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Rivers continued to maintain their courses (denoted by dashed line) during this phase resulting in short and episodic reworking of aeolian miliolite sediments. **c.** Phase of drainage rearrangement after the depositional phase of miliolite (last ~30 ka B.P.). Dotted line denotes the present-day drainage divides. Multiple surface faulting events along the KHF under compression led to uplift of the Katrol Hill Range in tilted manner which triggered drainage rearrangement. Southward tilting caused greater uplift of the wind gap which led to beheading paleo-Gangeshwar river. Channel segment of the catchment was diverted eastward along the easier path of the E-W strike of the Mesozoic rocks forming straight E-W oriented channel up to ‘S’-shaped bend through reversal of Tributary 2 and top-down (TD) process. The paleo-Gunawari at the eastern margin of Ler dome extended its course upstream through along strike headward erosion towards east along the strike forming E-W trending straight channel. Both straight channels oriented in same direction and progressing towards each other joined up producing the ‘S’-shaped bend which formed the capture point. **d.** Model depicting the formation of the anomalous ‘V’-shaped bend during the phase of drainage realignment in the last ~30 ka B.P. Prior to drainage realignment, the river flowed in a straighter path along the wind gap marked as ‘W’. Southward tectonic tilting due to surface faulting along the KHF forced the river to flow southward through top-down process (TD), forming the western arm of ‘V’-shaped bend. The new channel met up with the pre-existing tributary (Tributary 1) that flowed northward after arising from the Marutonk dungar hill located in the south. The development of ‘V’-shaped bend is therefore attributed to the drainage rearrangement that was strongly influenced by tectonic activity and the reach specific conditions i.e., availability of the channel of Tributary 1.

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