

themselves cannot develop unless the rocks behave in a ductile manner. Recrystallisation of grains and development of oriented fabrics are microscopic evidence favoring ductile deformation. Presence of mylonite foliation indicates zones where ductile deformation was concentrated into high finite strain. It has been clearly stated that the sample of mylonite shown in Fig 13 was found as a disoriented fabric in the brecciated zone delineating the GBF south of Halonda. This evidence has been given in the paper to support our view that the GBF was subjected to a late brittle movement, which has obliterated the early ductile

fabric from most part along the GBF.

However, mylonites in some incipient form were observed in its original orientation in the northeastern corner of the mapped area and in some small patches along the southeastern branch of the GBF. These portions along the GBF have been referred to as the 'undisturbed remnant of mylonite' i.e. mylonites whose fabric is not obscured by later brittle deformation.

We are not in agreement with Dr. Sahay regarding tensional origin of the fracture transecting the mylonite foliation in Fig 13. Fine angular grains filling up the fracture clearly indicate that it is a fault.

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BOOK REVIEW

PRINCIPLES OF RADIOMETRY IN RADIOACTIVE METAL EXPLORATION

by B. K. Bhaumik, T. Bhattacharya, A. A. P. S. R. Acharyulu, D. Srinivas and M. K. Sandilya
A.M.D. Complex, Khasmahal, Jasmshedpur - 831 002, Jharkhand. 292p. Price Rs 600/-

This book is to be viewed in the context of more than 50 years of tradition in instrumentation fostered and developed meticulously by the pioneering physicists of the Atomic Minerals Division (now the Atomic Minerals Directorate for Exploration and Research), a wing of the Department of Atomic Energy, to aid in the main task of ensuring adequate fuel resources for the national atomic energy program. In keeping with the high traditions of the DAE in the field of instrumentation, the AMD had indigenously designed and fabricated the entire gamut of radiometric instruments necessary for exploration for radioactive minerals from both airborne and ground platforms, bore hole evaluation and ore grade control in their exploratory mines. The technology was also transferred to the uranium mines for grade control and planning development and to Electronics Corporation of India (ECIL)

for large-scale manufacture of select instruments. In fact there is no instrumentation used in radioactive mineral exploration that is not locally fabricated. It is heartening to recall that there are field set-ups in several centers for the repair and maintenance of the equipments that ensure timely maintenance of instruments. Backed by this tradition, the book under review is comprehensive in relation to the tasks of exploration for radioactive minerals and a welcome addition to the existing mostly foreign publications.

The book is divided into six chapters dealing with physics of radioactivity, radiation detectors, radiation survey meters, including air-borne gamma ray spectrometric system, radiometric assaying, natural gamma ray logging and connected instrumentation. The chapters are well written and well illustrated, though several diagrams could

have been very much improved with the currently available computer facilities

Radiometry today finds application in much wider areas of mineral exploration than only radioactive metals. This book will therefore be of interest not only in field of radioactive metal exploration as the title indicates, but in several other areas of mineral exploration and environmental assessment. The publication would also be a very useful handbook for teaching radiometry to students.

The book seems to have been printed in limited numbers departmentally, as inferred from the high price of Rs 600/-,

which seems quite prohibitive for a book of just 292 pages. Considering the lucidity in presentation and comprehensive contents, the book could be printed as a textbook with improved illustrations and, perhaps, even subsidised by the DAE, so that it will be available to a larger section of earth scientists and educational institutions alike at an affordable price.

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AURIFEROUS FORMATIONS AND GOLD EXPLORATION. M W Y Khan and K L. Rai (Eds.), Special Inaugural Issue, Volume 1, No 1 (2004), Journal of Economic Geology and Georesource Management. Published by South Asian Association of Economic Geologists (India Chapter), New Delhi 168p.

Despite being marginalized by the ever-expanding frontiers of Information Technology, the Indian mineral industry continues to play a significant role in the country's economy. India is bestowed with fairly satisfactory levels of mineral resources whose judicious management has been a subject matter of great concern for both the mineral managers and policy makers. A major problem that is being faced by the country is non-augmentation of its dwindling mineral resources. This is apparent in the case of precious metals and stones in general and gold and diamond in particular where imports worth billions of dollars are being made annually to quench the thirst of the local market. Another area that the industry needs to address is the improvement in techniques of mineral beneficiation so that huge low-grade ores could be converted into usable resources. A point that needs to be hammered again and again to the policy makers is that a mineral is a non-renewable commodity. The shortsighted policy of its export, particularly in its raw form, not only leads to the loss of that commodity forever but also creates man-made imbalances that may lead to environmental degradation among other problems. Groundwater is the most important of georesource of any country. Its current unmindful exploitation in our country may trigger a series of consequences that may cost very dearly to all of us. Amidst this backdrop of general callousness to the problems faced by the mineral industry, it is heartening to note the launch of a new journal on "Economic Geology and Georesource Management" by South Asian Association of Economic Geologists (India chapter). The journal has patronage of the Department of

Science and Technology, Government of India and All India Council for Technical Education (AICTE), New Delhi. In its inaugural issue, Prof. K L Rai, Chief Editor of the Journal, rightly observes the conflicting scenarios of recession on one hand and globalization on the other faced by the Mineral Industry. He has earnestly sought the support from all segments of mineral industry that are concerned with the sustainable development of georesources.

The inaugural number, edited by M W Y Khan and K L Rai, is a special issue that collates the papers presented at the International Conference on "Auriferous Formations and Gold Exploration" held at Pandit Ravi Shankar University, Raipur during November 12-15, 1997. There are seventeen papers in this issue arranged in three categories that deal with (i) potential auriferous formations having favorable geological set-up, (ii) results of preliminary exploration and (iv) concept based studies as an aid to gold exploration. The papers cover wide-ranging topics. There are papers on gold in (i) greenstone belts of Hutti (two papers, one each by R. Nijagunnappa and P.S. Sangurmath and N.J. Sathe and R.R. Patil), Ramgiri (S.K. Dutta and others), Gurumahisani-Badampahar (Mukul Kishore and others), Mahakoshal (M.K. Soni), Sonakhan area (R.K. Ray and K.L. Rai) and on Sakoli Group of rocks (R.N. Padhi and others) (ii) Banded Iron Formations of Ajjanahalli (two papers one each by A. Chattopadhyay and S.M. Hussain and S.M. Naqvi), Chikkasidavanhalli (A.K. Mukherjee), BIF of Bastar (S.K. Sarkar) (iii) in lavas of Dhanjori (Malangtoli area by S.K. Das and others) and Barren Island (by J.V. Subbaraman) and (iv) auriferous laterites of