



GIS\KeyTM v4

QUICK START DOCUMENT

FOR

DATA OUTPUT / WORK PRODUCTS

(AutoCAD 2000 or newer)

November 2002

TABLE OF CONTENTS:

Tables	Page 1
Graphs	Page 2
Export Builder (Custom Exports)	Page 3
Cross-Sections	Page 4
Maps with Data and Contours (e.g., Isopleths).....	Page 5
Maps with Report Tables	Page 6
Boring Logs.....	Page 7
Title Block and Borders.....	Page 8



TABLES

QUERY DATA

1. From the Scout Project Manager, click the appropriate Reporting Tool icon for the data you'd like to query. These are also available from the toolbar:
 - Chemistry Reporting Tool
 - Geology Reporting Tool
 - Hydrology Reporting Tool
 - NPDES Reporting Tool
2. This starts the Query Tool.
 - a. Select the data as appropriate (i.e. select sites, dates, etc.),
 - b. Click 'Next' to get to the next tab.
3. At the last tab of the Query Tool, click 'Output' - 'Report' (or select 'Report' from the menu). Select the appropriate report type (e.g. Results Reports - Primary Reports). This starts the Format Tool.

FORMATTING

1. Format the table as appropriate.
2. For Chemistry Primary Reports, in the 'Report Formatting' – 'Formatting', you have the option to output to a:
 - 'Form' (data posted onto an existing table template created in Crystal Reports) or
 - 'File' (an Excel or comma-delimited file).
3. To create the table, click 'View Report' or 'Create File' as appropriate
4. To reformat the table, click any of the tabs on the left hand side.

PRINTING AND EXPORTING

1. A Crystal Report table can be sent to:
 - A printer (select the printer icon)
 - A file (select the envelope icon). Identify the file name and file type.
2. Tables saved as a 'RPT' file can be viewed and printed by double-clicking the file from the Scout Project Manager.



GRAPHS

QUERY DATA

- To generate a Constituent vs Distance graph, Stiff Diagrams, or Trilinear Pipers, you must start from AutoCAD. All other graphs can be started from the Scout Project Manager or AutoCAD. Start the appropriate Reporting Tool by selecting any of the following:
 - From Scout Project Manager**
 - Chemistry Reporting Tool
 - Hydrology Reporting Tool
 - OR
 - From AutoCAD**
 - 'GIS\Chem' – 'Graphs'
 - 'GIS\Hydro' – 'Graphs'
- This starts the Query Tool.
 - Select the data as appropriate (i.e. select sites, dates, etc.),
 - Click 'Next' to get to the next tab.
- At the last tab of the Query Tool, click 'Output' - 'Graph' (or select 'Graph' from the menu). Select the appropriate graph (e.g. Hydrograph). This starts the Format Tool.

FORMATTING

- Format the graph as appropriate. When done, click 'Finish'.
- Make the appropriate changes in the 'Graph Properties' window. Click 'Okay' when done.
- The graph is displayed. Click the 'Show Graph Properties' icon (far right) to edit the graph. To view the previous or next graph (e.g., if more than one graph has been created), select the appropriate icons in the upper left corner.

PRINTING AND EXPORTING

- The graph can be:
 - Printed by clicking the printer icon
 - Copied to the clipboard by clicking the copy icon
 - Saved as a file by clicking the disk icon. You must first specify the export file type in the 'Graph Properties' - 'Export' tab.



