WITSML Compliant
Data Management
Real-time Data
Wellsite Reporting
ProdML
WITSML to LAS Conversion Tools
WITS to WITSML Conversion Tools
Links to Pore Pressure Evaluation
Links to Mechanical Properties Evaluation
Links to Formation Evaluation

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The WITSML Data Solutions (WDS) are innovative data management systems based upon the new WITSML standards which are now supported by the majority of Oil & Gas Operators and Service Companies Worldwide.

The Modular, fully customizable systems consist of fault-tolerant acquisition-transmission-storage units that can interface automatically with and third-party Service Company or Operator WITSML compliant Data Sources or Applications.

Examples of Data Sources would be mudlogging, measurement-while-drilling (MWD) logging, electric wireline logging data in the WITSML data format. Where data was only available in the older WITS (Wellsite Information Transfer Specification) format, the WDS will convert the data to the newer WITSML format.

Examples of Applications would be real-time Pore Pressure and Fracture Gradient calculation programs, Mechanical Property programs, and Log Analysis programs.

The WDS incorporates a fully customizable plotting package that is accessible by Internet Browsers from anywhere at any time by a virtually unlimited number of users. This plotting package is available either on real-time server-based systems, both through the internet and also installed on the Customer internal network, and is also available as a free off-line plotting utility that may be used to display static data files.

WITSML Data Solutions provide everything that is required for Wellsite Real-Time and Data Distribution needs. The Rapid-Response Operation Team is available 24/7 to help resolve all Wellsite Data Delivery problems, and the Research and Development team is available at all times to find the fastest and most efficient way to interface Wellsite Data Acquisition Systems with the Customers' own Data Management Systems.

**WDS Overview**

WITSML Data Solutions provide an all-inclusive solution for Real-Time data delivery needs. Examples of the type of data that can be simultaneously managed and displayed include Drilling Sensor information, and Mudlogging and Measurement-while-drilling (MWD/LWD) Data in Real-Time directly from the various service provider acquisition systems at the Wellsite. This Data can then be merged by the system to produce plots on a time or depth based index.

The system can accept streaming WITS, WITSML, and other binary format information, and also access standard or custom databases directly, in order to convert that data to the WITSML standard and then deliver it to the secure network servers worldwide which are the components of the WITSML Data Extranet.

The innovative plotting package allows presentation and plotting of Wellsite data through an Internet browser equipped with a SVG plug-in. Source data files can be uploaded in any of the formats handled by the system and each individual user can then select from pre-formatted presentations, and if necessary customize them to build individual presentations. These presentations are stored in the system for later use, and can be downloaded in an XML format for use in other software packages capable of reading this industry standard format.
WITSML Data Solution (WDS)

Data can be converted from and to different standards, allowing conversion and basic re-formatting between a wide variety of data types, such as WITSML, WellLogML and Tabular ASCII. Data may also be published directly into other Wellsite data acquisition databases if required, or into a wide variety of Corporate Relational Databases.
WITSML Data Solution (WDS)

WDS Internet Hub

» Complete subscription support for WITSML V1.2 Data Flows
» WITSML V1.3 Publisher/Subscriber capability
» Extended WITSML V.1.2/1.3 STORE capabilities Data can be stored
» Monitoring and alarm system
» Monitor Publisher System
» Extended fully customisable graphical interface
» Secure Socket encrypted access
» Data archive with direct access from the plot
» Plot with image capabilities
» Virtually unlimited numbers of access
» Accessible by Internet Browser
» Geological and engineering reporting

WDS Internet Hubs are located near to users and secured by SSL providing fast and secure access to data. Users can easily view the data in a format which best suits them. They can rearrange nearly all of the parameters: comments, lithologies and symbols can be simply managed from the graphical interface. Symbols can be linked to related items or documents that pop up directly on your screen: cores, seismic, RFT and anything else that is needed is just a click away. Analysis and standard computations can be performed in real-time. Data can be collected and delivered in real-time by a Monitor Publisher System and can be view as it is seen on the rig. WDS is not only a real-time management system, it also provides you with a standard and customisable set of forms to satisfy your daily engineering/geological/economical reporting needs.

WDS Internet Hubs guarantee a 24/7 access system with redundancy. At any time a backup Hub is available.
WITSML Data Solution (WDS)

WDS Intranet Hub

» Complete subscription support for WITSML V1.2 Data Flows
» WITSML V1.3 Publisher/Subscriber capability
» Extended WITSML V.1.2/1.3 STORE capabilities Data can be stored
» Monitoring and alarm system
» Monitor Publisher System
» Extended fully customisable graphical interface
» Secure Socket encrypted access
» Data archive with direct access from the plot
» Plot with image capabilities
» Virtually unlimited number of access
» Accessible by Internet Browser
» Geological and engineering reporting

WDS Intranet Hubs are located inside the operator’s network to guarantee fast and totally secure access to data. External access can be secured by VPN tunnelling and SSL transactions enable secure access to data. Users can easily view the data in a format which best suits them. They can rearrange nearly all of the parameters: comments, lithologies and symbols can be simply managed from the graphical interface. Symbols can be linked to related items or documents that pop up directly on your screen: cores, seismic, RFT and anything else that is needed is just a click away. Analysis and standard computations can be performed in real-time. Data can be collected and delivered in real-time by a Monitor Publisher System and can be view as it is seen on the rig. WDS is not only a real-time management system, it also provides you with a standard and customisable set of forms to satisfy your daily engineering/geological/economical reporting needs.

