Origin Software Reference Guide

Defining Stakeout Reports

Introduction

The Spectra Geospatial Origin software supports user-definable stakeout reports. These reports enable you to configure the display of staked information on the **Confirm staked deltas** screen that appears when you enable **View before storage**.

The content and format of the stakeout reports is controlled by XSLT style sheets. Translated default XSLT Stakeout Style Sheet (*.sss) files are included with the language files, and accessed by the Origin software from the language folders. You can create new formats in the office and then transfer them to the **Spectra Geospatial Data** folder on the controller.

For information relating to XSLT style sheets, refer to the *Creating Custom Files and Reports for Origin Reference Guide* PDF, which is available from the [PDF guides page](#) of the Spectra Geospatial Origin Help Portal .

Use the **Staked deltas format** option available from the **Stakeout Options** screen to select the stakeout format you want to use when staking out.

The available choices in the **Staked deltas format** field are determined by Stakeout Style Sheet (.sss) files located by the Origin software. The field lists the formats (.sss files) found in the **Spectra Geospatial Data** folder and in the language folder for the currently selected language.

How the stakeout details are reported

When you stake a point, the Origin software automatically creates a special XML file (based on the format of the JobXML file). This XML file is transformed, using the selected format style sheet, to create a specifically formatted text file, which is used as the source data for presenting stakeout details on the controller screen. Examples of these XML files are provided in the following section.

Format details for the source data text file

The transformation of a source XML file using any Stakeout Style Sheet must produce a valid source data file. This file is simply a text file that has some specific commands (keywords) to control the appearance of the stakeout report on the controller.

The keyword details are as follows:

LivePointName

Presents an editable point name field with the heading **As-staked name**.

LivePointCode

Presents an editable point code field with the heading **As-staked code**.

LiveDescription1

Presents an editable point description field. The heading matches the **Description 1** label that was assigned in the job properties.

LiveDescription2

Presents an editable point description field. The heading matches the **Description 2** label that was assigned in the job properties.

DisplayReportSoftkey

Displays a **Report** softkey on the screen. This softkey is used to present a **Catch point delta** report, so this keyword is only applicable for use when staking a catch point.

LivePointDesignElevation

Presents an editable design elevation field that can be used to modify the design elevation for the point currently being staked, subsequent to the position staking, but before the stakeout data storage.

UpdatingPointDesignElevation

Presents a non-editable design elevation field that will be updated with any value entered into a **LivePointDesignElevation** field. This type of field lets you place a non-editable, but updated, copy of the current design elevation value on a different page from the **LivePointDesignElevation** field.

UpdatingPointDesignElevCutFill

Presents a non-editable field that displays the updated cut/fill value based on the design elevation in the **LivePointDesignElevation** field and the staked elevation.

LiveExtraDesignElevation<index>

Presents an editable extra design elevation field that can be used to enter an extra design elevation for a staked point, subsequent to the position staking, but before the stakeout data storage. Only **<index>** suffixes 1 to 10 are valid. The suffixes are used to group the **LiveExtraDesignElevation**, **LiveExtraVerticalDistance**, **UpdatingExtraDesignElevCutFill**, and **LiveExtraDesignElevDescription** fields that are to interact together, and have their values stored together. See the supplied stakeout style sheet **Point - Stake multiple elevs.sss** for examples of how these groups of fields are used.

LiveExtraVerticalDistance<index>

Presents an editable vertical distance (vertical offset) field that can be used to enter a vertical offset to be applied to the current point design elevation. The new design elevation will be displayed in the field **LiveExtraDesignElevation** with the same **<index>** value suffixes. Only **<index>** suffixes 1 to 10 are valid. The suffixes are used to group the **LiveExtraDesignElevation**, **LiveExtraVerticalDistance**, **UpdatingExtraDesignElevCutFill**, and **LiveExtraDesignElevDescription** fields that are to interact together, and have their values stored together.

UpdatingExtraDesignElevCutFill<index>

Presents a non-editable field that is updated with the current cut/fill value according to the current value in the field **LiveExtraDesignElevation** with the same **<index>** value suffixes. Only **<index>** suffixes 1 to 10 are valid. The suffixes are used to group the **LiveExtraDesignElevation**, **LiveExtraVerticalDistance**, **UpdatingExtraDesignElevCutFill**, and **LiveExtraDesignElevDescription** fields that are to interact together, and have their values stored together.

LiveExtraDesignElevDescription<index>

Presents an editable field that can be used to enter a description to be associated with the extra design elevation with the same suffix **<index>**. Only **<index>** suffixes 1 to 10 are valid. The suffixes are used to group the **LiveExtraDesignElevation**, **LiveExtraVerticalDistance**, **UpdatingExtraDesignElevCutFill**, and **LiveExtraDesignElevDescription** fields that are to interact together, and have their values stored together.

NewLine

Forces the next field defined in the style sheet to be presented on a new line in a **Confirm staked deltas** page. This allows you to line up similar types of fields if required.

NewPage

Forces the next field defined in the style sheet to be presented on a new **Confirm staked deltas** page. This allows you to force details onto a new page.

NextWizardScreen

Enables you to force the subsequent **Confirm staked deltas** details onto a new screen, which must be viewed before the stakeout details can be stored. This allows you to present the stakeout details using a wizard-type approach.

GroupBoxStart

Presents a group box in the Origin software, within which any following prompt and value pairs will be included. The name to be used for the group box heading must be included following the **GroupBoxStart** keyword, after a tab character.

GroupBoxEnd

Indicates the end of the current group box. All the prompt and value pairs between this keyword and the preceding **GroupBoxStart** keyword will be included in the group box.

WideScreen

Instructs the Origin software to use the full width of the screen for the output details.

