

Eureka

## Integrated geospatial data tools

Integrate > Analyse > Identify





## Better exploration, analysis and modelling

Maptek™ Eureka™ provides an efficient and effective way to assess and interpret a range of geospatial data, such as drilling, seismic, gravity and magnetic surveys.

**Maptek™ Eureka™** is an interactive 3D visualisation tool for displaying, manipulating and analysing extremely large datasets of geological information.

Eureka integrates all of the relevant project data in a single 3D interactive viewing environment, allowing the user to view and analyse data in its correct location.

Exploration geologists and miners can combine seismic data with other geological data and models, including drillholes and surfaces, to view important relationships and conduct the immersive analysis which is conducive to resource discovery.

Compatibility with Maptek™ Vulcan™ mine planning software standard file formats, such as design databases, mapfiles, triangulations and grid models, creates a seamless workflow for moving projects from exploration through to mine design and production.

Eureka allows users to fully exploit LAS and MWD (measurement while drilling) data for building accurate coal strata models. Advantages include more accurate charge placement and blast loading, leading to less coal damage and greater ore recovery.

Specialised modules which handle drillhole tools, seismic interpretation, implicit modelling and geotechnical analysis can be added to a base Eureka licence.

### Eureka Advantage

- Work with disparate geospatial data in a single environment
- Easily manage very large datasets
- Interrogate, model and manipulate data on PC or field laptop
- Convert 2D seismic data to depth
- Edit, correlate and model drilling data
- Highlight anomalies for analysis of similar responses
- Create implicit surfaces to better predict orebody extents
- Register images in plan or section view
- Convert data between coordinate systems
- Export high-resolution screen captures and animations

### Drillhole Tools

- Import and validate drillholes against downhole logs
- Dynamically edit, correlate and model drilling data
- Immediate update of changes in the project database
- Import and display geophysical traces
- Display stratigraphic correlations in 3D

### Seismic Tools

- Import and display SEG-Y format seismic data
- Depth-convert 2D seismic data to view alongside drillhole data
- Intelligent horizon-tracking tools allow fast interpretation of features

