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## Chapter 3

# Importing Data

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## 3.1 Objectives

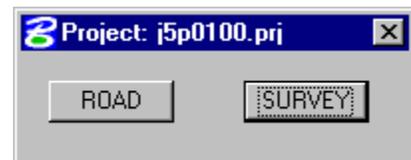
- Learn how to import photogrammetric data and survey data into Geopak.
- Learn how to map photogrammetric and survey data into a .dgn file.
- Learn how to create a digital terrain model from photogrammetric and survey data.

## 3.2 Definitions

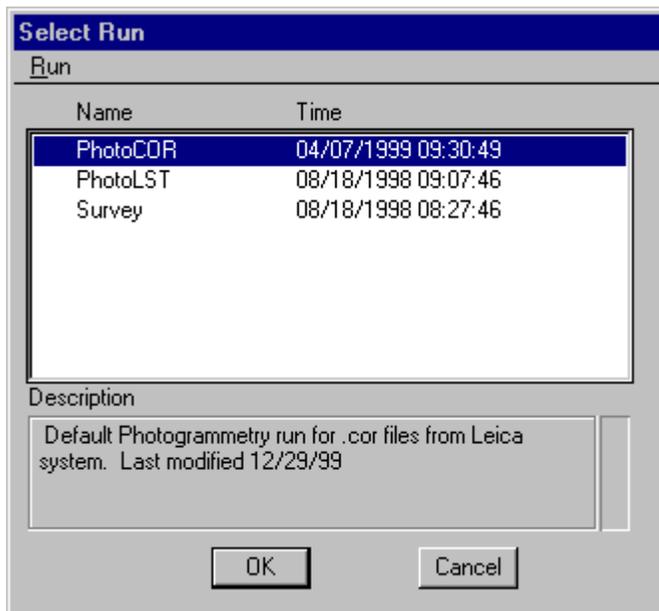
Geopak Survey is a tool for importing survey data into Geopak to be used in the design process. The information from either field surveys or aerial surveys is used to create a digital terrain model of the existing conditions as well as for showing the existing planimetric features.

## 3.3 Accessing

Geopak Survey can be accessed from the **Project** dialog as shown to the right.



When **Survey** is chosen the following **Run** box is opened.



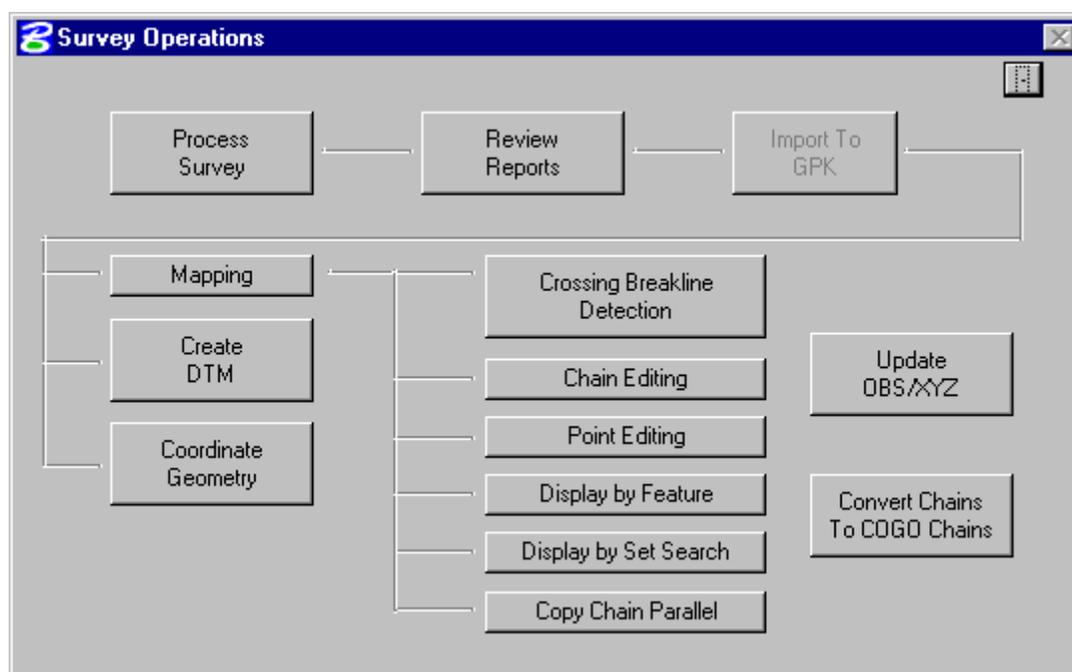
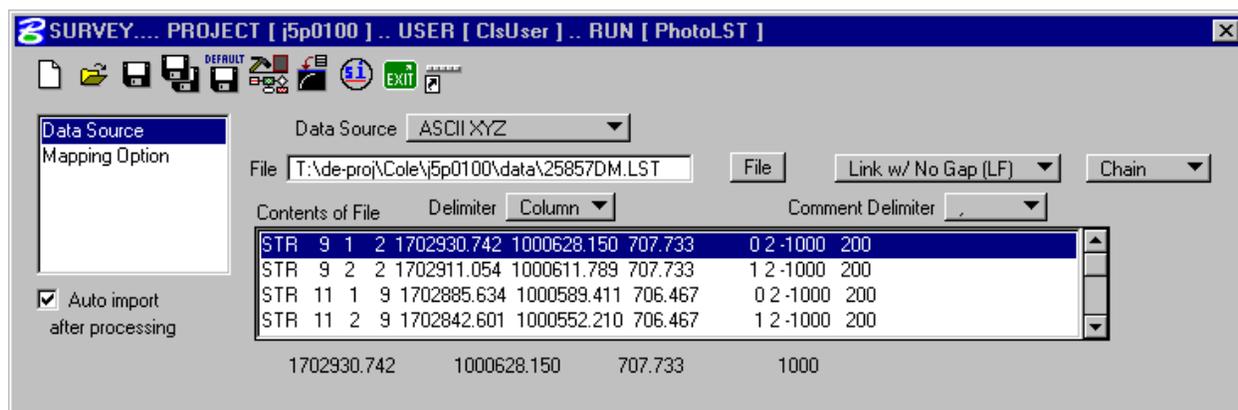
There are three runs to choose from. It is suggested to always copy a run so there will always be a default run available for future runs.

