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# encom<sup>★</sup> discover

## The Must-Have GIS

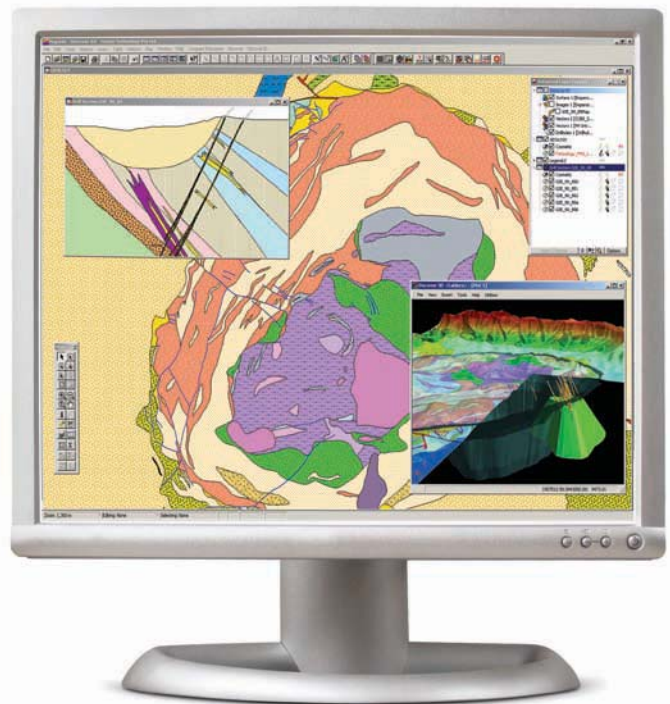
Encom Discover 9.0 is the desktop Geographical Information System (GIS) designed especially for the geosciences, providing the tools to effectively compile, visualise, analyse and map spatial geoscience data. Since its release in 1994, Discover with MapInfo Professional has become the GIS of choice for geologists, environmental scientists, cartographers, exploration managers and database administrators. Discover is the 'must have' application for geoscientists worldwide.

## Visualise & Manage Data

Discover lets you create and instantly visualise gridded data, drillhole data and numerical attribute data. The advanced table and data editing utilities let you search, sort and manage datasets interactively.

## Unlock the Power of MapInfo

With its range of features customised for geoscience applications, Discover unlocks the power of MapInfo Professional for geologists and other geoscience professionals.





# Geological Map Making

## Scaled Map Making

Create accurate and standardised scaled maps quickly and easily by setting the paper size and map scale, then positioning the map sheet over the required area. Add customisable titleblocks, map grids, legends and other data to produce high-quality maps of any size and scale.

Control the annotation of objects on your maps, such as features or lines, using advanced symbol options or text.

Build geological datasets in Discover, and then construct professional-quality point, line and polygon maps using functions including streamlined attribute data entry, line smoothing, polygonising, coordinate geometry, standard colouring and styles.

Add geological linework and structural symbols from Discover's in-built libraries that support international standard symbol sets.

## Image Transformations

Discover provides a suite of utilities to manipulate raster image files directly within MapInfo Professional.

Discover allows you to:

- rectify (rubber-sheet) unprojected images
- reproject and save images in a new coordinate system
- clip to polygons
- display image properties and metadata
- enhance with contrast and stretching operators
- apply edge and smoothing filters
- rotate on axis or by specified angle
- convert to other image formats.

