Indo Myanmar Ranges In The Tectonic Framework Of The Himalaya And Southeast Asia Proceedings Of The

Geology of the Innuitian Orogen and Arctic Platform of Canada and Greenland Sweden An Integrated Geophysical and Geological Study of the Tectonic Framework of the 38th Parallel Lineament in the Vicinity of Its Intersection with the Extension of the New Madrid Fault Zone Metallogenic Characteristics in Relation to Tectonic Framework of the Himalaya The Geology of Egypt Tectonic Framework of the Central Java Subduction Zone Southern and Central Mexico: Basement Framework, Tectonic Evolution, and Provenance of Mesozoic–Cenozoic Basins Earth's Oldest Rocks The Tectonic Setting and Origin of Cretaceous Batholiths within the North American Cordillera The Geology and Tectonic Settings of China's Mineral Deposits Tectonic Setting and Gondwana Basin Architecture in the Indian Shield The Geology and Tectonic Settings of China's Mineral Deposits Geology of the Alps Geology of Egypt and Libya Global Tectonic Zones, Supercontinent Formation and Disposal Backarc Basins Geophysics The Geology and Tectonics of the Jabal Akhdar and Saih Hatat Domes, Oman Mountains Andean Magmatism and Its Tectonic Setting Tectonic Controls and Signatures in Sedimentary Successions Basins of the Rio Grande Rift: Structure, Stratigraphy, and Tectonic Setting The Geology of Egypt Tectonic Evolution of the Lake Ohrid Basin (Macedonia/Albania) Tectonic Setting and Lithology of the Winterhaven Formation Tectonic Setting of Faulted Tertiary Strata Associated with the Catalina Core Complex in Southern Arizona Tectonic Setting and Gondwana Basin Architecture in the Indian Shield Economic Deposits and Their Tectonic Setting Global Tectonic Zones Supercontinent Formation and Disposal Global Tectonic Zones, Supercontinent Formation and Disposal Basin Evolution and Petroleum Prospectivity of the Continental Margins of India The Tectonic and Climatic Evolution of the Arabian Sea Region Tectonics of Sedimentary Basins Beaches and Coasts Tectonic and Structural Framework of the Zagros Fold-Thrust Belt Evolution of Laurussia Biological Consequences of Plate Tectonics 4-D Framework of Continental Crust Basement Tectonics 8 Geologic and Tectonic Development of the Caribbean Plate Boundary in Northern Central America Aspects of the Tectonic Evolution of China

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Tectonic Setting and Lithology of the Winterhaven Formation Nov 12 2020

Evolution of Laurussia Dec 02 2019 This volume aims at providing earth scientists Laurussia. Some fundamental discrepancies with an overview of the late Palaeozic evolu were recognised between the different data sets tion of North America, Europe, the Arctic and that required modifications of the hitherto ac North Africa in a plate tectonic framework. cepted palaeomagnetically controlled continent reconstructions. As a next step, regional palaeo Plate motions are reviewed that underly the late geographical maps were constructed for North Silurian-early Devonian suturing of Laurentia America, Europe and North Africa on the basis Greenland and Fennosarmatia, the principal of published data and in-house studies of the constituents of Laurussia, the Devonian and Shell Group of companies. These maps were early Carboniferous accretion of Gondwana digitised and transferred to modified palaeo derived continental fragments to the southern reconstructions of the continents that were margin of Laurussia and of Arctica to its made with the aid of an Evans and Sutherland northern margin, and ultimately the late Car PS-300 vector graphics terminal. boniferous to Permian suturing of Laurussia with Gondwana, Kazakhstan and Siberia. An During the evaluation of the validity of account is given of the evolution of sedimen modified palaeoreconstruction of the con tary basins that developed during late Silurian tinents, as presented in this volume, special at to late Permian times, within and along the tention was given to the timing of orogenic margins of Laurussia.

