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**GEOSCIENTIFIC INVESTIGATIONS OF POLYMETALLIC NODULES
AND HOST SEDIMENTS FROM THE CENTRAL INDIAN OCEAN
BASIN**

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ABSTRACT

This report embodies the results of the research carried out on the polymetallic nodules, host sediments and pumice of the Central Indian Ocean Basin (CIOB). An extensive study has been conducted to best describe the morphological, geotechnical (water content, porosity, density, etc.), mineralogical and geochemical properties of the CIOB nodules and pumice. Morphological aspects of nodules such as size, shape, surface texture and their variations have been studied in detail. An attempt was made to classify the CIOB pumice based on their shape by applying Zingg's method and Sneed and Folks method. The physical properties of the host sediments were studied in order to understand their variation with depth. A hypothetical model has also been discussed for the provenance of these sediments. A smear slide technique has been used to understand the various microfossil clusters and mineral aggregates that make up bulk of the sediments.