



- Gridding
- Profile-based analysis
- 3D EM modelling
- Compilation

AEM Workshop – Analysis of Discrete Airborne-EM Anomalies

- Profile Analysis
- Gridding
- EM Modelling

AEM Workshop is a Windows application being developed by Novaminex to integrate all aspects of AEM data interpretation of discrete anomalies in one program. While the final vision has not yet been realized, AWS is being used in-house to support Novaminex exploration consulting services. It will be offered on a subscription basis in 2023.

AEM Workshop provides an integrated environment for the interpretation of airborne survey data with a focus on EM. It combines a profile-view form for analysis of EM profiles and ancillary data with a map view where selected gridded data can be viewed under the flight lines. Once an interesting EM anomaly is identified in the profile-view AWS can place a plate model at that location and have its response plotted in the data profile. The plate parameters can be adjusted to suitably match the observed anomaly and when done the model parameters can be promoted to the database. The modelling process is made more efficient by use of automated parametric optimization. Plates in the database are plotted in projection in the map view. The workflow allows for the efficient modelling of EM anomalies while providing insight into their geographic and geological context.

For both time-domain and frequency-domain systems AWS supports the “quick and dirty” filament plate model which is fast to compute but not ideal for very large conductors especially having a shallow dip. Work is planned to include a deformable plate model boasting harmonic surface current basis functions, which can provide a much more accurate solution for large and shallow dipping targets. For frequency-domain systems AWS adds the analytic perfectly-conducting half-plane model.