EXPORT BUILDER

QUERY DATA

1. From the Scout Project Manager, select the appropriate Reporting Tool for the data you'd like to query:
 - Chemistry Reporting Tool
 - Geology Reporting Tool
 - Hydrology Reporting Tool
2. This starts the Query Tool.
 - a. Select the data as appropriate (i.e. select sites, dates, etc.),
 - b. Click 'Next' to get to the next tab.
3. At the last tab of the Query Tool, click 'Output' - 'Export' - 'Export Builder' (or select from the menu). For Chemistry, select 'Export' – 'Result Exports' – 'Export Builder'. This starts the 'Export Builder'

FORMATTING

1. From the 'Available Data' area, select (double-click) the fields you would like to include in your export file. These fields will be displayed in the 'Selected Output' window.
2. To select another Table from which to get data, select the appropriate table in the 'Select Table' drop-down list. The available fields from that table will show up in the box below.
3. The 'Browse' button (in the 'Available Data' area) lets you browse the selected table.
4. To change a field output name in the 'Selected Output' window, double-click the 'Output Name' field and enter the new name.
5. To set the sort order of the records in the table, double-click in the 'Order' field.
6. To insert a blank field:
 - a. Select a field,
 - b. Right-click on the field,
 - c. Select 'Insert New Field'
 - d. A blank field will be inserted before the selected field.
7. To save your export format (stored as *.gex), click the 'Save' button. To load a previously-saved export format, click the 'Load' button.

EXPORTING

1. To create the Export Table, click the 'Build' button.
2. To view and edit the Export Table, click the 'Browse' button. While browsing:
 - a. To edit records; select 'Edit' – 'Replace'. This will open the 'Replace Expression' Builder. Use FoxPro commands to replace values.
 - b. To delete records; select 'Edit' – 'Delete'. Use FoxPro commands to specify which records you wish to delete.
 - c. To hide a column; highlight a column, then right-click and select 'Hide'.
 - d. To move a column; highlight a column, left-click and hold the field name, and drag to the new location.
3. To export the table:
 - a. From the Browser, select 'File' – 'Save As' OR from the Export Builder, click the 'Export' button
 - b. Identify the file name, file type, and location of the table you wish to save
 - c. Then click 'Save'



CROSS SECTIONS

From the Scout Project Manager, double-click a Project Base Map (starts AutoCAD).

PREPARATION (OPTIONAL):

Show Specific Sites - Turn on Site Groups

1. 'GIS/Utility' – 'Site Map Symbols' – 'Site Groups'; select the Site Group, check 'On Only' as appropriate; then click 'Apply'

Make Grid Meshes (an AutoCAD surface that can be shown on a cross-section)

1. Get Data: Structure Data: 'GIS/Geo' – 'Maps' AND/OR
Ground Surface Elevations: 'GIS/Utility' – 'Ground'
2. Apply grid meshes: 'GIS/Contour' – 'Contour' – 'Grid Mesh' (change configuration as appropriate)
3. Archive grid meshes: 'GIS/Contour' – 'Contour Utilities' – 'Archive Grid' (save in Project\surface folder)

Make Section Line (if none are made already)

1. 'GIS/Geo' – 'Sections' – 'Make Line' (follow AutoCAD prompts).

MAKE SECTION

1. In AutoCAD, run Section Command by:
 - a. Select 'GIS/Geo' – 'Sections' – 'Sections' – 'Get Data'
 - b. Select appropriate Section Line (opens 'GIS\Key Sections' window)
 - c. Select Meshes (optional); a 'Grid Mesh' (e.g. a ground surface mesh) is projected onto a cross-section as a polyline.
 - d. Choose sites to plot onto Section: 'Pick Sites' to select individually or 'Select Sites' to draw boxes around sites
 - e. Click 'OK'.
2. Use Reporting Tool To Query Data ('GISMapControl - Logs')
 - a. Click 'Apply'
 - b. At the last tab of the Query Tool, click 'Output' - 'Export' (or select 'Export' from the menu). Select 'Logs / Sections'.
3. Use Reporting Tool To Format Output:
 - a. Select preference, then click 'Finish'
4. Back in AutoCAD, click 'Apply' at 'GIS\Key Profiles' window.
5. If prompted to create a Title Block and Border
 - a. Select an appropriate paper size and orientation
6. This will create a new drawing (e.g., Drawing1.dwg) and will display the 'GIS\Key Sections' window.
 - a. Make changes as appropriate
 - b. Check 'Hatch' and/or 'Stick', then click 'OK'
 - c. Be sure to specify the appropriate scale and location at the command prompts.
7. To view the cross-section without the Title Block and Border, click the 'Model' tab.

