]
16 $F_w = L/H(F_c Q_m)^2(1-e^{-S})$	53.11	50.911	36.19	34.76	21.56	21.09	16.530	16.114	[illegible]	[illegible]
17 $P_w^2 = P_t^2 + F_w$	2357.0	2355.8	2313.9	2312.4	2427.8	2427.3	3217.9	3217.4	[illegible]	[illegible]
18 $P_s^2 = e^S P_w^2$	4600.7	4640.3	4455.8	4544.6	4731.5	4786.6	6331.2	6413.1	[illegible]	[illegible]
19 P_s	2131.8	2154.1	2110.9	2132.3	2175.2	2188.5	2514.2	2532.4	[illegible]	[illegible]
20 $P = (\frac{P_t + P_s}{2})$	1825.0	1836.2	1810.0	1820.7	1863.2	1869.9	2151.7	2169.8	[illegible]	[illegible]
21 $P_r = (P/P_{cr})$	2.74	2.75	2.71	2.73	2.79	2.80	3.23	3.25	3.24	[illegible]
22 $T_r = (T/T_{cr})$	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	[illegible]
23 Z (Table XI)	.754	.753	.756	.755	.752	.752	.741	.741	.739	.739