ACKNOWLEDGEMENT

During the entire period of my research work many persons have helped me to an immense extent either through technical support or valuable suggestions, but their role is subsidiary to my 'GUIDE' Dr. B. K. Mohapatra, Scientist 'F', Regional Research Laboratory, Bhubaneswar for his constant inspiration, encouragement, valuable advice, strenuous day-to-day supervision. His cordial and amiable nature extended to me during the entire tenure of work, without which this write-up could not have seen the light of the day. It is only through his supervision and able guidance that has moulded my work into reality.

I record my gratitude to Mr. P. P. Singh, Reader, P.G. Department of Geology, Utkal University, Vani Vihar for his deep involvement and keen interest in this research work as the Co-guide.

I am grateful to Dr. Vibhuti N. Misra, Director, Regional Research Laboratory, Bhubaneswar for providing me all infrastructural facilities during my stay as a research scholar and the Department of Science and Technology, New Delhi for providing financial help through a project.

To the Head, P.G. Department of Geology, Utkal University, Vani Vihar, I owe my gratitude for permitting me to avail of the library and laboratory facilities.

I am highly indebted and wish to record my deep sense of gratitude to Dr. R. K. Sahoo, Ex-Head, Mineralogy & Metallography department, Regional Research Laboratory, Bhubaneswar for his encouragement and valuable suggestions during the entire span of this research work.

Un-grudging help and assistance received from Mr. P. S. R. Reddy, Dr. S. Prakash, Dr. R. Bhima Rao, Dr. S. K. Biswal Senior Scientists of Regional Research Laboratory, Bhubaneswar to avail of Mineral Processing Laboratory facilities are thankfully acknowledged.
A special word of appreciation is due to Mr Santosh Kumar Misra, Senior Scientist, Regional Research Laboratory, Bhubaneswar who has taken a lot of pain in preparing photographic document for this research work.

I would remain obliged to Mr S.K. Mishra, Manager, OMC, and Mr K Mahanta, Deputy General Manager (G & E), M/s OMDC Ltd and other officials for their kind help in sample collection during the course of my field study.

My sincere thanks are due to Dr Rajeev and Dr B.S. Acharya, Senior Scientists, Regional Research Laboratory, Bhubaneswar for carrying out the XRF and XRD analysis respectively.

Dr. B. C. Acharya and other scientists of Mineralogy and Metallography Department, Regional Research Laboratory, Bhubaneswar deserve special appreciation for their help at various stages of the work.

My profuse thanks to Mr Krishna Chand and Mr. Chitra Prasad Bahadur for computing data, designing and giving a decent look to the thesis, to Sri D. K. Patta for preparing polished and thin sections, Sri H. K. Puhan for photo printing and Sri D. Parida for sample preparation work.

I thank all my well-wishers Dr. B. R. Nayak, Dr M. B. S. Rao, Dr (Mrs.) S S Nibedita, Mr. P. K. Mallick, Dr K. K. Dash, Mr R. R. Mohapatra, Miss. Sujata Mallick for constantly encouraging me from time to time throughout my work.

I owe my sincere thanks to all others who have directly or indirectly helped me in the progress and success of the work.

Last but not the least, I express my deep sense of love to my family members, who lent massive support to infuse in me the desired confidence and work ethics during the entire period of this research work.

Pattapaban Mishra