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Field Report

A fieldwork report on the Tertiary Stratigraphy of Kachchh, Gujarat

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By
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Submitted to

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CERTIFICATE

This is to certify that Ms. Kshitija Kadam Class- M.Sc.-I UID No- 198409 has successfully carried the compulsory field work at Kachchh in Gujarat State from 16th December, 2019 - 25th December 2019 as a part of the curriculum.

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ABSTRACT

Kachchh basin is a peri-cratonic rift basin in the western margin of India, which has preserved almost a complete sequence from Triassic to Recent by several stratigraphic breaks between transgressive cycles. The basin extends far to the west over the present continental shelf. The Tertiary sediments are developed in the western part of this basin. Tertiary is exposed mainly in the narrow coastal plains of Kachchh Mainland and in the outlying plains of other 'highlands'. (Biswas, 1992)

The lithostratigraphy of Kachchh consists of limestone, shales and sandstones. The characteristic lithologies were taken into consideration in identifying formations, which further divided into members. Due to stable shelf environment the formations have remarkable lateral continuity and could be mapped throughout extend of the Tertiary outcrop. (Biswas, 1992)

Matanomadh Formation consists of volcanoclastic sediments deposited in variable environment, ranging from fluvial to littoral. Overlying the brightly coloured lateritic volcanoclastic rocks of the Matanomadh Formation it occurs a dominantly argillaceous formation, which is named as Naredi Formation. Three distinct members are recognized in the type locality are Gypseous Shale Member, *Assilina* –Limestone Member, Ferruginous Clay Stone Member. Harudi Formation consists of greenish grey, splintery shale with yellow limestone in the lower part and calcareous claystone and siltstone with occasional layers of gypsum and carbonaceous shale in the upper. Fulra Limestone consists of a thick sequence of bedded white foraminifer's limestone. There is abundance of *Discocyclina* and the upper part contains number of echinoids. The Maniyara Fort Formation consist of a group of bedded, yellow to ochre coloured foraminiferal limestone with a basal greyish green glauconitic siltstone overlying the white Fulra Limestone. This formation is divided into four members the basal member, lumpy clay, coral limestone and Bermoti Member. The overlying white and foraminifera limestone of the Fulra and Maniyara Fort Formations is the Khari Nadi Formation sediments consists of khaki to yellowish in colour fine grained silts. The beds are thinly laminated towards the top. The exposure shows purple colouration.