

WORK SHEET FOR STEPWISE CALCULATION

Form C-122-E

(P_f & P_s)
PRESSURE
(P_c & P_w)

(SURFACE)
RATE NO. 1

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

LOCATION: UNIT SECTION TOWNSHIP RANGE

11126 H 11126 L/H 1.00 G 0.592 % CO₂ 1.17 % N₂ 0.00 % H₂S 1.49
d F_r Q_m M² cfd (L/H) (F_r Q_m)² P_{cr} 670 T_{cr} 350

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		11126	5563		0						
2	GH		6587	3293		0						
3	37.5GH		246997	123499		0						
4	P _c or P _n		3830.0	3449.3	3435.9	3042.4	3010.1					
5	P _r		5.72	5.15	5.13	4.54	4.49					
6	T		654	592	592	530	530					
7	T _r		1.87	1.69	1.69	1.51	1.51					
8	Z		0.950	0.881	0.880	0.795	0.794					
9	P/Z P/Z	4 ÷ 8	4031.58	3916.60	3905.32	3827.34	3791.59					
10	P/TZ	9 ÷ 6	6.1645	6.6159	6.5968	7.2214	7.1539					
11	(P/TZ) ² /1000	(10 ² /1000										
12	L/H(F _r Q _m) ²											
13		11 + 12										
14	I _n	10 ÷ 13	162.219	151.152	151.588	138.477	139.783					
15	M=P _n ⁻¹			381	394	394	426	424				
16	N=1 _n + 1 _{n-1}			313.371	313.807	290.065	291.371					
17	M x N	15 x 16			119394		124124					
18	Σ (M x N)	Σ 17			119394		243518					

Delta P = $\frac{162.219 + 4[151.588] + 139.783}{3} = \frac{740992}{908.354} = 815.8$ P = 3830.0 - 815.8 = 3014.2