## Import / Export

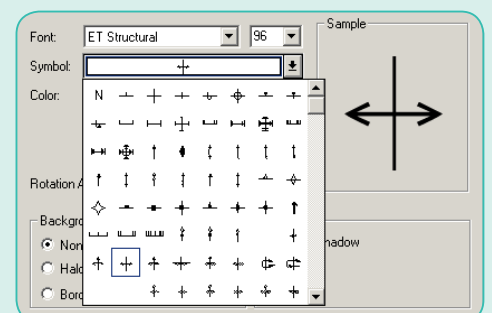
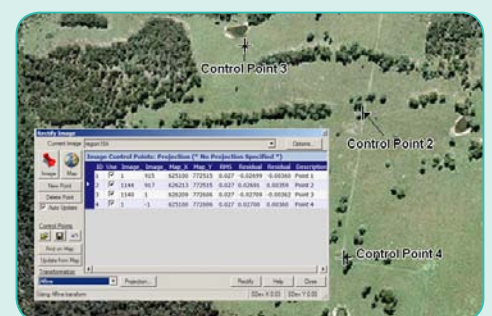
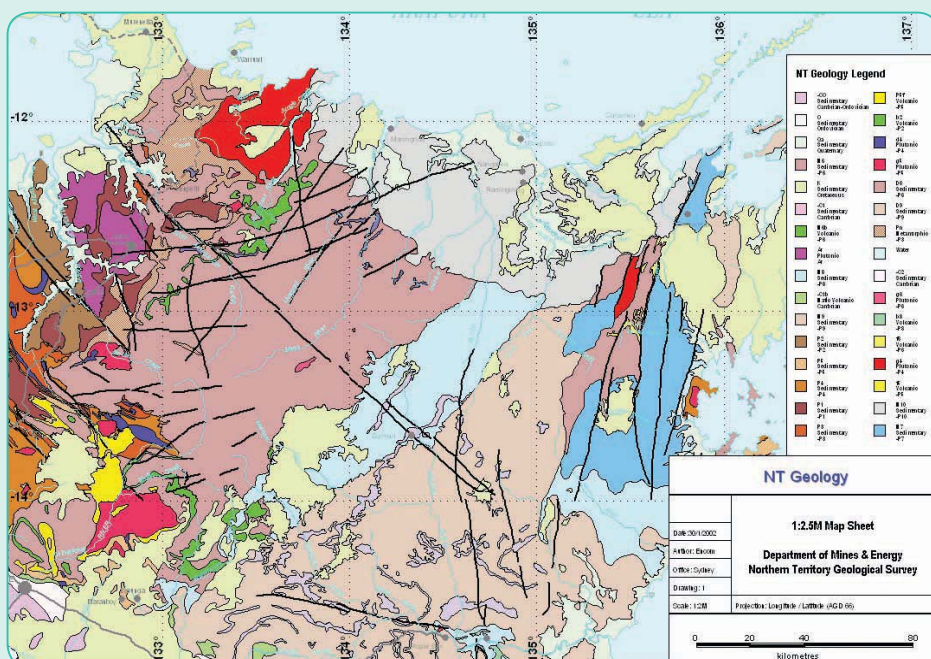
Discover provides import and export support for the following data formats:

- Datamine ASCII
- Surpac string
- MineSight SRG
- Vulcan ARCH\_D
- 2D and 3D DXF

Import support is also included for:

- acQUIRE, DataShed and Geosoft databases
- Gemcom BT2
- MicroMine

Discover's Advanced ASCII Import utility allows flexible import of multi-column ASCII files with control for the handling of headers, comment lines, delimiters, column widths and much more.



# Drillhole Management & Display

## Drillhole Projects

Create and manage drillhole projects. Define and display cross-sections, plans, trenches & logs.

## Data Display

Display download data as text, linegraphs, histograms and colour patterns. Add structural data and integrate surface geology, topography and other surfaces. Create or import colour patterns.

## Interpret and Analyse

Digitise geological interpretations directly on to sections, calculate sectional resources and determine 3D coordinates. Use Discover's gridding tools to produce grids of downhole data on sections. Use the optional Discover 3D module to take your drillhole project into an interactive and integrated 3D environment.

