

Studies from GETECH's non-exclusive Landscape Analysis Series examine the modern landscape and river networks to identify changes in sediment source-to-sink relationships through time.

Each study is focused on the evolution of the hinterland, and thus the controls on sediment supply, to petroliferous sedimentary basins. Where appropriate the influence of, and interrelationships with, portions of major neighbouring drainage systems will also be considered.



## project rationale *and objectives*

The aim of each study is to identify, understand, date and map changes in each drainage system through time as the landscape evolves in response to changes in climate and tectonics. These changes affect sediment flux, provenance, sediment character and composition, transport mechanisms and ultimately downstream depositional systems.

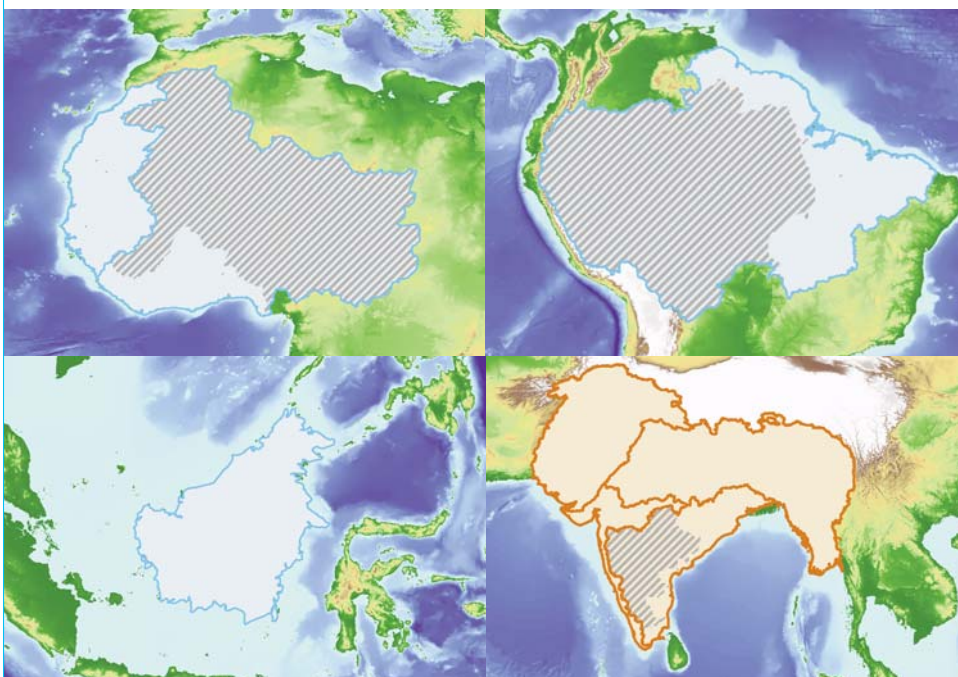
A better understanding of sedimentary processes in the hinterland enhances our knowledge of not only clastic reservoir systems, but also the presence or absence of offshore carbonates; organic carbon type and its preservation; and the distribution of source rocks and potential seals. Each study focuses on the hinterland evolution of between one and three sedimentary basins and is designed to assist you to answer questions on the sediment source-to-sink relationship in your area of interest.

As of April 2009 the following studies are ongoing:

- The Eastern Margins of India
- The Ganges and Brahmaputra Rivers
- The Indus River
- The Western Margins of India and the identification of Pre-Deccan Uplift drainage features

The following studies are proposed:

- Equatorial Africa and the influence of the palaeo-Niger
- The Equatorial Atlantic Margins of South America and the influence of the Amazon
- Northwest Africa and the influence of the palaeo-Senegal and Saharan Rivers
- Borneo



KEY

■ Ongoing ■ Proposed ■ Influence considered

# deliverables

These studies are delivered as:

**An A3 Report, with accompanying A0 enclosures (hardcopy and pdf)**

**GIS Project (ArcGIS 9.x)**

## the report

Executive Summary and Introduction  
Investigation for each drainage basin

■ Basin overview

General basin information  
topography; hydrologic features; substrate geology and structure; climate, vegetation and soil type

Stream morphometry  
morphometric parameters;  
hypsoetry

Geomorphology  
long profile, high pass filter

■ Drainage and landscape analysis

Drainage evolution – Hypotheses  
Stream pattern analysis and interpretation  
Tests and evidence

■ Conclusions

Interaction with adjacent basins  
Landscape evolution  
Implications for hydrocarbon exploration

Regional palaeodrainage evolution

Conclusion and References

Appendix

Drainage methodologies

Three A0 Enclosures

## the GIS project

Reprocessed Digital Elevation Model (DEM) and derivatives

Shuttle Radar Topography Mission (SRTM) 3' (where available) and 30'

High pass filter (discriminating short wavelength geomorphological features for a specified spatial wavelength)

Low pass filter (discriminating long wavelength landforms greater than a specified spatial wavelength)

Newly generated drainage networks

Newly defined drainage basins

Palaeodrainage trends

Main structural trends

Cultural data

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STUDIES

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## other products

### structure and tectonics series

GETECH's global series of Structure and Tectonics studies will re-evaluate, region-by-region, the fundamental structural and tectonic framework that underpins oil and gas exploration. The ultimate goal is a series of detailed, kinematically realistic, structural maps and an original global plate tectonic model.

### gravity and magnetic data

GETECH holds the world's most extensive commercial library of gravity and magnetic data. Our database covers almost every country in the world at a variety of scales and resolutions.



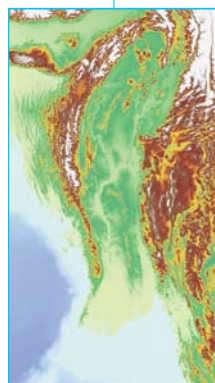
Multi-disciplinary teams of technical experts



Including the world's largest gravity and magnetic library



A global portfolio of focussed exploration reports



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GLOBAL EXPLORATION  
STARTS HERE