

SARI

Formasi Sonde pada jalur Sungai Kedawung, Kecamatan Mondokan, Kabupaten Sragen, Jawa Tengah, tersusun atas batuan yang sangat bervariasi, seperti batugamping klastik, napal, dan batulempung. Penelitian ini dilakukan untuk mengetahui dinamika sedimentasi Formasi Sonde yang berada di wilayah barat Zona Kendeng. Pengukuran stratigrafi dimulai dari Formasi Kalibeng sebagai batas bawah Formasi Sonde, dan diakhiri oleh Formasi Pucangan pada bagian atasnya. Pembagian fasies didasarkan pada pengamatan batuan secara megaskopis, yang meliputi jenis litologi dan struktur sedimen. Pengamatan petrografis batuan pada 15 sampel dilakukan untuk membantu menentukan jenis komposisi tiap fasies, serta pengamatan foraminifera kecil bentonik dilakukan untuk mengetahui paleobathimetri tiap lingkungan pengendapannya. Daerah penelitian dapat dibagi menjadi 9 fasies, yaitu fasies *grainstone* berlapis sejajar (Gm), fasies napal (Mm), fasies *packstone* (Pm), fasies *grainstone* silangsiur palung (Gt), fasies *rudstone* berlapis sejajar (Rm), fasies batulempung berlapis sejajar (Cm), fasies *rudstone* silangsur sejajar (Rp), fasies batulempung masif (Cms), dan fasies *wackstone* (Wm). Daerah penelitian dapat dibagi menjadi 6 asosiasi fasies, yaitu Asosiasi fasies A mewakili lingkungan pengendapan pantai zona *subtidal* bawah, *open marine*, Asosiasi fasies B mewakili lingkungan pengendapan pantai zona *subtidal* bawah-*subtidal* atas, Asosiasi fasies C mewakili lingkungan pengendapan pantai zona *subtidal* bawah, *open platform*, Asosiasi fasies D mewakili lingkungan pengendapan pantai zona *subtidal* bawah-*intertidal*, dan Asosiasi fasies E mewakili lingkungan pengendapan pantai zona *intertidal*, *pond*. Berdasarkan interpretasi tumpukan sedimen dan data paleobathimetri, batuan yang berada di daerah penelitian terendapkan pada lingkungan *peritidal* dengan kedalaman $\pm 20-0$ meter. Pengendapan sedimen berjalan secara dinamis, namun perubahan lingkungan pengendapan tersebut terjadi pada daerah pantai zona *subtidal* hingga *intertidal*.

kata kunci: Sungai Kedawung, Formasi Sonde, Stratigrafi, Batugamping *Peritidal*.

ABSTRACT

Sonde Formation on the Kedawung River, Mondokan, Sragen, Central Java, is composed by very widely variation of rocks, such as clastic limestone, marl, and also claystone. This study was conducted to determine the sedimentation dynamics of Sonde Formation that located in the western region of Kendeng Zone. Stratigraphy measurement starts from Kalibeng Formation as the lower boundary of Sonde Formation, and is terminated by Pucangan Formation at the top. The facies differentiation is based on the megascopic observation of rocks, which includes the type of lithology and sedimentary structures. Rock petrographic observations on 15 samples was conducted to help determine the composition of each facies, and the paleobathymetri data was conducted to help determine each depositional environment. The study area can be divided into 9 facies, there are horizontal bedded limestone facies (Gm), marl facies (Mm), packstone facies (Pm), trough crossbedded grainstone facies (Gt), horizontal bedded rudstone facies (Rm), horizontal bedded claystone facies (Cm), parallel crossbedded rudstone facies (Rp), massive claystone facies (Cms), and wackstone facies (Wm). The study area can be divided into 6 facies associations, there are Facies Association A represents Beach, lower subtidal zone, open marine; Facies Association B represents Beach, lower subtidal-upper subtidal zone; Facies Association C represents Beach, lower subtidal zone, open platform; Facies Association D represents Beach, lower subtidal-intertidal zone; and Facies Association E represents Beach, intertidal zone, pond. Based on the interpretation of sediment and paleobathymetry data, litology of the study area deposited in peritidal environment with depth \pm 20-0 meters. Sediment in the study area was deposited dynamically, however this sedimentary environment just happened around the subtidal to intertidal zone of the Beach.

keyword: Kedawung River, Sonde Formation, Stratigraphy, Peritidal Limestone.