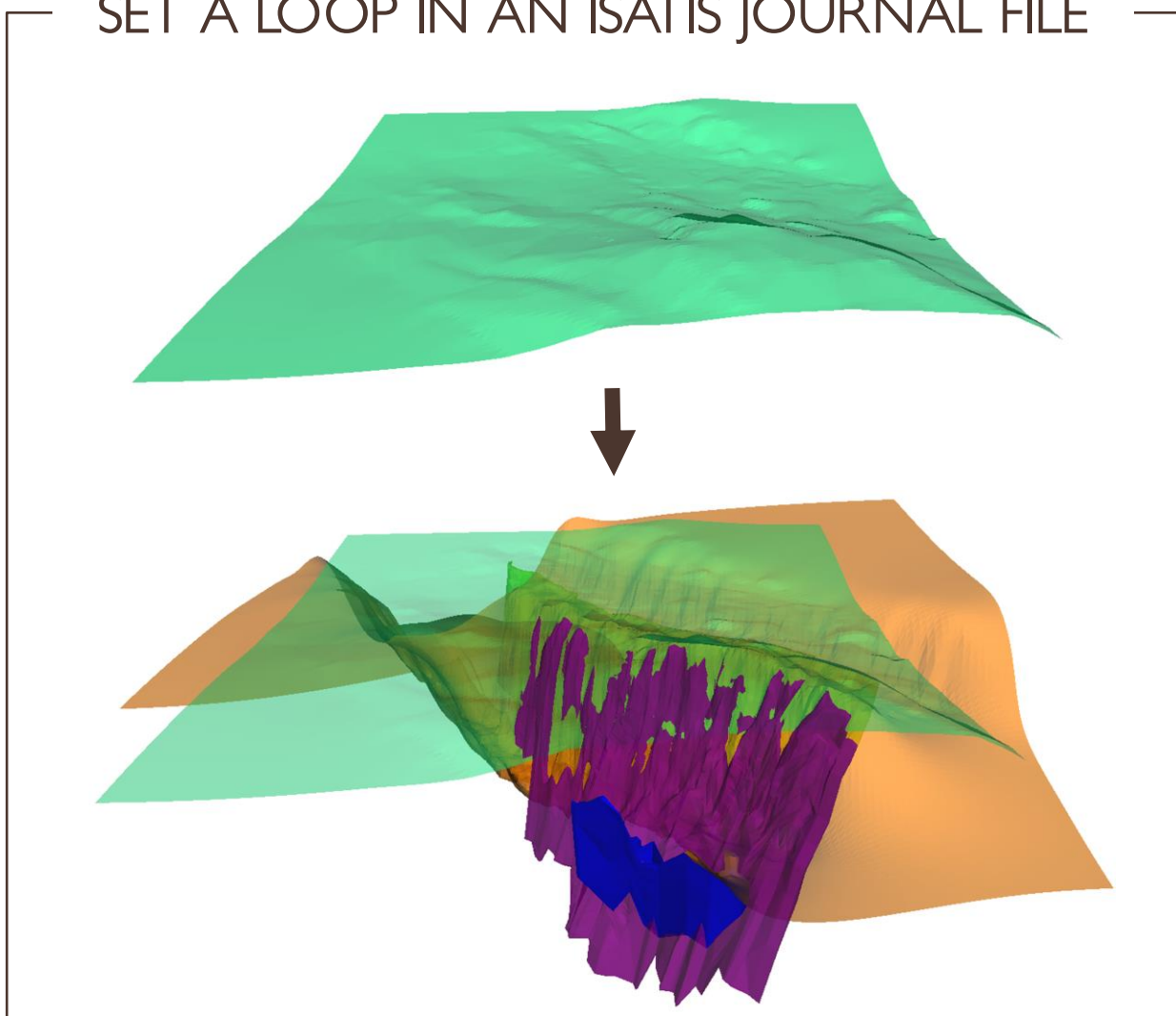


HOW TO...

