



*Training offer*  
**Sequence Stratigraphy**

The objective of this training course is to get more out of seismic and well data through the use of sequence and seismic stratigraphy and integrated stratigraphic analysis to further constrain geological models. Ultimately, it can be used to predict and discover more geological resources and predict the geology before wells are drilled.

This 5-day interactive Sequence Stratigraphy training course will deal with the fundamentals and practical applications of sequence and seismic stratigraphy. It will include exercises and case histories for some interpretation and workshop discussion

## Objectives

- Understand the use of chronostratigraphy in providing a temporal and spatial display of depositional packages
- Have a sound understanding of the factors controlling sedimentary basin fill
- Gain awareness of the terms and definitions used in sequence and seismic stratigraphy
- Identify the main stratal terminations, surfaces, system tracts and sequences on seismic
- Integrate other geological data to identify sequences and system tracts on well logs and biostratigraphy charts.



*Classroom lectures and exercises*



*Field trip in Portugal*

# ***Training methodology***

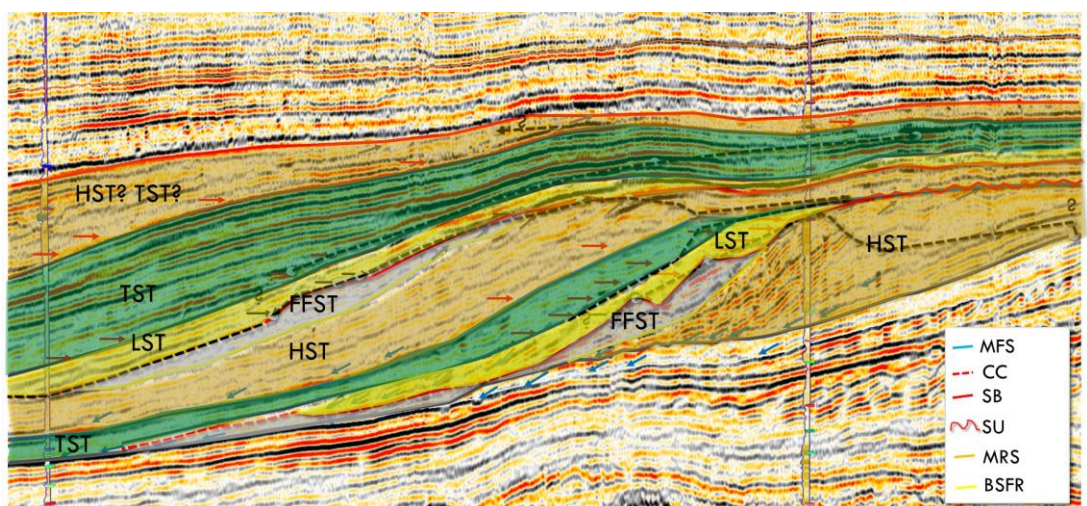
The training course will be based on slide presentations for each module, together with exercises and/or field work. There will also be sessions with real exploration examples to get participants a hands-on experience on the usage of seismic data, well data and biostratigraphy data. Exercises and examples include several sedimentary settings and participants will be able to observe, map and interpret the different data types in a sequence stratigraphic perspective to predict reservoir, seal and source rock presence.

## ***Who Should Attend?***

This course is designed for subsurface professionals who are interested in using Sequence Stratigraphy for their work in their companies, including oil & gas, mining, carbon sequestration and gas storage industries.

This course is suitable to a wide range of professionals but will greatly benefit:

- *Petroleum Geologists*
- *Exploration geoscientists*
- *Sedimentologists and stratigraphers*
- *Petrophysicists*
- *Basin modellers*



*Sequence stratigraphic interpretation of seismic line*

# Course contents

## Day One

### Introduction to Stratigraphy

- The laws and principles of Stratigraphy
- The history of sequence stratigraphy and stratigraphic models
- Chronostratigraphy and seismic models
- Coastal onlap and eustacy

## Day Two

### Sedimentary fill and cyclicity

- Principles and the geometry of depositional systems
- Changes in accommodation space
- Controls on basin stratigraphy
- Orders of cyclicity
- Types of sedimentary basins

## Day Three

### Sequence Stratigraphic models and its application

- Stratal terminations
- Surfaces – sequence boundaries, flooding surfaces and transgressive surfaces.
- The Exxon Model
- Genetic stratigraphic sequences
- Modern uses of sequence stratigraphy

## Day Four

### Seismic facies and Sequence Stratigraphy on well log and biostratigraphy data

- Seismic facies analysis
- Analysis of seismic attributes
- Well logs for stratigraphic interpretation
- Identification of surfaces and systems tracts
- Sequence interpretation of biostratigraphic charts

## Day Five

### Carbonate Sequence Stratigraphy

- Carbonate systems overview
- Introduction to carbonate sequence stratigraphy
- Controls on carbonate production and sedimentation
- Carbonate platform drowning and causes
- Highstand shedding
- Mixed systems

These contents can be delivered as part of a field trip in Portugal

# 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](mailto:info@chronosurveys.com)