### Geotechnical Analysis

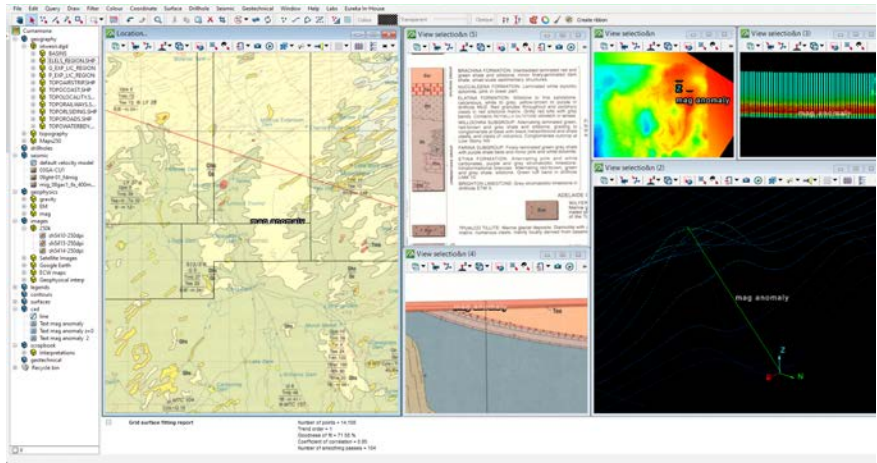
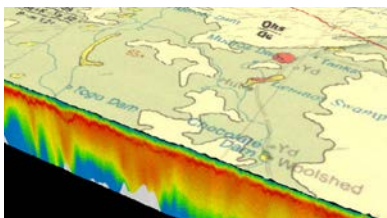
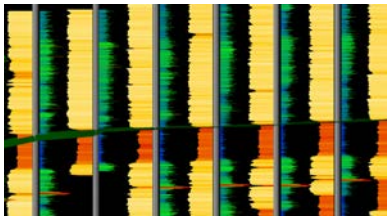
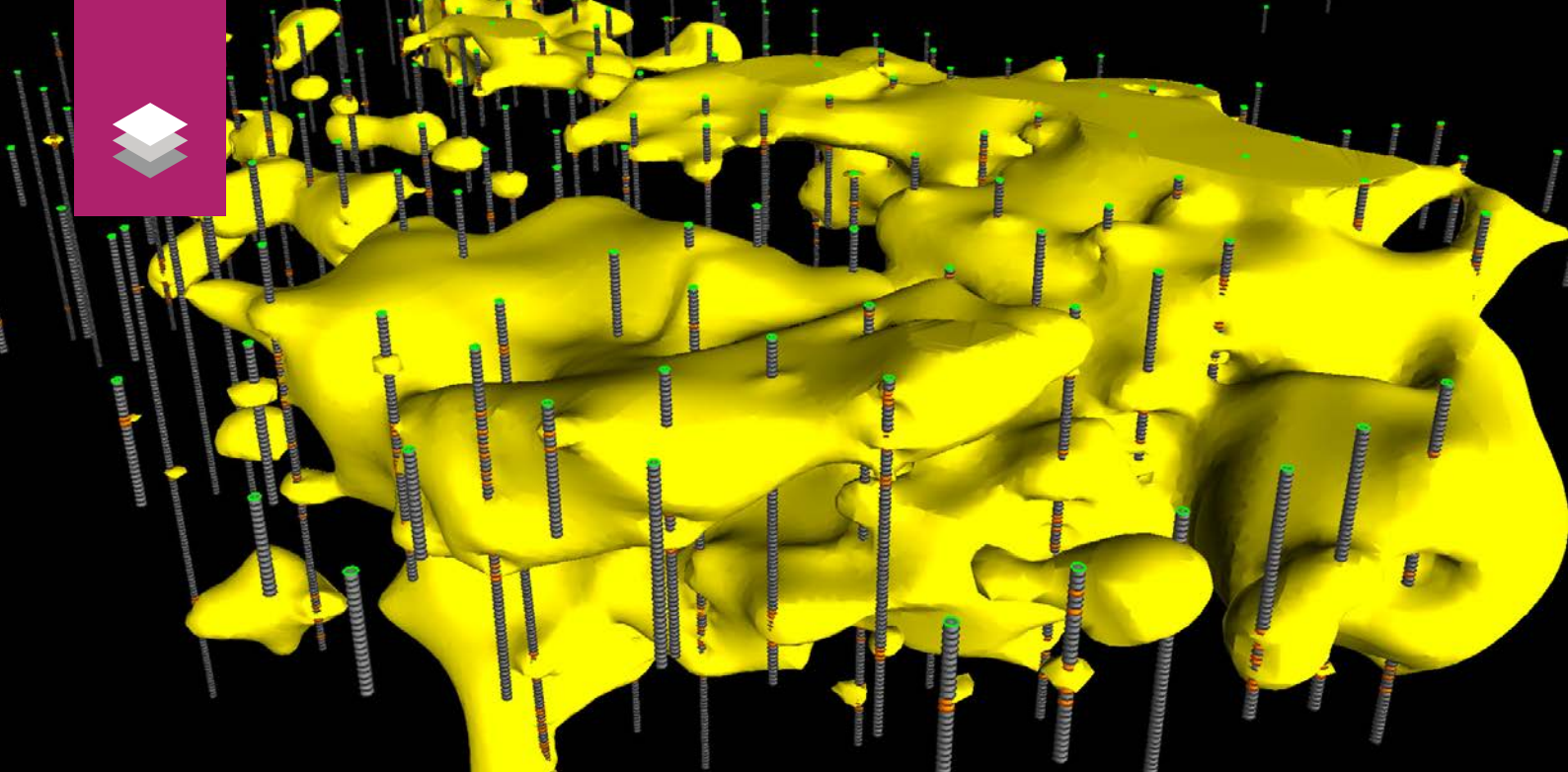
- Extract dip and strike information (discontinuities) from surfaces
- Create stereonet and rose diagrams for geotechnical analysis
- Perform kinematic analysis

### CAD Tools

- New functionality for snap modes
- Point, line and polygon creation tools
- Support for filled polygons and line styles
- Action Plane for grid snapping, improved free space picking

Displaying and interrogating disparate geospatial data in the common environment provides an immersive experience of your project.





