

Stanton (R. E.). *Analytical Methods for use in Geochemical Exploration*. London (Edward Arnold), 1976. v+55 pp., 1 fig. Price £2.20.

This book presents details of a large number of analytical procedures, covering most of the elements likely to interest the exploration geochemist. Colorimetric, Atomic Absorption, and to a much lesser extent XRF, and Emission Spectrographic methods are described, the work being a sequel to the author's previous book, giving only colorimetric methods (M.A. 18-153). The great merit of the book is that specific details of the methods are provided, and this should prove of great value to exploration geochemists. In particular a chapter on cold-extraction methods for some of the more commonly studied elements, e.g. As, Cu, Pb, Zn, and Ni will be most welcome. The four pages devoted to XRF and the six pages on Emission Spectrography are somewhat abbreviated, and the section on statistics is so truncated that a reference to a standard text would be preferable. These criticisms aside, the book will undoubtedly be most useful, although the price, £2.20 for only 55 pages, is quite excessive.

J. N. WALSH

Condie (K. C.). *Plate Tectonics and Crustal Evolution*. New York, Toronto, Oxford, Sydney, Braunschweig, Paris (Pergamon Press), 1976. x+288 pp., 150 figs. Price £11.25.

The author of *Plate Tectonics and Crustal Evolution* is a well-known petrologist and geochemist who has now written a book based on a course that he teaches. The course and the volume attempt to combine in a descriptive format the geophysics and geochemistry of plate tectonics and to give them a historical-geological perspective. The volume succeeds very well. The first four chapters discuss the evidence for the structure and behaviour of the earth as a whole and for its crust and mantle. The writing is fairly simple but the concepts are sophisticated and it is assumed that the reader is familiar with the basis of petrology and physical geology, while a working knowledge of elementary physics and chemistry is also expected. The ideas and hypotheses throughout these chapters are supported by numerical data, and suggestions for further reading at the end of each chapter point towards particularly informative references. The latter are quite apart from a comprehensive list at the end of the book.

Chapters 5 and 6 describe the gross structure of major continental provinces and oceanic domains. These chapters are informative, but not surprisingly much of the evidence is directed at the Atlantic and Eastern Pacific realms. The short chapter 7 deals with magmatic associations of different crustal provinces from a geochemical standpoint; it is very well done. Next comes the discussion of the dynamic behaviour of plates in geological time. The discussion is worth while but suffers from a somewhat inadequate exploration of tectonics. At the level of this volume it would not have been remiss to include such features as variations of strain, the state of stress in the crust and the actual, rather than cartoon, sections through orogenic belts.

Chapter 10 is concerned with the origin and growth of the crust from the earliest geological time. The treatment is basically geochemical and is a subject of the author's particular interests. In my view its implications should be familiar to every honours student on either side of the Atlantic Ocean.

The work as a whole is written in a textbook style and therefore there is little but the arrangement and the discussion that can be especially attributed to the author. Nowhere in its almost