

Analisis fasies endapan turbidit formasi halang daerah Cimanggu dan sekitarnya, Kabupaten Cilacap, Jawa Tengah = Turbidite deposit facies analysis of the halang formation in the Cimanggu Region and Surrounding Areas, Cilacap Regency, Central Java

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Abstrak

Lokasi penelitian ini berada di daerah Kecamatan Cimanggu dan sekitarnya yang secara geografis terletak pada koordinat batas timur laut UTM 262370 E 9198862 N serta batas barat daya UTM 256431 E 9192930 N. Wilayah ini mencakup Desa Cijati, Pesahangan, Desa Negarajati, serta desa sekitarnya, Kecamatan Cimanggu, Kabupaten Cilacap, Jawa Tengah. Daerah penelitian termasuk ke dalam Formasi Halang berdasarkan Peta Geologi Lembar Majenang (Kastowo dan Suwarna, 1996). Formasi Halang merupakan salah satu Formasi pengisi Cekungan Banyumas, terendapkan pada umur Miosen Tengah hingga Pliosen Awal, dengan dominasi batuan sedimen jenis turbidit yang terendapkan pada zona batial atas. Batuan sedimen jenis turbidit inilah yang menjadi fokus penelitian kali ini untuk mengetahui fasies endapan turbidit serta asosiasinya agar dapat menentukan sub-lingungan pengendapan pada daerah penelitian. Bagian timur laut daerah penelitian didominasi oleh ukuran butir yang lebih kasar sedangkan pada bagian barat daya didominasi oleh butiran yang lebih halus. Daerah penelitian terbukti terendapkan dengan mekanisme turbidit dikarenakan jenis litologi yang beragam, dari yang berbutir kasar (breksi – pasir sedang) hingga berbutir halus (pasir halus – lanau). Didapatkan umur relatif Formasi Halang yang mencakup daerah penelitian pada Miosen Tengah (N11) berdasarkan analisis mikrofosil. Berdasarkan pengukuran measuring section, analisis makroskopis dan mikroskopis, didapatkan 5 lintasan log stratigrafi yang memiliki fasies dominan proksimal pada timur laut dan medial pada barat daya berdasarkan klasifikasi dekatnya dari sumber sedimen (Nichols, 2009). Diasosiasikan dengan sub-lingungan pengendapan kipas laut dalam (submarine fan) dan diinterpretasikan merupakan bagian inner fan dan middle fan, dengan tiga fasies pengendapan channel dan levee serta depositional lobes berdasarkan Nichols (2009).

.....The location of this research is in the Cimanggu region and its surroundings which is geographically located at the coordinates of the northeastern boundary of UTM 262370 E 9198862 N and the southwest boundary of UTM 256431 E 9192930 N. This area includes Cijati Village, Pesahangan, Negarajati Village, and the surrounding villages, Subdistrict Cimanggu, Cilacap Regency, Central Java. The research area is included in the Halang Formation based on the Geological Map of the Majenang Sheet by Kastowo and Suwarna (1996). The Halang Formation is one of the filling formations of the Banyumas Basin, deposited in the Middle Miocene to Early Pliocene age, with the dominance of turbidite sedimentary rocks deposited in the upper bathial zone. This turbidite sedimentary rock is the main focus of this research to determine the turbidite depositional facies and their associations in order to determine the sub-environment of the deposition in the study area. The northeastern part of the study area is dominated by coarser grain sizes, while the southwest is dominated by finer grains. The study area was proven to be deposited by a turbidite mechanism due to the various types of lithology, from coarse-grained rocks (breccia – medium sand) to fine-grained rocks (fine sand – silt). The relative age of the Halang Formation which covers the study area is in the Middle Miocene (N11) based on microfossil analysis. Based on measuring section measurements,

macroscopic and microscopic analysis, obtained 5 stratigraphic log paths which have dominant facies proximal to the northeast and medial to the southwest based on the close classification of sediment sources (Nichols, 2009). Associated with sub-depositional sub-environment of submarine fans and interpreted as part of the inner fan and middle fan, with three depositional facies channel, levee and depositional lobes based on Nichols (2009).