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Seismic Facies and Sedimentary Processes of Submarine Fans and Turbidite Systems - Paul Weimer 2013-11-11 The Frontiers in Sedimentary Geology series was established for the student, the researcher, and the applied scientist to enhance their potential to stay abreast of the most recent ideas and developments and to become familiar with certain topics in the field of sedimentary geology. This series deals with subjects that are in the forefront of both scientific and economic interests. The treatment of a subject in an individual volume, therefore, should be a combination of topical, regional, and interdisciplinary approaches. The interdisciplinary aspects are becoming more and more important because most studies dealing with the natural sciences cannot effectively stand alone. Although this thrust may sound simple, in reality it is not, basically because each discipline has developed its own jargon and definitions of terms. Communication among disciplines is a major issue and can be accomplished more constructively when people with different backgrounds join together at the same symposium and can read from the same volume rather than confining themselves within the world of their own specialty meetings and journals. Books in this series provide this connective link between disciplines. Each book in this series provides a continuous and connected flow of concepts throughout the volume by the use of introductory chapters that outline a topic to help the reader grasp its problems and to understand the contributions that follow.

Seismic Facies and Sedimentary Processes of Submarine Fans and Turbidite Systems - Paul Weimer 1991-12-16 The Frontiers in Sedimentary Geology series was established for the student, the researcher, and the applied scientist to enhance their potential to stay abreast of the most recent ideas and developments and to become familiar with certain topics in the field of sedimentary geology. This series deals with subjects that are in the forefront of both scientific and economic interests. The treatment of a subject in an individual volume, therefore, should be a combination of topical, regional, and interdisciplinary approaches. The interdisciplinary aspects are becoming more and more important because most studies dealing with the natural sciences cannot effectively stand alone. Although this thrust may sound simple, in reality it is not, basically because each discipline has developed its own jargon and definitions of terms. Communication among disciplines is a major issue and can be accomplished more constructively when people with different backgrounds join together at the same symposium and can read from the same volume rather than confining themselves within the world of their own specialty meetings and journals. Books in this series provide this connective link between disciplines. Each book in this series provides a continuous and connected flow of concepts throughout the volume by the
Salt Control on Sedimentary Processes in Early Pleistocene-Munji Syarif 2002 The interpretation of 3D seismic data from Ship Shoal South Addition Blocks 349-358, Gulf of Mexico shows a complex interaction between salt, faults, and sedimentary strata. Reconstruction of the geometry of early Pleistocene (about 3.65 Ma) through recent salt and associated sediments reveals the evolution of a supralobal basin in the study area. The basin depocenter shifted from the northeastern part to the center of the study area through time. A small, bulb-shaped, salt-stock structure occurs in the northwest, and a salt sheet structure is present in the southeastern part of the study area. Those structures are part of a pennant-shaped structure bounded by counter regional faults trending northeastward. Salt movements created instability and triggered extensive faulting of the overlying strata. Three-dimensional reconstruction suggests that salt blocked the sediment during the early Pleistocene. The sediment was diverted around the salt high on both east and west sides of the salt body to the southwest and southeast. Stratigraphic interpretation of the interval between 1.35 Ma and 1.95 Ma led to the identification of a highstand systems tract (HST), a transgressive systems tract (TST), and two lowstand systems tracts (LST). The strata are developed normally in the depocenter area, whereas the strata at the basin margin were deformed by salt movement and faulting. Each systems tract is uniquely associated with a certain seismic facies. Three seismic facies were identified associated with LST, TST, and HST. Additionally, seismic sections reveal channel geometries in the LST. Seismic attribute analysis elucidates facies distribution in the systems tracts. Because of its ability to move, to divert sediment, to create instability, and to block sediment transport pathways, salt exercises the main control on the sedimentary processes in the study area.