## Data Validation

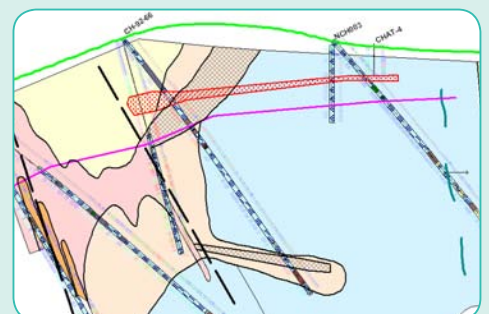
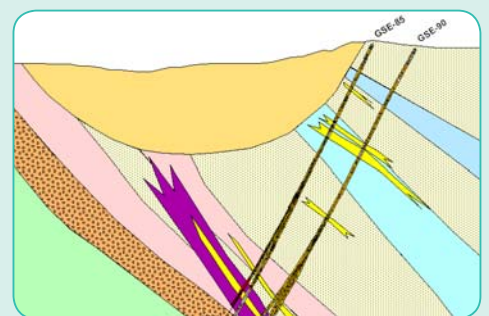
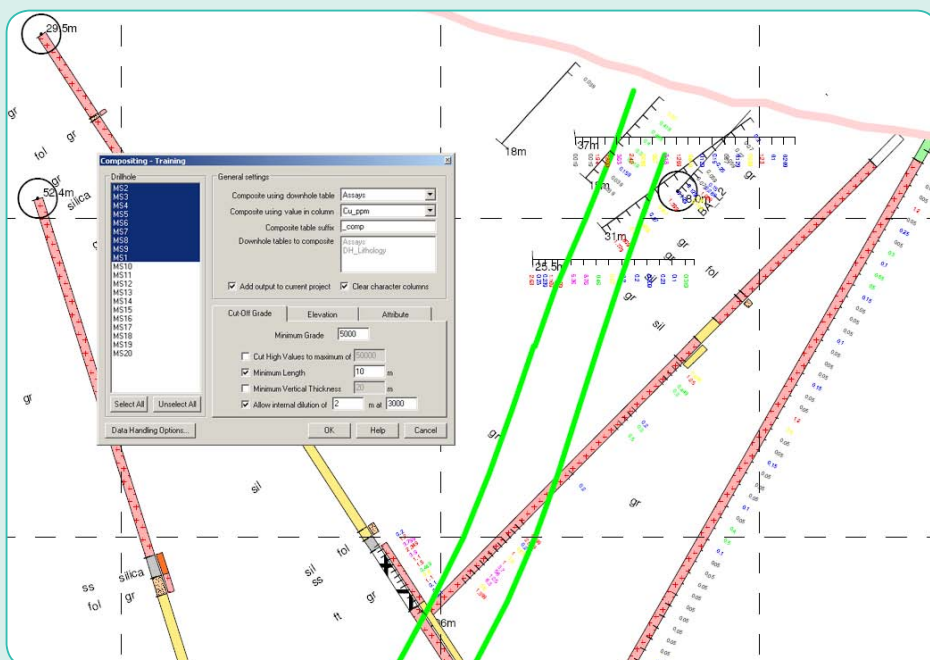
Discover provides options to check for common drillhole data problems, such as:

- duplicate sample numbers
- overlapping sample intervals
- sample gaps
- large hole deviations
- total depth mismatches
- holeID mismatches.

## Compositing

Drillhole data can be composited by:

- cut-off grade, including internal dilution
- elevation or downhole depth
- attribute.



# Productivity Tools

## Data Utilities

Discover's powerful data manipulation utilities enhance your MapInfo Professional experience.

These include:

- text search and replace
- selection by group/attribute
- stacked profile creation
- node extraction
- proximity searches
- data normalisation
- coordinate transformations
- creation of local grid layouts
- automatic attribute entry during map digitizing
- calculation of line direction
- vector plotting

## Table Utilities

A range of table utilities are provided in Discover. Major utilities include:

- workspace editing
- table sorting
- batch reprojection
- maintenance of favourite tables, workspaces and MBXs
- multiple table opening, importing, appending, packing and exporting
- multiple table structure manager

## Tenement/Permit Utilities

Discover provides the ability to produce exploration tenement applications (Australia only) and to perform optimised tenement searches.