The Geology of Egypt Jan 15 2021 Scholars from Egypt, Germany and the US review and analyze the results of work carried out on the geology of Egypt: geomorphology and evolution of landscape, tectonics, geophysical regime, volcanicity, Precambrian geology, geologic history and paleogeography, paleontology of selected taxa, ore depos

Aspects of the Tectonic Evolution of China Jun 27 2019 This volume provides accounts of up-to-date research by Chinese and international geological teams on key aspects of the tectonic evolution of China and its surrounding areas. The papers describe the formation of the geological terranes that make up this part of east Asia, place constraints on plate tectonic models for their assembly and provide accounts of unique geological feature of the subcontinent.

Tectonic Setting and Gondwana Basin Architecture in the Indian Shield Dec 26 2021 Tectonic Setting and Gondwana Basin Architecture in the Indian Shield, Volume Four, is the newest book in the Problems and Solutions in Structural Geology and Tectonics series from Elsevier, and is a synthesized monograph on the tectonic settings of Gondwana basins of India. It is a unique book on a topic of national and international interest, especially given the economic importance of the region (coal reserves). The book is authored and edited by very experienced theoretical experts and explores and reconstructs unified stratigraphic research of the region, including the relative role of tension and lateral movement in basin formation. Basin formation is the driving force behind formation and break-up of supercontinents and the time frame of supercontinent cycles. Provides the latest data on the tectonic settings of Gondwana basins of India Explores the unified stratigraphic research of the region Authored and edited by experienced theoretical experts

Global Tectonic Zones, Supercontinent Formation and Disposal Aug 22 2021 This book is a collection of papers presented in the 30th International Geological Congress, held in Beijing, on global tectonic zones supercontinent formation and disposal. The papers deal with topics on tectonic framework, and petrology and geochemistry variations of Asian regions.

Andean Magmatism and Its Tectonic Setting Apr 17 2021

Sweden Oct 04 2022 The solid rock mass of Sweden forms a natural field laboratory revealing insight into the westward growth and reworking of one of the planet’s ancient continental nuclei. Three major geological units are exposed in different parts of the country: the western part of the Fennoscandian Shield, mainly sedimentary rocks deposited on this crystalline rock mass and the Caledonide orogen. This volume synthesizes the tectonic evolution of Sweden

over more than 2500 million years from the Neoarchean to the Neogene. Following an introduction describing the lithotectonic framework of the country and the organization of the volume, the tectonic evolution is addressed essentially chronologically. Different phases of intracratonic rifting, accretionary orogeny, continent-continent collisional orogeny and platformal sedimentation are identified. Sweden is one of Europe's major suppliers of metals, and the country's mineral resources are also presented in the context of the lithotectonic framework. Sweden: Lithotectonic Framework, Tectonic Evolution and Mineral Resources has been designed to interest a professional geoscientific audience and advanced students of Earth Sciences.

The Geology and Tectonics of the Jabal Akhdar and Saih Hatat Domes, Oman Mountains May 19 2021 The geology of the Oman Mountains, including the Jabal Akhdar and Saih Hatat domes, is extraordinarily well-exposed and diverse, spanning a geological record of more than 800 Ma. The area is blessed with first-class outcrops and is well known in the geological community for its ophiolite. The Oman Mountains have much more to offer; including, Neoproterozoic diamictites ('Snowball Earth'), fossil-rich Permo–Mesozoic carbonates and metamorphic rocks. The arid climate and deep incision of wadis allow for nearly complete rock exposure which can be investigated in all three dimensions. The diverse geology is also responsible for the breathtaking landscape. New roads and the nature of the friendly Omani people make fieldwork unforgettable. This Memoir provides a thorough state-of-the-art overview of the geology and tectonics of the Southeastern Oman Mountains, and is accompanied by an oversized geological map.