WDS Intranet Hubs can replicate to WDS Internet Hubs to share all or part of the data with your partners.
WITSML Data Solution (WDS)

WDS Wellsite Hub

- Complete subscription support for WITSML V1.2 Data Flows
- WITSML V1.3 Publisher/Subscriber capability
- Extended WITSML V.1.2/1.3 STORE capabilities Data can be stored
- Monitoring and alarm system
- Monitor Publisher System
- Extended fully customisable graphical interface
- Secure Socket encrypted access
- Data archive with direct access from the plot
- Plot with image capabilities
- Virtually unlimited numbers of access
- Accessible by Internet Browser
- Geological and engineering reporting

WDS Wellsite Hubs are located at the rigsite. Working within the operator environment guarantees fast and totally secure access to the data directly at the rigsite. External access can be secured by VPN tunnelling and SSL transactions enable secure access to data. Users can easily view the data in a format which best suits them. They can rearrange nearly all of the parameters: comments, lithologies and symbols can be simply managed from the graphical interface. Symbols can be linked to related items or documents that pop up directly on your screen: cores, seismic, RFT and anything else that is needed is just a click away. Analysis and standard computations can be performed in real-time. Data can be collected and delivered in real-time by a Monitor Publisher System and can be view as it is seen on the rig. WDS is not only a real-time management system, it also provides you with a standard and customisable set of forms to satisfy your daily engineering/geological/economical reporting needs.

WDS Internet Hubs can replicate to WDS Internet Hubs to share all or part of the data with your partners and directly with WDS Intranet Hub.
WITSML Data Solution (WDS)

WDS Wellsite Aggregator

» Collect data from different sources contemporary
» Access data storage
» Convert WITS, Binary, databases streamed data in WITSML 1.2/1.3
» Provide data archiving and backup at the rigsite
» SSL encryption and tunneled transactions
» Flexible and customisable

The WDS Wellsite Aggregator is able to collect different streams of data and merge them in a unique flow to different WDS Hubs. The input can be an RS232, an internet port, a binary or ascii file on the disk or a standard or custom database. Our development department is able to customize any aspect of the system to satisfy your needs. The WDS Wellsite Aggregator preserves the data received and is able to protect it from any internet outages or data loss during transmission to the WDS Hubs. The system is equipped with alarms and monitors for input and output outages and faults.
The WDS Replicator provides scheduled replications between the WSD Hubs databases. It backs up data and exports it to other databases in compliance with the WITSML 1.2/1.3 standard.

Full or partial database replication by selected keys can be easily scheduled to move data. WDS not only covers real-time applications but can also manage your Data Distribution System. Replication allows you to operate independently of an internet connection, thus you can continue to work on your data without internet access, and replicate the data to the Hubs at a scheduled time, or when you have an internet connection.
What is WITS?

WITS is the Wellsite Information Transfer Specification, a standard that has been used for some time in the Oil and Gas Industry to specify time- or depth-based information and allow Geotechnical data to be transmitted by a wellsie service contractor and interpreted and plotted by a third party.

Various levels of the WITS specification have been proposed and used, but the only one still in common use today is the earliest and simplest WITSML Level 0, which is a simple ASCII based format. Further details and examples of this format be found at the url:

http://www.witsml.org/Docs/WITSRecords.htm

What is XML?

The eXtensible Markup Language, or XML, is a standard that has emerged in recent years as a mechanism for the exchange of self-describing data between different hardware systems and database formats.

XML offers the potential to allow companies worldwide to exchange and share data without the need for reformatting. In its simplest form, XML may be thought of as the embedding of data in ASCII format within simple HTML web pages. These web pages allow the data to be described by various ‘style sheets’ and displayed through the use of browser-enabled viewers, such as the Scalable Vector Graphics (SVG) plotting engine.

Further details on XML may be found at the url:

www.xml.org

Further details and demonstrations on the SVG viewers may be found at the url:

www.adobe.com/svg
What is WITSML?

WITSML = WITS + XML

WITSML was initially developed by an oil industry initiative sponsored initially by BP and Statoil, and then later by Shell, as a new standard for the transfer of Geotechnical data such as drilling and geological information. Participation in this initiative now covers most of the major Oil & Gas Operators and Service Companies worldwide.

Through meeting and collaboration, the Oil & Gas Industry has formed Special Interest Groups (SIGs), which meet regularly to agree and promote the definitions of the various types of Geotechnical data so that these may be exchanged between service contractors and Oil & Gas Operators.

The defined goal of the original non-profit making organization was to define and promote the use of standards which would improve the flow of Geotechnical data, and in particular in the first instance ‘real-time’ data that was to be transmitted and delivered to the end-users as it was actually being incorporated.

