in kardhiq, Kaparjel, Gusmar and Vermik and are represented by diabases, olivinic diabases, plagioclasic porphyrites etc. After petrochemical analysis it results that volcanic and metamorphic rocks belong to the toleitic magma and are characteristic for deep oceanic volcanics, It is difficult to determine the provenance and original position of these rocks. Authors, based on some studios of greek coleagues (Papanikolaou, D.J. 1986, 1988, 1989) are of the opinion that these rocks derived from deep levels of Carboniferous or Permian age beeing similar to these ones founded in some sections of Crete, Kithyra and South Peloponnesus.

PALAEOTETHYAN TECTONIC EVOLUTION OF THE NORTH TETHYAN MARGIN IN THE CENTRAL PONTIDES, N TURKEY

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Pre-Late Jurassic basement of the Central Pontides comprises a thick subduction-accretion complex, amalgamated since Lata Palaeozoic. Detailed structural-sedimentological and geochemical studies have revealed a number of major tectonic units, assembled through plate tectonics processes. Two oceanic basins are recognised, separated by two different tectonic units. The first of these is the Devrekani metamorphic unit, made up of gneisses and amphibolites at the base, transgressively overlain by metamorposed carbonates. This unit is interpreted as the basement of a rifted south Eurasian margin fragment. The cover of this unit may be represented by the Palaeozoic of Istanbul and Early Mesozoic sequences of the W. Pontides. The second unit is the Cangaldag Complex, a 10 km thick imbricated pile of evolved volcanics and volcaniclastics, overlying oceanic basement, comprising sheeted dykes and basic lavas. This unit is interpreted as a Late Palaeozoic south-fashing ensimatic arc. The northern oceanic basin is represented by the Küre Complex, a structurally thickened wedge of siliciclastic turbidites, interleaved with a dismembered, supra-subduction zone ophiolite. The Küre Complex is interpreted as a Triassic to Early-Mid Jurassic subduction-accretion complex of southward polarity. The southerly basin is represented by Domuzdag-Saraycikdag unit, a Palaeozoic-Early Mesozoic subduction-accretion complex of northward polarity, made up of an ophiolitic melange in the north, and an accretionary prism in the south, both metamorphosed to blueschist facies. Metabasites are of MORB type. Structurally beneath is a collapsed Permian carbonate platform, together with its passive margin sequences both to the north and south. Lavas associated with these passive margin sequences are of within-plate type without identifiable subduction component.

Available data suggest that, Palaeotethys was subducted northwards, under the active Eurasian margin during Palaeozoic time, giving rise to a major ensimatic arc. A continental sliver was rifted off, related to transform and/or active margin processes, opening the Küre Basin as a back-arc basin an Latest Palaeozoic-Earliest Mesozoic time. A carbonate platform, possibly a Gondwana derived fragment or a Palaeotethyan seamount, drifted northwards, collided with the trench, subsided and was overridden by the accretionary complex, partially closing Palaeotethys. This collision could have triggered southward subduction-accretion of the Küre Basin, followed by uplift in Late Jurassic time. Pre-Late Jurassic granits in the northern Central Pontidas may relate to southward closure of the Küre basin, rather than to northward Palaeotethyan subduction, as in some recent models.

THE GEOCHEMISTRY OF LAVAS FROM AND ADJACENT TO THE SOUTHERN TROODOS TRANSFORM FAULT ZONE: COMPARISON WITH OCEANIC FRACTURE ZONES

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Mid-ocean ridge transform faults are dominated by exposures of peridotites and of other lithologies normally met with in the lower zones of the oceanic crust. In contrast adjacent ridge segments are mostly occupied by MORB basalt flows. Such a petrologic dissimilarity can be attributed to a paucity of volcanic eruptions within and to uplift and rifting parrallel to the fracture zones.

Similar morphologic and tectonic features are found within the Southern Troodos Transform Fault Zone (STTZ), a rare example of a relatively well-preserved fracture within an ophiolite.

There are however distinct and important differences between oceanic transform zones and STTZ. Lavas within the STTZ are extremely depleted in the High Field Strength Elements (HFSE) (TiO_2<0.30%, Zr<20 ppm, Zr/Y<2.5) than lavas recovered from oceanic transforms or from adjacent ridges. To the north of STTZ synchronous lavas extruded along the spreading ridge(s) are less depleted in HFSE than intra-STTZ lavas (TiO_2~0.36-0.67, Zr~30-50 pmm, Zr/Y<0.27) but still considerably more depleted than any MORB. Such first order differences are attributed to the tectonic environment of ophiolite generation which, in this instance, is considered to be above a subduction zone.

Second order geochemical differences along the spreading axis indicate a higher degree of fractionation in synchronous lavas as the STTZ is approached. At the ridge