

A handbook on practical coal geology

by **Larry Thomas**, Published by John Wiley & Sons. 1992. ISBN 0-471-93557-3. 338 pgs.

Review by Christopher G. Kendall

As outlined in the preface of this volume, this is intended as a basic guide for the coal geologists to use in their everyday activities, but it is not intended to be a definitive work on any particular aspect of coal geology.

The book discusses coal as a substance in terms of its physical description, coalification, and quality. It includes a brief description of the classification of coal. Also, there's some discussion on the origin of coal, how coal accumulates in the depositional environment, modern analogs, how one correlates facies and facies maps, how coals may be affected by structure, the age and occurrence of coal and its distribution in the U.S., Canada, Europe, Africa, India, Central and South America, the former U.S.S.R., the Far East, and Australasia. It discusses world coal reserves in production, field techniques for coal exploration, data collection, drilling (open core, core and open hole), use of geophysical techniques (strength, weathering, etc.), the geophysics of coal, physical properties of coal-bearing sequences (density, seismic velocity, reflection coefficients, etc.), radiometric and electrical conductivity, and a discussion of surface and subsurface geophysical methods, the geophysical borehole logging of coals, etc.

There's a chapter on the hydrogeology of coals, coal sampling and analysis, coal and gas, coal resources and reserves, how to write your formal report, etc. There's some 13 chapters, 4 appendices, and a bibliography.

This book will be a practical help to geologists and geophysicists who work with coal. In fact, the geophysical section is somewhat more extensive than one might have expected. There are even seismic lines and discussion of the instrumentation needed to make geophysical analyses of coals. It is a handy book that's short and to the point. It is a little cursory because it is a handbook. Nevertheless, it is relatively well referenced. I think it meets the intent of the author, which is to provide a basic text that can be used as a "jump off point" to get more deeply into.

On the downside, it lacks photographic record of the occurrence in coals and a photographic scheme for classifying the different occurrences of coals and the associated lithologies. Also, an expanded section on the depositional setting of coals would be helpful in the assessment, interpretation, and the prediction of the distribution of coals.

Beauty is in the eye of the beholder. Overall, it is a professional book and from the geophysical standpoint, the section on seismic and well-logging of coals will be of some use to those geophysicists who need to extend their knowledge of coals.