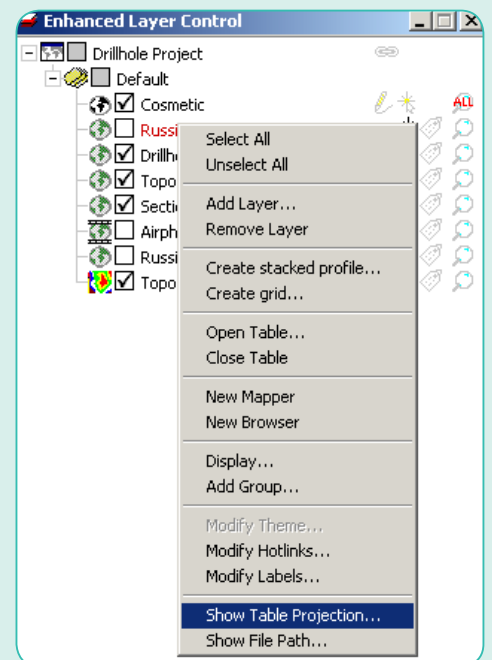
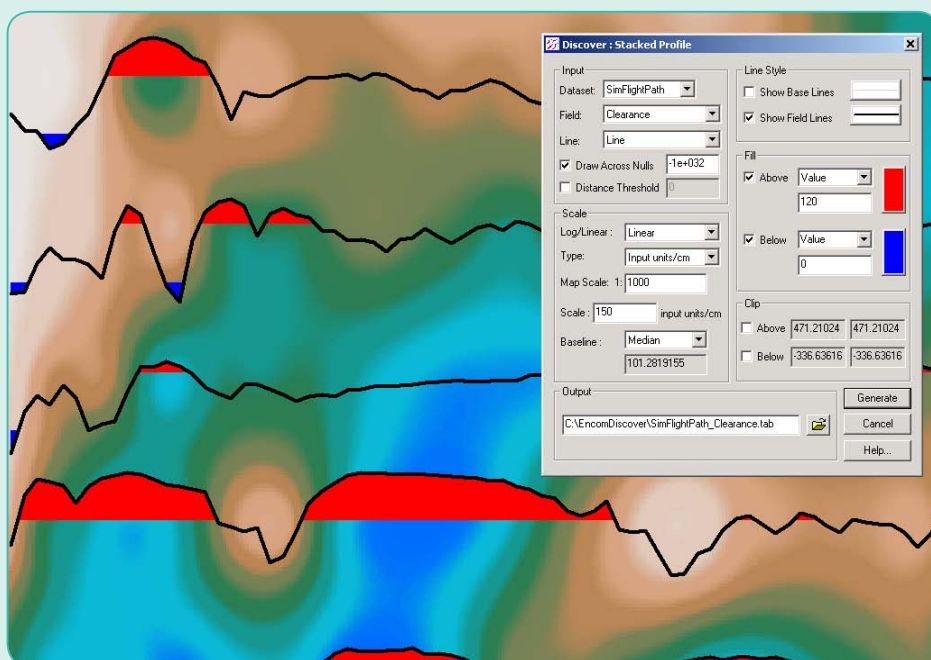
## Object Editing

Discover extends MapInfo Professional functionality to include object editing capability such as drawing via keyboard, polyline smoothing, node thinning, polygonising, object alignment and more.

## Map Window Tools

Manage your map windows and views with a range of zoom and selection tools and a real-time floating Enhanced Layer Control. With Discover you can save & restore map window states, create coordinate grids and store lists of standard views and selections. Use the cursor position tool to identify selected points on all maps and convert any map window to a registered raster.

Animate a map window at specified time intervals and create movie files.





# Grid Creation & Analysis

## Grid Creation

Grid creation offers:

- minimum curvature, IDW, triangulation, and spatial neighbour algorithms
- ordinary and simple kriging for Point and Block estimation
- density and distance analytical methods
- data pre-conditioning
- statistical analysis, including interactive sample variogram and model variogram analysis
- breakline support
- optimal parameter selection
- RGB output
- smoothing, clipping and coincident point options

## Grid Utilities

Use the extensive range of grid utilities to classify, clip, convert, create RGB images, edit, fill holes, flip, overlay, replace, resample, reproject, merge, rotate, shift, compute volume, calculate slope, calculate curvature, split, vectorise and calculate view-sheds.

Generate contours and modulated profiles and manipulate colours, transparency and sun-shading. Select areas via queries and determine level volumes.

