

1. Record Nr.	UNINA9910132216903321
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Titolo	Harness oil and gas big data with analytics : optimize exploration and production with data driven models // Keith R. Holdaway
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2014 ©2014
ISBN	1-118-91094-X 1-118-91089-3 1-118-91095-8
Edizione	[1st edition]
Descrizione fisica	1 online resource (378 p.)
Collana	Wiley & SAS Business Series
Classificazione	BUS070040
Disciplina	665.5068/4
Soggetti	Petroleum industry and trade Gas industry Big data
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: Preface Chapter 01: Fundamentals of Soft Computing Current Landscape in Upstream Data Analysis Evolution from Plato to Aristotle Descriptive and Predictive Models The SEMMA Process High Performance Analytics Three Tenets of Upstream Data Exploration and Production Value Propositions Oilfield Analytics I am a... Notes Chapter 02: Data Management Exploration and Production Value Proposition Data Management Platform Array of Data Repositories Structured Data and Unstructured Data Extraction, Transformation, and Loading Processes Big Data Big Analytics Standard Data Sources Case Study: Production Data Quality Control Framework Best Practices Notes Chapter 03: Seismic Attribute Analysis Exploration and Production Value Propositions Time-Lapse Seismic Exploration Seismic Attributes Reservoir Characterization Reservoir Management Seismic Trace Analysis Case Studies Reservoir Properties defined by Seismic Attributes Notes Chapter 04 Reservoir Characterization and Simulation Exploration and Production Value Propositions Exploratory Data Analysis Reservoir Characterization Cycle Traditional Data Analysis Reservoir Simulation Models Case Studies Notes Chapter 05: Drilling

and Completion Optimization Exploration and Production Value Propositions Workflow One: Mitigation of Non-Productive Time Workflow Two: Drilling Parameter Optimization 5.5 Case Studies: Steam Assisted Gravity Drainage Completion Notes Chapter 06: Reservoir Management Exploration and Production Value Propositions Digital Oilfield of the Future Analytical Centers of Excellence Analytical Workflows: Best Practices Case Studies Notes Chapter 07: Production Forecasting Exploration and Production Value Propositions Web-Based Decline Curve Analysis Solution Unconventional Reserves Estimation Case Study: Oil Production Prediction for Infill Well Notes Chapter 08: Production Optimization Exploration and Production Value Propositions Case Studies Notes Chapter 09: Exploratory and Predictive Data Analysis Exploration and Production Value Propositions EDA Components EDA Statistical Graphs and Plots Ensemble Segmentations Data Visualization Case Studies Notes Chapter 10: Big Data: Structured and Unstructured Exploration and Production Value Propositions Hybrid Expert and Data Driven System Case Studies Multivariate Geostatistics Big Data Workflows Integration of Soft Computing Techniques Notes Glossary About the Author Index .

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## Sommario/riassunto

"Use big data analytics to efficiently drive oil and gas exploration and production Harness Oil and Gas Big Data with Analytics provides a complete view of big data and analytics techniques as they are applied to the oil and gas industry. Including a compendium of specific case studies, the book underscores the acute need for optimization in the oil and gas exploration and production stages and shows how data analytics can provide such optimization. This spans exploration, development, production and rejuvenation of oil and gas assets. The book serves as a guide for fully leveraging data, statistical, and quantitative analysis, exploratory and predictive modeling, and fact-based management to drive decision making in oil and gas operations. This comprehensive resource delves into the three major issues that face the oil and gas industry during the exploration and production stages: Data management, including storing massive quantities of data in a manner conducive to analysis and effectively retrieving, backing up, and purging data Quantification of uncertainty, including a look at the statistical and data analytics methods for making predictions and determining the certainty of those predictions Risk assessment, including predictive analysis of the likelihood that known risks are realized and how to properly deal with unknown risks Covering the major issues facing the oil and gas industry in the exploration and production stages, Harness Big Data with Analytics reveals how to model big data to realize efficiencies and business benefits"--

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