Genesa Mineral Glaukonit pada Endapan Tsunami Purba dan hubungannya terhadap Lingkungan Pengendapan di Pantai Bagedur, Lebak, Banten = Diagenesis of Glauconite in Paleotsunami Deposit and its Relationship Towards Paleoenvironment Interpretation in Bagedur Coast, Lebak, Banten

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Abstrak

Pantai Bagedur di Kabupaten Lebak, Provinsi Banten merupakan bagian dari morfologi dataran rendah yang disekitarnya terdapat rawa. Berdasarkan karakteristik sedimen dan geomorfologinya, Pantai Bagedur diduga merupakan tempat diendapkannya endapan tsunami purba. Pengambilan sampel sedimen lepas bawah permukaan pada lokasi yang diduga terdapat endapan tsunami purba dilakukan dengan menggunakan metode bor tangan terhadap 8 stasiun pada kedalaman yang berbeda-beda. Kedalaman pemboran tangan dari stasiun BG 01 hingga BG 08 secara berturut-turut adalah sebagai berikut: 115 cm, 100 cm, 80 cm, 700 cm, 400 cm, 450 cm, 160 cm, dan 143 cm. Penelitian ini berfokus terhadap proses evolusi mineral glaukonit yang ditemukan diantara dugaan lapisan tsunami purba serta aplikasinya sebagai penciri lingkungan pengendapan. Mineral glaukonit merupakan mineral autigenik yang terbentuk di lingkungan laut, sehingga keberadaannya dapat dimanfaatkan sebagai penanda stratigrafik lingkungan laut. Karakteristik mineralogi dan geokimia lapisan pasir hijau dianalisis melalui beberapa metode, diantaranya: Petrografi, X-Ray Diffraction (XRD), X-Ray Fluorescence (XRF), dan Scanning Electron Microscope Energy Dispersive X-Ray (SEM-EDX). Hasil analisis menunjukkan bahwa glaukonit tengah memasuki tahap evolusi awal (nascent) berjenis mineral illitik yang terbentuk pada lingkungan lagun-paparan dalam. Berdasarkan lapisan pembawa mineral glaukonit dan komponen bioklastik pecahan cangkang pada inti bor tangan, lokasi penelitian diinterpretasikan memiliki endapan tsunami purba yang tertransport dari lingkungan laut melalui gelombang tsunami.

.....Bagedur coast in Lebak regency, Banten province, Indonesia is part of lowland-swampy swale area that consist of various sediment deposit. Based on its sediment characteristics and geomorphology profile, Bagedur coast is assumed as depositional environment of paleotsunami deposit. Hand Auger drilling method is used to collecting loose sediment sample from eight observation stations with various depths. The depth of hand drilling in BG 01 station to BG 08 station is consecutively as follows: 115 cm, 100 cm, 80 cm, 700 cm, 400 cm, 450 cm, 160 cm, and 143 cm. This research is focused on analayzing evolution process of glauconite minerals and its application as paleoenvironment indicator. Glauconite is an authigenic mineral which is formed in marine environment, thus it can be used as stratigraphical marker of specific paleoenvironment. Mineralogical and gheochemical characteristics of glauconite-bearing bedx are analyzed through several methods, among of them are: Petrography, X-Ray Diffraction (XRD), X-Ray Fluorescence (XRF), and Scanning Electron Microscope Energy Dispersive X-Ray (SEM-EDX). Analysis result show that glauconite sample is classified as illitic minerals and currently undergo early stage of evolution (nascent) which previously formed at lagoonal-inner shelf environment. Based on the presence of glauconite-bearing bed and bioclastic componenets such as shell fragments, observation area is interpreted to have paleotsunami deposit which transported from marine environment by high energy tsunami wave.