

structure of the Vertiskos and the Kerdilion units. It took place during the Upper Jurassic before the sedimentation of the Tithonian molesse.

The second tectonometamorphic event predates the third one, is not recognizable within the Circum Rhodopian Belt metamorphites but is the oldest one affecting the Nea Madytos unit. There are two possible interpretations about the age of this event and the origin of the Nea Madytos unit:

(1) The Nea Madytos unit is equivalent to the Svoula series of the Circum Rhodopian Belt, as has been thought up to now, and therefore the second event is of Upper Jurassic age.

(2) The Nea Madytos unit is independent from the Svoula series and older, as favoured by the author. Its first structure forming event may be (a) of Upper Paleozoic age or (b) of Lower Mesozoic age (Gimmerian orogenesis?).

The "first tectonometamorphic event" includes all the possibly preexisted events, which may have affected the Vertiskos and the Kerdilion units and are still poorly known.

GEOLOGICAL STRUCTURE OF THE SERBOMACEDONIAN MASSIF IN NE CHALKIDIKI PENINSULA

D. Sakellariou^{*} & St. Dürr[™]

^{*} Department of Geology, University of Athens, Panepistimioupoli, Zografou, 15784 Athens.

[™] Geological Institute, University of Mainz, Saarstrasse 21, 6500 Mainz, Germany.

Various metamorphic rocks, belonging to four distinct geotectonic units, contribute to the geological structure of northeastern Chalkidiki peninsula.

The Kerdilion unit, the lower one of the Serbomacedonian Massif, consists of biotit gneisses, marbles and amphibolites.

The Vertiskos unit lies tectonically on the Kerdilion unit, more specifically on the upper marble horizon of this unit, and consists of various gneisses and amphibolites, but no marbles.

The contact between the two units of the Serbomacedonian Massif is proved to be a significant mylonite shear zone, called by us "Upper Marble Shear Zone", developed inside and along the upper marble horizon of the Kerdilion unit. The existence of that shear zone proves the tectonic relationship of the two units of the Serbomacedonian massif to each other and can explain the lithological, structural and radiocronological differences between them.

The Nea Madytos unit consists of marbles, metapelitas and a few amphibolites. It occurs in large scale isoclinal fold and duplex structures in the Vertiskos unit. Lithologi-

cal and textural differences between the Nea Madytos unit and the Svoufa series, the Triassic-Jurassic pelagic part of the Circum Rhodopian Belt, make the earlier proposed equivalence of those two metasedimentary suites doubtful. No evidence, which could support a primary base - cover relation between the Vertiskos and the Nea Madytos units, have been found.

The Arnea granite, a strongly schistosed and lineated leucocratic orthogneiss, is overthrust along a southwest-dipping mylonite shear zone on to the Vertiskos unit.

The lack of magmatogenic phenomena, as aplitepegmatitic veins, contact aureole e.t.c. and the presence of mylonites, allow us to support, that the contact of the Arnea granite to the Circum Rhodopian Belt is also tectonic and further on that the granite is very probably pre-Upper Jurassic.

Based on the above mentioned new data we believe that the Nea Madytos unit is independent from the Circum Rhodopian Belt and originated the Vertiskos and the Kerdillon units. That area may be also responsible for the creation of the basic - ultrabasic complexes occurring within the Vertiskos unit along the contact to the Kerdillon unit. The closure of that (paleo-oceanic?) area led very probably to the collision of the Vertiskos and the Kerdillon units and to the creation of the Serbomacedonian massif in Early Mesozoic or Late Paleozoic. The creation of the Arnea granite may be also related to the closure of that area.

GEOCHEMICAL SETTING AND HYDROCHEMICAL EVOLUTIONS OF THREE MODERN SALINE LAKES IN CENTRAL ANATOLIA

M.Y. Savascin and R. Birsoy

Dokuz Eylül University, Geology Department, 35100 Bornova-Izmir, Turkey

Due to the extensional neotectonic regime continuing since Middle Miocene, a considerable amount of graben basins occurred in Western Anatolia. These basins are characterized by terrestrial and lake sediments and also gypsum, borate and zeolite depositions.

Trona depositions (Bey pazari) also show the same kind of development in Middle Anatolia. These types of occurrences in Middle Anatolia gave rise to both ancient (Middle Miocene) and modern deposits (Late volcanism and saline lakes).

In this study, the three most important mirabilite producing lakes, among the hydrothermal property exhibiting lakes were examined. The geological histories of these lakes throughout their evolutions, and their similarities and differences can be summarized as follows: