

Preface

It seems like digging the past but I still remember the day when the second edition of Dobrin's book "Introduction to Geophysical Prospecting" appeared. Even in those days, presenting this subject in a single volume was no easy task. Since then, our knowledge and capabilities for discovering oil and other natural resources has undergone a sea change. The credit mostly goes to a large number of individuals who used their highly specialized knowledge to analyze and solve a vast diversity of problems. Their contributions are well documented and continue to appear in technical books and professional journals. However, most of them are primarily useful for those engaged in research and development. Other professionals often find them too specialized or highly mathematical in nature. "Exploration Geophysics" by Gadhah and Fisher is a timely product which will fill a much needed gap.

The authors endeavor to present a simplified version of the science of exploration geophysics. In line with their professional background, they have primarily dealt with the various aspects of seismic prospecting. However, they cover almost everything related to this subject. After a short description of nonseismic methods, the reader is first introduced to an important but relatively less familiar subject of seeking permit for the acquisition of field data. This follows a detailed discussion on the acquisition and processing of data by using as little mathematics as possible. Much of the remaining book deals with the migration and interpretation of seismic data as well as the various tools needed to accomplish these tasks such as velocity analysis and the use of borehole information. In order to present a complete picture, the authors do not hesitate to touch upon the most recent developments such as cross-hole tomography and 4-D seismic.

The book provides a broad outline of seismic exploration without burdening the reader with nitty-gritty details. On the other hand, the door is kept open for further study by providing a comprehensive list of technical articles at the end of various chapters. At the other end of the spectrum, those quite new to the subject will find several lists of exercises valuable for self-learning. The book may also prove useful to those who work closely with geophysicists such as geologists, petroleum engineers as well as exploration managers.

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