# WellWizard Software

Aggregates all wellsite data from surface logging operations and provides custom data displays

Applications

- Real-time data management for surface logging operations in all well types:
  - Onshore and offshore wells
  - Single wells or multiple wells in a field

Features and Benefits

- Interfaces with data-acquisition systems to record all surface-sensor data in real time
- Offers a convenient means of viewing all wellsite data from one spot, including directional drilling, measurement-while-drilling, and logging-while-drilling data
- Displays data in time, depth, and total vertical depth (TVD) and lets users switch between display options easily
- Enables users to customize the display of their wellsite data, including gauge type, location, size, color, and tab groupings for quick-view changes
- Accepts and displays numerical data from any company providing a WITS0 data stream
- Is compatible with many data-export formats:
  - LAS 2.0 and 3.0
  - WITSML log object
  - Comma delimited
  - Text (txt, csv, tab, asc)
  - Excel
- Is compatible with many import-data formats:
  - LAS 2.0
  - Comma delimited
  - Text (txt, csv, tab, asc)
  - Excel
- Interfaces with gas-detection equipment to provide gas-ratio analysis
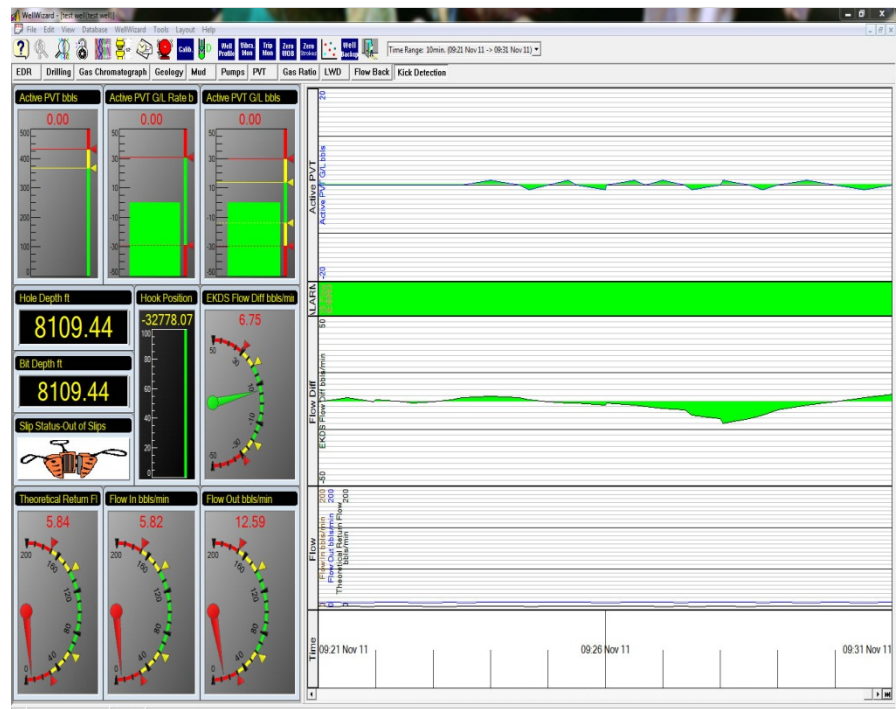
The early kick detection screen (EKDS) within the software helps users to determine whether they are losing too much drilling fluid and provides warnings of wellbore instability.

- Has a user-defined calculation engine that enables specific calculations to be input into the system and calculated in real time
- Prints integrated logs quickly and easily
- Creates 3D representations of the well path based on surveys
- Supports many types of analyses:
  - Flowback/enhanced flow monitoring for advanced kick detection (with appropriate sensors)
  - Hydraulic analysis for monitoring downhole conditions
  - Gas-ratio analysis for identification of fluid types in the well
  - Cross/scatter plotting for drilling optimization
  - Pressure, volume, and temperature monitoring for observing well conditions
  - Surface-to-surface delta lag calculations for enhanced accuracy of gas measurements
- Allows users to add customizable lithologies and input comments easily

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Features and Benefits (continued)

- Detects drillstring vibration to help optimize drilling operations and prolong bit life
- Has easy-to-read status gauges that monitor slip and rig status to keep users informed of wellsite conditions throughout the operation
- Uses different WellWizard Server and WellWizard Client operating systems and an encrypted database for complete data security
- Uses a two-hard-drive configuration with all data replicated on both drives, which enables continued operations with minimal interruption of service if one server is destroyed

Tool Description

Weatherford WellWizard software is used for acquisition, interpretation, and display of wellsite data from surface logging operations. WellWizard software operates in a server/client model: WellWizard Server and WellWizard Client.