Seismic Stratigraphy and Salt Tectonics of the Northern Green Canyon Area, Gulf of Mexico-Robert G. Mann 1987


Submarine Fans and Related Turbidite Systems-Arnold H. Bouma 2012-12-06 Exchange of information in the field of earth sciences is increasingly needed to stay informed about advances. However, the continuous increase in the number of journal articles and books is very noticeable, while the available time to keep up is decreasing. Such a large flow of information commonly necessitates professionals to search selectively for material and special publications in one’s sub-discipline that have more specific coverage. In addition to surveying research needs, earth scientists working in a pure or applied research environment collect and produce information that often is of interest to the much larger group of industry-employed geologists and geophysicists, to professionals employed by agencies, and to students. To accommodate this exchange of needed information, Springer-Verlag is launching a monograph series entitled "Frontiers in Sedimentary Geology." This series will cover a number of subjects related to sediments and sedimentary rocks in a manner that both the researcher and the industrially oriented earth scientist can use constructively. Publications in
this monograph series may fit one or more of the following main categories: Topical A topical subject will cover either the different aspects of a selected environment of deposition, or present a world tour of a particular depositional environment to demonstrate its variability and its commonalities. The author(s) or editor(s) accepts the responsibility to guide the reader as to the state of knowledge, rather than providing a set of independent chapters.

**Deep-Water Processes and Facies Models: Implications for Sandstone Petroleum Reservoirs** - G. Shanmugam 2006-03-31 This rock-based book is an attempt to link deep-water process sedimentology with sandstone petroleum reservoirs. In presenting a consistent process interpretation, the author has relied on his description and interpretation of core and outcrop (1:20 to 1:50 scale) from 35 case studies (which include 32 petroleum reservoirs), totaling more than 30,000 feet (9,145 m), carried out during the past 30 years (1974-2004). This book should serve as an important source of information for students on history, methodology, first principles, advanced concepts, controversies, and practical applications on deep-water sedimentology and petroleum geology. *Discusses the link between deep-water process sedimentology and petroleum geology * Addresses criteria for recognizing deposits of gravity-driven, thermohaline-driven, wind-driven, and tide-driven processes in deep-water environments * Provides head-on approach to resolve controversial process-related problems

**Seismic Geomorphology** - Geological Society of London 2007 We are poised to embark on a new era of discovery in the study of geomorphology. The discipline has a long and illustrious history, but in recent years an entirely new way of studying landscapes and seascapes has been developed. It involves the use of 3D seismic data. Just as CAT scans allow medical staff to view our anatomy in 3D, seismic data now allows Earth scientists to do what the early geomorphologists could only dream of - view tens and hundreds of square kilometres of the Earth's subsurface in 3D and therefore see for the first time how landscapes have evolved through time. This volume demonstrates how Earth scientists are starting to use this relatively new tool to study the dynamic evolution of a range of sedimentary environments.

**Siliciclastic Sequence Stratigraphy** - American Association of Petroleum Geologists 1994 "This memoir grew out of the 2 1/2-day symposium, 'Variations in Depositional Systems Within a Sequence Stratigraphic Framework: Applications to Exploration,' that we organized at the 1991 AAPG annual meeting in Dallas, Texas."--Preface.

**Sedimentary Processes, Environments and Basins** - Gary Nichols 2009-03-05 For several decades Peter Friend has been one of the leading figures in sedimentary geology and throughout that time he has helped scores of other people by supervising doctoral students, collaborating with colleagues, especially in developing countries, and selflessly sharing ideas with fellow geologists. This collection of papers is a survey of the research frontier in basin dynamics, a field Peter Friend helped initiate, and a token of thanks from people who have benefited from an association with Peter during their careers. The papers in this book fall into four themes - Tectonics and sedimentation, Landscape evolution and provenance, Depositional systems and Fluvial sedimentation - which reflect Peter's research interests and are all important areas of current research in sedimentary geology. There are both case studies and review articles on these themes which reflect recent work, but the collection can also be considered to be a 'sampler' of sedimentary geology for anyone with broad interests in the Earth sciences.

