

WORK SHEET FOR STEPWISE CALCULATION

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

Form C-122E
Adopted 9-1-65

COMPANY Continental Oil Co. LEASE Anderson Ranch U. WELL NO. 3 DATE 1/24/69

LOCATION: Unit A Section 11 Township 16-S Range 25-E

L 12,148 H 12,148 L/H 1.00 G 1.036 % CO₂ .61 % N₂ 1.39 % H₂S 0

d 1.995 F_r 0.1823 Q_m 1.078 M²cfd (L/H) (F_rQ_m)² .0008862 P_{CT} 657 T_{CT} 495

TABLE IX & X

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LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		12,149	6074								
2	GH		12,586.4	6292.7				0				
3	37.5GH		471,990	235,976				0				
4	P _c or P _n		3836.9	2938.3	2918.0	2919.1		2001.1	1906.6	1907.4		
5	P _r		5.84	4.47	4.44	4.44		3.05	2.90	2.90		
6	T		640	580	580	580		520	520	520		
7	T _r		1.29	1.17	1.17	1.17		1.05	1.05	1.05		
8	Z		.787	.636	.633	.633		.413	.394	.394		
9	P/Z	4÷8	4875.3	4619.9	4609.7	4611.5		4845.2	4839.0	4841.1		
10	P/TZ	9÷6	7.6176	7.9653	7.9477	7.9508		9.3176	9.3057	9.3098		
11	(P/TZ) ² /1000	(10) 2/1000										
12	L/H(F _r Q _m) ²											
13	I ₁ + I ₂											
14	I _n	I ₀ ÷ I ₃	131.3	125.5	125.8	125.8		107.3	107.5	107.4		
15	M = P _n - P _{n-1}			898.6	918.9	917.8	917.8	918.0	1012.5	1011.7	1012.1	
16	N = I _n + I _{n-1}			256.8	257.1	257.1	257.1	233.1	233.3	233.2		
17	M x N	I ₅ x I ₆				235,966						
18	Σ (M x N)	Σ I ₇	471,990			236,024						

Q₃:

$$G = \frac{G_g + \frac{4595 G_1}{G_{OR}}}{1 + \frac{V_1}{G_{OR}}}$$

$$G = 1.036$$

$$\begin{array}{r} P_{cr} = 656 \\ + 2.4 \\ - 1.4 \\ \hline 657 \end{array}$$

$$\begin{array}{r} T_{cr} = 500 \\ - .6 \\ - 4.2 \\ \hline 495 \end{array}$$

$$\Delta P = \frac{3(37.5 GH)}{I_t + 4I_1 + I_2}$$

$$\Delta P = 1922.2$$

$$P_s = P_t + \Delta P$$

$$P_s = 3815.4$$

$$\Delta P = \frac{3(37.5 GH)}{I_w + 4I_1 + I_2}$$

$$\Delta P = 1908.6$$

$$P_w = P_s - \Delta P$$

$$P_w = 1906.8$$

$$\begin{array}{l} G_g = .736 \\ G_1 = .7694 \\ G_{OR} = \frac{1078,000}{117} = 9214 \\ V_1 = 741 \end{array}$$

$$\begin{array}{l} 37.5 GH = 471,990 \\ I_t = 106.6 \\ I_1 = 124.9 \\ I_2 = 130.4 \end{array}$$

$$P_t = 1893.2$$

$$\begin{array}{l} 37.5 GH = 471,990 \\ I_w = 107.4 \\ I_1 = 125.8 \\ I_2 = 131.3 \end{array}$$

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