



**GEO**SOFT  
**Oasis montaj**



**Software for Earth Science Mapping and Processing**

*"The raw power that Oasis montaj provides for quickly and easily creating and recreating grids, tweaking colour bars, recontouring, and doing real time sun shading with different orientations of lineaments, is not available in any other software program..."*

Bill Pearson, Pearson Technologies Interactive Visualization



## Why Oasis montaj?

A leading exploration technology solution, Oasis montaj provides a scalable environment for efficiently importing, processing, viewing, analyzing and sharing large volume geophysical, geochemical and geological data, all within one integrated environment.

This powerful mapping and processing software is designed to support and streamline your daily problem solving needs, with a rich set of easy to use features that meet and exceed rising global standards.

Join the global leaders in earth exploration and geosciences currently using Geosoft® Oasis montaj™ technology, to increase productivity and profitability.

### Use Oasis montaj for:

Oasis montaj provides a complete data experience, including data access, processing, interpretation, data sharing and decision making.

#### Industries that use Oasis montaj:

- Mineral exploration
- Government Geological Surveys
- Oil and Gas Exploration
- UXO (Unexploded Ordnance) detection
- Environmental
- Education

*"We remain focused on usability and productivity advances within the Geosoft environment, allowing us to put more power, flexibility and control into the hands of our clients. This focus is the foundation of our vision to help geoscientists recapture time lost to handling and working with data, so they are free to explore."*

Louis Racic, Geosoft Product Management Director



### Proven ROI

A proven industry standard technology, Oasis montaj achieves long term savings in both time and money. Integrated productivity tools maximize your ability to make strategic use of large volumes of geoscience data within today's compressed project time lines.

- Access all available data for a complete investigation and informed decision making.
- Collect and view data for quick site assessment in the field, or use Oasis montaj for in depth processing and analysis.
- Create sophisticated visualizations to guide subsurface exploration.
- Construct professional quality maps of complex 3D earth models for sharing your information with colleagues and investors.

## Key Features

### Professional map-making

Whether you're a geologist, geochemist or geophysicist, easily create maps to share, integrate data and use in presentations. Quickly access standard map templates from the template library or customize your own. Templates are fully scriptable for power users.

### Subsurface 3D visualization simplifies viewing and analysis

3D capabilities in Oasis montaj software responds to the growing emergence of 3D visualization as the standard for integration and analysis of interdisciplinary data. Its stability, usability, axis display and voxel manipulation enable you to quickly integrate all your data, from surfaces, drill data and geophysical models.

### Seamless interoperability

Oasis montaj supports a large range of data formats, including point data, grids and images, vectors and 3D data, through native format support or import/export. We support a large variety of instrument data formats, GIS layer formats, ODBC links to databases as well as to wire frame and block model formats. We support most commonly used data formats to ensure seamless interoperability within our environment.

### Pinpoint map data, through dynamic linking

Oasis montaj includes built-in dynamic linking between, and among, imagery, maps, profiles, graphs, data and metadata, in one, two and three dimensions. Click on a point on a map and immediately see the exact data point within the appropriate profile, graph or data view. Ideal for QA/QC, it provides a quick, yet powerful way to visually link common features or areas of interest. It makes anomaly location and target selection quicker and more efficient. It also adds value throughout your project lifecycle, by enabling you to interact with data and immediately evaluate results.

### Advanced gridding capabilities saves you time

Gridding algorithms with Oasis montaj are fast, efficient and optimized for large-volume geoscientific data. This enables you to interpolate data and to produce grids, using minimum curvature, bi-directional, trended, gradient, tinning and kriging gridding routines. Grid processing and enhancement tools include interactive shading display, grid windowing, the ability to create shaded relief grids and display grid outlines. An array of advanced grid utilities include: grid filters, locating grid peaks, boolean operators to merge overlapping grids, grid math functions, calculating grid volume and grid masking.