**Geological Processes on Continental Margins** - Michael George Parke Stoker 1998 Continental margins form the relatively narrow transition zones between the different domains of land masses and deep-ocean basins. They are the main regions of sediment input and transfer of sediments to the oceans and thus represent important zones of sediment flux. This work addresses three topics of significance to continental margin development: sedimentation, mass-wasting and stability. It should be of interest to marine geologists, sedimentologists, palaeoceanographers and physical properties specialists.

**Ancient Sedimentary Environments** - Selley, Richard C. 2013-05-13 This edition retains the case history approach to emphasize the
subsurface diagnosis of environments using seismic and geophysical well logs and their application to petroleum exploration and production. This book should be of interest to undergraduates in sedimentology and petroleum geology.

**Terrigenous Clastic Depositional Systems**
William E. Galloway 2012-12-06 Nonrenewable energy resources, comprising fossil fuels and uranium, are not randomly distributed within the Earth's crust. They formed in response to a complex array of geologic controls, notably the genesis of the sedimentary rocks that host most commercial energy resources. It is this genetic relationship between economic resources and environment that forms the basis for this book. Our grouping of petroleum, coal, uranium, and groundwater may appear to be incongruous or artificial. But our basic premise is that these ostensibly disparate resources share common genetic attributes and that the sedimentological principles governing their natural distributions and influencing their recovery are fundamentally similar. Our combined careers have focused on these four resources, and our experiences in projects worldwide reveal that certain recurring geologic factors are important in controlling the distribution of commercial accumulations and subsurface fluid flow. These critical factors include the shape and stability of the receiving basin, the major depositional elements and their internal detail, and the modifications during burial that are brought about in these sediments by pressure, circulating fluids, heating, and chemical reaction. Since the first edition of this book in 1983, there has been a quantum leap in the volume of literature devoted to genetic stratigraphy and refinement of sedimentological principles and a commensurate increase in the application of these concepts to resource exploration and development.

**Mass-transport Deposits in Deepwater Settings**
R. Craig Shipp 2011 Historically, submarine-mass failures or mass-transport deposits have been a focus of increasingly intense investigation by academic institutions particularly during the last decade, though they received much less attention by geoscientists in the energy industry. With recent interest in expanding petroleum exploration and production into deeper water-depths globally and more widespread availability of high-quality data sets, mass-transport deposits are now recognized as a major component of most deep-water settings. This recognition has lead to the realization that many aspects of these deposits are still unknown or poorly understood. This volume contains twenty-three papers that address a number of topics critical to further understanding mass-transport deposits. These topics include general overviews of these deposits, depositional settings on the seafloor and in the near-subsurface interval, geohazard concerns, descriptive outcrops, integrated outcrop and seismic data/seismic forward modeling, petroleum reservoirs, and case studies on several associated topics. This volume will appeal to a broad cross section of geoscientists and geotechnical engineers, who are interested in this rapidly expanding field. The selection of papers in this volume reflects a growing trend towards a more diverse blend of disciplines and topics, covered in the study of mass-transport deposits.

**Geology of the United States’ Seafloor**
James V. Gardner 2005-10-06 This book presents new, definitive studies of the seafloor adjacent to the United States.

**Deep-sea Sediments**
Heiko Hünemeke 2011 ‘Deep-sea Sediments’ focuses on the sedimentary processes operating within the various modern and ancient deep-sea environments. The chapters track the way of sedimentary particles from continental erosion or production in the marine realm, to transport into the deep sea, to final deposition on the sea floor.

