WORK SHEET FOR STEPWISE CALCULATION (SUBSURFACE) (SURFACE) PRESSURE (P_c & P_w)

Form 3-1-2
Adopted 4-1-65

COMPANY Cities Service Co LEASE Brantley "A" WELL NO. 1 DATE 8-20-81

LOCATION: Unit _____ Section _____ Township _____ Range _____

_____ H _____ L/H _____ G _____ % CO_2 _____ % N_2 _____ % H_2S _____

d _____ F_r _____ Q_m _____ M^2cfd (L/H) $(F_rQ_m)^2$ _____ P_{cr} _____ (TABLE IX & X) T_{cr} _____ (TABLE IX & X)

2ND RATE

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		12,063	6031.5		0						
2	GH		710,631	355332		0						
3	[illegible]		266 487	133,243		0						
4	P_c or P_w		3925.189	3508.41	3491.50	3058.39	3017.45					
5	$\bar{P}_c$		5.86	5.18	5.16	4.52	4.46					
6	$\bar{T}$		657	588	588	519	519					
7	$\bar{T}_c$		98	1.68	1.68	1.48	1.48					
8	$\bar{Z}$		.955	.879	.877	.7856	.777					
9	$P/\bar{Z}$	$\bar{4}\div\bar{8}$	4110.145	3989.5	3979.37	3892.99	3882.46	3021.				
10	$P/\bar{T}\bar{Z}$	$\bar{9}\div\bar{6}$	6.25592	6.78494	6.7763	7.50096	7.48066					
11	$(P/\bar{T}\bar{Z})^2/1000$	$(\bar{10})^2/1000$	–	–	–	–	–					
12	$(L/H)(F_rQ_m)^2$		–	–	–	–	–					
13		$\bar{11}+\bar{12}$	–	–	–	–	–					
14	I_n	$\bar{10}\div\bar{13}$	159.85	147.39	147.762	133.32	133.678					
15	$M=P_n-P_{n-1}$		0	416.78	433.69	433.16	474.05					
16	$N=I_n+I_{n-1}$		0	307.23	307.61	281.07	281.07					
17	M x N	$\bar{15}\times\bar{16}$	0		133,243							
18	$\sum$(M x N)	$\sum\bar{17}$	266,487		133,2400							

One copy to be filed in District Office (Work copy same table)