The WellWizard Server acquires and stores wellsite data, and is housed in one of two hardware options. The WellWizard Client displays wellsite data acquired and stored in the WellWizard Server. It displays data using real-time gauges or historical charts, exports and imports files containing wellsite data to and from the WellWizard Server, and performs various calibration and configuration functions in the WellWizard Server. The WellWizard Client runs on the Windows platform and communicates with the WellWizard Server via a TCP/IP connection.

## Specifications

WellWizard Server

Current version	6.0
Operating system	FreeBSD 9.0
Database	PostgreSQL 9.1.3
Maximum acquisition rate	1 sec/0.3 ft (0.1 m), 10 Hz for vibration detection channels
Encryption	SSL2, SSL3, TLS1.0, HMAC-MD5, AES-128bit, HTTPS
Export classification	US: EAR99, NLR; Canada: 1-5.D.2.c 1 of Cat 5, Part 2; UK: NLR
Power requirements	100-240 VAC 47-63 Hz
Operating temperature	50º to 120º F (10º to 50ºC)
Storage	2 x 120 GB Intel 510 SSD (ZFS)
RAM	Minimum of 2 GB

WellWizard Client

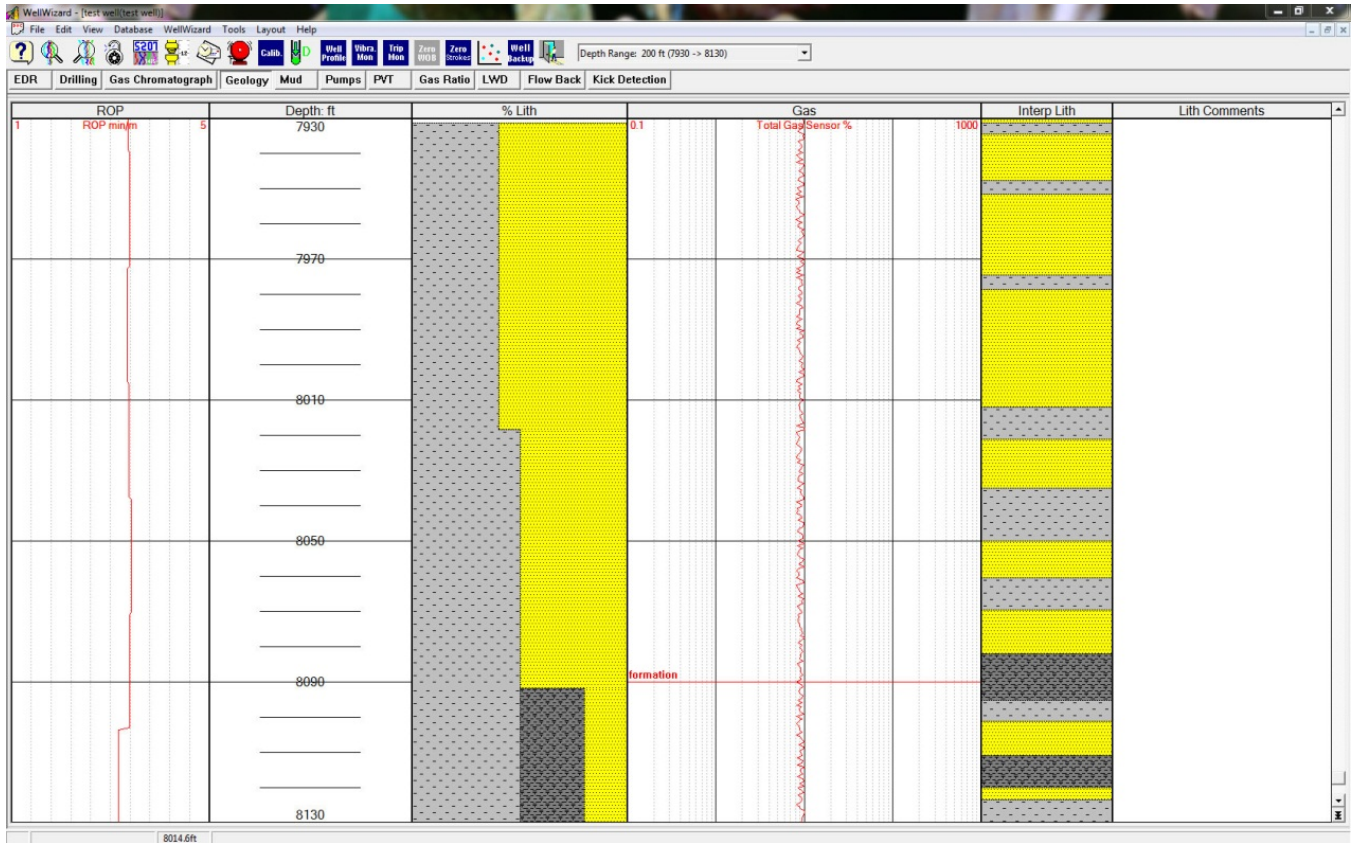|	
Current version	6.0
Minimum software requirements	Windows XP
Minimum hardware requirements	Pentium 233; 12 MB disk space; 32 MB RAM

