

# **ERDAS® ER Mapper**

Powerful image processing software for geoscientists and GIS professionals

ERDAS ER Mapper professional software is used worldwide in the oil, gas, and mineral exploration industries for satellite and aerial image exploitation. Working from raw data, immediately applying processing and enhancing options, and real-time response are distinctive advantages that ERDAS ER Mapper provides to users. ERDAS ER Mapper technology saves time and disk space with revolutionary algorithm processing, including these features:

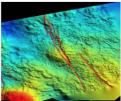
- Image integration platform for remote sensing and geophysical imagery
- Domain-specific workflows
- Easy to use intuitive interface and wizards
- Imagery preparation tools for web data deployment

With the ever increasing number of 3-D seismic surveys being acquired, it is essential that interpretation of the data be both effective and efficient to ensure that maximum information is derived. Image processing, traditionally applied to datasets such as satellite images, has become an important tool for exploration geophysicists to analyze interpreted seismic horizon datasets and their associated attributes.

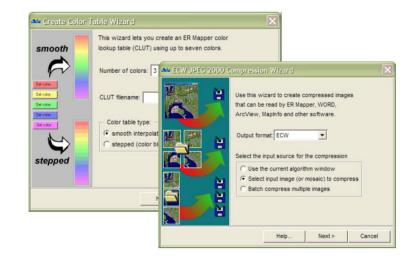
ERDAS ER Mapper provides unique capabilities for enhancing and visualizing surface interpretations, and integrating data from a variety of sources to create top quality map products. ERDAS ER Mapper can lower exploration costs by aiding detection of subtle structural features and lineations not readily discernible by other means. This type of information can, for example, be used to improve the positioning and accuracy of target wells.











ERDAS ER Mapper provides many features to visualize and integrate interpreted seismic and attribute data, including abilities to:

- Import data in common geophysical formats (including SEG-Y, Landmark Graphics products, Schlumberger (GeoQuest, Geosoft, Gridpro, and more) and satellite image formats (Landsat, SPOT, IRS-1C/1D etc.), TIFF files, and more.
- Process and integrate geophysical, geochemical, satellite, digital terrain, radar, airphotos, scanned maps, vector GIS, and other data for combined analysis.
- Apply sophisticated illumination and shading effects to geophysical data to rapidly identify gradients and trends, subtle geological features, and processing artifacts.
- Interactively combine structure and other images into a single display by showing data as both color and brightness (colordraping).
- Use math functions to generate dip, azimuth, isochron, vertical derivatives and continuations of potential fields data, Landsat band ratios and Principal Components, and other common transforms.
- Use Fourier transforms (FFTs) to apply processing in the frequency domain, such as reduction to pole of magnetic data.
- Register satellite images to actual locations of seismic shots.
- Tie subsurface images to surface geology.
- Combine different types of raster, vector, and tabular data into a single visualization.
- Render top quality, annotated image maps to over 230 hardcopy devices and standard graphics file formats.

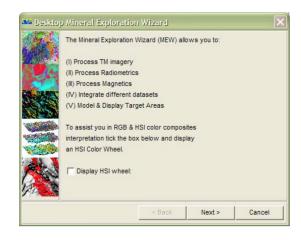
# Domain-Specific Workflows by Wizards

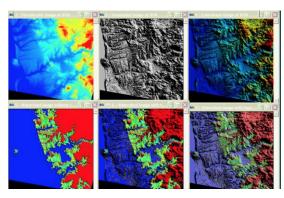
## Geosciences and Exploration

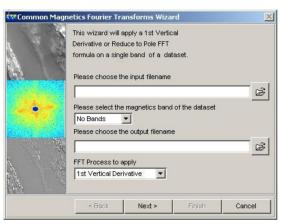
- Common Geophysical Images Wizard
- Contouring Wizard
- Desktop Mineral exploration wizard
- Oil & Gas, ASAT (Advanced Seismic Analysis Toolbox)

# **Environment, Urban Planning, Utilities**

- Land application Wizard with options for
- Flood zone mapping
- Change detection analysis
- Watershed mapping







#### **Data Preparation**

- Image display and mosaic
- Image Balancing
- Image Compression

# **Magnetic Data and Seismic Data Processing**

Designed for geophysical studies, dedicated wizards including Minerals, Geophysics, and Oil and Gas can ingest geological data including magnetic survey data or seismic data.

