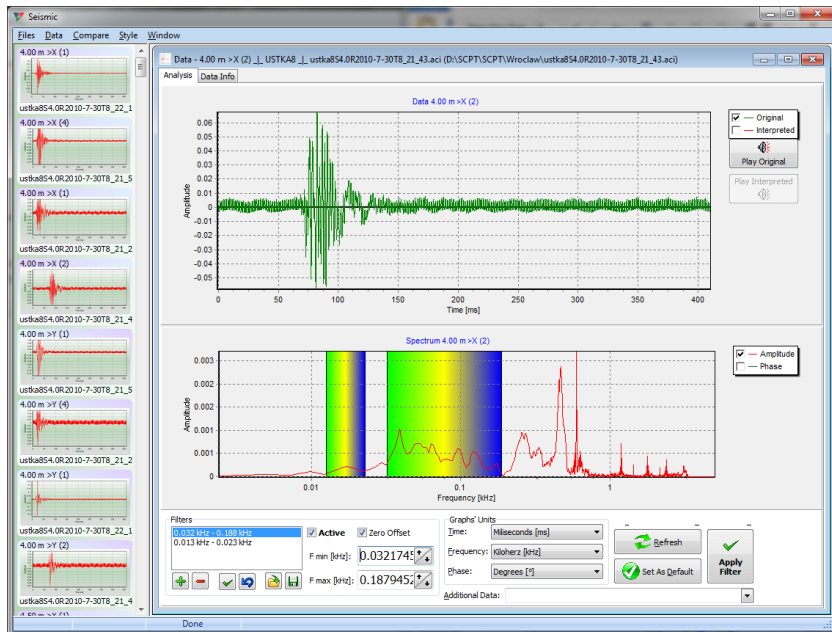


SEISMIC-pro

software for reduction, analysis
and interpretation of seismic tests.

SEISMIC-pro software allows User to filter, analyze and interpret raw data generated in seismic test, as well as to generate report with results of analysis.



The results of interpretation (values of wave velocity defined for depth intervals) can be presented as sounding logs, including the graph of function *velocity vs. depth* in selected vertical scale, header table with standard descriptions (date, hole name, site etc.) and company logo.

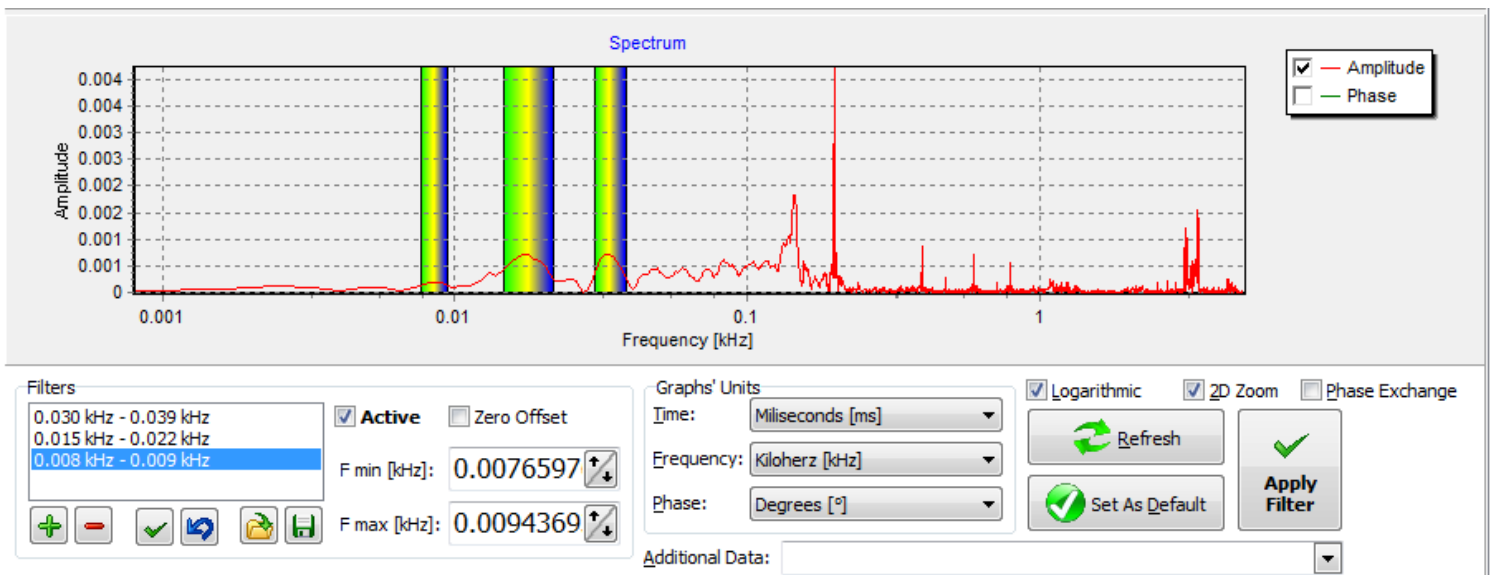
The results can be also saved in **CSV** file and easily imported to *Interpretation* module of *CPT-pro* or another software for further analysis.

