cap rock of the field. Source rocks were found at the lower part of the Eocene - Oligocene sequence in adjacent areas. The hydrocarbons migrated laterally into the reservoir form deeper parts of the Thermaikos basin.

The reservoir is composed of platform type limestones of Up. Jurassic - L. Cretaceous age with very low to zaro matrix porosity and locally of thin Eocene limestones.

The limestones are highly fractured. Fractures, faulted zones and Karsts provide the essential effective porosity and parmeability.

Outcrop measurements, aerial photos and well logs (such as the F.M.S. Log) was used to determina tha following fracture characteristics:

— Open fractures generally formed by tensional tectonics

— Predominant direction, N to NE. Surbordinate directions NW-SE and E-W.

— Fractura dips are subvertical (60^o-80^o)

— Fracture apertures varias from 0,2 mm to 3 cm. Tha most open are these of N-S general direction. Appertures greatar than 4 mm corresponds probably to high fractured zones and Karsts.

— The average fractura spacing is 16 cm.

A minimum porosity of 1% is calculated from thase data.

The reservas are estimatad to be $500X10^6$ M^3 of natural gas.

TECTONOMETAMORPHIC EVOLUTION OF THE GEOTECTONIC UNITS OF THE CHALKIDIKI PENINSULA

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Five at least tectonometamorphic avents have been recognized affecting tha geotectonic units of the Chalkidiki peninsula.

The youngest (5th) avant is responsible for tha transformation of the Sithonia granodiorite to augen gneiss and is racognizable within sll tha geotectonic units of the Chalkidiki peninsula, bat has not affected tha Stratoni granodiorite.

The fourth avent took place during the Lower Cretsceous and is the oldast ope which can be detected within the Tithonian molassic sediments. During this avent, the Vertiskos, Kerdilion and Naa Madytos units, as well ss the Arnaa granite, have been metamorphosed under low grade conditions.

The third event represents the first structure forming evant of the Circum Rhodopian Belt and tha Arnea granite and is responsibla for the dominant tectonometamorphic

structure of the Vertiscos 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 independente 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 (Cimmerian 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

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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 Serbomaceconian 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 radiocrhonological 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-