ACKNOWLEDGEMENT

The author is highly grateful to Dr. N. Y. Bhatt for his continual help and encouragement throughout this research work. During the field visits as well as in the laboratory he has constantly guided me. Under his able guidance and supervision the author was able to complete this work. I will always remain indebted to him.

The author is thankful to Dr. B. K. Jain (Principal, M. G. Science Institute) and Dr. R. D. Shah (Head, Geology Department), for granting necessary permissions, computer facilities and encouragement. I am also grateful to Dr. S. J. Patel (Department of Geology, The M. S. University of Baroda) for his valuable support and guidance.

During the field visits constant support and help provided by Prof. J. M. Patel, Prof. H. V. Majethia and Dr. M. G. Thakkar of Shri R.R. Lalan College, Bhuj. I cannot forget ceaseless efforts of Shri Hardik P. Patel of Institute of Seismological Research, Gandhinagar and Ms. Dipal A. Patel, JRF at M.G. Science Institute, during the various phases of field, laboratory studies and during the finalization of the work. Dr. B.G. Desai of Pandit Dindayal Petroleum University, Gandhinagar and Shri Vijay Sumera have helped during the field visits. All these are thankfully acknowledged.

Thanks are also due to Shri Bharatbhai Limbachiya and Shri Jagdish Makwana for their support. Computer and typing work was assisted by my students Ms. Vidhi Bhojak, Ms. Bhavika Nirmal and Shri Dhimant Chauhan.

Shri Jitendra C. Lilani, Dr. H.V. Pandya and Dr. M.D. Shukla are thankfully acknowledged for their constant help, support and encouragement.

I am also thankful to the persons who have directly or indirectly helped during this work.

Last but not the least, I am thankful to my family members for their constant encouragement and support, with which my efforts becomes successful.
In addition to the above, external foreign referee of the thesis have provided positive comments and suggestions and also suggested many publications for the improvement of the work, which were much useful to improvise this revised version of the thesis. I will remain highly indebt to him.