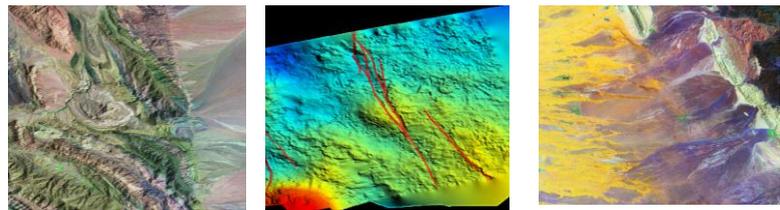


ERDAS ER Mapper Software

ER Mapper professional software is widely used in exploration industry and geologist worldwide for satellite image exploitation.

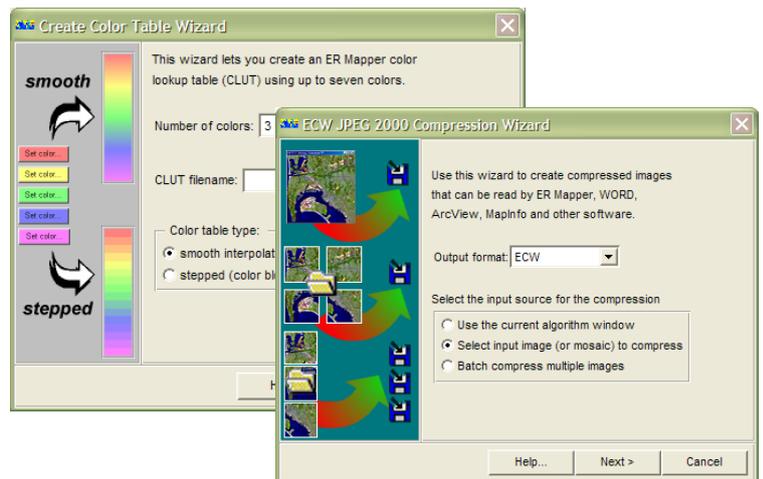
It is known for its:-

- Powerful image processing software for geoscientists and GIS professionals
- Unique data display tools to enhance satellite and aerial imagery, Elevation and geophysical datasets
- Easy to use and intuitive
- Domain specific workflows (Advanced Seismic Analysis toolbox)
- Wizard oriented
- Image Integration platform for remote sensing and geophysical imagery
- 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 now become an important tool for exploration geophysicists to analyze interpreted seismic horizon datasets and their associated attributes.

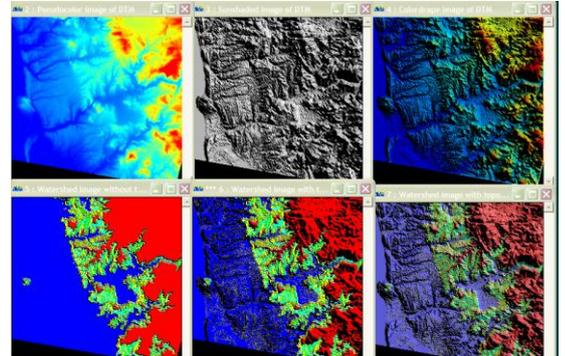
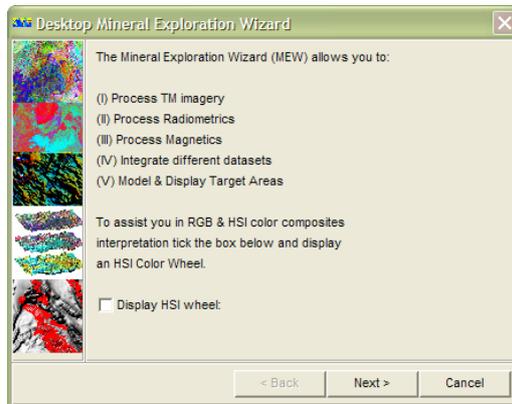
ER Mapper provides unique capabilities for enhancing and visualizing surface interpretations, and integrating data from a variety of sources to create top quality map products. ER Mapper can lower exploration costs by aiding detection of subtle structural features and lineations not readily discernible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





HEXAGON
GEOSPATIAL

INTERGRAPH®



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 (“colordrapping”);
- ✓ 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

