# Getting Started with Target

Geosoft Target is essential exploration software that facilitates the processing and visualization of subsurface drillhole and borehole data, enabling explorationists to better manage drill projects, from initial planning to the evaluation stage. Target enables you to create and recreate sections in minutes, process thousands of drillholes at a time, and generate professional-quality maps integrating geophysical, geochemical and geological information.

Built on Geosoft's industry-leading Oasis montaj software, Target provides powerful spatial data mapping and processing capabilities. Using Target you can import and export data directly from the acQuire data management system, enabling you to verify and manage all your drillhole project data. Together Target and acQuire provide a complete and powerful solution for all your exploration data requirements.
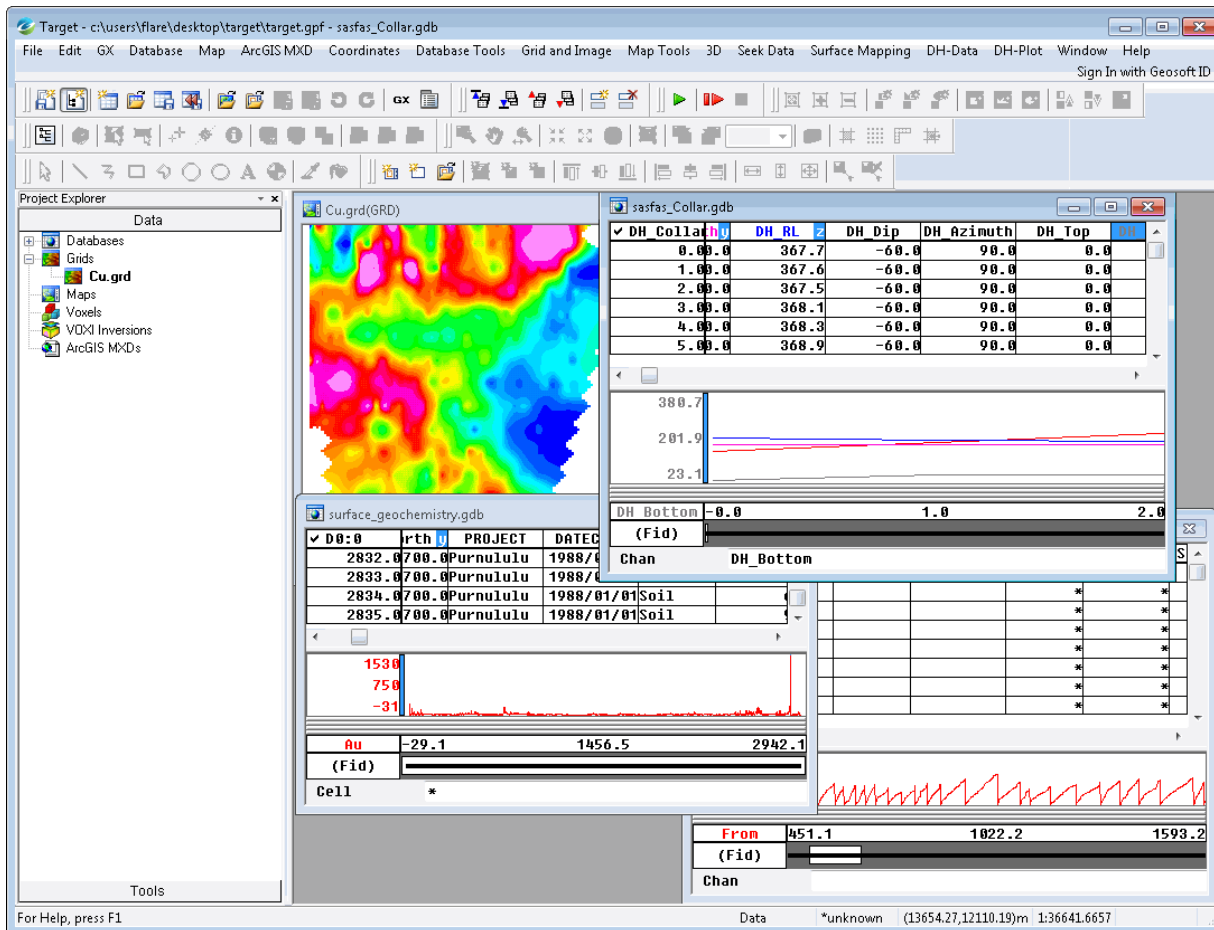
Key features include:

- Easy data sharing and user-friendly wizards enable you to import or export data using industry-standard data formats, including ASCII, ODBC, LAS, acQuire, ArcGIS, Microstation, Surpac, and Datamine™ files.

- Rapid processing and analysis of high volume surface and drillhole data

> Fast and accurate generation of drillhole plans and sections

> Efficient production of high quality maps for interpretation and target definition

> Effective exploration project generation and management

The Target system can be enhanced by adding the following data processing and analysis capabilities:

> montaj Geochemistry extension adds advanced geochemical analysis and QA capabilities. This extension enables geoscientists to effectively validate and analyse their surface geochemical data. It provides rich functionality for visualizing and presenting geochemical survey data, validating data quality and performing multivariate analysis.

Overview of Target Capabilities

The Target application provides explorationists with an easy-to-use and comprehensive data processing and presentation solution for surface and drillhole data. This software package enables geoscientists to manage drill projects from the initial planning to the evaluation stage.