Then three runs available to the user are **PhotoCOR**, **PhotoLST**, and **Survey**. The **PhotoCOR** run is for importing Leica photogrammetric data files (.cor). The **PhotoLST** run is for importing KORK photogrammetric data files (.lst). The **Survey** run is set up to import ASCII XYZ files in the format of point number, X coordinate, Y coordinate, Z coordinate, and point code. If the data file to be imported is in a different format, the **Survey** run will serve as a good starting point for the import process.

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## 3.4 Importing Photogrammetric Data

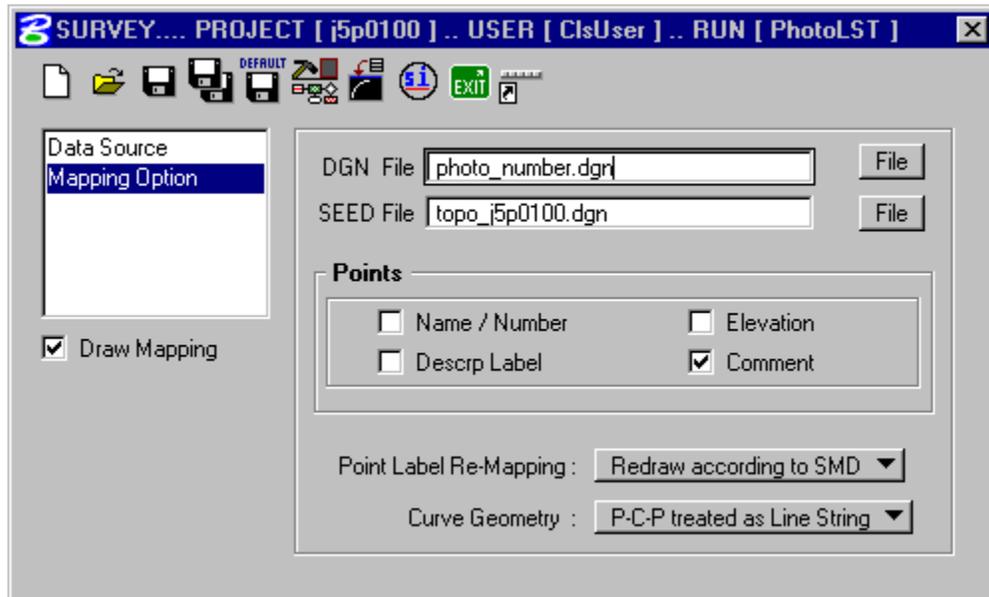
Once the one of the runs has been chosen, the following dialogs will open. (When the PhotoLST run has been chosen, a columns dialog will also open. **DO NOT** change this dialog. It is set up for importing KORK photogrammetric data.)



The user can either search for the file to be imported by pressing the **File** button or key-in the file name. On the search box, be sure to change the filter to **All Files [ \*.\* ]**.

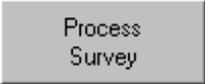
After the file is selected, the data will appear in the **Contents of File** box. If the file contains any header information, the user will need to remove this header information, then select the file again. The user needs to select a line of data from the **Contents of File** box.

From the box on the left side of the dialog select the **Mapping Option** and the following dialog will appear.



Enter the name of the **DGN File** to be created. Be sure the **SEED File** is set to **topo\_jobnumber.dgn**. The **topo\_jobnumber.dgn** file is a 2D file that has the global origin shifted for the project.

