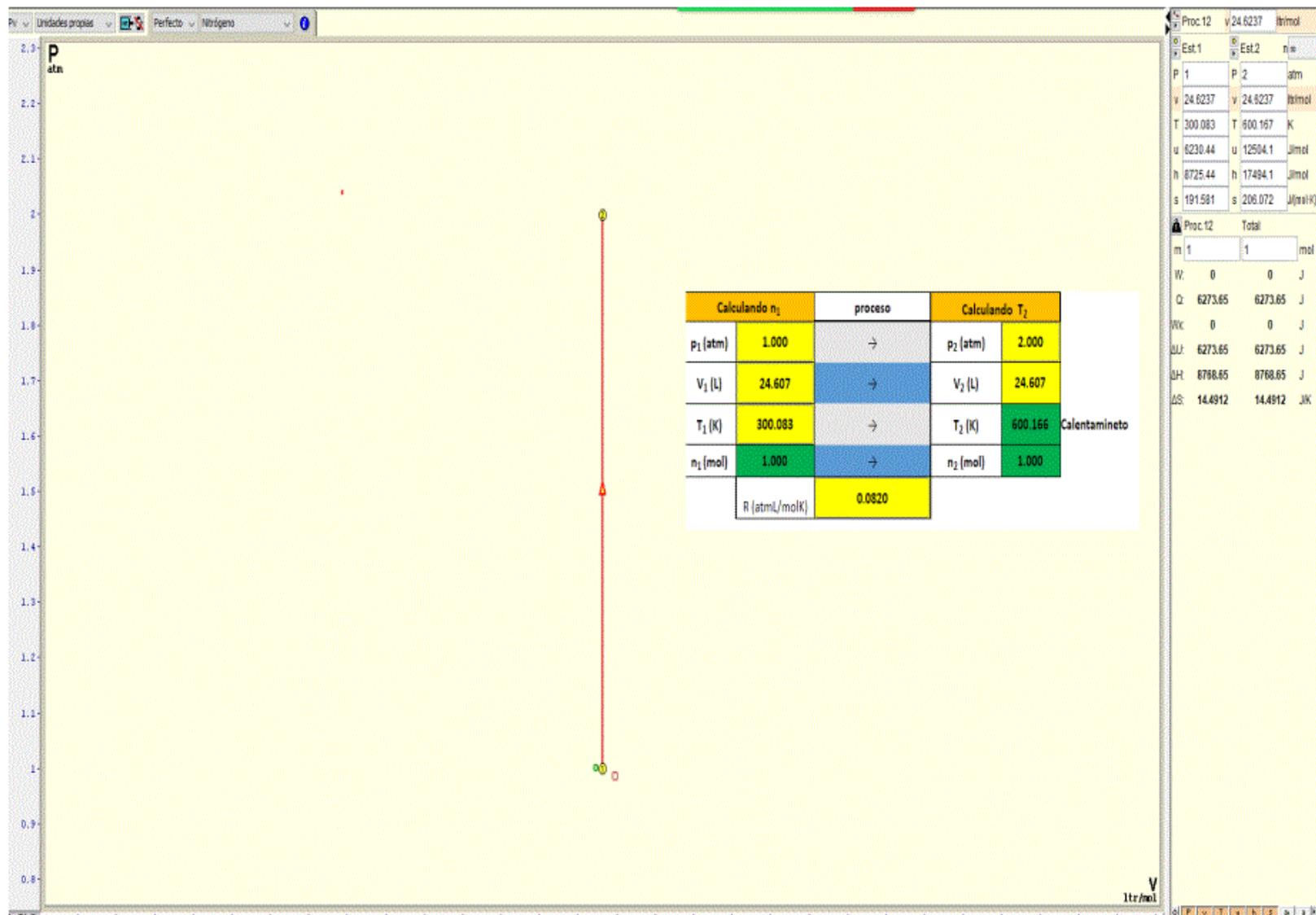


Clase 31 6 octubre 2021

Título de la nota

06/10/2021



Unidades propias Perfecto Nitrógeno

Proceso isocórico en gases de comportamiento perfecto en sistemas cerrados

Instrucción: Insertar en las celdas de color amarillo los valores correspondientes

Calculando V_1		proceso	Calculando V_2		
p_1 (atm)	1.000	→	p_2 (atm)	2.000	Calentamiento
V_1 (L)	24.607	→	V_2 (L)	24.607	
T_1 (K)	300.083	→	T_2 (K)	600.167	
n_1 (mol)	1.000	→	n_2 (mol)	1.000	
	R (J/molK)			8.314	
C_v (J/molK)	20.760				Temperatura aumenta
C_p (J/molK)	29.070				Calentamiento
Especificar el gas empleado	Nitrógeno				Presión aumenta

Calentamiento	
ΔH (J)	8723.442
ΔU (J)	6229.744
ΔS (J/K)	14.390
q (J)	6229.744
w (J)	0.000