The Target application is organized around an integrated database and streamlined menus and toolbars that provide the following surface and drillhole capabilities:

> Data Import: User-friendly Import Wizards enable you to import both surface and drillhole data from different data sources, including ASCII, ODBC, LAS, acQuire, ArcGIS MXD, ArcGIS LYR, MapInfo, Microstation, Datamine and Surpac. Data validation on import ensures the integrity of any sub-surface information you generate. Interpretations or other vector map layers can be exported for use in mine planning applications. The Geosoft voxel (3D grid) engine enables the import of ASCII XYZ, GoCAD and UBC datasets as well as Datamine block models.

> Locate and download spatial data using Seeker: Geosoft's Seeker tool was designed to retrieve spatial data stored on global and corporate spatial servers – Geosoft DAP servers, from the many WMS Image servers currently available, as well as retrieve data from the Web and locally from your desktop, using Geosoft's Desktop Cataloger.

> Drillhole plans and sections: Easily create and recreate drillhole sections and plans in minutes, using dialogs with sensible default settings. Visualize thousands of drillholes at a time. Save and share templates with others.

> Powerful data processing: Target is built on Geosoft's Oasis montaj powerful processing engine for working with large volume spatial data. Target provides industry-standard technology for processing large volumes of exploration data for target generation.

> Dynamic data linking: Analyse and interrogate your drillhole data in real time via dynamically linked sections, plans, 3D, map, MXD, and database views. This also includes all data views within a map. A map with a section view and surface view will be linked with a shadow cursor. This linking includes all scatter plots and triplots, plan maps, section maps, 3D views, and between multiple instances of Oasis montaj.

> 3D drillhole visualization: Interactive tab dialogs make it easy to create and customize 3D views of grids and profile data. View borehole traces and Voxels (3D Grids) from different angles in 3 dimensions to spot the relationship between surface and sub-surface features. The easy-to-use 3D subsurface visualization tool permits quick data integration from multiple sources, combining surfaces, grids, profile data, drill data and geophysical data to visualize spatial relationships.

> 3D Voxels: A "Voxel" is another word for a 3-dimensional grid, and is created using Geosoft's 3D Kriging gridding method. Target includes 3D Lithology Gridding, which enables you to create a 3D lithology grid based on drillhole lithology data. A lithology voxel grid can be created from any geologic attribute, such as rock type, alteration, or

mineralization. Also available are 3D lithology contact surface, which enables you to create elevation grids to represent top or bottom surface of a lithology unit based on a lithology channel in a Geosoft Drillhole database.

- Fence Diagrams: Create professional fence diagrams quickly, based on selected drillholes. Fence diagrams are especially useful when comparing down hole geology from a limited number of holes. Fence diagrams are displayed in real world coordinates.

- Surface mapping: Utilizing versatile gridding algorithms, grids and contour maps can be created using point sample datasets (eg. streams, soils, rocks, geophysical data) from a variety of raw data sources (ASCII, Excel, Access, and acQuire). Easy-to-use dialogs simplify the creation of grids and contours. Interpretation can be done on all maps with CAD drawing tools, which enable a user to annotate and define areas of interest onto new layers in the map view.

- Surface and Drillhole data Integration: Combine drillhole data with all other surface data and information to create detailed, integrated surface and subsurface maps.

- Strip Log and Compositing: Create scaled graphical strip log display of selected holes or the entire drillhole project with Target's strip log feature. Utilize up to 32 graphical fields to display down hole data. Using the Strip Log feature, geologists can better manage and visualize their drill projects, from initial planning to the evaluation stage.

- Professional map production: The software provides a full featured dynamic contouring algorithm with gradient feathering and extensive labelling control for professional quality maps. Quickly create multiple and varied types of maps, including gridded maps, surface maps, posted value maps, and sub-location maps.

Software and Hardware Requirements

Operating System	Windows 8 (32-bit and 64-bit)
	Windows 7 SP1 (32-bit and 64-bit) - Recommended
	Windows Vista Business SP2 (32-bit and 64-bit)
	Windows XP Service Pack 3 (32-bit) - Minimum requirement
	Windows 2000, 95, 98, ME, NT are not supported.
CPU	A Dual Core processor is recommended. An Intel Celeron processor is not recommended.
RAM	3+ GB recommended, 1 GB minimum required.
Graphics	Nvidia Professional 256MB 3D (OpenGL 2.0) Graphics Card recommended.
Printer/Plotter	Any Windows® supported colour printer. Hewlett Packard® large-format ink-jet plotters are recommended.
Installation	You must be logged on with Administrator permissions when installing Oasis montaj.
Installation Disk Space	2 GB or more of free space on the Program Files drive is required for the installation process.
Data Disk Space	Data disk space depends on the volume of project data to be processed and the printer driver you are using, however 100 GB is recommended. This is largely based on your business and data requirements.
Internet	Internet Connection: To use VOXI, we recommend a medium to high-speed internet connection (512Kbps upload and 1Mbps download or higher). The faster your internet connection, the faster you will be able to upload your modelling information to the VOXI cloud servers and download your results.
	Internet Browser: To use the internet capabilities in Oasis montaj or Target, you will need to install Internet Explorer 8.0 or later. This does not mean that you have to have Internet Explorer as your default browser; Oasis montaj and Target just use the internet connection technology supplied in IE8.
Supporting Software	The following software prerequisites are required and will be downloaded and installed if not present:
	• Microsoft .NET 4
	• ESRI ArcEngine 10.2

Geosoft Connect and Geosoft ID

Geosoft Connect is a service available through the Target application. Geosoft users can sign in to their Geosoft ID, using Geosoft Connect, to access any online service that requires a secure sign in, including online licensing, online updates, VOXI Earth Modelling and Bing Map services. Geosoft Connect enables you to sign in from your desktop when you are connected to the Internet.

