

FACIES ANALYSIS AND DEPOSITIONAL MODEL OF THE MIDDLE-UPPER TRIASSIC SEMANTAN FORMATION, CENTRAL PAHANG, MALAYSIA

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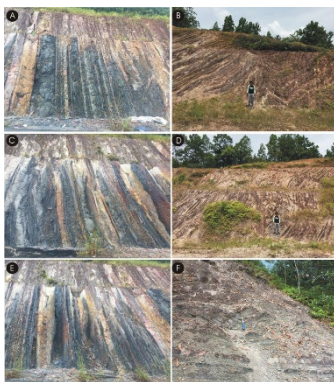
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Graphical abstract



Abstract

This study details the sedimentological analysis of the Middle-Upper Triassic Semantan Formation in the Jerantut-Temerloh-Kemayan region of central Pahang. Seven (F1-7) facies have been identified which are; F1) poorly sorted conglomerate, F2) pebbly sandstone, F3) structureless-to-parallel laminated sandstone, F4) wavy-to-ripple fine-to-medium laminated sandstone, F5) slumped thin-interbedded sandstone and shale, F6) interbedded sandstone and shale, and F7) shale, represent a subordinate part of the Semantan Formation. Examination of the succession of the vertical facies resulted in concession of genetic units (FA1-FA5) which are; FA1) deep channel complex, FA2) distal lobe, FA3) hybrid gravity flow deposit, FA4) channelised lobe and FA5) non-channelised lobe. It is believed that these five genetic units were deposited within four proposed laterally contiguous depositional environments which are; 1) Inner fan – deep channel-levee complex (represent by FA1), 2) Mid fan – channelised lobe (represented by FA5 and FA3), 3) Mid Fan – non-channelised lobe (represented by FA4 and FA3), and 4) Outer fan – distal lobe (represented by FA2). The Semantan Formation deep-water fan is analysed as a sand-rich fan system, based on its sediment types.

Keywords: Semantan Formation, sedimentological, facies associations, channel-levee, Lobes, hybrid gravity flow deposit, Central of Pahang.

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1.0 INTRODUCTION

The development of a deep-water environment (e.g. Semanggol and Semantan Formations) located in the Central Belt of the

Peninsular Malaysia and formed during the Permian-Triassic period (e.g. [1], [2]). This study focuses on the sedimentological characteristics of the deep-sea rock succession of Semantan Formation, which is exposed along the Lanchang-Temerloh route, Jerantut and Kemayan area. The main objective of this