

The book is a welcome and valuable addition to the library of the senior student or practising earth scientist. It will have served its purpose if it assists in a more critical and rigorous treatment of the wealth of numerical data that at times threatens to drown geosciences.

I. L. GIBSON

JEFFERY (P. G.). *Chemical methods of rock analysis*. Second edition. Oxford and New York (Pergamon Press), 1975. xx+525 pp., 104 figs. Price £16.00.

The second edition of this book will be welcomed by many geochemists working in the field of rock and mineral analysis. Although there are no radical changes from the first edition [M.A. 72-816], which appeared in 1970, many of the instrumental methods are now more comprehensively covered. One of the strongest recommendations in favour of this book is that it describes methods of analysis in detail, with appropriate references, unlike some recent books, which have confined themselves to vague generalizations. Methods for a very wide range of elements are given. One criticism, in view of the current widespread use of atomic absorption analysis for rock analysis, is that more details could have been given of this method. The determination of aluminium by atomic absorption using the nitrous oxide flame is dismissed in only a few lines, for example.

J. N. WALSH

JONES (M. J.) Editor. *Minerals and the environment*. London (Inst. Mining and Metall.). xii+803 pp., 236 figs., 1 pl., 1975. Price £25.00.

Forty-one papers, together with discussion and authors' replies, are the proceedings of a symposium organised by the Institution of Mining and Metallurgy with the cooperation of the Institute of Quarrying and the Institution of Mining Engineers. The overall theme relates to ways of reducing and ameliorating the impact that the production of raw materials for the world's industries has on the human environment. Minerals are considered as the means by which energy is channelled to uses that raise human living standards above subsistence levels and ores in terms of their utilization and benefit/cost ratios rather than their genesis and detailed mineralogical constitution. The environment is mainly considered in relation to regions where mining, quarrying, and metallurgical extraction takes place.

Topics covered include rehabilitation of open-cast mines and mine tips, revegetation of toxic mining wastes, the role of microorganisms in the recovery of polluted areas, disposal of wastes, and control of pollution of rivers. The section relating to dust in mines and quarries deals with control and collection methods, not the mineralogy of dusts. Here, as in other parts of this volume, the environmental aspects exclude those relating to biological effects on people working in, or living in the vicinity of mining, quarrying, and metallurgical industrial establishments.

The demonstration in this well-produced and illustrated book of what can be achieved in the environmental field if money is available may have a considerable