Beaches and Coasts Feb 02 2020 Coastlines of the world are as diverse as any geological setting onEarth. Beaches and Coasts is an exciting and unique new textbookthat provides an exhaustive treatment of the world's differentcoasts and details the highly varied processes that have shapedthem. Having conducted research on coastlines throughout the world,the authors draw on a wealth of experience that broadens thecontent of chapters and provides for numerous and varied examples.The book furnishes a basic understanding of the tectonic framework,hydrographic regime, climatic setting, and geologic materials thatdetermine the morphology of a coast. Individual chapters aredevoted to major coastal environments such as barriers, tidalinlets, marshes, estuaries, lagoons, deltas, glaciated coasts,rocky coasts and many others. Beaches and Coasts provides the necessary content forteaching a broad coastal geology course. Though designed forintroductory students, its comprehensive treatment of coastaltopics will make it appropriate for many upper level courses. Exciting and unique textbook that provides an exhaustivetreatment of the world's different coasts and details the highlyvaried processes that have shaped them. The authors draw on a wealth of experience that broadens thecontent of chapters and provides for numerous and variedexamples. Provides a basic understanding of the tectonic framework,hydrographic regime, climatic setting, and geologic materials thatdetermine the morphology of a coast. Individual chapters are devoted to major coastal environmentssuch as barriers, tidal inlets, marshes, estuaries, lagoons,deltas, glaciated coasts, rocky coasts, and many others. Provides comprehensive content for teaching a broad coastalgeology course for both introductory and upper level courses.

Basin Evolution and Petroleum Prospectivity of the Continental Margins of India May 07 2020 During the last 10 years, the Oil industry in India has seen a tremendous rise in exploration activity with several major E&P companies generating vast amount of new geological and geophysical data. The availability of such integrated data sets (gravity, magnetic, seismic, drilled wells), especially in the deep offshore basins, has led the authors to revisit earlier concepts and models in order to redefine the tectonic framework of major offshore basins along the Indian continental margins. The book covers the stratigraphic evolution, play types and the classification of major offshore basins both in shallow and deepwater environments. Features: * Incorporation of latest dataset (specially the seismic, gravity and magnetic) * Analogy of global

offshore basins with India * Sedimentation and depositional history of Bengal fan and Indus fan * Redefinition of major tectonic framework of the margins * Exceleent high quality graphics that include: seismic sections, gravity-magnetic maps, conceptual geological models and new revised tectonic elements Benefits: * Comprehensive geological and geophysical demonstration of basin development and history in the light of petroleum prospectivity of the Continental Margins of India * Emerging concepts on rift-drift history of the Eastern Gondwanaland in the light of probable Mesozoic prospects hitherto little known in this part of the world * A deep insight of all major offshore prospective basins with illustrations and high resolution datasets otherwise not available to common readers * Useful as a textbook for petroleum professionals and as a reference book for marine geo-science researchers

The Geology and Tectonic Settings of China's Mineral Deposits Jan 27 2022 Extensive descriptions of a wide range of key or world-class mineral deposits of China are presented in the context of the country’s general geology, tectonic units and mineral systems and their geodynamic evolution within the tectonic framework of the Asian continent. This comprehensive overview, incorporating the latest geological concepts, is the first such coverage written in English by a western expert, and will be of benefit to mineral explorers and miners, as well as to research scientists and students in institutions of higher education. In his compilation of this compendium of Chinese geology and mineral systems, Franco Pirajno draws on first-hand knowledge of China’s geology and mineral deposits gained in numerous field visits and research projects with Chinese colleagues from various academic institutions over the past 18 years. First time that a western-based book on China’s geology and mineral deposits is published Appropriate for use by the mineral exploration industry Modern English-language geological and mineral deposits information on China Most useful to Western (and Chinese) geoscientists

The Tectonic and Climatic Evolution of the Arabian Sea Region Apr 05 2020 The Arabian Sea region has several features that make it the best area for studies of climate and palaeoceanographic responses to tectonic activity, most notably in the context of the South Asian monsoon and its relationship to the growth of high topography in the adjacent Himalayas and Tibet. The papers range from high resolution, holocene palaeoceanographic studies of the Pakistan margin to regional tectonic reconstructions of the ocean basin and surrounding margins throughout the Cenozoic.