Particularly interesting and valuable is transfer of results of seismic analysis to *Interpretation* module of *CPT-pro*, due to common presentation of seismic and *CPTU* data as well as using *Formula Editor* implemented in that module to calculate values of geotechnical parameters from values of velocity of seismic waves.

SEISMIC-pro is designed as a one of modules of *CPT-pro* package, however, it is also available as a fully independent application.

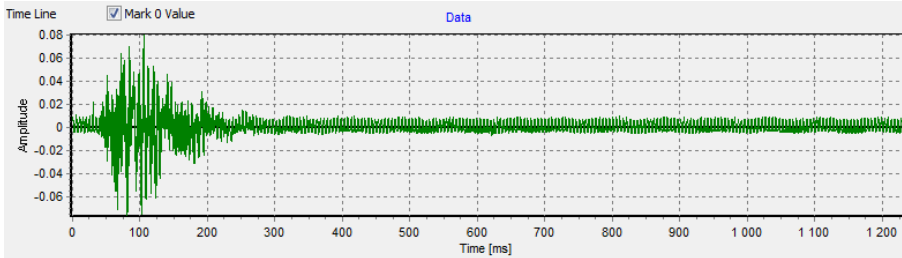
The universal procedures implemented in the *SEISMIC-pro* can be used not only for files generated in SCPT test but also for other ones like SDMT (seismic dilatometer) etc.

SEISMIC-pro application is designed as a multi-thread application. It helps in decided speeding up mathematical calculations in case of using MS Windows NT operating system or higher and using *multi-processor*, *multi-core* or *Hyper-Threading* architecture.

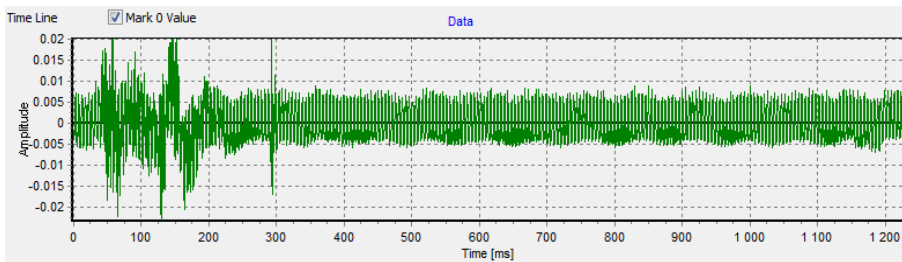


One of the most important functions implemented in *SEISMIC-pro* software is advanced filtering of the seismic data files. The procedures implemented in the software allows User to precisely select the frequency ranges depended on source of seismic waves and soil characteristics that are considered in further analysis (see below the highlighted ranges of spectrum). The number of selected ranges and ranges can be freely chosen by User.

