

WORK SHEET FOR STEPWISE CALCULATION

PRESSURE (P_c & P_w)
 Form C-122-E
 RATE NO. 2

COMPANY Monsanto Company LEASE Albert Federal WELL NO. 1 DATE 1-10-77

SECTION: UNIT 0 9299 L/H 1.00 SECTION 32 TOWNSHIP 19S RANGE 25E
 2.441 F_r 0.010763 Q_m 1.717 M² cfd (L/H) (F_r Q_m)² 0.000342 P_{cr} 672 T_{cr} 354

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		0	4650		9299						
2	GH		0	2766		5533						
	37.5GH		0	103742		207484						
4	P _c or P _n		2258.2	2556.2	2550.2	2842.2	2831.2					
5	P _r		3.36	3.80	3.79	4.23	4.21					
6	T _r		523	570	570	616	616					
	T _r		1.48	1.61	1.61	1.74	1.74					
	2		0.759	0.820	0.820	0.874	0.873					
9	P/Z P/Z		2974.45	3117.70	3110.38	3252.69	3241.58					
10	P/TZ		5.6873	5.4744	5.4616	5.2803	5.2623					
11	(P/TZ) ² /1000		0.032345	0.029970	0.029829	0.027882	0.027692					
12	L/H(F _r Q _m) ²		0.000342	0.000342	0.000342	0.000342	0.000342					
14	I _n		11 + 12	0.032687	0.030311	0.028224	0.028033					
15	M=P _n - P _{n-1}			298	292	292	281					
16	N=1 _n + 1 _{n-1}			354.603	355.018	368.114	368.740					
17	M x N				106585		103616					
18	Σ (M x N)				106585		210201					

$$\begin{aligned}
 \text{Delta P} &= \frac{3[207484]}{173.994 + 4[181.024]} + 187.716 = \frac{622452}{1085.806} = 573.3 \\
 P &= 2258.2 + 573.3 = 2831.5
 \end{aligned}$$