

The Deep Gas Potential of the BatuRaja Formation in South Sumatra. A Case History : The Singa Gas Discovery

by

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ABSTRACT

The Singa-1 well was completed as a gas discovery in July 1977, proving up the deep potential of the BatuRaja Formation in South Sumatra.

The lead had been identified over 10 years earlier and offered to the industry for farm-in on many occasions. Over the years there were a number of alternative interpretations of the data. The structure may have been just a seismic artifact, or possibly a volcanic feature, but it was also recognised that the feature could be a BatuRaja play. However, the potential for preserved porosity within a BatuRaja carbonate at that depth was generally thought to be low. Added to this, the structural setting, within the Lematang Trough depocentre, also suggested a high risk that the BatuRaja would not be within a reservoir facies.

Reprocessing of the 1990 seismic data showed a marked improvement in resolution and supported the interpretation of a BatuRaja build-up at depth. Although high risk, a wildcat well was eventually proposed to test the concept, with a depth to target of around 12000'. High temperatures and pressures were anticipated, together with overpressured shales in the Gumai Formation, all of which made the well technically challenging.

The results confirmed the model, and the Singa-1 well encountered reservoir quality reefal facies within a BatuRaja limestone buildup, testing gas at 30.7 MMSCFD from a 258' gross interval.

Singa-1 tested gas some 3000' deeper than any wells previously drilled in the area, extending the BatuRaja play to new depths within South Sumatra.

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