

ABSTRAK

Penelitian mengenai batuan dasar pada batas cekungan Sumatera Selatan terutama pada Bukit Garba belum banyak dipelajari. Ragam batuan serta struktur pada Bukit Garba menggambarkan tektonik yang terjadi selama Paleozoikum hingga Tersier sangat kompleks. Subduksi *Woyla block* terhadap *West Sumatra block* selama Kapur menghasilkan granit Garba. Metode yang digunakan dalam mengungkap evolusi tektonik Bukit Garba ini dengan pemetaan detail lapangan pada 11 lintasan, analisis citra satelit, analisis petrografi, analisis struktur, analisis geokimia berupa XRF dan XRD, serta analisis biostratigrafi. Lintasan pemetaan detail dilakukan pada Lintasan Saka, Gilas, Gedung Wani, Melat, Liki-Meninting, Sui-Kiti, Malau, Menhanggin, Pisang, Lubar, dan Rambangnia. Pola struktur mayor yang memperlihatkan kelurusan struktur yang dominan berarah *NW-SE*. Pola ini sejajar dengan *Sumatra Fault*, sehingga diinterpretasikan bahwa struktur mayor pada daerah penelitian didominasi oleh tektonik Neogen dan Kapur. Pola kelurusan struktur mayor sebagian kecil terdapat di luar segmen berarah relatif *E-W* yang diinterpretasikan berumur Jura. Struktur ini merupakan hasil dari tektonik sebelumnya. Hasil analisis *protolith* menunjukkan bahwa Bukit Garba merupakan wilayah pertemuan antara *West Sumatra block* yang berasal dari *continent* dengan *Woyla block* yang berasal dari *oceanic*. Analisis umur berdasarkan fosil dari batulempung dan batupasir menunjukkan bahwa bagian dari *Woyla block* berumur Jura hingga Kapur Awal. Stratigrafi penyusun *Oceanic Plate Stratigraphy* (OPS) pada daerah penelitian dijumpai pada Lintasan Saka, Melat, Lubar dan Rambangnia. Sikuen pada daerah penelitian disusun oleh kelompok batuan *mid oceanic ridge* hingga ke *mélange*. Komposisi batuan penyusun OPS terdiri dari gabbro hingga batuan campur aduk dari *mélange*. Sikuen ini terjadi sejak Trias Awal hingga Kapur Awal. Ragam batuan penyusun dan struktur yang berkembang pada Bukit Garba mencerminkan perkembangan evolusi tektonik pada Permian hingga tersingkapnya Bukit Garba seperti sekarang ini pada Plio-Plistosen. Evolusi tektonik yang terjadi di daerah penelitian dibagi menjadi 4 (empat) tahapan yaitu 1) *subduction to collision West Sumatra block*, 2) *subduction to collision Woyla block*, 3) *Renewed Subduction*, dan 4) *oblique subduction*.

ABSTRACT

The research of bedrock at the boundary of the South Sumatra basin, especially on Garba Hill, has not been studied much. The variety of rocks and structures on Garba Hill illustrates the tectonics that occurred during the Paleozoic to the Tertiary is very complex. Woyla block subduction to West Sumatra block during Cretaceous produces the Garba granite. The method used in revealing the tectonic evolution of Garba Hill is by a detailed mapping the field on 11 trajectories, satellite image analysis, petrographic analysis, structural analysis, geochemical analysis in the form of XRF and XRD, and biostratigraphic analysis. The detailed mapping trajectory was carried out on the Saka, Gilas, Wani Building, Melat, Liki-Menitnting, Sui-Kiti, Malau, Menhanggin, Pisang, Lubar, and Rambangnia tracks. The major structural pattern that shows the dominant structural straightness is in the NW-SE direction. This pattern is parallel to the Sumatra Fault, so it is interpreted that the major structure in the study area is dominated by Neogene and Cretaceous tectonic. Some of the linearity pattern of the major structures occurs in a small part outside the E-W relative trending segment which is interpreted as Jurassic. This structure is the result of previous tectonics. The results of the protolith analysis show that Bukit Garba is a meeting area between the West Sumatra block originating from the continent and the Woyla block originating from the oceanic. Age analysis based on fossils of claystone and sandstone indicates that part of the Woyla block is Jurassic to Early Cretaceous. The stratigraphy that composes the Oceanic Plate Stratigraphy (OPS) in the study area is found on the Saka, Melat, Lubar and Rambangnia trajectories. The sequence in the study area is composed of rock groups from mid-oceanic ridge to mélangé. The rock composition of the OPS consists of gabbro to mixed rock from mélangé. This sequence occurs from the Early Triassic to the Early Cretaceous. The variety of constituent rocks and structures that developed on Garba Hill reflects the development of tectonic evolution in the Permian until the exposure of Garba Hill as it is today in the Plio-Pleistocene. Tectonic evolution that occurred in the study area is divided into 4 (four) stages, 1) subduction to collision West Sumatra block, 2) subduction to collision Woyla block, 3) Renewed Subduction, and 4) oblique subduction.