

Potential Reservoir of Complex Channel in Deep Water Vulcaniclastic Turbidite System, Case Studies in Kebo-Butak Formation

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ABSTRACT

Kebo-Butak Formation is one of the formations contained in the Southern Mountains, exposed extends from West to East. Kebo-Butak Formation is one of a series of formations in system deposition gravity turbidite with the composition of vulcaniclastic and some lava andesite basaltic, where deposited in the open sea during the period of late Oligocene – early Miocene in the southern mountains (Satyana, 2005).

Channel on a submarine fan system is one of the most important architecture, which is very good for a candidate reservoir geometry in terms of vertically and horizontally. In the research area encountered a succession of channel complex with type prograding of stratigraphy are good exposed, so it is interesting to understand about character of channel and channel geometry and than can be made as an analogue for the reservoir in volcanic deep water turbidite depositional models. The method used is the measuring section, fossil analysis and porosity analysis using petrographic incision.

There two types of channels it is the type of meandering and braided, which is the show with geometric patterns and succession this stratigraphy. Type of meandering channel has a geometry that is quite large with good-medium porosity, whereas the type of braided channel has a geometry that is small enough separated by fine sediments that its distribution be isolated but has a porosity ranging from very good-medium. The model channel arsitecture in Kebo Butak Formation very good for use in exploration in volcanic regions, especially in the island of Java, where the model from geometery and output range porosity show a potential, but because of limited seismic data and the lack of exploration decrease potential in addition to the necessary understanding of aspects mineral alteration of volcanic and effect to impairment porosity.