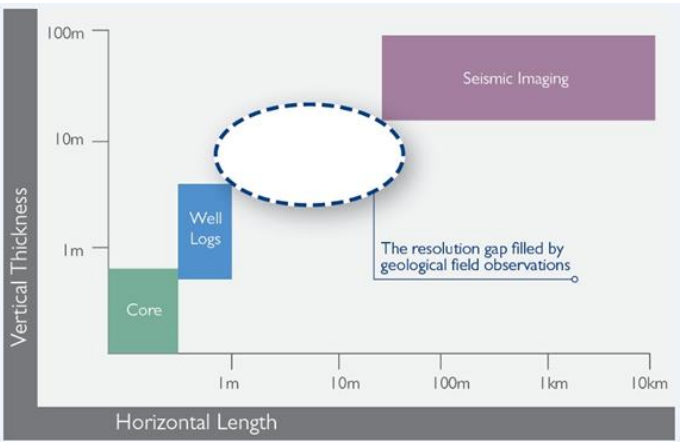
chronosurveys
Geological consultants

Training offer

Lusitanian Basin Field trip

Lusitanian Basin field trip

This course is designed to provide industry professionals an understanding of the Lusitanian Basin Geology and its Petroleum systems elements and processes. Activities include an overview of basin evolution, field exercises and observation of World-class outcrops from seismic to hand-sample scales. The Lusitanian Basin is one of the few exposed North-Atlantic basins, allowing the comparison with conjugate and analogue basins only observable by seismic and well data. The field trip can be adapted from 2 to 5 days. Most outcrops are 1h driving distance from Lisbon's international airport.



Nichols and Baker 2015

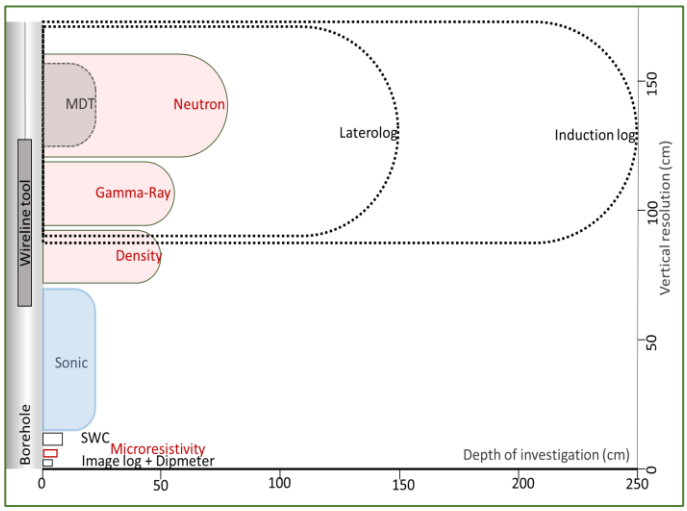
Objectives

- Understand North Atlantic basins evolution from the Triassic to recent times
- Observe and interpret main stages of sedimentary fill and different reservoir types:
  - Continental Triassic red beds
  - Lower to Middle Jurassic carbonate platforms
  - Upper Jurassic fluvial, deltaic and marine siliciclastic sequence
  - Siliciclastic-dominated Cretaceous and Cenozoic sequences
- Interpret source rocks and fluid paths using outcrop and seismic data
- Observe salt-related structures in outcrop and compare with seismic data
- Understand how seismic and well information and outcrop geology can be used for exploration – bridging the observation resolution gap
- Analyse and quantify an exhumed oil accumulation based on outcrop data.

Training methodology

This course is based on theory presentations, field observations and practical exercises. The field component allows participants to have hands-on approach to geological concepts and petroleum systems elements and processes. World-class outcrops of the Lusitanian Basin (Western Portugal) are used as examples and different scales of observation are discussed – outcrop, borehole and seismic.

Field exercises



Depth of investigation of wireline tools, to overlay on outcrops

Who Should Attend?

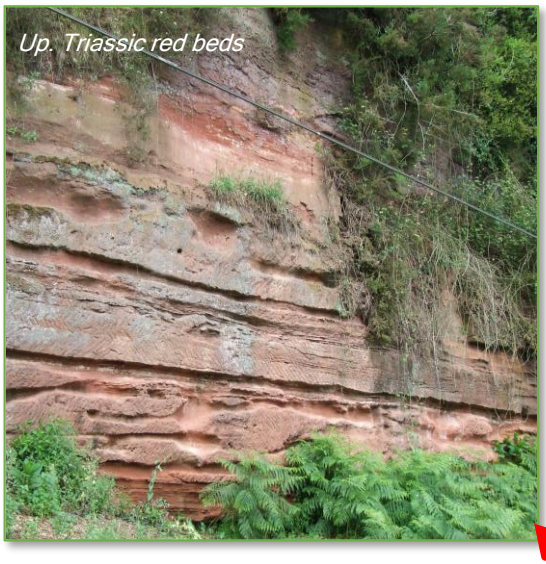
Industry professionals who work with the Petroleum Geology of North Atlantic or analogue basins and want to know and see more similar geology at different scales:

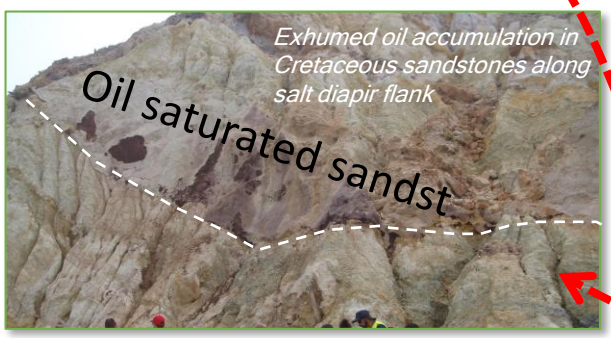
- Exploration Geologists/Geophysicists
- Petroleum Engineers (Reservoir, Drilling, etc)
- Petrophysicists
- Development/production Geologists

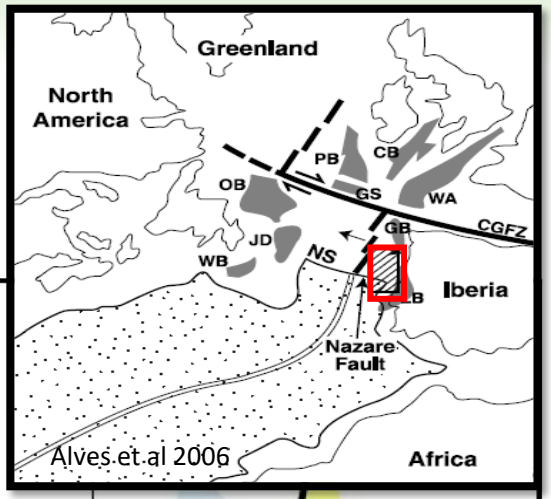
Main organizational and professional benefits

- Exploration and development teams boost their regional knowledge
- Direct analogues of reservoirs are observed from hand sample to seismic scales
- Basin evolution and structure are understood from basement to recent fill

Lusitanian Basin highlights



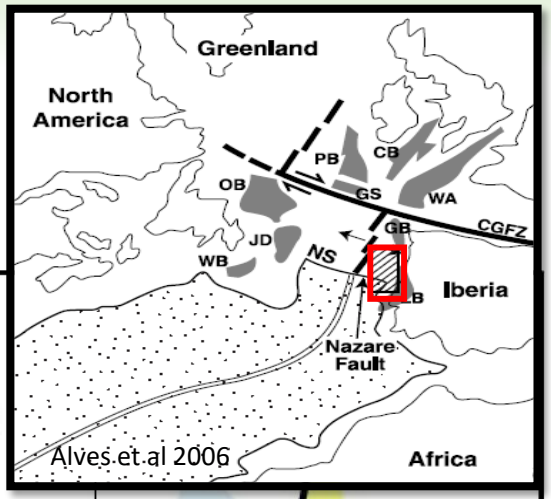




Lusitanian basin

Reis and Pimentel 2007

Lusitanian Basin highlights



Lusitanian basin

Offshore
- Cenozoic
- Mesozoic
- Paleozoic

Onshore
- Cenozoic
- Cretaceous
- Jurassic
- Triassic
- Basement
- Triassic diapirs
- *Main faults*

Boa Viagem
C
Lousã
40°
Atlantic Ocean
VF
L.
N
T
P.Mós
Caldas
Arrife
PN
SC
TV
39°
Lisboa
B
Arrábida
9°
8°
Reis and Pimentel 2007

About Chronosurveys

Chronosurveys brings together the best of the Oil & Gas Industry and Academia. We are a group of consultants based in Portugal with experience in Oil & Gas and specialist researchers in Academia that provide integrated services in Stratigraphy, Source Rock evaluation and other Petroleum Geology disciplines. Our services include:

- Biostratigraphy
  - Palynology
  - Nannofossils
  - Micropaleontology (forams)
  - Conodonts
  - Other disciplines (SSF, metamorphic terranes, etc)
  - Review of vintage reports

- Source rock evaluation
  - Organic geochemistry (TOC, RockEval)
  - Thermal maturity (vitrinite reflectance, spore colour, fluorescence)
  - Visual kerogen typing

- Seismic interpretation and prospect generation
  - Data room evaluations
  - Regional prospectivity
  - Volumetrics and risking

- Stratigraphy and reservoir geology
  - Well correlation
  - Petrographic descriptions
  - XRD

- Multiclient regional prospectivity reports
  - Dynamic GIS project (and webGIS version)
  - Petroleum system evaluation with plays, GDE and CRS maps, well data, seismic and cross-sections, outcrop data, source rock and reservoir parameters

- Training
  - In house and offsite training courses (biostratigraphy, seismic interpretation, petroleum geology)
  - Field trips in Portugal
  - Geo-Historical tours of Lisbon

We are available to discuss further details in a Zoom/Teams meeting or by email: info@chronosurveys.com