



Arabian Institute For Training

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# Advanced Data Management for Oil and Gas Professionals

## INTRODUCTION

- This Advanced Data Management for Oil and Gas Professionals training course is designed for professionals and companies that want to take the full advantage of the data as an important asset of the company. The data revolution and the benefits as well as risks arising from it have propelled the data into the status of the lifeblood of today industry.
- As the project management become standardized, the Data Management is becoming more and more standardized, and the data that the oil and gas companies gather and use needs to be properly valued, acquired, stored, managed and used in analysis in a way that will fully utilize the data as the very valuable enterprise asset.
- With Big Data comes the challenge of data management, as just having the data does not suffice, the Data Management is defined as an administrative process that includes acquiring, validating, storing, protecting, and processing required data to ensure the accessibility, reliability, and timeliness of the data for its users. This training course comprises the full scope of the master data management of the spatial-geophysical and well data for the oil and gas industry.

### This training course will highlight:

- Management of data through the whole Data Lifecycle
  - Strategic importance of information
  - Standard practices in geophysical and well data acquisition, management and analysis
  - Master Data Management essentials
  - Data security strategies
  - Ensuring the data quality
  - Professional Petroleum Data Management framework
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## OBJECTIVES

- This Advanced Data Management for Oil and Gas Professionals training course focuses on presenting the delegates with the opportunity to learn the essentials of data governance, ensuring the data quality, how to gather and maintain the well data, how are wells identified and classified, geospatial data collection and management, data security, record retention and data transfer and results communication. The whole course helps delegates prepare for the role of Petroleum Data Analyst, and can help delegates in their certification as data analysts.
- Learn to identify the impact of data governance on the enterprise
- Acquire the knowledge about data vendors and data domains
- Get acquainted with the legal requirements for well identification
- Learn how to prepare and implement the strategies of data security
- Be able to determine data retention schedule
- Identify the legal documents defining the master data management
- Learn how to gather, transform and use the spatial data
- Identify the relations between the master data management and Exploration and Production

## TRAINING METHODOLOGY

- This training course uses a number of proved adult learning techniques, theoretical presentations with practical work of the delegates on how to properly use the data in Exploration and Production, how to prepare and implement the retention schedule and how to define the data architecture applicable for their enterprise. The focus is on enabling delegates to answer the questions which arise in everyday life of Petroleum Data Analyst.

## ORGANISATIONAL IMPACT

- Data went a long way from simple necessity to the main element of sustainability and improvement. When the companies properly acquire, analyze, manage, store and secure their data they gain incredible competitive advantage. However, it is not enough only to collect and store the data and put it under several layers of IT protection, as this approach usually ends up drying out the patience of stakeholders, clients and developers, and a lot of times it is not even in compliance with the rules of data management.
  - The adequate knowledge of master data management, well and spatial data storage and retention helps organizations to first comply with the legal requirements, and also be able to increase their profits and optimize their work with the data driven decision making, by insuring the quality, safety and proper management of their data.
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## This training course will highlight:

- Standards in well identification and classification
- Spatial data standards and importance of coordinate referencing
- How to adequately manage and retain the company data
- Standard and modern data security issues and measures applicable to Exploration & Production (E&P) data
- Methods of ensuring the data quality

## PERSONAL IMPACT

- The delegates will learn from the experiences of real projects, get the insight into the success stories, problems and even failures in order to be able to avoid mistakes and harness the lessons learnt from companies that have successfully used the master data management. The delegates will also be able to fully apprehend their role as current or future Petroleum Data Analyst as well as to understand the importance of that role.

## The delegates will acquire:

- Full knowledge of data lifecycle management
- Introduction to data vendors, and national, international and local data repositories
- The relationship between the Exploration & Production (E&P) lifecycle and data lifecycle
- Modern methods of data transfer
- Introduction to risks and mitigation measures related to data quality and data security
- List of data retention standards in oil and gas industry
- Available software and applications related to Master Data management in oil and gas
- Requirements of data retention in cases of company transfer, joint-ventures and abandonment

## WHO SHOULD ATTEND?

- This training course has been designed for professionals whose jobs involve the data gathering, data analysis, decision making, and are focused on either becoming Petroleum Data Analysts, certified or not, or fully using the benefits of Petroleum Data Analysis in their company business.

## This training course is suitable to a wide range of professionals but will greatly benefit:

- Petroleum Data Analysts
- Systems Analysts
- Programmers
- Data Analysts
- Database Administrators
- Project Leaders
- Software Engineers

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## Course Outline

### Master Data Management

- Data Lifecycle Management
- The Data as Enterprise Asset
- Metadata
- Data Retention Requirements
- Data Governance Frameworks
- DGI

### Data Gathering and Data Quality

- Data Sources
- Applicable Data Rules for Well Identification and Classification
- Professional Petroleum Data Management (PPDM) Data Model
- Data Management Functions

### Geospatial Data

- Geospatial Data Architecture
- Geospatial Data Repositories
- Software for Geospatial Data Gathering and Analysis
- Geographic Information Systems (GIS) Related Databases
- Geomatics Data Quality
- Geospatial Data Storage, Analysis and Retention

### Master Data Management and Referencing in Exploration & Production (E&P)

- Exploration & Production (E&P) Terminology
  - Master Data
  - Reference Data
  - Data Warehouse Architecture and Business Intelligence
  - Business Conceptual Model
  - Logical Data Model
  - Physical Data Model
  - Database Administration
  - Data Warehouse Administration
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## Data Management, Risks and Security

- The CIA Triad - Confidentiality, integrity and availability of the data
- Data Security Policy
- Data Security Standards and Procedures
- Data Security Audit
- Data Security on the Cloud
- Interaction between the Stakeholders, Users, Clients and Government Agencies



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