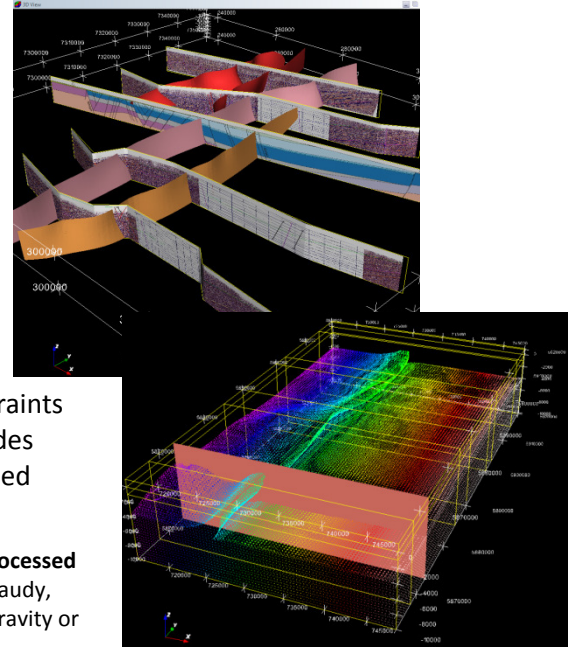


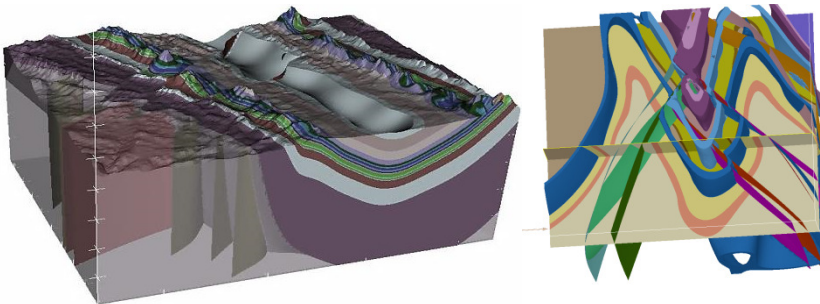
Technical Solutions - Summary of tasks available using 'Base' GeoModeller

Geological Interpretation and 3D Model Building

- Input a large range of data to a common workspace: images of maps and sections, 2D and 3D grids, drilling, 3D points, seismic picks, depth-converted interpreted constraints/products from magnetics, gravity, EM, etc.)
- Manage 2D and 3D grids (fully supported with histograms, custom colour stretches, metadata, filtering)
- Drape images and grids on sections in 2D or 3D Viewers, enabling direct interpretation of geology
- Build and edit steady state, implicit 3D geology models based on primary geological data (honouring coupled constraints from both contact points and structural orientations). Includes building complex geology models with fault strata, overturned limbs, intrusions and thin bodies

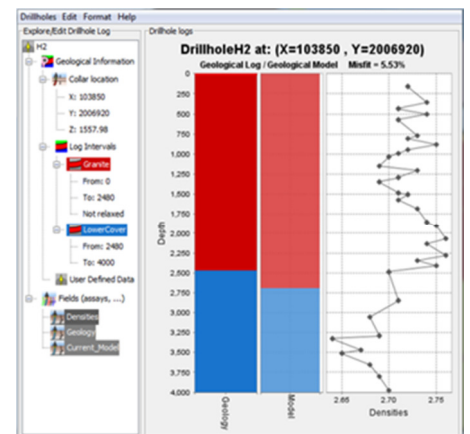


* Additionally from *Intrepid* software, *GeoModeller* can take outputs from processed potential field geophysics such as 'Depth to basement' (eg., estimated using Naudy, Euler, Phillips, or Murthy & Rao methods), or 'Multi-scale edge detection' on Gravity or Magnetics grids (called 'worming' and applied for auto structural analysis).



