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Unconventional hydrocarbon resource plays in the North Sea Basin, Northwestern Europe

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In 2017 the geological surveys contributed to the European wide project 'EU Unconventional Oil and Gas Assessment' (EUOGA). The goal of EUOGA was to assess all potentially prospective shale formations from the main onshore basins in Europe and included contributions of twenty-one European geological surveys and the assessment covered 82 geological formations from 38 basins (Zijp et al. 2017).

To extend the assessment to offshore basins the geological surveys of Denmark (GEUS), Germany (BGR), the Northlands (TNO) and United Kingdom (BGS) are working together on the Geological Analysis and Resource Assessment of selected Hydrocarbon systems (GARAH) project that aims at assessing the conventional and unconventional hydrocarbon resource in the North Sea Basin. Within the basin more than 10 shale layers have been recognised as holding potential resources. These shales include the offshore equivalent of the Cambrian Alum Shale, The Carboniferous Bowland shale and the Jurassic Wealden and Kimmeridge shales that onshore have been a target for hydrocarbon exploration within the European Union member states. Each shale layer will be characterized using thirty systematic parameters such as areal distribution, structural setting, average net to gross ratio of the shale reservoir, average Total Organic Carbon content (TOC) and average mineralogical composition.

This is a part of an ongoing EU Horizon 2020 GeoERA project (The GARAH, H2020 grant #731166 lead by GEUS).

References

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