## Grid Filter

Discover provides you with a range of convolution and FFT filters to help you analyse your grids. These include smoothing, enhancement, average, band pass, continuation, reduction to pole, reduction to equator and vertical derivative.

## Grid Calculator

The advanced grid calculator provides extensive grid arithmetic, statistical analysis and Boolean calculations on one or more grids.

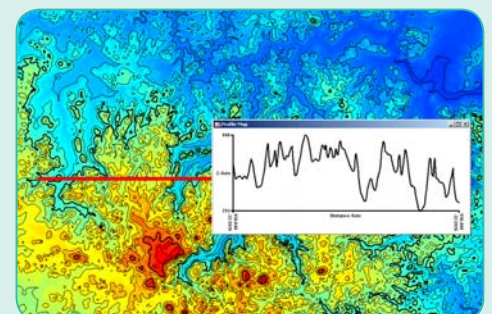
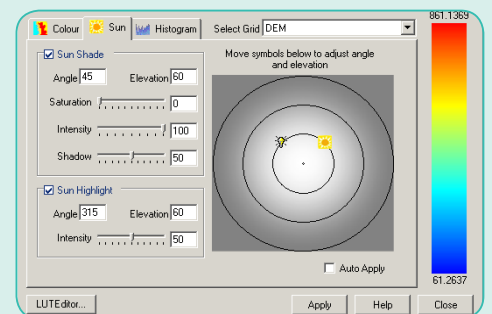
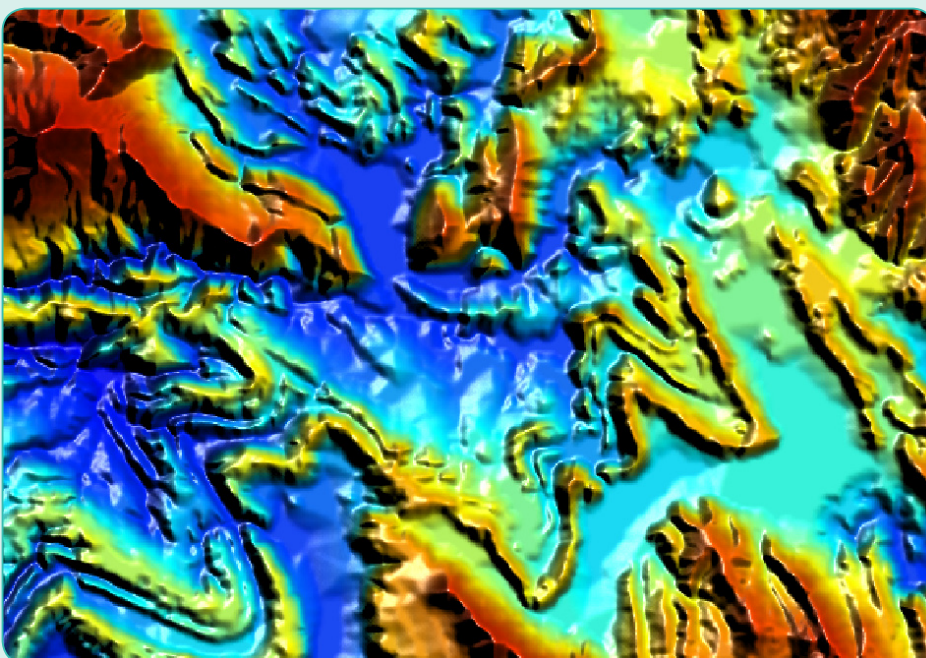
## Import/Export

Discover supports:

- Arc ASCII
- BIL
- ER Mapper
- Geosoft
- Surfer
- Vertical Mapper

Plus :

- USGS DEM (import only)
- Minex ASCII (import only)
- GeoTIFF (export only)





# Advanced & Interactive Data Analysis

## GraphMap

Produce 2D and 3D graphical visualizations of your geochemical and structural data via Discover's GraphMap.

