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Extended Natural Gas Application

Extended Natural Gas with Heated Sample Valve



Extended Natural Gas Application

Application Overview

(Reference Figure 1)

The Sample Processing Module with a standard split/splitless injection port and a heated gas sample valve deliver the sample to a column switching valve for analysis on two independent Programmed Temperature Column Modules (PTCM). The inlet includes septum purge to prevent bleed components from entering the system.

The two PTCMs are independently controlled by the method. PTCM 1 contains a MXT Q-Bond resistively heated stainless steel capillary column and is operated in a temperature programmed mode. This column provides separation of CO₂ and C1 - C12. (See figure 2A & B)

PTCM 2 contains a MXT mole sieve 5A resistively heated stainless steel capillary column and is operated in an isothermal mode. This column provides separation of CO, O₂, N₂, and C1. (See figure 3)

The analyzer includes ChromPerfect software for calculating and reporting BTU content as well as other physical properties such as specific gravity and compressibility.

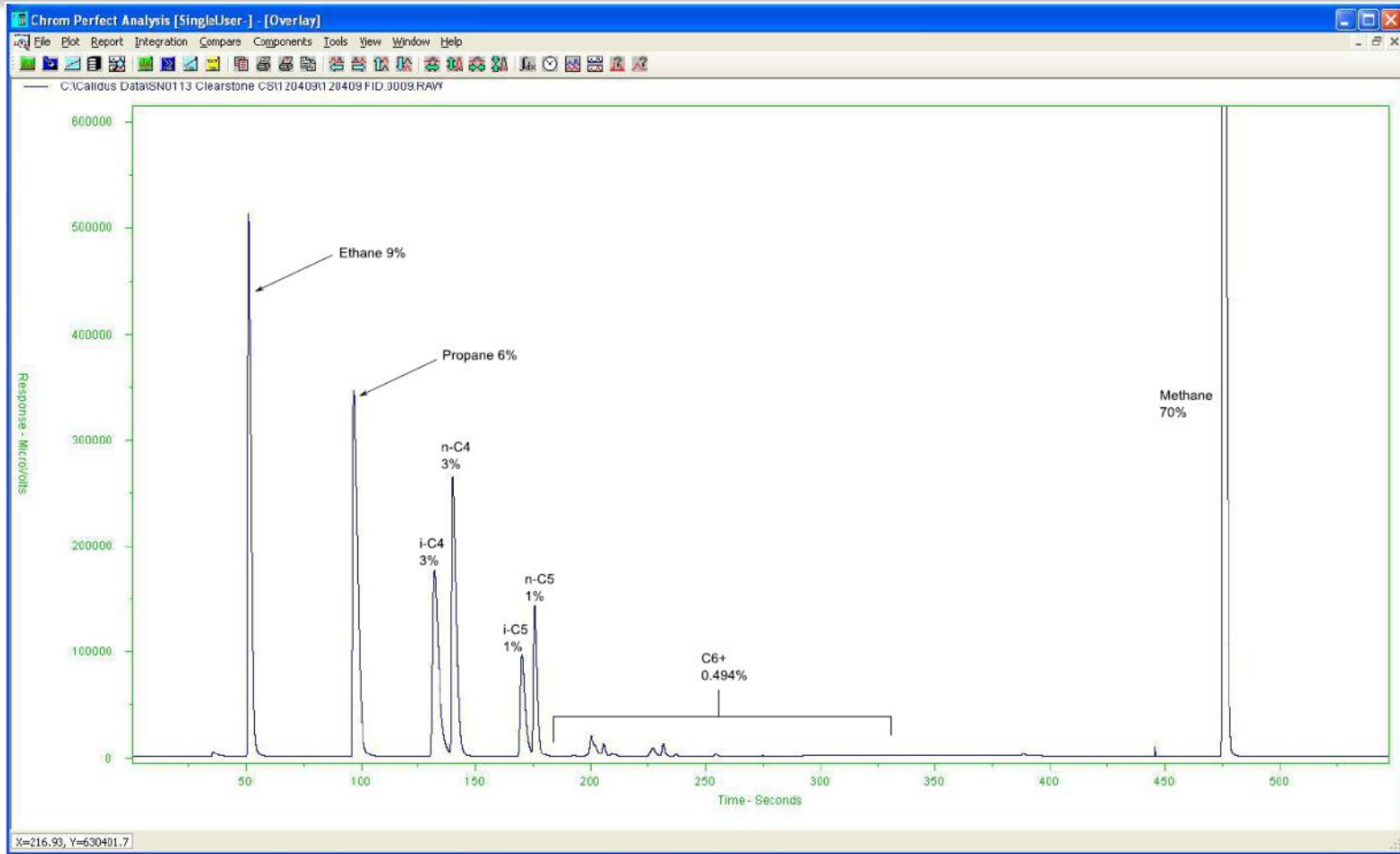


Major Analytical Advantages

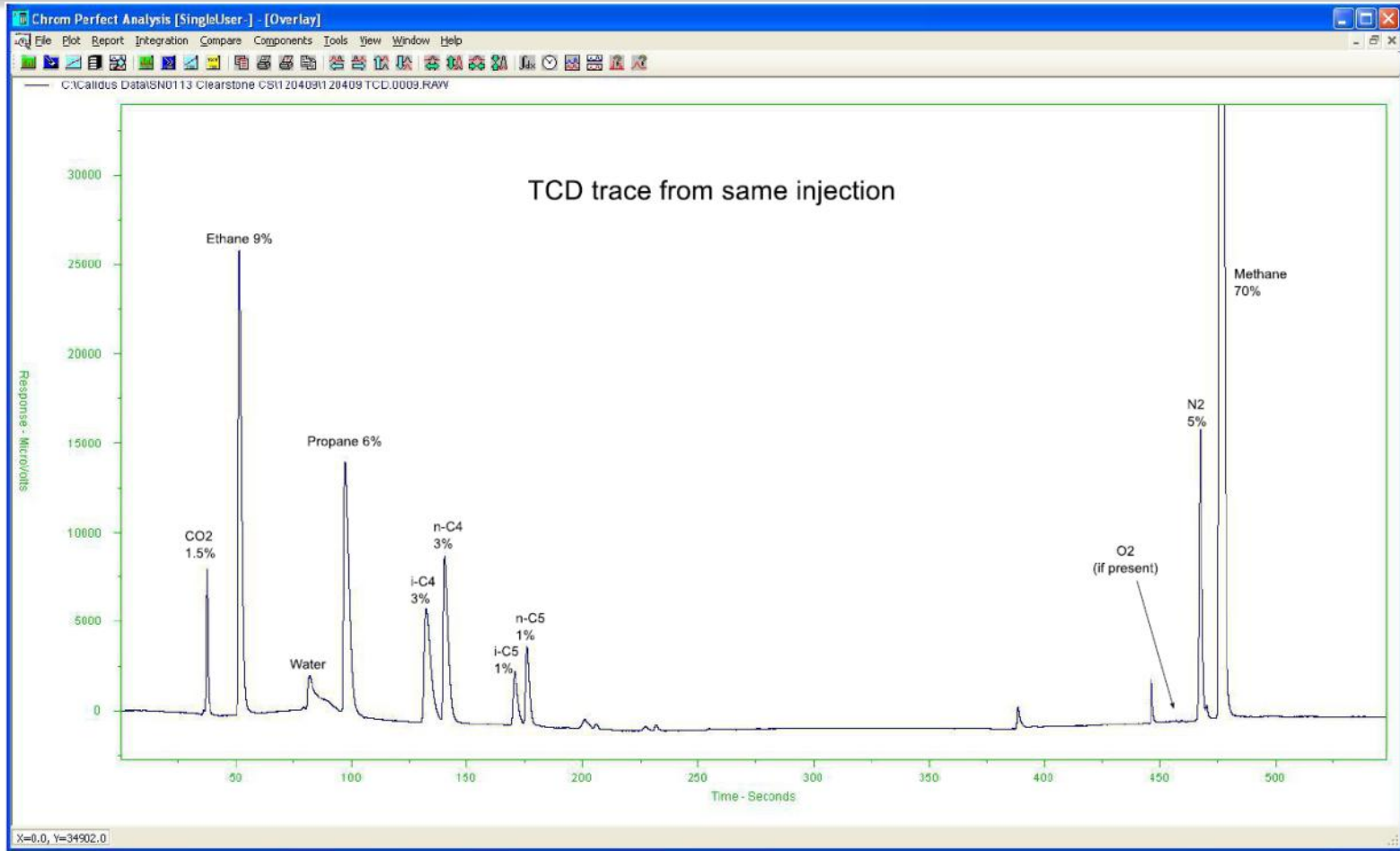
- ***Fastest analysis time in the industry for Extended Natural Gas with excellent performance and reliability***
- ***Incorporates patent pending Resistively Heated Stainless Steel Capillary Column Module and its thermal management system resulting in a paradigm shift in GC analysis.***
- ***Simplest hardware analytical approach for achieving Extended Natural Gas Analysis.***
- ***One of the most compact and transportable analytical solutions for Extended Natural Gas analysis. 43 cm L X 21.5 cm D X 27.9 cm W, wt. 9.07 kg***
- ***Meets Gas Processors Association (GPA methods 2261 and 2177)***



