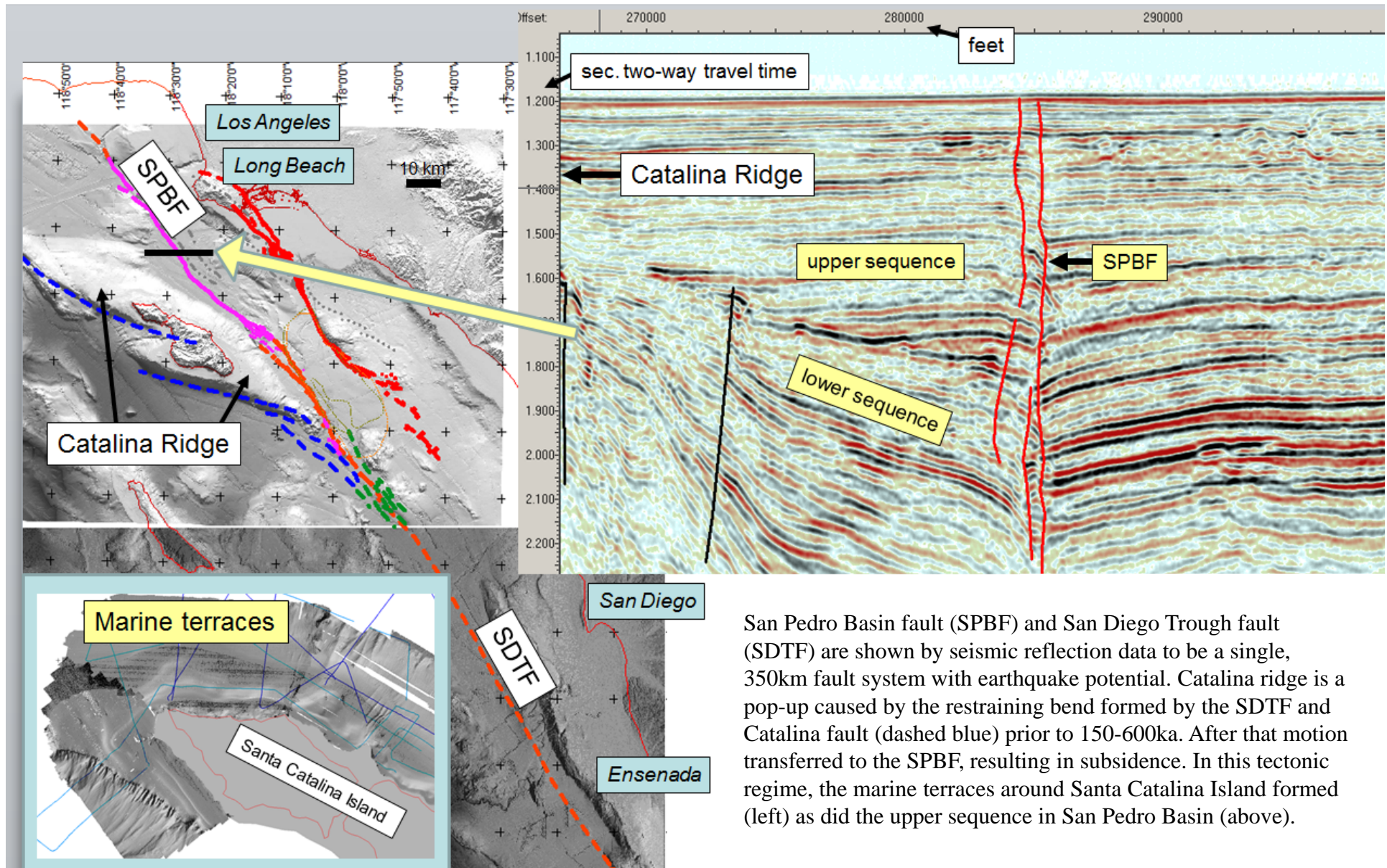


Development of a young pull-apart basin in the California Continental Borderland: High-resolution seismic reflection profiling of San Pedro Basin

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San Pedro Basin fault (SPBF) and San Diego Trough fault (SDTF) are shown by seismic reflection data to be a single, 350km fault system with earthquake potential. Catalina ridge is a pop-up caused by the restraining bend formed by the SDTF and Catalina fault (dashed blue) prior to 150-600ka. After that motion transferred to the SPBF, resulting in subsidence. In this tectonic regime, the marine terraces around Santa Catalina Island formed (left) as did the upper sequence in San Pedro Basin (above).