



Acknowledgements

I feel overwhelmed in expressing my gratitude to Prof. Ashok K. Singhvi, under whose supervision this work was carried out. This thesis is the result of his continued support, encouragement and inspiring guidance. His valuable suggestions and critical reviews at all stages of the work had gone a long way in shaping of the work to its present form. His sense of humor was of great support at some difficult times and helped me completing this challenging work on luminescence chronology of Himalayan sediments.

I am extremely grateful to Dr. S.K. Gupta for his guidance, suggestions and review during course of the work carried out for the present work.

It gives me immense pleasure to put on record the guidance and untiring support, I received from Dr. S.J. Patel and Dr. L.S. Chamyal, Department of Geology, M.S. University of Baroda, Vadodara.

I am grateful to Prof. S. Krishnaswami, Prof. R. Ramesh, Prof. S. K. Bhattacharya, Prof. S.V.S. Murty, Prof. M. M. Sarin, Prof. J. N. Goswami, Dr. J.R. Trivedi, Dr. S.K. Singh, Dr. J. S. Ray and Dr. D. Banerjee for their valuable suggestions and critical review during seminars and reviews.

My sincere thanks are due to Dr. B.R. Arora, Director, Wadia Institute of Himalayan Geology, Dehradun for his help, encouragement and moral support during writing of the thesis.

The guidance and encouragement I received from Dr. Malay Mukul, Scientist, CM-MACS, Bangalore and Prof. R.J. Wasson, Charles Darwin University, Australia, during the course of the work including field tour is gratefully acknowledged. I am extremely grateful to Prof. M.D. Shastri, Prof. Andrew Murray, Dr. Mark Bateman and Dr. Mayank Jain for the many useful discussions I had with them.

Financial support in the form of Travel Grants from Department of Science and Technology (DST) and Council of Scientific and Industrial Research (CSIR) is also gratefully acknowledged for supporting a tour to attend the "UK Luminescence and ESR meeting, 2004" held at St. Andrews University, Scotland, UK.

I am extremely grateful to the Director, Physical Research Laboratory for providing infrastructure to carry out the research work. Many thanks are due to staff of the Lab, especially to Workshop, Library, Canteen, Stores and Purchase section. I am thankful to Babu bhai and D.R. Shelat for helping in providing lab material and Nitrogen Gas Cylinders in time to carry out the experimental work.

I am thankful to Anil Shukla, Ravi Bhushan, R. D. Deshpande, R. Mahajan and Dr. M.G. Yadava for their guidance and support to carry out the work. Deepu, Som Sharma, Rama and Bhavsar bhai is highly acknowledged for an enjoyable company during post-lunch tea session.

I am extremely thankful to my senior lab colleagues. Dr. N. Juyal, Dr. P. Srivastava, Dr. P.J. Thomas, Dr. G. Mathew, J.T. Padia and Vachaspati Pandey are highly acknowledged for their critical reviews and thought provoking discussions at all stages of work. Their sweet and brotherly nature for a healthy lab is memorable.

I am thankful to my colleagues Yogesh Nagar, P. Morthekai and Madhav for their help, support and discussions during the course of the work. I enjoyed their joyful company.

I will do injustice to my friends, just by thanks and acknowledging them. Their help, support and motivations cannot be evaluated. Special thanks are due to Bhai sahab–Neeraj Rastogi for his valuable support, help and encouragement throughout the work. His optimistic nature was always helpful to come out from the bad phases of life. I am extremely grateful to Santosh and Anuradha for their moral support and sharing our moments of all the ups and downs of life. Santosh's excellent sense of humor and very original and creative immediate response of any event is memorable. Getting frustrated with Sanjeev is memorable; however, he completed his work on time leaving everybody a bit surprised. Anirban, a cool man behaved like an elder brother in our group and shared our emotions. Sanyal's laugh (after *gussa*) and super fast sound of Sajan is memorable. Manish and Pradyumna Pathak are acknowledged for an enjoyable company especially in TV room. Thanks are due to my neighbor Harish and Deval, Yogesh and Yogita, Soumen and Jhumma for their kind support to my family. I am grateful to Mrs. Pauline and Bhoomi for their emotional support and encouragement during the course of the work. Many thanks are due to Maibam, S.Rajesh, Vinay Rai, Rajesh Agnihotri, Alok Taori, Jitti, Tarun Dalai, Subraoto, Aninda, Sudeshna, Sarika, Shilpy, Harsha, Uma, Jayendra, Tarak, Sanat, Dilip, Virendra, Ravindra, Vinay Choudhary, Satya, Shreyas and Jayesh Das (and Mrs. Das) for a memorable and enjoyable environment in PRL campus. The list is too long to put all of my friends here.

I am also grateful to my friends in Wadia Institute of Himalayan Geology, Dehradun especially Amit, Arun, Deepak, Bhuvan, Shreejit, Dr. Suresh, Jyoti, Anubhooti, Priti, Anusuiya, Sneha, Iqar, Sandeep, Senthil for their support and an enjoyable company during the thesis writing.

Last but not the least I am grateful and thankful to my mother and my darling wife "Raxita" for their love, affection, unknown sacrifices, help and support. This work would not have been completed without their help and support. I am also thankful to my son 'Shivam' whose smile was enough to feel fresh after work.