ACKNOWLEDGEMENTS

I express my heartfelt thanks to my research supervisor, Dr. R. Baskaran, Professor and Head, Department of Industries and Earth Sciences, Tamil University, Thanjavur, for the opportunity given me to carry out the research under his active guidance. The valuable suggestions and encouragements given by him, throughout the research period are really worthwhile.

I would like to place on record my sincere thanks to Dr. K. Anbarasu, Principal, National College (Autonomous), Tiruchirapalli for his encouragement and valuable suggestions during the tenure of my research work.

I would especially thank Shri. K. Raghunathan, Secretary, National College (Autonomous), Tiruchirapalli and the Council Members of Academy of Higher Education of National College (Autonomous), Tiruchirappalli for the facilities offered to carry out my research activities.

I would like to thank in a very special way to Dr. V.Kumar, Professor & Head, Department of Geology, National College (Autonomous), Tiruchirapalli and Dr. D. Srinivasan, Department of Geology, National College (Autonomous), Tiruchirapalli the members of Doctoral committee for their valuable suggestions and support.

I am greatly indebted to Dr. N. Jawahar Raj and Dr. S. Selvaraj Department of Geology, National College (Autonomous), Tiruchirapalli for their valuable suggestions and for going through the manuscript.

I am much thankful to Dr. V. Subramanian, Dr. R. Ramesh, Mr.
S. Sivakumar, Dr. V. Vasanthamohan, Department of Geology, National College (Autonomous), Tiruchirapalli Dr. K. Sivakumar, HOD, School of Architecture, M.A.M, Engineering college, Tiruchirapalli and Mr S. Jeevanandam, Assistant Professor, School of M.A.M, Engineering college, Tiruchirapalli for their help in various capacities.

The timely help lent by Dr. M. Sathyanarayana, Scientist B, Geochemistry Division, and Mr. Sariput Sawant, National Geophysical Research Institute (NGRI), Hyderabad for geochemical analysis is really valuable.

My wholehearted gratitude goes to Miss.V.Kannagidevi, Lab Technician, Department of Industries Earth Sciences, Tamil University, Thanjavur for her helpful co-operation in the geochemical analysis of the samples.

My heartfelt thanks are also due to my dearest friends Dr. T. Gangaimani, Assistant Professor, Mother Therasa Engineering College, Mr. K. Prabakaran, Mr. M. Omprakash, Mr S. Jeevanandam, and Mr. S. Sathiskumar Department of Geology, National College (Autonomous), Tiruchirapalli for their untiring help and support during the tenure of this research work.

The helpful cooperation from my fellow researchers and students Mr. M. Thiyagarajan, P. Prabhu. S. Varunkumar, A. Rajkumar, G. Muthulakshmi, N. Nandhini, Mithas Ahmad, Imran Ahmad and Gandhimathi, Department of Industries and Earth Sciences, Tamil University, Thanjavur and Mr. A. Solai Research scholar, Department of Geology, University of Madras, Chennai in the preparation of the thesis is
highly appreciated.

I sincerely thank the Department of Ocean Development, Government of India, and Ocean Science and Technology Cell, Thanjavur, for the grant of a Major research project to my research supervisor, which initiated my research carrier.

Sincere special credit goes to all my Close Friends for their moral support and encouragement. I also thank the Non Teaching Staff, Department of Geology and Office Staff, National College (Autonomous), Tiruchirapalli for their help in various capacities.

Last, but not the least, I have been most fortunate to have incessant affection and encouragement from my adorable parents. Their prayer at every stage helped me to complete the thesis successfully.

K.CHITTIBABU