MagPick[™] Processing Software for Magnetometer Survey Data





 $\mathsf{MagPick}^{\scriptscriptstyle \boxtimes}$ Data Display showing Total Field Map and Profile Browser Window

MagPick[™] is a powerful data processing program that runs on either Microsoft Windows or Linux operating systems. This program is designed to edit, process, interpret and present land, marine or airborne magnetometer survey data.

MagPick is best used with datasets acquired from magnetometer surveys locating small, near-surface targets that are important in environmental and engineering applications. This software includes advanced data processing techniques to help enhance anomalies for easy interpretation. Reportready profile, contour maps and source target models can be constructed within minutes of data download.

This program also allows the user to apply inverse modeling solutions to survey data to determine depth of burial, mass estimation and accurate target location for discrete, high-magnetic-contrast buried targets. Titles, annotations, scale bars and other important details used in report and data presentation are easily incorporated in exported GeoTIFFs. If GPS data is included in the magnetometer data a KMZ file can be created to show the data in Google Earth for spatial analysis.

FEATURES & BENEFITS

- Runs on Windows XP, 7, 8 and Newer Multicore Multitasking operating systems.
- **Powerful Data Processing Capabilities** Allows for more advanced data processing and interpretation of magnetometer data sets.
- **Inversion Tools** To estimate Position, Depth, Mass, and Magnetization of a target.
- Create Quasi-Analytic Signal Maps With marine, land or airborne magnetometer datasets.
- Report Ready Images and Google Earth Overlays Easily created and exported.
- **Constant Updates** Feature automatically checks Geometrics FTP site for newer releases of the program each time the program is opened.





INVERSION AND DEPTH ESTIMATION

During profile analysis the user can select the boundaries of an anomaly to determine the depth and mass estimate of the feature. This feature is intended for analyzing magnetic anomalies generated by pipelines, UXO and certain archaeological features in order to better locate the feature for retrieval or excavation. MagPick is not designed for interpretation of geologic structures, but it offers a unique and powerful feature set to identify and characterize high-contrast source bodies in the near surface (~6 - 10 m).



GRID VIEW

Data can also be analyzed and processed through the grid view. Data can be expressed as stacked profiles to observe spatial trends or as a contoured, shaded relief or image map. There are predefined user-selectable color palettes or a user-defined gradient color palette to best show the buried features.

PROFILE VIEW

Data can be analyzed and processed in a profile window that displays each survey transect individually. Erroneous spikes or drop-outs can be cut and interpolated. Each profile can be examined for the effects of editing and filtering prior to gridding to make sure that important anomalies are not removed from the data.



Quasi-Analytic Signal Map characterizing UXO targets in a marine magnetometer survey.

QUASI-ANALYTIC SIGNAL MAPS

Transverse gradiometer data can be processed with MagPick to calculate the quasi-analytic signal to yield a single data channel repositioned to the center of the gradiometer, where source anomalies will appear as bellshaped features centered on the target. This property of the quasi-analytic signal is well-suited for local target location identification as compared to using the conventional total field map.

Specifications subject to change without notice. MagPick_v1 (0723)



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