SET A LOOP IN AN ISATIS JOURNAL FILE



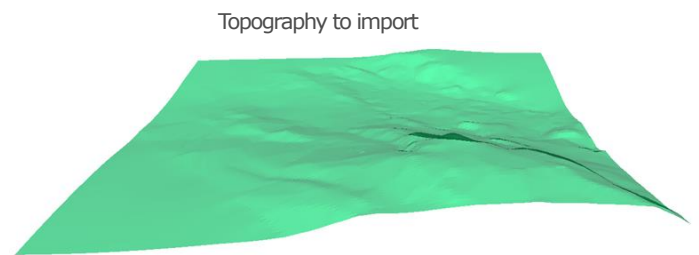
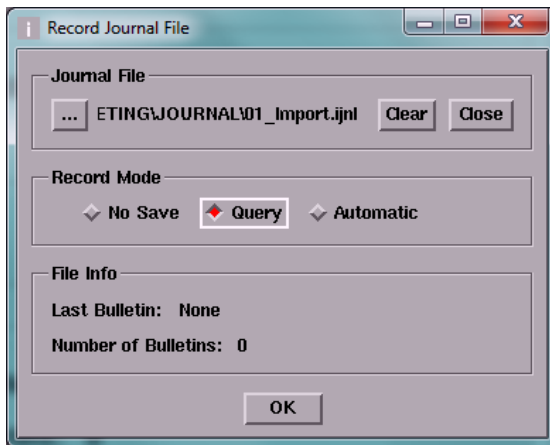
Journal Files are used to record workflows and later rerun them in Isatis. An Isatis Journal File contains a sequence of bulletins or steps that store all the parameters chosen for a workflow. **This document shows how to insert loop instructions in a Journal File.** Loops are used to repeat multiple actions with minimal effort. This example shows how to define a loop to import several geological facies as wireframes (.dxf files). We start from an initial journal file (01_Import.ijnl) and we modify it in order to introduce loop instructions (01_Import_Loop.ijnl).

NB: this document focuses on loops only. Should you wish general information on batch procedures in Isatis, please refer to Isatis online technical documentation.

1. Record the First Step

The first step consists in importing one wireframe (the *topography*) and recording this action into a journal file:

- Create the journal file 01_Import.ijnl
 - ➔ Isatis → Batch & Workflows → Record Journal File

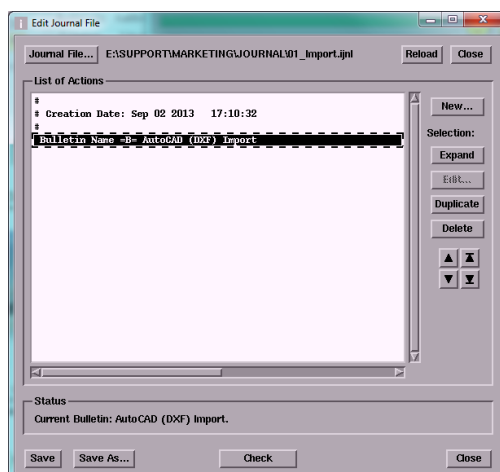


- Then, import the wireframe (Topography.dxf file) and save the action by clicking *Run*.
 - ➔ Isatis → File → Import → AutoCAD (DXF)

2. Edit Journal File & Add three keywords: %VAR, %LOOP and %ENDLOOP

The second step modifies the journal file to incorporate a loop command, which aims at importing additional geological units automatically. The loop is defined by three key words: **%VAR** which contains a set of values or names assigned to the variable on each iterative step, **%LOOP** which marks the start of the cycle, and **%ENDLOOP** which marks its end.

- Edit the previously recorded journal file 01_Import.ijnl:
 - ➔ Isatis → Batch & Workflows → Edit Journal File





- Use a **%VAR** statement in order to define the variable **\$GEOLOGY** which contains the geological facies information stored in six different .dxf files: *Topography*, *OX_Min_1001*, *OX_Prof*, *Sul_Min_2001*, *Sul_Min_Sec_2001* and *VN_Min_4001*:

➔ Isatis → Batch & Workflows → Edit Journal File → New... → Add an Action of Type → Variable

The 'Journal File Actions' dialog box shows the 'Add an Action of Type:' dropdown set to 'Variable'. The 'Variable Name:' field contains 'GEOLOGY'. The checkbox 'Define this Variable as an Explicit Array' is checked. The 'Value(s):' text area contains the list of files: 'Topography, OX_Min_1001, OX_Prof, Sul_Min_2001, Sul_Min_Sec_2001, VN_Min_4001'. Under 'If this Variable was Already Defined:', the 'Overwrite the Previous Value(s)' option is selected. The bottom text field contains the command: '%VAR GEOLOGY = Topography, OX_Min_1001, OX_Prof, Sul_Min_2001, Sul_Min_Sec_2001, VN_Min_4001'. 'Add' and 'Close' buttons are at the bottom.