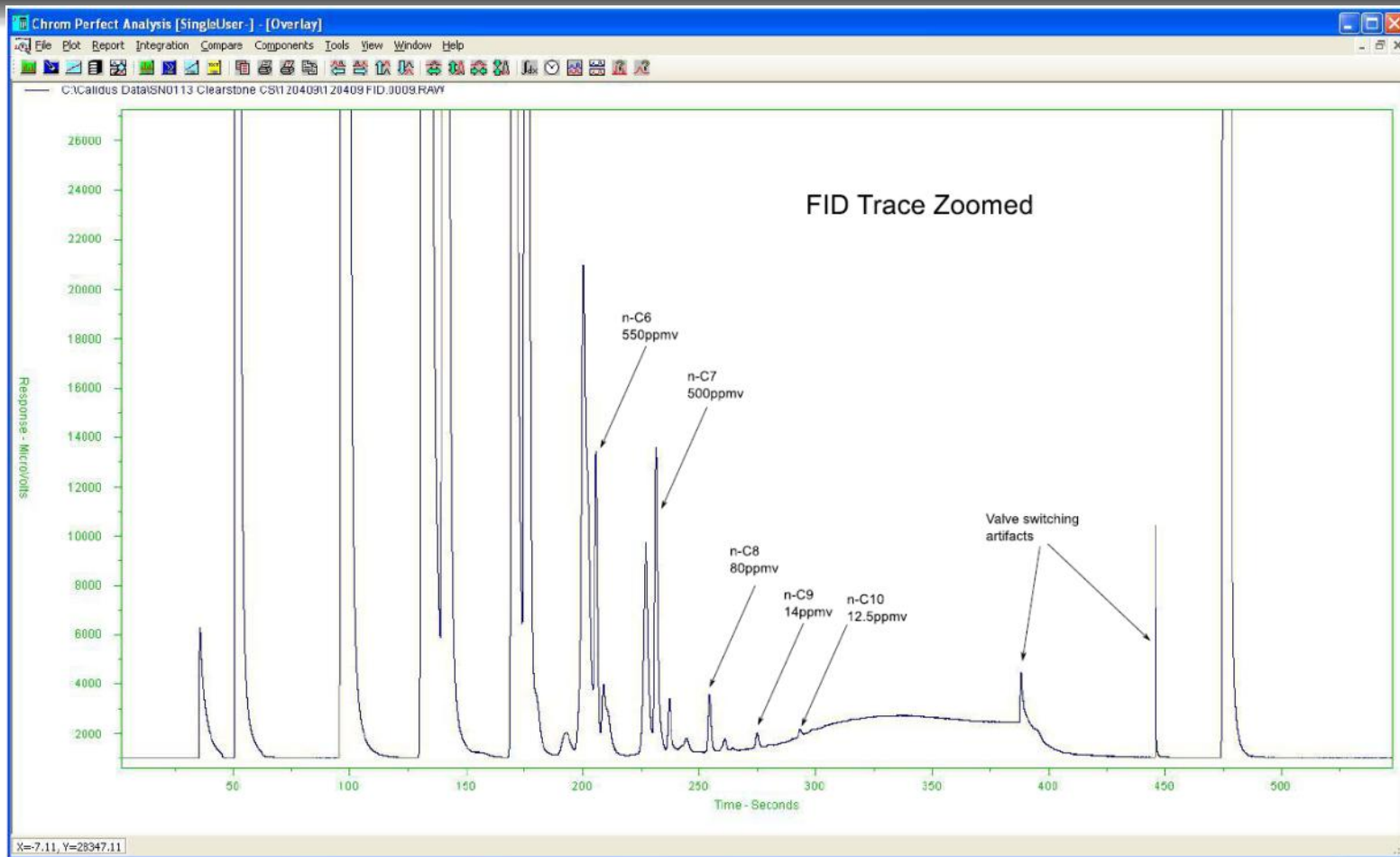
Trap on MXT MoleSieve while Bypass through MXT QBond to the FID



