

XXXXXXXXXXXX

WORK SHEET FOR STEPWISE CALCULATION

Form C-122-E

(P_f & P_g)

PRESSURE

(SURFACE)

(P_c & P_w)

RATE NO. 3

COMPANY MESA PETROLEUM CORP. LEASE NASH UNIT WELL NO. 3 DATE 10-25-76
SECTION 12 TOWNSHIP 23S RANGE 29E
UNIT F H 12445 L/H 1.00 G 0.721 M² cfd CO₂ 0.00 N₂ 0.00 H₂S 0.00
d F I Q_m (L/H) (F_Q)² P_{cr} 668 T_{cr} 398

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		12445	6223		0						
2	GH		8973	4486		0						
3	37.5GH		336482	168241		0						
4	P _c or P _n		5099.2	4415.8	4401.7	3704.8	3669.3					
5	P _r		7.63	6.61	6.59	5.55	5.49					
6	T		640	586	586	532	532					
7	T _r		1.61	1.47	1.47	1.34	1.34					
8	Z		0.981	0.890	0.889	0.776	0.772					
9	P/Z P/Z	$\bar{4} \div \bar{8}$	5199.55	4960.44	4953.58	4775.42	4755.47					
10	P/TZ	$\bar{9} \div \bar{6}$	8.1243	8.4649	8.4532	8.9764	8.9388					
11	(P/TZ) ² /1000	(10 ² /1000)										
12	L/H(F _r Q _m) ²											
13		$\bar{11} + \bar{12}$										
14	I _n	$\bar{10} \div \bar{13}$	123.088	118.135	118.298	111.404	111.871					
15	M=P-P _n	$\bar{1}$		683	697	697	732	731				
16	N=1 _n +1 _{n-1}			241.222	241.386	229.702	230.170					
17	M x N	$\bar{15} \times \bar{16}$			168246		168484					
18	Σ(M x N)	$\Sigma \bar{17}$			168246		336730					

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ARTIFICIAL LIFT DIVISION

Delta P = $\frac{3[336482]}{123.088 + 4[118.298]} + 111.871 = \frac{1009445}{708.151} = 1425.5$ P = 5099.2 - 1425.5 = 3673.7