hydrothermal ferromanganiferous crusts on basalts. The reworked Fe-Mn nodular concretions resulted from submarine hydrothermal and fissural activity. These processes took place during the pre-emplacement period of an oceanic crust unit preserved today as the Subpelagonian ophiolite.

Tectonic evolution of the Argolis Peninsula (Greece)

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The Argolis Peninsula indicated a Tertiary nappe stack of different Pelagonian tectonic units structurally overlying the Subpelagonian series. From the base to top they consist of three major tectonic units, which have been successively emplaced throughout different extensional and compressional tectonic regimes: (a) the Para-autochthonous Subpelagonian Unit, as Lower Unit, which is composed by Middle Triassic - Lower Jurassic limestone sequence of Didyma-Trapezona, an ophiolitic mélange of Late Jurassic age, an ophiolitic nappe bearing pillow lavas with radiolarian red cherts of Triassic and Jurassic age and at the top by Meso-autochthonous series that is consisted of an unconformably cover by the Cretaceous to Eocene meso-autochthonous sedimentary sequences, which are tectonically overlain by Pelagonian-originated units, like a Middle Unit (b) Flyschoidal Mélange of Late Cretaceous - Early Tertiary age, associated with various carbonate and ophiolite tectonosomes trapped and carried within this highly disrupted terrigenous flyschoidal mélange and, (c) an Upper Unit consisting of Cretaceous carbonate slivers bearing serpentinite sole. An intra-Jurassic extensional regime (D0) has affected the limestone sequence of Didyma-Trapezona, which was subjected to an extensional stress-field of NE-SW direction. This extensional regime had an effect on the deposition of condensed pelagic limestone of Toarcian age and upwards to the tectono-sedimentary ophiolitic mélange of Late Jurassic age originated from the destruction of an oceanic internal basin. A Late Jurassic compressional stress-field (phase φ1) with NE-SW direction affected the red cherts, which is responsible for the overthrusting of the pillow lavas ophiolitic nappe over the ophiolitic mélange and shows a movement towards the southwest with structural elements that are characterised by overturned NW-trending folds, shear planes and internal thrusts of similar direction having low angle of dip towards the NE and show a constant vergence towards the southwest. After the compressive tectonic phase of Late Jurassic, the Argolis at that time records a severe intra-Cretaceous extensional regime (D1) with NE-SW stress field direction leading to the successive transgression events and hiatus in sedimentation that have occurred from SE to NW of diachronous Meso-autochthonous Cretaceous limestone deposits, topped by deep-water limestone of Campanian-Maastrichtian and then from Lower Tertiary limestone passes upwards into post-Ypresian flysch of the para-autochthonous Subpelagonian Unit. The post-flysch compressional stress-field (phase φ2) with NW-SE direction of late Eocene age, which may be connected with the Cycladic blueschist formation, during the Eocene continental collision of the Hellenides, has contributed to the formation of the Flyschoidal Melange Unit, overriding by the Upper unit, and finally has caused their thrust over the Para-autochthonous Subpelagonian Unit. This compressional phase activated the old lines of NE-SW direction and consists of fronts of internal shearing and thrusting of the same direction and with planes at low angle of dip towards the SE. The recognized structural data indicate a compressional movement towards the northwest. The Upper Unit, which tectonically overlays the Flyschoidal Melange Unit is also affected by the same post-flysch (φ2) phase and was synchronously affected by a transtensional tectonic regime D2, which is characterized by an oblique slip of the normal faults with NE-SW direction and within the same stress-field direction. The neotectonic faults reveal an extensional regime (D3) with NNW-SSE direction stress-field that has affected the Neogene and Quaternary sediments, with a NE-SW trend (σ3, minimum principal axis of stress) and is responsible for the creation of Ligourio-Dhimaina and Drepano-Nafplio-Argos graben-like structures.