REVISE OR POST DATA ON CROSS SECTION

To revise

1. Select 'GIS/Geo' – 'Sections' – 'Revise' to make changes as appropriate.

To plot Chemistry Data on a Cross-Section

1. 'GIS/Chem' – 'Sections' – 'Get Data'
 - a. Select data in Reporting Tool as appropriate
 - b. Click on 'Output' – 'Map' (or 'Map' from menu)
 - c. Click 'Apply'

To contour or apply a polyface mesh to the Chemistry Data

1. 'GIS/Contour' – 'Contour'
 - a. Select 'Contour' or 'Polyface Mesh'
 - b. Adjust 'Colors' and 'Configuration' as appropriate
 - c. Click 'Show' to preview
 - d. When done, select 'GIS/Contour' - 'Contour' – 'Draw'



MAPS WITH DATA AND CONTOURS (E.G., ISOPLETHS)

From the Scout Project Manager, open up any Project Base Map (starts AutoCAD)

PREPARATION (OPTIONAL)

Preset Symbol & Label Size

1. 'GIS/Utility' – 'Site Map Symbols' – 'Setup'

Turn on Site Groups

1. 'GIS/Utility' – 'Site Map Symbols' – 'Site Groups'

POST AND CONTOUR DATA

1. In AutoCAD, select one of the following as appropriate:
 - For geology data: 'GIS/Geo' – 'Maps'
 - For hydrology data: 'GIS/Hydro' – 'Maps' – 'Fluid Levels' or 'Hydraulic Parameters'
 - For chemistry data: 'GIS/Chem' – 'Maps'
 - a. Click 'Get Data' and select sites. Hit the 'Enter' key when done selecting site.
2. Use Reporting Tool To Query Data:
 - a. Query data as appropriate (e.g. pick dates, depths, constituents)
 - b. At the last tab of the Query Tool, click 'Output' - 'Map' (or select 'Map' from the menu)
3. Use Reporting Tool To Format Output:
 - a. Make selections as appropriate
 - b. Click 'Finish'
 - c. This returns you back to the AutoCAD 'GIS/Key Maps' Window.
4. Optional: To review and/or revise data before posting
 - a. To review data: select 'Surface Info' – 'Qbrowser'
 - b. To revise postings, edit values in the 'Post' column
 - c. 'File' – 'Save All'
5. Posting data
 - a. From 'GIS/Key Maps' window, hit 'Apply'; or see TIP 1.
6. To contour or apply polyface mesh:
 - a. Select 'GIS/Contour' – 'Contour'
 - b. Select 'Contour' or 'Polyface Mesh'
 - c. Adjust 'Colors' and 'Configuration'
 - d. Click 'Show' to preview
 - e. Click 'Draw' when done.
 - f. Smooth contour lines: 'GIS\Contour' – 'Contour Utilities' – 'Smooth'
 - g. Add labels to contour lines: 'GIS\Contour' – 'Contour Utilities' – 'Labels'

TIP 1: Show Only Sites With Data

1. 'Cancel' at 'GIS/Key Maps' window (not 'Apply')
2. Select 'GIS/Utility' – 'Delete Layers'
3. Delete layers: WB_Zone_On, WB_Zone_Off, Post*
4. Return to 'GISKey Maps' window by selecting:
 - 'GIS/Geo' – 'Maps'
 - 'GIS/Hydro' – 'Maps', or
 - 'GIS/Chem' – 'Maps'
5. Click 'Apply'

FINISHING THE DRAWING

Optional: Add a Title Block and Border

1. See Page 8

Change Site Symbol Color and Size

1. In AutoCAD Model Space, 'GIS\Utility' – 'Site Map Symbols' – 'Setup'
 - a. Make changes as appropriate
 - b. Click 'Apply' and select sites.

