

WORK SHEET FOR STEPWISE CALCULATION

Form C-122-E

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

RATE NO. 4

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 0.688 % CO₂ 1.17 % N₂ 1.49 % H₂S 0.00
d 2.441 F_r 0.010763 Q_m 1.641 M² cfd (L/H) (F_r Q_m)² 0.000312 P_{cr} 670 T_{cr} 350

INE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	5563		11126						
2	GH		0	3827		7655						
3	37.5GH		0	143525		287051						
4	P _c or P _n		1673.2	1961.2	1958.2	2242.2	2236.2					
5	P _r		2.50	2.93	2.92	3.35	3.34					
6	T		530	592	592	654	654					
7	T _r		1.51	1.69	1.69	1.87	1.87					
8	Z		0.800	0.862	0.863	0.909	0.909					
9	P/Z P/Z		2090.45	2274.91	2268.80	2466.40	2459.80					
10	P/TZ		3.9443	3.8428	3.8324	3.7712	3.7612					
11	(P/TZ) ² /1000		0.015557	0.014767	0.014688	0.014222	0.014146					
12	L/H(F _r Q _m) ²		0.000312	0.000312	0.000312	0.000312	0.000312					
13	I _n		0.015869	0.015079	0.014999	0.014534	0.014458					
14	M=P _n -P _{n-1}		248.549	254.846	255.504	259.473	260.139					
15	N=I _n +I _{n-1}			288	285	284	278	278				
16	M x N			503.396	504.054	514.977	515.644					
17	(M x N)				143655		143348					
18					143655		287003					

$$\text{Delta } P = \frac{3[287051]}{248.549 + 4[255.504]} + 260.139 = \frac{861152}{1530.704} = 562.6$$

$$P = 1673.2 + 562.6 = 2235.8$$