

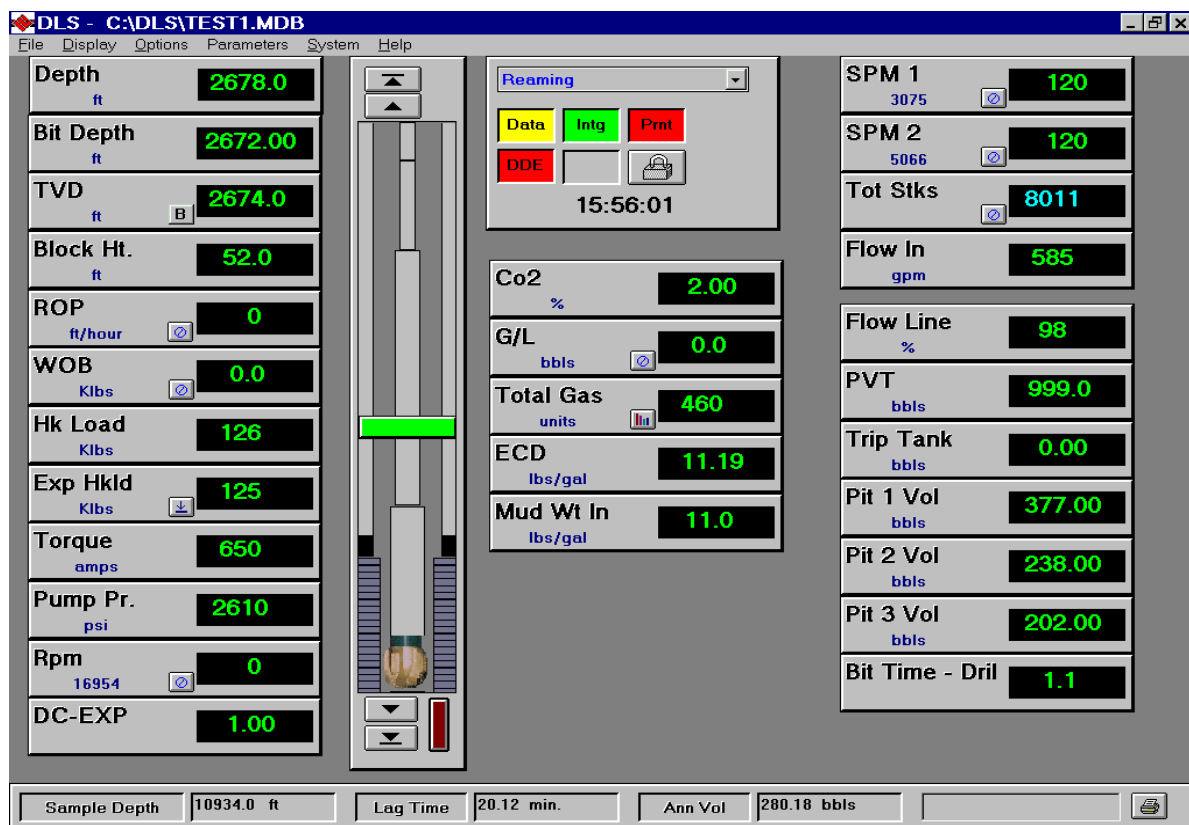
# DRILL LOGIC SYSTEM SERVER

## OVERVIEW

The Drill Logic System (DLS) is proprietary software developed by International Logging for mud logging services. DLS is a complete real-time acquisition and rig monitoring system with all the features necessary to aid drilling and engineering personnel during all phases of the drilling operations.

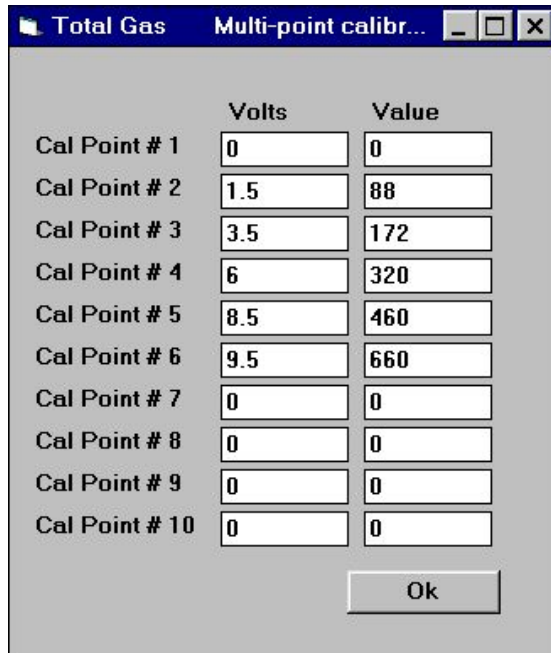
The Drill Logic System Server (DLS) is an extremely reliable and fast software application responsible for all real-time mud logging and drilling data services. DLS is used, primarily by the data engineer to calibrate sensors, set parameters, configure screens and set data archival options. Once running, DLS scans all the sensors once per second and displays the calculated and drilling logic results.