Move symbol labels and posts

1. In AutoCAD Model Space, click on the site
2. Click on the appropriate grip (small squares)
3. Move labels as appropriate. **Do not move the symbol.**
4. Hit 'Esc' twice to hide grips.
5. To save these locations for use in other drawings, see TIP 2.

TIP 2: Save the label locations and sizes

1. 'GIS/Utility' – 'Site Map Symbols' – 'Parameters'
2. Click 'Store' to save your posting locations
3. Click 'Retrieve' to apply locations already saved



MAPS WITH REPORT TABLES

Chemistry and Hydrology data can be posted in a map report table. Maps with report tables cannot be contoured.

PREPARATION (OPTIONAL):

In AutoCAD - Preset Symbol & Character Size

1. 'GIS/Utility' - 'Site Map Symbols' - 'Setup'

In AutoCAD - Turn on Site Groups

1. 'GIS/Utility' - 'Site Map Symbols' - 'Site Groups'

QUERY DATA AND FORMATTING

1. Start Reporting Tool from AutoCAD Base Map by selecting 'GIS/Chem' - 'Maps'. Then select sites.
2. Use Reporting Tool To Query Data:
 - a. Query data as appropriate (e.g. pick dates, depths, constituents)
 - b. At the last tab of the Query Tool, click 'Output' - 'Map' - 'Report Table' (or select from the menu)
3. Use Reporting Tool To Format Output:
 - a. Make selections as appropriate
 - b. Click 'Finish' when done
4. Open/Return to AutoCAD:
 - a. Cancel at 'GIS/Key Maps' window if open
 - b. Turn OFF Object Snap (toggle 'OSNAP' button to off)
 - c. Optional: set text size & color before creating tables by selecting 'GIS\Utility' - 'Site Map Symbols' - 'Setup'
 - d. Select 'GIS/Chem' - 'Reports' - 'Apply'
5. If you cannot see the data in the Report Tables
 - a. Select 'GIS/Utility' - 'Layer Control'
 - b. Change the color of the GIS_Mask layer to a light gray shade (try color = 254 or 255)
 - c. Select 'OK' to return to map

FINISHING THE DRAWING

To Apply a Title Block and Border

1. See Page 8

To resize report tables

1. In AutoCAD Model Tab,
 - Type in 'Scale' at the command prompt, select Report Table, identify Base Point and Scale Factor for scaling as prompted, OR
 - Use 'GIS\Utility' - 'Delete Layers' to delete layers GIS-Mask and GIS_Report, then change setup options (Step 4c), and rerun Step 4d.

To move report tables

1. In AutoCAD Model Space, select 'GIS/Chem' - 'Reports' - 'Move'



BORING LOGS

LOG TEMPLATES

AutoCAD lets you create two pages for your template:

- Page 1, which includes all the pertinent drilling information in the header,
- Page 2, which is used for all subsequent pages and usually includes minimal header information.

Make Log Template

1. In AutoCAD, select 'GIS/Geo' – 'Logs' – 'Make Template'. Modify the following as appropriate:
 - Page Layout (margins, scales, and colors),
 - Header Setup (select the database fields you want to include in the headers of Pages 1 and 2 of your template)
 - Graphic Setup (select the columns, order, and width of the fields to display in the graphic portion of your log)
2. Click 'OK' when done (follow AutoCAD prompts).
3. AutoCAD will create the log template.
4. 'Zoom' to 'All', then save the template

Edit the template

1. Select 'GIS/Geo' - 'Logs' – 'Edit Template'. Recreate any part (header, page layout, or graphic setup) of the template for Pages 1 and 2.

Edit the template header

1. Select 'GIS/Geo' - 'Logs' – 'Edit Header'. This allows you to edit only the header of an open template.
 - a. Select the text of the header field,
 - b. Indicate the new boundaries of the header field.