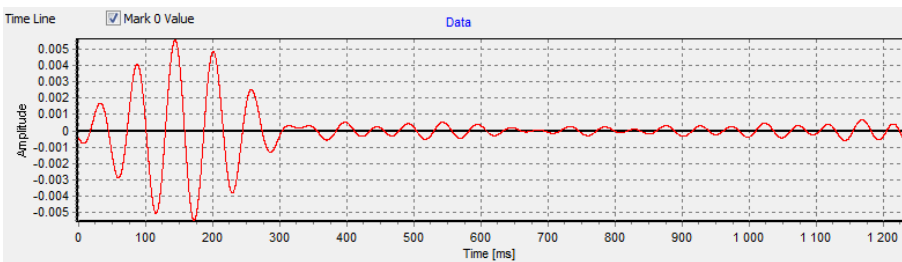
Usually the correct seismic data file looks like:



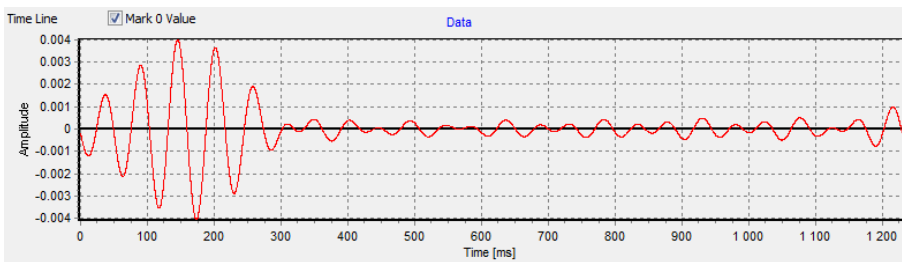
Or



The same files after filtering look respectively:

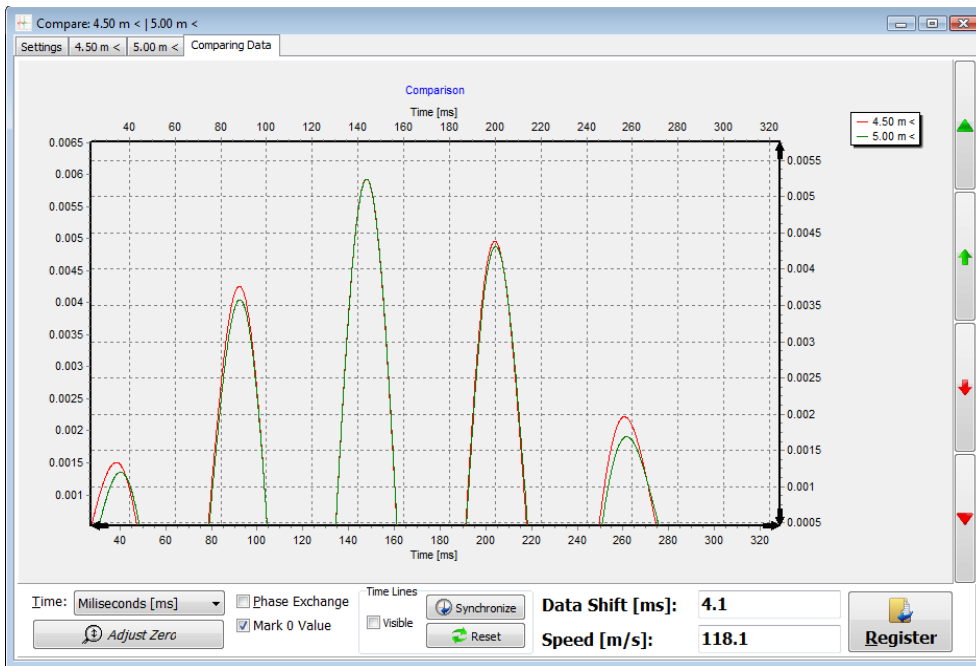


and

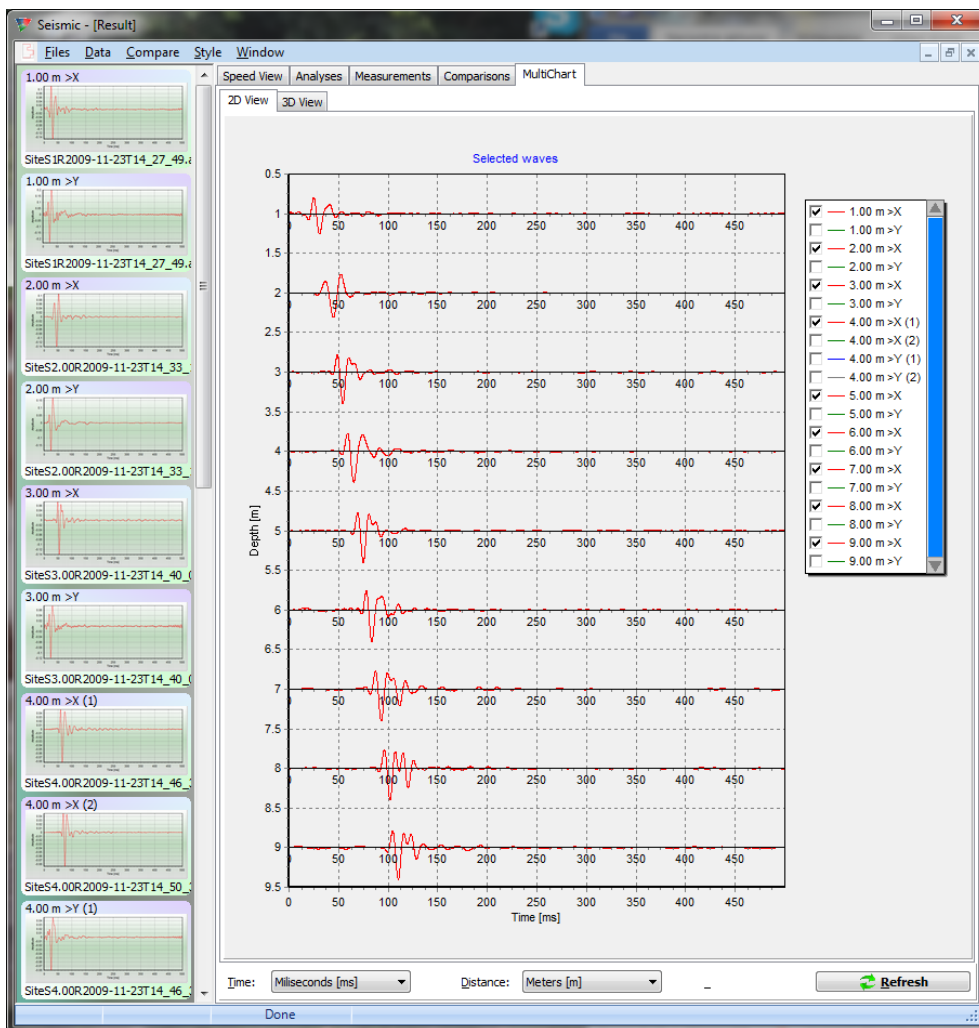


ANALYZING

Using procedures implemented in *SEISMIC-pro* you can easily compare seismic waves and calculate the time distance between them for two freely selected different depth, thus you can calculate the average velocity of seismic waves in considered range of depth.



