

A new site for examining Holocene Paleoseismology and Paleoclimate from finely laminated lacustrine deposits on the Lisan Peninsula in Jordan

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Channels incised inside a spillway on the Lisan peninsula were examined as a potential site for Holocene Paleoseismic and Paleoclimate investigations. The spillway was formed when a dike containing an evaporation pond collapsed in March 2000. Sections were observed up to 6.5 meters below the ~1960 Dead Sea Level. In the field varve counts and comparison to the Ein Gedi site with similar deep water lacustrine facies suggest that each meter of sediment represents approximately 700 years of deposition. In addition, no obvious hiatuses were observed in the field leaving open the possibility that a continuous section of paleoseismic history is present and easily accessible from ~1960 ACE to at least ~2600 BCE. Varves also appear to be better defined than in the Ein Gedi site; leaving the possibility of assigning more accurate absolute dates for seismites observed in the section. 43 seismites of various types were tentatively identified in the field between depths of 1.85 and 6.34 meters below the ~1960 Dead Sea level. Seismites were observed showing folding, brecciation, folding and brecciation, boudinage structures, microfolds, and microfaults