

**Building a Global Thermochemistry and Thermal-History Database and Its Application in a Norwegian Source-to-Sink Case Study.**

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A truly global compilation of all thermochemistry datasets is often discussed in the academic community but has yet to be implemented. Here, we present our efforts towards achieving this goal and our work to collate published thermal-history models. In the thermochemistry database, we capture all available and published fission track and (U-Th)/He data and synthesize various thermal-history models into one meaningful format. This unique, resource-intensive process yields a far superior application of thermochemistry-derived information for the hydrocarbon industry than was previously available. In this presentation, we outline what/how we capture data and the tools used to display and interrogate in a regional context.

The importance of this approach is demonstrated in a case study focused on source-to-sink (S2S) analysis in offshore Western Norway using techniques developed in-house by Wilson *et al.* [1]. Our data can be reconstructed and analysed palinspastically, offering unique insights into paleo-landscape evolution. This allows areas acting as active sediment sources to be easily identified, helping to refine our pre-drill reservoir predictions. We also demonstrate the additional insights our platform provides over public datasets, such as the ability to visualise cooling and heating rates for any time and thermal-history location.

[1] Wilson et al. (2017) *Geophys Res Abstr* **19**, 17542.