

This non-exclusive study examines the geodynamics and petroleum geology of the Equatorial Atlantic margins of South America and Africa.

The study is an evaluation of the tectonostratigraphic evolution of the Equatorial Atlantic passive margin basins and the key issues of source, reservoir and seal development and maturation history.



project rationale *and objectives*

The study builds on GETECH's unique global gravity and magnetic data to underpin a re-evaluation of the structural development of the margins of the Equatorial Atlantic. This forms the basis for the mapping of eleven critical palaeogeographic and palaeo-landscape timeslice reconstructions. Aided by an analysis of the modern day drainage, the study reviews the landscape evolution and likely effects on sediment dispersal. It also contains a review of the geochemical literature, new geochemical modelling, a synthesis of the stratigraphic framework and a basin-by-basin petroleum systems review. All these are used to generate new insights into the petroleum systems of the Equatorial Atlantic margins.

The study will be delivered in two parts:

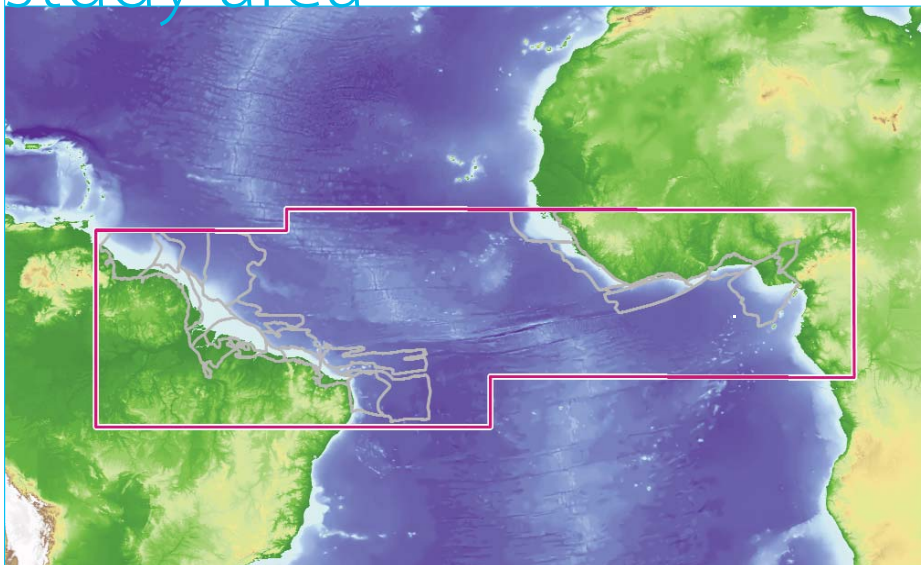
Phase 1: Potential Field Geophysics, Structural Geology, Plate Modelling, Palaeogeographies, Landscape and Drainage Analysis.

Phase 2: Palaeoclimatology/palaeoceanography, Petroleum Geochemistry, Stratigraphic framework and Petroleum Systems.

Some critical issues addressed in the study include:

- Geodynamic evolution and timing of the opening of the Equatorial Atlantic
- Source rocks development, distribution and maturity, and the key differences between basins
- Petroleum potential of the unexplored or under-explored basins

study area



BASINS COVERED

Amapa Platform
 Amazonas Cone
 Barreirinhas
 Benin Embayment
 Ceara
 Cote d'Ivoire, Ghana
 Deep Ivorian
 Demerara Plateau
 Fernando da Noronha
 Foz do Amazonas
 Ghana-Togo
 Guyana
 Marajo Grabon
 Niger Delta
 Para Maranhao
 Pernambuco
 Potiguar

Sao Paulo Deep-Sea
 Southern Senegal
 Sierra Leone-Liberia

TIMESLICES

Tithonian
 Berriasian
 Barremian
 Aptian (Syn-salt)
 Albian
 Cenomanian
 Campanian
 Maastrichtian
 Early Eocene
 Late Oligocene
 Middle Miocene

deliverables

The study is delivered as:

A multivolume A3 Report, with accompanying A0 enclosures (hardcopy and pdf)