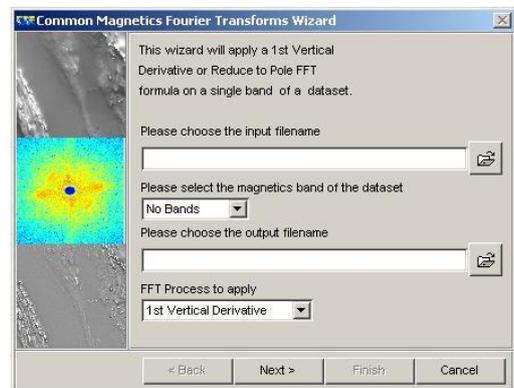
ER Mapper Professional has dedicated wizards based for Geophysicist toolbars like Minerals, Geophysics and Oil and Gas. Importance for these toolbars are not only the satellite image but geological data like magnetic survey data or seismic data can also can be used here.

In Geophysics toolbar most notable tools are:-

K/Th algorithm

Magnetic Fourier wizard

Through this wizard magnetic data can be processed to view the anomalous zones.



Desktop Mineral Mapping Wizard

These can be used to model, integrate and display different data sets like satellite images, magnetic data, seismic data and some vector layer as well.



In Geophysics toolbar most notable tools are:-

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



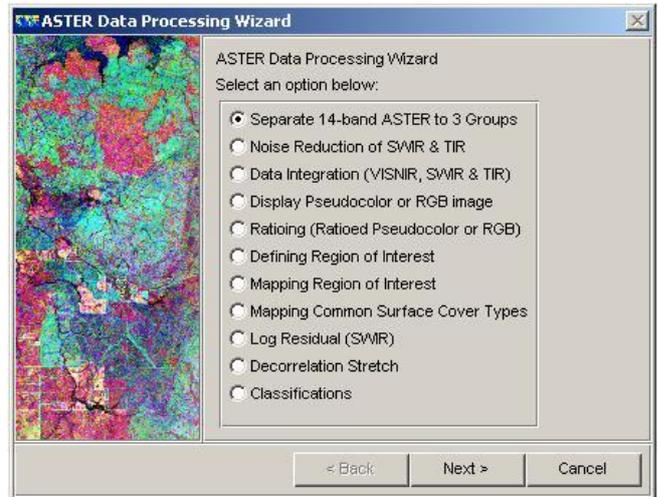
Oil and Gas Tool:

Different Horizon Dips can be created with magnetic and seismic data (below toolbar).



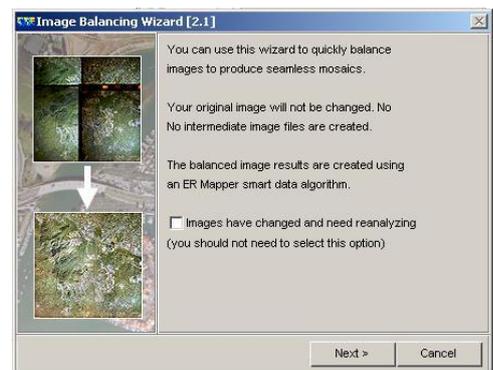
Full ASTER processing Wizard

Full ASTER processing functionality like band grouping, band ratio. in a single wizard.



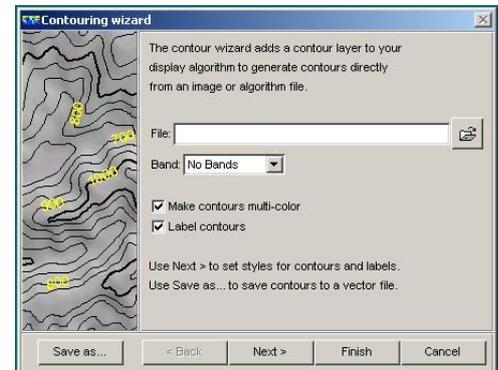
Other Notable tools

- 1) After mosaicing To balance the colour of the entire tile colour balancing wizard is useful:



- 2) Automatic **contouring wizard** helps to create vector contour from a DEM with label.

The contour will be in .erv format and that can be exported to .shp format.



- 3) In remote sensing tool bar there are two very important wizards

- **Local Council Application Wizard:**

Here various types of change detection and integration of aerial photo(PAN and PGB) with scan map of same area can be done.



- **Land Application Wizard:**

In this wizard two very useful utilities are “Flood zone Mapping” and “Watershed Mapping”. In change detection using TM data some preset algorithm like mapping of water and Mapping vegetation can be used.