q	>	0	Endotérmico
w	=	0	No cambia volumen
ΔS	>	0	Aumento de entropía

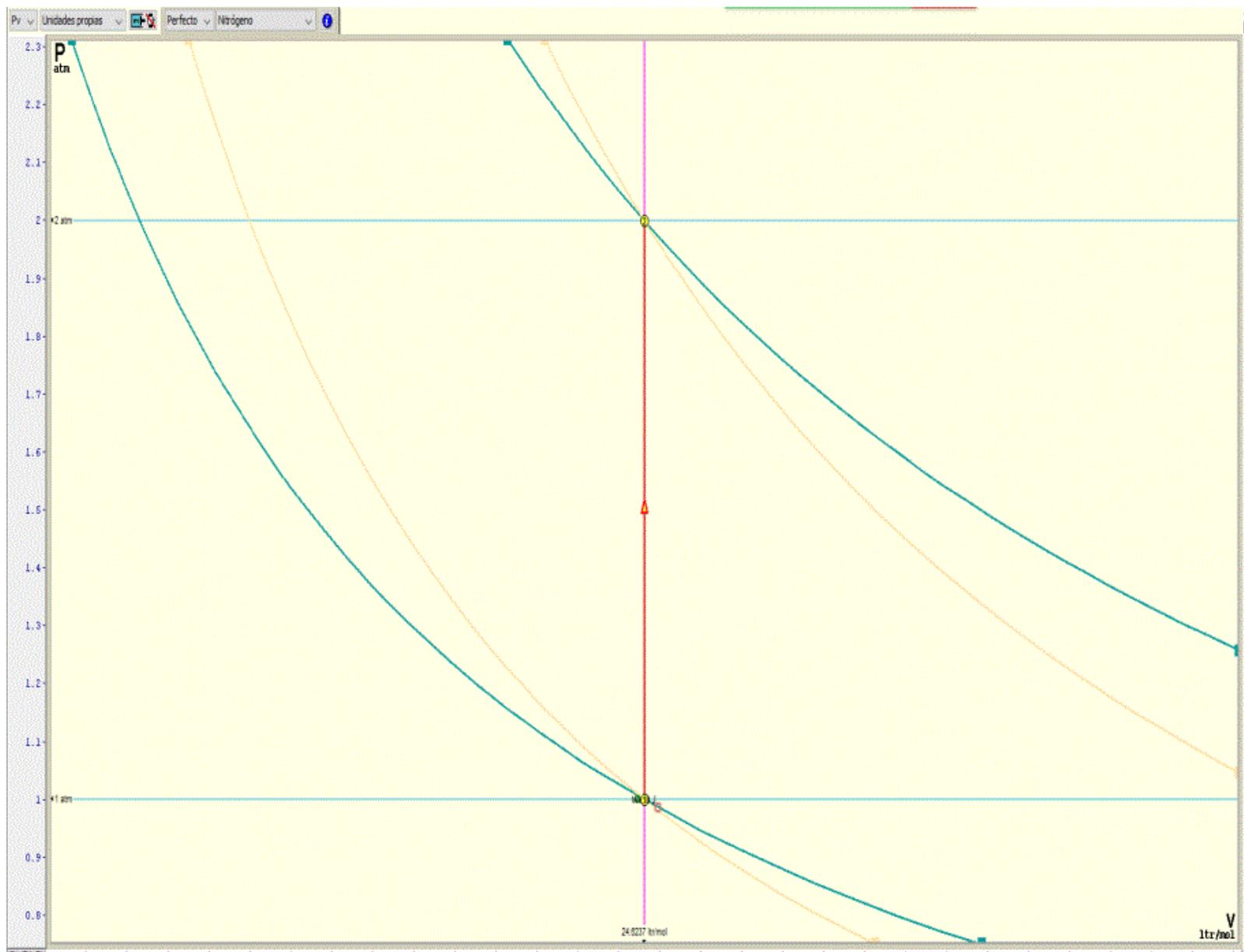
1tr/mol

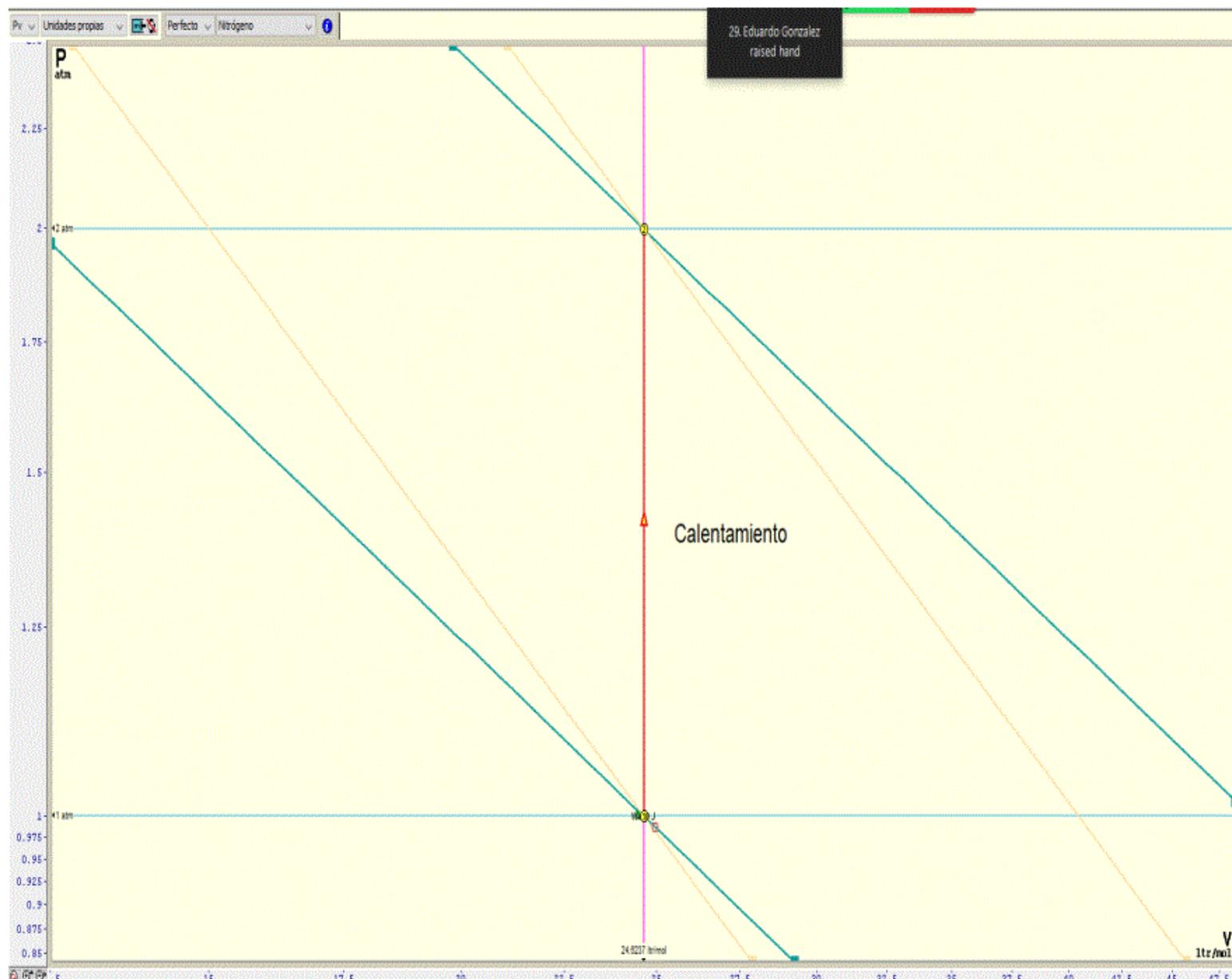
Proc. 12 24.6237 1tr/mol

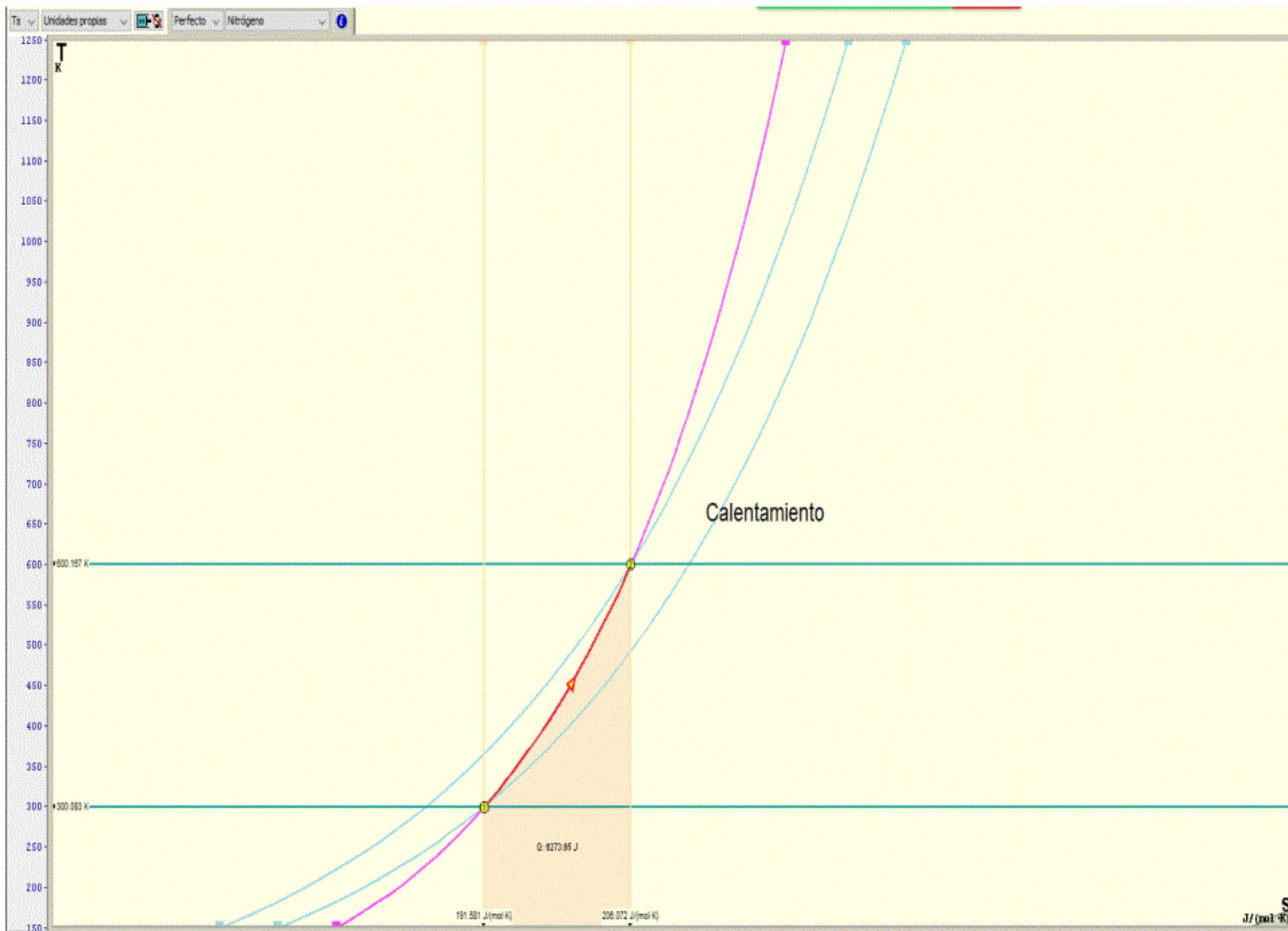
Est.1	Est.2	Unidad
P 1	P 2	atm
v 24.6237	v 24.6237	l/mol
T 300.083	T 600.167	K
u 6230.44	u 12504.1	l/mol
h 8725.44	h 17494.1	l/mol
s 191.581	s 206.072	l/mol K

