

This non-exclusive study examines the petroleum systems of the interior basins of the Algerian Saharan Platform.

This study is an evaluation of the tectonostratigraphic evolution of the basins on the northern edge of the African craton in Algeria and the key issues of source, reservoir and seal development and maturation history.



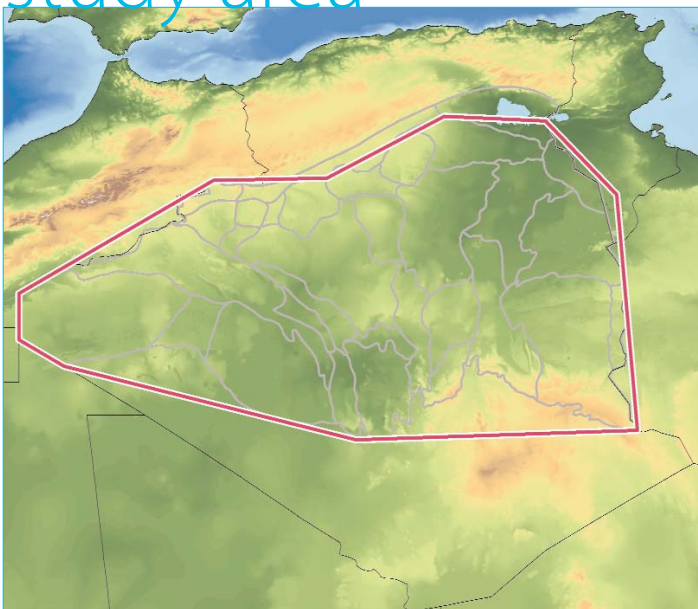
## project rationale *and objectives*

The study builds on GETECH's unique global gravity and magnetic data to underpin a re-evaluation of the structural development of the Saharan Platform in Algeria. This forms the basis for an evaluation of the tectonostratigraphy of key horizons in the study area. The study also incorporates tectonics, petroleum systems, palaeodrainage analysis and play fairway mapping with a particular emphasis on establishing the evolution of the Algerian Saharan Platform through the Palaeozoic and Mesozoic Supercycles. Particular emphasis has been given to specific issues surrounding source and reservoir distribution and quality, source maturation history, seal distribution and competency and trap formation. All these have been used to generate new insights into the petroleum systems of the Algerian Saharan Platform

Some key issues addressed in the study include:

- How did Hercynian and Post-Hercynian movements affect the petroleum systems?
- What influence do the intra-basin highs have on sediment source and transport pathways?
- Does the proximity to land influence the distribution and quality of source and reservoir rocks?
- What is the hinterland extent of the Palaeozoic and Mesozoic Supercycles onto the Saharan Platform?
- What is the importance of glacial valleys in the distribution of Silurian source rocks?
- What effect did Triassic volcanics have on source maturity across the Saharan Platform?
- Can sequence stratigraphic analysis assist in understanding the distribution of potential play fairways in frontier areas?
- What effect has movement on the main structural lineaments had on the competency of seals, trap formation and migration?

## study area



### BASINS COVERED

Illizi-Berkine  
Oued Mya-Mouydir  
Timimoun-Ahnet  
Tindouf-Reggane

# deliverables

The study is delivered as:

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

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

## the report

**Executive Summary and Introduction**

**Structure and Tectonics**

Images of the gravity and magnetic data to illustrate key features  
Structural interpretation of the gravity and magnetic data  
Re-evaluation and testing of published structures

**Drainage and Landscape Analysis**

**Petroleum Systems Evaluation**

A full assessment for each basin:

- Exploration status
- Tectonostratigraphy
- Full appraisal of proven and potential: sources, Reservoirs and seals
- Exploration potential

**Conclusion, References and Appendices**

Five printed A0 enclosures

A further 15 A0 enclosures as .pdfs

## the GIS project

A series of .mxds illustrating:

**Structure and Geophysics**

Images of gravity and magnetic data and derivatives  
Satellite images  
Structures and tectonic boundaries  
Isopachs (grids and polygons) for 12 key horizons

**Modern Day Drainage**

Landscape analysis grids and shape files

**Facies Distribution and Risk Assessment**

Depth to basement

Petroleum System Summaries for 15 reservoir and source horizons including (data dependent):

- Facies distribution
- Porosity distribution
- Migration pathways
- Source maturity
- Proven reservoir by field
- Risk analysis map for six key reservoir horizons

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STUDIES

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## other products

### libya - a tectonic and basin evolution study

This study, co-authored by Saad Jassim, provides fundamental insights into the tectonic history, basin evolution and morphology of all the principal onshore and offshore basins of Libya. Based on gravity and magnetic data and a database of over 700 well tops, the study will assist companies who are reviewing prospective new areas of Libya.

### 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.



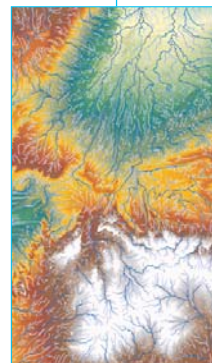
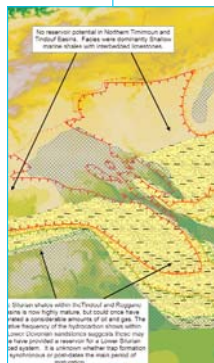
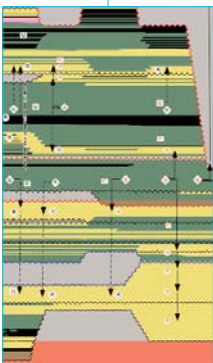
Multi-disciplinary teams of technical experts



Including the world's largest gravity and magnetic library



A global portfolio of focused exploration reports



GLOBAL EXPLORATION  
STARTS HERE