The Geology and Tectonic Settings of China's Mineral Deposits Nov 24 2021 Extensive descriptions of a wide range of key or world-class mineral deposits of China are presented in the context of the country’s general geology, tectonic units and mineral systems and their geodynamic evolution within the tectonic framework of the Asian continent. This comprehensive overview, incorporating the latest geological concepts, is the first such coverage written in English by a western expert, and will be of benefit to mineral explorers and miners, as well as to research scientists and students in institutions of higher education. In his compilation of this compendium of Chinese geology and mineral systems, Franco Pirajno draws on first-hand knowledge of China’s geology and mineral deposits gained in numerous field visits and research projects with Chinese colleagues from various academic institutions over the past 18 years. First time that a western-based book on China’s geology and mineral deposits is published Appropriate for use by the mineral exploration industry Modern English-language geological and mineral deposits information on China Most useful to Western (and Chinese) geoscientists

Biological Consequences of Plate Tectonics Oct 31 2019 This book recognizes and celebrates the contributions of Professor Ashok Sahni to the field of paleontology. Prof. Sahni established a School of Vertebrate Palaeontology at Panjab University, Chandigarh, India, where he trained many of today’s vertebrate paleontologists of India. The book covers topics on evolutionary patterns, macroevolutionary events, origination and radiation events, changes in physical

environments & climate and their implications for biodiversity dynamics, intercontinental affinities and biogeographic connections in a plate tectonic framework. The book begins by exploring India in the age of the dinosaurs, discussing new fossil remains from the Jurassic Era, then moves through the Cretaceous and Eocene to provide a picture on faunal and floral changes in Gondwanaland in the context of plate tectonics. Furthermore, the book explores the evolutionary patterns and biotic dispersals that resulted from the northward drift of Indian plate during the Cretaceous and its collision with Asia in the Eocene. The respective chapters reveal the role of plate tectonics and climate in shaping the geographical distribution of plants and animals in Gondwana, specifically in India, as well as the post-India/Asia collision implications for biodiversity changes and biogeography in the region's continental environments. Given its scope, the book will appeal to vertebrate paleontologists, evolutionary biologists, and paleobiogeographers.

An Integrated Geophysical and Geological Study of the Tectonic Framework of the 38th Parallel Lineament in the Vicinity of Its Intersection with the Extension of the New Madrid Fault Zone Sep 03 2022

Basins of the Rio Grande Rift: Structure, Stratigraphy, and Tectonic Setting Feb 13 2021

Earth's Oldest Rocks Mar 29 2022 Earth's Oldest Rocks provides a comprehensive overview of all aspects of early Earth, from planetary accretion through to development of protocratons with depleted lithospheric keels by c. 3.2 Ga, in a series of papers written by over 50 of the world's leading experts. The book is divided into two chapters on early Earth history, ten chapters on the geology of specific cratons, and two chapters on early Earth analogues and the tectonic framework of early Earth. Individual contributions address topics that range from planetary accretion, a review of Earth meteorites, significance and composition of Hadean protocrust, composition of Archaean mantle and deep crust, all aspects of the geology of Paleoarchean cratons, composition of Archean oceans and hydrothermal environments, evidence and geological settings of early life, early Earth analogues from Venus and New Zealand, and a tectonic framework for early Earth. * Contains comprehensive reviews of areas of ancient lithosphere on Earth, of planetary accretion processes, and of meteorites * Focuses on specific aspects of early Earth, including oldest putative life forms, evidence of the composition of the ancient atmosphere-hydrosphere, and the oldest evidence for subduction-accretion * Presents an overview of geological processes and model of the tectonic framework on early Earth

The Geology of Egypt Jul 01 2022 This richly illustrated book offers a concise overview of the geology of Egypt in the context of the geology of the Arab Region and Northeast Africa. An introductory chapter on history of geological research in Egypt sheds much light on the stages before and after the establishment of Egyptian Geological Survey (the second oldest geological survey worldwide), Hume's book and Said's 1962, 1990 books. The book starts with the Precambrian geology of Egypt, in terms of lithostratigraphy and classifications, structural and tectonic framework, crustal evolution and metamorphic belts. A dedicated chapter discusses the Paleozoic-Mesozoic-Cenozoic tectonics and structural evolution of Egypt. A chapter highlights the Red Sea tectonics and the Gulf of Suez and Gulf of Aqaba Rifts. Subsequent chapters address the Phanerozoic geology from Paleozoic to Quaternary. The Egyptian Impact Crater(s) and Meteorites are dealt with in a separate chapter. The Earth resources in Egypt, including metallic and non-metallic ore deposits, hydrocarbon and water resources, are given much more attention throughout four chapters. The last chapter addresses the seismicity, seismotectonics and neotectonics of Egypt.

