

## **Evolution of the intracratonic Chhattisgarh Basin of India**

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The crescent shaped Chhattisgarh basin in east-central part of India covers an area of about 30,000 sq km. It is characterised by the presence of a platformal siliciclastic-carbonte lithic assemblage. The time period of deposition of the sediments has been dated to be 1200 to 700 Ma and hence the basin is equated with other intracontinental Middle to Upper Proterozoic basins of India. The rock sequence of the basin rests unconformably on the Archaean granitic basement. Petrography of the rocks suggests that there was rapid sedimentation from the nearby source area without much sorting. Association of volcanogenic sediments in the basal rocks and occurrence of acid volcanics in the peripheral part of the basin indicate that volcanic activity, basin formation and deposition of the sediments were interrelated with each other. Though the rocks are mostly shallow water deposits, geophysical data reveal that the central part of the basin has a sedimentary column of more than 2000m. Thus the central part of the basin must have subsided consequent to the deposition of the sediments. The sedimentary pile records evidence of compressive tectonic regime. The structural features in the rocks suggest that the intensity of deformation was maximum in the early phase and least toward the end phase of basin evolution. A basin developed on a hotspot will have the features observed and hence it is visualised that hotspot magmatic activity of Precambrian period played an important role in the evolution of the Chhattisgarh basin.