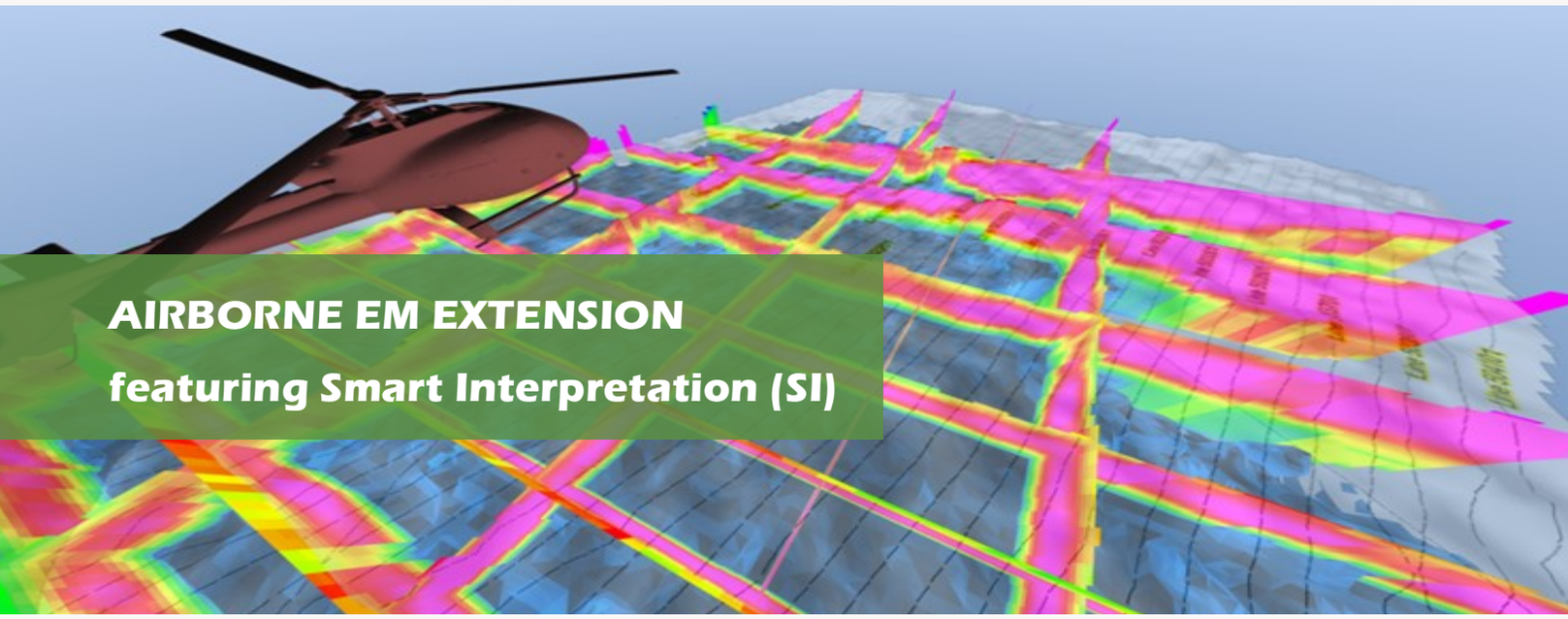
GEOScene3D



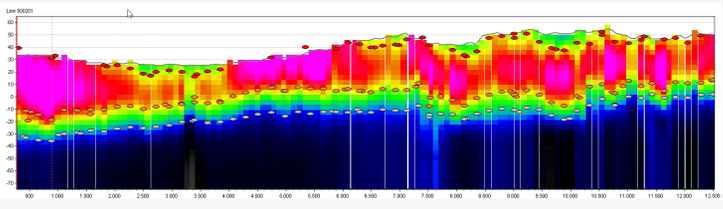
AIRBORNE EM EXTENSION
featuring Smart Interpretation (SI)