To quote the WITSML website:

"To promote the “right time” seamless flow of well site data between operators and service companies in order to speed and enhance decision-making."

Once agreed, the data schemas are published on the organization website, whence they can be downloaded and used by the various data acquisition and other specialized data companies who have a need to receive data to perform their own services.

Early schemas for WITSML V1.0 and V1.1 looked at the requirement for Mudlogging and Measurement while Drilling (MWD). These have been used successfully now by several data acquisition and data companies.

As of the completion of WITSML V1.2 in March 2003, the custody of WITSML was passed to the Petrotechnical Open Standards Consortium (POSC).

POSC is an international, not-for-profit, membership organization, and has an objective “to unite Oil & Gas Industry people, issues and ideas to collaboratively address Exploration & Production information challenges and opportunities.”

Further details of the involvement of POSC in the WITSML developments may be found at the following url:

www.posc.org

WITSML has now moved on to the definition of non real-time data such as lagged data and object descriptions, and some of these have been defined in the latest release WITSML V1.3.

Further details and the latest specifications of the WITSML initiative may be found at the url:

www.witsml.org
Who are XML Power?

XMLPower is a company that specialises in the development of hardware and software tools that will allow companies in any business sector to exchange information and data through the use of the emerging XML standards. Further details on the general activities of XMLPower may be found at the url:

www.xmlpower.net

As part of their service portfolio XMLPower have developed a range of Wellsite solutions that are collectively known as WITSML Data Solutions (WDS).

These WITSML Data Solutions may be either hardware or software-based depending on the application for which they are intended.

WDS systems products and services have been developed to allow the flow of any type of Wellsite Geotechnical data in a secure and encrypted manner, and to use the minimum telecommunications bandwidth possible in order not to interfere with existing systems.

WDS systems operate either inside the company firewall as a bespoke separate system for internal use, or may operate through firewalls to other WDS systems on the internet or at other operator partner or service company locations, effectively creating a unique WITSML Data Extranet (WDE).

WDS systems incorporate mechanisms for the aggregation of Wellsite Geotechnical data from multiple locations, enabling information to be collected in a WITSML Data Store and then published to any number of other WITSML Data Stores and then made available through the global users.

WDS systems are able to interface with a wide range of Wellsite data acquisition systems and also many Operator corporate databases, and the XMLPower team of highly competent developers are able to custom build the WITSML interfaces required in a short time frame.

By incorporating the WITSML open-source standards, which are constantly being refined and developed, and by implementing other emerging XML services, XMLPower intends to be the leading provider of WITSML Solutions to the Oil & Gas Industry Worldwide.

XMLPower has no affiliation with any of the wellsite data acquisition service providers, and is therefore in an unique position to provide an Extranet Hub that may be used by the Operator, the Well Partners and the service providers themselves. This Neutral Extranet Hub thereby allows the Operator to avoid issues related to possible conflicts of interests where service providers might be requested to transfer data that is provided by other service providers.

Through the use of these Neutral WDS system interfaces, the Wellsite Operator is less reliant on 'integrated offerings' from the larger service providers and is then able to choose the 'best of breed' services provided by service providers and other specialised data analysis vendors, in order to meet their exact requirements and promote a healthier competitive environment.

XMLPower becomes the focal point for data aggregation, transmission and distribution, and will take care of all of the interfacing required to ensure the continuity of data transfer from the Wellsite contractors into the real-time graphical display systems, to specialized data analysis packages, or the Operator corporate data stores.

By using the XML standards to move data into existing corporate data stores, the Operator and Well Partners do not need to change the legacy databases and systems that they already have in place, and can instead concentrate on their own data management requirements.
WDS Features

WDS Key Features

» Secure Internet or intranet based access
  ✓ Access to data anywhere anytime
» 512bit SSL encryption on all systems
  ✓ Secure data access
» Worldwide network of redundant and synchronized servers
  ✓ Data is always available even if a server fails
» Automatic server fallover
  ✓ Transparent redundancy
» Individual accounts for each user
  ✓ Maximum security
» Detailed access logs and records for audit and operator reference purposes
  ✓ Trace who has loaded, viewed and downloaded which data
» Functions through a web browser
  ✓ No installation issues or licensing costs
» Easy to learn and easy to use
  ✓ Saves time and money

WITSML Data Service and Support benefits with WDS

» WITSML Data creates and manages all secure user accounts
  ✓ This allows the client to get on with their core business
» WITSML Data contacts all users to issue account details and ensure they can log on
  ✓ Personal level of service
» Complete management of the system on WITSML Data's worldwide Internet and intranet server network
  ✓ Requires little input or resources from the client
» Data conversion and QC checks on all types of data loaded into WDS
  ✓ Improved data quality
» 24/7 operations support to all customers by office visits, telephone and email
  ✓ Very high level of customer service and support
» The Customer can manage all of the user accounts and access control independently if required
Contact Details

If you have any questions regarding WITSML Data, please contact us by calling or e-mailing us and we'll get back to you as soon as possible.

XML Power

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