**Salt Tectonics, Sediments and Prospectivity**
G. Ian Alsop 2012 In this timely volume, geoscientists from both industry and academia present a contemporary view of salt at a global scale. The studies examine the influence of salt on synkinematic sedimentation, its role in basin evolution and tectonics, and ultimately in hydrocarbon prospectivity. Recent improvements in seismic reflection, acquisition and processing techniques have led to significant advances in the understanding of salt and sediment interactions, both along the flanks of vertical or overturned salt margins, and in subsalt plays such as offshore Brazil. The book is broadly separated into five major themes covering a variety of geographical and process-linked topics.
These are: halokinetic sequence stratigraphy, salt in passive margin settings, Central European salt basins, deformation within and adjacent to salt, and salt in contractual settings and salt glaciers.

**Regional Geology and Tectonics: Principles of Geologic Analysis** - Nicola Scarselli
2020-06-17 Regional Geology and Tectonics: Principles of Geologic Analysis, 2nd edition is the first in a three-volume series covering Phanerozoic regional geology and tectonics. The new edition provides updates to the first edition’s detailed overview of geologic processes, and includes new sections on plate tectonics, petroleum systems, and new methods of geological analysis. This book provides both professionals and students with the basic principles necessary to grasp the conceptual approaches to hydrocarbon exploration in a wide variety of geological settings globally. Discusses in detail the principles of regional geological analysis and the main geological and geophysical tools. Captures and identifies the tectonics of the world in detail, through a series of unique geographic maps, allowing quick access to exact tectonic locations. Serves as the ideal introductory overview and complementary reference to the core concepts of regional geology and tectonics offered in volumes 2 and 3 in the series.

**Confined Turbidite Systems** - Simon A. Lomas
2004

**Fractals in Petroleum Geology and Earth Processes** - C.C. Barton 2012-12-06 In this unique volume, renowned experts discuss the applications of fractals in petroleum research-offering an excellent introduction to the subject. Contributions cover a broad spectrum of applications from petroleum exploration to production. Papers also illustrate how fractal geometry can quantify the spatial heterogeneity of different aspects of geology and how this information can be used to improve exploration and production results.

**The Web of Geological Sciences** - Marion Eugene Bickford 2013 “This volume covers many of the important advances in the geological sciences from 1963 to 2013. These advances include understanding plate tectonics, exploration of the Moon and Mars, development of new computing and analytical technologies, understanding of the role of microbiology in geologic processes, and many others”—Provided by publisher.

**Seafloor Processes and Geotechnology** - Ronald C. Chaney 2015-11-04 An ideal resource for civil engineers working with offshore structures, pipelines, dredging, and coastal erosion, Seafloor Processes and Geotechnology bridges the gap between the standard soil mechanics curriculum of civil engineering and published material on marine geotechnology. Utilizing organized information on sediments and foundations for marine applications from a variety of sources, it provides practical reference information and approaches for analysis and design. This book provides an understanding of the processes and loadings affecting the sediment/water interface and the sediment column on the continental shelf and slope as well as the abyssal plains. It outlines the geological and geotechnical factors that should be considered in an investigation, and provides practicing professionals with the information they need to analyze potential environmental hazards and problems in marine foundations and slope stability. It covers geology, site investigation, drilling and sampling sediments, material properties, foundation design, slope stability, and more. Exploring marine geotechnology from a historical perspective, this book: Describes the development of marine geotechnology, the marine environment, and the geology of the seabed. Discusses the various elements of a site investigation. Explains how to investigate a site by remote sensing over the macro scale, probing to look at a more defined area, and drilling and sampling at the micro scale. Looks at the physical, acoustic, and geochemical properties of marine sediments at the micro scale. Focuses on slope stability and marine foundations. Seafloor Processes and Geotechnology provides the background for in situ investigation, drilling, soil sampling, and laboratory testing technologies and serves as a complete handbook for engineers, geologists, as well as marine and environmental scientists.

**Dynamics of the Earth System: Evolution, Processes and Interactions** - Dhananjai K. Pandey 2020-04-09 This book highlights Indian
scientific endeavours and contributions to answering the vast multitude of questions posed by our changing environment. The International Ocean Discovery Program (IODP) explores Earth’s history and dynamics using deep ocean drilling platforms to recover the data locked inside seafloor sediments and rocks. Since 2009, Indian scientists have been actively engaged in these expeditions. Scientists from various Earth Science disciplines have seized this opportunity to offer their expertise in order to help unravel the mysteries of the past – by delving deep into the valuable sedimentary records of our oceans. This book presents a compilation of some of their most important findings to motivate and encourage young minds for their enhanced role in the cutting edge science of ocean drilling.

Regional Geology and Tectonics: Principles of Geologic Analysis - David G. Roberts
2012-03-16 Expert petroleum geologists David Roberts and Albert Bally bring you Regional Geology and Tectonics: Principles of Geologic Analysis, volume one in a three-volume series covering Phanerozoic regional geology and tectonics. It has been written to provide you with a detailed overview of geologic rift systems, passive margins, and cratonic basins, it features the basic principles necessary to grasping the conceptual approaches to hydrocarbon exploration in a broad range of geological settings globally. Named a 2013 Outstanding Academic Title by the American Library Association’s Choice publication A “how-to” regional geology primer that provides a detailed overview of tectonics, rift systems, passive margins, and cratonic basins. The principles of regional geological analysis and the main geological and geophysical tools are discussed in detail. The tectonics of the world are captured and identified in detail through a series of unique geographic maps, allowing quick access to exact tectonic locations. Serves as the ideal introductory overview and complementary reference to the core concepts of regional geology and tectonics offered in volumes two and three in the series.

Carbonate Sedimentology and Sequence Stratigraphy - Wolfgang Schlager
2007 This book, dedicated to carbonate rocks, approaches sequence stratigraphy from its sedimentologic background. It attempts to communicate by combining different specialities and different lines of reasoning, and by searching for principles underlying the bewildering diversity of carbonate rocks. It provides enough general background, in introductory chapters and appendices, to be easily digestible for sedimentologists and stratigraphers as well as earth scientists at large.

Sedimentary Processes - Gemma Aiello
2020-05-27 This book contains six chapters covering the sedimentary processes with examples from Asia, Turkey, and Nigeria. The book focuses on the geological characteristics, beach processes, coastal and lacustrine sedimentary archives, and the role of mangroves in controlling coastal sedimentation. In more detail, these topics are pertaining to the geological characteristics and the production response of a reservoir located offshore the Niger Delta (Nigeria), the coastal lacustrine geo-archives with the example of the Lake Bafa (Turkey), the sedimentary processes in the riparian zone of the Ruxi Tributary Channel (Three Gorges Reservoir, China), the beach morphological changes studied by means of a contour-line change model and finally, the role of the mangroves in controlling the sedimentary accretion of coastal and marine environments with the regional example of the south-eastern Asia.

The Gulf of Mexico Sedimentary Basin - John W. Snedden
2019-11-21 A comprehensive and richly illustrated overview of the Gulf of Mexico Basin, including its reservoirs, source rocks, tectonics and evolution.