#### **Geophysics Tools**

- K/Th algorithm
- Magnetic Fourier wizard can process magnetic data to view the anomalous zones

#### **Desktop Mineral Mapping Wizard**

Model, integrate and display different data sets such as satellite images, magnetic data, seismic data, and some vector layers as well.

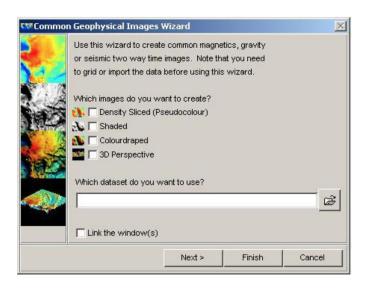
- Abrams Ratio Algorithm
- Clay ratio/ Magnetic colour drape
- Common Geophysical Wizard

#### Oil and Gas Tool

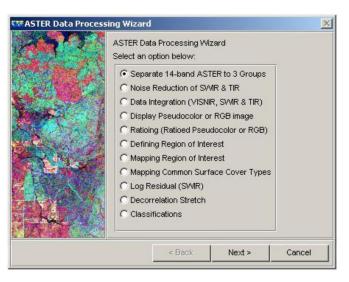
Different Horizon Dips can be created with magnetic and seismic data.

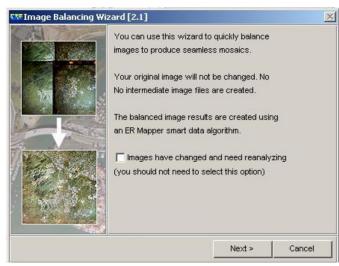
#### **Full ASTER Processing Wizard**

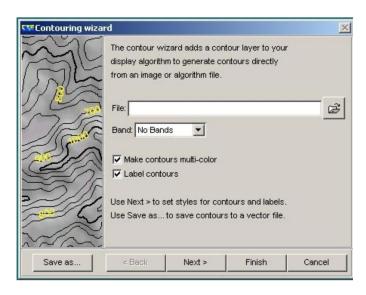
Full ASTER processing functionality such as band grouping,

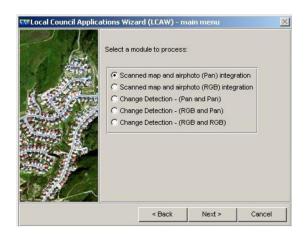


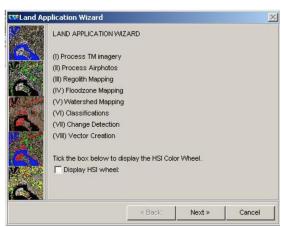












#### Mosaic, Contouring, Land Application Wizards

#### Mosaic and Color Balance

After mosaicking, use the color balancing wizard to balance the color of each tile to match the overall mosaic image.

#### Draw Contours from an Elevation File

Automatic contouring wizard creates vector contours from a DEM, and includes labeling of the contour lines. The resulting contour file can be saved in Shapefile format.

## **Local Council Application Wizard**

Used for various types of change detection and integration of aerial photos (PAN and PGB) with scan map of same area.

#### **Land Application Wizard**

While performing change detection using Landsat TM data, you can map a floodzone, or define a watershed area map.

# Contact us



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# About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates solutions that deliver a 5D smart digital reality with insight into what was, what is, what could be, what should be, and ultimately, what will be.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at hexagon.com and follow us @HexagonAB.

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