II. Unit of alternating lithologies with a thickness ranging between 300-600 m. It is subdivided into three series:

(a) Series of alternating gneisses-micaschists-marbles.

(b) Series of alternating gneisses-micaschists-marbles with intercalations of amphibolites.

(c) Series of alternating gneisses-micaschists-amphibolites (eclogite-amphibolites)-marbles with intercalations of serpentinites.

III. Unit of marbles with a thickness of ≈ 1.500 m. It consists of banded cipoline marbles, dolomitic and calcitic marbles.

The protoliths of the units II and III are probably of Mesozoic age. The magmatic rocks are represented by the syn-kinematic granite of the Skaloti area, and the post-kinematic, (Oligocene), granodiorites of Panorama and Granitis areas.

The evolution of the Rhodopian orogenic system took place during Upper Cretaceous-Lower Oligocene, starting with closure of the basin and subduction. At this stage the rocks under-went a high P/T metamorphism. During unloading they were overprinted under medium pressure (in Eocene time) and low pressure conditions. At this stage rocks with a higher grade of metamorphism, overthrust rocks with a lower grade of metamorphism, thus forming two major tectonic units: the upper tectonic unit characterised by middle to upper amphibolite facies conditions, and the lower tectonic unit by upper greenschist facies conditions, referring to the medium pressure metamorphism.

The tectonic evolution of the area produced a variety of ductile and brittle deformation structures. Folding is related to three systems of axial strike representing different deformation stages. The brittle deformation is represented by three systems of meso-to macroscale faults.

During Middle Miocene the Serbomacedonian massif overthrust the West Rhodope. During the Upper Miocene vertical movements formed the grabens of Serrae, Drama, Kavala-Prinos, and the horts of the mountains Falakro, Pangaeo and Lekani.

INVESTIGATION OF THE TECTONIC SUBSIDENCE MECHANISM IN THE NESTOS-PRINOS BASIN: New prospects for oil exploration

E. Chiotis

IGME, 70 Messoghion st., 115 27 Athesn.

The formation of the Nestos-Prinos basin, previously considered as a typical graben, is ascribed to the Kavala-Xanthi-Komotini strike-slip fault. The origin of the Tertiary Xanthi-Komotini basin is also connected to the initial activation phase of the same fault.

The evolution of the latter basin was early interrupted by the fault plane curvature which impeded the activation of the fault section NE of the Avahira horst. As a consequence a small (12x8 km) basin was initiated during Serravallian (?) in Nestos with extremely rapid tectonic subsidence and terrestrial sedimentation 1500 m thick. At the same period a strong thermal anomaly is confirmed by coalification measurements.

The Nestos-Prinos basin was established in the Tortonian during a stage of intensive lithospheric thinning (average stretching factor - 1,45) associated with a total strike displacement of 12 km along the sturthern section of the fault. Lithospheric thinning progressed NW gradually through the formation of tilted fault blocks bounded by NW-SE faults. This lithospheric stretching propagated also SW of Prinos to the Orphanos basin, separated by another horst. Following the lithospheric thinning, the sedimentation since the Messinian has been associated with thermal subsidence.

A new target for oil exploration is suggested, connected with the tilted fault blocks in the submarine part of the basin. The restricted deeps between the blooks are considered favourable for the deposition of surce rocks, whereas the block geometry provides chances for tectonic and stratigraphic traps. In addition, the conglomerates deposited on the top of Tortonian sediments during a phase of erosion constitute a reasonable canditate resertoir and offer another possibility of stratigraphic traps. However, for the delimitation of such targets a seismic survey of improved penetration is required coping with the high absorbtion of seismic energy by the salt layers.

PALEOGEOGRAPHIC CONDITIONS OF PHOSPHORITES AND BLACK SHALES DEPOSITION IN EPIRUS: Contribution to the exprolation for phosphorites and hydrocarbons

E. Chiotis and P. Vekios

IGME, 70 Messoghion str. 115 27 Athens.

Stratigraphic sections pertaining to phosphorites and black shales in Epirus are described, as well as the distribution of the most significant occurences and the paleogeography during their formation. The correlative sedimentation of radiolarites, phosphorites and black sales during the Lower and Middle Jurassic and the Upper Cretaceous is ascribed to oceanic upwelligs from Tethys. Both, the Jurassic phosphorites and the relevant black shales were deposited during Domerian to Callovian and were associated with equatorial currents. The phosphorites were formed in the photic zone on submarine mountains whereas the black shales in basins a few hundred meters deep.

Two types of jurassic phosphorite occurences are distinguished: sedimentary veins filling fractures of the Pantokrator limestones and stratiform phosphorites covering a

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