Seismic Stratigraphy, Basin Analysis and Reservoir Characterisation - P.C.H. Veeken
2006-11-13 The interest in seismic stratigraphic techniques to interpret reflection datasets is well established. The advent of sophisticated subsurface reservoir studies and 4D monitoring, for optimising the hydrocarbon production in existing fields, does demonstrate the importance of the 3D seismic methodology. The added value of reflection seismics to the petroleum industry has clearly been proven over the last decades. Seismic profiles and 3D cubes form a vast and robust data source to unravel the structure of the subsurface. It gets nowadays exploited in ever greater detail. Larger offsets and velocity anisotropy effects give for instance access to...
more details on reservoir flow properties like fracture density, porosity and permeability distribution, Elastic inversion and modelling may tell something about the change in petrophysical parameters. Seismic investigations provide a vital tool for the delineation of subtle hydrocarbon traps. They are the basis for understanding the regional basin framework and the stratigraphic subdivision. Seismic stratigraphy combines two very different scales of observation: the seismic and well-control. The systematic approach applied in seismic stratigraphy explains why many workers are using the principles to evaluate their seismic observations. The here presented modern geophysical techniques allow more accurate prediction of the changes in subsurface geology. Dynamics of sedimentary environments are discussed with its relation to global controlling factors and a link is made to high-resolution sequence stratigraphy. ‘Seismic Stratigraphy Basin Analysis and Reservoir Characterisation’ summarizes basic seismic interpretation techniques and demonstrates the benefits of integrated reservoir studies for hydrocarbon exploration. Topics are presented from a practical point of view and are supported by well-illustrated case histories. The reader (student as well as professional geophysicists, geologists and reservoir engineers) is taken from a basic level to more advanced study techniques. * Overview reflection seismic methods and its limitations. * Link between basic seismic stratigraphic principles and high resolution sequence stratigraphy. * Description of various techniques for seismic reservoir characterization and synthetic modelling. * Overview inversion techniques, AVO and seismic attributes analysis.


**Continental Shelves of the World** - F.L. Chiocci 2014-11-06 The world's continental shelves are the sites of vast resources of food, energy and minerals, the exploitation of which is continuously increasing. Fluctuating global sea levels throughout the Quaternary period produced multiple transgressive and regressive cycles that profoundly affected and shaped these shelves. The complex interactions among climate, sea level, tectonics, oceanography and sediment input have formed distinctive sediment packages on each shelf and provide a guide to the interpretation of older shelf sequences throughout the geological record. This Memoir compiles studies on 23 selected shelves from all the continents, focusing on their evolution and examining the patterns of sedimentation during the past approximately 125 000 years. In addition to providing basic background information for each area, the chapters consider specific aspects of continental shelf research, from seismic stratigraphy to geomorphology, from palaeoceanography to palaeo sea-level reconstruction and from palaeontology to geochemistry.

**Stratigraphy: A Modern Synthesis** - Andrew D. Miall 2015-12-28 A Comprehensive review of modern stratigraphic methods. The stratigraphic record is the major repository of information about the geological history of Earth, a record stretching back for nearly 4 billion years. Stratigraphic studies fill out our planet’s plate-tectonic history with the details of paleogeography, past climates, and the record of evolution, and stratigraphy is at the heart of the effort to find and exploit fossil fuel resources. Modern stratigraphic methods are now able to provide insights into past geological events and processes on time scales with unprecedented accuracy and precision, and have added much to our understanding of global tectonic and climatic processes. It has taken 200 years and a modern revolution to bring all the necessary developments together to create the modern, dynamic science that this book sets out to describe. Stratigraphy now consists of a suite of integrated concepts and methods, several of which have considerable predictive and interpretive power. The new, integrated, dynamic science that Stratigraphy has become is now inseparable from what were its component parts, including sedimentology, chronostratigraphy, and the broader aspects of basin analysis.

**The Sedimentary Basins of the United States and Canada** - Andrew Miall 2019-04-20 The Sedimentary Basins of the United States and Canada, Second Edition, focuses on the large, regional, sedimentary accumulations in Canada and the United States. Each chapter provides a succinct summary of the tectonic setting and structural and paleogeographic evolution of the basin it covers, with details on structure and stratigraphy. The book features four new chapters that cover the sedimentary basins of...
Deep Marine Systems - Kevin T. Pickering
2015-10-23 Deep-water (below wave base) processes, although generally hidden from view, shape the sedimentary record of more than 65% of the Earth’s surface, including large parts of ancient mountain belts. This book aims to inform advanced-level undergraduate and postgraduate students, and professional Earth scientists with interests in physical oceanography and hydrocarbon exploration and production, about many of the important physical aspects of deep-water (mainly deep-marine) systems. The authors consider transport and deposition in the deep sea, trace-fossil assemblages, and facies stacking patterns as an archive of the underlying controls on deposit architecture (e.g., seismicity, climate change, autocyclicity). Topics include modern and ancient deep-water sedimentary environments, tectonic settings, and how basin and extra-basinal processes generate the typical characteristics of basin slopes, submarine canyons, contourite mounds and drifts, submarine fans, basin floors and abyssal plains.