Besides making hundreds of engineering calculations in just a few milliseconds, DLS is also responsible for maintaining an online MS Access database, providing real-time data to DLS Clients, servicing historical data requests from DLS Clients and setting internal and external alarms.



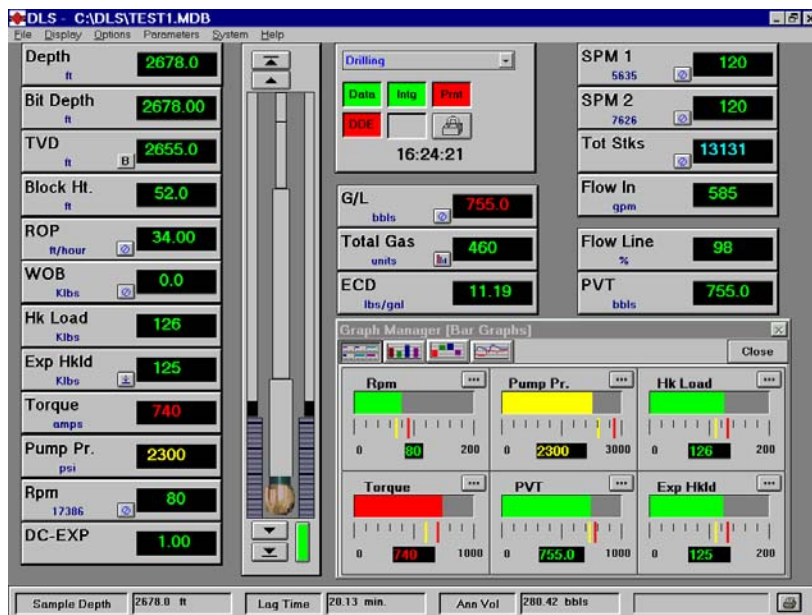
# DLS FEATURES

## SENSOR CALIBRATION



Each analog sensor, hook load or total gas for example is converted to engineering units based on up to 10 calibration points. This ensures the highest level of accuracy for all types of linear and non linear sensors.

Any number of screen layouts may be configured and saved by the user. Each of over 70 parameter blocks may be added to the screen and positioned by dragging with the mouse to the desired position. Clicking an individual parameter will bring up a configuration window for that parameter.



The hole profile window displays a scaled cross section of the hole and pipe and also indicated bit rotation and bottoms up status.

The status panel indicates drilling mode, data transfer status, integrator and printer status and external alarm status.

# **DLS FEATURES**

## **ADVANCED**

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### **DLS accepts data from:**

Real-time data gathering source (analog and digital sensors)

- Secondary source such as MWD
- Input interpretive entries such as lithology and sample description
- Software based on the DLS API (Application Programming Interface)

The result is a unified database that facilitates accessibility and usefulness of the data for the Oil Company.

### **Major Features:**

Comprehensive Instrumentation Package.

Designed for the MS Windows 2000 Operating System.

Drill Floor and Remote CRT or LCD display.

User Selectable Multiple Screen Configuration.

Intuitive Interactive Software with familiar GUI.

Multiple Audio and Visual Alarm Outputs.

Complete Safety Regulation Compliance (Intrinsically Safe).

Scalable to Meet all Operational Requirements.

### **The DLS Server Data Acquisition computer is responsible for:**

Sensor Calibration.

Collecting analog and digital signals from the signal-conditioning unit.

Collect and process chromatograph data from integrator.

Applying engineering units to raw signals.

Processing calculated data.

The lag is determined from detailed hole geometry and updated dynamically.

Determine current operational mode (Drill, Ream, Slips Set, etc.).

Display data on screen.

Display alarm conditions and trigger alarm devices.

Manage the display of real-time data in graphic modes (2-D and 3-D, bar graphs, histograms, and X-Y plots).

Update the database.

Supply real-time data to connected DLS Clients (and other client software) via Distributed Component Object Model (DCOM)

