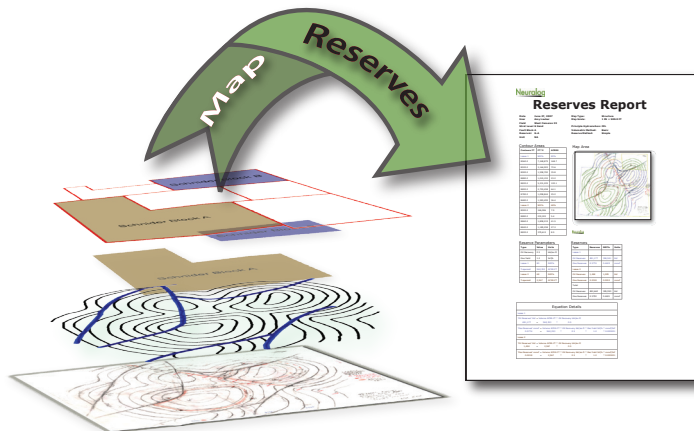


NeuraMap

Volumetrics, Reserves and Map Digitizing



NeuraMap is the industry accepted application for calculating volumetrics and reserves. Any scanned, hand-drawn or computer created map can be used. Basic and modified methods are included as well as nine standard equations to generate accurate areas, volumes and reserves. These results can be exported for further evaluation or presented in a customizable report that includes calculation methods used in obtaining your results.

NeuraMap is also the oil and gas industry's leading application for the data capture of contour and basemap data. Valuable information is brought directly into your workflow from maps, cross plots, interpreted seismic and other types of data, new or legacy. Data capture is made simple with accurate and rapid auto-tracing and symbol recognition.

NeuraMap converts raster images into industry digital data. Line, curve and point data overlay original image for immediate QC. Editing is WYSIWYG and workflows are wizard driven. The Raster maps can also be directly georeferenced and reprojected, without digitizing. Unlimited calibration points are used to automatically eliminate the effects of image skew and stretch. A calibration grid provides visual and quantitative error analysis.

NeuraMap provides the ultimate flexibility for volumetrics, reserves and map digitizing. Once data and other information are assembled, they can be imported directly to *NeuraSection* or converted into any industry standard format for E&P workstations.

Volumetrics and Reserves

- Work with a range of reservoir maps (structure, net thickness, net pore volume, and net hydrocarbon pore volume) in either relative scale or absolute coordinates.
- Calculate distances, areas, volumes and reserves including gas-in-place, oil-in-place, recoverable oil and recoverable gas.
- Volumes are calculated using digitized contours contained by faults, leases and other cultural boundaries.
- Volumetric methods include standard and modified algorithms: Trapezoid, Pyramid, Trap/Pyramid, Quadratic, Step, Ratio, Simpson, and 3/8 Rule.
- Present your results with text or HTML reports with composite displays including maps and other graphics as well as your company logo.

Automated Digitizing

- Auto-tracing digitizes solid and dashed curves, as well as the perimeter of basemap objects.
- Auto-symbol search locates and digitizes wells, shotpoints and other point data.

Neuralog

Turning Paper Into Petroleum

Display and Merge Multiple Data Sources

- Raster images and digital data can be loaded from a variety of sources and combined into a single file. Multiple images and digital data sets, even in different projections, can be merged.

On-Screen Quality Control, Interactive Editing

- Accuracy is quickly verified while digitizing. The trace overlays the image in an offset color.
- Digital data, such as seismic lines or contour maps from other workstations, can be overlaid on the original image for QC and editing.
- Point and click interaction with auto-tracing and editing tools enable edits to be made immediately.

Worldwide Map Systems

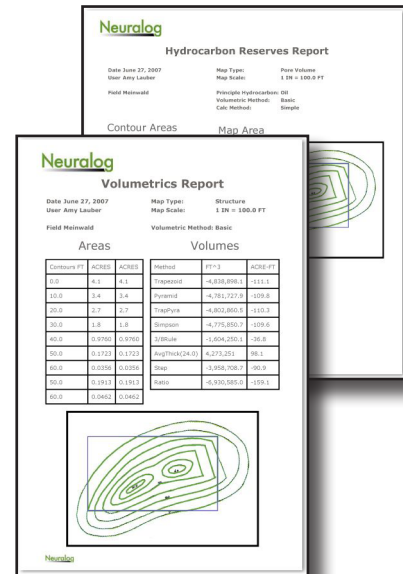
NeuraMap, with Blue Marble Geographics, supports 12,000+ mapping systems and user-defined systems.

GeoTIFF Export (ArcView World Image File)

ArcView World Image Files can be created from scanned images for most E&P workstations.

Map and Chart Printing

Digital map and graphic data can be viewed on the screen in WYSIWYG format or plotted with any Windows standard printer.



Data Input

Scanned Images

NeuraMap accepts any standard TIFF, JPEG, PDF or BMP image as input. Color, grayscale or b/w images supported (200 dpi recommended). Neuralog recommends the *NeuraScanner* for small or foldable maps and has available wide-format scanners from 36" to 54" width.

Data Files

AutoCAD DXF, ESRI ArcView Shape, Generic ASCII or Existing *NeuraMap* NDS file.

Seismic Location Data

UKOOA and SEG P1 formats. Import as Lat/Lon or Grid values.

Data Output

NeuraMap works with *NeuraSection* plus industry formats including:

- AutoCAD DXF • AutoCAD 3d DXF • ArcView Shape • ArcView World Image Affine (GeoTIFF)
- ArcView World Image Exact • DGI EarthVision • GeoGraphix WellBase V2.0 • GeoGraphix Landnet CDF V1.0 • GeoQuest CPS3 • GeoQuest Finder • Landmark Graphics ZMAP+ ASCII
- Landmark SeisWorks • PetroSys Mapping • SEG P1 Seismic • Tobin Base Map • UK00A Seismic
- QuickPlot - immediate display of captured data • Formatted ASCII and HTML

NeuraMap System Requirements

Pentium 4 Processor • Minimum 100 MB Disk Space • Minimum 256 MB RAM • Graphics - 800 x 600 Minimum with 16 bit color video • Windows 2000/XP/Vista/7