

### ACKNOWLEDGEMENTS

The author owes a special debt of gratitude to Professor S.S. Merh who supervised this research. His constant encouragement and guidance enabled the author to complete this task.

He is also indebted to Shri S.N. Talukdar, Director of Geology, Oil and Natural Gas Commission, who took keen interest in the work and allowed the author to avail the study leave. He is further thankful to Shri P.V. Dehadrai, Dr. D.K. Chandra, Dr. V.R. Rao, Shri C.K.R. Sastry and Shri S.N. Shukla of Oil and Natural Gas Commission, who helped the author in various ways during the course of research.

The author expresses his thanks to the Operations Research Group of Sarabhai Research Syndicate (P) Ltd., who allowed the use of computer. Help from Shri V.N. Shah who prepared the programme is acknowledged.

Special thanks are due to many individuals who facilitated the completion of the project. Dr. M.G. Hardas initiated the author to grain size experiment work and Shri S.M. Chumekar helped him in analysing a few samples. Shri B.M. Chauhan carried out drafting and photographic work while Shri V.F. Bhavsar did the typing job. S/Shri B. Roy, R.V. Godbole, R.K. Parmar, S.G. Patel and M.P. Patel helped the author during final preparation of this thesis and author's thanks are due to them.