

## Certificate

I hereby declare that the work presented in this thesis is original and has not formed the basis for the award of any degree or diploma by any university or institution.

Prasanta Sanyal (author)

Certified by

Dr. S.K. Gupta (Guide)

Planetary and Geosciences Division Physical Research Laboratory

Ahmedabad-380 009, India

Prof. P.P.Patel (Co-guide)

Department of Geology M.S. University of Baroda

Vadodara-390 002, India