As a customer, your Geosoft ID is the only sign in you'll need to remember when accessing any of our services, resources, community activities or our web site.

⚠️   *For more information see the Geosoft ID Common Questions on the Geosoft web site.*

Create your Geosoft ID

Your Geosoft ID is the only sign in you'll need to remember when accessing any of our secure online services, including online licensing, online updates, VOXI Earth Modelling and Bing Map services.

Create Geosoft ID:

1. Connect to the Internet.
2. Go to the, *Register Geosoft ID (https://www.geosoft.com/geosoftid/)* web page.
3. Click the **Create a Geosoft ID** button. The *Create a Geosoft ID* web page is displayed.
4. Enter your information as required and then click the **Create a Geosoft ID** button.

   ⚠️   *We prefer if you use your business email for your Geosoft ID. You may get a message saying 'A user account already exists for that e-mail address.', If you don't know or have forgotten the associated password, you may need to reset it.*

5. Once you have registered, Geosoft will immediately send you an activation link to the e-mail address you provided (within 20 minutes).
6. When you receive the activation e-mail, click the **Click to Activate** link. Your Geosoft ID will be activated.

   💡   *Geosoft Connect is a service available through the Target application. You can use this service to sign in to your Geosoft ID from your desktop, when you are connected to the Internet.*

Welcome to the Target Environment

This how-to guide walks you through the basic steps needed to know and prepare your Target environment before moving on to work with data.

To Start Target

1. From the *Start* menu, click **All Programs**.
2. Select **Geosoft** and then, select **Target|Target** (or double click on the *Target* icon). The *Geosoft License Manager* dialog appears.

3. In the "License Key" box, enter your 8-digit alphanumeric license key (provided with your DVD-ROM) and click the **[Internet]** button.

⚠️   *If you have not already signed in to your Geosoft ID, using Geosoft Connect, the Sign In with your Geosoft ID dialog will be displayed. Sign in to your Geosoft ID. For more information on your Geosoft ID see the topic **Create your Geosoft ID** in this Target Getting Started How-To Guide, or see the Geosoft ID Common Questions web page (https://www.geosoft.com/geosoftid/common-questions).*

4. The Geosoft license server will retrieve your license from our Internet server and download it to your computer.

5. The Target Graphical User Interface (GUI) opens with standard Windows style elements, including the Main Menu, Pop-up Menus and Application Help as shown below:
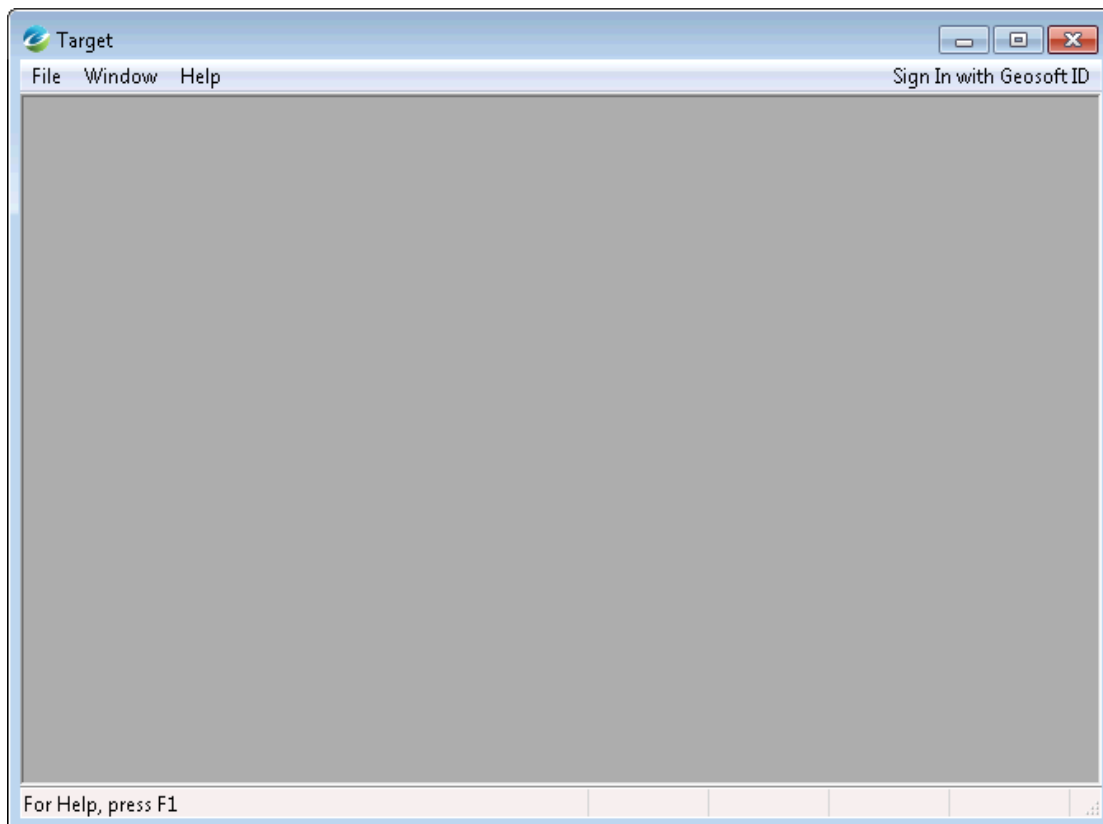
Target System Files

As you work with the system, you will become familiar with a variety of standard files used for specific functions. The following list provides a short summary of the more important files.