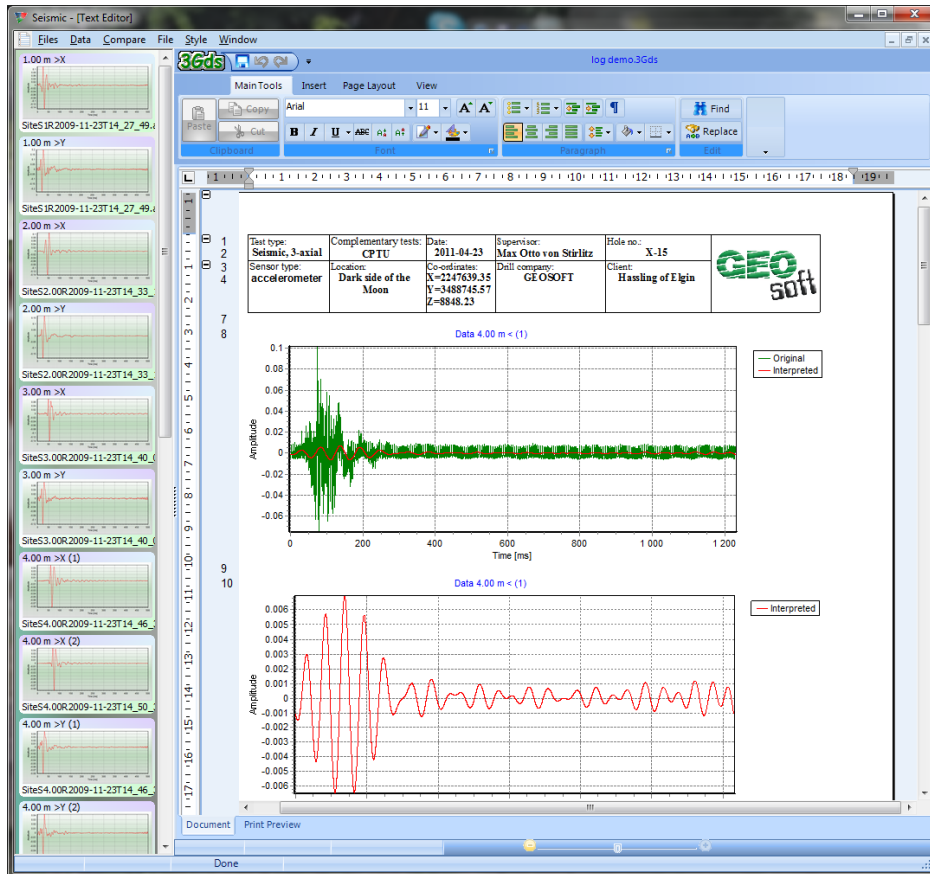
Overlap of waves - see above. Just by moving the bottom axis by mouse cursor against the upper one you can calculate the **Time distance 4.1 [ms]** for selected range of depth. To have better overlap of waves of different amplitude you can change the minimum and maximum of right axis (i.e. the vertical scale of lower wave) and move it, together with wave, against the left one. The final parameter i.e. **velocity of seismic wave 118.1 [m/s]** is calculated automatically in the same window.



The repeatability and – in consequence – quality of seismic data can be easily estimated by presentation of all filtered tests on the same graph. The same function can be used for common presentation of finally selected waves.

REPORTS

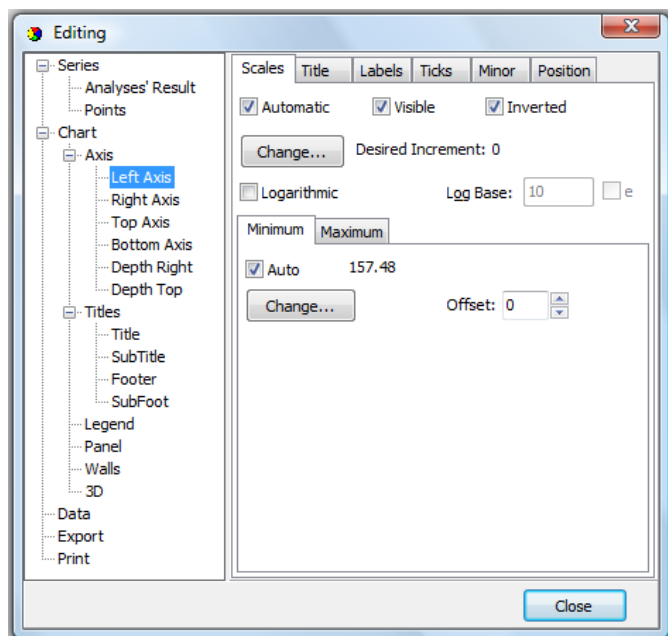
The basic results of analyzing of seismic tests. i.e. function [*velocity vs. depth*] can be further analyzed in *SEISMIC-pro* or exported to CSV file and transferred to external software (like *CPT-pro*). *Log Editor* implemented in that software allows User to generate logs of seismic soundings and high quality reports. Advanced structure of *Log Editor* allows to include any graph generated in *SEISMIC-pro* to report and add own text.