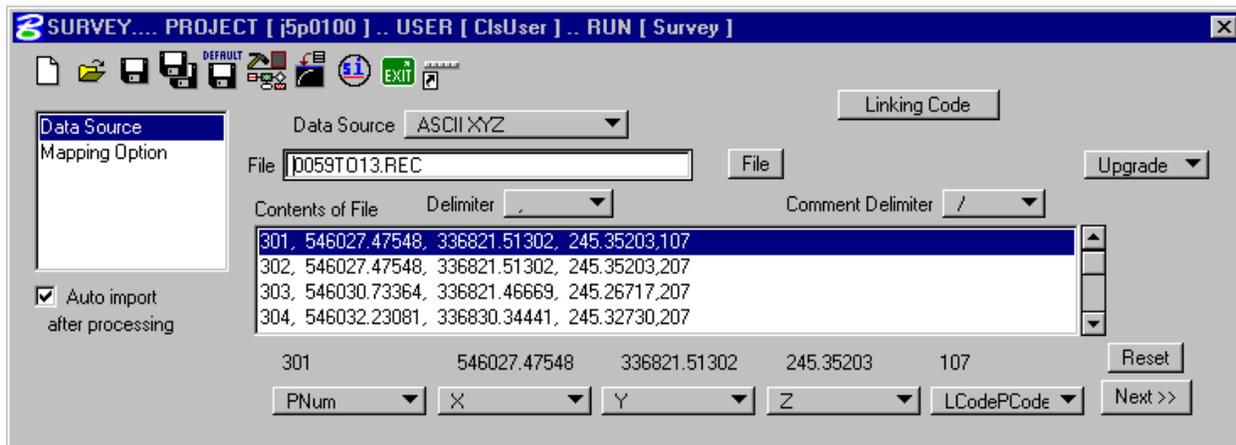
A user can turn on the information about the **Points** to be drawn with the map.

 Once the data file is selected, and the DGN File is specified, the user can choose the **Process Survey** button on the **Survey Operations** flow chart. This will import the data to the Geopak database (.gpk) and map the data to the specified drawing.

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### 3.5 Importing Survey Data

The process for importing survey data is the same as it was for importing the photogrammetry data. When the user chooses the **Survey** run, the **Survey** dialog appears as shown below.



The user needs to select a line of data, specify the name of the DGN file to import to, and select the **Process Survey** button.

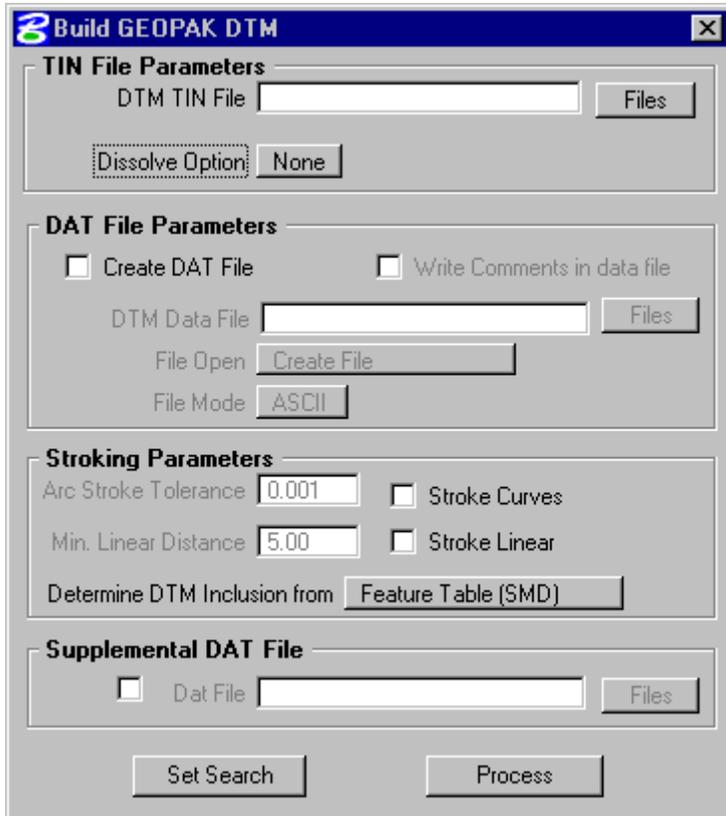
If the file to be imported is not in the format of point number, X coordinate, Y coordinate, Z coordinate, point code, the user can assign the proper columns after selecting a line of data.

### 3.6 Creating the Digital Terrain Model



Once the import of all the survey files is complete, the user is ready to build the digital terrain model (DTM). To begin this process, the user should select the **Create DTM** button from the **Survey Project Manager** flow chart.

The user can specify the file name of the .tin file to create, and then select the runs to include in the DTM by selecting the **Set Search** button and selecting from the list of available runs.



Digital Terrain Models are discussed in further detail in Chapter 4.

### 3.7 Mapping

If the data was not mapped when survey file was processed, the user can map the data by using the **Mapping** button on the **Survey Manager**. The user can then select the **Set Search** button to select the run(s) they would like to map. Selecting the **Process** button will map the data into the Microstation drawing specified in the **Mapping Option** of the Survey Manager.