- Add the variable **%LOOP** and define the iterating **index name** "i", the **start index** (=1) and the **stop index** (=6, the number of wireframes to import). In this case **\$#GEOLOGY** calls for the total number of elements contained by the variable **\$GEOLOGY**.

➔ Isatis → Batch & Workflows → Edit Journal File → New... → Add an Action of Type → Loop

The 'Journal File Actions' dialog box shows the 'Add an Action of Type:' dropdown set to 'Loop'. The 'Index Name:' field contains 'i'. The 'Start Index =' field contains '1'. The 'Stop Index =' field contains '\$#GEOLOGY'. The 'Index Step =' field is empty. The bottom text field contains the command: '%LOOP i = 1 TO \$#GEOLOGY'. 'Add' and 'Close' buttons are at the bottom.

- We finish with the **%ENDLOOP** variable:

➔ Isatis → Batch & Workflows → Edit Journal File → New... → Add an Action of Type → End of Loop

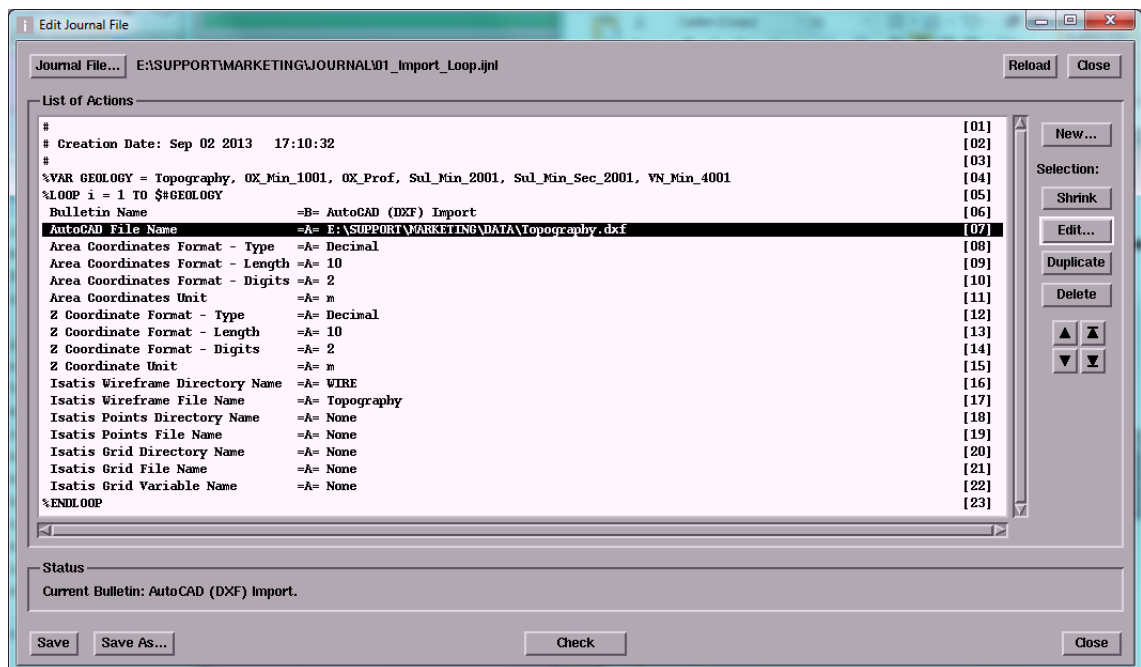
The 'Journal File Actions' dialog box shows the 'Add an Action of Type:' dropdown set to 'End of Loop'. The bottom text field contains the command: '%ENDLOOP'. 'Add' and 'Close' buttons are at the bottom.

