PREFACE

In the present area of study the effects of neo-tectonic activity are manifested along major and active faults and lineaments that has a control on alignment of channel of many rivers and their tributaries.

The study of aerial photographs, satellite images and topographic maps those are supported by ground truth surveys has revealed that the area has a network of interlinked fractures that behaves as subsurface water conduits owing to the tectonic activities. The present work describes the relationship that exists between the morphotectonic features vis-a-vis the availability of subsurface water in the north western Himalaya in view of the active tectonics.

The entire work has been divided into different chapters. Chapter I describes the general description of the study area, scope and its objectives and the general methodology adopted for the study of geo-hydrological conditions. Chapter II deals with the regional geological studies involved and correlates the minor and major geological structures. Chapter III deals with the categorization of the entire land forms into different geomorphological classes developed through the process of active tectonics. Chapter IV deals with the study of slopes, aspects, drainage and its morphometric analysis to establish the ground water regime. Chapter V deals with the study of active tectonics that has brought about the changes in the landform. Chapter VI deals with the hydrogeology and its relationship with ground water prospects. Chapter VII deals with the designing of data base for ground water modeling in GIS platform and finally Chapter VIII summarises the findings and suggestive plans for ground water development in the study area.