Target System Files	System File Extensions
Geosoft database file	*.GDB
Map file, including plots and grids	*.MAP
Geosoft grid file	*.GRD
Colour information for grids/images	*.AGG
Geosoft voxel file	*.GEOSOFT_VOXEL
ArcGIS MXD file	*.MXD
Oasis XML file	*.XML
Geosoft eXecutable	*.GX
Geosoft script file	*.GS
Oasis menu, Oasis sub-menu	*.OMN, * .SMN
Geosoft project file	*.GPF
Geosoft projection information file	*.GI
Geosoft map file (used in the MapInfo software to distinguish a Geosoft map file from a MapInfo (*.map) file	*.GM

Creating a Geosoft Project

To work in Target requires an open Project. A Geosoft "Project" encompasses every item in your working project; from the data files in your project (databases, maps, grids, ArcGIS mxd files), to the tools used (including auxiliary tools such as histograms, scatter plots etc.), to the project setup including the menus you have displayed and whether you are working on a map or profile and the state in which you left it the last time you used it.

The project also controls your working folder. Projects are saved as (*.gpf) files. If you open an existing project from a folder, the system assumes that all your project files are located in the same folder. To streamline your work, as well as keep it organized, you may wish to make sure that your project file is in the same folder as the other files you want to use. We recommend that each project you work on have its own project (*.gpf) file. If you use a number of applications or add-on tools in Target that have different menus, you can use the project to display only the menus you require.

To Create a Project

1. On the *File* menu click **Project | New**. The system displays the *New Project* dialog.
2. Specify a name and folder for the project. For example, name the project Drillhole and specify the working folder as E:\GeoDemo.

⚠️   *Target assumes that your data is in the folder containing this project.*

3. Click the **Save** button. The system saves the project and indicates it is open by opening the Project Explorer window, enabling the buttons on the Main toolbar, and adding menus to the menu bar. These are visual clues indicating that you are ready to start working with the system.
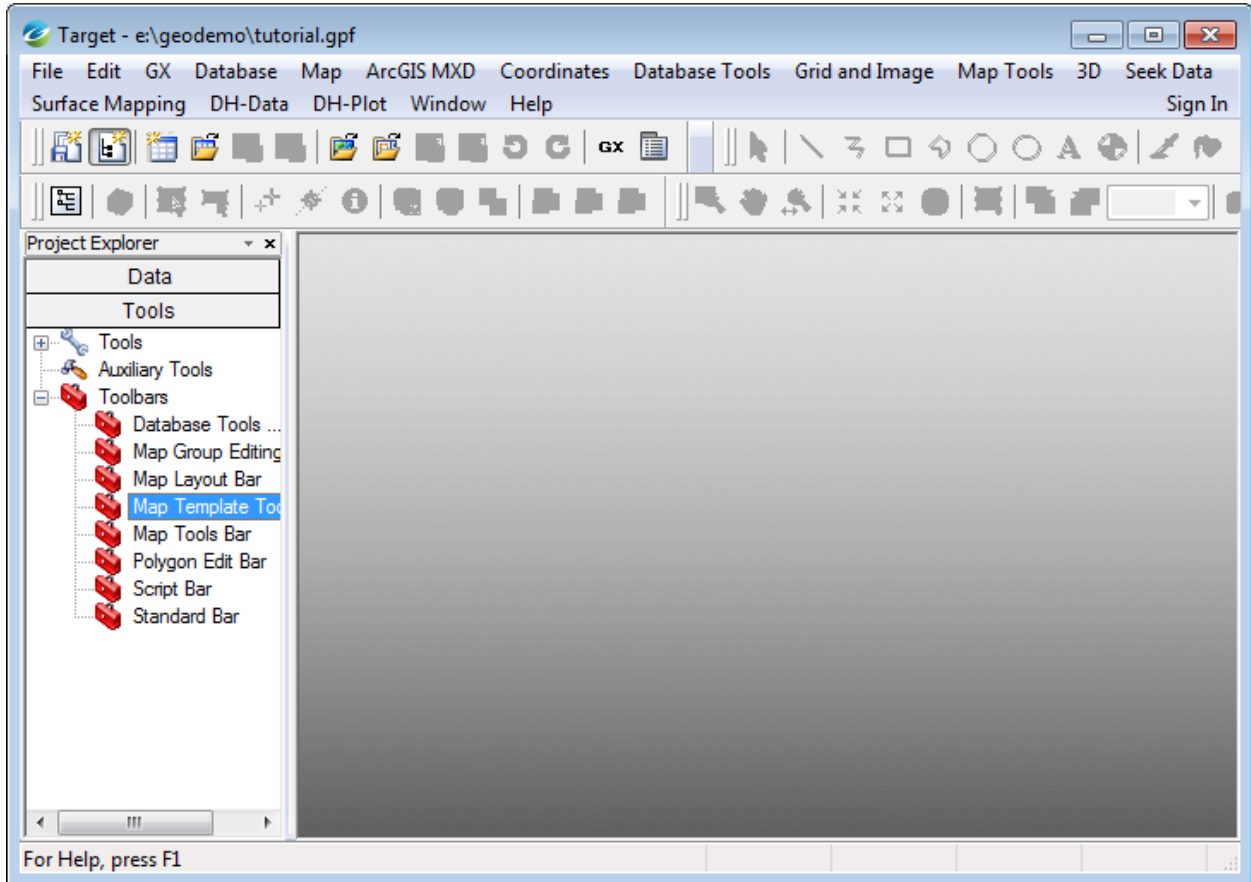
Closing a Project

Closing a project will save all of your project databases, maps and profiles, plus information that tells the system whether you are working on a map or profile and the state in which you left it the last time you used it.

