

A-136

Biostratigraphic evaluation of data from the Mittelplate oilfield (NW Germany)

B. Holstein¹, C. A. Schneider², H. Bolten³

¹IntegBiostrat, Wedemark, Germany, ²Wintershall Dea, Technology & Service Center, Barnstorf, Germany, ³Wintershall Dea Deutschland GmbH, Hamburg, Germany

In the framework of a comprehensive field study, all available biostratigraphic data from Early Cretaceous to Middle Jurassic age of the Mittelplate oilfield was checked and evaluated. Old recordings of microfossil analyses, which partially reach back to the 1990s, were revised for consistency and afterwards harmonized. All available microfossil counting information was transferred to a consistent data format. In total biostratigraphic data from approximately 50 wells was available.

Older microfossil spellings were updated to scientific notations and emendations, using the latest available literature. By means of a complex data query and a standardized section (all stratigraphic units were matched and a general thickness for each was created), a micropaleontological generalized range-chart for the whole field was compiled.

As primary tool "Excel®" spreadsheets were used and with help of visual basic functions the operational mode of a small database functionality was obtained. This allows to select a specific microfossil and to execute a query. As a result, each occurrence of the microfossil within any well can be displayed.

In a second step, the complete dataset was exported into the biostratigraphic software "StrataBugs®". This software allows to combine the data with other significant well data like gamma ray logs, lithology, wellsite stratigraphy or casing depths.

Within "StrataBugs®" different charts were compiled: an overview chart with all wells, which helped to identify effectively biostratigraphic data gaps, and a second chart, which allows to select specific microfossils, being displayed in all wells. This provides an overview of the field wide occurrences facilitating the identification of index fossils. Based on the large database, the ranges and respectively the abundance maxima of some index microfossils were revised. All biostratigraphic relevant events were compiled in a stratigraphic framework.

The created data set will be constantly updated and a paleoenvironmental assessment conducted. Future well site biostratigraphic analyses ("biosteering") will benefit through a more confident stratigraphical assignment of the drilled horizons.