

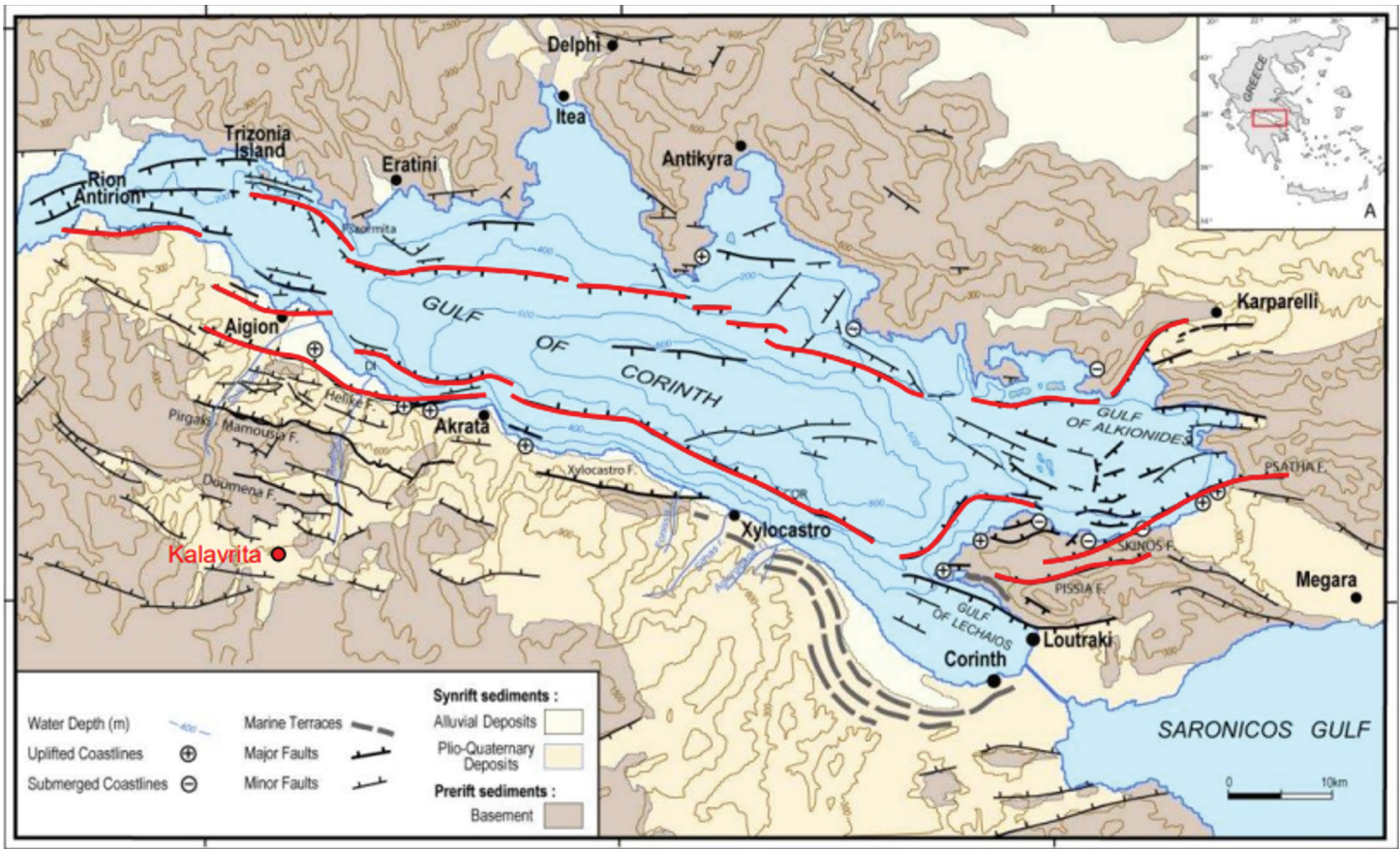
Rift tectonics vs. sedimentation Fault block scales and geometries
Sedimentological variations and architecture Seismic and subseismic
deformation Fault properties and fluid flow
Analogues to NCS Seismic Scale Examples



This trip is arranged by AkerBP and Concedo for FORCE.

Who is this trip for: On this field trip, we will visit approximately twenty localities that highlight a broad spectrum of structural and sedimentological geological features. The multidisciplinary scope of the trip makes it highly relevant for both geologists and geophysicists engaged in exploration along the rift margins on the Norwegian Continental Shelf. Special emphasis will be placed on structural geology, fault architecture at the seismic scale, sedimentology and geological evolution—occurring within a time frame comparable to the major tectonic events that shaped the structural framework of the NCS.

The Gulf of Corinth rift margin offers world class exposures in the scene of an active rift. This field trip demonstrates the complexity of rifted margins with respect to timing of fault movements, unconformities and resulting geometries of tectonic and depositional elements. Emphasis will be put on analogies on the Norwegian Continental Shelf.



Map: The map shows the geological outline of the Gulf of Corinth, situated on the northern Peloponnese coast. The east-west trending active rift system has been active since Miocene, and syn-rift deposits rest unconformably on top of basement rocks of Cretaceous and older age. Red lineaments show active faults. Modified from Moretti et al. (2003).



The image to the left - taken across the Corinth channel - is showing the northernmost channel wall.

At the center of the image, a high-angle normal fault offsets shallow marine sediments showing large-scale examples of cross-bedding and unconformities, providing insights into the marine environment that once existed in the paleo-strait of Corinth, prior to the region's uplift to its present elevation. One interpretation of the localized uplift of the Corinth channel area is that it may indicate the onset of volcanic activity in the region....



Left: Rotated fault block. Mapping of large to medium scale faults and internal sedimentological layering trigger field discussions like fault block geometries, uncertainties in seismic interpretation and compartmentalisation.



Right: Small-scale faults segmenting fluvial channels. Relevant topics like sediment transport direction, fault seal analyses and implementation of heterogeneities in 3D models are discussed.



The image on the left shows the 2025 Kalavrita team approaching the Pissia Fault - a presently active fault within the extensional tectonic regime of the Corinth region. On February 24, 1981, at 10:53 p.m. local time, a major earthquake struck the area, resulting in 20–22 fatalities. A powerful aftershock followed at 4:35 a.m, registering a magnitude of 6.3. During these seismic events, displacement along the Pissia Fault exceeded 1.5 meters. This movement remains visible today as a horizontal color contrast along the fault plane, caused by reduced vegetation in its lower sections. Additional geological features observable at this location include slickensides, fault plane deformation, and more.



At the locality to the left one can observe a coarse grains conglomeratic river channel embedded in sandstones and siltstones of Late Pliocene age. The channel can be picked up on the other side of the road enabling the construction of a 3D model of its geometry. Excellent exposures of syndimentary faults enable discussions on deformation processes leading to clay enrichment and sand mobilization within and along fault zones.

Excursion Guide: Einar Sverdrup, Advanced Geologist (Aker BP ASA).
 Field Assistant, Anders G. Finstad, Explorationist (Concedo AS).

Duration: The Gulf of Corinth field trip is scheduled to start and end in Athens (Monday 4th to Friday 8th May 2026), with 3 full days (Tuesday-Thursday) in the field.

Cost: Estimated to NOK 12.000 , which includes hotels, rental cars and common meals. Plane tickets are not included. Recommendation for booking of plane-tickets will be given as soon as the trip is confirmed.

Other: Number of participants 8-15. Some adjustments of the price can occur based on the final number of participants (+/- 10%). The field trip schedule, as well as excursion field guide will be provided in due time before the trip.