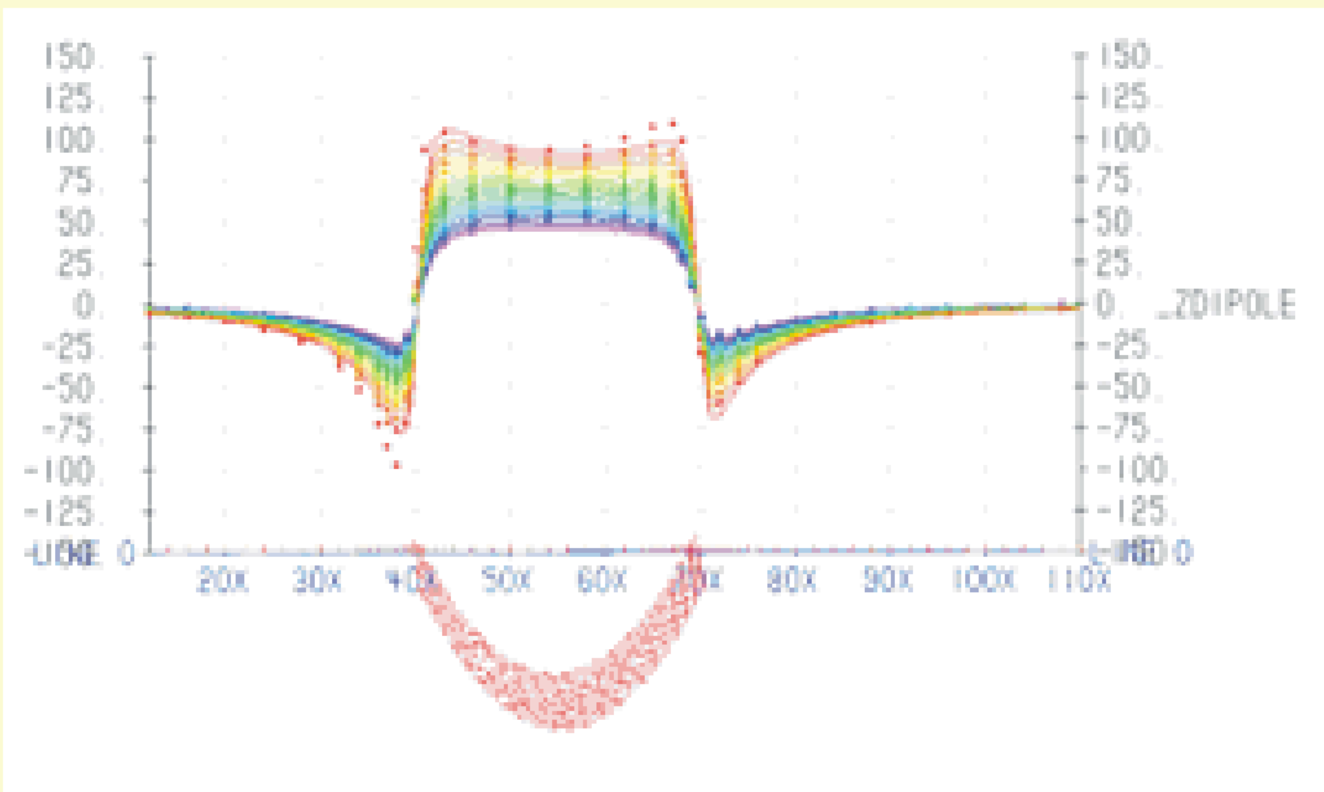
Thin Sheet Electromagnetic Modelling

With MultiLoop III

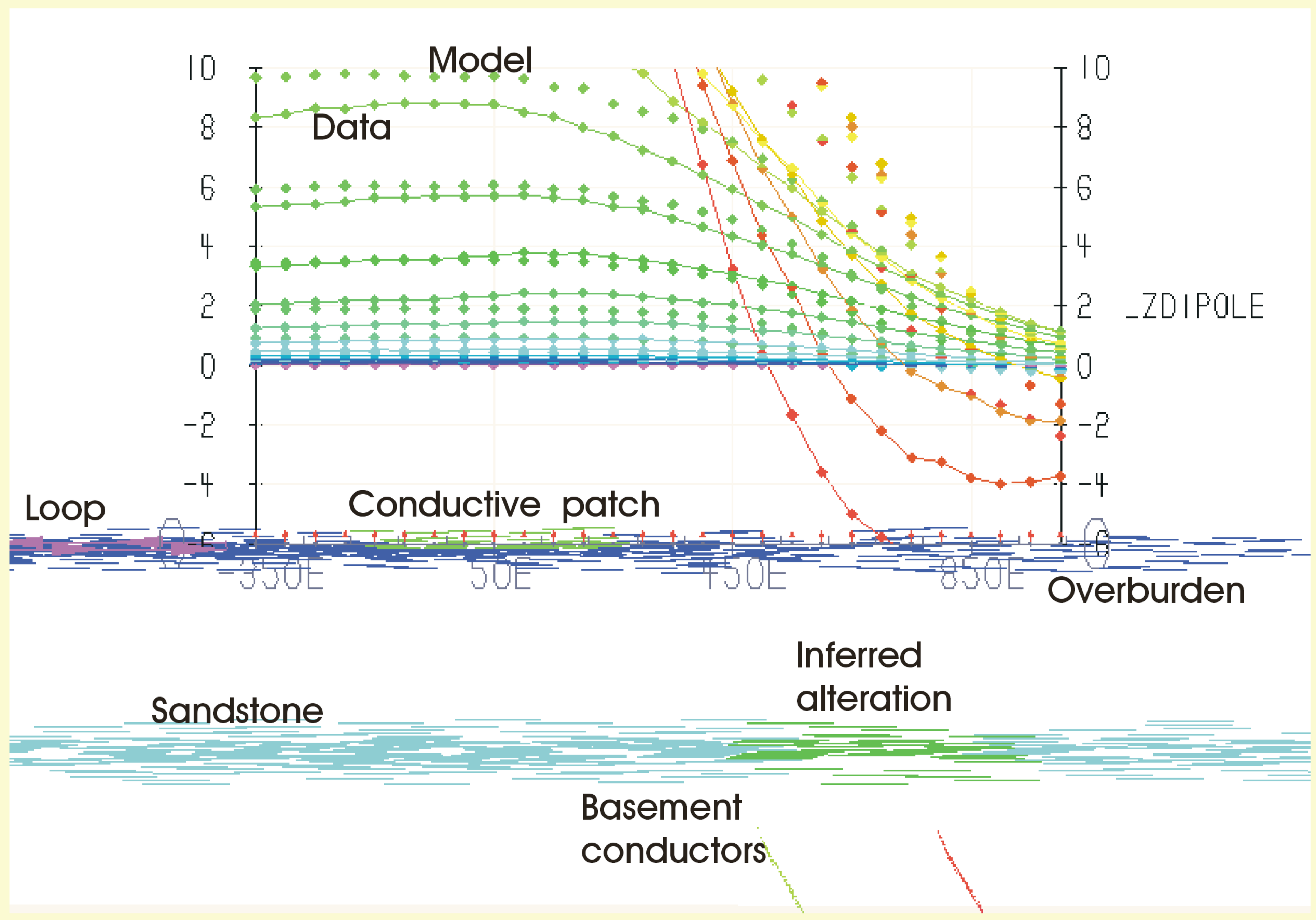
Proven solution



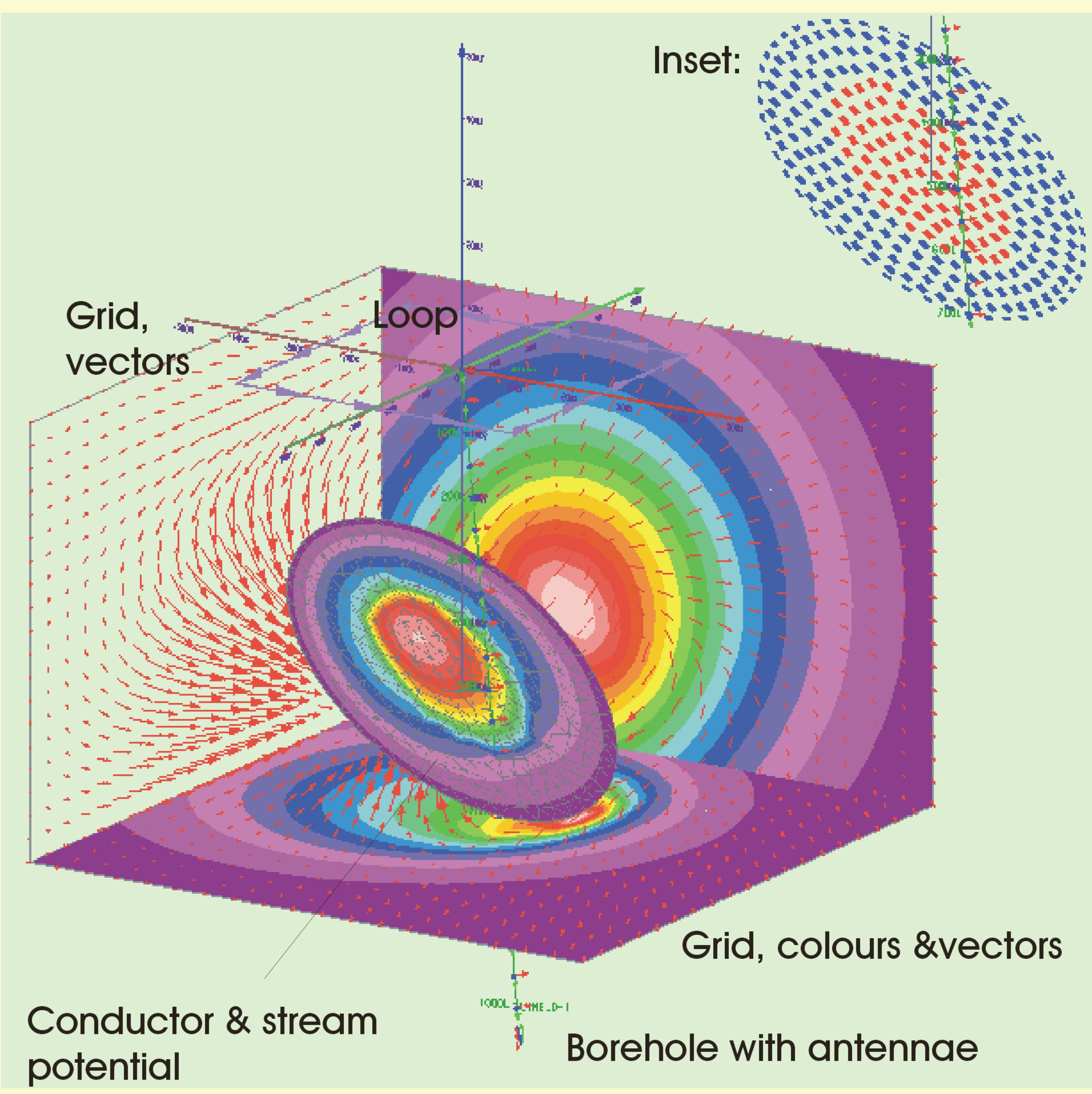
In this example courtesy of CVRD, MultiLoop III is compared with scale model data acquired over a conductive copper sheet. In fact, MultiLoop compares favourably in numerous tests including thin plates, semi-infinite thin sheets, bent sheets and sheets with variable resistance.

Model realistic geology

In this example from Cameco's Millenium Deposit in Saskatchewan, MultiLoop III was used to model EM-37 data. The model indicates a conductor in the sand-stone which is interpreted to be alteration. The model includes a conductive patch in the overburden, and basement conductors.



Versatile graphics



MultLoop III provides the mesh, grid and profile plotting options to allow you to better understand your data. With the highly accurate computational engine in the background, one can be sure difficult problems, such as the one to the left where a borehole crosses a conductor, can be calculated accurately. Here, the response of a conductor with a resistive halo to a 30 Hz UTEM system is shown. The channel 2 stream potential is plotted on the conductor (resistance is shown in the inset). The grid show the channel 1 vector response, with the vertical grid showing the channel 1 response in colours and the horizontal grid showing the channel 7 response.

Versatile Structures

MultiLoop III can model more than plates. Geological structures such as synclines and folds can be modelled as quadratic surfaces. Closed shapes such as spheres can be used to model the response of massive conductors, and pseudo-infinite sheets can be used to model extensive conductors such as overburden and regional conductors. The figure to the right illustrates the difference in response of a cylinder and a sphere. Figures A & C illustrate excitation from a source to the left, while Figures B & D illustrate excitation form above.