

WORK SHEET FOR STEPWISE CALCULATION

XXXXXX-XXXXXX
PRESSURE (P_e & P_s)
(SURFACE) (P_c & P_w)
RATE NO. 1

Form C-122-E

PROPERTY: MESA PETROLEUM CORP. LEASE: NASH UNIT WELL NO. 3 DATE 10-25-76
 LOCATION: UNIT F 12445 H 12445 L/H 1.00 G 0.721 CO₂ 0.00 N₂ 0.00 H₂S 0.00
 d F_r Q_m M² cfd (L/H) (F_r Q_m)² P_{cr} 668 T_{cr} 398

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		12445	6223		0						
2	GH		8973	4486		0						
3	37.5GH		336482	168241		0						
4	P _c or P _n		3588.1	3042.3	3033.2	2478.7	2454.5	2456.8				
5	P _r		5.37	4.55	4.54	3.71	3.67	3.68				
6	T		640	585	585	529	529	529				
7	T _r		1.61	1.47	1.47	1.33	1.33	1.33				
8	Z		0.864	0.776	0.775	0.663	0.662	0.662				
9	P/Z P/Z	4 ÷ 8	4152.41	3921.52	3914.78	3740.89	3709.89	3713.43				
10	P/TZ	9 ÷ 6	6.4881	6.7092	6.6977	7.0716	7.0130	7.0197				
11	(P/TZ) ² /1000	(10 ² /1000)										
12	L/H(F _r Q _m) ²											
13		11 ÷ 12										
14	I _n	10 ÷ 13	154.127	149.049	149.306	141.410	142.592	142.456				
15	M = P _n - P _{n-1}			546	555	554	579	576	577			
16	N = 1 + 1 _{n-1}			303.177	303.433	290.716	291.898	291.762				
17	M x N	15 x 16			168405			168055				
18	Σ (M x N)	Σ 17			168405			336460				

Delta P = $\frac{3[336482]}{154.127 + 4[149.306]} + 142.456 = \frac{1009445}{893.807} = 1129.4$ P = 3588.1 - 1129.4 = 2458.7