### High-performance database

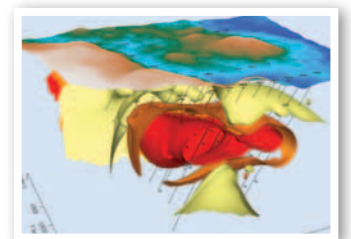
The built-in, high-performance database provides efficient storage for very large geoscientific data sets. Direct access to data contained in the database is provided through a spreadsheet and an integrated profile display window. The database is the key advantage for working with large datasets at each stage of the project lifecycle, from acquisition, storage, processing and analysis through to visualization and integration with other data and information.

### ESRI Integration

ESRI technology is built into Oasis montaj ensuring the seamless creation, viewing and sharing of ArcGIS MXD and Geosoft Map files between Geosoft and ArcGIS users.

### Built-in data access technology

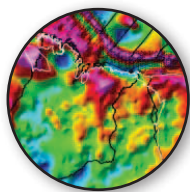
For complete investigation and informed decision making, use Dapple Globe Viewer to find, display and extract more data from a variety of data servers. You can search internal as well as public servers, including DAP, ArcIMS, and Tile servers, without leaving the Geosoft environment.



# Advanced geophysical, geological and geochemical analysis

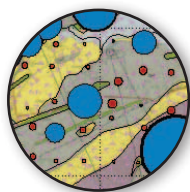
Geosoft montaj extensions and montaj plus extensions make Oasis montaj one of the world's most robust and comprehensive geoscience mapping and processing systems. Extensions are available for advanced geophysics and geochemical data processing, analysis and quality control, 3D drillhole plotting, gravity and magnetic filtering, levelling, interpretation and other functionality.

## montaj extensions



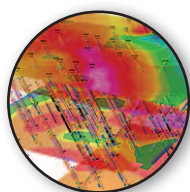
### Geophysics

Provides a range of filters and statistical tools for working with large volume geophysical data. Spatial 1D filters enable field geophysicists to process data by applying a variety of space-domain filters (linear and non-linear). The 1D FFT filter enables you to apply a variety of Fourier domain filters to one-dimensional (line) potential field and other data. A variety of geostatistical tools provide the ability for summary and advanced statistics, including histogram, scatter and triplot analysis, and the ability to subset data based on rock code or map group classification.



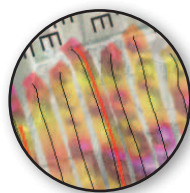
### Geochemistry

Provides QA/QC tools, analytical tools and advanced mapping techniques for surface and subsurface geochemistry. Easy to use Standards and Duplicates handling simplifies the quality control process. Multi-element geochemistry analysis is made simpler with interactive histograms, scatter plots, probability and ternary plots to identify outliers and populations. This extension also includes SEMPlot, a simple to use workflow for analyzing indicator mineral grain geochemistry in diamond exploration.



### Drillhole Plotting

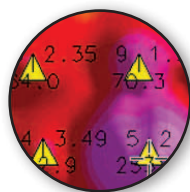
Allows quick, easy and accurate production of presentation quality drillhole section and plan maps. It enables geologists to set up drill projects, manage results dynamically, and interpret results for follow-up drilling and



decision making. The extension includes plan, section, stacked section, strip logs, fence diagrams and 3D visualization. Other capabilities include anisotropic 3D gridding, iso-surface and lithology surface creation and compositing of drillhole data.

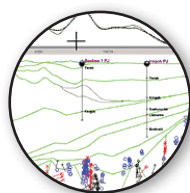
### Airborne Quality Control

Provides essential tools for planning an airborne survey, and meeting basic tender specifications. Includes flight path planning tools, the ability to monitor the survey progress, and streamlined quality control (QC) tools. A built-in mapping wizard automatically displays QC results. Quality control functions provide the ability to perform tests for altitude deviation, flight path deviation, flight line separation, sample spacing, diurnal drift and magnetic noise.