Extensive display control, multi-graph selection tools, statistical reports and MapInfo Professional connectivity form an advanced interactive environment for data exploration. Display types include:

- 2D and 3D scatter
- Line
- Bar
- Scatter Matrix
- Probability
- Map
- Histogram
- Box and Wisker
- Pie
- Rose
- Ternary
- Stereogram

## Geochemical Analysis

Discover provides a range of tools for analysis and visualisation of geochemical data, including:

- Data levelling and transformations to assist in the detection of anomalous samples
- Point classification
- Summary statistics for selected data populations
- Calculation of correlation coefficients

Use Discover's GraphMap Module for interactive graphical analysis.

## Environmental Tools

### Temporal Trend Graph Creation

Display temporal data from point locations, such as water monitoring sites.

### Vector Plotting

Visualise vector (magnitude and orientation) data.

### Area Change Mapping

Quantify and visualise area changes.

### Fonts

Hydrographic and other environmental symbols.

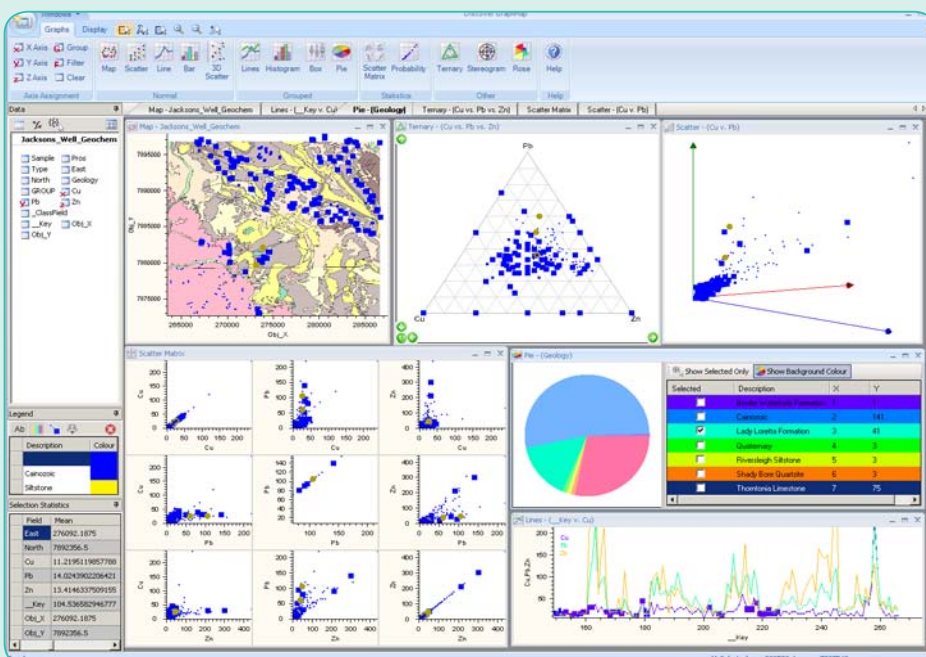


Table Select table to classify **Stream\_Geochem** with 11178 records

Channel Selection

Red **Cu\_ppm** Thresholded by  Value 5 a value of 81.45

Green **Pb\_ppm**  Percent 3.5 a value of 21.7

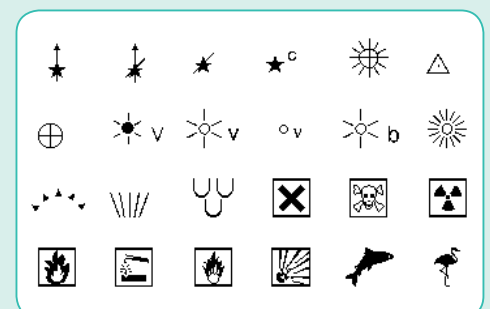
Blue **Zn\_ppm**  Percentile 6 a value of 114

Use single threshold

Output Type

Thematic Map  Change Source  Create New Table

Save classification code to field **ClassField**





## Extend to 3D and Mobile Mapping

### Encom Discover 3D Module

Discover 3D is an optional advanced module for Encom Discover that turns your 2D GIS into a full desktop 3D system. Combine and display all of your 2D data with mine planning data, 3D models, geophysical data, drillholes, maps and surfaces.

