



NeuraSection

Answer your Geology Questions



NeuraSection allows you to evaluate leases, generate prospects and answer your E&P questions in one application. Users can visualize, analyze and create presentation logs, maps, sections and prospect montages, as well as calculate reserves, in a process that maximizes the utility of available data resources and minimizes the time required to create and present the total play concept.

NeuraSection is flexible enough to use your raster logs and maps to get you started right away, yet powerful enough to use your entire digital data set for a full analysis. Raster and LAS logs can be normalized, correlated, annotated and used in sections faster and less expensively than either paper or digital-only methods. A basemap is generated automatically with your well data, while scanned or vector maps provide the reference for your well selection or analysis.

Log correlation is quick and easy with LAS files and depth calibrated rasters. Correlate in log or cross section views. Updated information is automatically reflected in all views and can be shared among projects. Cross sections are readily created using templates or user-defined parameters. Raster, LAS and stick wells may be displayed along the deviated wellbore path in structural cross sections. Stratigraphic cross sections are generated automatically with an option to display missing intervals.

Rapid mapping in *NeuraSection* enables the geoscientist to create presentation quality maps through a set of automated mapping tools. Auto-contouring allows users to quickly generate contours for different map types within the same AOI without leaving the workspace. Gradient or discrete fills can be added for formation evaluation and reservoir displays. The user can manually draw contours as well as freely edit and/or infill auto-generated contours. Volumetric reserves can be determined from these custom structural or stratigraphic maps.

Bring everything together in a *NeuraSection* montage and export data to any E&P application. The montage allows you to incorporate show logs, cross sections, maps, reports and any Windows graphics to present everything needed for evaluation and decision-making. *NeuraSection* brings together the whole play concept in an efficient solution.

Neuralog Desktop Integration

Neuralog Desktop is a GIS based interface that integrates with *NeuraSection* to enable users to quickly visualize their geological data from *NeuraSection* and other databases with an on-screen interactive display.

- Display and open cross sections, AOIs, wells, logs and well/field related documents for any *NeuraSection* project. Includes strong well filters and visualization tools
- Area tree for quick well, log and document recognition
- *NeuraSection* toolbar is integrated to allow users to quickly create or edit projects
- Manage projects, documents and well logs across your corporate workspace

Benefits of NeuraSection

- ① Answer your E&P questions in one application
- ② Faster lower cost evaluations means more success
- ③ Reduce time and budget for evaluations
- ④ Achieve independence with an application in your control

Quality Control

Quality control is a part of all Neuralog products. In *NeuraSection* this is primarily achieved through the integration with other Neuralog products where data is captured and validated. There are some critical quality control functions within *NeuraSection* as well.

- Log Coverage Diagrams show log types and depth intervals to locate missing data
- Well spots are color coded in map view to indicate wells with missing logs
- Well Filter lets you search for and inspect wells of specified criteria
- Log List View tracks which logs have been calibrated and which have attributes set
- Bubble displays shows you how well your contours match your top picks
- Contour intersections show you how well your contour map matches the interpretation in your cross section

Data Input

Automated DB Connections: Well/Log Data

Divestco, LogTech LogArc, P2ES PetroLAB, MJ Systems

Log Data Formats

DrillingInfo, LogTech/LogArc, TGS smartRASTER, TGS SIF Files, MJ Systems LogSleuth, Geographix and PETRA, LAS and TIFF Batch File Loaders, NeuraLog NLGX Files

LAS Digital Files

LAS 1.2 and LAS 2.0

Scanned Images and Depth Calibrated Images

NeuraSection accepts any standard TIFF image as input. Color, grayscale or b/w images are supported. Images can come from industry standard data providers or more conveniently, directly from the NeuraScanner.

Well Data with Assigned Logs

TGS SIF Files and SmartRaster, Drillinginfo, MJ Systems LogSleuth, LAS Batch File Loader, NeuraLog NLGX Files

Data Output

Well/Log Data

GCS Well and Top, Generic ASCII, GeoGraphix WellBase V2 and V3, MJ Systems LogSleuth Well File, NeuraSection Project, PETRA Ready and GeoGraphix Ready data

Map Data

AutoCAD DXF, ArcView Shape, DGI EarthVision, GeoQuest CPS3, GeoQuest Finder, Landmark Graphics Metafile, Landmark ZMAP Plus, MFD, ASCII, Landmark SeisWorks, Formatted ASCII

NeuraSection System Requirements

- I5 Processor – 8GB RAM – 1920x1080 resolution – Windows 7 to Windows 10
- Support for both SQL and Access databases

“We set up cross sections and illustrate our ideas much faster with NeuraSection than any other software”

Visit neuralog.com/ case-studies to read the full case study.

Value Add Options



Neuralog Desktop adds access and visualization of E&P data from other in-house databases.



NeuraScanner and/or NeuraLog add log data capture when and where available to help you solve E&P questions.

Logs

Individual logs can be marked and annotated to create a show log for your working reference, final presentation, or inclusion in the montage.