Backarc Basins Jul 21 2021 Experts in the field offer the first comprehensive review of the tectonics and magmatism of backarc basins, covering their initial rift stage to mature spreading. Complete with numerous illustrations, each of the twelve chapters focuses on a young, active backarc basin of the circum-Pacific-where volcano-tectonic processes are best studied because of their activity. Key themes in this volume include volcano-tectonics setting; cause and

location; rift magmas; and hydrothermal activity. Researchers also present models of the dynamic processes occurring in backarc basins.

4-D Framework of Continental Crust Sep 30 2019 "This book contains landmark papers on the processes of formation of continental crust from its beginnings in the Archean to modern processes, as well as discussions of several ancient and modern orogenic belts. The book is international in scope, with contributions from geoscientists dealing with crustal processes on five continents, and articles from more than 50 non-U.S. authors and co-authors."--Publisher's website.

Tectonics of Sedimentary Basins Mar 05 2020 Investigating the complex interplay between tectonics and sedimentation is a key endeavor in modern earth science. Many of the world's leading researchers in this field have been brought together in this volume to provide concise overviews of the current state of the subject. The plate tectonic revolution of the 1960's provided the framework for detailed models on the structure of orogens and basins, summarized in a 1995 textbook edited by Busby and Ingersoll. Tectonics of Sedimentary Basins: Recent Advances focuses on key topics or areas where the greatest strides forward have been made, while also providing on-line access to the comprehensive 1995 book. Breakthroughs in new techniques are described in Section 1, including detrital zircon geochronology, cosmogenic nuclide dating, magnetostratigraphy, 3-D seismic, and basin modelling. Section 2 presents the new models for rift, post-rift, transtensional and strike slip basin settings. Section 3 addresses the latest ideas in convergent margin tectonics, including the sedimentary record of subduction intiation and subduction, flat-slab subduction, and arc-continent collision; it then moves inboard to forearc basins and intra-arc basins, and ends with a series of papers formed under compessional strain regimes, as well as post-orogenic intramontane basins. Section 4 examines the origin of plate interior basins, and the sedimentary record of supercontinent formation. This book is required reading for any advanced student or professional interested in sedimentology, plate tectonics, or petroleum geoscience. Additional resources for this book can be found at: www.wiley.com/go/busby/sedimentarybasins.

Global Tectonic Zones, Supercontinent Formation and Disposal Jun 07 2020 This book is a collection of papers presented in the 30th International Geological Congress, held in Beijing, on global tectonic zones supercontinent formation and disposal. The papers deal with topics on tectonic framework, and petrology and geochemistry variations of Asian regions.

Geologic and Tectonic Development of the Caribbean Plate Boundary in Northern Central America Jul 29 2019

The Tectonic Setting and Origin of Cretaceous Batholiths within the North American Cordillera Feb 25 2022 In this Special Paper, Hildebrand and Whalen present a big-picture, paradigm-busting synthesis that examines the tectonic setting, temporal relations, and geochemistry of many plutons within Cretaceous batholithic terranes of the North American Cordillera. In addition to their compelling tectonic synthesis, they argue that most of the batholiths are not products of arc magmatism as commonly believed, but instead were formed by slab failure during and after collision. They show that slab window and Precambrian TTG suites share many geochemical similarities with Cretaceous slab failure rocks. Geochemical and isotopic data indicate that the slab failure magmas were derived dominantly from the mantle and thus have been one of the largest contributors to growth of continental crust. The authors also note that slab failure plutons emplaced into the epizone are commonly associated with Cu-Au porphyries, as well as Li-Cs-Ta pegmatites.

