ACKNOWLEDGEMENTS

I wish to express my deep sense of gratitude to the Director General, Geological Survey of India, for granting permission to submit a part of my departmental work for the doctoral degree.

The study, synthesis and the write-up work was carried out under the able guidance of Prof. Dr. M.N. Rao, Professor (Retd.), Department of Geological Sciences, Gauhati University, Guwahati. I am deeply indebted to him for nurturing the idea of doing research and for his valuable suggestions during the course of the research work.

Grateful thanks are due to Prof. Dr. P.K. Chowdhary, Head, Department of Geological Sciences, Gauhati University, for providing necessary laboratory facilities in the department. I am very thankful to Prof. Dr. S. Rahman (Retd.), for his help and encouragement during the course of the research work.

I extend my sincere thanks to Shri. P. Medhi, Lab. Assistant and Shri. Jayanta Laskar, Research Scholar, in the Department of Geological Sciences, Gauhati University, for helping me in the laboratory work.

I wish to place my grateful acknowledgements to Shri. V. Natarajan, Deputy Director General and Shri. T.M. Ganesan, Director, Geological Survey of India, for their encouragement during the course of the research work.
Sincere thanks are due to Dr. Rajendra Shukla, Geologist (Sr.), and Shri. B. Nageshwaran, Geologist (Sr.), Geological Survey of India, for their help during the course of research work.

Last but not the least, I express my deep sense of gratitude to my wife and daughters for their continued inspiration and patience, without which this work would have remained incomplete.

(R. GOPALAKRISHNAN)