

Paper 24

Abnormal pressure study in the Malay-Penyu Basin

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Drilling of approximately two thirds of the structures in the Malay-Penyu Basin were terminated due to abnormal pressure. Blowouts and the subsequent loss of technical data has always been a concern during drilling operations.

This study uses data from 91 exploratory wells spread throughout the Malay-Penyu Basin. The postdrill abnormal pressure predictive method used in this study is pressure versus depth plots of data obtained from RFT (Repeat Formation Tester) readings.

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Results indicate that abnormal pressure occurs in progressively older units towards basin flanks. The margins of the Malay Basin and the entire Penyu Basin are normally pressured. The onset of abnormal pressure is abrupt in the northern and more gradual in the southern portion of the Malay Basin. Abnormal pressure in the Malay Basin is neither depth dependant nor age related.

This phenomenon is crucial to the understanding of the hydrocarbon migration and will also enable the planning of safe and efficient drilling campaigns.