To Close a Project

1. On the *File* menu, click **Project** and then click **Close**.
   The *Save Modified Documents* dialog appears.

⚠️   *Modified Documents' refers to items in your project that you have modified since the project was last saved, such as databases and maps.*
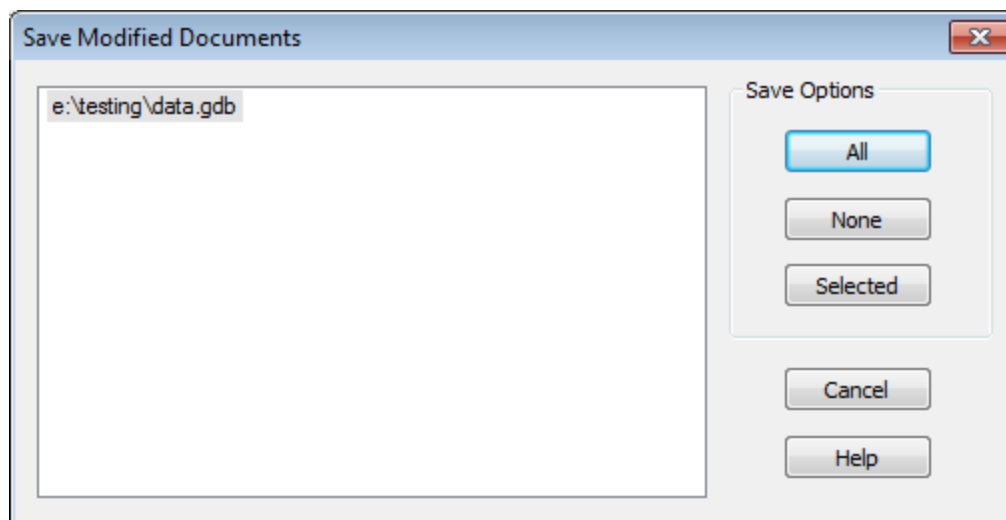
2. Click **All** to save all open document(s) in your project. Alternately, you may select specific document(s) to save by highlighting the document(s) and click **Selected** or click **None** to abandon document(s) changes.

Target Menus

The Target System menus are displayed directly under the Title Bar when you open a project. These dropdown menus provide direct access to all of the systems capabilities.

Loading Applications and Tools

In addition to the Target base functionality, you may be licensed to access specialised applications, which we call "Extensions". Extensions are accessed by loading a menu file (*.omn), which in turn will load all of the menus and sub-menus associated with that extension. Examples include ((our geochemical analysis extension, geochemistry.omn).

Your Oasis montaj project keeps track of which menus are displayed. This means that you can have a different set of menus displayed for each project. This is especially useful if you are working on multiple projects and using many applications or tools. For example, if you are working on a geochemistry project, you may want to display different menus than if you are working on an UXO project. By creating separate projects with differing menus you can customise the Oasis montaj environment to suit your current project.

To Load an Application or Extension Menu

1. On the *GX* menu, select **Load Menu**. The *Load Menu* dialog appears.
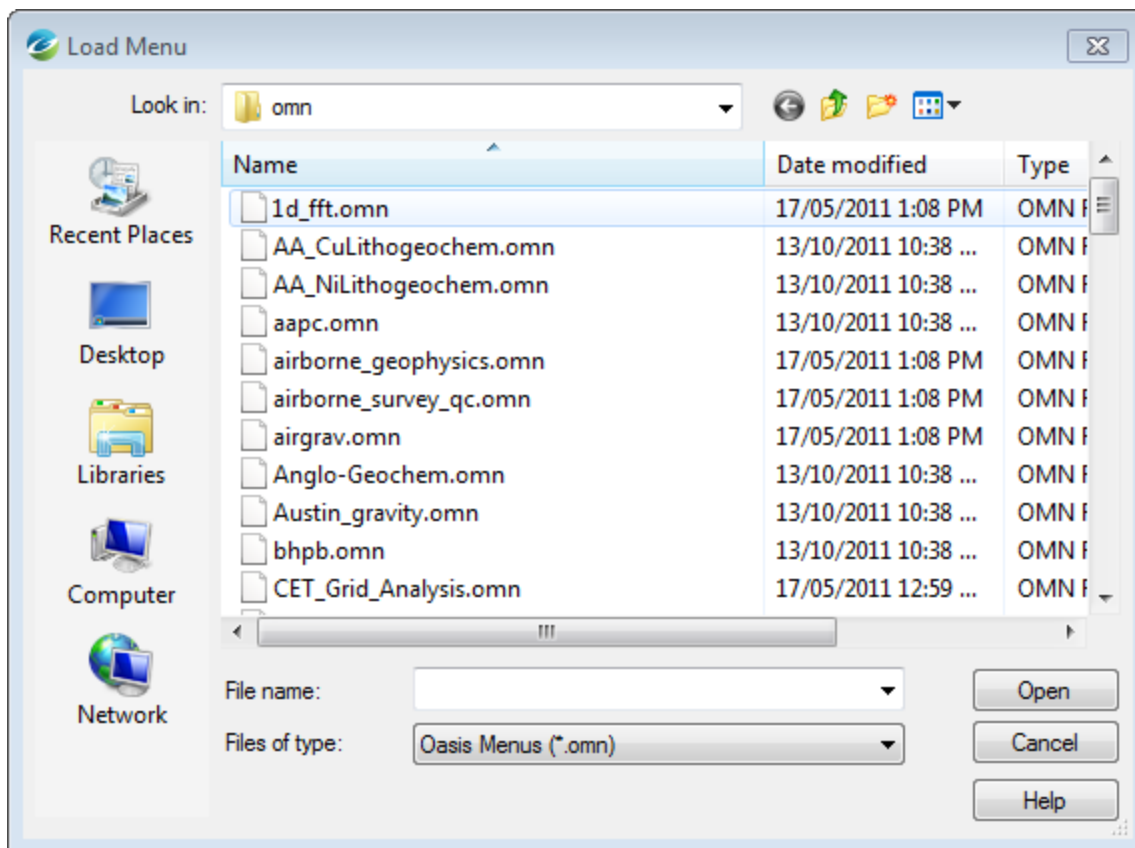
2. Select the menu file (*.omn) from the list of files and click **Open**. The new menu appears on your menu bar.

