



Tectonostratigraphic and sedimentological characterisation of the Upper Jurassic syn-rift deposits (Froan Basin, Norway)

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Project Description

The aim of this project is to improve our understanding of the syn-rift tectonostratigraphic evolution of the Froan Basin (Trøndelag Platform, Offshore Norway), and to contribute to a better general understanding of sedimentology and distribution of shallow-marine reservoirs. The Trøndelag Platform is one of the major, petroleum-bearing structural elements of the Norwegian Sea, but despite the Draugen discovery, made in the early 1980s, the constituent Froan Basin area is still underexplored, and the Upper Jurassic Rogn Fm play are accordingly not well understood. This is surprising given the Trøndelag Platform is located immediately up-dip of a very prolific basin (i.e. Halten Terrace) that contains a successful Upper Jurassic play.

The renewed interest in the Froan Basin, as indicated by recent exploration activities targeting potential Upper Jurassic syn-rift reservoirs (e.g. wells 6407/9-12), strengthen our understanding of the tectono-stratigraphic evolution of the area. In particular, the role of the paleotopography as a controlling factor on the deposition and preservation of reservoir sandbodies will be investigated.

The aims of the projects are to:

- Generate a tectono-stratigraphic model describing the syn-rift evolution of the Froan Basin;
- Constrain the regional distribution of the Rogn Fm and explore the potential role of the Callovian Unconformity in controlling sandstone deposition and preservation;
- Criteria to identify sandstone ridges in seismic reflection data
- Identify and apply modern and ancient analogues (in collaboration with Sergio G. Longhitano, University of Basilicata, Italy)

We are looking for a student with interest in seismic interpretation and the sedimentological analysis of well and core data, and with a passion in sedimentology and structural geology. The successful candidate will be part of the Clastic Sedimentological Investigation (CSI) group of the Earth Sciences Department of the Royal Holloway, University of London, and will have close ties to the Basin Research Group (BRG) at Imperial College. The PhD student will benefit from training organised by the CSI and the Earth Sciences Department, and will attend national and international conferences and workshops



to present their work. There is potential for participation in activities (e.g. fieldwork) organised by collaborating research groups (e.g. The Drifters, RHUL). Finally, there will be an opportunity to spend part of the project in the sponsor company's office in Norway, benefitting from access to additional data and the expertise of company experts.

Funding Notes

The studentship is fully funded for 3 years in the first instance through a scholarship provided by a Norwegian Oil Company. The studentship covers: (i) the annual stipend, (ii) research costs, and (iii) tuition fees at the UK/EU rate. Overseas and EU students with alternative funding are also welcome to apply. You can extend your funding period for up to 3 months by applying for an industrial placement.

For further information contact: domenico.chiarella@rhul.ac.uk

For more information on how to apply visit us at [Royal Holloway Direct](#)

Closing date for application is **24th January 2020**.