3. Expand Bulletin & Call for Variable \$GEOLOGY[\$i]

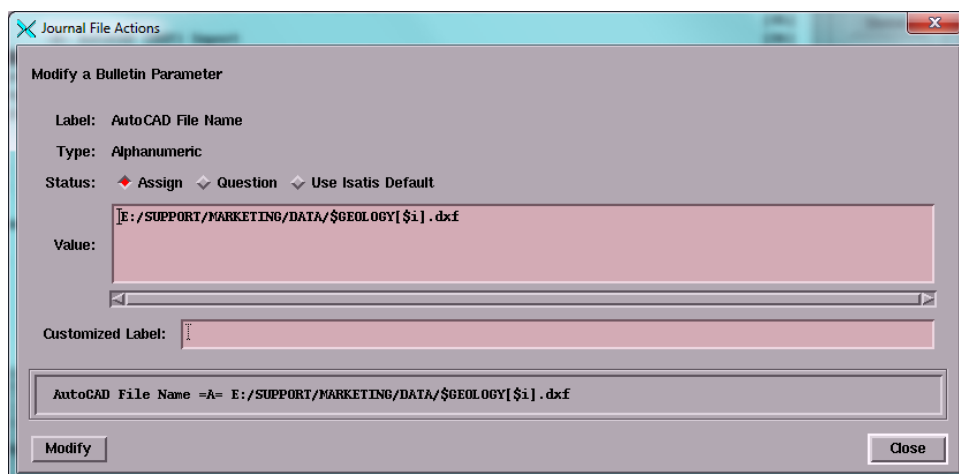
At this stage the journal file repeats six times the very same task (importing the Topography) as recorded in our very first step. The bulletin needs to be expanded to call for the variable \$GEOLOGY[\$i] which will take a different wireframe file name at each iteration.

- In order to import different wireframes, we need to replace the word "Topography" by a generic variable **\$GEOLOGY[\$i]**, each index of this variable referring to one of the six wireframes to import.

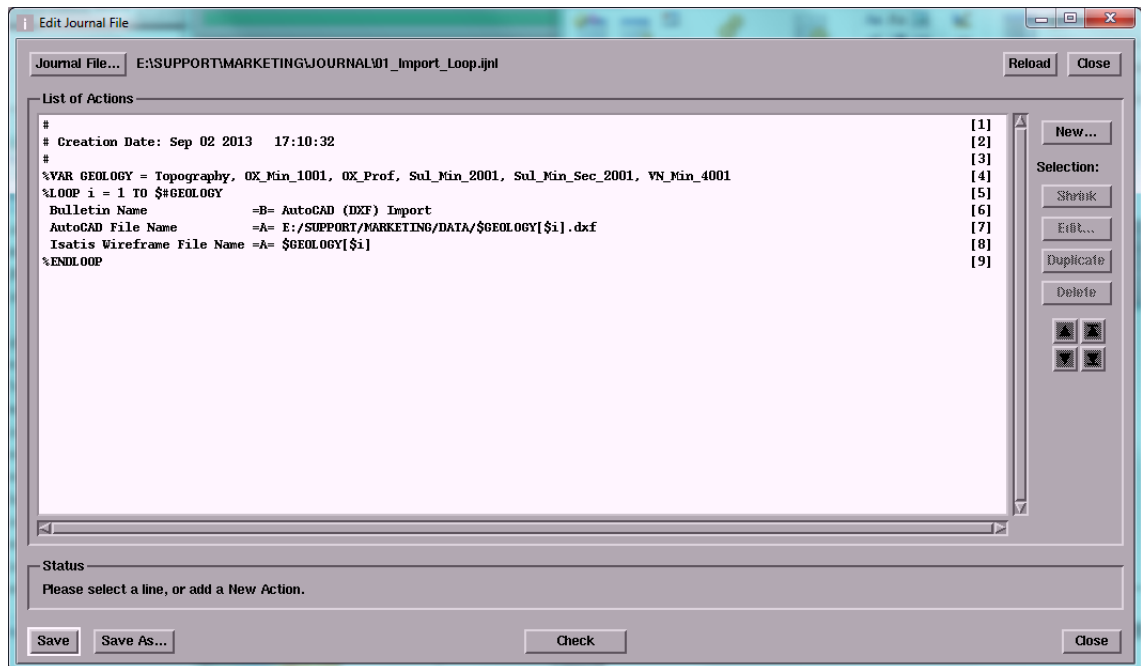
➔ Isatis → Batch & Workflows → Edit Journal File → Select Bulletin → Expand → Edit...