⚠️ *If you want to modify your default menus (i.e. load a specified menu with every new project) you can use the GX|Global Settings|General menu to display the Default settings dialog to change your settings. If you are really interested in system configurations and want to view all of the System settings, open the Advanced Settings file from the GX|Global Settings|Advancedmenu. The Advanced Settings will be displayed in the Metadata Browser.*

Target Settings

The Target program has standard default settings which are designed to work well in most environments. However if you have particular personal or computing requirements you may overwrite the defaults to suit your needs.

To Change the Default Settings of the Target Environment

1. On the *GX* menu, select **Global Settings** and then click **General**. The *Default settings* dialog appears.
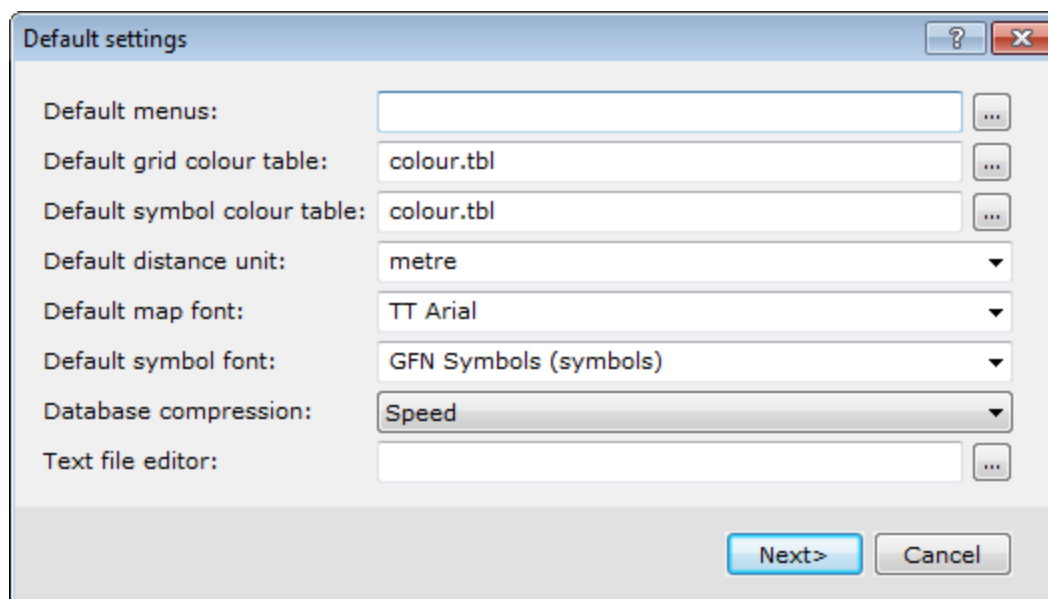
2. Select the desired choices from the available selections.

3. Click **Next** to navigate through the *Default settings* dialogs.

4. Click **Finish** when complete.

   💡 *For more information on the available selections, click the **Help** button on your dialog of interest.*

Common Default Settings

The following table summarizes some of the more frequently changed settings.

Default menus	Select the menu files (.omn) to load as the default menus when creating a new project. If more than one menu is selected, each menu must be separated by the | character.
Default grid colour table	Select the default colour table to use for displaying grids.
Default symbol colour table	Select the default symbol colour table (*.tbl).
Default map font	Select the default map font. The file TRUETYPE.INI will be modified to map the "default" font from Geosoft PLT files to the TrueType font specified here. To change the mappings of other Geosoft fonts you can modify the TRUETYPE.INI file directly.
Click **Next** for *More settings*	
Default input grid format	Select the input grid format you would like to use by default.
Default output grid format	Select the output grid format you would like to use by default.
Default grid element type	This is the default grid element type to use for Geosoft grids. If grids will be used with Geosoft DOS programs, select "16-bit (DOS compatible)".
Error level reporting	If All errors are selected, you will see more error messages each time an error occurs. This is useful for GX programmers who may need to see more error context when debugging GX's.

Auto Save Time

Target has an *Auto Save Time* feature that enables databases and maps to be saved automatically. When *AutoSave* is enabled a popup dialog will be displayed asking if you want to save the changes to all open documents.

