Geophysical Research Abstracts
Vol. 12, EGU2010-1682, 2010
EGU General Assembly 2010

Seafloor features and processes of the West Nile Delta

Roger Moore, Andy Mills, and Gayle Hough
Halcrow Group Ltd, Birmingham, UK (moorer@halcrow.com)

Recently acquired high-resolution bathymetry and seismic data of the West Nile Delta reveal that the seafloor comprises a variety of features and processes that pose potential constraints to exploration and development of gas fields in the area, including:

- landslides of all scales and ages
- channels, avulsion, erosion and incision
- channel bank instability and recession
- escarpment instability and recession
- turbidity currents
- mud volcanoes, ring faults and mudflows
- shallow gas and shallow water flow
- pockmarks and fluid expulsion

These features and processes are being assessed systematically using high-quality bathymetry, seismic and geotechnical datasets, and through the development of conceptual ground models. Potential geohazard risks have been identified and evaluated to determine their significance to operations and development proposals using qualitative and semi-quantitative assessment methods.

Although significant advances have been made in understanding the frequency, mechanisms, causes and impacts of potential features and processes, further data acquisition and assessment work remains to be carried out in order to reduce uncertainty on key issues, allow better quantification of the risks and to provide assurance to operations and development proposals.

The presentation will illustrate the range of features and processes observed and describe the ongoing investigations and assessments.