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DETERMINATION OF TOTAL SUSPENDED SEDIMENT DURING
SPRING TIDE IN TOK BALI LAGOON, KELANTAN

By

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Research Report submitted in partial fulfillment of
The requirements for the degree of
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**PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

Determination of Total Suspended Sediment during Spring Tide in Tok Bali Lagoon, Kelantan oleh **Muhammad Abduh bin Yazed**, No. Matrik **UK 8740** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Samudera sebagai memenuhi sebahagian daripada keperluan memperoleh Ijazah Sarjana Muda Sains (Sains Samudera), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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ABSTRACT

The main objective of this study is to determine the total suspended sediment in Tok Bali Lagoon, Kelantan. The transport of sediment and its components through a lagoon channel during spring tide was conducted on 16th September 2005. Samples are taken for 10 hours with an interval of 15 minutes. The results of the study showed that the total sediment load ranged between 0.1163 and 1.0942 kg/s⁻¹hr⁻¹. The current velocities are higher during ebb tide with an average of 0.1055 ms⁻¹ than during flood tide which is 0.0755 ms⁻¹. Meanwhile, the maximum amounts of total suspended solid occur on the earlier phase of ebb tide to the middle phase of ebb tide and in the end of flood tides. This suggests that the higher the current velocities, the higher concentrations of suspended sediment in the water.

**UNTUK MENENTUKAN JUMLAH ENAPAN TERAMPAI KETIKA AIR
PASANG PERBANI DI LAGUN TOK BALI, KELANTAN**

ABSTRAK

Objektif utama projek ini adalah untuk menentukan jumlah enapan terampai ketika air pasang perbani di Lagun Tok Bali, Kelantan. Pengangkutan sediment melalui alur Sungai Semerak ketika air pasang perbani dijalankan pada 16 September 2005. Sampel air diambil selama 10 jam dan sampel di ambil pada setiap 15 minit. Dari keputusan yang diperolehi, didapati bahawa jumlah enapan terampai ini berjulat antara 0.1163 dan $1.0942 \text{ kg/s}^{-1}\text{hr}^{-1}$. Kelajuan air adalah lebih tinggi semasa air surut dengan kelajuan puratanya iaitu 0.1055 ms^{-1} berbanding semasa air pasang yang mana kelajuannya lebih perlahan iaitu dalam 0.0755 ms^{-1} secara puratanya. Selain itu, didapati bahawa nilai maksimum enapan terampai diperolehi pada permulaan air surut dan pada penghujung air pasang. Oleh itu, dapat disimpulkan bahawa kelajuan arus memberi pengaruh yang besar terhadap jumlah enapan terampai dalam air.