

WORK SHEET FOR STEPWISE CALCULATION

Form C-122-E

XXXXXXXXXXXX

(P_f & P_s)

PRESSURE

(P_c & P_w)

(SURFACE)

RATE NO. 3

Federal "E" Com

COMPANY Mark Production Company

LEASE

WELL NO. 1

DATE 2-25-77

LOCATION: UNIT 12708 H 12708 L/H 1.00 G 0.759 % CO₂ 0.00 % N₂ 0.00 % H₂ 0.00

d F_r Q_m M² cfd (L/H)' (F_r Q_m)² P_{cr} 667 T cr 411

SECTION 27 TOWNSHIP 18S RANGE 32E

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		12708	6354		0						
2	GH		9645	4823		0						
3	37.5GH		361701	180851		0						
4	P _c or P _n											
5	P _r		3870.2	3224.5	3220.0	2570.2	2363.5					
6	T		5.80	4.83	4.83	3.85	3.84					
7	T _r		630	585	585	540	540					
8	Z		1.53	1.42	1.42	1.31	1.31					
9	P/Z P/Z		0.860	0.761	0.761	0.653	0.653					
10	P/TZ		4498.66	4236.07	4230.15	3936.03	3925.75					
11	(P/TZ) ² /1000		7.1407	7.2411	7.2310	7.2889	7.2699					
12	L/H(F _r Q _m) ²											
13												
14	I _n											
15	M=P _n -P _{n-1}		140.042	138.100	138.293	137.194	137.553					
16	N=1 _n +1 _{n-1}			646	650	650	656	656				
17	M x N			278.141	278.335	275.487	275.847					
18	Σ (M x N)			180918	180918	180918	180956	180956				

Delta P = $\frac{3[361701]}{140.042 + 4[138.293] + 137.553} = \frac{1085104}{830.767} = 1306.1$

P = 3870.2 - 1306.1 = 2564.1