

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

fact that majority of the deposits are leased out, the wealth of information on the minerals will be immensely beneficial to the students of earth science and the entrepreneur who would embark on some mineral based project. The present technological advancement in metallurgy will be an impetus for reassessment of vanadium bearing magnetite deposits to extract vanadium and low grade lateritic nickel ore to extract nickel. The vast array of rare-metal pegmatite needs re-look for their strategic element potential other than gemstones and tin. The chapter on 'Groundwater' by S Das and 'Exploitation of Minerals and Growth of Mineral based industries' by R C Mohanty and S K Sarangi are indeed welcome additions.

However certain minor attentions need to be given, hopefully in its fourth reincarnation. The size and cover colour of the book, which attracts at the first sight, seem mismatch to its content. The present book, an edited compilation, is the result of combined efforts of number of authors. A bit of information of the contributors along

with their subjects at the beginning in the form of an 'Introduction' by the editorial committee as well as their names suffixing the title of their subject in the content chapter would have created easy links. An index of the subjects, localities and authors would have been the icing on the cake. The quality of the material information contained in the book would have attained its zenith with the help of still better map drawing and printing. It is time that SGAT takes the initiative of putting up an integrated and uniform geological, structural and metallogeny map of Orissa.

The book has been a treasure trove of information on all the basic aspects of geology and mineral deposits/ occurrences of the highly endowed state of Orissa. Kudos to SGAT.

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DISCUSSION

A NEW FIND OF YOUNGER DOLERITE DYKES WITH CONTINENTAL FLOOD BASALT AFFINITY FROM THE MESO-NEOPROTEROZOIC CHHATISGARH BASIN, BASTAR CRATON, CENTRAL INDIA by D.V. Subba Rao, M.W.Y. Khan, D.N. Sridhar and K. Naga Raju. *Jour. Geol. Soc. India*, 2007, v.69(1), pp.80-84.

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- 1 The scientific communication is interesting to read, based on two subsurface samples of two locations namely, (i) Lat N 21°15'14", Long E 81°36'6.4" and (ii) Lat N 21°15'7.9", Long E 81°35'52.7". It is a common phenomenon in Proterozoic sedimentary formations, wherein dykes related to Deccan Basalt have been intruded in the sedimentary rocks. The paper generates an interest to read, but does not give full satisfaction of reading. The reason may be because the authors are planning to publish a detailed paper elsewhere and have not as such included full data (such as plot not shown – p 80, figures not shown – p 81, 83).
- 2 The title of the paper gives an understanding that

authors are describing younger dolerite dykes for the first time in Meso-Neoproterozoic Chhattisgarh Basin. The earlier reference of dolerite dykes traversing Gunderdehi (shale) Formation of the upper most Raipur Group, reported by Tripathi and Murti (1981), near Dhangar and Mohadeopali of Raigarh district of erstwhile Madhya Pradesh, has already recorded the presence of such activity in Raipur Group. Authors have not correlated their new find with the reporting of Tripathi and Murti (*op cit*). The stratigraphic position where such dykes have been encountered is an essential information which is missing in this write-up. This may be added up for reference for future studies. Sinha et al (1998) have also reported younger basic sills and dykes in the Rohatikhi Formation of Singhora Group of Chhattisgarh Supergroup, but they are comparable with older age (~1100 my, Sinha et al *in press*).