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## Halliburton Surface Data Logging (SDL)





# An Introduction to Sperry Drilling SDL

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## Introduction to Sperry Drilling Surface Data Logging (SDL)



Halliburton's Surface Data Logging from Sperry Drilling Services ensures you get the best most accurate information from your well, so you make better drilling and geological decisions, faster. With real time data acquisition, expert interpretation, and instant access through a fully-integrated network, these are the resources you need to maximize the value of your Asset.

#### Make better drilling and geological decisions faster

With the evolving environment of today's oilfield, you require quick access to real-time data to make informed drilling and geological decisions. Surface Data Logging services from Halliburton Sperry Drilling are engineered to help you reduce nonproductive time (NPT) and overall risk.

## Enhance your reservoir understanding with real-time insight

You need the big picture to drill safer, faster, and on target. In addition to traditional mud logging, our real-time drilling monitoring, cuttings and gas analyses provide you with vital insight about your well conditions, formation pressures, fluid composition and geology.

- Precise drilling measurements allow for improved decisionmaking and performance
- Advanced gas analysis and extraction services provide complete fluid characterization
- Advanced cuttings analysis, mineralogical and source rock/maturity at the wellsite enabling informed and timely decisions, and helping place the wellbore in the reservoir target zone and the sweet spot

With real-time data, expert reservoir insight and interpretation, and engineered drilling solutions, we can help you maximize the value of your deepwater, unconventional and mature field assets every step of the way.



#### HALLIBURTON SURFACE DATA LOGGING

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Highly trained and experienced professionals, skilled in monitoring, analysis and interpretation of logging, engineering, and geological parameters, so you can have confidence in the information that guides your decision-making.

Real-time data access by all parties, putting critical information on the desktops of decision makers when and where it is needed. More than 600 possible parameters can be displayed and monitored, both on the rig and remotely.

#### **Advanced SDL Solutions**

SDL offers a range of advance solutions to deliver engineered drilling solutions and reservoir insight to maximize asset value.

These advanced solutions are:



**DrillFact<sup>™</sup>** - includes a toolkit of various sensors and software packages to enable solutions intended to monitor key drilling parameters with the focus on enhancing drilling performance, safety and efficiency. By combining our real-time service, mud logging experts, and technical expertise, the DrillFact service helps operators reduce well time, minimize drilling uncertainties, and lower costs to maximize the value of their assets in a wide range of drilling environments such as deep water.





GasFact<sup>™</sup> - Delivers reservoir insight and enhances reservoir understanding with rapid, reliable fluid characterization. A combination of enhanced, gas extraction, detection and analysis, for rapid, reliable fluid characterisation. GasFact<sup>™</sup> gas analysis service from Halliburton Sperry Drilling is a surface data logging service that combines the capabilities of the constant volume and temperature gas extraction from the EAGLE<sup>™</sup> gas extraction system, Halliburton Mass Spectrometer, the Baseline® 9250 C1 to C8 chromatograph, the Isotopic Analyser, extraction efficiency correction, and geochemical analysis to deliver reservoir understanding.

LithoFact<sup>®</sup> service identifies your rock and fluid properties and helps accurately place your wells to maximize reservoir contact. LithoFact<sup>TM</sup> rock analysis service provides the technology and expert interpretation to enhance reservoir understanding by fully exploiting the information from the elemental, mineralogical, and organic carbon data in the drill cuttings. This complete evaluation of the formation enhances reservoir insight and understanding to make optimal field development decisions.











#### **Personnel – Training and Competency**

Halliburton recognizes that the driving force behind any successful organization is its competent workforce. Halliburton's Global Talent Management attracts, develops, motivates and retains its employees by offering access to a challenging global work environment.

As an industry leader, Sperry Drilling SDL provides our employees with the tools and training needed for development, accomplishing goals and proving competence. With our rigorous development programs and innovative recruiting framework, we are able to get the right people to our client's workplaces.

The vision of Halliburton Sperry Drilling SDL training is three fold; completely meet the business needs, provide the highest service quality and empower employees by improving and upgrading their skills. All competencies align to business needs; and training is structured such that it is "fit for purpose". The future-focused training program combines essential knowledge with practical exercises, performance support, and management mentoring and feedback.

#### The SDL Cabin and Equipment

Sperry Drilling SDL offers a range of ergonomically designed cabins which range in size from standard mudlogging units, to larger integrated Sperry Drilling service cabins, which house our Surface Data logging, LWD, and Directional Service surface equipment and personnel. Locating all three services in one combined logging unit provides a truly integrated drilling and formation evaluation team at the wellsite. All of our cabins will meet local or international certification standards. We are also capable of installing our surface equipment in rig-provided safe area rooms.

All of our surface computer, sensors packages, and analyzers are developed to be robust, durable and deliver high quality, accurate, data. Sperry Drilling SDL is continuously developing new sensors, analyzer packages, and software to ensure we are delivering the latest technologies. Sperry's powerful Surface Data Logging capabilities capture accurate comprehensive measurements enabling the realtime monitoring of all rig systems. This allows the timely identification of critical situations and intervention to prevent problems developing.

Through our powerful and flexible InSite<sup>®</sup> rig information management system and database, Sperry's comprehensive Surface Data Logging services give you maximum flexibility in managing your data and seamless integration with other digital services from



Halliburton. The backbone of our service provision, the InSite<sup>®</sup> system is able to aggregate data from multiple service partners, allowing you to manage one complete database using your network of choice. InSite<sup>®</sup> is compatible with every major data transfer protocol in the industry, including the latest WITSML standard.

#### **Design of Service**

Sperry Drilling Surface Data Logging's project execution strategy is driven by adhering to our value proposition.

## *"We COLLABORATE to deliver engineered drilling solutions and reservoir insight to maximize asset value"*

Through a rigorous planning and continuous improvement work process, Sperry Drilling SDL will systematically document the challenges observed over the course of well delivery and implement strategies, techniques and technologies to reduce the overall well cost for our clients

The Halliburton Design of Service process "DOS" is in place to ensure the correct engineering and data acquisition planning is conducted for each well, ensuring a flawless service that meets and exceeds the customers' expectations for wellbore placement and well logging.

The Design of Service is performed before each and every project/well. Sperry Drilling SDL representatives meet with the client's contract holder and operations personnel to finalize service delivery, equipment, and geological requirements. This information is incorporated into the DOS, which is agreed upon with the customer and communicated to the field crew prior to work starting.



