

The CEDRA Corporation's COMMAND OF THE MONTH

A monthly information bulletin

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FEATURED COMMAND

Aliquot Polygons from
Table Command



Application Description

In the August 2007 issue of Command of the Month we discussed the [Aliquot Polygon] command which offers the ability to enter aliquot descriptions resulting in the creation of polygon features. For the case where the user needs to establish one or two polygons this command is more than adequate.

However, what happens when the user needs to create hundreds of polygons, if not more. In this situation a more efficient command needs to be employed.

Such a situation was recently described to us by a CEDRA user. In an effort to make our software as useful of a tool as possible, a change had to be made. Not to mention eliminating a lot of tedious and time consuming work.

The CEDRA Solution

To address this situation the [Aliquot Polygons from Table] command was created. This new command appears at the bottom of the Aliquot Commands choice list as shown in Figure 1.

The premise under which this command operates is that the user will have one layer that contains polygon features, which represent section grids. This layer is referred to as the Section Grid Layer.

Prior to invoking the [Aliquot Polygons from Table] command, the user activates or selects the appropriate layer in the Table of Contents that is to represent the Section Grid Layer. Only one layer can be



Figure 1
CEDRA-Aliquot-Tools Toolbar

active or selected when this command is invoked.

Additionally, the user will have a Table (dBase table) that contains the aliquot descriptions which are to be processed.

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This month's issue discusses how Aliquot Descriptions can be mass processed to create multiple polygons in a single operation.

The command processes the Table, row by row, creating polygon features based upon the aliquot description found in the Table. If the Table contains selected rows, then only the selected rows are processed. If there are no selected rows, then all of the rows in the Table are processed.

In order for a match to be made between the Table row and a feature in the Section Grid Layer, the Table must contain information that relates the row to a polygon feature in the Section Grid Layer.

The way a record in the Table is related to a polygon feature in the Section Grid Layer is by matching attribute values.

Three, four or five attributes can be used to make a match.

As an example, the table could contain three attributes called Town, Range and Section. These three attributes are to be used to identify the section which the aliquot description is to be applied to. Within the Section Grid Layer, these three attributes must also appear. Thus when processing a record from the Table, the values for the attributes Town, Range and Section are used to find a polygon in the Section Grid Layer which has the exact same values.

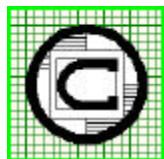
Note that if there is only one match then it is this polygon feature that is subdivided, if there are no matches or more than one, the Table record is ignored and the next record in the Table is processed.

Once the corresponding polygon feature in the Section Grid Layer has been found, the command uses the exact same algorithm that the [Aliquot Polygon] command uses to create a new polygon feature. The new polygon feature is stored in the current active layer.

In addition to creating new polygon features, the command enables the user to transfer attribute data from the Table record to the new polygon feature. In so doing the user is able to attach to the new polygon feature pertinent data in the Table row.

Use of the Command

1. Use the [Set Active Layer] command to define the current active layer.



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This command appears in the third combo-box within the CEDRA-AVcad-Menus toolbar.

2. Activate or select in the Table of Contents the polyline or polygon layer that represents the Section GridLayer.
3. Select the [[Aliquot Polygons from Table] command. If there is no active layer, the warning message shown in Figure 2 will be displayed.



Figure 2 - No Active Polyline or Polygon Layer Error Message



Figure 3 - More than 1 Active Polyline or Polygon Layer Error Message

If there are more than one active layer, the warning message shown in Figure 3 will be displayed.



Figure 4 - Invalid Layer Type Error Message

If the active layer is not a polyline or polygon layer, the warning message shown in Figure 4 will be displayed.

Once the Section Grid Layer has been ascertained, the command checks if there are any tables present in the data frame. If there are no tables, the warning message shown in Figure 5 will be displayed.



Figure 5 - No Tables in Data Frame Error Message

If any of the warning messages discussed above appear, click the OK button, resolve the error and then re-select the command.

