## **ACKNOWLEDGEMENT**

It is with deep sense of indebtedness and gratitude, that, I wish to express my sincere feelings to Prof. J.R. Pandya, Department of Physics, Faculty of Science, M.S. University of Baroda, Vadodara for suggesting a problem and for his enthusiastic guidance throughout the present work.

My sincere thanks to Prof. S.K. Shah, Prof. & Head, Department of Physics, Faculty of Science and to Prof. T.R. Joshi, Prof. & Head, Applied Physics Department, Faculty of Technology & Engineering for providing research facilities in the departments, to Prof. V.N. Potbhare for giving permission to use the computer and Miss. Neera Tressler for her valuable help and useful suggestions in computational and graphic work and also to Dr. A.J. Shah, Dr. R.T. Shah, Dr. D.R. Joshi, Dr. K. Gireesan, Dr. G.R. Pandya and Dr. C.F. Desai for their encouragement.

Dr. Patel and Mr. B.M. Chauhan, Geology Department, Faculty of Science, M.S. University of Baroda, Vadodara have also extended their selfless help in photography.

I owe my thanks to all in the Central Workshop for their kind cooperation.

I wish to thank all my colleagues, especially, Dr. Minaxi Patel, Dr. N. George, Mr. Ravindran, Mr. Shahalom Siddiqui

and Mr. Jani for their help and cooperation throughout the present investigation.

The credit for the neat typing goes to Mr. G.V. Rao, and I am extremely grateful to Mr. B. Thiyagarajan for his untiring and selfless efforts he has rendered in each and every part of the thesis work.

Contributions from Mr. V. Bhaskaran, Mr. C. Pradeepan, Mr. Deepak Jain are acknowledged with sincere thanks.

The main source of inspiration and moral support were my parents - Achachen and Pappa.

Without my husband nothing would have been possible and my gratitude for my son, Atul, for his forbearance and endurance.

Annie Kuruvilla