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## Field Report

A fieldwork report on the Tertiary Stratigraphy of Kachchh, Gujarat

(15th Dec 2019 to 27th Dec 2019)



By  
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M.Sc I

Submitted to

Department of Geology  
St. Xavier's College, Mumbai  
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## CERTIFICATE

This is to certify that Mr. Steven Dsouza Class- M.Sc.-I UID No- 198404 has successfully carried the compulsory field work at Kachchh in Gujarat State from 16<sup>th</sup> December, 2019 - 25<sup>th</sup> December 2019 as a part of the curriculum.

**Field Instructors**



Dr. Shweta Gurav

**Field Instructors**



Mr. John Dsouza



Dr. Pravin Henriques  
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## ABSTRACT

The main objective of this field work was to study the stratigraphic successions of the Cenozoic Kachchh basin in the western part of the state of Gujarat in India. The Kachchh basin is a peri-cratonic rift basin and the study of the sedimentation in the desired area plays an important role in understanding the paleoclimate and the life during that time. The basin is rich in Cenozoic fossil assemblages throughout the study area. The lithostratigraphy based on Biswas (1992) right from Matanomadh to Khari Nadi Formation was observed on field to study their environment of deposition and their fossil assemblages. The Formations Naredi, Harudi, Fulra Limestone, Maniyara Fort are rich in fossil content which range from Foraminifera to Mega fossils like gastropods, echinoids and much more. Our focus was mostly based on studying the area Formations by Formation and co-relating the Formations based on the deposition of each Formation.

The area has excellent preserved fossils along with burrows and other sedimentary features. The area provides us into an insight into the sedimentary processes and biological activity in that area during the Cenozoic time. The key rock units which show abundance of fossils are mostly limestones, shales and other clastic sediments. The sediment record helps us understand how the basin evolved and how each Formation seen gives us a detailed knowledge of sedimentation and evolution of the Kachchh Basin. Foraminiferal assemblage seen in the area included *Assilina*, *Nummulites*, *Discocyclina*, *Asterocyclina* and *Spiroclypeous*. The foraminiferal assemblages are characteristic markers of the Particular Formations in the Stratigraphy of Kachchh. These are mostly the Larger Benthic Foraminifers which helped us to predict the environment of deposition of that particular Formation. Matanomadh, Naredi, Harudi, Fulra Limestone and Maniyara Fort Formations were extensively studied to understand their lithologies and fossil assemblages. Sedimentary logs for every formation were also prepared and studied.