



SARI

Formasi Oyo adalah anggota stratigrafi Pegunungan Selatan dan tersusun atas batuan campuran karbonat-silisiklastik. Beberapa penelitian telah dilakukan di Formasi Oyo, namun penelitian mengenai batuan campuran karbonat-silisiklastik di sana belum dijumpai. Maksud dari penelitian adalah untuk mengetahui stratigrafi dan sedimentasi batuan penyusun Formasi Oyo, melalui analisis suksesi vertikal dan horizontal batuan di jalur penelitian. Tujuan dari penelitian adalah untuk mengetahui proses sedimentasi batuan campuran karbonat-silisiklastik serta membuat model sedimentasinya. Daerah penelitian berlokasi di Sungai Oyo, Desa Bunder, Kecamatan Patuk, Kabupaten Gunung Kidul, DIY tepatnya pada koordinat $7^{\circ}53'53''$, $110^{\circ}32'47''$ hingga $7^{\circ}53'39''$, $110^{\circ}32'40''$.

Metode yang digunakan dalam penelitian adalah pengukuran data stratigrafi sepanjang aliran Sungai Oyo dengan skala 1 : 10. Total ketebalan batuan adalah 22 meter dengan kemiringan lapisan rata-rata 11° . Hasil dari pengukuran stratigrafi dibuat menjadi sebuah kolom stratigrafi daerah penelitian dan dilanjutkan dengan analisis sedimentologi (pemisahan kandungan karbonat dan silisiklastik), petrografi, serta paleontologi.

Terdapat 9 fasies penyusun daerah penelitian yaitu fasies A (*Muddy allochem limestone*), fasies B (*Sandy allochem limestone*), fasies C (*Sandy allochem limestone* dengan laminasi), fasies D (*Allochemic sandstone*), fasies E (*Sandy allochem limestone* dengan *trough crossbed*), fasies F (*Oncoidal rudstone* dengan *trough crossbed*), fasies G (*Sandy allochem limestone* dengan struktur *scour marks*), fasies H (*Sandy allochem limestone* dengan *planar crossbed*), dan fasies I (*Oncoidal rudstone*). Material silisiklastik di daerah penelitian merupakan material vulkanik yang terdiri atas *resedimented (syn eruptive) volcanoclastic deposits* serta *volcanogenic sedimentary deposits*. Material karbonat terdiri dari hasil rombakan terumbu. Proses pencampuran antara karbonat dengan vulkanik di daerah penelitian termasuk tipe *source mixing* dengan mekanisme transportasi *sandy debris flow*, arus turbid dan aliran debris. Lingkungan pengendapan batuan berada *reef slope carbonate* hingga *toe of slope carbonate*. Batuan berumur N9 – N10 (awal Kala Miosen tengah) dengan paleobatimetri berkisar antara *outer neritic – upper bathyal* (100 – <500 meter).

Kata kunci : Formasi Oyo, batuan campuran karbonat-silisiklastik, lingkungan pengendapan, dinamika sedimentasi.



ABSTRACT

Oyo Formation is a member of Southern Mountains stratigraphy which consists of mixed carbonate-siliciclastic rocks. Several studies have been conducted in Oyo Formation, but the study on the mixed carbonate-siliciclastic rocks has not been found. The purpose of this study was to know the stratigraphy and sedimentation of Oyo Formation, through a vertical and horizontal succession analysis of rocks in the path of research. The aim of this study was to determine the sedimentation process of mixed carbonate-siliciclastic rocks and make the sedimentation model. Study area is located on Oyo River, Bunder Village, Patuk District, Gunung Kidul, DIY, precisely at the coordinates 7°53'53", 110°32'47" until 7°53'39", 110°32'40".

The method used in this study is the stratigraphy measurement along the Oyo River with a scale of 1 : 10. The total thickness of the rocks is 22 meters with dip about 11°. The results from measurement made into a stratigraphy column. The research continued with the analysis of sedimentology (separation of carbonate and siliciclastic content), petrography, and paleontology.

There are 9 facies of research path, namely facies A (Muddy allochem limestone), facies B (Sandy allochem limestone), facies C (Sandy allochem limestone with lamination), facies D (Allochemic sandstone), facies E (Sandy allochem limestone with trough crossbed), facies F (Oncoidal rudstone with trough crossbed), facies G (Sandy allochem limestone with scour marks structure), facies H (Sandy allochem limestone with planar crossbed), and facies I (Oncoidal rudstone). Siliciclastic material in this study area is volcanic material that composed of resedimented (syn eruptive) volcanoclastic deposits and volcanogenic sedimentary deposits. Carbonate material consists of the reef detritus. The mixing process between carbonate and volcanic material includes source mixing type with sandy debris flow, turbidity current, and debris flow transport mechanism. Depositional environment of the rocks are in reef slope carbonate until toe of slope carbonate. The rocks were deposited on N9-N10 (early Middle Miocene) with paleobathymetry range between outer neritic-upper bathyal (100 – <500 meters).

Keywords : *Oyo Formation, mixed carbonate-siliciclastic rocks, depositional environment, dynamic sedimentation.*