GET DATA (CREATE LOG FILES)

From Scout Project Manager

1. Select Geology Reporting Tool
2. Use Reporting Tool To Query Data:
 - a. Select sites, then click 'Apply'
 - b. Click 'Output' - 'Export' - 'Logs/Sections'
3. Use Reporting Tool To Format Output:
 - a. Select appropriate options, then click 'Finish'
 - b. If prompted, click 'OK' at 'Log File Created'.

OR Starting From AutoCAD

1. From AutoCAD Basemap select 'GIS/Geo' – 'Logs' – 'Logs'
 - a. Click 'Get Data' and select sites
2. Use Reporting Tool To Query Data:
 - a. Click 'Output' - 'Export' - 'Logs/Sections'
3. Use Reporting Tool To Format Output:
 - a. Select appropriate options, then click 'Finish'
 - b. If prompted, click 'OK' at 'Log File Created'.

MAKE LOG

1. In AutoCAD, select 'GIS/Geo' – 'Logs' – 'Logs', then click 'Get Files'
 - a. Select the appropriate log template (see above to create a log template)
 - b. Select the appropriate log file (created above)
 - c. Click 'Apply' to generate the log
2. To view the next page, select 'GIS/Geo' – 'Logs' – 'Next Page'

PRINTING

1. 'GIS/Geo' – 'Logs' – 'Print' (do not print logs using the AutoCAD Plot command).



TITLE BLOCK AND BORDERS

TEMPLATES (OPTIONAL)

In AutoCAD, a Title Block and Border can be added to any existing drawing in Model Space. There are different Title Block and Border templates for various paper sizes and orientations. For example, 'gisa.dwt' is the template for an 8 ½ x 11 landscape Title Block and Border (starting in AutoCAD 2000 and newer, templates have a DWT extension). Template files are located in the GISKEY\ACAD2K\BLOCKS directory.

Edit A Title Block and Border Template

To customize a GIS\Key Title Block and Border Template (e.g., adding a logo, centering title text), edit the DWT file in AutoCAD, OR

1. Open up the corresponding DWG file in AutoCAD (e.g. gisa.dwg for the gisa.dwt template)
2. Make changes as appropriate.
3. Select 'GIS\ Utility' - 'Title Block and Border' – 'Convert' to convert the DWG into a DWT file.

MAKE A BORDER AREA

A border area must be defined before you can add a Title Block and Border to your drawing (except for a Cross-Section drawing). The border area specifies the area of your drawing that will be included inside the Title Block and Border.

1. 'GIS\ Utility' - 'Title Block and Border' – 'Make Border Area'
 - a. Select the appropriate paper size and orientation.
 - b. AutoCAD will prompt for the lower left and lower right corners of your border area.
 - c. Specify the desired scale.
 - d. You have the option to zoom in or out, move or rotate your title block and border, or change the scale.
 - e. Hit enter (for OK), then specify a unique name and description for your border area.
 - f. Click 'OK'. The border area may disappear from your screen.

ADD A TITLE BLOCK AND BORDER

1. 'GIS\ Utility' - 'Title Block and Border' – 'Add'
 - a. Select the appropriate paper size and orientation
 - b. Select the appropriate border area. One must be created first (see above)
 - c. AutoCAD will prompt for the text height, North Arrow/Scale, Outline. Click 'OK'
 - d. If prompted, enter the appropriate title information
 - e. AutoCAD will prompt for the location of the North Arrow and Scale
 - f. Select 'GIS\ Utility' - 'Title Block and Border' – 'Edit' to enter the title text

NOTES

1. If your border area is not oriented parallel to your x and y coordinate system, GIS\Key will automatically rotate the site map symbols and labels so that they are parallel to the boundaries of your paper.
2. The Title Block and Border is created in Paper Space; the original drawing is in Model Space. To make changes to the original drawing, select the 'Model' Tab.

REVISE/EDIT A TITLE BLOCK AND BORDER

1. 'GIS\ Utility' - 'Title Block and Border' – 'Edit' (or use AutoCAD's ATTEDIT command)
 - a. Enter the appropriate title information.
 - b. Click 'OK'.