

WORK SHEET FOR STEPWISE CALCULATION

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

Form C-122-E

RATE NO. 2

COMPANY _____ LEASE _____ WELL NO. _____ DATE _____

LOCATION: UNIT _____ SECTION _____ TOWNSHIP _____ RANGE _____

9680 H 9680 L/H 1.00 G 0.903 % CO₂ 1.30 % N₂ 0.69 % H₂S 0.00
d 4.778 F 0.005128 Q_m 0.331 M² cfd (L/H) (F Q_m)² 0.000003 P_{cr} 662 T_{cr} 457

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	4840		9680						
2	GH		0	4371		8741						
3	37.5GH		0	163895		327789						
4	P _c or P _n		3594.2	4358.2	4329.2	5063.2	5016.2					
5	P _r		5.43	6.58	6.54	7.65	7.58					
6	T _r		530	591	591	651	651					
7	T _r		1.16	1.29	1.29	1.42	1.42					
8	Z		0.727	0.852	0.849	0.954	0.949					
9	P/Z P/Z		4 ÷ 8	4941.16	5114.06	5099.18	5305.11	5283.55				
10	P/TZ		9 ÷ 6	9.3229	8.6606	8.6354	8.1492	8.1160				
11	(P/TZ ² /1000		(10 ² /1000	0.086917	0.075005	0.074569	0.066409	0.065870				
12	L/H(F _r Q _m) ²			0.000003	0.000003	0.000003	0.000003	0.000003				
13				11 + 12	0.086920	0.074572	0.066412	0.065873				
14	I _n			10 ÷ 13	107.259	115.462	115.799	122.706	123.207			
15	M=P _n -P _{n-1}				764	735	734	687	685			
16	N=1 _n + 1 _{n-1}				222.720	223.057	238.505	239.006				
17	M x N											
18	Σ (M x N)											

$$\Delta P = \frac{3[327789]}{107.259 + 4[115.799]} + 123.207 = \frac{983367}{693.662} = 1417.6 \quad P = 3594.2 + 1417.6 = 5011.8$$