

SARI

Penelitian ini dilatarbelakangi oleh keterdapatan batugamping berlapis pada Anggota Dander di lokasi penelitian yang sebelumnya Pringgoprawiro (1983) mengatakan bahwa Anggota Dander terdiri hanya dari batugamping terumbu. Tujuan dari penelitian ini adalah mengetahui proses-proses yang terjadi atau genesa daerah penelitian dalam ruang dan waktu meliputi litologi atau satuan, lingkungan pengendapan, umur, dan sejarah geologi daerah penelitian. Lokasi penelitian secara administratif berada di Provinsi Jawa Timur dan mencakup dua kecamatan serta lima desa yaitu Kecamatan Bubulan dan Kecamatan Ngasem, Desa Bubulan, Desa Cancung, Desa Setren, Desa Trenggulan dan Desa Butoh. Berdasarkan koordinat UTM WGS 1984 zona 49S daerah penelitian berada diantara 9193910-9190269 N dan 584794-591710 E. Penelitian ini terdiri dari dua tahap yaitu tahap identifikasi masalah yang terdiri dari observasi awal, studi pustaka dan penyusunan hipotesis. Tahap penyelesaian masalah yang terdiri dari pengambilan data, pengolahan data, analisis data dan penarikan kesimpulan. Metode yang digunakan dalam penelitian ini berupa pemetaan geologi skala 1:25.000, analisis petrografi dan analisis paleontologi. Berdasarkan analisis yang dilakukan daerah penelitian terdiri dari 4 satuan batuan yaitu satuan *rudstone-packstone*, satuan *grainstone-floatstone*, satuan *coralline framestone* dan satuan konglomerat. Karakteristik litologi batuan karbonat di daerah penelitian berupa *fossiliferous packstone*, *fossiliferous grainstone*, *fossiliferous rudstone*, *biocalstic packstone*, *bioclastic grainstone* dan *bioclastic floatstone*. Batuan non-karbonat di lokasi penelitian berupa Konglomerat andesit-*grainstone*. Batuan karbonat terendapkan di lokasi penelitian pada Kala Pliosen Akhir (N21) di lingkungan *open sea shelf*, *forereef* dan *organic reef*. Batuan non-karbonat terendapkan di lokasi penelitian pada Kala Pleistosen di lingkungan darat dengan mekanisme sedimentasi berupa *traction flow*. Hubungan stratigrafi antar satuan batuan karbonat adalah selaras menjari dan ketidakselarasan erosional dengan satuan batuan non-karbonat. Daerah penelitian mengalami pengangkatan pada bagian selatan sehingga intrusi Gunung Pandan dengan umur Pleistosen muncul ke permukaan dan mengalami erosi dan transportasi sehingga fragmen-fragmennya dapat terendapkan di selatan daerah penelitian..

Kata kunci: Desa Bubulan, Anggota Dander, batuan karbonat, menjari, *forereef*, *organic reef*, *open sea shelf*.

ABSTRACT

This research was based on the existence of bedded limestone of Dander Member in the research area. Previous studies by Pringgoprawiro (1983) said that the Dander Member consists of only coral limestone. The purpose of this research is to determine the process that happened and the genesis of the research area, including space, time, lithology, depositional environment, age, and also the geological history of the area. The research area is located in East Java Province, specifically in 2 districts and 5 villages, Bubulan and Ngasem District, Bubulan Village, Cancung Village, Setren Village, Trenggulunan Village, and Butoh Village. Based on UTM WGS 1984 49S zone coordinates, this area is located in 9193910-9190269 N and 584794-591710 E. This research consists of 2 phases. Problem identification phase consists of pre-observation, literature studies, and hypothesis determination. Problem solving phase consists of data retrieval, data observation, data analysis, and determining the conclusion. The methods that were used in this research are field mapping in 1:25000 scale, petrography analysis, and paleontology analysis. Based on the analysis that was conducted, the research area has 4 lithologies which are rudstone-packstone, grainstone-floatstone, coralline framestone, and conglomerate. The characteristics of carbonate rocks in this area are fossiliferous packstone, fossiliferous grainstone, fossiliferous rudstone, bioclastic packstone, bioclastic grainstone, and bioclastic floatstone. Non carbonate rocks in this area are conglomerate andesite-grainstone. Carbonate rocks in this area were deposited in Late Pliocene (N21), in open sea shelf, forereef, and organic reef environment. Non carbonate rocks in this area were deposited in Pleistocene in non marine environment with traction flow as the sedimentation mechanism. Stratigraphic relations among the carbonate rocks are interfingering conformity and erosional conformity for non carbonate rocks. This area experienced uplift in the southern part, which made Pandan Mountain intrusion (Pleistosen) surfaced to the ground and went through erosion and transportation that made the fragments deposited in the southern part of the research area.

Key words: Bubulan Village, Dander Member, carbonate rocks, interfingering, forereef, organic reef, open sea shelf.