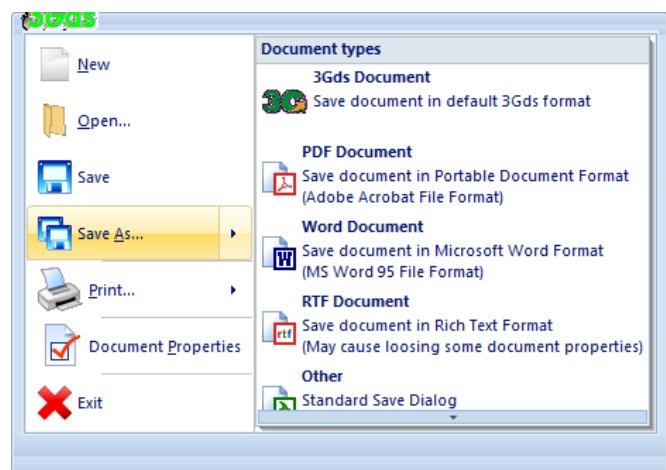
Logs generated in *Log Editor* can be saved in fully editable *3Gds* format and additionally in text formats DOC, RTF and PDF.

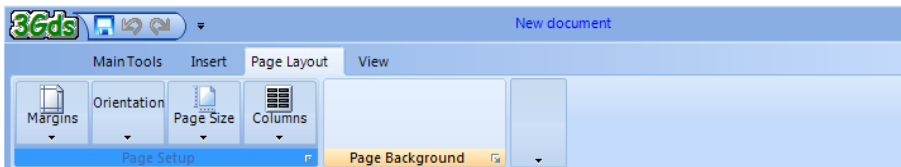
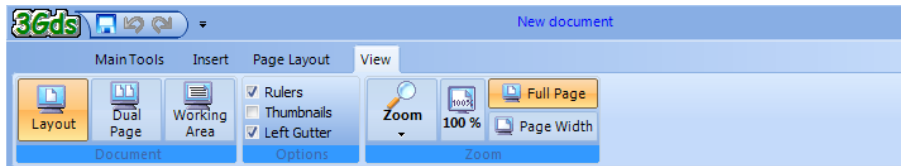
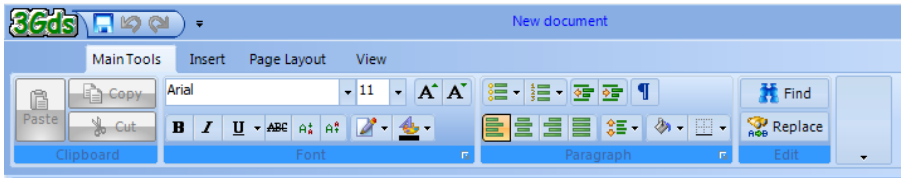
Graphs of [*velocity vs. depth*] and other of type [*parameter vs. depth*] can be presented in freely selected vertical scale.

Number of tools that are standard for advanced text editors, allow not only to generate graphs with results of seismic analysis but also complete reports with texts formatted in advanced manner and external graphic objects.



