Lake Acigöl "Denizli"

The saline Lake Acogöl is located in an active graben basin, and is a perennial lake. It has becorne a saline lake by recharging rain water, ground water, and hot springs throught its evolution. In addition, besides volatile transferes of Pliocene aged alkaline basaltic volcanism and solfataric sulfur deposits of the same volcanism are important rechange sources.

Lake Bolluk and Lake Tersaken

By disconnecting from the ancient Tuzgölü basin, these lakes continued their specific evolutions and reached their own hydrochamical stages. Lake Bollum, being closa to the volcanic center, with its hot springs and travartine pinnacles, is a typical spring fed perennial saline lake.

Lake Tersakan, howaver, does not hava travertine pinnackles that can be seen at the surface. This lake shows the characteristics of Lake Tuzgöl,129 and Lake Bolluk, having gypsum occurences and Na, SO_4, and Cl concentrations.

The Na:Cl ratio does not change in all waters of the inflow and lake brina, for the lakes. For this reason, when the Na:Cl line is used as a reference, HCO_3 + CO_3 depletion is observed in the brines of all of the lakes. This is related to tha carbonate precipitation. K remains constant in all inflows and brines. SO_4 is depleted in Lake Acigöl water, because of mirabilite production. In Lake Bolluk, howaver, no SO_4 deplation is observed because the springs of Lake Bolluk are enriched in SO_4 and this makes up the SO_4 and this makes up the SO_4 loss caused by mirabilite production.

HIGH-PRESSURE/LOW-TEMPERATURE METAMORPHISM IN THE EXTERNAL HELLENIDES (CRETE, PELOPONNESE)

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High-P/low-T metamorphic rocks are found as coherent sheets at the base of the nappa piles of Crete and tha Peloponnese. P-T estimates for the Plattenkalk Series in the lowermost tectonic position are near 10 kbar and 350° C in Central Crete and even higher in the Peloponnese. The overlying Phyllite-Quartzite Unit also shows a gradation in P-T conditions of metamorphism from E-Crete (320±40° C, 8±3 kbar) via W-Crete (400±40° C, > 10 kbar) to tha Peloponnese (450±30° C, 17±4 kbar). Lower-grade high-pressure metamorphism is indicetad for the Rawdoucha and Tyros Beds in the

top of the Phyllite-Quartzite Unit. The existence of a high-P/low-T metamorphic belt in the external Hellenides places constraints on geodynamic models of this region.

EVIDENCE FOR TURONIAN RIFT RELATED EXTENSIONAL SUBSIDENCE AND TERTIARY BACKTHRUSTING: THE ALMOPIAS AND PAIKON ISOPIC ZONES, NORTHERN GREECE

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The Almopias and Paikon Zones, first defined by Mercier, form the western and central units respecively of the Vardar Zone of Northern Mainland Greece. The Paikon Zone has long been regarded as an area of neritic sedimentation from Triassic to Cretaceous times, whilst the Almopias Zone, classicaly was regarded as an area of basinal sedimentation.

In this paper we present new sedimentological and structural data from the western margin of the Paikon Zone.

Rather than being simply a shallow water carbonate platform unit in the Late Cretaceous, our sedimentological data establishes an important rifting event, heralded by a depositional hiatus, followed by clastic sedimentation, with limestone olistoliths, overlain by a deep water pelagic carbonate and radiolarite succession. New radiolarian determinations indicate a Late Cenomanian-Lower Turonian age for this break up event.

Rifting and subsidence took place elsewhere in the Vardar Zone at this time, associated with the generation of ophiolites (e.g. Eubeoa, Argolis, Sporades), and may reflect a regional Eastern Tethys lithospheric extensional event.

The nature of the Almopias-Paikon Zone contact will also be examined. This major tectonic contact was originally defined as a **southwestward** directed thrust contact, placing Cretaceous limestones of the Paikon Zone over pillow lavas and radiolarites of the Almopias Zone. However, our new structural data indicate that in fact large-scale **eastward**-directed thrusting and folding took place along this contact, emplacing lavas and radiolarites of the Almopias Zone towards the north east over the Paikon Zone in the Early Tertiary.

This large-scale Early Tertiary backthrusting at the Almopias-Paikon interface may be a result of the Tertiary thrust stack ramping westwards over the Pelagonian continental margin in the west. Full scale collision appears to have resulted in the