Show/Work Log Displays

- Create composite logs using multiple raster/LAS logs and annotate to make type logs
- Display tops, bases, faults, PERF, CORE, IP, DST, Shows, Production and Well CUM, etc.
- Annotate with user-defined text and free-form drawing
- Place bitmap and metafile graphics: lithology, engineering, and geology included

LAS Well Log Displays

- Create custom templates for curve fills, track, scale, color, line type, backup, etc.

Counting Tool

- Click and drag over the interval for instant counts
- Create lithologic, fluid or user-defined interval counts
- Color and pattern fill intervals
- Auto-post and map net interval data on maps and/or export for other users/applications

Log Coverage Diagram

- Shows log types and depth intervals for one or many wells as selected

Correlation

Log Correlation can be done in log-to-log mode or in the cross section. Any depth calibrated log is ready for correlation with manual picks or auto-posting of imported picks.

Flexible Well Log Correlation Options

- Click to correlate down the stratigraphic column or across multiple logs
- Optionally correlate multiple wells simultaneously using even thickness model
- Correlate in measured depth or true vertical depth
- Align well log views on Structural or Stratigraphic datums
- Define custom Strat Sets for refined correlation workflow
- Search Strat Set to quickly find desired surface
- Switch between correlation in cross sections and log-to-log, as needed
- Mark formation tops and bases with "lock to depth" option
- Add fault markers with type and missing or repeat section

Cross Section

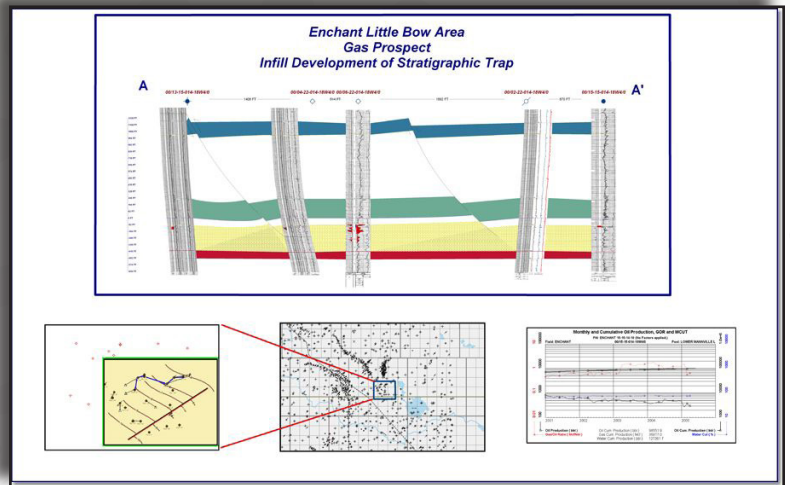
Cross Sections are an integral part of *NeuraSection*, and any number of structural or stratigraphic cross sections can be created and saved. Select wells for your section from the map view or the well list.

Well Log Displays Normalized

- Display logs with English or metric depth scales in any vertical scale and width, regardless of original.

Deviated Wells Displayed in Cross Section

- Enter survey information manually or import from another data source
- Display corrected logs in True Vertical Depth
- Display Log images and LAS along wellbore path, even for horizontal wells
- Cross Sections generated automatically
- Create section templates that control every aspect of the display
- Switch between Structural and Stratigraphic views
- Re-hang on any Stratigraphic Datum to create a new view
- Space wells equidistant, geo-proportional or custom
- Create TVT cross section displays



Composite Log Presentations for Wells with Multiple Logs

- Drag and drop logs in desired order in the cross section
- Merge digital and raster data
- Crop out undesired tracks
- Merge multiple log runs into the same presentation

Fault and Top Profiles

- Shape top profiles and use optional contour intersections from your maps
- Create custom profiles with colors, fills, patterns and line styles
- Auto-connect fault markers in the wells to fault profiles or draw fault profiles independently
- Break top profiles with faults and create displacements across the faults with interactive tools
- Restore missing sections in wells for stratigraphic cross section displays

Maps

Reference Maps can be imported or created on the fly from well data. The Area of Interest (AOI) allows users to create multi-surface structure, net isopach net pay, and TVT maps. All maps can be posted.

Reference Maps

- Post well status and header information
- Select wells from map to create cross sections
- Display map image, GeoTIFF or vector map layers
- Apply well filter to remove unwanted wells from map

Working & Presentation Maps

- Work with multi-level map management system based on stratigraphic column
- Post top, net gas, sand, or any rock or fluid parameter you have picked
- Create and edit computer generated contours for multiple maps within the same AOI
- Manually create and edit contours for your interpretation
- Add gradient or discrete fills to contours to enhance your evaluation
- Create simple faults or fault polygons using optional throw, heave, and dip calculations
- Create displacements across faults
- Display single maps or overlay several maps for referral and integration

Reserves

- Calculate basic volumetrics and reserves from structure or stratigraphic maps, create reports and post on montage.

Montage

NeuraSection has full-montage capability to complete your evaluation and presentation process. Include logs, maps, sections and reserves along with other windows graphics such as core photos, spreadsheets, well reports, etc. "Drag-and-drop" placement makes it easy to add documents and images to the montage. Once complete, the montage can be transmitted electronically, included in a proposal, printed for a personal presentation, or saved as PDF, TIFF or JPEG files. Presentation quality montages will sell your prospect or project.

