

WORK SHEET FOR STEPWISE CALCULATION

XXXXXXXXXXXXXXXX
 PRESSURE
 (SURFACE)
 RATE NO. 1

Form C-122-E

Client: Monsanto Company

LEASE Cert Federal

WELL NO. 2

DATE 10-20-76

SECTION: UNIT

SECTION 10

TOWNSHIP

21S

RANGE

27E

11437 H 11437 L/H 1.00 G 0.596 & CO₂ 0.00 & N₂ 0.00 & H₂S 0.00
 d F_r Q_m M²cf/d (L/H) (F_r Q_m)² P_{cr} 671 T_{cr} 358

ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
H		11437	5719		0						
GH		6816	3408		0						
37.5GH		255617	127808		0						
P _c or P _n		3046.1	2691.4	2687.3	2328.7	2320.6					
P _r		4.54	4.01	4.00	3.47	3.46					
T		624	577	577	529	529					
T _r		1.74	1.61	1.61	1.48	1.48					
2		0.879	0.822	0.822	0.758	0.758					
P/2 P/2		4 ÷ 8	3463.84	3274.96	3269.98	3071.36	3060.63				
P/TZ		9 ÷ 6	5.5510	5.6808	5.6721	5.8060	5.7857				
(P/TZ) ² / 1000		(10 ² / 1000)									
1/H (F _r Q _m) ²											
		11 + 12									
T _n		10 ÷ 13	180.147	176.032	176.301	172.236	172.840				
M-P - P _{n-1}			355	359	359	367	366				
N = 1 _n + 1 _{n-1}			356.179	356.448	348.537	349.141					
M x N		15 x 16	127965	127965	128135						
Σ (M x N)		Σ 17	127965		256100						

$$\Delta P = \frac{3[255617]}{180.147 + 4[176.301] + 172.840} = \frac{766851}{1058.191} = 724.7 \quad P = 3046.1 - 724.7 = 2321.4$$