Drillhole Management

- Interactively select drill holes and sections in the 2D and 3D Viewers for interpretation. Compare drilling intercepts with the modelled geology (for trouble-shooting misfits in drill logging)
- Edit drill hole data, save/export the revised drill hole data bases (3 files: Collars, Surveys, Geology)
- Import of any type of *numerical* downhole data - such as geochemistry (assays), or rock properties (densities, susceptibilities)



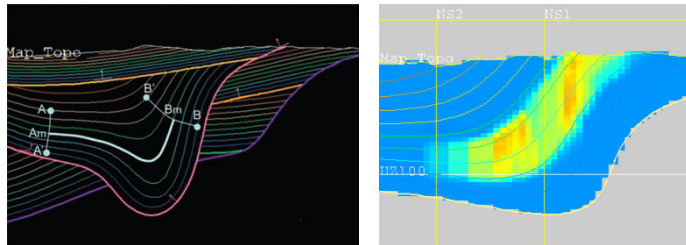
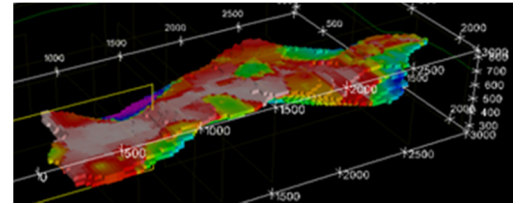
2D and 3D Gridding Meshing Management

- Handle and create meshes and new fields using the 3D Mesh Calculator (eg., create block models for resource analysis or density property analysis/3D modelling)
- Retrieve volumetrics (metres cubed) of grade limits, or grade masked by geology

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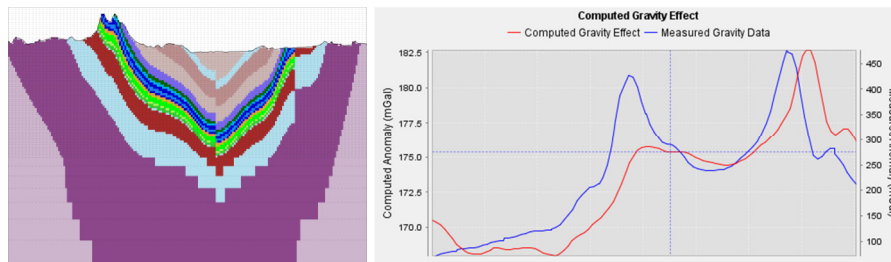
Geospatial Analysis

- Prepare data for geostatistical workflows: Histograms, Cross-plotting, Multi-field analysis, Field transformation using Gaussian Anamorphosis, Gaussian Simulation on a domain
- Perform 2D and 3D interpolation by: Inverse Distance Interpolation, Nearest neighbour Interpolation, kriging, cross validation
- Perform a clever kriging method eg., for assays (unique to *GeoModeller* called ‘domain kriging’) interpolating along structural contours within the geological volumes (akin to bedding or structure). This can provide **accurate** kriging for difficult to handle: stratiform ore deposits or structurally controlled ore

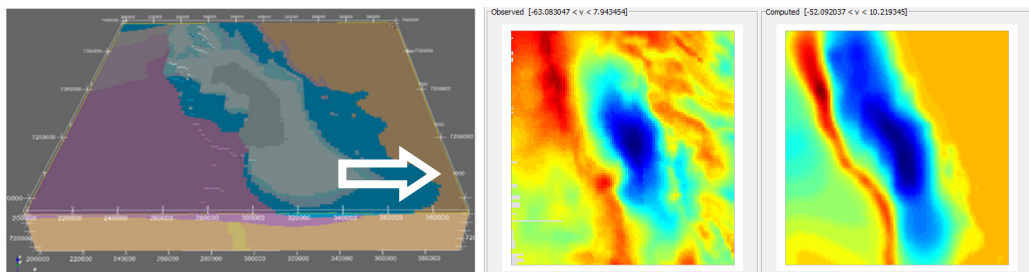


Forward Geophysics in ‘Base’ *GeoModeller*

- Forward model gravity and magnetics (or full tensors) in 2.5D and 3D, using properties from tables or imported 3D grids together with your 3D geology
- Compare and contrast with observed geophysics (using misfit grids created in *GeoModeller*)
- Verify the geology-geometry of your starting model, and verify your rock properties



Forward 2.5D



Forward 3D

- PLUS predict **synthetic 2D seismographs** directly from your 3D geology, using velocities tables

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