Drilling Data Management System

MCS-DDMS

Technical Presentation
Contents...

DDMS

- Definition
- Importance
- Modules
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- Structure
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- Benefits
DDMS: is a drilling Database management system that Works from well pre-spud till well recap, post analysis & Synchronizing Drilling Operational Data Between Rig/s and head office.
DDMS Importance

• Replacing your old excel files
• One drilling data base for all wells
• Easy data recall
• Different and customizable deliverables
• Managing multiple rigs from one focal point
• Saving engineers time & Saving company money
• Authenticated levels for data base entry
• Database encryption
• Easy data base backup and restore
DDMS Modules

MCS-DDMS

Data Collection & Entry
- MCS-DRRS
- MCS-Web DRRS

Data Accessibility
- MCS-DRRS

Reporting
- MCS-DRRS

Analysis
- MCS-DPA

One SQL Database
DDMS Modules

- **DRRS** Daily Rig Reporting System ‘Main DB Module’
  - Collect data from rig site/s & Linked to head office
  - Generation of daily reports – Morning report, Depth Progress Report, Well Trajectory Report, ...... etc
  - Multiple morning drilling report generation Using MRG
  - Planned drilling budget (AFE) Preparation & Creation

- **Web–DRRS** Web-Daily Rig Reporting System
  - Simple URL, no setup needed
  - Online Follow up for drilling operations and generate daily reports
  - Via internet or Intranet

- **DDR** Drilling Data Reporter
  - This is DDMS reporting tool for generating FWR Or statistical reports
  - Powerful data filtering function
  - Flexibility and customization to create new reports
  - Powerful charts and info-graphics capabilities

- **DPA** Drilling Performance Analyzer
  - Pre-well design phase data preparation for well planning
  - Evaluate drilling contractors, Crews, operations, Setting Company’s Benchmarking
  - DB Query to search Data Base for any type or combination of data
DDMS Functions

- Intensive & Comprehensive Drilling DB
- Reporting Purposes
- Top Management Reporting
- Final Well Reporting
- Well Cost Administration
- Serving Well Pre-design Phase
- Performance Analysis & Optimization
- Serving Rig Selection Purposes
- Data Web Access
DDMS Architecture

DRRS  Daily Rig Reporting System

Web-DRRS  Web Access

Internet  Intranet

DDR  Drilling Data Reporter

DDMS  Architecture

Intranet

Corporate Data Base

Office  Rig

DPA  Drilling Performance Analyzer

Office

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DDMS Structure

Corporate Database

= Team

= Rig

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DDMS Workflow

Data Collection & Entry

Revision & QC

Central DB

- Reporting
- Web Publishing
- Analysis - Planning

Online Drilling Data Synchronization
DDMS Features

**DRRS** Daily Rig Reporting System

Easy & Flexible Data Entry

Data Grouping

![Easy & Flexible Data Entry Example](image-url)
DDMS Features

DRRS  Daily Rig Reporting System

Easy & Flexible Data Entry

Data Entry through pickup lists
DDMS Features

**DRRS** Daily Rig Reporting System

**Easy & Flexible Data Entry**

Data Entered Once

![DDMS Data Entry Screenshot]
DDMS Features

DRRS Daily Rig Reporting System

Easy & Flexible Data Entry

Data Carry Over

Image of a software interface showing data entry and carry over functionalities.
DDMS Features

DRRS  Daily Rig Reporting System

Easy & Flexible Data Entry

Paste from clipboard
DDMS Features

DRRS Daily Rig Reporting System

Easy & Flexible Data Entry

Importing Well Logs Data Feature

Welcome to open hole logs wizard

Select The Type of file you want to Import:

- Wire Line Logs
- LWD
- Mud Logs
**DDMS Features**

**DRRS** Daily Rig Reporting System

**Easy & Flexible Data Entry**

System built in calculations – Survey Management

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**Data Entry**

<table>
<thead>
<tr>
<th>BWI</th>
<th>Operation</th>
<th>Survey Data</th>
<th>Daily</th>
<th>Multi</th>
<th>Final Survey</th>
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</table>

**Drilling Criteria**

<table>
<thead>
<tr>
<th>CSG &amp; CMT</th>
<th>Mud Data</th>
<th>SRE</th>
<th>Evaluation Data</th>
<th>Completion</th>
<th>Geology</th>
<th>Cost</th>
<th>Other Data</th>
<th>Planned Data</th>
</tr>
</thead>
</table>

**DDMS Features**

- **Start MD**: 861.00
- **End MD**: 1087.00
- **Survey Company**: Sperry Sun
- **Survey Tool**: MWD

<table>
<thead>
<tr>
<th>MD (ft)</th>
<th>Inclination (deg)</th>
<th>Azimuth (deg)</th>
<th>Comment</th>
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<td>294.84</td>
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</table>

**Current Report No. of Records**: 1

**Current Record is**: 1 of 1

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DDMS Features

**DRRS**  Daily Rig Reporting System

**Easy & Flexible Data Entry**

System built in calculations – Survey Management
DDMS Features

**DRRS** Daily Rig Reporting System

**Easy & Flexible Data Entry**

System built in calculations – Survey Management
DDMS Features

**DRRS** Daily Rig Reporting System

**Multi Measurements System**

Data Storage in SI Units

Data Entry & Display Support Multi Units
DDMS Features

**DRRS  Daily Rig Reporting System**

**Smart and Accurate Data QC System**

Data QC checker

![DDMS Features Diagram]

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DDMS Features

**DRRS**  Daily Rig Reporting System

Smart and Accurate Data QC System

Data Integration
**DDMS Features**

**Comprehensive Operations Coding System**

- Built–in Coding System
- NPT Coding System
- Customized Coding System
DDMS Features

Secured Data Storage, and Transfer

DDMS Security Levels

- Authentication
- Data Transfer
- Data Storage
DDMS Features
Power Reporting Tool

- Daily Reports
- Final Well Reports
- Statistical Reports
- Customized Reports
DDMS Features

Drilling Performance Analyzer

Smart Drilling Operations Analysis Tool

- Multiple Wells Progress
- Multiple Wells Trajectories
- Lithology Correlations
- NPT Analysis
- Offset Data Analysis
- CPF Analysis
- Drill To the Limit - DLT

Progress Chart

Duration (Days)

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DDMS Benefits

- Retention of organization knowledge
- Saving engineering and operational time & cost
- Objective measures for company Performance, teams
- Identify and evaluate potential Optimization Areas
- Define the basis to plan a new well
- Support Continuous Process Improvement