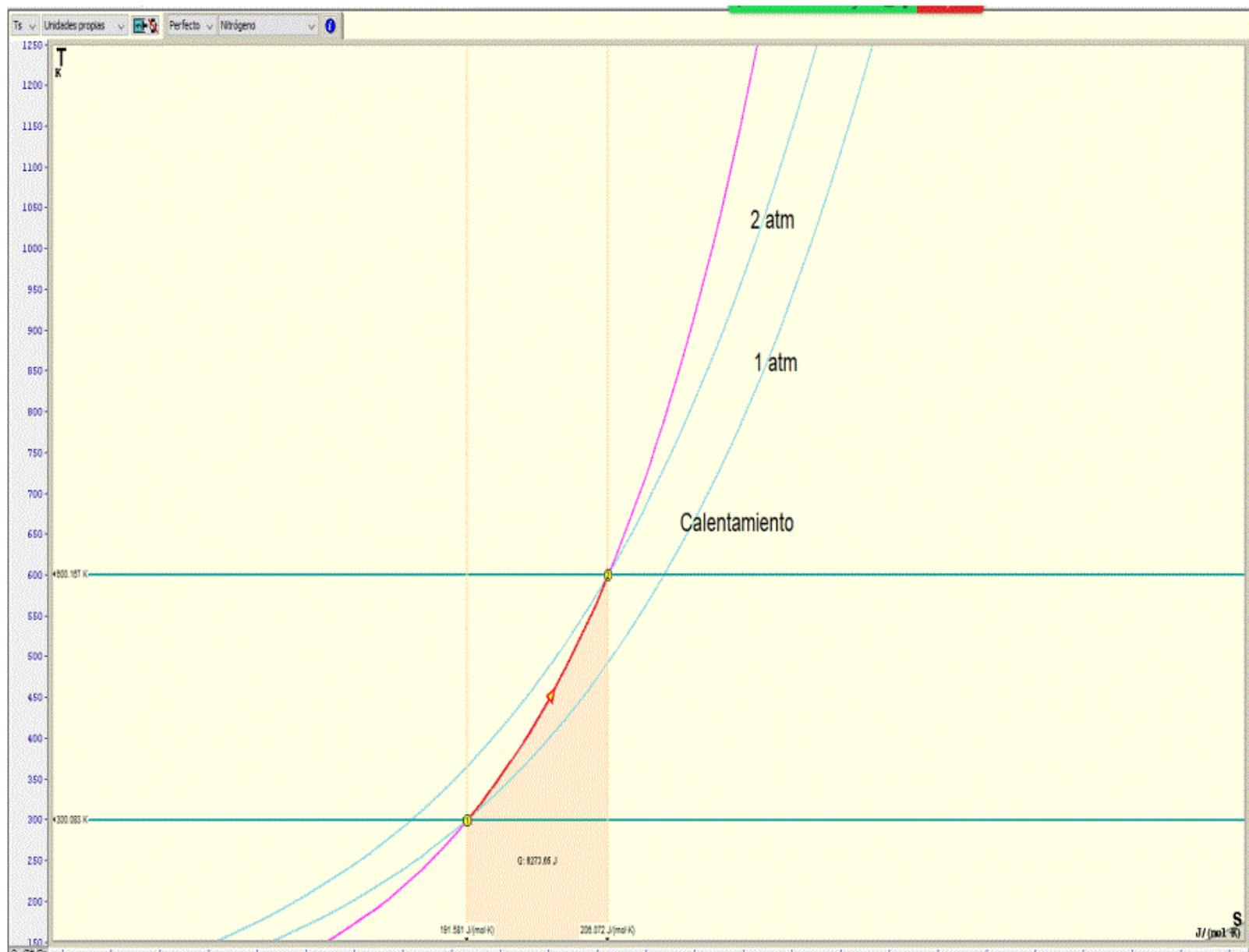
Proc. 12 Total

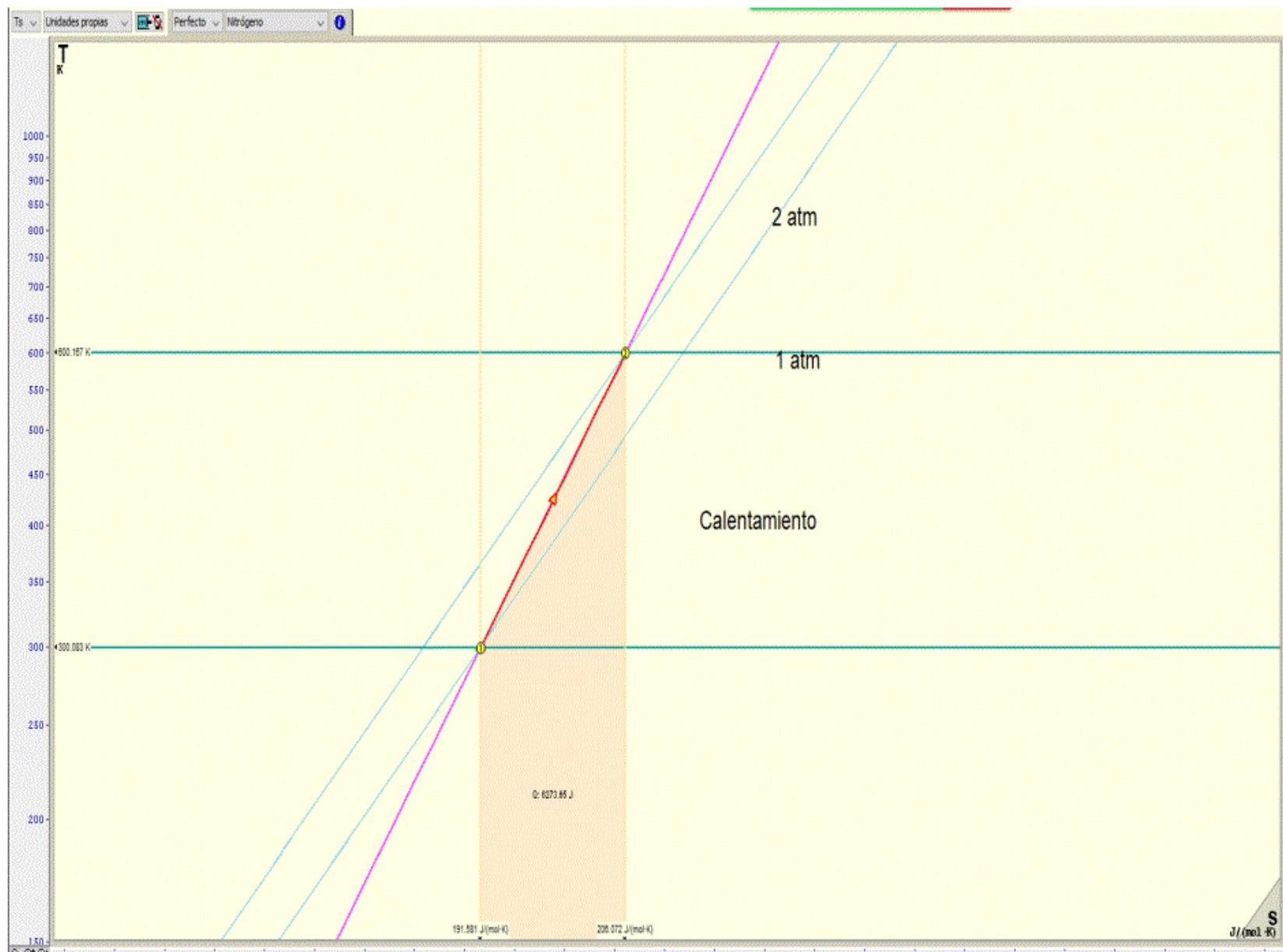
m	1	1	mol
W:	0	0	J
Q:	6273.65	6273.65	J
Wx:	0	0	J
ΔU :	6273.65	6273.65	J
ΔH :	8768.65	8768.65	J
ΔS :	14.4912	14.4912	JK

