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WORK SHEET FOR STEPWISE CALCULATION — PRESSURE (P_f & P_s) (SURFACE) (P_c & P_w) — Form C-122-E

RATE NO. 1

MPANY Mark Production Company LEASE Federal "E" Com WELL NO. 1 DATE 2-25-77

CATION: UNIT _____ SECTION 27 TOWNSHIP 18S RANGE 32E

12708 H 12708 L/H 1.00 G 0.759 % CO_2 0.00 %N_2 0.00 %H_2S 0.00

d _____ F_r _____ Q_m _____ M^2cfd (L/H) $(F_rQ_m)^2$ _____ P_{cr} 667 T_{cr} 411

NE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		12708	6354		0						
2	GH		9645	4823		0						
3	37.5GH		361701	180851		0						
4	P_c or P_n		4730.2	4003.5	3996.3	3262.6	3244.4					
5	P_r		7.09	6.00	5.99	4.89	4.86					
6	T		630	585	585	540	540					
7	T_r		1.53	1.42	1.42	1.31	1.31					
8	Z		0.934	0.835	0.834	0.716	0.714					
9	P/Z P/Z	$\overline{4} \div \overline{8}$	5062.83	4795.78	4792.86	4557.96	4545.25					
0	P/TZ	$\overline{9} \div \overline{6}$	8.0362	8.1979	8.1929	8.4407	8.4171					
1	$(P/TZ^2/1000$	$(10^2/1000$										
2	$L/H(F_rQ_m)^2$											
3		$\overline{11} + \overline{12}$										
4	I_n	$\overline{10} \div \overline{13}$	124.436	121.982	122.057	118.474	118.805					
5	$M=P_n-P_{n-1}$			727	734	734	752	751				
6	$N=I_n + I_{n-1}$			246.419	246.493	240.531	240.862					
7	M x N	$\overline{15} \times \overline{16}$			180926		181128					
8	$\sum$(M x N)	$\sum \overline{17}$			180926		362054					

$$\text{Delta P} = \frac{3[361701]}{124.436 + 4[122.057] + 118.805} = \frac{1085104}{731.469} = 1483.5$$

P = 4730.2 − 1483.5 = 3246.7