Features include:

- Open Discover drillhole projects and display sections, modulated drillholes and interpreted boundaries.
- Open voxel models from geophysical and mine planning systems in thresholded, isosurface or sliced views.
- Load and display gridded surfaces with extensive control of display, scale and compression.

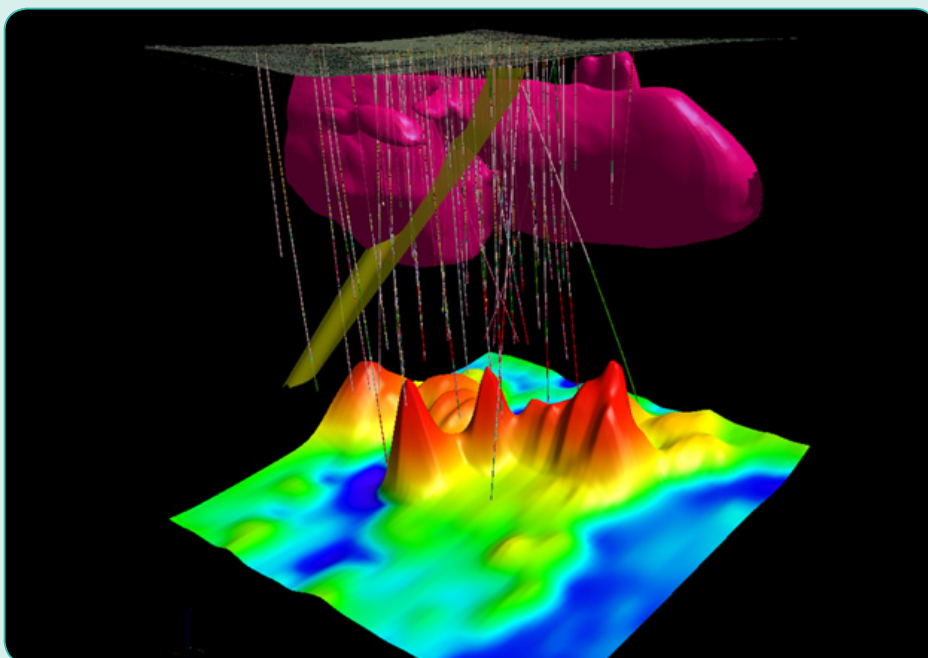
- Real-time 3D navigation with flythrough creation and export to movie files.
- Open and create 3D vector objects
- Create point clouds and 3D lines directly from MapInfo Professional objects
- Digitise directly into 3D
- Generate 3D solids with tie-line control and powerful shape matching
- Create and manipulate 3D voxel models

Discover 3D bridges the gap between 2D GIS and mine planning systems, allowing every geoscientist to have the power of 3D.

### Encom Discover Mobile

Discover Mobile lets you take your digital data, maps and images with you wherever you go. Running on a Windows Mobile device, such as a hand-held PDA, it also makes it easier than ever before to capture field data. Fully GPS-enabled, with a comprehensive set of object drawing and editing tools, Discover Mobile helps you log samples, map geological boundaries, assign attributes and record structural measurements.

Discover Mobile is a GIS in your hand and the seamless integration with the MapInfo/Discover desktop make it the ideal field companion.





# encom<sup>♦</sup> advanced realities

## System Requirements

**Encom Discover 9.0** requires MapInfo Professional 7.8 to 9.0 for Windows 2000, XP or Vista.

**Encom Discover 3D** is an optional module and requires Discover 9.0 with the following minimum system specifications:

Windows 2000/XP/Vista  
Processor: Pentium III 800+  
RAM: 512Mb  
Video Card: 128Mb onboard memory with hardware acceleration  
Hard Drive: 100Mb free space

**Encom Discover Mobile 3.0** requires a handheld computer running Windows Mobile 2003 or 2005. No separate MapInfo solution is required. Trimble post-processing requires Discover 8.1 or later and Trimble Pathfinder Office 3.1.

## Contact Tetrad Computer Applications

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