The frequency of the *AutoSave* (in minutes) can be modified or shut-off from the *GX|Global Settings|Advanced* menu.

💡 *Changing this setting to zero (0) shuts-off the AutoSave feature.*

Setting Drillhole Preferences

Drillhole preferences are global variables, and remain set for a given installation of Target. This means they remain the same for different data sets and projects. The values are stored in the *Drill Hole Preferences* dialog.

To Set Drillhole Preferences

1. On the **DH-Data** menu, select **Preferences**. The *Drill Hole Preferences* dialog is displayed.

2. Use this dialog to set the specified global variables of your project.

⚠️ *For more information on what these global variables mean, click the **Help** button at the top right corner of this dialog.*

3. Click the **OK** button to accept the Drillhole Preferences.

Metadata

Metadata (data about data) is captured by Target from the first time a dataset is opened by the program. The metadata information, which is based on ISO 19115 standards, is stored inside the data (if supported) or as a companion XML file. When you import or work with data in Target, *User name*, *Date*, *Time* and any actions performed on the data will be maintained in the Metadata. When data is derived from other data, the Metadata is passed on and the lineage of what was done to the data is maintained in the Lineage section. Note that, memory intensive GDB processing tasks are not recorded in the lineage.

> ⚠️ *When working with script files you have the ability to turn off the XML metadata file creation.*

Attributes (or metadata), information about data, can be simple or complex and the descriptive needs of different kinds of data are infinitely diverse. To allow for this and provide flexibility, Geosoft developed the *XML Metadata Viewer* and *Metadata Editor* to help you organize your metadata.

Even though each Geosoft data type (Database, Grid, Map, ArcGIS MXD, Voxel, etc) exhibits many different attributes, using these tools are easy. The current selection drives what exists inside the tool.

Metadata Viewer

Use the *Metadata Viewer* dialog to view the metadata associated with selected data files.

To View and/or Edit Metadata

1. On the *Project Explorer* window, select the data of interest.
2. Right-click and select **Metadata** from the pop-up menu. The *Metadata Viewer* appears.
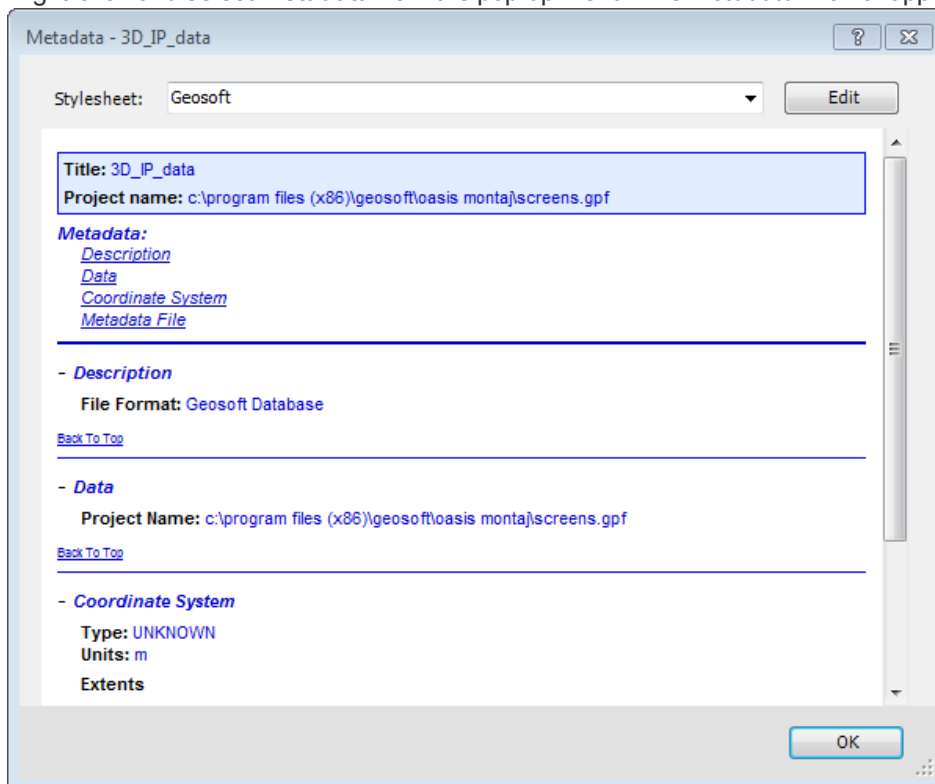
3. Click **Edit** and the *Edit Metadata* dialog appears.
4. Make any necessary changes.
5. Click **Close** when finished and then click **OK** to close the Metadata Viewer.
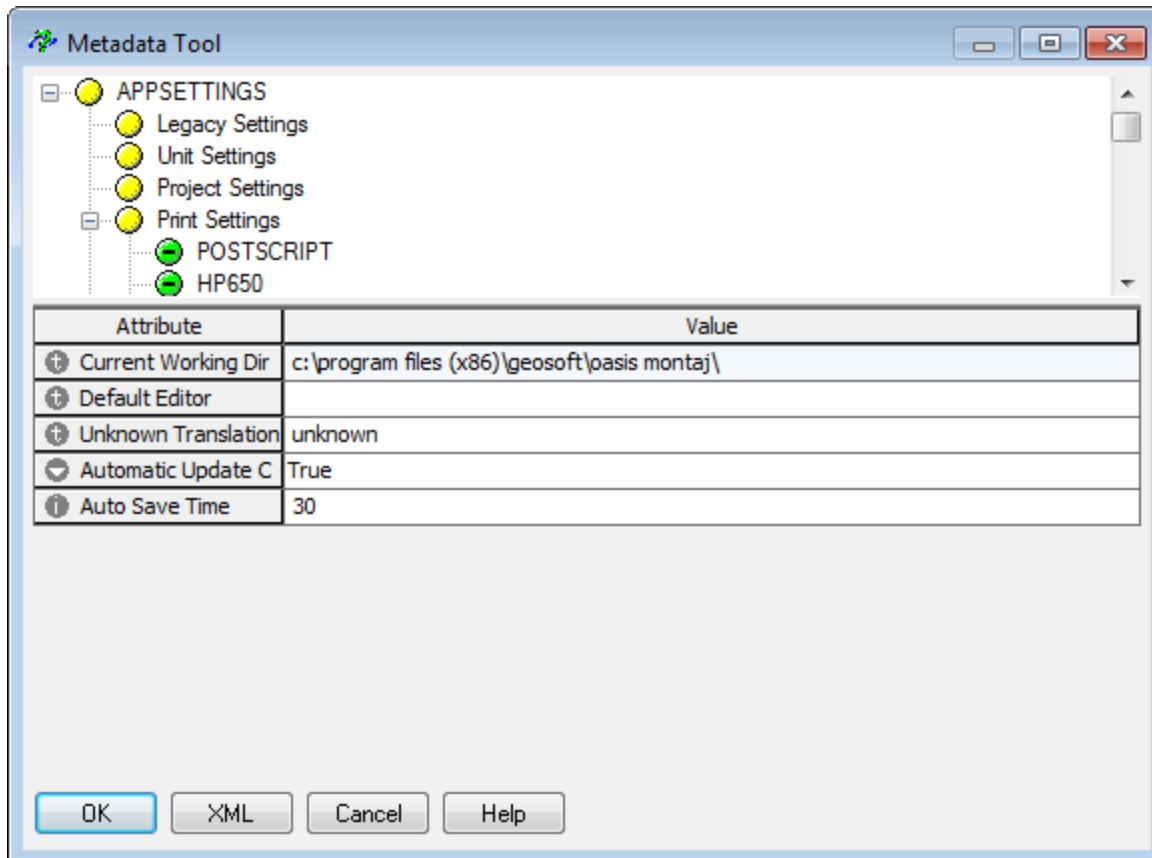
Metadata Tool

