CONCLUSIONS
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The study area comprises part of Bhuj taluka of Kachchh district. It lies in southwest of Bhuj city covering 476 sq km area with exposures of Jurassic – Cretaceous sequence.

Following are the important outcome of the study.
1. The Jurassic – Cretaceous sequence of the study area, as a whole, developed on a shallow siliciclastic shelf, related to linear clastic shoreline setup.
2. Based on the field observations the geological map of the study area has been prepared on the scale of 1:50,000.
3. Stratigraphic sections were examined and measured at 24 locations and 3 composite sections have been prepared based on the data collected from the study area. This enabled to draw important conclusions regarding demarcation of various stratigraphic units, their lithological and biological characters, sedimentary structures and trace fossil occurrence.
4. The Jumara, Jhuran and Bhuj Formations of the Jurassic – Cretaceous sequence have been demarcated and further subdivided into ten stratigraphic units. These are, (1) Bharasar Member, (2) Chadwa Dungar Member, (3) Samtiya Dungar Member, (4) Piludi Lake Member, (5) Dhosa Oolite Member in Jumara Formation; (6) Kandawari Wadi Member, (7) Rathi Dungar Member, (8) Sir Edmund Lake Member in Juran Formation; (9) Godpar Member and (10) Rukmavati Member in Bhuj Formation.
5. Based on distinct lithological characters, physical and biogenic sedimentary structures, six lithofacies have been identified which are further subdivided in to subfacies. The six lithofacies and subfacies are, (I) Intercalated Shale Siltstone Sandstone Facies (ICSSF), (I.1) Intercalated Calcareous Shale Siltstone Subfacies (ICSSS), (I.2) Ripple Marked Ferruginous Sandstone Siltstone Shale Subfacies (RMFSSSS); (II) Limestone Facies (LF); (III) Sandstone Facies (SF), (III.1) Ferruginous Sandstone Subfacies (FSS), (III.2) Massive Felspathic Sandstone Subfacies (MFSS), (III.3) Bedded Sandstone Subfacies (BSS), (III.4) Cross Bedded Sandstone Subfacies
6. The Jurassic – Cretaceous sequence is rich in trace fossils of various groups.
7. In all 53 ichnogenera and 76 ichnospecies are identified and described with reference to their diagnostic features, facies characteristics, nature of preservation, stratigraphic distribution, association of other trace fossils and probable producers of the traces.
8. Based on similar life habits or behavioural patterns of biogenic structures five ethological groups were recognized, such as Domichnia, Fodinichnia, Pascichnia, Repichnia and Cubichnia.
9. The highest diversity of biogenic structures found in ICSSS facies of Chadwa Dungar Member of Jumara Formation, while the maximum density is found from BFSS facies of Rukmavati Member of Bhuj Formation.
10. The distribution of trace fossils in all the Members is varied and abundant except Piludi Lake Member, Dhosa Oolite Member and Sir Edmund Lake Member.
11. Three Ichnofacies have been recorded from the study area – (1) *Psilonichnus*, (2) *Skolithos* and (3) *Cruziana*.
12. Based on the association of trace fossils, total seven ichnocoenoses are suggested for the study area, (1) *Gyrochorte* ichnocoenose, (2) *Palaeophycus* ichnocoenose, (3) *Rhizocorallium* ichnocoenose, (4) *Skolithos* ichnocoenose, (5) *Taenidium* ichnocoenose (6) *Thalassinoides* ichnocoenose and (7) *Zoophycos* ichnocoenose. The trophic diversity of trace fossil assemblages reflects different types of substrate conditions, varying rates of sedimentation and different degrees of wave agitation.
13. Ichnological and Sedimentological events have been identified and Member wise described in details. Based on this the depositional environments recognized, which are Estuary, Intertidal (beach, barrier, tidal flat),
Lagoon, Subtidal and Shallow Shelf. Cyclic repetition of these environments observed throughout the Jurassic – Cretaceous sequence.

14. Integration of sedimentological and ichnological data becomes the important tool for the interpretation of depositional environments. Various transgressive – regressive phases, non-depositional contacts, storm events have been noted for the Jurassic – Cretaceous sequence. Finally, a shallow shelf sedimentation model with a transgressive and prograding linear clastic shoreline can be suggested for the study area.