

CHAPTER 19

GEOLOGY

Doctoral Theses

185. MANSOOR AHMAD
Mineralogical and Geochemical Studies on Clays of Intra-volcanic Bole Horizons from the Eastern Deccan Volcanic Province : Palaeoenvironmental Implications and K-T Boundary.
Supervisor : Prof. Jaya Prakash Shrivastava
Th 15298

Abstract

Studies of clay mineralogical and geochemical variations in the intra-volcanic bole horizons, associated with the stratigraphic framework of 37 lava flows of the Eastern Deccan volcanic province (occur in polarity Chron 30N, 29R and 29N). Constructs well constrained clay stratigraphy for the Eastern Deccan volcano sedimentary sequences. Structural and compositional studies on bole clays to understand palaeoenvironmental conditions prevalent during the Deccan volcanism and K-T boundary transition are described.

Contents

1. Introduction. 2. Field Studies. 3. Clay Mineralogy. 4. Micro-structural and compositional studies. 5. Geochemical studies. 6. Discussion. 7. Conclusion. Bibliography.

186. ROKOSUNO KINTSO
Upper Paleocene-Lower Eocene Planktonic Foraminiferal Biostratigraphy of the Tanot-1 Well Section, Jaisalmer Basin, India and the DSDP Site 237, Western Indian Ocean.
Supervisor : Prof. Prabha Kalia
Th 15299

Abstract

Describes and updates the planktonic foraminiferal biostratigraphy in the bathyal and neritic sections located in the low

latitudes. Records the planktonic foraminiferal response to the Initial Eocene Thermal Maximum (IETM) in the neritic environment where documentation has so far been very poor. Demarcates the Paleocene/Eocene boundary based on the standard biostratigraphy.

Contents

1. Introduction. 2. Systematic paleontology. 3. Biozonation. 4. Discussion and conclusion. Bibliography.

187. TAMAL PAL
Ore Deposit Modeling in the Dariba-Rajpura-Bethumni BELr, Rajasthan, in the Light of a Database on Sediment-Hosted Pb-Zn Sulphide Deposits in India.
 Supervisor : Mihir Deb
 Th 15300

Abstract

Focuses on developing a database on the sediment-hosted Pb-Zn sulphide deposits in India; understanding the regional geological setup of the Dariba-Rajpura-Bethumni belt; understanding the nature of mineralization in the different deposits and prospects along the belt; understanding the petrologic and metamorphic evolution of the ore and host rocks along the belt; understanding the geochemical variation (major, minor, REE, isotopic) in the host rocks and ores to constrain the ore forming environment and its effects on the host rocks; fluid inclusion analysis to characterize the nature of the mineralizing fluids and developing a metallogenic model for the Dariba-Rajpura-Bethumni belt based on all the attributes generated in this study.

Contents

1. Introduction. 2. Regional Geology. 3. Geology of Dariba-Rajpura-Bethumni mineralized belt. 4. Mineralization in the Dariba-Rajpura-Bethumni belt. 5. Petrography and mineral chemistry. 6. Condition of metamorphism and metamorphic evolution of the belt. 7. Geochemistry of host rocks and ores. 8. Fluid inclusion study. 9. Mineral deposit modeling of base metal sulphide mineralization in Dariba-Rajpura-Bethumni belt. Bibliography and Appendix.

188. VIMAL SINGH
Tectonic Geomorphology of the Pinjaur Dun and its Bordering Mountain Fronts, NW Himalayas.
 Supervisor : Prof. S. K. Tandon
 Th 15470

Abstract

Understands the morphotectonic evolution of a part of the NW Himalayan foothills in zones consisting of duns. The Pinjaur Dun has been investigated to understand the co-evolution of structures and landforms. In particular, this work examines the evolution of the landforms and the role of tectonic processes and to some extent, climatic changes in shaping them. Also attempts to build a drainage evolution model for the Pinjaur Dun and related geomorphic zones. Most of the major geomorphic units lie on the Himalayan frontal thrust sheet. Also, few other thrust sheets are present in the area which forms part of the sub-Himalayan wedge. The evolution of the landscapes in the area is also influenced by the progressive deformation of these thrust sheets. Also investigates the character of deformation within the sub-Himalayan wedge, and the effect of these deformations on the adjacent areas.

Contents

1. Introduction. 2. Geological setting. 3. Geomorphology and morphometry. 4. Alluvial fan sedimentation in intermontane valley. 5. Tectonic geomorphology. 6. Morphotectonic evolution of the study area. 7. References and Appendices.

M.Phil Dissertations

189. NANDA (Jagannath)
Interpretation of Sedimentological and Pedological Characters of the Sediments of Bhargavi River, Chilka Lake.
 Supervisor : Dr. Pankaj Srivastava