Trap on MXT MoleSieve while Bypass through MXT QBond to the TCD



Trap on MXT MoleSieve while Bypass through MXT QBond to the FID - Zoomed



Expanded Application Capability for Minimal Cost

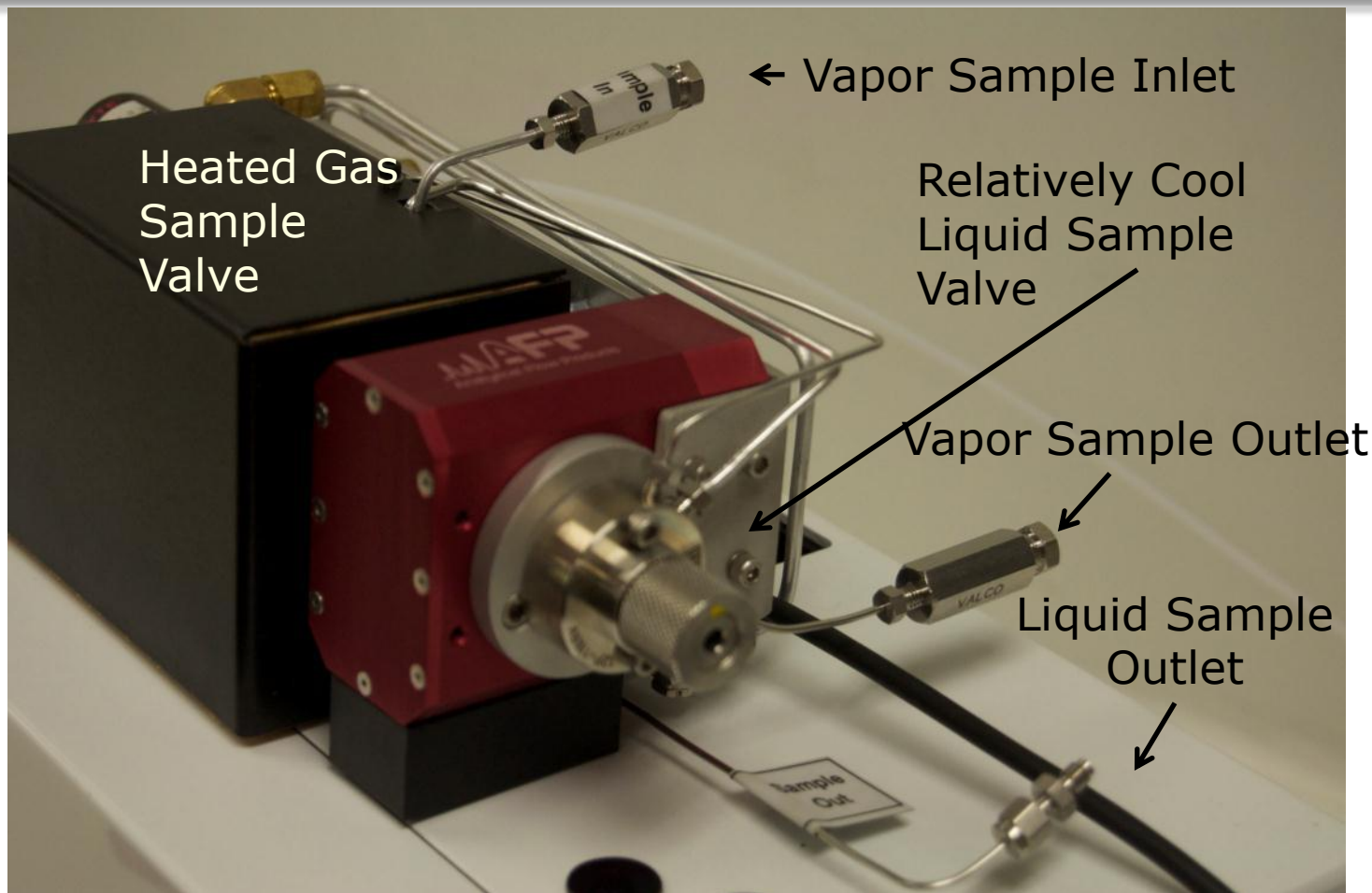
- ***Expand capability to include LP Gas***
 - ***CALIDUS CS with a simple compact Heated Gas /Liquid Sample combo valve***
 - ***LPG, flip the Sample Selector Switch located on the side of the combo valve to Liquid to the right***
 - ***It is that easy! Less than 10% increase in cost for capability of 2 applications.***

Extended Natural Gas System

(compressed natural gas and natural gas liquids, air components to C₁₂)



High Pressure Vapor and Compressed Liquid Sampling (operation selected with a switch shown on next slide)



Gas or Liquid Selector Switch *(From the front of the GC the switch position points to the valve that will operate. Push left for gas, right for liquid. It is shown for gas sample valve operation here.)*

