

The Geology of the Guiana Shield

edited by A.K. Gibbs and C.N. Barron, published by Oxford University Press, Inc., 1993, 246 pages, ISBN 0-19-507350-9.

Review by Christopher G. Kendall

This book was assembled and written by the authors with the purpose of providing access to the existing literature on this area for geologists working in the region to focus on unsolved issues, to end controversies that have been disproved, to draw attention to the mineral resources of the area, and to encourage interest in the area in comparative study with other Precambrian Shields. The book draws attention to the fact that most of this shield lies beneath one of the worlds most highly developed lateritic soils, and describes how the use aerial photography, magnetic data and surface studies plus drilling have provided the geological information recorded in the text. For instance, the authors draw attention to the work of Orville Dirby who examined soils for resistant minerals including quartz, ilmenite, zircon etc. to determine the underlying geology.

The book is broken into 16 chapters which are themselves divided into separate groups forming 5 parts to the book. The book begins with an introduction and goes on to a discuss the Archean and lower Proterozoic, Trans-Amazonian, Middle-Proterozoic, the Upper Proterozoic, and Phanerozoic sections and ends with the discussion of the economic geology of the region. The book is extremely well referenced and the type is sharp, through many of the tables suffer from being photographs of typed data produced with a dot matrix printer. The book also has an annoying numerical system of numbering sections and chapters which are sometimes so long that they exceed the length of the section subtitle. However the writing style is clear and I particularly enjoyed the introductory chapter with its photographs and maps which were quite helpful. The text has systematically described the geology of the Guiana Shield touching on general and in most cases quite specific descriptions of each sub-region of the shield, the petrology of the rocks, their structural and diagenetic history, the effect of metamorphism and intrusives etc. The reference list is extremely complete and geologists and geophysicists who have interest in this region will find this book invaluable. It is extremely interesting book and I am pleased to have it on my shelves. The authors have produced a systematic description of most of the geology in the area as completely as they could with the data available to them. The result is that the book is packed with information. It should be on your personal shelves if you are in need of specific geologic information of Guiana, and it is certainly a book that should be in your company or school library.