ACKNOWLEDGEMENTS

The author very gratefully acknowledges the constant encouragement and the valuable guidance received from Shri S.D. Desai, Reader in Geology, Faculty of Science, The M.S. University of Baroda, Baroda.

The author is also grateful to Prof. S.S. Merh, Head of the Geology Department and Dean, Faculty of Science for taking keen interest and providing research facilities.

The author expresses his thanks to Managing Director,
Parshuram Pottery Works for providing accommodation during
field work as well as facility for laboratory work in his
Research and Development Section.

Sincere thanks are also due to Shri C.V. Sundaram,
B.A.R.C. Bomaby, for providing facility of using
Differential Thermal Analysis and Thermogravimetric
Analysis, and to Mr. C.K.R. Sastry, General Manager, O.N.G.C.,
Western Region, Baroda, for providing Differential Thermal
Analysis instrument for testing.

The author is grateful to Dr. B.K. Basu, Head of Solid State Electronic Group, T.I.F.R., Bombay for providing Transmission Electron Microscope for studies and to Dr. Somayajulu, S.E.M. Incharge, P.R.L., Ahmedabad for

extending Scanning Electron Microscope for testing.

My thanks to Dr. V.K. Varma, head of Geology Department and Dean, Faculty of Science, Delhi University and Dr. Varadrajan, Incharge, X-ray Diffraction, Delhi University, are gratefully acknowledged for providing me facility to use X-ray Diffraction.

The author gratefully acknowledges his thanks to Shri Thatte, Director, Engineering Research Institute, Baroda for extending laboratory work facility in his Soil Mechanics Laboratory.

The author sincerely acknowledges the manifold help received from Shri Sudhir Raje, Mines Manager, Parshuram Pottery Works, Shri Mohan Maindarker, Assistant Geologist, O.N.G.C., Mr. R.K. Parmar, Geology Dept., and friends.

The author expresses his gratitude to Dr.M.G. Hardas, O.N.G.C., Baroda, Dr. N.M. Vashi, Dr. R.V. Karanth, Dr.M.P. Patel, Dr. S.J. Desai and Dr. S.G. Patel of the Department of Geology for their assistance.

The decent typing of this thesis by Shri D.M.Mohite and printing of photographs by Shri D.M.Chauhan, deserves special thanks.

The author will be failing in his duty if he does not acknowledge the financial assistance render by University Grants Commission.