WORK SHEET FOR STEPWISE CALCULATION

(SUBSURFACE) PRESSURE (SURFACE) Rate = $\frac{(P_c^2 - P_w^2)}{}$

NY _____ LEASE _____ WELL NO. _____ DATE _____

TION: UNIT _____ SECTION _____ TOWNSHIP _____ RANGE _____

3542 H 13542 L/H 1.0 G .619 % CO_2 .4 % N_2 .2 % H_2S _____

d 1.867 F_r .018231 Q_m 3.973 M^2cfd (L/H) $(F_rQ_M)^2$ .005246 P_{cr} 671 T_{cr} 365

ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
H		0	6771				13542				
GH		0	4191				8382				
37.5GH		0	157172				314344				
P_c or P_n		3093.2	3272.8	3255.8	3234.0	3231.0	4369.3	4355.3	4341.1		
P_r		4.61	5.63	5.60	5.56	5.56	6.51	6.49	6.47		
T		515	582	582	582	582	648	648	648		
T_r		1.41	1.59	1.59	1.59	1.59	1.78	1.78	1.78		
Z		.745	.870	.869	.867	.867	.961	.961	.960		
O/Z P/Z	4÷8	4151.9	4342.4	4322.0	4306.8	4304.3	4546.7	4532.0	4522.0		
P/TZ	9÷6	8.0620	7.4676	7.4326	7.4063	7.4020	7.0165	6.9939	6.9785		
$(P/TZ)^2/1000$	$(10^2/1000$	.064996	.055765	.055244	.054855	.054791	.049231	.048915	.048700		
$L/H(F_rQ_m)^2$		.005246	.005246	.005246	.005246	.005246	.005246	.005246	.005246		
	11÷12	.070242	.061011	.060490	.060101	.060037	.054477	.054161	.053946		
I_n	10÷13	114.774	122.397	122.873	123.233	123.292	128.796	129.132	129.361		
$H=P_n-P_{n-1}$			685	663	641	639	635	623	609		
$H=I_n+I_{n-1}$			229.549	237.171	245.270	246.106	246.525	252.089	257.928		
H × H	15 × 16					157262			157078		
∑(H × H)	∑ 17					157262			314340		

$$\Delta P = \frac{3(314344)}{114.774 + 4(123.292) + 129.361} = \frac{943031}{737.303} = 1279.0 \qquad P = 3093.2 + 1279.0 = 4372.2$$