



SURFACE LOGGING ANALYZERS **HYDROCARBON MONITORING** **FOR OIL & GAS EXPLORATION**

PPM to %-level Detection Utilizing Gas Chromatographs
and Hydrocarbon Analyzers

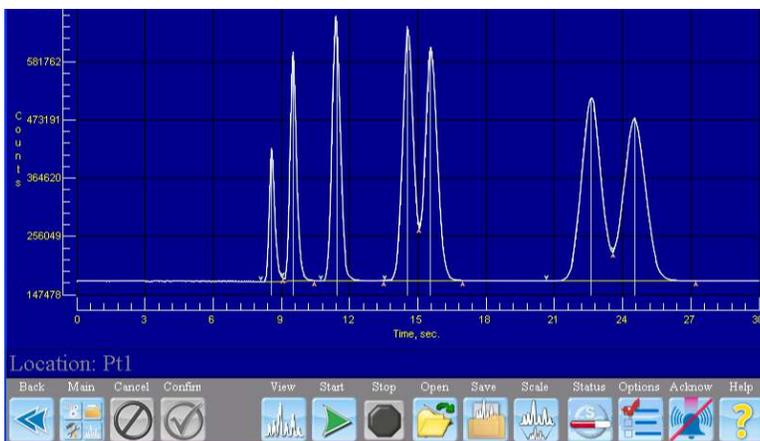
AMETEK® | **mocon**®

PetroAlert® 9100 Gas Chromatograph

Gas monitoring and analysis during surface logging assist in determining the physical characteristics of the formation. The PetroAlert line of Gas Chromatographs provide qualitative and quantitative analysis of C1-C5 hydrocarbons in 30 seconds, ranging from low-ppm to 100% as methane. Other common configurations include C6-C10 hydrocarbons or the addition of alkenes for drill bit metamorphism monitoring.



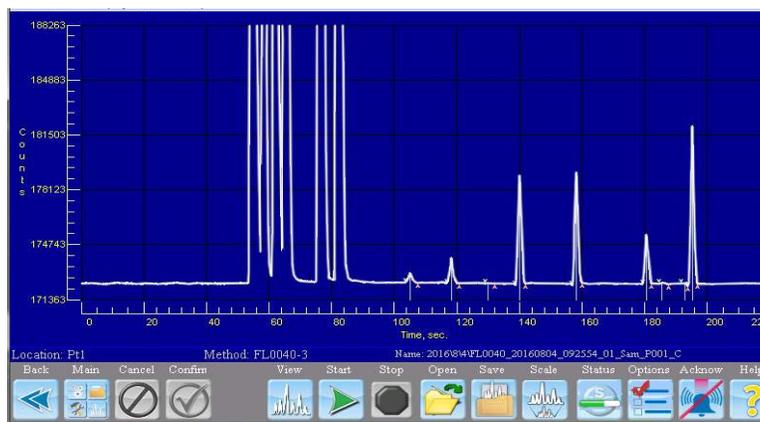
C1-C5 Hydrocarbons in Air



DETECTOR:	Flame Ionization (FID)
CARRIER GAS:	UHP Hydrogen
SAMPLE :	Ambient Air
MDQ/LDL:	< 10ppm as Methane

MOCON's PetroAlert® analyzers have been used by surface loggers for more than 40 years to provide qualitative and quantitative hydrocarbon measurements. The PetroAlert 9100 GC provides C1-C5 concentrations in less than 30 seconds using a flame ionization detector, with options to add additional compounds such as alkenes.

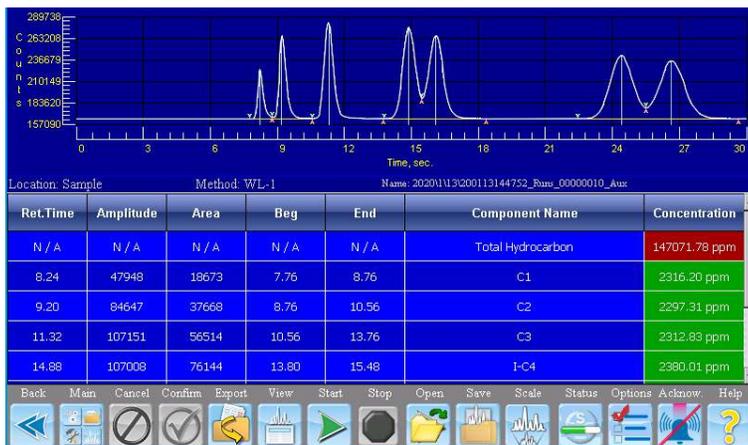
C6-C8, Benzene, Toluene in Air



DETECTOR:	Flame Ionization (FID)
CARRIER GAS:	UHP Hydrogen
SAMPLE :	Ambient Air
MDQ/LDL:	< 10ppm as Methane

This is an example of one of the many custom applications we have developed for the oil & gas exploration industry. This application reported all C6, C7, and C8 hydrocarbons and their isomers as a total per carbon number, and isolated and quantified selected aromatic hydrocarbons. Other custom applications have been C1-C10 (as totals), C6-C10, and C1-C5 with BTEX.

