should be studied for their coatings and categorised accordingly. In that sense, this book is quite interesting and very useful. The chapters are well organised and each paper is well illustrated. A chapter at the end reviewing the different classifications and terminologies of the coated grains and different views and concepts of the genesis of these grains, would have made this book more useful for the students. The book, however, is meant for the use of advanced researchers who will, no doubt, find it quite useful. The book is also useful for the professional petroleum geologists engaged in the study of reservoir petrography.

Malaviya Institute of Petroleum Exploration, Dehra Dun

S. K. BISWAS

PRINCIPLES OF NUCLEAR GEOLOGY. By U. Aswathanarayana, Oxonian Press Pvt. Ltd., New Delhi, 1985, pp. 397, Price Rs. 59/-

There is a growing interest in the application of nuclear techniques in understanding geological processes and evolution. In this book Aswathanarayana attempts (with success) to cover the main facts of Nuclear Geology from the geologists' view point. Contrary to the author's desire, however, the contents, style and emphasis of the volume are unlikely to make it either a 'reference book' or a 'hand book'.

There are 10 Chapters and 6 Appendices. Chapters 1 and 2 treat fundamentals of nuclear physics and techniques relevant to nuclear geology. Semantic purists may be dismayed by the title of the 3rd Chapter, 'Mineralogy of Nuclear Metals' Chapters 4 and 5 are devoted to the geochemistry and distribution of U and Th. The next Chapter on 'Radiogenic heat' is short and precise. Chapter 7 on 'Radiometric prospecting and assaying' is disproportionately long, 61 pages. Some of the sub-headings are out of place. I much regret seeing all methods of isotopic age determination being crowded in Chapter 8. It is imposible to do justice to so vast a topic. Students will find this difficult to follow. Chapters 9 and 10 deal with stable isotopes and cosmic ray produced radioactivity. Both cover a number of topics but the development has been abrupt. Lack of general theoretical framework to link up separate and disconnected subjects is an obvious drawback.

Geochronology of India has been covered in less than 2 pages! This does not reflect the present state of our knowledge. Many important references have been omitted. The promised focus on 'Geological Processes' (cf. Preface) has remained unfulfilled. Problems are given at the end of each Chapter. These will be helpful for understanding the subject.

The volume is well indexed with both author and subject index. Each chapter is followed by a list of references (about 350 in all). The book is free from serious typographical errors; the printing is tolerable but the quality of paper and diagrams are poor.

In summary, the book covers a number of topics in a straightforward manner and contains useful information. This can be recommended as an introductory text to geology students. It will encourage interested readers to consult books devoted exclusively to specialised topics. Publication of this volume with the sponsorship of the University Grants Commission should encourage teaching of Nuclear Geology in Indian Universities.

The price is attractive for libraries and individual possession as well.

Geological Survey of India Calcutta

D. K. PAUL