

Internship report

Inventory of Hydrocarbon Shows in the Dutch Northern offshore

Chris Heerema

June 6, 2016

Supervisors:

Eveline Rosendaal (EBN)

Marloes Kortekaas (EBN)

dr. Francien Peterse (Utrecht University)

Abstract

Hydrocarbon show information is valuable in exploration studies. Locating mobile hydrocarbons, determining migration paths, and acquiring information regarding source kitchens are among the uses of hydrocarbon shows. Documentation of hydrocarbon shows can therefore be a powerful exploration tool. Several vintage hydrocarbon show databases have been created, however the lack of clear guidelines, unclear input methodology, and absence of documentation of 'no-show' information limits their potential for regional exploration studies. The goal of this project is to build upon the vintage databases, address their drawbacks, and create a clear workflow for a new EBN hydrocarbon show database. The initial area of focus for this project is the Dutch Northern offshore (D, E, F, A and B blocks). A well-structured hydrocarbon database is designed through extensive literature research and consultation of industry experts. The main strength of this database include the threefold tailored input sheets, to cover three fundamentally different types of hydrocarbon indicators, and allow an integrated view of them. Also, the documentation of 'no-show'-information provides information on less prolific hydrocarbon regions. Several supplementary documents were created to provide minimal ambiguity regarding hydrocarbon indicator documentation and classification. Additionally, preliminary analyses in Spotfire and symbols created for QGIS provide a great first step in visualizing the data. The outlook of this project is to continue adding hydrocarbon show information, eventually resulting in complete on- and offshore coverage. Additional possibilities will be explored to correlate EBN hydrocarbon show data to other logs and make seismic ties.

The remainder of this report contains information that is (temporarily) confidential.