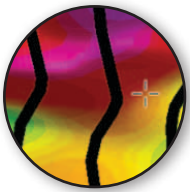
### UX-Detect

Provides unique capabilities for locating and analyzing UXO targets, based on magnetic (total field and gradiometer) and electromagnetic data. Use UX-Detect to quickly locate the ground position of potential UXO targets in large volumes of data and narrow these selections to a final target list. Geophysical correction tools identify and remove noise in data from sources such as background geology or instrument inherent sources.



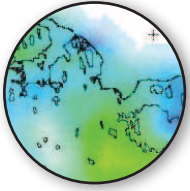
### Depth to Basement

Provides an automated method for determining the position, dip and intensity of magnetic source bodies for a magnetic profile. The depths are determined using Werner Deconvolution, Analytic Signal and Extended Euler Deconvolution. With large, distinct density contrasts, the extension can also be used on gravity profiles to determine the position of gravity source bodies.



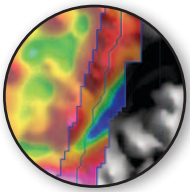
### Geophysics Levelling

Incorporates advanced tools for processing and enhancing airborne magnetic and other geophysical data. A step-by-step methodology for accomplishing a variety of levelling and correction tasks. The microlevelling toolkit enables you to perform microlevelling corrections on line-based data.



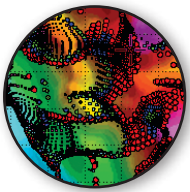
### Gravity and Terrain Correction

A complete system for processing and reducing gravity data from conventional surveys. Apply terrain corrections from digital elevation models or gridded elevation data. With the streamlined menu system, perform all the standard gravity processing steps quickly and easily. And the uniquely optimized terrain reduction algorithm delivers accurate corrections quickly, even for very large data sets.



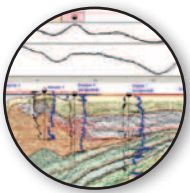
### Gridknit

Delivers two advanced methods for rapidly and accurately merging virtually any pair of geophysical grids. The blending method quickly merges grids via standard smoothing functions. The suturing method enables you to automatically or manually define a join path, then applies a proprietary multi-frequency correction to eliminate differences between the grids along the path. "Postage stamp" stitching allows easy insertion of high resolution grids into regional backgrounds.



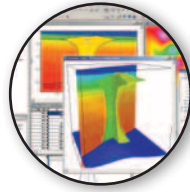
### Grav/Mag Interpretation

Automatically locates and determines depth for gridded magnetic and gravity data with Euler 3D Deconvolution processing routines. Euler 3D automates 3D geologic interpretation by delineating magnetic and gravimetric boundaries, and calculating source depths. Also includes the Keating Magnetic Correlation Coefficients tool for kimberlite exploration. This tool uses a simple pattern recognition technique to locate magnetic anomalies that resemble the response of modeled kimberlite pipes. A Source Edge Detection tool locates edges (e.g. geological contacts) or peaks from potential field data by analyzing the local gradients. The Source Parameter Imaging tool quickly and easily calculates the depth of magnetic sources.



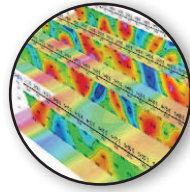
### GM-SYS Profile Modeling

Using a user-friendly and interactive interface, create a geologic model and compare its gravity and magnetic response to observed measurements. Basic, Intermediate and Advanced profile modeling are available based on your requirements.



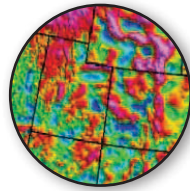
### GMSYS-3D Modeling

Design three dimensional models that depict the variation and irregularity of subsurface structures within this interactive layer based gravity and magnetic modeling extension. The user-friendly interface provides easy model creation, visualization and manipulation. The inversion module and the ability to import constraints from other sources simplifies the creation of a well-constrained model.