The *Metadata Tool* is a context-oriented, interactive method for viewing and editing attributes assigned to Geosoft Global Setting, DAP Data etc.

⚠️ *Values displayed in a grey box cannot be edited. Values displayed in a white box may be edited.*

To View the Metadata Tool

1. On the *GX* menu, select *Global Settings* and then select **Advanced**.
   The advanced global settings will be displayed in the *Metadata Tool*.

2. Make any necessary changes.
3. Click **OK** when finished or click **Cancel** to close the Metadata Tool.

Shortcut Keys

Target now provides configurable Shortcut Keys (Hotkeys) enabling quick and easy access to menu functions.

To view or modify these settings, you have two options:

- **Database Shortcut Keys**: Select *GX | Database Settings | Configure GDB Shortcut Keys*.
- **Map Shortcut Keys**: Select *GX | Map Settings | Configure Map Shortcut Keys*.

Both options provide an interactive dialog enabling you to configure your own shortcut keys (hotkeys) or view the provided defaults.
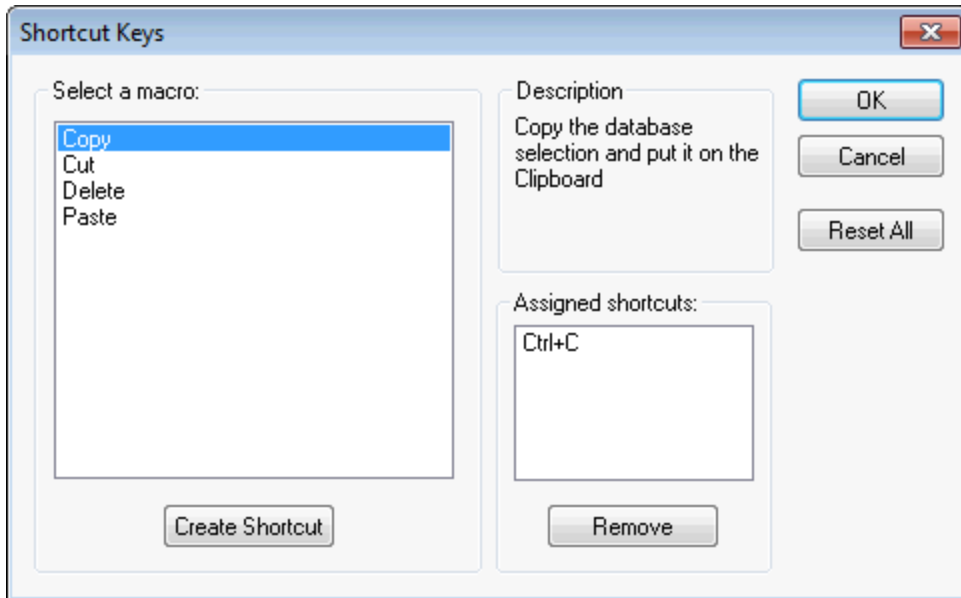
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