Tectonic Setting of Faulted Tertiary Strata Associated with the Catalina Core Complex in Southern Arizona Oct 12 2020 Mid-Tertiary strata exposed as tilted homoclines along the flanks of the San Pedro trough and across broad uplands north of the Catalina core complex are assigned to the following formations, each of which includes informal local members and facies: (a) Mineta Formation, mid-Oligocene redbeds including both conglomeratic fluvial and

finer-grained lacustrine deposits; (b) Galiuro Volcanics, including lavas and domes, air-fall and ash-flow tuffs, and intercalated volcaniclastic strata of late Oligocene to earliest Miocene age; (c) Cloudburst Formation, also of late Oligocene and earliest Miocene age but including a sedimentary upper member of conglomeratic strata as well as a volcanic lower member correlative with part of the Galiuro Volcanics; and (d) San Manuel Formation, composed of lower Miocene alluvial fan and braidplain deposits that display contrasting clast assemblages in different areas of exposure. Generally correlative Oligocene-Miocene strata exposed south of the Catalina core complex are assigned to the Pantano Formation, which contains similar lithologic components. Less-deformed Neogene strata of post-mid-Miocene basin fill are assigned to the Quiburis Formation along the San Pedro trough, but stratigraphic equivalents elsewhere lack adequate nomenclature. High benchlands mantled by paleosols mark the highest levels of Neogene aggradation. Successive stages of subsequent erosional dissection are recorded by multiple terrace levels incised into basin fill. Key exposures of syntectonic mid-Tertiary sedimentary sequences in several local subareas reveal typical structural and stratigraphic relationships. Multiple fault blocks expose pre-Tertiary bedrock overlain by tilted mid-Tertiary strata confined to intervening half-grabens. Bounding syndepositional faults dip southwest and associated homoclines dip northeast. Fanning dips and buttress unconformities reflect progressive tilt and burial of eroding fault blocks. Dips of block-bounding faults are inversely proportional to the ages of the faults. Steeper dips for younger faults suggest either progressive erosion of successive listric faults or progressive rotation of successive planar faults. Uniformly moderate to steep dihedral angles between fault surfaces and offset homoclinal bedding imply that the faults dipped more steeply near the surface when syntectonic mid-Tertiary strata were subhorizontal. Although the inference of listric faulting best links apparent strands of the Catalina detachment system, the alternate interpretation of rotational normal faulting is compatible with local structural relationships including tilt of porphyry copper orebodies. Within the San Pedro trough, multiple homo clines of mid-Tertiary strata are exposed locally in tilt-blocks exhumed by Neogene erosion from beneath nearly flat-lying basin fill of the Quiburis Formation. Faults bounding the mid-Tertiary exposures include backtilted strands of the Catalina detachment system, somewhat younger listric or rotational normal faults, and steeper basin-range normal faults that display offsets both synthetic and antithetic to the flanks of the San Petro trough. In Cienega Gap, flanking the Tucson Basin, multiple tilt-blocks of the Pantano Formation form part of the upper plate of the Catalina detachment system. Initial construction of alluvial fans by generally westward paleoflow was followed by ponding of lacustrine environments along the foot of secondary breakaway scarps that also generated massive megabreccia deposits. In summary, syntectonic Oligocene to Miocene sedimentation succeeded a prominent pulse of polymodal mid-Tertiary volcanism and was coeval with mylonitic deformation and detachment faulting along the flank of the Catalina core complex. The headwall rupture for the detachment system migrated westward from an initial position along the range front of the Galiuro Mountains. After mid-Miocene time, accumulation and subsequent dissection of essentially undeformed basin fill was accompanied by basin-range block faulting. The most challenging structural issue is whether fault strands of the Catalina detachment system are interconnected or are disconnected rotational segments.

Southern and Central Mexico: Basement Framework, Tectonic Evolution, and Provenance of Mesozoic–Cenozoic Basins Apr 29 2022

Geology of Egypt and Libya Sep 22 2021 Treating the geology of Egypt and Libya as one entity, this unquestionably thorough text is divided into six parts covering the following key areas: · the tectonic framework of Egypt and Libya and the main tectonic elements in the two countries · the geology of the Pan-African Shield · the Phanerozoic stratigraphy of Egypt, with a review of the stratigraphic nomenclature · a review of the stratigraphy of Libya · a synthesis of the geological evolution of Egypt and Libya, and how this fits into global tectonics and sea-level

fluctuations. · a bibliographic list of more than 2000 references used in the compilation of the book.