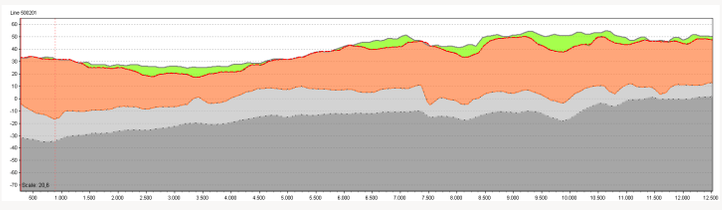
Airborne Electromagnetics (AEM)

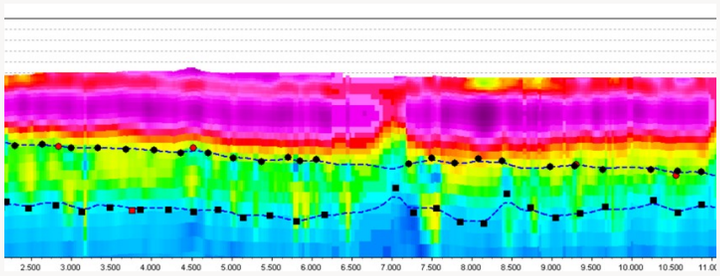
The Airborne Electromagnetics (AEM) Extension works directly with the Layer Builder Module in GeoScene3D. This extension provides access to additional import capabilities for data formats commonly used in AEM surveys. The AEM Extension also introduces the new, ***Smart Interpretation*** tool, a user-assisted process for rapid interpretation of large AEM datasets. The Smart Interpretation tool will save you many hours of interpretation when modeling areas with large AEM surveys.

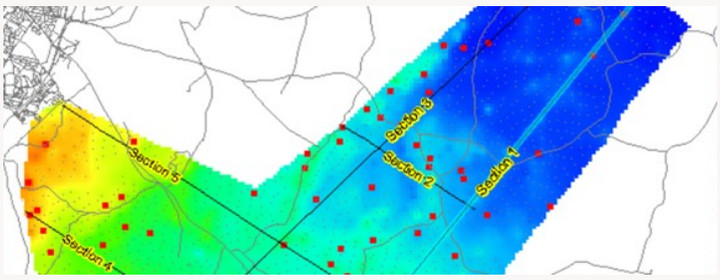
AEM data and GeoScene3D

GeoScene3D and AEM data go hand in hand. The software was developed at a time when regional AEM surveys were being conducted across Denmark as part of a nation-wide groundwater mapping initiative. This connection means that AEM data are naturally integrated with the GeoScene3D geological modelling workflow. Tools and capabilities are in place to combine information from AEM data with other data and knowledge into your final geological model.







