

ABSTRACT

Administratively research area include Karantina, Lawang Kidul Sub-district, Muara Enim District, South Sumatera. The extent of research area is \pm 5 km².

Drainage pattern of research area is not developed, Main River in this area is Enim River with drainage pattern subparallel . Landform of research area have divided into (9) landform; Open mine area (D14), Sump (D15), Disposal (D16), Alluvial plain (F1), Flood plain (F7), Channel (F22), Anticline hills (S21), Homoclin slope (S22), Valley intrusion (V24). Stratigraphy of research area have divided into three (3) units unformal litostratigraphy unit and alluvial deposited with arranged form oldest until youngest are sandstone unit of Muaraenim Formation (Early Miocene), claystone unit of Muaraenim Formation (Middle Miocene), Intrusion of andesite (Plistosen) and alluvial deposited (Holosen-Resen).

Structural geology have developed in research area are joint, Prebanch Fault with relative direction Northeast- Southwest, and Murman Anticline (Subvertical, Upright Gentle Plunging Fold) with relative direction Southeast- Northwest.

*Paleoecologi based on analysis of palinology which formed by sandstone unit of Muaraenim Formation (Early Miocene), claystone unit of Muaraenim Formation (Middle Miocene), based on appearing of *Florscuethzia levipoli*, *Florscuethzia meridionalis*, *Florscuethzia semilobata*. The deposition of research area took place in Back Mangrove-Mangrove (Lower Delta Plain), based appearing *Florscuethzia levipoli*, *Florscuethzia meridionalis*, *Spinizonocostites echinatus*, *Zonocostites ramonae*, *Acrostichum aureum*. The deposited of coal in limnic condition with the type of swamp is bog for coal and inundated marsh for interburden layers. There has one event of climate change that is wet, arboreal pollen (82,76%-84,37%) more dominated than non arboreal pollen (15,62%-17,23%). Low moisture (35,05%-40,8%) indicated that the sphore is not dominated. This point supported by maseral analysis, which the percentage of vitrinite is dominated (15%-78,2%)*

Keywords : miocene, lower delta plain, paleoclimate, paleomoisture, paleoecologi