Geology of the Innuitian Orogen and Arctic Platform of Canada and Greenland Nov 05 2022 Fourteen chapters discuss regional stratigraphy by time intervals from Precambrian to Quaternary, while other chapters describe the geography, geomorphology, tectonics, geophysical characteristics, and resources of the region. A summary chapter includes geologic maps, structural cross-sections, a geotectonic correlation chart, a gravity map, and a location map for exploration wells in the Arctic Islands and northern Greenland. A wealth of additional information is contained on the nine accompanying plates.

Tectonic and Structural Framework of the Zagros Fold-Thrust Belt Jan 03 2020 The latest volume in the Developments in Structural Geology and Tectonics series from Elsevier, Tectonic and Structural Framework of the Zagros Fold–Thrust Belt is a collection of the most up-to date research and developments in the unique tectonic and structural geology of the Zagros. The Zagros fold–thrust belt is famous among geologists and is one of the most-studied terrains in the world. Because of its unique structures, the Zagros orogeny is challenging for many researchers and experts; this book is the essential reference that collates the newest data and fully explores that aspect. In addition, because the Zagros range is a potential source for hydrocarbons, it is of interest to petroleum geologists and exploration companies worldwide. This book is an essential, cutting-edge reference for oil companies, structural geologists, and students at both the undergraduate and postgraduate levels. Includes valuable new data about one of the most famous collisional mountain ranges in the world, the Zagros fold–thrust belts, as a guide for other collisional ranges such as the Himalaya, the Alps, and the Andes, as they share common fundamental deformation mechanisms Provides research from geologists across the world, with the goal of understanding the unique dynamics and kinematics of the Zagros range

Metallogenic Characteristics in Relation to Tectonic Framework of the Himalaya Aug 02 2022

Global Tectonic Zones Supercontinent Formation and Disposal Jul 09 2020 This book is a collection of papers presented in the 30th International Geological Congress, held in Beijing, on global tectonic zones supercontinent formation and disposal. The papers deal with topics on tectonic framework, and petrology and geochemistry variations of Asian regions.

Tectonic Evolution of the Lake Ohrid Basin (Macedonia/Albania) Dec 14 2020 Lake Ohrid is situated in an active tectonic region at the border between the Former Yugoslavian Republic of Macedonia and the Republic of Albania. This UNESCO World Heritage site is an ancient lake with an age of 2 - 5 Ma and among the oldest lakes in Europe. Lake Ohrid has more than 200 endemic species making it the lake with the highest concentration of endemic diversity in the world when considering its small surface area of 358 km2. Several phases of deformation have affected the area since the Tertiary due to the influence of the Northern Hellenic Trench. This activity is documented by frequent moderate and a few major earthquakes, which have formed a seismic landscape. It therefore represents a first class site to investigate the impact of geological, climatic, and environmental events on biological evolution within lakes. This thesis is focused on the tectonic framework and geomorphological evolution of the basin. Palaeostress and structural analyses were undertaken to determine the past and recent tectonic stress regimes; this provides data on the current deformational system gives and provides insights into the morphological development. Results from detailed sedimentary analyses allow several coastal domains and sedimentary realms to be distinguished. This also provides information on how the lake responds to landscape change and how the lake level varied during the Holocene. A detailed geomorphological study deals with the expression and geometrical properties of fault scarps including the analysis of scarp lengths, their spatial distribution and a survey on how lithology interacts with scarp formation in the area. This gives insights into localised basin activity. Finally, the question as to whether seismic activity, together with the

geological character of Lake Ohrid, is capable of triggering speciation events in the lake is answered.

Geology of the Alps Oct 24 2021 The Alps, with their outstanding outcrop conditions, represent a superb natural laboratory for many geological processes, and have played a crucial role in the history of geology. This book gives an up-to-date and holistic overview of the key aspects of Alpine geology. After a brief presentation of the plate tectonic framework, the rock suites are discussed, starting with the pre-Triassic crystalline basement, followed by Paleozoic, Mesozoic and Cenozoic sedimentary sequences. The lithological description of the rock types is supplemented by a discussion of their paleogeographic and plate tectonic contexts. The book goes on to describe the structure of the Alps (including the Jura Mountains and the Alpine foreland to the north and south) illustrated by numerous cross-sections. The evolution of the Alps as a mountain chain incorporates a discussion of the Alpine metamorphic history and a compilation of orogenic timetables. The final sections cover the evolution of Alpine drainage patterns and the region's glacial history. Readership: The book is essential reading for students and lecturers on Alpine courses and excursions, and all earth-scientists interested in the geology of the region.