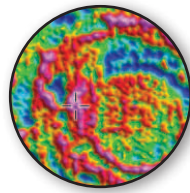
### Induced Polarization

Designed for both contractors and in-house geophysicists, this extension performs a variety of tasks on your IP data including: import, quality control, processing, gridding, and plotting. Import, perform basic quality control, process, and present data from both time and frequency domain surveys. Import time-domain or frequency-domain data in Zonge, Iris, Scintrex, Phoenix and Geosoft formats. Process data from dipole-dipole, pole-dipole, pole-pole, or gradient surveys. Automatically calculate apparent resistivity, metal factor, IP, self potential and individual time slices. Evaluate duplicate samples with the unique quality control tool. Filter your data using standard pant-leg filters. Produce pseudo-section presentations, including stacked sections, and instantly convert your stacked sections to display in three dimensions.



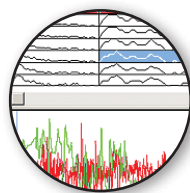
### Isostatic Residual

Calculate a depth to the Moho (the "root") using the topographic grid, terrain density, Moho density contrast and depth of sea level compensation. It then calculates the 3D gravity response of that root at sea level, out to 166.7 km. We use a modified version of the USGS algorithm to calculate the Airy isostatic regional and residual gravity from a topographic grid.



### MAGMAP Filtering

Utilizes a 2D-FFT filter library to allow the application of common Fourier domain filters to gridded data in Oasis montaj. MAGMAP rapidly processes and enhances gridded datasets by applying a wide range of robust geophysical and mathematical filters. Easily apply multiple filters together, modify selected filter parameters, and define and apply your own filters.



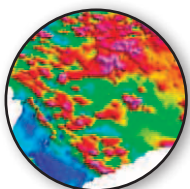
### 256-Channel Radiometrics Processing

Provides the capability to visualize and process 256 channel spectrometer data. From a data handling and processing perspective, there are three main phases in airborne spectrometer surveying: acquisition, processing and presentation. This extension is designed specifically for processing raw data collected from airborne surveys.

# Expand your capabilities with **montaj plus** partner extensions

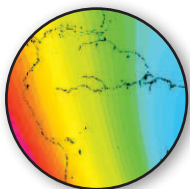
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## montaj plus extensions



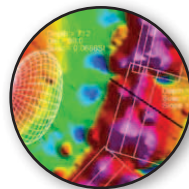
### Compudrape

Drapes any potential field profile or gridded data to any reference surface. The Compudrape extension performs height continuation on aeromagnetic profile data, to transform it from the original magnetic field on an arbitrary observation surface to the magnetic field on a new surface of specified height. The primary uses are to drape barometric or loose drape surveys to a tight drape, drape over the basement surface, transform drape-flown surveys to barometric and apply height corrections to minimize line-to-line effects.



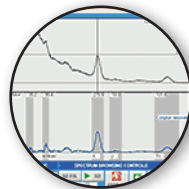
### Grav/Mag Filtering

Create a grid that is reduced to the pole everywhere with a Continuous Reduction to the Pole function. It also enables you to calculate Total Magnetic Field from Measured Horizontal Gradients.



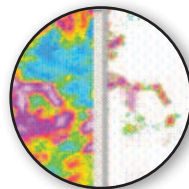
### PotentQ Modeling Lite

Provides rapid semi-automatic modeling of a single magnetic and/or gravity anomaly. A specially formulated inversion scheme generally requires no user intervention. PotentQ is a simplified and streamlined version of Potent, GSS's mainstream potential field modeling tool. The model consists of a single body chosen from one of seven possible geometries.



### Praga3

Provides an advanced solution for processing of whole spectrum gamma-ray spectrometry data, acquired by modern spectrometers using NaI(Tl) detectors. This extension includes a spectrum browser with tools for peak identification, advanced full spectrum processing using least-squares fitting techniques, principal component (NASVD or MNF) analysis, spectrum restoration and complete solutions for radon background removal.