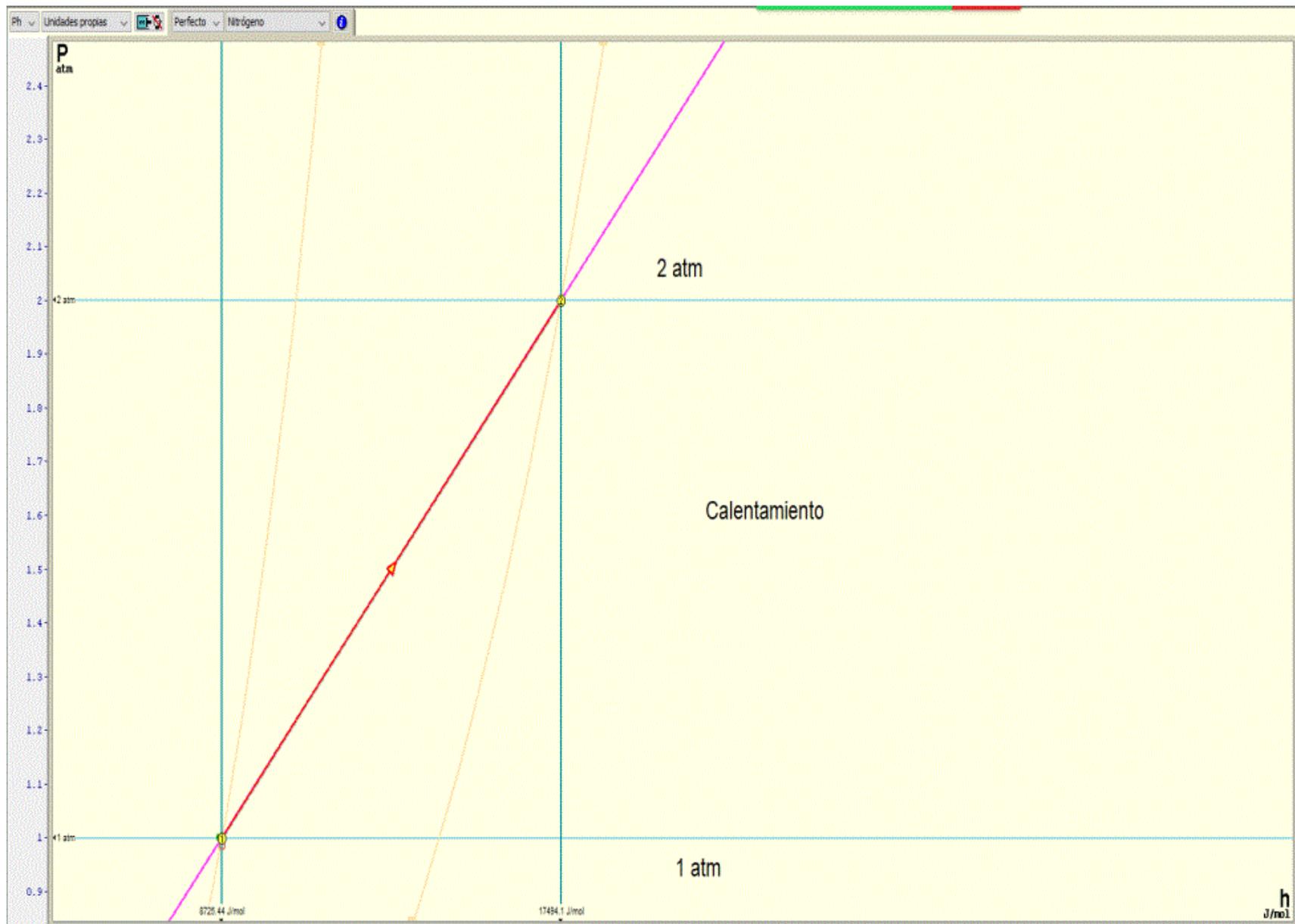


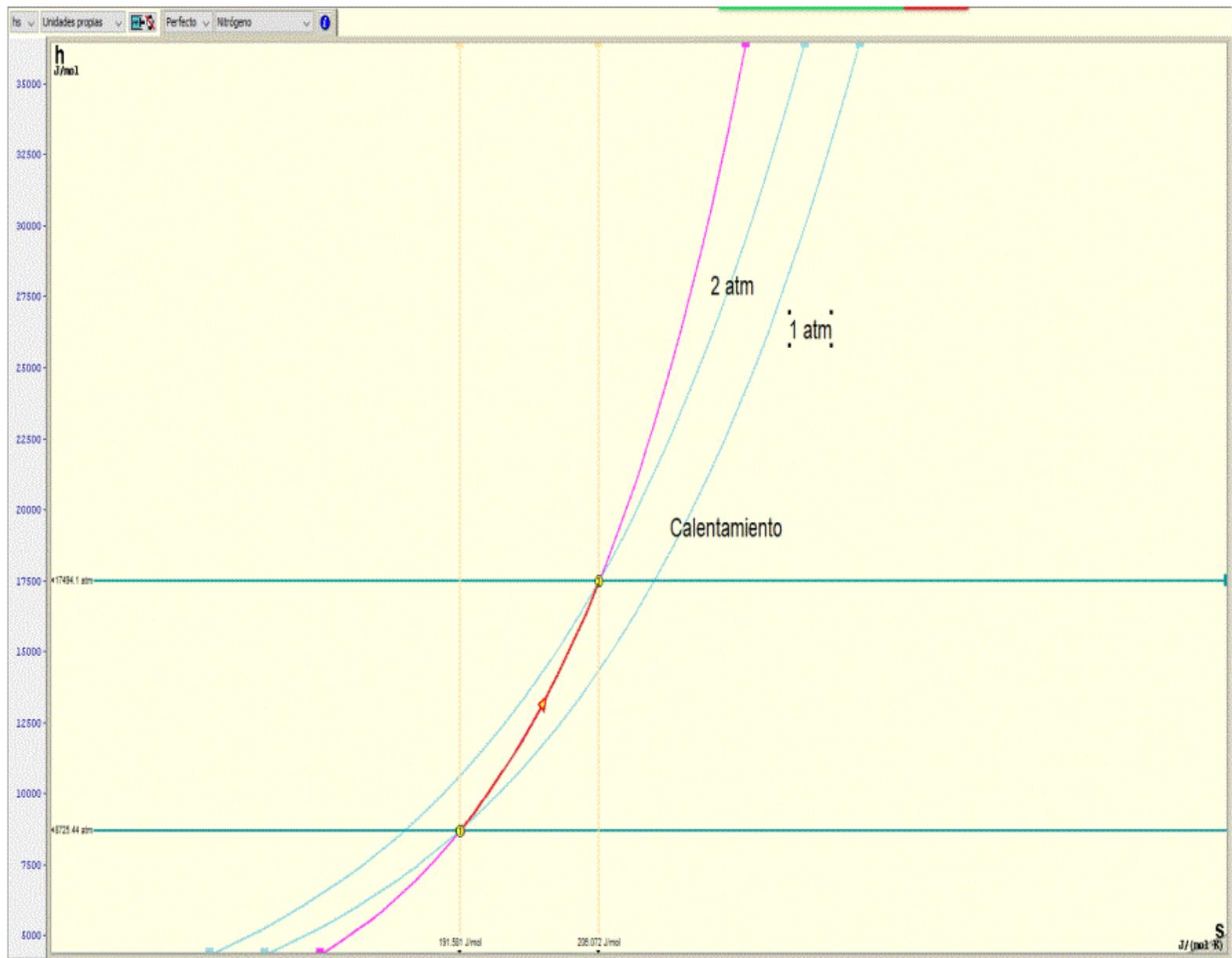


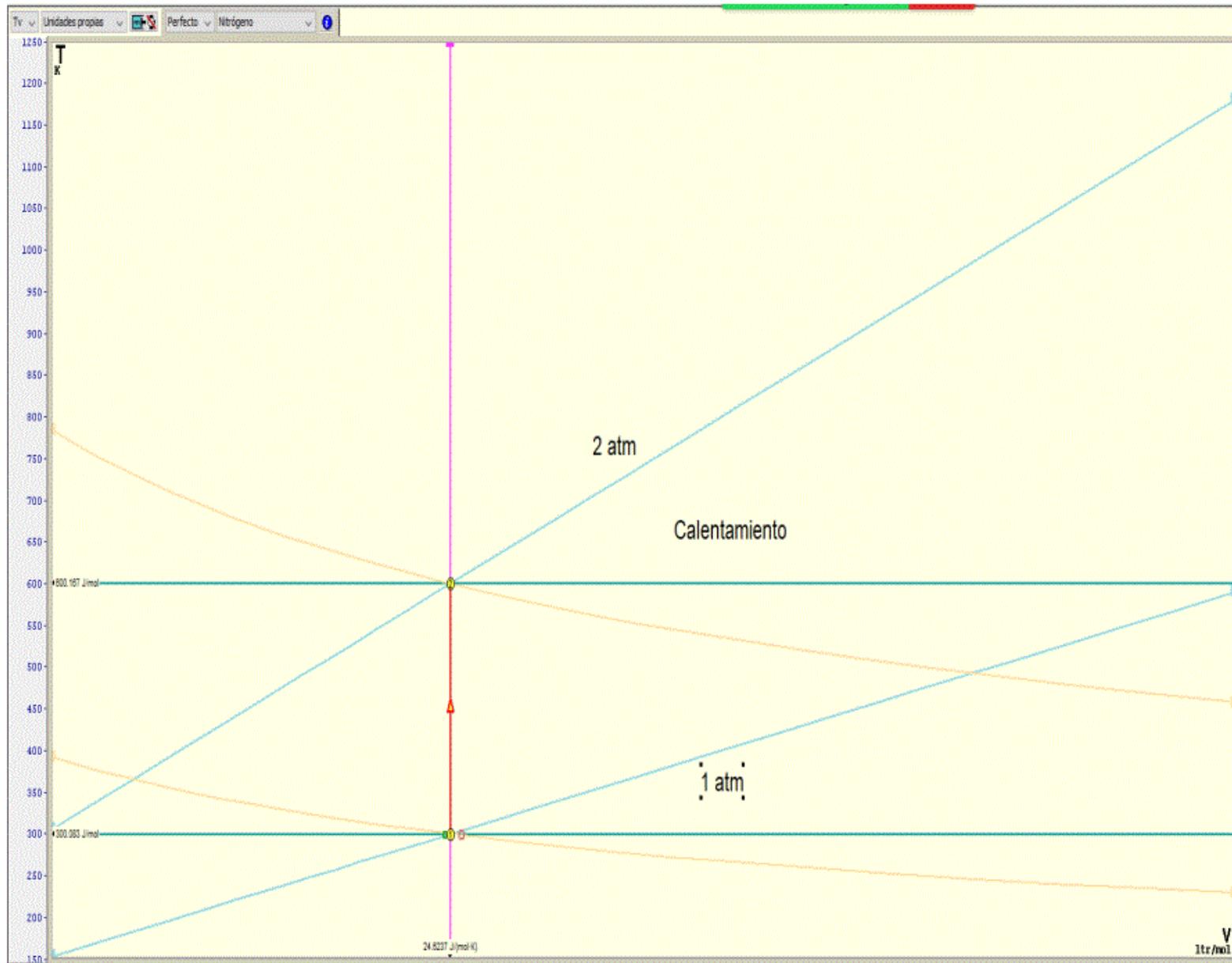


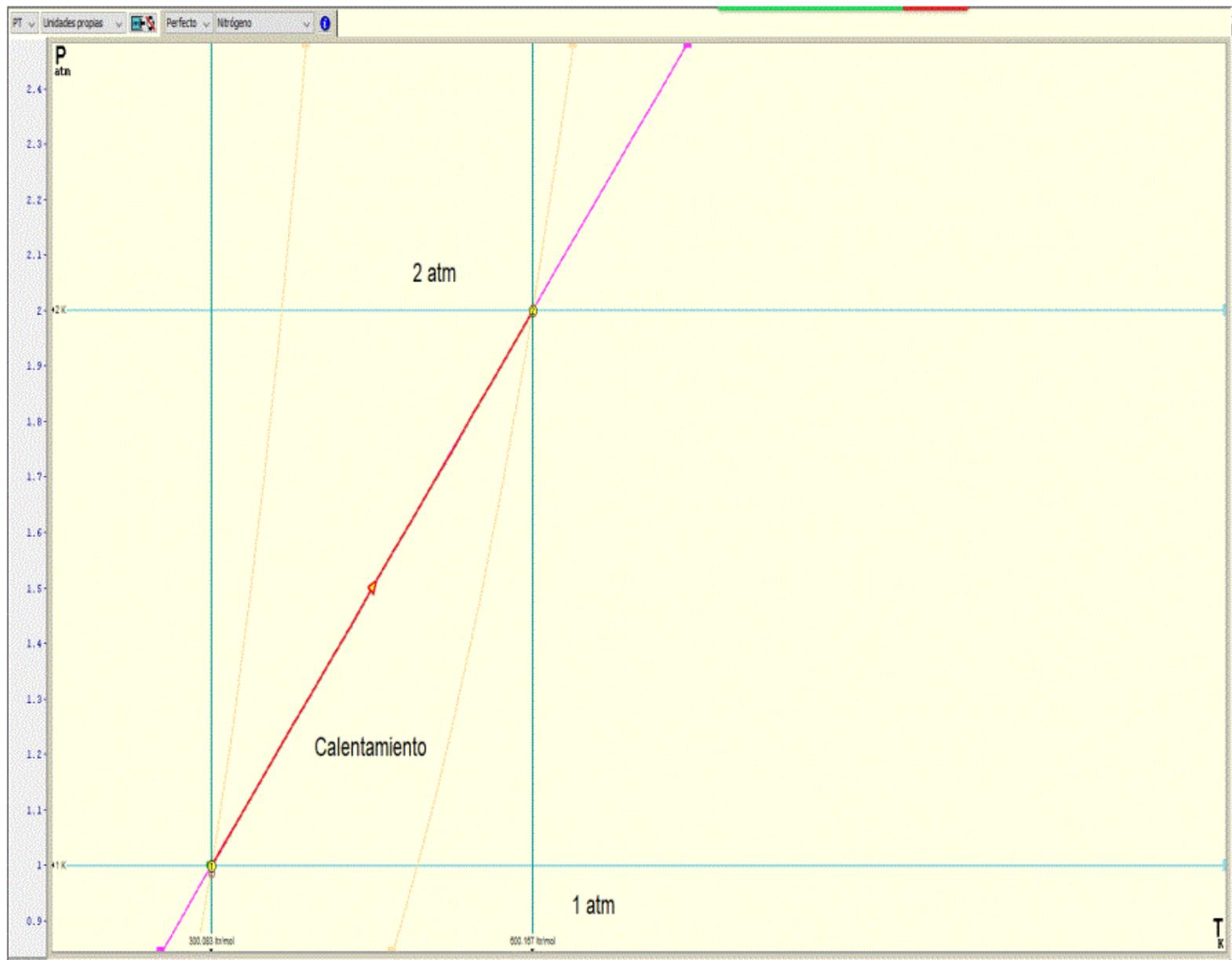


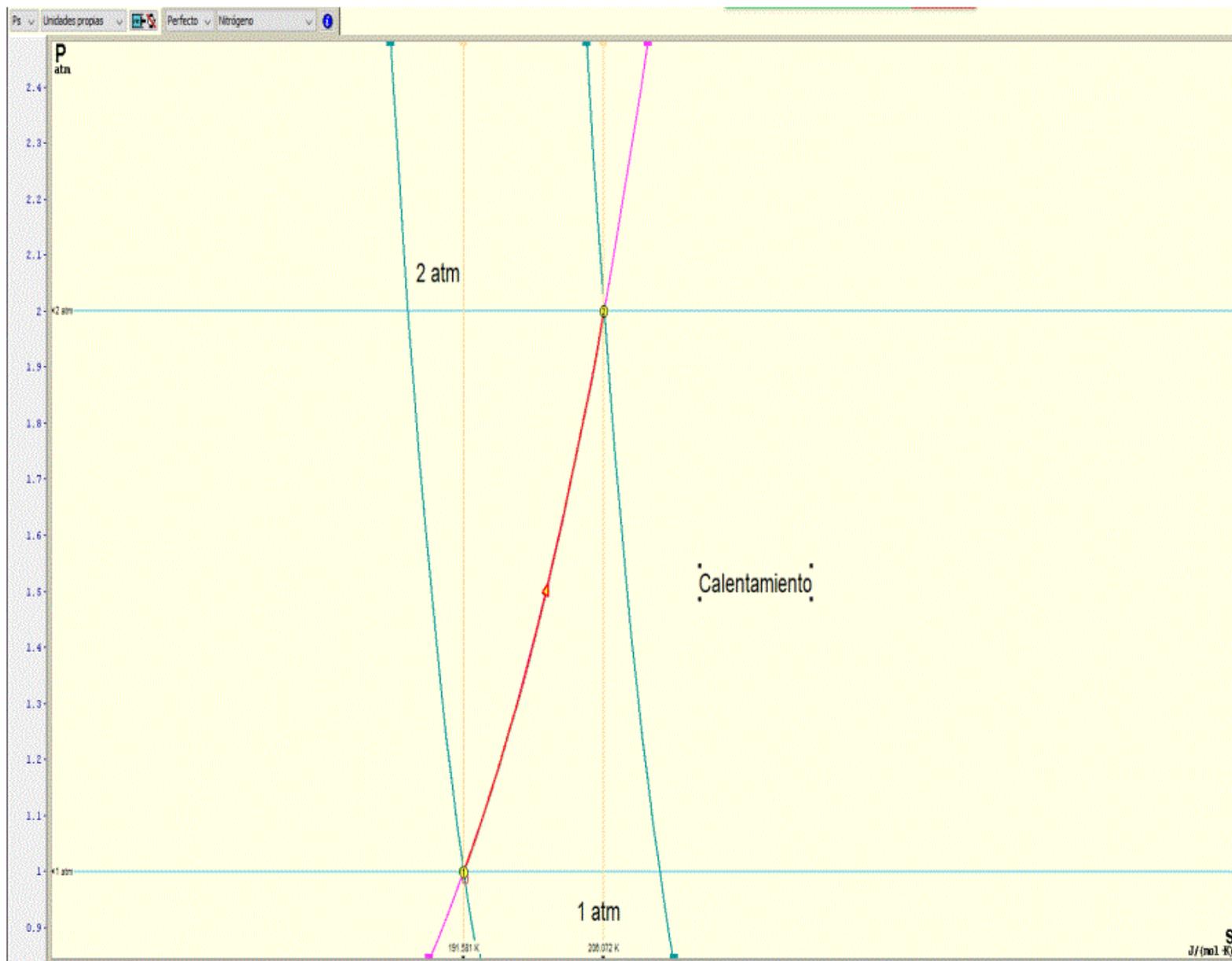