Basement Tectonics 8 Aug 29 2019 The 8th International Conference on Basement Tectonics was held in Butte, Montana, August 8-12,1988. Historically, basement tectonics conferences have focused on such topics as reactivation of faults, the influence of basement faults on metallogeny and hyrocarbon accumulation, and the use of geophysical and remote sensing techniques to interpret subsurface and surface geology. The 8th Conference diverged from past conferences in that a unifying theme was selected. Because ancient major terrane or cratonic boundaries are often postulated to be fault zones which are subsequently reactivated, the conference was organized to examine all aspects of ancient continental margins and terrane boundaries and to compare younger (Mesozoic) ones, about which more is known, with older (Paleozoic and Precambrian) ones. Moreover, because the 8th Conference was held in the northwestern United States, a greater emphasis was placed on the Mesozoic margin of western North America and the North American shield. The seven oral sessions and four poster sessions all dealt with aspects of the conference theme: characterization and comparison of ancient continental margins. The organizers extend their thanks to those individuals who graciously consented to serve as moderators for the oral sessions: John M. Bartley, Mark S. Gettings, M. Charles Gilbert, John M. Guilbert, Donald W. Hyndman, William P. Leeman, Robert Mason, and A. Krishna Sinha. The program with abstracts volume was prepared by S. E. Lewis and M. J. Bartholomew.

Geophysics Jun 19 2021 This book aims to map the Precambrian basement, to recognize the paleo-suture zones, and to determine the nature of ancient tectonic regime. It proposes the new concepts of the basement tectonic framework and major tectonic features.

Tectonic Setting and Gondwana Basin Architecture in the Indian Shield Sep 10 2020 Tectonic Setting and Gondwana Basin Architecture in the Indian Shield, Volume Four, is the newest book in the Problems and Solutions in Structural Geology and Tectonics series from Elsevier, and is a synthesized monograph on the tectonic settings of Gondwana basins of India. It is a unique book on a topic of national and international interest, especially given the economic importance of the region (coal reserves). The book is authored and edited by very experienced theoretical experts and explores and reconstructs unified stratigraphic research of the region, including the relative role of tension and lateral movement in basin formation. Basin formation is the driving force behind formation and break-up of supercontinents and the time frame of supercontinent cycles. Provides the latest data on the tectonic settings of Gondwana basins of India Explores the unified stratigraphic research of the region Authored and edited by experienced theoretical experts

Tectonic Framework of the Central Java Subduction Zone May 31 2022 The tectonic framework

of the central Java subduction zone is presented in this study. Three marine wide-angle seismic profiles are analyzed by combined forward- and inverse modeling of first and later arrival traveltimes and are integrated together with marine gravity data. The subduction of the oceanic Roo Rise plateau, located south of central Java, with its thickened and buoyant crust, strongly influences subduction dynamics. The incipient subduction of a broad band of seamounts causes frontal erosion of the margin and leads to mass wasting due to oversteepening of the upper trench wall. The rough surface of the Indo-Australian lithosphere with its volcanic edifices affects the interplate coupling. Seamounts and similar features present on the megathrust may potentially act as asperities to seismic rupture, limiting lateral rupture propagation.

Tectonic Controls and Signatures in Sedimentary Successions Mar 17 2021 Stratigraphers and sedimentologists who are presently describing and interpreting the infill of sedimentary basins are generally agreed that it is difficult to disentangle the signatures of tectonic processes from those of climate and eustatic sea level change in the resultant rock succession. Until better criteria are developed to distinguish between the roles played by the major variables, it is still most useful to document and interpret basin-fill architectures where we know, from independent evidence, that one of the main controls is likely to have been a major contributor. This book contains a collection of papers describing situations where the tectonic setting is fairly well established, and it can be assumed that at least the tectonic factor has contributed to the resultant signatures.

Economic Deposits and Their Tectonic Setting Aug 10 2020