## Lithology Targeting

- Uses downhole geophysical or drilling data to automatically detect coal seams or other target strata
- Import LAS files of downhole geophysical measurements such as gamma and density
- Import CSV drilling data from drill rig information - torque, air pressure, weight on bit at regular downhole intervals
- Interactive tool to visualise correlation between multiple downhole data traces and rock type
- User-defined categorisation of rock type against trace
- Automatically update database with new rock types to derive seam names and models

## Coordinate Conversion

- Convert spatial data to any coordinate system or grid representation
- Define customised grid system by specifying a datum, including vertical datums and geoids
- Edit and manage frequently used coordinate systems

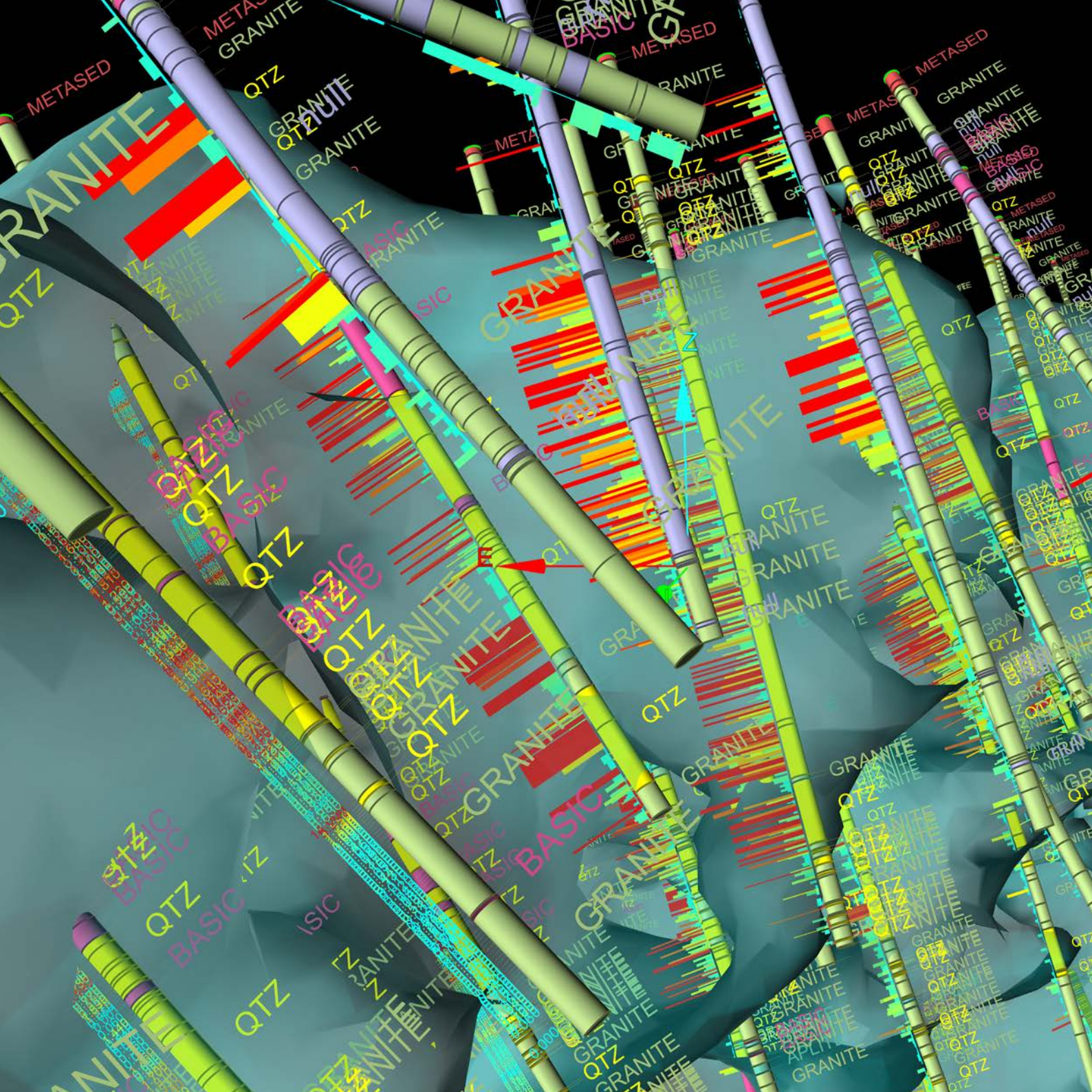
## Implicit Modelling

- Create implicit surfaces of drilling or attributed data for better orebody interpretation
- Use design strings, points, ribbons, drillholes and triangulations as input
- Model narrow sub-vertical data such as veins
- Ellipsoids honour trends when modelling steeply dipping deposits

## Data integration & compatibility

- Compatibility with Vulcan standard file formats - design databases, mapfiles, triangulations and grid models
- Compatibility with I-Site Studio data formats
- Supports multi-attributed data with attributes displayed in tabular view, modelled, coloured and filtered
- Export seismic data as a registered image for display in Vulcan
- Use drillhole editing tools to directly edit Vulcan ISIS databases





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