## **ACKNOWLEDGEMENTS**

The author is very much grateful to Shr.S.D.Desai for his valuable guidance right from the stage of selection of the problem to the very end. Without his inspiration this thesis would not have seen the light of the day. His constant guidance and valuable advice throughout this research work, are gratefully acknowledged.

Prof. S.S. Merh, Head, Department of Geology and Dean, Faculty of Science, M.S. University of Baroda, extended full cooperation and encouragement. The author sincerely wishes to express his gratitude to Prof. S.S. Merh for his continuous interest. The encouragement given by Prof. N.M. Bhatt and Prof. N.S. Pandya, Ex-Deans, Faculty of Science, M.S. University of Baroda, is also very gratefully acknowledged.

The author is thankful to the staff members of the Department of Geology, Faculty of Science, M.S.University of Baroda, particularly to Dr. M.K. Murty, Dr. S.J. Desai, Dr. M.P. Patel, Dr. P.P. Patel and D.T. Brahmbhatt for their useful suggestions and help.

The author is very much grateful to the Director, Technical Education, Gujarat State, Ahmedabad and

Principals Dr. V.J. Jani of L.E. College, Morvi, and Prof. K.J. Bhatt of L.D. College of Engineering, Ahmedabad, for their continuous encouragement in pursuing this work.

The Director of Engineering Research Institute of Baroda, and his staff, particularly B.K. Parikh, S.V. Mahadik, Y.D. Vyas, J.T. Kotecha, S.R. Naik, and A.D. Tamhanker extended their whole-hearted cooperation during the experimental work. Their discussions with the author were extremely useful. The author is extremely grateful to them.

The author is also thankful to Dr. M.G. Hardas and B.K. Shrivastav of ONGC, Baroda for their valuable suggestions in the work pertaining to petrographic analysis.

The author is particularly thankful to Prof.V.K. Kulkarni, Dr. P.P. Oza and K.C. Thacker of the L.D. College of Engineering, Ahmedabad for their guidance and valuable suggestions relating to the engineering properties of the soils.

The author is very much thankful to all his colleagues in Civil Engineering Department of L.D.

College of Engineering, Ahmedabad for their whole-hearted

cooperation. The author wishes to make a special reference to the continuous encouragement given by Prof. B. Venugopalachar and Prof. V.K. Chavda to whom the author is very grateful.

The author would be failing in his duty, if he does not express his thanks to H.C. Yagnik, M.M. Shah and A.R. Shaikh of L.D. College of Engineering, Ahmedabad and M.R. Bhatt of Government Polytechnic, Ahmedabad who helped him in experimental work, assessment of areas, and reducing the maps.

The author is also thankful to Dr. S.J. Bedi,

Department of Botany, and M.C. Ghia, Department of Geography,

M.S. University of Baroda for their help in the identification
of the vegetations and preparation of graphs on climate
respectively.

R.K. Parmar, B.M. Chauhan and Mayur Patel helped the author in various ways during the preparation of this thesis work. The author is greatly thankful to all of them. The author is thankful to V.F. Bhavsar for typing the thesis.

The author wishes to extend a special tribute and gratitude to his elder brothers for sharing the family responsibilities. Lastly, the author wishes to express his special thanks to his wife for her untiring and devoted assistance.