cesses which can create these mineral deposits. If I have a gripe, it is that if suffers from a slight lack of clarity. The chapters do not possess separate summaries, and I repeatedly became confused both by the amount of descriptive detail and the manner in which genetic sections are mixed in. For instance, I found the section on Cainozoic synsedimentary lacustrine fluorite extremely interesting, but came away without a clear insight into the chemistry of its formation.

Despite its shortcomings, this book will be of value to those interested in gaining a broad understanding of mineral deposits, and should find a home on the library shelves. It contains a body of useful information which would otherwise remain scattered. However, an uneven, often weighty style and the tendency to mix description with genetic interpretation will hinder its adoption as a general text. The book is illustrated by numerous maps, cross-sections and photographs. There are few obvious typographic errors, although the lists of references contain mis-spellings of some author's names (including my own).

N. J. FORTEY

Earney, F. C. F. *Marine Mineral Resources*. London and New York (Routledge, Chapman and Hall Ltd.), 1990. xxiv + 387 pp., 94 figs. Price £65.00.

In many ways Fillmore Earney's new book is a sequel to his *Petroleum and Hard Minerals from the Sea* published in 1980. By comparing them one is able to see charted the developments in knowledge and technology of the last decade. Much more of the recent work is dedicated to the implications of the emergence of the Law of the Sea (UNCLOS III) Convention of 1982. In addition to detailed descriptions of the known resources and current technologies for their recovery, the author dwells on the new regime, particularly the emergence of the Exclusive Economic Zone concept which gives coastal and island states powers to regulate the economic activity within a zone reaching 200 nautical miles seawards from set base lines and thus take resources from the waters, from the sea bed and from beneath the sea bed. He further discusses the role of the International Sea-bed Authority which will regulate sea-bed mining beyond the limits of EEZs. Very properly he reveals the impact of the recovery of mineral resources from the sea on the economies of those states, often developing countries, but also including Canada, which are currently the leading producers of metallic minerals.

The coverage is global, detailed and backed by up-to-date statistics of reserves and production rates. Particular attention is paid to cases where the ownership of marine mineral resources have been and still are matters of dispute.

At £65 the work is expensive but such is the scholarship and with more than 600 references it should be required reading for all geologists, technologists and indeed administrators concerned with the sea.

A. J. SMITH

Hodgson, A. A. (editor). *Alternatives to Asbestos—the Pros and Cons*. John Wiley & Sons (on behalf of the Society of Chemical Industry), 1989. xiv + 195 pp. Price £43.50.

The need for a book on alternatives to asbestos arises from the growing awareness of the serious health hazards involved with inhalation of its fine particles and more specifically from the recommendations of the report of the U.K. Health and Safety Commission's Advisory Committee on Asbestos (1979). Key recommendations from the report involve substitution by other materials as far as practical, weighing advantages and disadvantages of asbestos and potential substitutes including their potential health risks, performance of the finished product, and the costs associated with changing from asbestos to a substitute.

The present survey is in three contributed chapters: 1. The alternative raw material (60 pp) by the editor A. A. Hodgson. 2. The feasibility of substitutes (88 pp) by A. Pye, and 3. The health aspects (28 pp) by P. E. Elmes.

Chapter 1 encompasses glass fibres, mineral wools, synthetic and natural organic fibres, some specific minerals (mica, vermiculite and other clays, talc, pyrophyllite and wollastonite), expanded rhyolite glass (perlite), diatomite, and carbon, refractory and metallic fibres. Consideration is given to chemical and physical properties, manufacturing methods, uses, costs and availabilities. Asbestos itself is not treated in detail but the reader is directed towards other publications.

Chapter 2 deals with substitution in the six major product groups: fibre-reinforced cements, building materials and insulation, friction products, heat-resisting textiles, reinforced plastics and packings and jointings. No single material is a universally suitable substitute. Almost by definition, anything that completely reproduces the desirable properties would also present the undesirable hazards. However, among the most viable alternatives are: cellulose fibre reinforced cement, vermiculite insulation sprays and coatings, insulation with man-made 'mineral' fibre