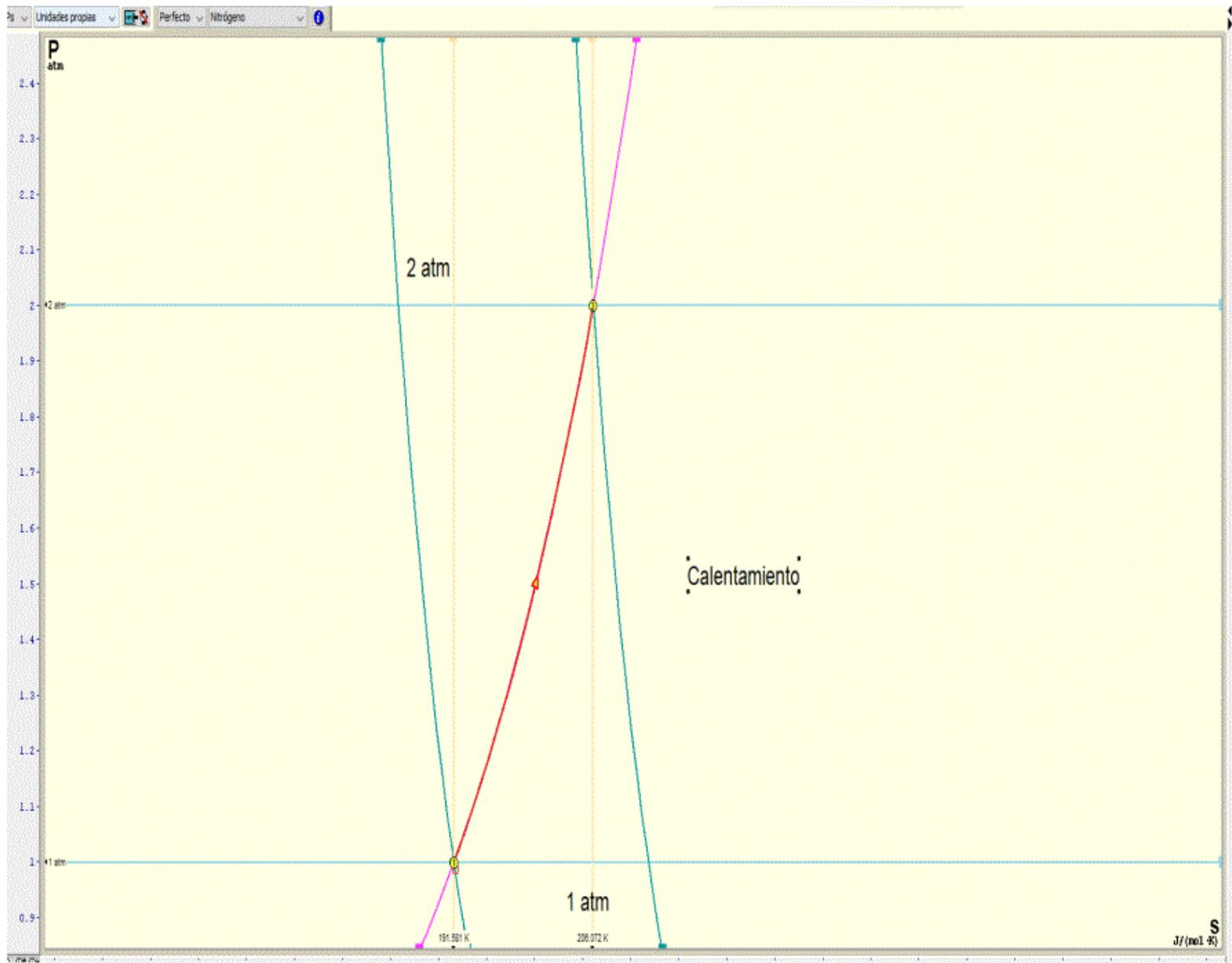




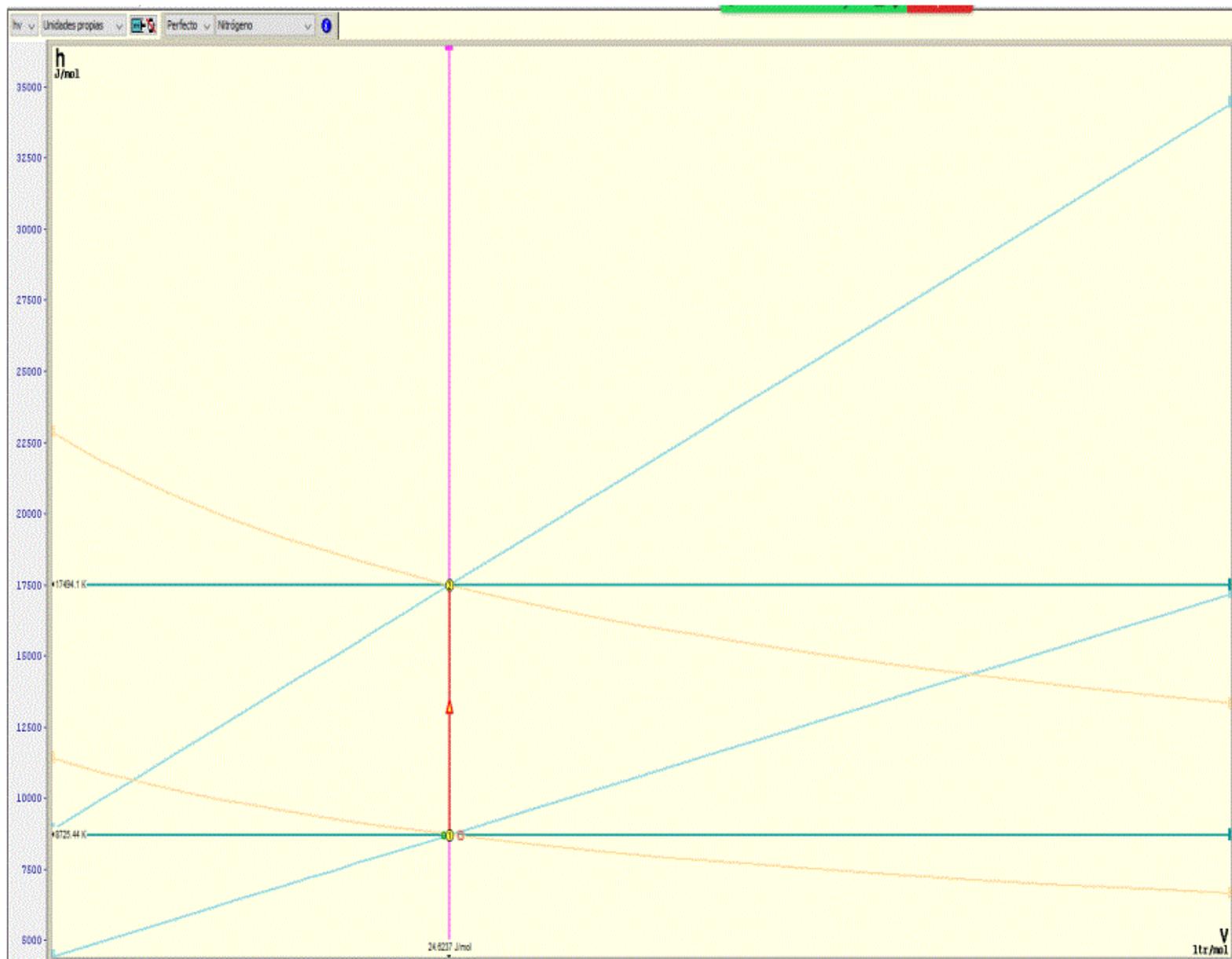


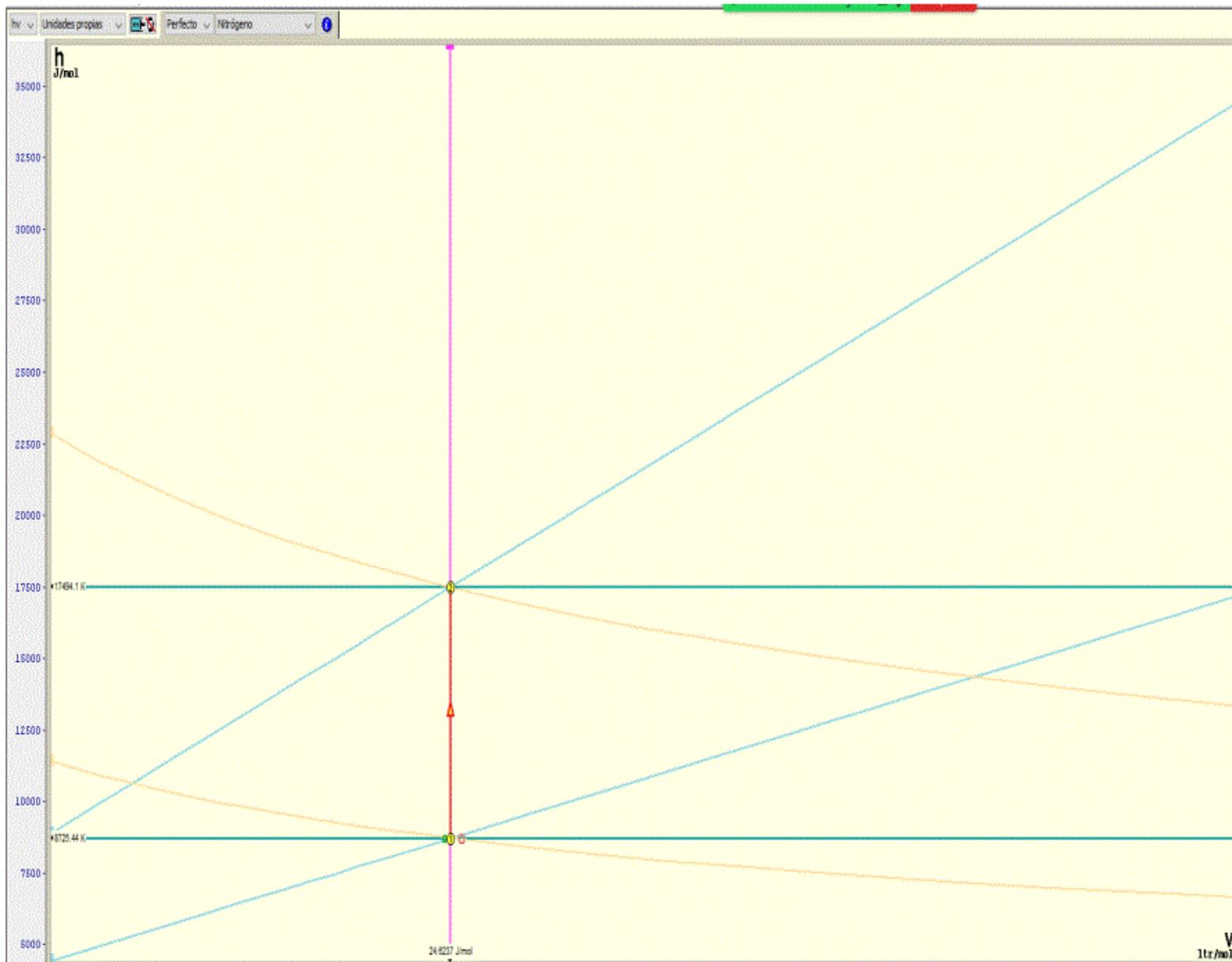


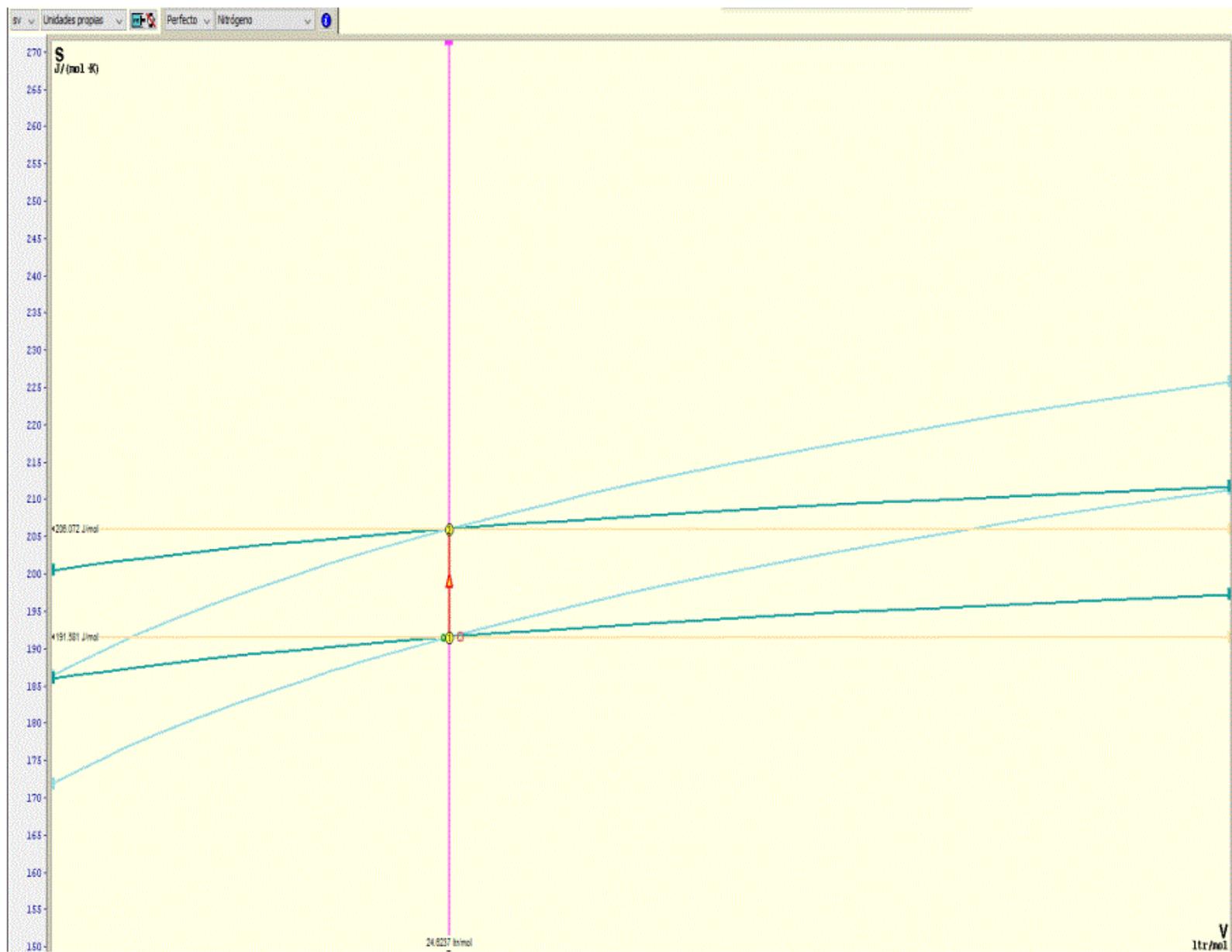


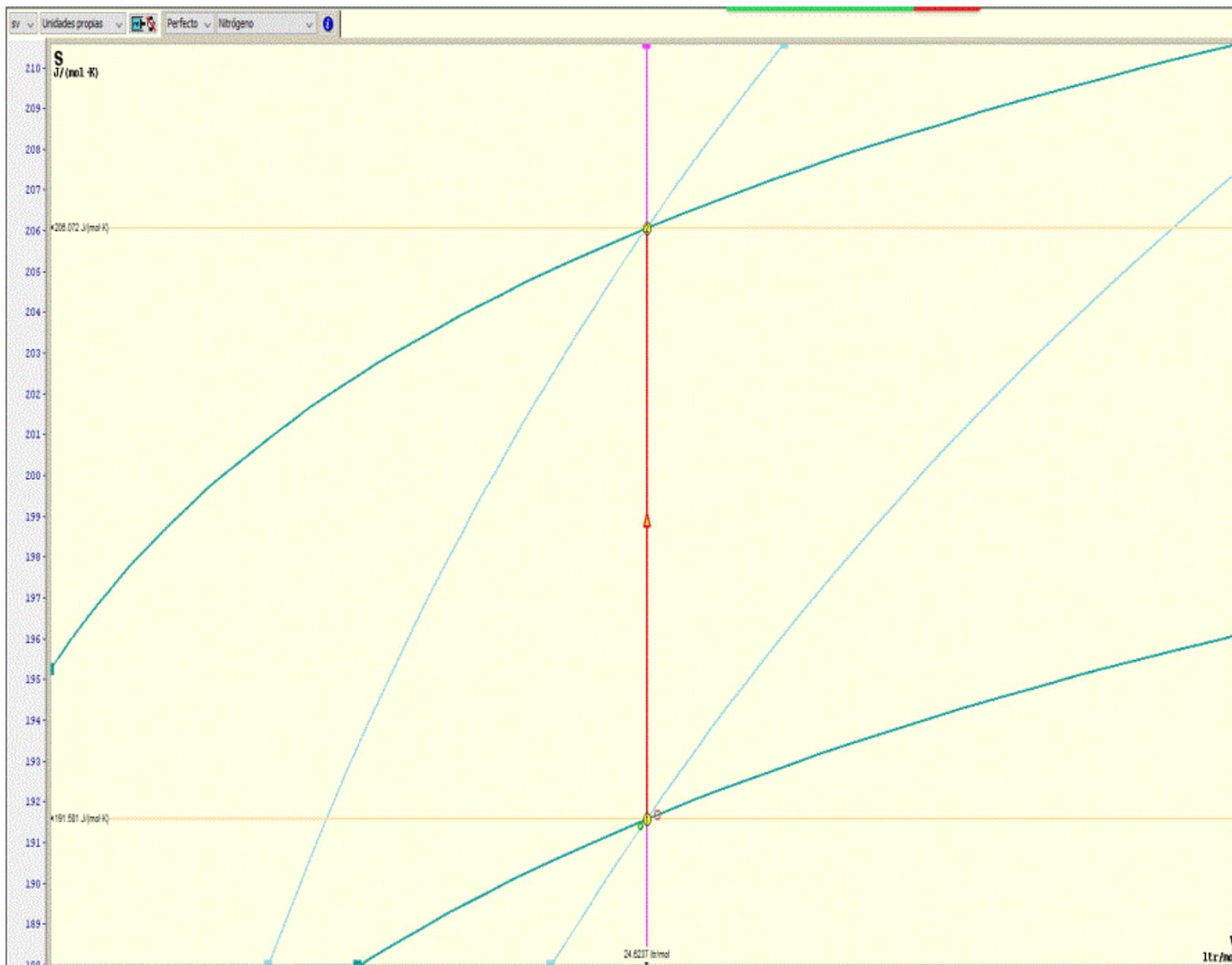


