WORK SHEET FOR STEPWISE CALCULATION (SUBSURFACE PRESSURE) (P_f & P_s)

XXXXXXXXX) XXXXXXXXX
C W

RATE NO. 3

COMPANY Monsanto Company LEASE Coquina Federal WELL NO. 1 DATE 5-27-75

LOCATION: UNIT J SECTION 31 TOWNSHIP 20-S RANGE 27-E

L 10690 H 10690 L/H 1.0 G .640 % CO_2 % N_2 % H_2S

d 1.995 F_r .018231 Q_m .795 M^2cfd (L/H) $(F_rQ_M)^2$ .000210 P_{cr} 670 T_{cr} 372

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	5345	10690							
2	GH		0	3421	6842							
3	37.5GH		0	128280	256560							
4	P_c or P_n		1293.2	1489.4	1688.2							
5	P_r		1.93	2.22	2.52							
6	T		538	582	625							
7	T_r		1.45	1.56	1.68							
8	Z		.804	.834	.868							
9	O/Z P/Z	$\overline{4} \div \overline{8}$	1608.4	1785.9	1944.9							
10	P/TZ	$\overline{9} \div \overline{6}$	2.9896	3.0712	3.1119							
11	$(P/TZ)^2/1000$	$(10^2/1000$	.008938	.009433	.009684							
12	$L/H(F_rQ_m)^2$		.000210	.000210	.000210							
13		$\overline{11} \div \overline{12}$	.009148	.009643	.009894							
14	I_n	$\overline{10} \div \overline{13}$	326.803	318.509	314.518							
15	$M=P_n-P_{n-1}$			196	199							
16	$N=I_n+I_{n-1}$			653.607	645.313							
17	M x N	$\overline{15} \times \overline{16}$		128107	128019							
18	$\sum$(M x N)	$\sum \overline{17}$		128107	256126							

delta P = $\frac{3\ (256560)}{326.803 + 4\ (318.509) + 314.518} = \frac{769680}{1915.357} = 401.8$ P = 1293.2 + 401.8 = 1695.0