

WORK SHEET FOR STEPWISE CALCULATION

(SURFACE)

PRESSURE
(P_c & P_w)

5th

Form C-122-E
Adopted 9-1-65

COMPANY Liberty Oil & Gas LEASE Lee Federal Com WELL NO. 2 DATE 3.27.83

LOCATION: Unit 11230 Section 25 Township 20s Range 28e

L 11230 H 11230 L/H 1.000 G mix .6355 % CO₂ .990 % N₂ .446 % H₂S 372
d 1.995 F_r .018231 Q_m 0 M^2 c/d (L/H) ($F_r Q_m$)² 0 P_{cr} 670 T_{cr} 372

LINE	ITEM	SOURCE	1	2	3	4	5	6	7	8	9	10
1	H		11230	5615		0						
2	GH		7126.7	3568.3		0						
3	37.5GH		267,626	133,812		0						
4	P_c or P_n		4045.1	3589.7	3580.9	3117.8	3092.4	3094.0			Pw=3096.5	
5	P_r		6.04	5.36	5.34	4.65	4.62	4.62				
6	T		646	590	590	534	534	534				
7	T_r		1.74	1.59	1.59	1.44	1.44	1.44				
8	Z		.920	.860	.860	.770	.769	.769				
9	P/Z P/Z	$\bar{4}=.8$	4396.8	4174.1	4163.9	4049.1	4021.3	4023.4				
10	P/TZ	$\bar{9}=.6$	6.8063	7.0747	7.0574	7.5826	7.5305	7.5345				
11	$(P/TZ)^2/1000$	$(\bar{10})^2/1000$										
12	$L/H(F_r Q_m)^2$											
13		$\bar{11} + \bar{12}$										
14	I_n	$\bar{10} + \bar{13}$	146.922	141.349	141.695	131.882	132.794	132.722				
15	$M=P_n-P_{n-1}$		455	464	463	489	487					
16	$N=I_n+I_{n-1}$		288.271	288.617	273.576	274.488	274.417					
17	$M \times N$	$\bar{15} \times \bar{16}$	133972				133618					
18	$\Sigma (M \times N)$	$\Sigma \bar{17}$	133653									