# The value of BHI data in the Exploration-Appraisal-Production cycle

One day course tailored to your needs

# badley ashton

**Reservoir Geoscience** 



Pre-MENA 2015 Oil & Gas Conference Course No. 1 <u>Place:</u> Imperial College <u>Date:</u> 7<sup>th</sup> September 2015 <u>Time:</u> 8:30 AM-17:00 PM

Click for Registration Form

We aim to show you how using cutting edge technologies, integrated with more traditional analyses, will give you a deeper understanding of your reservoir

This interactive one day Borehole Image (BHI) awareness course is designed to provide an understanding of the advantages and limitations of current BHI devices, together with their applications and value to the Exploration-Appraisal-Production cycle. The course focuses on sedimentological and structural interpretation techniques, as well as methodologies for wider BHI integration with other data types. For these purposes, the course uses the Badley Ashton geologically-driven workflows and classification schemes for the different facets of the

Summary outline

BHI interpretation.

Identification and classification of image facies

Upscaling to genetically-linked

depositional packages

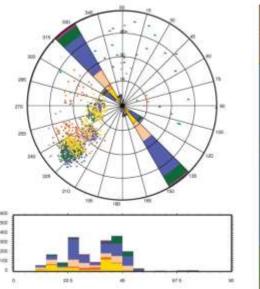
Interpretation of genetic

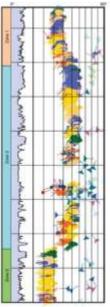
elements and generation of

depositional models paleoslope and paleoflow

analysis

- The workshop is organised into three sessions;
- Borehole Image data acquisition, processing and QC
- Workflows for an effective interpretation
- Application of the results Case Studies





## **Course outline**

#### Part A. Borehole Image data - acquisition, processing and QC

- Borehole Image and dip data principles
- Informed tool choice comparison of the available BHI tools and their geological interpretability
- Recent developments (Quanta Geo/NGI, StarTrak)
- Data acquisition, processing and loading
- the big points for discussions with Vendors
- Image display optimisation
- An overview of the QC of the image and dip data

### Part B. Workflows for an effective interpretation

- The work process and descriptive schemes
- Recognition of sedimentary, diagenetic and structural features
- Manual vs automatic dip interpretation
- Image facies identification and classification
- Structural dip evaluation and zonation
- Palaeoslope and palaeotransport analysis
- Fracture/fault analysis
- In situ stress determination
- Introduction to petrophysical BHI applications
- The relative value of core-derived and BHI-derived datasets, and their effective 'marriage' (including CT core scans)
  Upscaling the BHI observations - depositional evolution and
- opscaling the Bri observations depositional evolution at reservoir architecture interpretations

#### Part C. Application of the results - case studies

- Examples of deepwater projects integrating core, BHI, and CT scan data for reservoir architecture and fracture network determination
- Examples of BHI projects from other sedimentological environments (aeolian, fluvial, carbonate)
- Additional case studies from the client's own portfolio (assuming previous consultancy work by Badley Ashton)

#### Assumptions

- 1. The course has an approximate duration of 8 hours, which includes 15 minute coffee breaks in the mid-morning and mid-afternoon. A 1-hour lunch break is also assumed.
- The course can be held at the client's location (up to 10 participants) or in the Badley Ashton offices: in Houston (up to 6 participants) or Winceby (Lincolnshire), UK (up to 10 participants).
- 3. The data used for the illustrations and 'case studies' will be de-identified data from Badley Ashton's resources. These may be supplemented with more specific examples from the client's own portfolio (assuming previous projects with Badley Ashton). The client would be responsible for obtaining any internal permission with regard to their use in the course.
- 4. The course will be run by either Meriem Bertouche or Mateusz Cyprych with the assistance of Mike Ashton (see below for CV details).
- 5. The workshop will be delivered via a PowerPoint presentation supplemented by an interactive work session using TerraStation software\*; handouts of the presentation will also be provided in hardcopy at the beginning of the course.
- 6. The case studies will focus on deepwater environments, however, the exact scope and programme of the course can be tailored to specific client criteria. \* in agreement with TerraSciences Inc.

# Presenters

Meriem Bertouche - Meriem is Badley Ashton's CEO and in-house BHI specialist. She is responsible for the quality control of all the BHI work that the Badley Ashton group undertake; she is also responsible for the training of Badley Ashton's staff in BHI interpretation and has particular experience in the Miocene and Oligocene turbidite systems of the Gulf of Mexico, Offshore West Africa and Offshore Malaysia. Meriem has presented this course several times in the past few years.

Mateusz Cyprych - Mateusz is one of Badley Ashton's Houston-based deepwater specialists with interest in clastic sedimentology and data integration with geophysical imaging techniques such as BHI and core CT scans. Together with Meriem, Mateusz is responsible for the quality control of the BHI data and the staff training. He has extensive experience in both BHI and core-based sedimentological and structural interpretations of deepwater systems including Miocene projects from Gulf of Mexico and Offshore Malaysia. His Borehole Imaging expertise is kept up-to-date by participation in several BHI-focused courses and workshops (eg. the recent Quanta Geo advanced processing and interpretation course by Schlumberger).

Mike Ashton - Mike is the founder and Chairman of the Badley Ashton companies, and is primarily responsible for the technical work carried out by the group. He is a specialist deepwater sedimentologist and is actively involved in many GoM exploration and appraisal studies. Mike contributed to much of Badley Ashton's sedimentological work on both Miocene and Paleogene GoM projects.

#### Participants

The course is suitable for geologists, geophysicists, petrophysicists, reservoir engineers and managers who wish to develop a better understanding of borehole image tools and their geological applications. No previous BHI experience is required.

