

## **MAJOR MARINE ARCHAEOLOGICAL DISCOVERY IN THE GULF OF CAMBAY AND ITS SIGNIFICANCE**

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The National Institute of Ocean Technology (NIOT), Chennai , India, during the course of its multi-disciplinary marine surveys in the Gulf of Cambay, Gujarat State, India during 1999-2000 came across several startling Side Scan Sonar images in water depths of 20-40 m about 20km west of Hazira. The geometrical shaped features in a regular grid pattern deciphered from the Sonographs are seen to be aligned in a approximately WNW-ESE direction. Repeated Side Scan Sonar surveys followed by Sub Bottom Profiler surveys and Magnetometer surveys established two Paleao channel like features of about 9 km each over 100 sq.km area. The geometric shaped objects are located on either side of the paleao channel wherein several basements and big structures like features are picked up. In order to substantiate the findings, sampling in the area by utilising grab samplers, dredgers and cores were carried out. This brought to light several anthropogenic artefacts including rich haul of datable objects like carbonised wooden log, Charcoal pieces, pottery pieces, micro-lithic tools, hearth material, brick pieces, wattle and daub construction material. Several pieces of river conglomerates, alluvium, beads and human remains were also recovered. The carbonised wood was sent for dating in various institutions in India and Germany. The pottery pieces and other similar artefacts were subjected to TL and OSL dating techniques in India and abroad. The <sup>14</sup>C dates for the wood indicates an age of 9544 BP to 8450BP, while the TL date on the pottery piece gave an age of 13ka ± 2000 BP and the hearth material an age of 10.1ka ± 1500 years BP. The TL and OSL determinant of the artefacts in India and abroad indicate a period range from 9600 BP to 3500 BP.

The detailed geo chemical analysis of the geological and archaeological samples especially with respect to Rare Earth Elements clearly indicate that these are insitu and not transported. The magnetic survey brought to light several clear near surface,

magnetic anomalies which appear to be anthropogenic in nature and require further investigation.

The paper details various geological, geophysical and archaeological aspects of this extraordinary discovery wherein there is no literary, epigraphic or near coastal evidences for a major ancient and organized human settlements. This finding is likely to have a major impact on the pre-history of India.