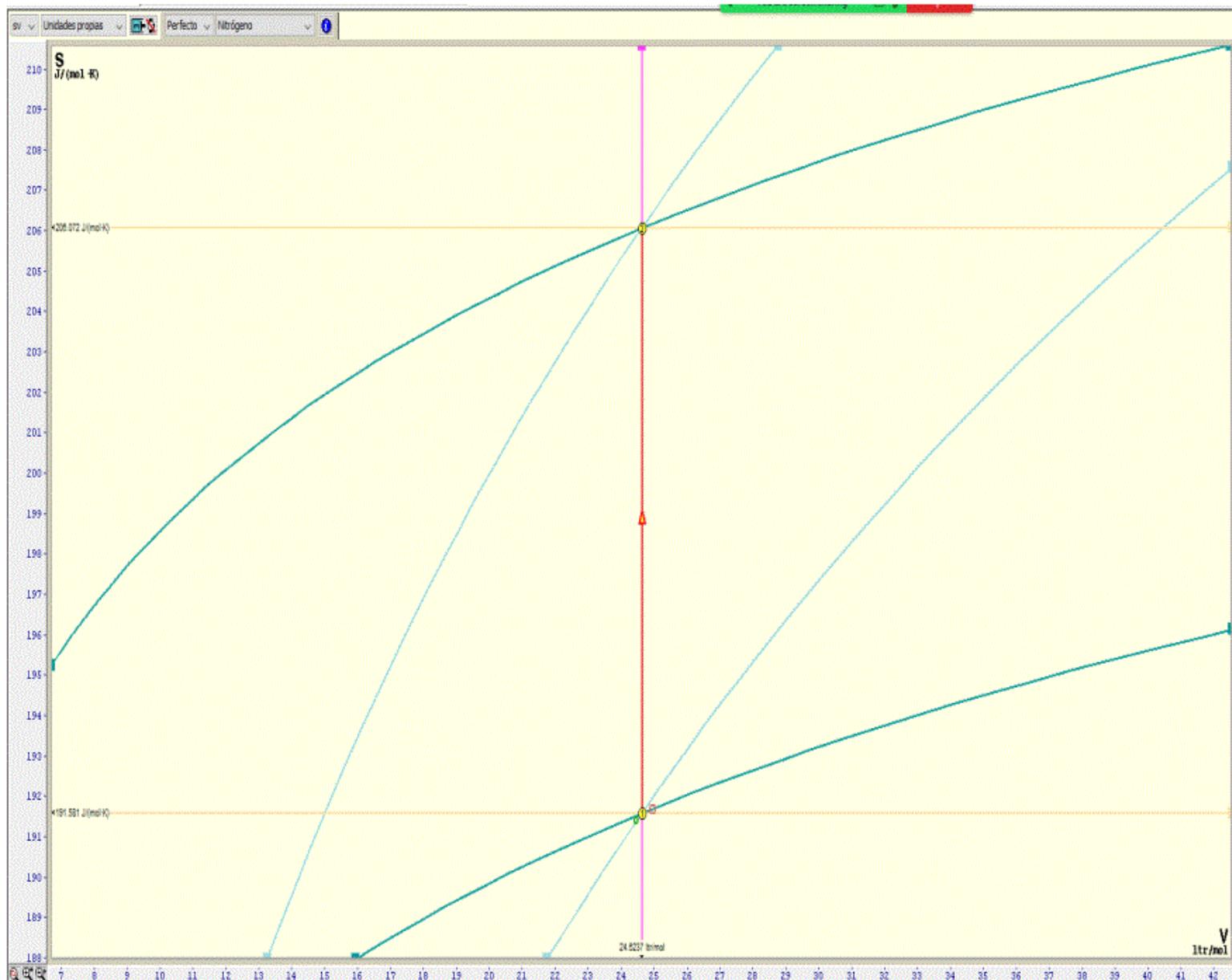












Cálculo de variables

Calent o enfriam perfecto

Calent o enfriam perfecto 2

Ideal como función de T

Gráfica

Proceso isocórico en gases de comportamiento ideal en sistemas cerrados					
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	R (J/molK)	8.314			
			Temperatura	aumenta	
		Calentamiento			
Especificar el gas empleado	Nitrógeno		Presión	aumenta	
Cp como función de T (cal/molK)		a	b	c	d
		7.44	-3.24e-3	6.40e-6	-2.79e-9
Cp=a+bT+cT ² +dT ³ (300-2500)K		Calentamiento			
		ΔH (J)	8847.853		
		ΔU (J)	6352.955		
		ΔS (J/K)	14.637		
		q (J)	6352.955		
		w (J)	0.000		
		q	>	0	Endotérmico
		w	=	0	No cambia volumen
		ΔS	>	0	Aumento de entropía



