

APPLIED HYDRODYNAMICS IN PETROLEUM EXPLORATION By Eric C. Dahlberg;  
Springer-Verlag, New York 1982, pp. vii + 132 + 2 Appendices.

For a very long time Geologists exploring for hydrocarbons have been confining their search to structures and stratigraphic traps. Though in recent years it has been recognised that greater attention should also be paid to the study of fluids which play an important role in controlling petroleum accumulations, the progress in this respect has been lagging behind. It is now very gratifying to note that this book under review will meet adequately the requirements of fluid studies.

The book explains systematically the principles of Hydrodynamics and its application to petroleum exploration in a short compass of only 132 pages divided into eight chapters. The author has very ably dealt with the subject from the first principles starting with the nature of fluids, the fluid environment and the concept of potential energy, fluid flow lines and gradients. The hydrogeological conditions and the effects of fluid flow magnitude on locations of hydro-carbon pools are described. It is pointed out that wells drilled on 'highs' in a specific hydro-dynamic environment could produce only water. Under conditions of extreme flow, liquid hydro-carbons could be anticipated only on the down dip flanks of some of the structures. Geologists who often locate Test wells only on the highs of anticlines do well to note this warning.

The author then proceeds step by step to the details for completion of petroleum exploration oriented hydrodynamic evaluations. Inference of subsurface flow patterns is then presented.

Mapping of oil and gas potential energy with respect to water and predicting oil and gas accumulations are next dealt with, presenting mathematical exposition and examples. Finally, the mapping of structural traps and non-structural traps is explained in detail. There are two Appendices - A and B. 'A' furnishes a list of symbols and abbreviations used in text; in 'B' a number of exercises and answers are furnished to help students and professionals studying this subject. At the end 'Suggested Readings' are added.

On the whole, the book presents a complete treatment of the topics covered under hydro-dynamic principles and application to mapping of hydro-carbon accumulation in different environments. The diagrams and illustrations presented in a large number help to grasp clearly the subject matter.

Both students and professional petroleum geologists and geophysicists would do well to have this book on their shelves to make use of it in dealing with the various aspects of fluids in exploration and development. The printing and get-up of the book are excellent.

M. B. R. RAO

## ANNOUNCEMENT

### 'CYPRIS, INTERNATIONAL OSTRACOD NEWSLETTER'

Prof. S. B. Bhatia, Chairman Department of Geology, Panjab University, Chandigarh who is the 'Cypris-correspondent' for India would like all Ostracod workers to let him have a report on their current and future research projects as well as list of publication for 1983, names and number of students working for Ph.D. theses and special requests for exchange of material, literature etc. The report may also contain any other information not covered above. Request for copies of the Newsletter for 1982 may be made to Dr. Karel Wouters, Koninklijk Belgisch Instituut voor Natuurwetenschappen, Vautierstraat 29, B-1040 Brussels, Belgium. Data for Newsletter for the year 1983 may please be sent to Prof. Bhatia so as to reach him latest by 31st December, 1983, since the final report is to be compiled by him and sent by the end of January, 1984'.