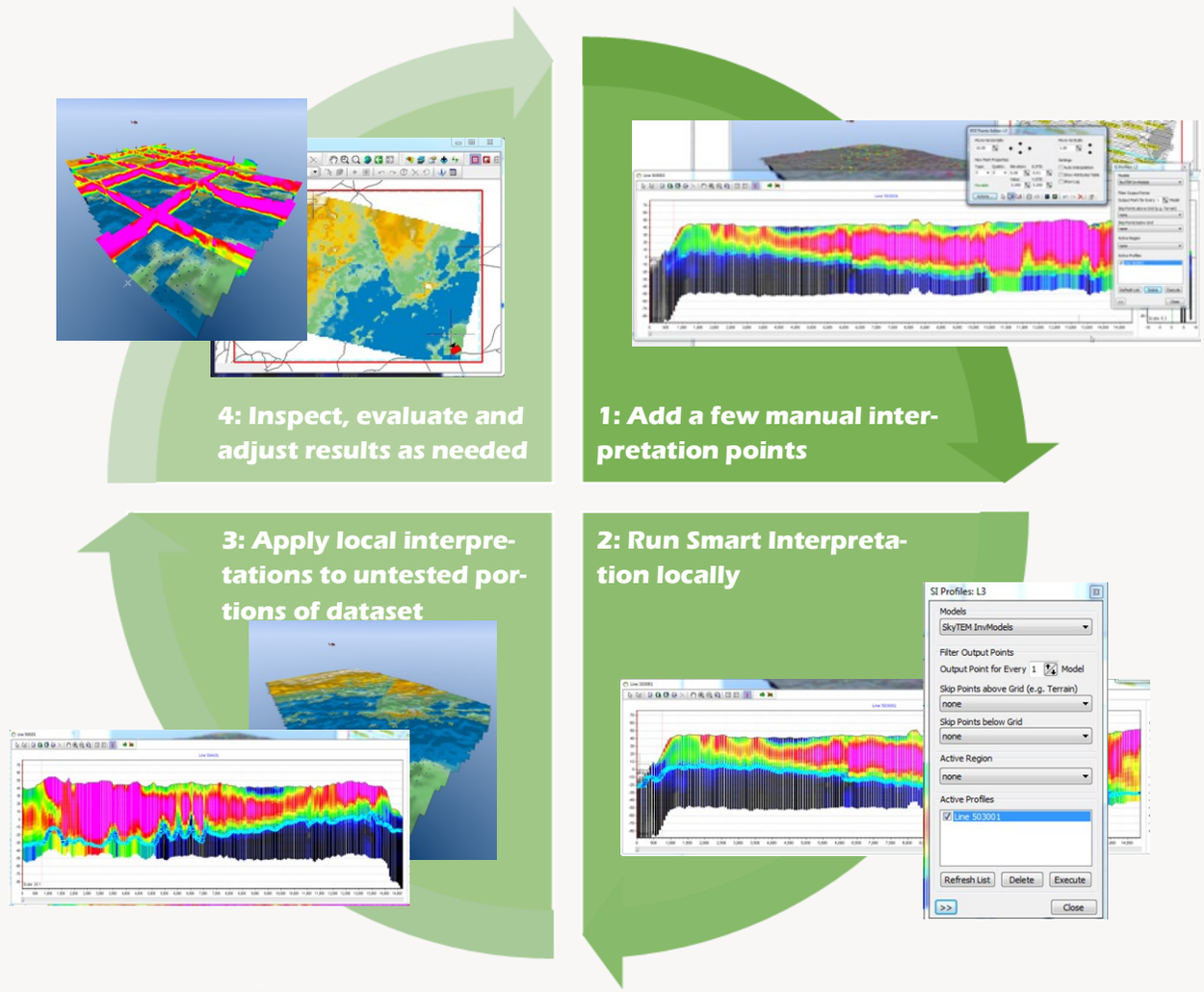


What is Smart Interpretation—and why use it?

Smart Interpretation is a user-directed tool for rapid interpretation of AEM data, that is fast, easy to use, and enables you to utilize all your available data, saving valuable time when building geological models.

With inspiration from the Oil & Gas industry's use of Seismic Auto-pickers as a well proven methodology to overcome these obstacles, we have developed *Smart Interpretation* to offer our customers a **practical and usable** tool for assisting the geologist in the normal modelling workflow. Smart Interpretation is a methodology developed together with the Niels Bohr institute at the University of Copenhagen.

SMART INTERPRETATION — the work flow



Smart Interpretation—the workflow

Smart Interpretation has been designed to integrate seamlessly with the standard GeoScene3D workflows. By training the system on portions of AEM datasets, the tool learns how the geologist combines and interprets all of their data. As the figure shows, the geologist uses Smart Interpretation to iterate through their data, assigning some interpretations to individual soundings, applying learned patterns to larger, untested areas, evaluating these new areas for accuracy, manually correcting errors, and adding in new areas.

This tool takes advantage of both the consistency of AEM interpretations and larger-scale changes in geologic patterns, to rapidly move through large AEM datasets while integrating geologic knowledge as known patterns change. Wizards are provided to guide the user through the Smart Interpretation process, making this workflow easy and intuitive. Interpolation and grid adjustments are also available through the integrated GeoScene3D environment to ensure a smooth and efficient modelling experience.

YouTube

WANT TO KNOW MORE?

We are here to help you! Find our useful online tutorials and information about GeoScene3D on our homepage or on YouTube channel: www.youtube.com/user/GeoScene3D