WORK SHEET FOR STEPWISE CALCULATION ~~(SURFACE)~~ PRESSURE ~~(P_t & P_s)~~ (SURFACE) (P_c & P_w)

RATE NO. 1

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_2 670 % H_2S 372

d F_r Q_m M^2cfd $(L/H)(F_rQ_M)^2$ P_{cr} T_{cr}

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		10690	5345	0							
2	GH		6842	3421	0							
3	37.5GH		256560	128280	0							
4	P_c or P_n		2735.3	2404.6	2072.5	2068.3	2065.8					
5	P_r		4.08	3.59	3.09	3.09	3.08					
6	T		625	580	534	534	534					
7	T_r		1.68	1.56	1.44	1.44	1.44					
8	Z		.849	.798	.734	.734	.734					
9	O/Z P/Z	$\overline{4} \div \overline{8}$	3221.7	3013.3	2823.6	2817.9	2814.5					
10	P/TZ	$\overline{9} \div \overline{6}$	5.1548	5.19994	5.2878	5.2769	5.2706					
11	$(P/TZ)^2/1000$	$(10^2/1000$										
12	$L/H(F_rQ_m)^2$											
13		$\overline{11} \div \overline{12}$										
14	I_n	$\overline{10} \div \overline{13}$	193.991	192.309	189.113	189.501	189.730					
15	$M = P_n - P_{n-1}$			331	332	336	339					
16	$N = I_n + I_{n-1}$			387.983	386.301	381.423	378.615					
17	M x N	$\overline{15} \times \overline{16}$		128422			128350					
18	$\sum(M \times N)$	$\sum \overline{17}$		128422			256772					

$$\text{delta } P = \frac{3\ (256560)}{193.991 + 4\ (192.309) + 189.730} = \frac{769680}{1152.957} = 667.6$$

$$P = 2735.3 - 667.6 = 2067.7$$