The Siwalik Group has been attracting the attention of geologists since 1832 when Falconer reported the occurrence of vertebrate fossils from the Siwalik rocks exposed near Hardwar. Since then, the paleontological and stratigraphical aspects of the Siwalik sequence have been worked out by a number of workers. In recent years, expeditions from U.S.A., U.S.S.R., and Japan have explored the Siwalik Hills for their rich fossil fauna and flora and for magnetostratigraphical data.

Paradoxical as it may seem, sedimentological aspects of the Siwalik Group remained nearly unexplored for almost a century. In the past two decades, some work has been done on the sedimentological aspects of the Siwalik Group of the Panjab and the Kumaon Himalaya but sedimentology of the Siwalik sequence exposed between the rivers Ghaggar and Markanda remained a void. In order to fill this gap, the present author took up the studies for his Doctoral research.

The author has confined his studies to the sedimentological aspects and has touched upon stratigraphical and structural aspects to the extent he found necessary to decipher the provenance and environments of deposition of the Siwalik sediments. Paleontological aspect has not been investigated since another researcher (Nanda, 1973)
from this very Centre has already studied this aspect in
detail and submitted his results in the form of Ph.D.
thesis.

The text of the thesis has been divided into
eleven chapters. Chapter I embodies introductory remarks.
Previous work has been summarised in Chapter II. Strati-
graphy; Regional distribution; and Sedimentary structures
including Fabric analysis form the subject matter of
next three chapters. Chapter VI deals with the petrography
of the Siwalik rocks. Chapter VII embodies X-ray diffraction
analysis of the clays. The next three chapters deal with
the Heavy mineral analysis; Mechanical analysis; and
Roundness and Sphericity analyses. In the last chapter
entitled 'Discussion and Conclusion', an attempt is made
to synthesise the observations drawn from the field and
the laboratory investigations.

Various tables and figures have been placed in the
appendix. The tables include the Description of the
stratigraphic columns; Lithologic units and specimen
numbers; Fabric data of the megasclasts; Modal analysis;
Percentage frequency distribution of quartz grains showing
various types of Crystallinity, Extinction and Inclusions;
Percentage frequency distribution of rock fragments;
Distribution of clay minerals; Heavy mineral percentage
frequency distribution; Average heavy mineral content; Phi percentiles; Graphic measures; Moment measures; Multivariate data; Percentage frequency distribution of sphericity grades of sand-sized grains; Intercept sphericity of megasclos; Shape classes of megacos; Elongation indices of megacos; Roundness of sand-sized grains; Roundness ratio of megacos; and Geographical location index.

The figures include stereograms of the fabric data; Bar diagrams of Crystallinity, Extinction and Inclusion types in quartz grains; Bar diagrams of the types of rock fragments; X-ray diffraction patterns of clays; Bar diagrams heavy mineral frequency distribution; Circular diagrams average heavy mineral distribution; Frequency curves, Cumulative curves and Log-probability plots. The figures also include Binary plots between environment-sensitive textural parameters; Histograms for sphericity and roundness of sand-sized fraction; Histograms roundness ratio and intercept sphericity of megacos; Shape plots and Diamond diagram.

The plates include field photographs, photomicrographs and camera lucida sketches of the heavy minerals.
Text tables and Text maps have been placed at appropriate places in the text of the thesis. Geological map of the area; Stratigraphic columns of the Mahan, Kela Amb and Saketi formations; and Geological sections are placed in the pouch of the thesis.

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(GURTEK SINGH GILL)