

WORK SHEET FOR STEPWISE CALCULATION

(SUBSURFACE)
PRESSURE
(P_f & P_s)
(P_c & P_w)

Form C-122-E

COMPANY MESA PETROLEUM COMPANY LEASE HONDO STATE WELL NO. 1 DATE 5-2-77

LOCATION: UNIT 11126 SECTION H 11126 TOWNSHIP G RANGE 1.17 $\%N_2$ 1.49 $\%H_2S$ 0.00

d 2.441 F_r 0.010763 Q_m 0.688 $M^2 cfd$ 0.592 $\%CO_2$ 1.17 $\%N_2$ 1.49 $\%H_2S$ 0.00

R 2.441 F_r 0.010763 Q_m 0.688 $M^2 cfd$ 0.592 $\%CO_2$ 1.17 $\%N_2$ 1.49 $\%H_2S$ 0.00

RATE NO. 1

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	5563		11126						
2	GH		0	3292		6583						
3	37.5GH		0	123436		246872						
4	P_c or P_n		3013.2	3455.2	3438.2	3862.2	3833.2					
5	P_r		4.50	5.16	5.13	5.76	5.72					
6	T		530	592	592	654	654					
7	T_r		1.51	1.69	1.69	1.87	1.87					
8	Z		0.794	0.881	0.880	0.951	0.950					
9	P/Z P/Z	$4 \div 8$	3795.44	3923.24	3907.93	4061.20	4034.95					
10	P/TZ	$9 \div 6$	7.1612	6.6271	6.6012	6.2098	6.1696					
11	$(P/TZ^2/1000)$	$(10^2/1000)$	0.051283	0.043918	0.043576	0.038561	0.038065					
12	$L/H(F_r Q_m)^2$		0.000055	0.000055	0.000055	0.000055	0.000055					
13		$11 + 12$	0.051338	0.043973	0.043631	0.038616	0.038119					
14	I_n	$10 \div 13$	139.492	150.707	151.296	160.808	161.851					
15	$M=P_n-P_{n-1}$			442	425	424	395	394				
16	$N=1_n + 1_{n-1}$			290.200	290.788	312.104	313.147					
17	$M \times N$	15×16			128180		123693					
18	$\Sigma (M \times N)$	$\Sigma 17$			128180		251873					

Delta P = $\frac{3[246872]}{139.707 + 4[151.296]} + 161.851 = \frac{740616}{906.742} = 816.8$

P = 3013.2 + 816.8 = 3830.0