Sedimentary System Responses to External Forcings: a Process-Based Perspective - Brian W. Romans 2020-12-01

Impact of Expected Climate Change on Mangroves - UNEP-UNESCO Task Team on the Impact of Expected Climate Change on Mangroves. Meeting 1993

Marine Geomorphometry - Vanessa Lucieer
2019-06-25 Geomorphometry is the science of quantitative terrain characterization and analysis, and has traditionally focused on the investigation of terrestrial and planetary landscapes. However, applications of marine geomorphometry have now moved beyond the simple adoption of techniques developed for terrestrial studies, driven by the rise in the acquisition of high-resolution seafloor data and by the availability of user-friendly spatial analytical tools. Considering that the seafloor represents 71% of the surface of our planet, this is an important step towards understanding the Earth in its entirety. This volume is the first one dedicated to marine applications of geomorphometry. It showcases studies addressing the five steps of geomorphometry: sampling a surface (e.g., the seafloor), generating a Digital Terrain Model (DTM) from samples, preprocessing the DTM for subsequent analyses (e.g., correcting for errors and artifacts), deriving terrain attributes and/or extracting terrain features from the DTM, and using and explaining those terrain attributes and features in a given context. Throughout these studies, authors address a range of challenges and issues associated with applying geomorphometric techniques to the complex marine environment, including issues related to spatial scale, data quality, and linking seafloor topography with physical, geological, biological, and ecological processes. As marine geomorphometry becomes increasingly recognized as a sub-discipline of geomorphometry, this volume brings together a collection of research articles that reflect the types of studies that are helping to chart the course for the future of marine geomorphometry.

Sedimentology and Sedimentary Basins - Mike R. Leeder 2011-08-02 The sedimentary record on Earth stretches back more than 4.3 billion years and is present in more abbreviated forms on companion planets of the Solar System, like Mars and Venus, and doubtless elsewhere. Reading such planetary archives correctly requires intimate knowledge of modern sedimentary processes acting within the framework provided by tectonics, climate and sea or lake level variations. The subject of sedimentology thus encompasses the origins, transport and deposition of mineral sediment on planetary surfaces. The author addresses the principles of the subject from the viewpoint of modern processes, emphasising a general science narrative approach in the main text, with quantitative background derived in enabling ‘cookie’ appendices. The book ends with an innovative chapter dealing with how sedimentology is currently informing a variety of...
cognate disciplines, from the timing and extent tectonic uplift to variations in palaeoclimate. Each chapter concludes with a detailed guide to key further reading leading to a large bibliography of over 2500 entries. The book is designed to reach an audience of senior undergraduate and graduate students and interested academic and industry professionals.


Submarine Slope Systems-Geological Society Publishing House 2005 Submarine slopes provide the critical link between shallow-water and deep-water sedimentary environments. They accumulate a sensitive record of sediment supply, accommodation creation/destruction, and tectonic processes during basin filling. There is a complex stratigraphic response to the interplay between parameters that control the evolution of submarine slope systems, e.g. slope gradient, topographic complexity, sediment flux and calibre, base-level change, tectonic setting, and post-depositional sediment remobilization processes. The increased understanding of submarine slope systems has been driven partly by the discovery of large hydrocarbon fields in morphologically complex slope settings, such as the Gulf of Mexico and offshore West Africa, and has led to detailed case studies and improved generic models for their evolution. This volume brings together research papers from modern, outcrop and subsurface settings to highlight these recent advances in understanding of the stratigraphic evolution of submarine slope systems.