Advanced Measurement System (AMS)

The Halliburton Advanced Measurement System (AMS) for slickline and cased-hole logging provides unsurpassed wireline depth measurement and data storage for job log summaries, downhole memory logging, and wire management.

The panel is a Windows®-based system, which receives real-time data signals from an optical encoder for depth and from the tension load sensor to measure strain on the wire. A microprocessor uses this data, as well as data on direction of travel and line speed, temperature, and empirical data on stretch coefficients to continuously correlate depth. The processor corrects depth readings caused by the effects of the wire's elastic stretch resulting from tension on the line.

Features
- A Class I, Division II (Zone II) hazardous rating compatible with all commonly used slickline and braided wireline
- Can be used with 2-, 3-, and 4-ft circumference measuring wheels, as well as measuring heads used with electric wireline logging units and slickline units
- Digital displays, including depth, line tension, and line speed
- Approaching surface alarm
- Excessive tension override, which can be tied into the hydraulic drum to stall the drum drive if line tension exceeds operator's settings
- Adapts easily to existing counter assemblies
- Can be used in English and metric units of measurement

Benefits
- Unsurpassed depth measurement accuracy
- Accuracy for production logging and well integrity test
- Increased operational efficiency and safety
- Depth, line speed, and tension data transmission and storage
- Reliability and repeatability
- Wire management to prevent potential for premature wire failures.
- Compatible with both slickline and electric wireline operations
- Use data for customer job records or memory production logging correlations

The design is weatherproof and has a touchscreen keyboard to use in adverse weather for inputting job setup information. The panel features two USB connectors for the keyboard and downloading LAS data files. The USB connections can also be used to connect a printer to the panel to print job logs from data acquisition software.
The Halliburton Wire-Management System
As an added feature to AMS, wire-management software can be run simultaneously to track the life of the slickline wire.

The software will record all history of the wire's activity, including the job details and the well environment in which the wire is used. The program receives data in real time from the AMS panel. This data is then used by the program to estimate the “used life” of the slickline wire. From the “used-life” percentage graphed by the program, the operator will know the wire's safe operational limits. The program can assist in determining if the proposed work can be performed or when to remove the wire from service before showing up on location. The program will also help monitor the entire life of the wire and assist with evaluating failures caused by conditions other than fatigue.