### Predictive Targeting with Neural Networks

Highlight new exploration targets using neural network simulation. Predictive Targeting is a two step process. First, apply neural network training to your known targets to generate a target signature, then apply neural network simulation to locate similar signatures. This extension allows you to integrate a wide variety of gridded data types (e.g. geology, geophysics, geochemistry, remote sensing, topography) for robust and unbiased target generation.



# SHARE DATA WITH ANYONE

Download your **free** Oasis montaj Viewer

Use the Oasis montaj viewer to share all your maps, grids and interpretations created in Oasis montaj.

As an added bonus, the viewer can complete a wide variety of grid conversions and print capabilities.

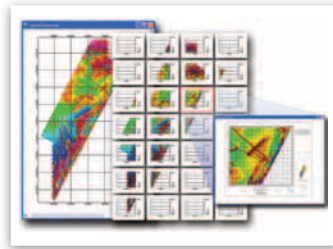
>> Visit [www.geosoft.com](http://www.geosoft.com) for your copy.



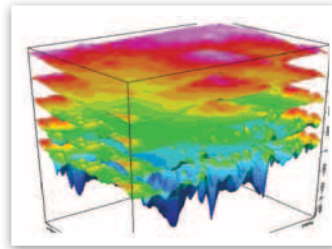
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## ABOUT GEOSOFT

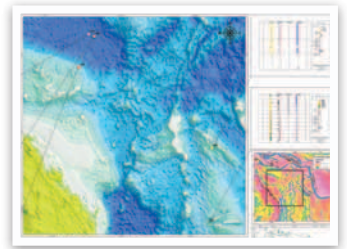
For more than 20 years, Geosoft has pushed the boundaries of earth science exploration, by providing software tools that maximize workflow efficiency, accuracy and integration. With offices in North America, South America, Europe, South Africa, United States and Australia, Geosoft is a global leader in delivering next-generation software solutions and services to progressive exploration companies around the world.



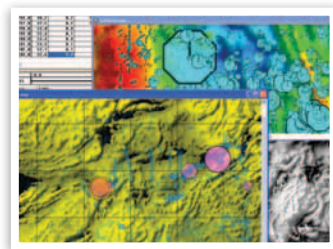
Easily produce multiple map sheets.



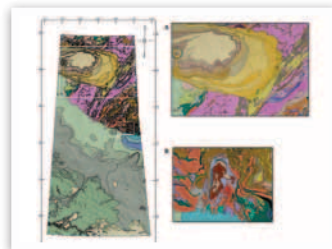
Complete 3D interpretations.



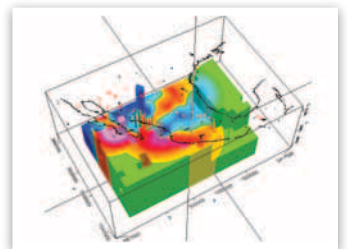
Produce professional quality maps.



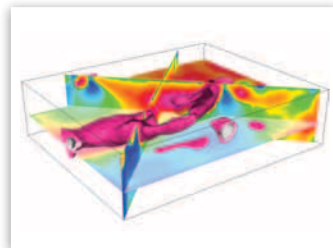
View multiple symbol plots.



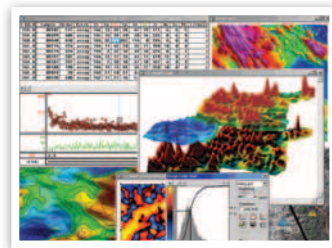
Access all data with Dapple globe technology.



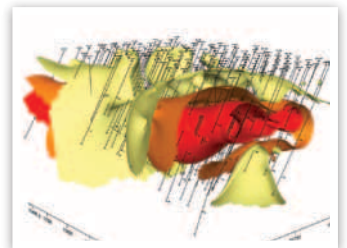
Integrate vectors with 3D grids .



Slice 3D voxels.



Integrate all your data in one environment.



Generate isosurfaces from voxel data.



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