PetroAlert® 9200 GC/THA Combo



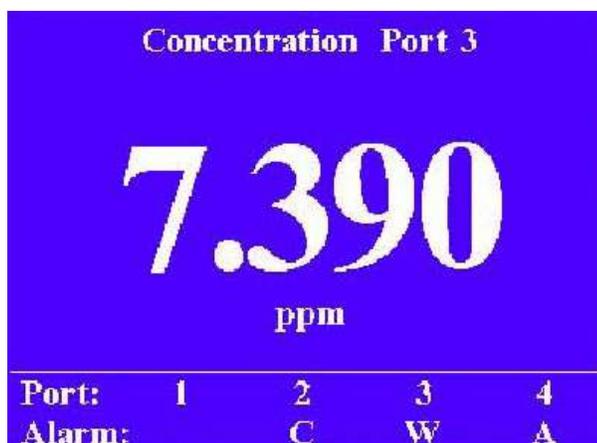
DETECTOR:	Flame Ionization (FID) x 2
SUPPORT GASES:	UHP H2, Zero Air
SAMPLE:	Ambient Air
MDQ/LDL:	< 10ppm as Methane

The PetroAlert 9200 is a combination of a C1-C5 GC analysis in 30 seconds, and a continuous total hydrocarbon analysis updating every second. Please contact us to discuss a custom GC analysis on this platform.



Baseline® 9200 PetroAlert

Baseline® 9000 THA



DETECTOR:	Flame Ionization (FID)
CARRIER GAS:	UHP H2, Zero Air
SAMPLE:	Ambient Air
MDQ/LDL:	< 10ppb as Methane

The Baseline 9000 Total Hydrocarbon Analyzer provides a continuous hydrocarbon reading, updated every second, with a linear range from < 10ppm up to 100% as Methane.



Baseline® 9000 THA

Baseline® 9130 Sample Conditioner

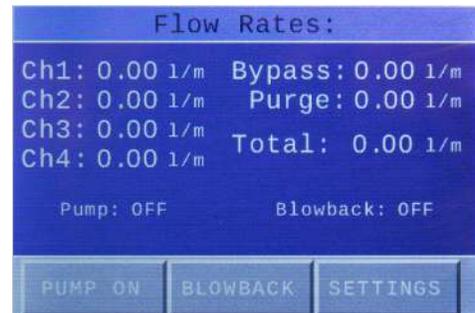
MOCON's Baseline® 9130 Sample Conditioner is an automated, low maintenance, system designed to reliably deliver a low particulate and low moisture sample to up to four (4) gas analyzers that virtually eliminates the potential of costly damage to your analytical system



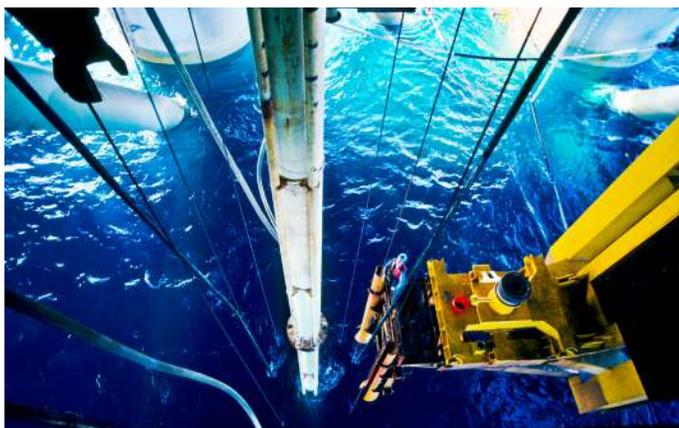
Protect Expensive Instrumentation

As a safety feature, the incoming sample passes through a protection float switch, which will remove power from the sample pump in the event that large amounts of moisture or other fluids are pulled into the sampling system. This eliminates the possibility of damaging the filter system and more importantly the gas analyzers being used. In conjunction with the protection switch, the system provides a Blow Back system to remove any contaminate build up by blowing it back to the source.

The heart of the Baseline® 9130 is the permeation dryer. The device consists of an inner tube surrounded by an outer tube of various inert materials. The water vapor is selectively absorbed into the walls of the inner tube and transferred to a purge gas stream. This transfer is driven by the difference in the partial pressures of the water vapor on opposing sides.



Custom Process GC Applications



The applications shown are just common examples of the hundreds of different analyses we have created for our customers. Contact us to discuss your detection needs. AMETEK MOCON will select the best detector for your application commonly utilizing Photoionization (PID), High-sensitivity Photoionization (HS-PID), Flame Ionization (FID), or Thermal Conductivity (TCD). Analytical arrangements typically involve a single valve, two column configuration, but may vary depending upon the application

