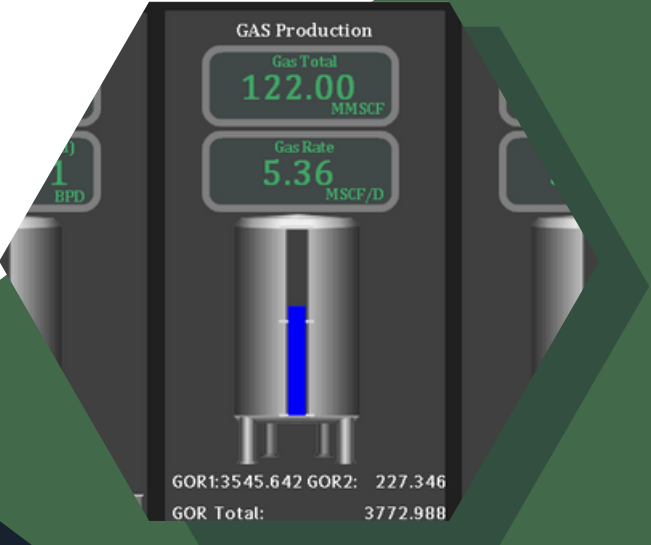
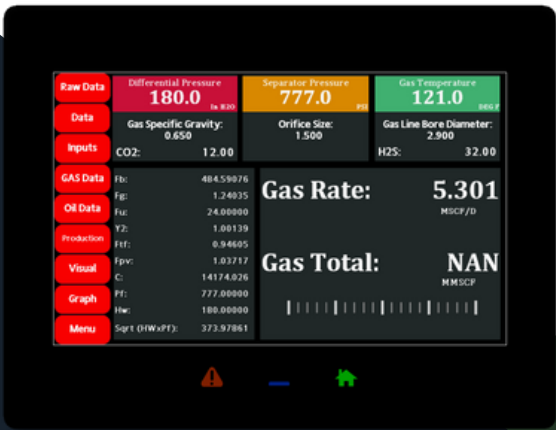
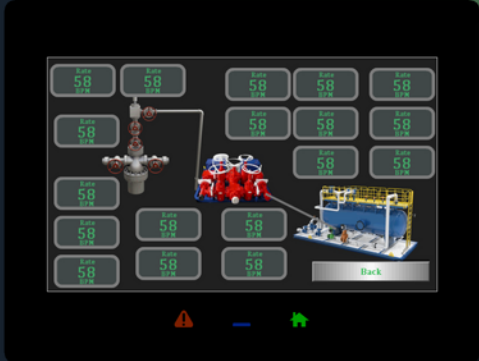


# REAM.HMI Well Testing

## Oil and Gas Well Testing Data Acquisition

Oil and gas well testing data acquisition refers to the process of collecting, monitoring, and recording various parameters and measurements during the testing and evaluation of oil and gas wells.



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## The most common parameters for well testing data acquisition

- **Pressure:** Measurement of reservoir and surface pressures, including flowing pressure, shut-in pressure, drawdown pressure, and pressure differentials across various well components.
- **Flow Rates:** Quantification of fluid flow rates, including oil, gas, and water production rates. This helps in assessing the productivity and performance of the well.
- **Temperature:** Monitoring of downhole and surface temperatures to understand fluid behavior, evaluate thermal properties, and detect anomalies or changes in well conditions.
- **Fluid Properties:** Analysis of fluid properties such as density, viscosity, composition (including gas-to-oil ratio - GOR), and water cut. This information helps in reservoir characterization and determining production behavior.
- **Choke Settings:** Recording and adjustment of choke settings, which control the flow of fluids from the well. Choke settings impact well performance and are crucial in optimizing production rates and managing pressure differentials.
- **Tubing and Casing Pressures:** Measurement of pressure within the wellbore, including tubing and casing pressures. Monitoring these pressures aids in diagnosing well integrity, detecting leaks, and evaluating well performance.
- **Flowline and Separator Pressures:** Monitoring of pressures in flowlines and separators to assess fluid behavior, identify potential bottlenecks or restrictions, and optimize separation efficiency.
- **Wellhead and Surface Equipment Parameters:** Collection of parameters related to wellhead and surface equipment, including temperatures, pressures, levels, and valve positions. These measurements help in monitoring equipment performance and ensuring safe and efficient operations.
- **Time and Duration:** Recording the duration of various well testing operations and time-based data, enabling proper scheduling, analysis of transient behaviors, and evaluation of testing efficiency.
- **Environmental Conditions:** Monitoring of environmental factors such as ambient temperature, humidity, and atmospheric pressure, which may impact well testing operations and data interpretation.

## The main features of data acquisition

- **Enhanced data acquisition:** The REAM HMI enables efficient collection of vital parameters during well testing, including real-time data such as pressure, temperature, flow rates, and fluid properties.
- **User-friendly interface:** The 9" TFT touch screen of the REAM HMI provides a user-friendly interface for easy data acquisition, monitoring, and analysis during well testing operations.
- **Secure data storage:** The system records acquired data on solid-state Compact Flash memory, ensuring secure and reliable storage for future analysis and reference.
- **Remote monitoring capabilities:** The REAM HMI allows for remote monitoring of data, enabling operators to access real-time information and make prompt decisions based on up-to-date data during well testing activities.
- **Seamless integration:** The HMI can communicate with various devices, such as flow analyzers, modbus-enabled devices, and PLCs, facilitating seamless integration and enhancing the overall data acquisition process.
- **Customizable features:** The REAM HMI offers customizable features to meet specific well testing requirements, allowing operators to tailor the system to their needs and optimize data acquisition processes.

