

## **Advanced Data Management for Oil & Gas Professional with CDMP**

### **Day 1: Introduction to Data Management in Oil & Gas**

- Importance of data management in the oil and gas industry
  - Key challenges in managing data for exploration, production, and distribution
  - Introduction to the CDMP certification
  - Core principles of the CDMP framework
  - Overview of Data Management Body of Knowledge (DMBOK)
  - Defining roles and responsibilities in data management
  - Data governance policies and procedures
  - Establishing data stewardship in oil & gas operations
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### **Day 2: Data Quality and Data Integration**

- Defining data quality metrics (accuracy, completeness, consistency)
  - Ensuring data quality in oil & gas exploration and production
  - Tools and techniques for improving data quality
  - Challenges in integrating data from multiple sources (e.g., seismic data, drilling reports)
  - ETL (Extract, Transform, Load) processes for oil & gas datasets
  - Best practices for real-time data integration
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### **Day 3: Master Data Management and Metadata**

- Concepts of MDM in the oil & gas industry
  - Managing key master data (e.g., assets, wells, equipment, locations)
  - Establishing a single source of truth for critical data
  - Understanding metadata and its importance in oil & gas
  - Tools and best practices for metadata management
  - Creating metadata standards and taxonomy
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#### **Day 4: Data Security, Compliance, and Analytics**

- Managing data security risks in oil & gas operations
  - Compliance with industry standards (e.g., GDPR, HIPAA, Sarbanes-Oxley)
  - Best practices for securing operational and production data
  - Overview of big data technologies (e.g., Hadoop, Spark)
  - Use of analytics for exploration, production optimization, and predictive maintenance
  - Data visualization and reporting tools (e.g., Power BI, Tableau)
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#### **Day 5: Data Architecture, Lifecycle, and Certification Preparation**

- Creating a scalable data architecture for oil & gas operations
- Data modeling techniques (ER models, dimensional modeling)
- Implementing data warehouses and data lakes
- Managing the lifecycle of oil & gas data from acquisition to archival
- Data retention policies and disaster recovery plans
- Review of key concepts from DMBOK
- Mock exams and practice tests for CDMP certification
- Exam tips and strategies for passing the CDMP certification