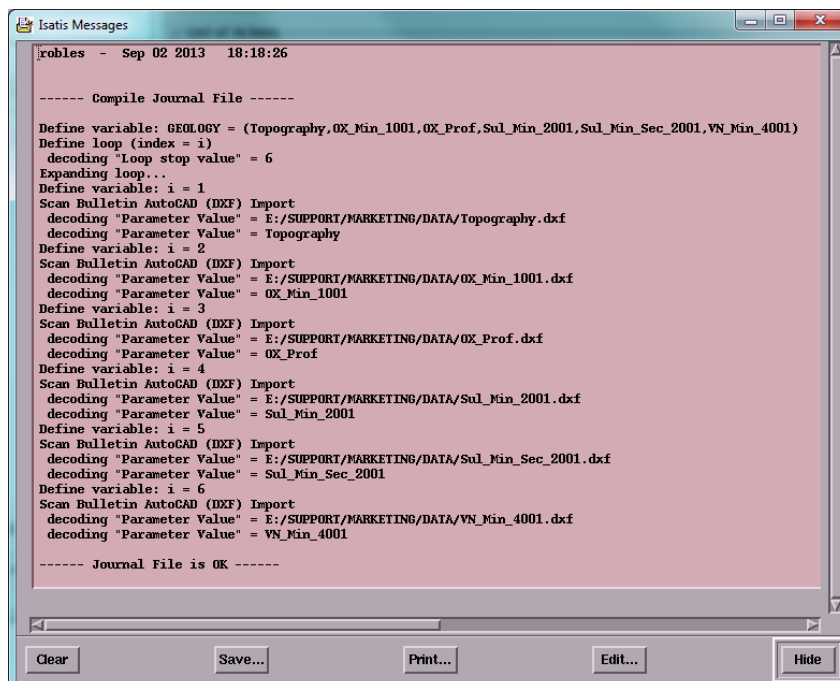
- Replace word "Topography" by the variable \$GEOLOGY[\$i] on lines [07] and [17]:



- **Save** the modifications, the Journal file will look as below:



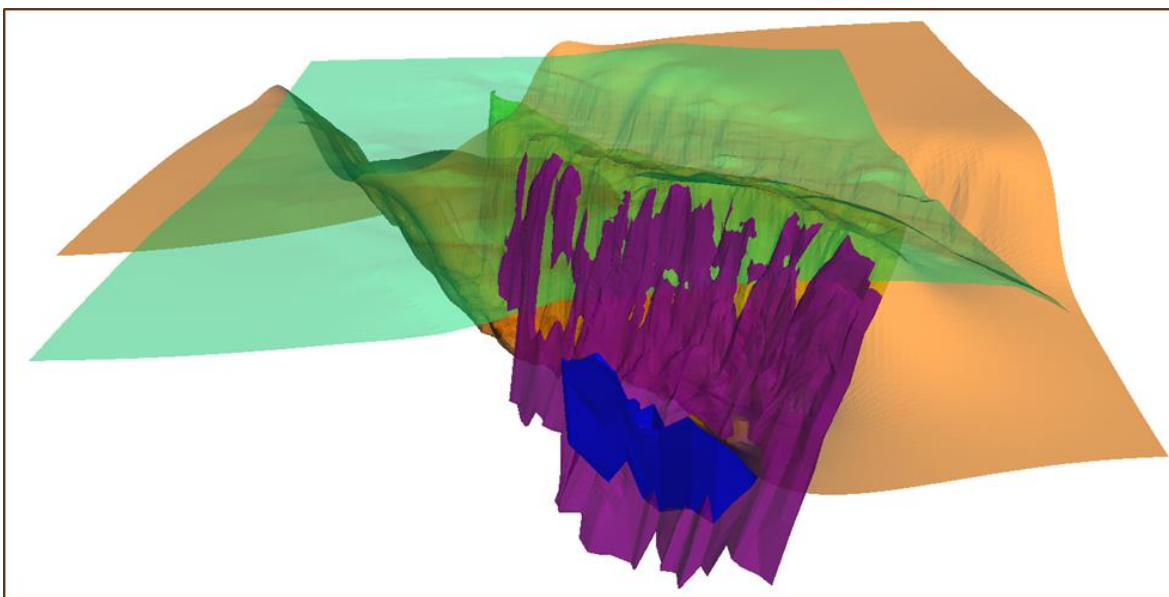
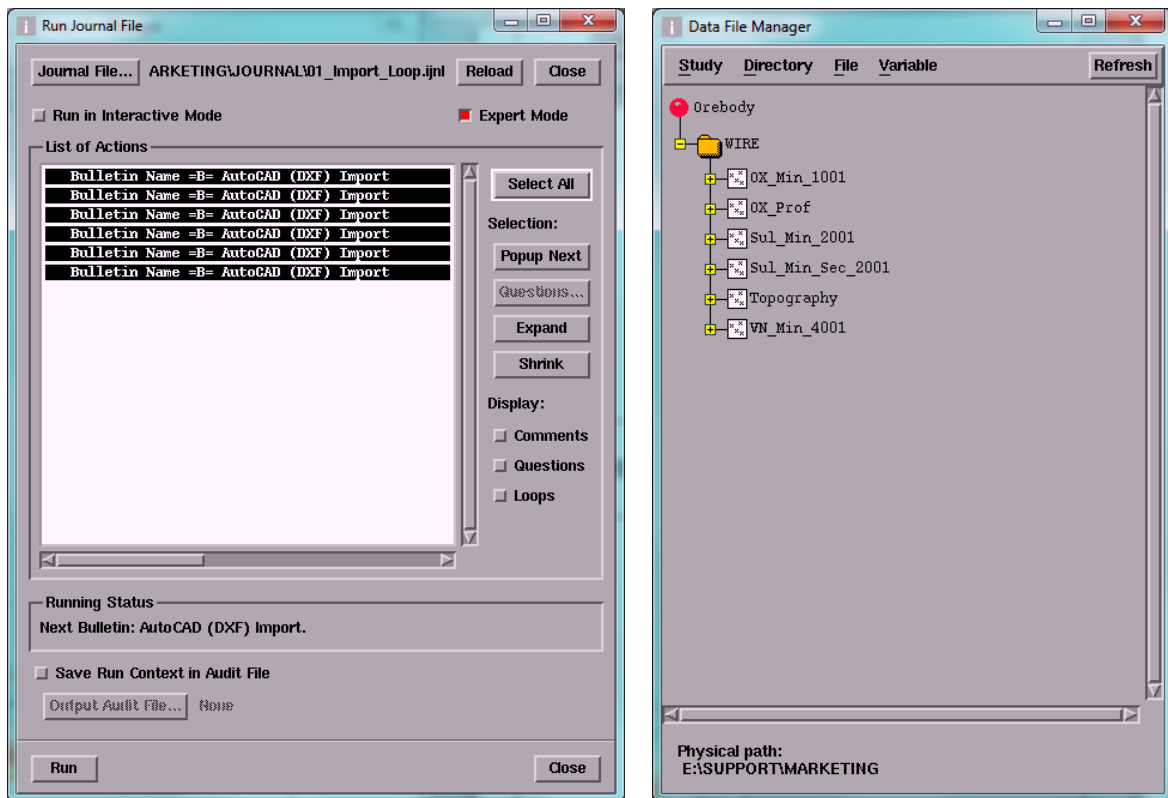
- **Check** the Journal File to verify whether it is alright. If its structure is correct, Isatis displays the following message letting you know that the "Journal File is OK":



4. Running the Journal

Now the Journal File contains the six required instructions, and can be run automatically:

→ Isatis → Batch & Workflows → Run Journal File → Expert Mode → Select All → Run





5. Journal File Example

```
#
# Creation Date: Sep 02 2013   17:10:32
#
%VAR GEOLOGY = Topography, OX_Min_1001, OX_Prof, Sul_Min_2001, Sul_Min_Sec_2001,
VN_Min_4001
%LOOP i = 1 TO $#GEOLOGY
#
***** Bulletin Name *****           =B= AutoCAD (DXF) Import
***** Bulletin Version *****        =N= 800
AutoCAD File Name                      =A=
E:/SUPPORT/MARKETING/DATA/$GEOLOGY[$i].dxf
Area Coordinates Format - Type          =A= Decimal
Area Coordinates Format - Length        =A= 10
Area Coordinates Format - Digits        =A= 2
Area Coordinates Unit                  =A= m
Z Coordinate Format - Type              =A= Decimal
Z Coordinate Format - Length            =A= 10
Z Coordinate Format - Digits            =A= 2
Z Coordinate Unit                      =A= m
Isatis Wireframe Directory Name         =A= WIRE
Isatis Wireframe File Name              =A= $GEOLOGY[$i]
Isatis Points Directory Name            =A= None
Isatis Points File Name                 =A= None
Isatis Grid Directory Name              =A= None
Isatis Grid File Name                   =A= None
Isatis Grid Variable Name               =A= None
%ENDLOOP
```