BOOK REVIEW

MAPPING GEOLOGY IN ITALY (2004). Editors: Giorgio Pasquare and Corrado Venturini, Gianluca Groppelli (Assistant Ed.). Published by: Dipartmento Difsea Del Soulo Servizio Geologico D' Italia, Roma. S.E.L.C.A. Firenze, 336p.

The Department for Land Resources and Soil Protection (Geological Survey of Italy) under the aegis of the Agency for the Protection of Environment and Technical Services (APAT) has come out with a highly informative Atlas incorporating modern geological maps with large amount of details The database, in cooperation with Regions, Autonomous Provinces, Universities and the National Research Council (CNR) serves Italy with an indispensable tool for the physical knowledge of the processes of Earth Sciences, management, prediction and prevention of natural hazards of the territory and its resources

The volume is a collection of some of the most recent, geological and geomorphologic cartographic representations of key areas of the Italian territory and its evolution, illustrated by means of state-of-the-art methodologies, appropriate to each site-specific geological condition It contains 38 contributions authored by a large number of scientists (172 of them to be very specific), centered on areas that are representative of the main geological aspects of the Italian territory The geological cartography is based upon an integrated analysis of surface and subsurface geological maps, aquifer well log information etc and several geological cross sections that depict stratigraphic intervals at varying depths Mapping of the offshore areas has integrated bathymetric surveys from single beam and multibeam echo sounders, morphologic and sea floor back scatter reconstruction from side scan sonars, high resolution 3D seismic volume images, sediment coring, characterization of sediment physical properties, biostratigraphy and geochronological data

The main purpose of the present work has been to combine data, cartographic representations and interpretations on evolution, with the related research methodologies The contributions that compose the present volume cover the following thematic areas, starting from the ones dedicated to the Quaternary (marine geology, geomorphology, neotectonics and surface deposits analysis), to those related to recent and active volcanism, and to stratigraphic, tectonic and kinematic topics related to the classic Apenninic Meso-Cenozoic successions Finally, the deformative features of different Alpine basements are considered. A special conclusive section is dedicated to the cartographic illustration of two geosite case studies, for which a graphical project to the lay public has been elaborated

The geologic makeup of Italy is characterized by an extreme diversity of features, which, since ancient times, have drawn the attention of Earth scientists from all over the world This peculiar geological setting is due to Italy's location in the middle of the Mediterranean Sea, where it was involved in the complex geodynamic interaction between the European and African tectonic plates These processes shaped the Italian peninsula, characterized by a series of orogenic and magmatic arcs, flanked by basins with different structural significance The earliest evidence found in Italy's geologic record dates back to the tectonic processes related to the evolution of the Palaeozoic Ocean known as Palaeotethys and its margins, which throughout Europe, led to the Caledonian and Hercynian orogenies Further, through the various geological periods, the terrain has experienced a complicated geological evolution, involving stratigraphic and deformative processes, such as lithospheric extensions, subductions, oceanizations, syn sedimentary tectonic movements at different scales, collisional events generating fold nappes, thrust and fold belts, reactivation of palaeostructures, metamorphic processes, exhumations, etc ,

Italy represents varied geological conditions and events, which, during the last 500 million years, have left their classical signatures in a very limited crustal sector Italy's geomorphologic settings is the result of a series of processes that combined with ever-evolving geological conditions, contributing to the shaping of the peninsula A complex interplay of erosion and depositional features, both subaerial and submarine, originated by the Quaternary, glacial and post-glacial events accompanied by eustatic and isostatic movements, magmatic events and, last but not least, man-induced modifications of the territory

Italy's geology and geomorphology meticulously recorded by generations of Earth scientists have always attracted both the experts and the lay public Basic geologic knowledge is best represented and conveyed through

geological and geomorphologic, 2D, and the state of the art 3D maps In this direction the publication has made a very significant landmark in production of a set of very attractive and informative series of maps, with geological features superposed over clearly discernable topographic illustrations using attractive and pleasant colour schemes in such a way that the maps are a marvelous treat to the eyes and mind The various structural features, thrust margins, collisional centers, nuclei of active volcanism and other geological phenomena appear very vividly in the maps and accompanying cross sections, block diagrams, panoramic photographs and illustrations which impress the reader The Geological Survey of Italy deserves all congratulations for bringing out such a useful and remarkable Atlas, which is replete with large-scale geological maps and synthesized latest geological knowledge of the subcontinent It serves as a very useful guidebook to the geological fraternity, beginners and the experts alike, and the teaching faculty The book has set a standard for other Geological Survey Organizations, especially of developing countries like India, to take note of and to follow

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GEOLOGY AND MINERAL RESOURCES OF ORISSA. N K Mahalik, H.K.Sahoo, R.N Hota, B P Mishra, J K.Nanda and A B Panigrahi (Eds.), SGAT, Bhubaneswar (2006), 3rd Edition, 467p.

Society of Geoscientists and Allied Technologists (SGAT), a forum started in 1981-82, is a forerunner in the varied activities on geology, mineral resources, mining development and environmental issues related to mining The activities spans from organizing symposia/seminars/ workshops/Interactive meets, publication of bi-annual SGAT Bulletin, conducting student programme like Environment cum Mineral Awareness Programme (EMAP) and Mineral Development Quiz Programme on annual basis in the Mining areas, instituting awards for outstanding contribution in the field of earth science, interacting with the state Government on mineral development and policies etc In continuation of its dedicated approaches the society has brought out a volume on 'Geology and Mineral resources of Orissa' That the book has seen the third edition since its first publication in 1995 bears testimony to its popularity

The state of Orissa has a rich legacy of mineral resources within its myriad geological milieu The correlation of tectonic framework of Eastern Ghat Granulites Terrain with the Napier Complex of East Antarctica of erstwhile-unified Gondwana Land is subject of focused research by the global scientific communities The book, covering 30 chapters (chapter 1 and 9 being overviews), has made a valiant attempt in providing all available information on the geology including coastal geology, structure, mineral resources, ground water potential and mining scenario in an organized and simple manner keeping in mind the utilities of this information by the end users

The chapter on 'Geology of Orissa an overview' by J K Nanda and M Mohanty sets the reader's mind to an interesting and crisp summarized account of the geology and metallogeny of the state This is followed by N K Mahalik's simple and lucid description of 'Geomorphology' (Chapter 2) and 'Structure & Tectonics' (Chapter 3) The higher planation ground with bauxite deposits are predominant feature in hinterland of EGMB The highlight of the book is the Chapter 4 'Precambrians' by N K Mahalik and J K Nanda which describes the highly complicated Precambrian (spanning 3 8 by to 600 my) terrain (80% of the state's land mass) in a precise and concise manner The information provided are a bundle of exiting thoughts for a probing reader The chapters on 'Gondwana' by K L Pandya and 'Cenozoic Rocks' by N K Mahalik are presented as well summarized accounts The chapter on 'Geology of Continental Shelf' by B M Faruque is an interesting piece of information on the hydrocarbon as well as heavy mineral potential of coastal Orissa 'Paleontological Records' by B P Patra seems to confine only to Gondwana and very little in Quaternary

The bulk of the book (chapter 9 to 28) has dealt with the rich mineral wealth of the state on alphabetically arranged mineral wise basis The descriptions are well organized to give the readers quick glimpse of the history, geology, distribution, uses, reserves, mining scenario etc of these deposits in capsular form All the authors have put their best efforts to provide maximum available information on each deposits making the book a must read for all In spite of the