GDF with Seismic Activity histogram data visualization user guide

This document contains instructions for running application Catalog Editor within the EPISODES Platform. The application allows visualization of a histogram of GDF data correlated with seismic activity from a Catalog file.

To obtain more general information about working with applications within the Platform, see Applications Quick Start Guide.

Input file specification

The application requires two types of files (one file per each type) - see *Figure 1*:

- Catalog - a seismic catalog of events in EPISODES Platform Matlab-based format.
- Industrial or other data in GDF format, containing time/date information and one or more parameters correlated with time - matching file types can be found in: list of data types containing one parameter and date and list of data types containing parameters and date.

The files can be found within the platform's Episodes data (see AH Episodes quick start guide), uploaded to the workspace or obtained with one of Converters, specifically CSV to Catalog converter and CSV to GDF converter.

Figure 1. Application input files specification

Visualization

Since the application is a direct visualization, it does not require running (see also Applications user guide), the results will become visible /updated right after the input files are added/changed.

The visualization shows a histogram of seismic activity correlated with the supplied industrial data. If the GDF file contains more than one parameter (apart from the time/date information), the choice of the parameter is available from the drop-down menu (marked with *(1)* in *Figure 2*, options shown in *Figure 3*). In case the file contains only one parameter, this menu is not visible and the parameter is displayed automatically on the plot. Histogram may be also plotted in a cumulated version - choose from drop-down menu marked with *(2)* in *Figure 2*. It can also be configured with the step setting (marked with *(3)* in *Figure 2*) - to apply the change of the step, press the *OK* button. In case logarithmic scale is more convenient to see the histogram, use the relevant option at the bottom of the plot (marked with *(4)* in *Figure 2*).
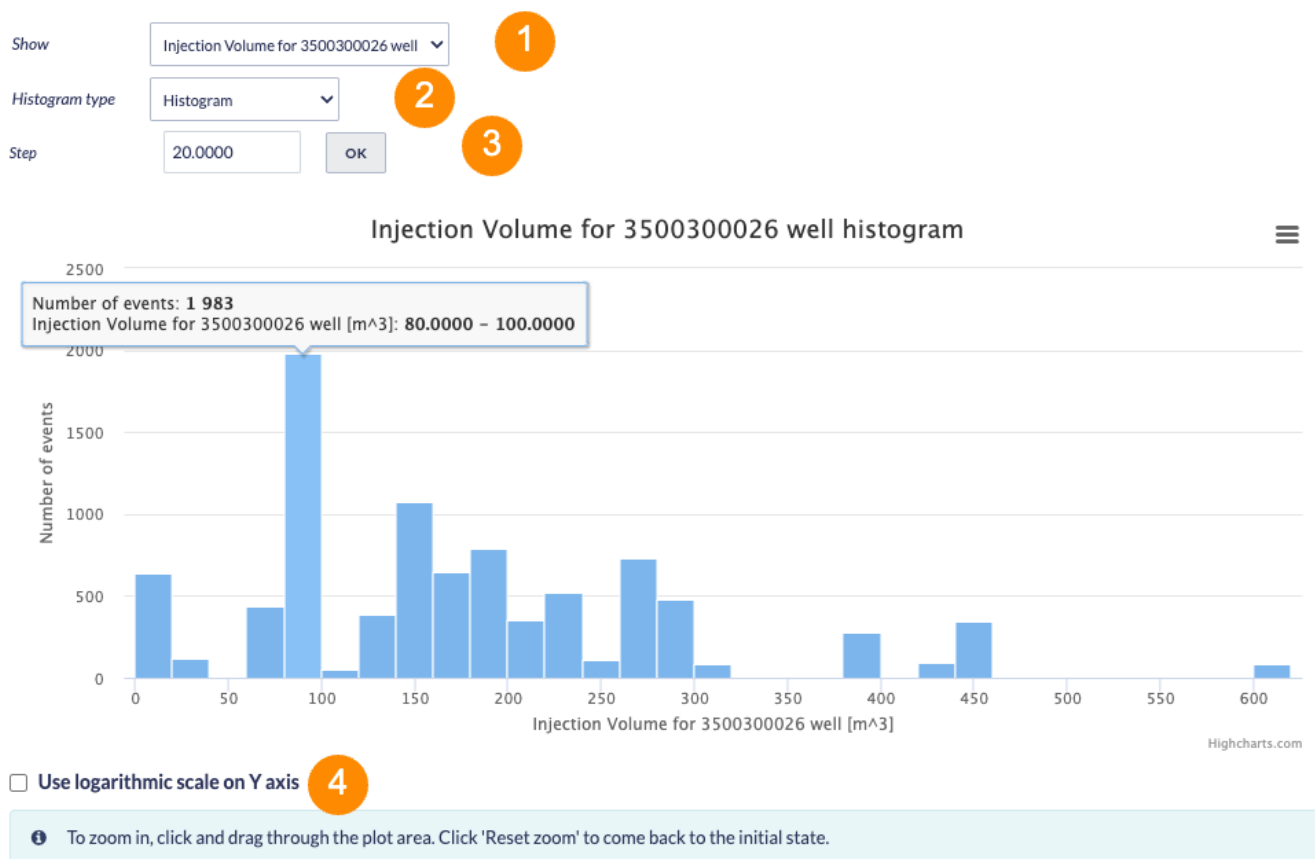
Show: Injection Volume for 3500300026 well ⌄ **1**

Histogram type: Histogram ⌄ **2**

Step: 20.0000 [OK] **3**

Injection Volume for 3500300026 well histogram ☰

Number of events: **1 983**
Injection Volume for 3500300026 well [m^3]: **80.0000 – 100.0000**

Number of events (Y axis, values: 0, 500, 1000, 1500, 2000, 2500)

Injection Volume for 3500300026 well [m^3] (X axis, values: 0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600)

Highcharts.com

☐ **Use logarithmic scale on Y axis** **4**

ⓘ To zoom in, click and drag through the plot area. Click 'Reset zoom' to come back to the initial state.

Figure 2. Produced visualization with configuration options marked

✓ Injection Volume for 3500300026 well
Injection Volume for 3500300163 well
Injection Volume for 3500320145 well
Injection Volume for 3500320786 well
Injection Volume for 3500320929 well
Injection Volume for 3500321074 well
Injection Volume for 3500321081 well
Injection Volume for 3500321107 well
Injection Volume for 3500321242 well

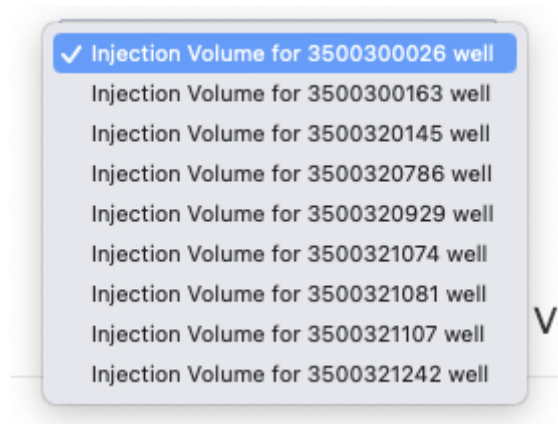**Figure 3. Parameter choice**

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