GIS Project (ArcGIS 9.x)

the report

Phase 1

Introduction

Tectonic and Structural Framework

Structural interpretation of the gravity and magnetic data
Re-evaluation and testing of published structures
Images of the gravity and magnetic data to illustrate key features
Eight regional 2D modelled gravity profiles

Palaeogeography and Palaeolandscape

Eleven palaeogeographic reconstructions
Palaeoelevation interpretation and derived palaeo-digital elevation models
Palaeodrainage reconstruction

Drainage and Landscape Analysis

Phase 2

Executive Summary

Stratigraphic framework

Palaeoclimatology and palaeoceanography

Petroleum Geochemistry

Source rock characterisation and evaluation
Burial history modelling
Correlation of available source rock and oil data

Petroleum Systems Identification and Evaluation

References and Appendices

More than ten A0 Enclosures

the GIS project

A series of .mxd files illustrating:

Potential Field Data

Images of gravity and magnetic data and derivatives

Structural Framework

Structures and tectonic boundaries

Palaeogeographies

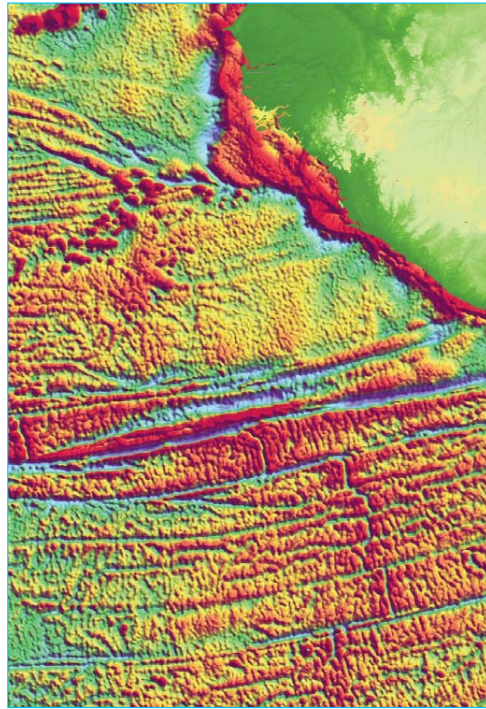
A series of maps for each of eleven timeslices:

- Palaeoenvironments and tectonophysiographic terranes
- Palaeotopography
- PalaeoDEM (digital elevation model)
- Palaeodrainage

Modern Day Drainage

Landscape analysis grids and shape files

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other products

geodynamics and petroleum geology of the south atlantic margins

This major GETECH study examines the geodynamics and petroleum geology of the conjugate margins of the South Atlantic from the Niger Delta to the Cape of Good Hope, and from the Potiguar Basin to Tierra del Fuego. The study will assist oil companies exploring in these exciting emergent basins through integration of key gravity and magnetic data and the expertise of GETECH's team of geoscientists.

gravity and magnetic data

The underlying digital grids of gravity and magnetic data which have been utilised in our studies are also available separately or as a complementary dataset to the study.



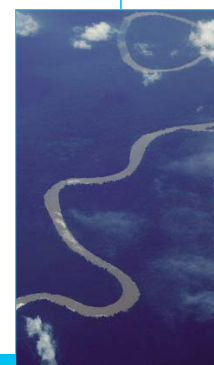
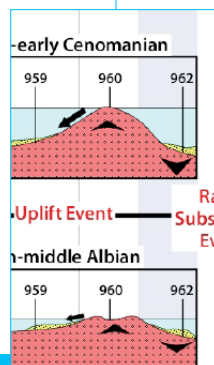
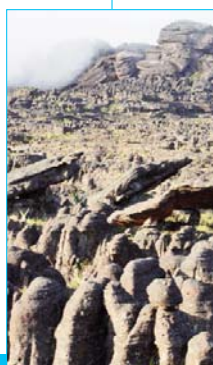
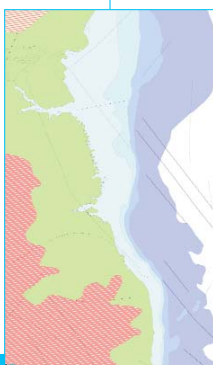
Multi-disciplinary teams of technical experts



Including the world's largest gravity and magnetic library



A global portfolio of focussed exploration reports



GETECH

GLOBAL EXPLORATION
STARTS HERE