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MIOCENE CARBONATES FROM THE RAJAMANDALA FORMATION: NEW LIGHT ON AN ANALOGUE FOR THE BATU RAJA

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ABSTRACT

The early Miocene Rajamandala Limestone outcrops are a distinct topographic high from Sukabumi in the southwest to Bandung in the northeast. It is age equivalent to the Batu Raja formation which is an important producing reservoir in the Java Sea and South Sumatra Areas. Previous studies of the Rajamandala formation have concentrated on broad facies analysis to define reef, reef slope, fore reef and platform top type sediments.

Recent detailed field study from a series of outcrops in the vicinity of Batuasih (near Sukabumi), has permitted a greater understanding of the Rajamandala formation on a scale which is equivalent to that

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observed in conventional core. Detailed sedimentological logging of these three dimensional outcrops has identified rapid facies variations from larger foraminifera-rich open-marine inter platform deposits to coral and coralline algae-rich low-energy protected lagoonal sediments Platform top successions include cyclic facies stacking patterns with intervening distinctive nodular horizons which are interpreted as karst breccia/palaeosols which developed during periodic subaerial exposure. Similar facies and facies variations are commonly apparent in cored intervals from the Batu Raja Formation. However, in conventional core the dynamic nature of the carbonate environment is often not fully appreciated. The recognition of lateral and vertical facies variations in this three dimensional outcrop study increases our understanding of subsurface geology as encountered in conventional core.