WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

COMPANY Depco LEASE [illegible] WELL NO. 1 DATE [illegible]

LOCATION: Unit J Section 3[illegible] Township 15 Range 28

L 9016 H 9010 L/H 1.00 G MIX 1.18 % CO_2 ____ % N_2 ____ % H_2S ____

d 1.995 F_r .018231 GH 10,639 P_{cr} 647 (TABLE IX & X) T_{cr} 559 (TABLE IX & X)

LINE	RATE I		RATE II		RATE III		RATE IV			
	Z		Z		Z		Z			
1 Q_m	.429	.429	.540	.540	.769	.769	.839	.839		
2 T_w (W.H. °R)	534	534	534	534	534	534	534	534		
3 T_s (B.H. °R)	625	625	625	625	625	625	625	625		
4 $T = (\frac{T_w + T_s}{2})$	580	580	580	580	580	580	580	580		
5 Z (Est.)	.412	.665	.375	.630	.304	.598	.252	.556		
6 TZ	239.0	385.7	217.5	370.6	176.3	346.8	146.2	322.5		
7 GH/TZ	44.52	27.58	48.91	28.71	60.34	30.67	72.79	32.99		
8 e^S (Table XIV)	5.31	2.81	6.26	2.03	9.61	3.16	15.33	3.45		
9 $1-e^{-S}$ (Table XIV)	.8117	.6446	.8403	.6592	.8559	.6835	.8350	.7098		
10 P_t	1964.2	1964.2	1781.2	1781.2	1415.2	1415.2	1096.2	1096.2		
11 $P_t^2/1000$	3858.1	3858.1	3[illegible]	3[illegible]	2002.8	2002.8	1201.7	1201.7		
12 F_r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 $F_c = F_r$ TZ	4.356	7.032	3.965	6.760	3.210	6.323	2.665	5.879		
14 $F_c Q_m$	1.87	3.02	2.14	3.65	2.472	4.863	2.236	4.933		
15 $L/H (F_c Q_m)^2$	3.49	9.09	4.584	13.313	6.111	23.64	4.998	24.330		
16 $F_w = L/H (F_c Q_m)^2 (1-e^{-S})$	2.84	5.87	3.853	8.78	5.47	16.16	4.672	17.270		
17 $P_w^2 = P_t^2 + F_w$	3860.9	3863.9	3[illegible]	3[illegible]	2008.3	2018.9	1206.3	1218.9		
18 $P_s^2 = e^S P_w^2$	20501.2	10870.7	19887.6	7335.4	19297.8	6378.0	18489.6	4200.2		
19 P_s	4527.8	3297.1	4456.6	3055.4	4392.9	2525.5	4299.9	2049.4		
20 $P = (\frac{P_t + P_s}{2})$	3246.0	2630.6	3120.4	2418.3	2904.1	1970.3	2698.1	1572.8		
21 $P_r = (P/P_{cr})$	5.02	4.07	4.82	3.74	4.49	3.05	4.17	2.43		
22 $T_r = (T/T_{cr})$	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05		
23 Z (Table XI)	.665	.543	.639	.502	.598	.413	.556	[illegible]		