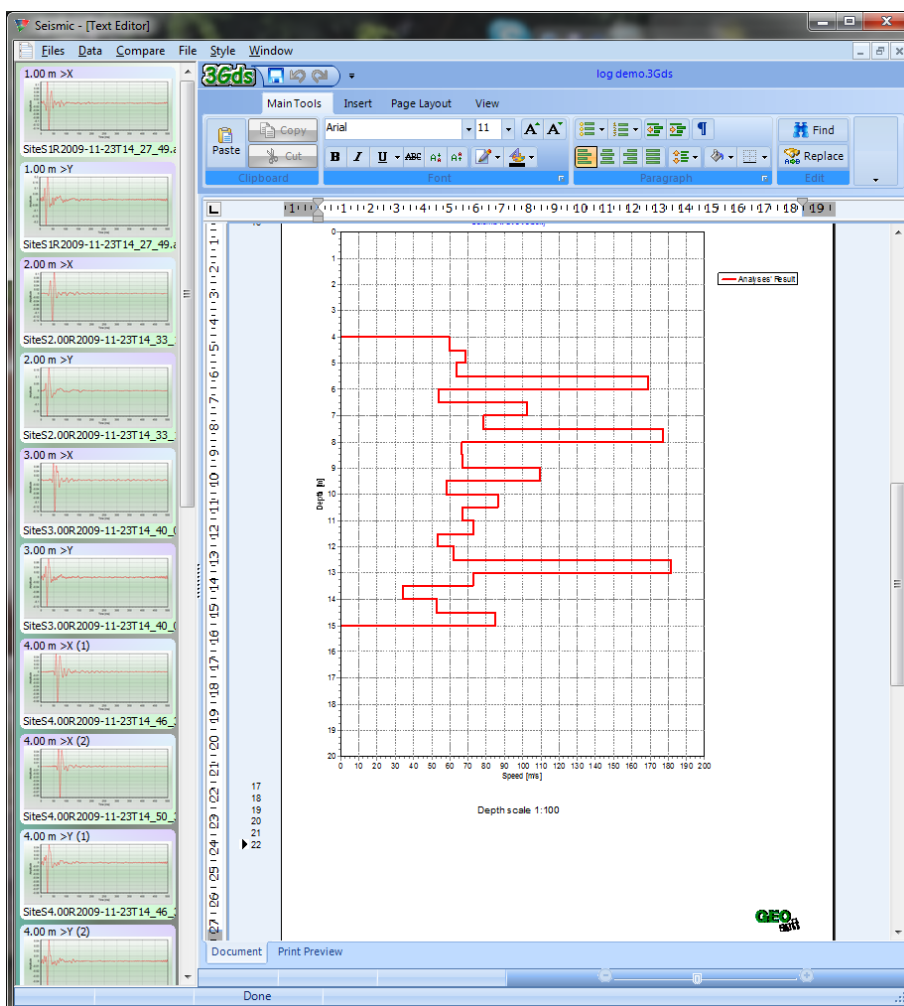
All graphs are included in logs with all attributes, so they can be easily and widely customized (including size, vertical and horizontal scales, colors, axis, grid etc.) just from the level of *Log Editor*.



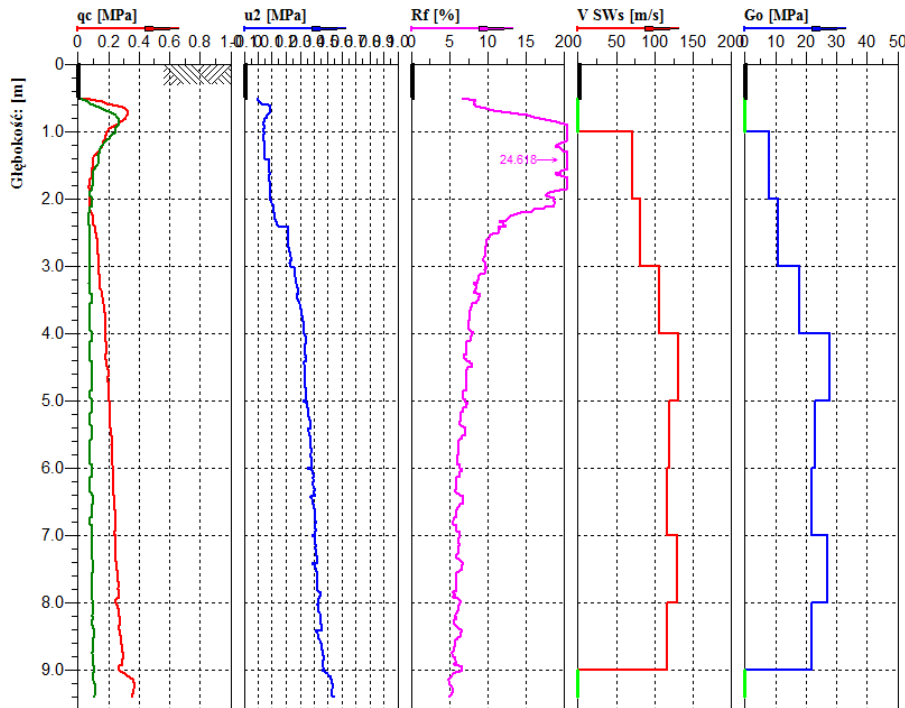


Logs generated in Log Editor can be saved in fully editable 3Gds format and additionally in text formats DOC, RTF and PDF.

