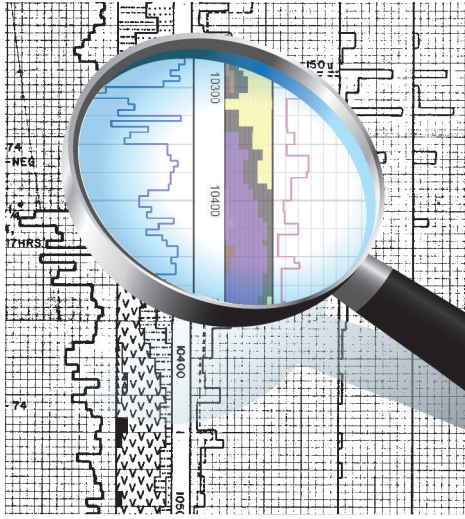




NeuraLog

Automated Log Digitizing and Preparation of Log Data



Oil and gas industry economics demand we get the most from our data while reducing data spend. *NeuraLog* does that as the most widely-used application for well log digitizing, depth registration and QC in the industry. E&P projects require a variety of data to develop a proper understanding of rock and fluid properties for reservoir characterization. *NeuraLog* provides automated tools for transforming all image or digital log data types into high quality information for display and analysis.

Quality digital data is a key element of successful E&P operations. Working with legacy logs can pose many problems for you and your organization, such as quality degradation, lack of digital data coverage,

data loss and variable data quality. *NeuraLog* addresses these problems through the use of automated tools which enable intuitive digitizing, QC and processing to ensure data is preserved for use with current and future projects at rigorous company/industry standards.

Digitizing

Automated Curve Tracing

Neural network algorithms trace curves for better-than-human speed and accuracy.

- Immediate feedback highlighting traced curve
- Line style curve tracers to accommodate curve crossings
- Built-in grid model to enhance curve recognition
- Auto-stop error detection
- Interactive curve editing with immediate resume tracing

Lithology, Text, Point and Dipmeter Data Capture

Utilize data from mud logs and lithology logs for complete analysis.

- Capture lithology and descriptions from hand-drawn mud logs with ease
- Unique step curve (ie. ROP, Gas...) capture by sample rate
- Annotation to mark important data such as zones, faults and reservoirs
- Capture point data from SWCs, pressures etc.
- Capture dipmeter data including direction and degrees

Image Warp and Stretch Correction

NeuraLog automatically corrects for distortion in log images by using defined depth grids to produce quality log images and digital data.

Interactive Log Display

NeuraLog displays the log image and traced data directly on your monitor, providing immediate QC.

- Point and click interaction and auto-scrolling with tracing tool
- Error correction at any point in the tracing process

Unlimited Backup Scales

NeuraLog's automated tracing functions process unlimited backup scales, automatically patching together the different sections of curves for streamlined curve output.

Benefits of NeuroLog

- 1 Focus on analysis not data
- 2 Log data how and when you need it for more timely decisions
- 3 Confidence in using the industry leader

QC and Processing

QC

NeuroLog includes comprehensive tools to QC and ensure log data quality. The Log Quality Index (LQI) Report provides an overall measure of quality on in-house or vendor data. The NeuroLog quality improvement tools include checks for pixel overlay, spikes, gaps, and depth gridding.

For verification of LAS data, the Virtual Light Table shows the match between the log image and digital data overlay quickly and visually. The LAS report summarizes your data to check for norms.

Multiple Runs/Curve Splicing

NeuroLog provides the option of merging multiple runs of the same curve within a log into one LAS file. In addition, curves from multiple files may be merged into a single LAS file for user convenience.

Digital Log Processing

Customizable LAS Curve Template • LAS Curve Edit • Curve Arithmetic • Baseline Shift • Depth Shift • LAS File Merge

Curve Calculation

NeuroLog comes pre-loaded with various methods to calculate v-shale, porosity, water saturation as well as other standard calculations. Custom equations can be created and saved for future use.

Data Input

Scanned Images

Standard color, grayscale or b/w TIFF, JPEG, PDF or BMP image

Data Files

Depth-calibrated rasters from industry data vendors and applications • Standard LAS files • Generic ASCII or Excel

Well Header Files

PI Dwigths Fixed 197 • IHS Well Fixed 297 • GeoGraphix WellBase V2 • LAS Headers • Generic ASCII or Excel

Data Output

Vector Files

LAS 1.2 • LAS 2.0 • AutoCAD DXF • IHS PETRA ASCII Well Data • Tab Delimited ASCII

Raster Calibration Output

NeuroLog Calibrated Rasters • PETRA Log Image Calibration (LIC) • GeoGraphix Depth • Registration ASCII (DRA)

NeuroLog System Requirements

i5 Processor • 8GB RAM • 1920x1080 resolution • Windows 7 to Windows 10

“NeuroLog provides the best and easiest digitizing and digital data.”

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

Value Add Options



Consider adding Neurolog Desktop for organization and easy access to all your well log data



Consider adding a NeuroScanner to capture logs for digitizing or raster calibration when needed