

mineralisation. However, there is a need for benchmark investigation into the economic potentiality of metallic mineral deposits in the Himalaya.

The GSI has great expertise in geotechnical investigations, particularly in tunnel projects, selection of dam sites, reservoir appraisal, stability of slopes, landslide hazards etc. The Tehri dam has received intensive attention (Nawani and Sanwal). Environmental studies have also kept pace with other disciplines.

During the last two decades the glaciology has received considerable attention and GSI has carried out detailed studies of Himalayan glaciers with particular reference to glacier regimen, secular movements, residency period, mass balance, glacier deformation, crystal fabric, geomorphology and till fabric.

The geothermal studies particularly in Ladakh have received great attention and GSI has built up an excellent expertise in this field as can be made out from the papers. It only needs a final push for tapping this energy for power.

Geophysics has not lagged behind and it is being continuously applied in the mineral and geotechnical studies as can be made out from this volume.

The Foredeep area, bordered by the Himalaya in the north and the Peninsular shield in the south, is a fascinating natural laboratory for sedimentological, environmental, groundwater and neotectonic studies. More than 10 papers cover various aspects of the Foredeep. A great deal of study is required to cover this vast area.

Environmental appraisal of mining and also implications of geology and geomorphology on public health have also received much attention.

The Symposium coverage is very comprehensive as to make some impact but the actual utility will become apparent when all the papers are published in time. The Symposium has brought out the wide range of studies that are being undertaken in the Himalaya under the aegis of the GSI and other sister organisations. It is a commendable effort on the part of the GSI to have conducted the symposium.

Bangalore

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DECCAN BASALTS, (1996). Eds. S.S. Deshmukh and K.K.K. Nair, Special Volume, Published by the Gondwana Geological Society, C/o University Department of Geology, Law College Campus, Amravati Road, Nagpur - 400 001, 543 pp., Price : Rs.800, Foreign: US \$ 150.

The massive volume under review represents a collection of 46 papers and 12 abstracts that were submitted for the National Symposium on 'Deccan Basalts' jointly organised by the Gondwana Geological Society and the Geological Survey of India, during 10-11 March, 1996 at Nagpur. This is perhaps for the first time that a volume of papers on the Deccan that were reviewed, printed and distributed to the delegates at the time of the conference. The Editors and Organisers need to be complimented on this score.

As outlined in the introduction, the volume includes a large number of contributions covering different aspects of Deccan Basalts such as, field relations, geomorphology, flow-wise stratigraphy, petrography, mineralogy, geochemistry, geochronology, geophysics, geothermal studies, palaeomagnetism, Cretaceous-Tertiary boundary and econo-

mic aspects. The contributions in a large measure (some 30 papers) reflect the research work carried out by the officers of the Geological Survey of India on the Deccan Traps in collaboration with the Earthquake Research Institute, University of Tokyo, Japan. A significant aspect of the volume is that a lot of new field and geochemical data are provided for the Deccan Basalts from the central and eastern parts, areas that had remained unstudied in detail for a long time. The present volume alleviates this problem as it provides a wealth of new data for researchers in India and abroad on the geochemistry and flow-wise chemical stratigraphy of eastern and central parts of the Deccan basalt plateau (some 21 papers). Some noteworthy contributions include those pertaining to the lava propagation systems comprising channels, tubes and lava tunnels in the compound flow sequence of parts of Western Deccan (Papers by Thorat and Sharma & Sudha Vaddadi of the Geological Survey of India) – features that had remained undiscovered for a long time.

An important feature that has been brought out by some of the papers that had dealt with chemical stratigraphy in the Eastern Deccan is the presence of chemical types akin to the Ambenali and Poladhpur Formation in the East. It would be interesting to seek whether actual correlations between the Western Ghats and the east really exists or only the chemical types are present due to special petrogenetic process that operated during the formation of these flows. Further, in an interesting paper, Sano and Fuji consider the chemical variation of the basalts of Deccan Traps and bringout that about 51% of the Deccan Basalts are 'Ambenali like', that is least contaminated.

There are several papers dealing with the mechanism of dyke propagation, an aspect not covered previously.

It would have been better the papers had been arranged in some order subject-wise, so that it would have been easier to scan the long list of contents quickly for topics of interest. Nevertheless this is not a serious drawback and the editors may have been constrained by possible delays in submission of the papers by authors, a feature not uncommon to edited volumes of seminars/workshops.

The volume thus represents an excellent collection of very useful papers providing a lot of data especially from the eastern and central part of the Deccan and this aspect certainly will make this volume a landmark contribution to the Deccan. Therefore, the volume is strongly recommended to all researchers and institutions with interest in Continental Flood Basalt Provinces in general and Deccan Basalts in particular.

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