All functions implemented in **Log Editor** are gathered in four bookmarks and are available just by clicking the relevant button. All of them work in standard way like in other advanced text editors.

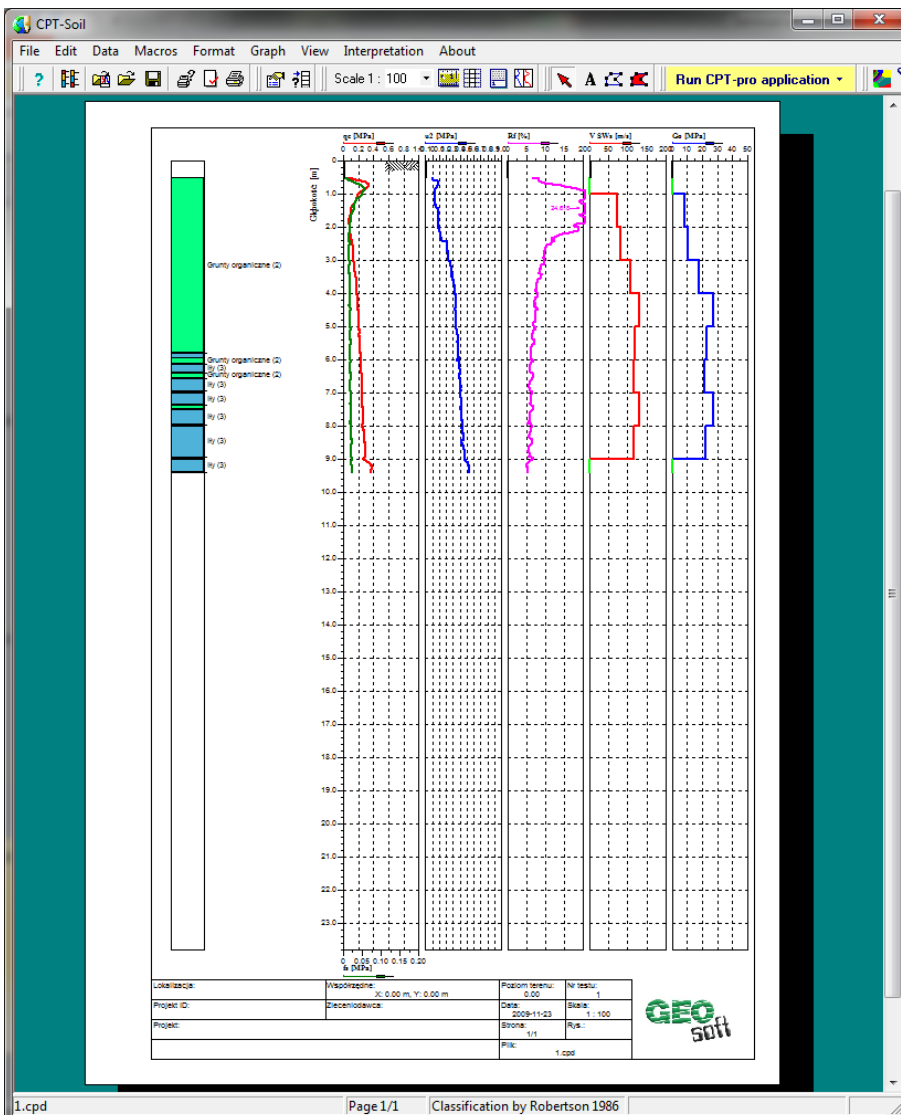


Result of analysis – **Velocity vs. Depth**. Graph pasted to **Log Editor** with all attributes. Vertical scale can be easily selected as **1:X**. Horizontal scale (minimum and maximum) can be adjusted from the level of **Log Editor**.



The result of analysis – *Velocity vs. Depth* can be moved directly to Interpretation module of *CPT-pro* for further analysis.

The procedures for calculation E_0 and G_0 are implemented. Additionally, the *Formula Editor* implemented in *CPT-pro* can be used for own correlations based on wave velocity.



The results of analysis of SCPT tests can be presented together with results of analysis of corresponding CPTU one on the same log.