4. Fill in the appropriate data for the various parameters shown in Figure 6.

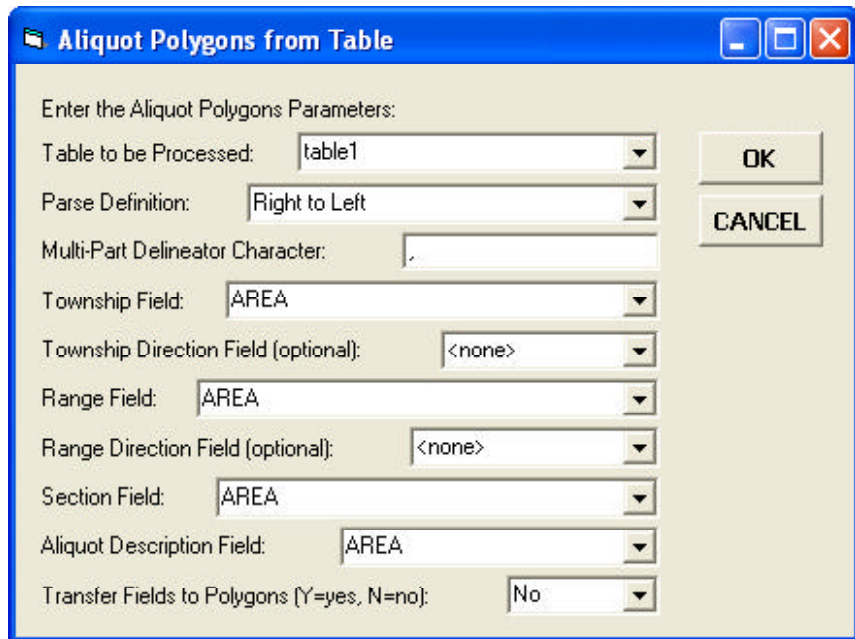


Figure 6 - Aliquot Polygons from Table Multi-Input Dialog Box

Beginning at the top of the dialog box, the user is able to control the following:

Data Line 1 - Table to be Processed

From the choice list, select the Table that contains the aliquot descriptions to be processed.

Data Line 2 - Parse Definition

From the choice list, select the parsing order to be used in parsing the Aliquot definition. The Aliquot

definition can be processed left to right or right to left. If the Left to Right option is selected, the command begins at the left side of the string processing the quadrant identifiers in a left to right order. If the Right to Left option is selected, the command begins at the right side of the Aliquot definition and proceeds in a right to left order. Depending upon the order, different results will be achieved.

Data Line 3 - Multi-Part Delineator

In this data field enter the character that is to serve as the delineator between individual polygon parts

within a single aliquot description. The default delineating character is the comma (,), although the user is able to specify any other character if desired. Note, if the tab character is to be used, the user should enter the string TAB in this data field.

Data Line 4 - Township Field

From the choice list, select the attribute that contains the township component value. Note that this is a required parameter and must be

specified. Additionally, this field must appear in both the Section GridLayer and Table.

Data Line 5 - Township Direction Field

From the choice list, select the attribute that contains the township direction component value. This is an optional parameter and as such does not need to be specified. If this is the case then specify <none> for this parameter.

Data Line 6 - Range Field

From the choice list, select the attribute that contains the range component value. Note that this is a required parameter and must be specified. Additionally, this field must appear in both the Section GridLayer and Table.

Data Line 7 - Range Direction Field

From the choice list, select the attribute that contains the range direction component value. This is an optional parameter and as such does not need to be specified. If this is the case then specify <none> for this parameter.

Data Line 8 - Section Field

From the choice list, select the attribute that contains the section component value. Note that this is a required parameter and must be specified. Additionally, this field must appear in both the Section GridLayer and Table.

Data Line 9 - Aliquot Description Field

From the choice list, select the attribute that contain the aliquot description to be decoded.

Data Line 10 - Transfer Fields

From the choice list, specify whether any attributes from the Table are to be transferred to the polygons that

are created. If attributes are to be transferred select the Yes option, otherwise, select the No option.

After entering the appropriate value(s), click at the:

- *Cancel* button to terminate the command, or the
 - *OK* button to process the data that has been specified.
- 5a. If the user specifies the No option for the Data Line 10 parameter, the command begins to process the records in the Table and creates the appropriate polygon features storing them in the current active layer.



Figure 7 - List Dialog Box for Selecting Attributes to be Transferred

- 5b. If the user specifies the Yes option for the Data Line 10 parameter, a list dialog box similar to the one shown in Figure 7 will be displayed.

This dialog box contains a list of the attributes present in the Table. The user should click in the square to the left of the attribute(s) to be transferred. Upon doing so a check mark will appear denoting that the attribute is to be transferred to the newly created polygon. If the user clicks at a square that already has a check mark displayed, the check mark will disappear thereby indicating that the attribute will not be transferred.

After selecting the appropriate attributes, click at the:

- *Cancel* button to terminate the command, or the
 - *OK* button to begin the processing. At this point proceed to Step 5a.
6. Upon completion of the processing the command will inform the user as

to how many records from the Table were processed and how many new polygons were created, if any. This information will appear in the status bar area (low left corner of the application window).

Notes

- a. When attributes are transferred from the Table to the current active layer, if the attribute does not exist in the current active layer, the command will create an attribute in the current active layer using the properties of the attribute (Name, Field Width, Field Type, etc.) as it is defined in the Table.
- b. If the user is not pleased with the polygons that are created, the user can select the {Edit} [Undo Create Polygons] to delete the newly created polygons.

Summary

This command has been recently added and users with a software support agreement should check with The CEDRA Corporation on how to obtain a software update so as to be able to use this new tool.

As mentioned before in previous issues of Command of the Month, we at The CEDRA Corporation try very hard to ensure that our software is as productive and useful for our users as possible. That is why when we heard of this request for this type of functionality we made the appropriate modifications.

As always, should the reader have any comments or suggestions they should feel free to forward them to us.

If you have a request for Command Of The Month, feel free to phone, fax or e-mail your request to The CEDRA Corporation.