WellWizard Software
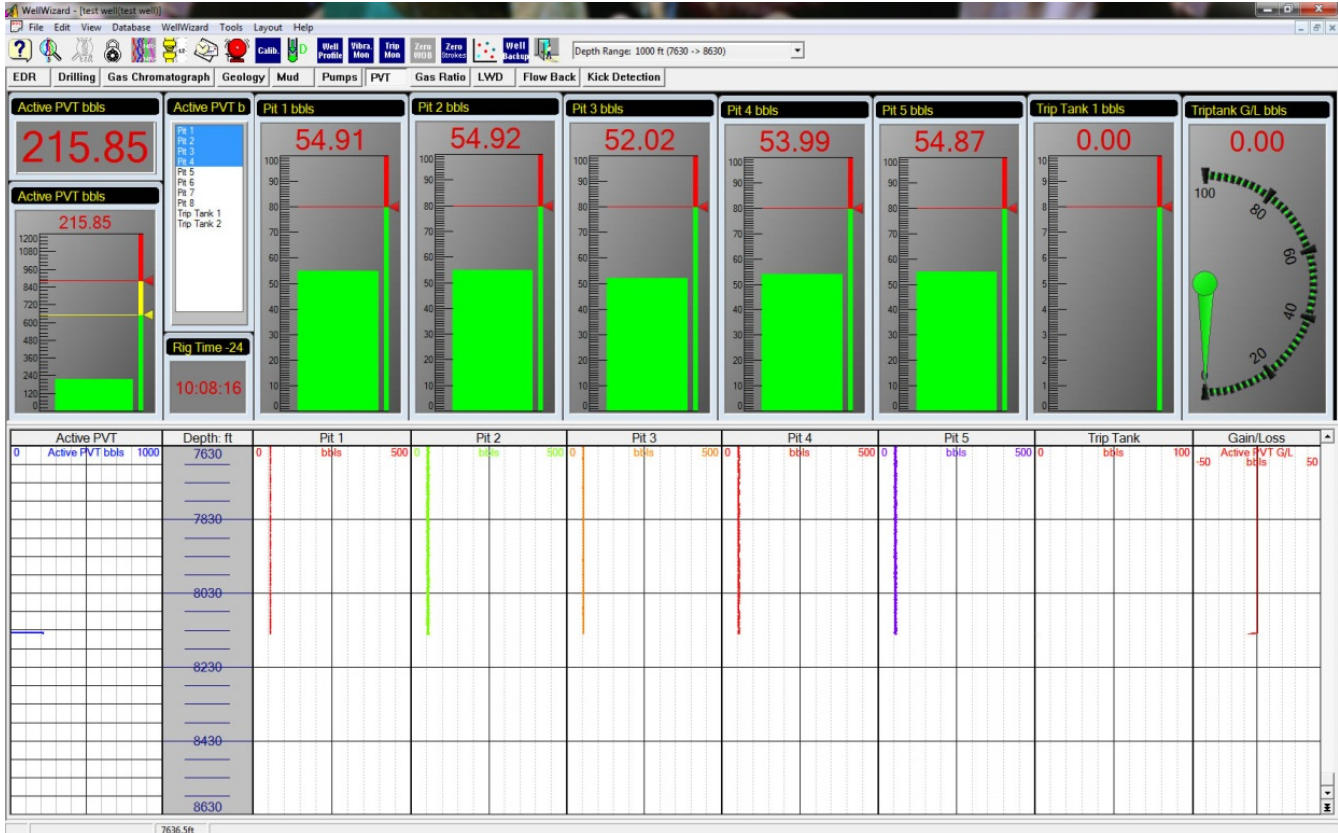
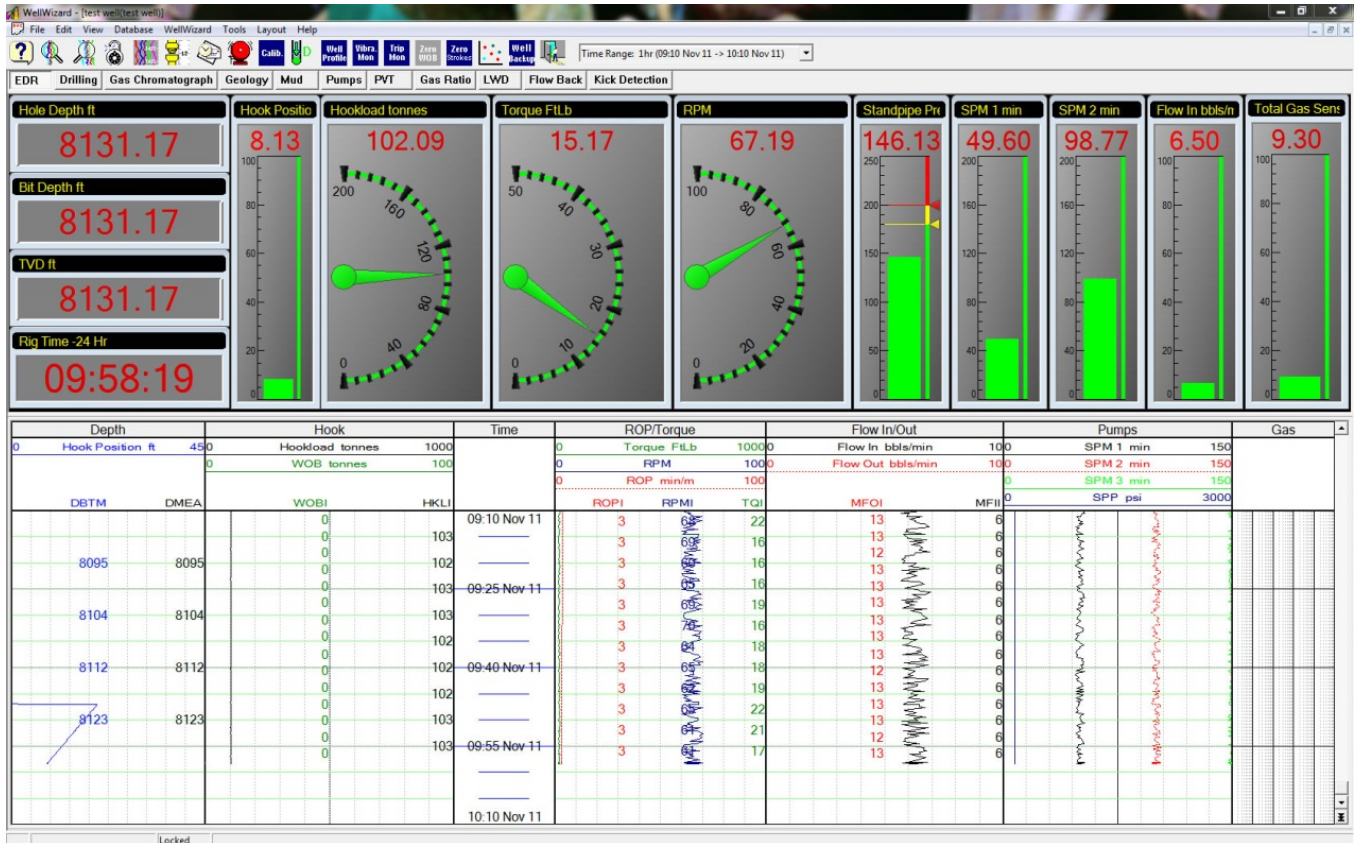The pressure, volume, and temperature screen shows users mud or drilling-fluid levels.

WellWizard Software

The geology screen is used to input information about well lithology and enable users to enter comments.

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The drilling screen provides a comprehensive picture of wellsite status.