DefaultPromptSize

Default font sizes can be defined for the prompts. Three prompt sizes are available: **Small**, **Medium**, and **Large**.

The default prompt size for all the prompts can be set at the start of the output using the following command, for example: **DefaultPromptSize=Medium**

DefaultValueSize

Default font sizes can be defined for the values. Four prompt sizes available: **Small**, **Medium**, **Large**, and **ExtraLarge**.

The default value size for all the values can be set at the start of the output using the following command, for example: **DefaultValueSize=Medium**

Prompt and value pairs

The actual data to be presented on screen typically includes a prompt and value pair. This consists of the text to be used for the prompt, a tab character and then the actual value text. You can also control the font size and color of the prompt and value text by adding extra, space-separated, commands after the value text, following a tab character.

Font size

Use this command to set the prompt font size, for example: **PromptSize=Medium**

Use this command to set the value font size, for example: **ValueSize=Medium**

The default color for prompts and values is Black, but colors can be assigned to prompts and values on an individual basis (in addition to any font size commands) by adding extra space separated commands following a tab character after the value text.

Prompt color

Use this command to set the prompt color, for example: **PromptColor=Red**. See the list of colors below.

Value color

Use this command to set the value color: **ValueColor=Black**. See the list of colors below.

Font and color

Use these commands to individually control the font size and color of a given prompt and value pair:
Prompt [Tab] Value [Tab] PromptSize=Large PromptColor=Red ValueSize=ExtraLarge ValueColor=Blue

Available colors

The available named colors that can be assigned are as follows:

Red, Mud, Blue, Cyan, Gray, Lime, Navy, Rose, Teal, Black, Brick, Cream, Green, Lemon, Olive, Peach, White, Orange, Purple, Silver, Yellow, Magenta, DarkGray, MediumGray, BlueBlack, LightBlue, RoyalBlue, Turquoise, TrimbleBlue, and TrimblePaleBlue

Example road stake out file

Terminate each line in the file with Carriage Return/Line Feed (CR/LF). A typical road stake out source data file appears as follows:

LivePointName	
LivePointCode	
DisplayReportSoftkey	
GroupboxStart	Stake deltas
Δ Station	-0+000.002m
Δ H.Offset	0.003m Left
V.Dist. to road	Fill 0.003m
Distance to centerline	9.131m
Elevation	16.530m
H.Dist to hinge point	1.131m
V.Dist to hinge point	Cut 1.128m
S. dist to hinge	1.597m
S dist to hinge + Constr off	?
GroupboxEnd	
GroupboxStart	Design Road
Road name	Olivers Road
Code	
Method	Station and offset
Station	0+020.000m (XS)

Cut slope (design)	100.0000%
Cut slope (as staked)	99.7066%
Cut ditch width	0.000m
GroupboxEnd	
GroupboxStart	Construction offsets
Horizontal offset method	Horizontal
Horizontal offset	?
Vertical offset	?
GroupboxEnd	

During normal operation of the Origin software, the XML file used as the data source for the transformation process, and the source data text file used to populate the **Confirm staked deltas** screen, are not retained on the controller. However, if the command line parameter **sssDebug** is specified when you start the software, then these files are retained as **customSX.xml** and **customSO.txt** in the **Spectra Geospatial Data\Projects** folder. These files are refreshed during each stakeout operation.

Creating a program shortcut with the sssDebug command line

To create a program shortcut with the **sssDebug** command line on a Windows 10 controller, add the sssDebug command to the command line for the desktop shortcut.

The following examples of **customSO.xml** files may help you to develop new style sheet definitions (avoiding the need to create files on your controller). With these files as source data, and using a suitable utility program that lets you edit and transform style sheets, you can develop your own stakeout report formats. Use the existing custom style sheets (*.sss files are available in the appropriate language folder on the controller) as a starting point for new definitions. The XSLT language lets you carry out quite sophisticated computations using the data available in the source XML file if required.

You can use the schema definition for the JobXML file as a reference for the format of the XML source file. You may see the following elements in addition to those defined in the JobXML schema.

<RoadType>

Possible values:

- DBENTITY_TrimbleRoad (This applies to RXL roads)

- DBENTITY_GenioRoad

- DBENTITY_LandXmlRoad

This element allows checking within the style sheet to determine the type of road used in a road stakeout operation.

- <GradeInDecimalDegrees> or <GradeToLineInDecimalDegrees>

- <SideSlopeGradeInDecimalDegrees> or <AsStakedSideSlopeGradeInDecimalDegrees>

The grade value is given as an angular value (decimal degrees). These elements are provided so that you do not need to convert a percentage grade value to an angular value for output if the current **<GradeUnits>** setting is **Angle**.

Example XML stakeout data files

The following sample data sets were created using different stakeout methods. They show the XML format data that is available for transformation into a source data text file using a XSLT stakeout style sheet.

NOTE – *In these samples, the Store grid deltas setting was selected in the stakeout options. This means that the stakeout delta values are stored as grid deltas. If this option is not selected, the stakeout delta values are stored as* ***<PolarDeltas>*** *elements, with the azimuth, horizontal distance, and vertical distance from the staked position to the design position recorded.*

RXL road: Stake method is Station and offset

<Stakeout DisplayMode="View Before Storage">

    <Name>ST001</Name>

    <Code>Olivers Road</Code>

    <ComputedGrid>

        <North>704912.78152679</North>

        <East>289868.45045602</East>

        <Elevation>16.30525552924</Elevation>

    </ComputedGrid>

    <DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>

        <HeightUnits>Metres</HeightUnits>

```xml
<StationingFormat>1+000.0</StationingFormat>
<GradeUnits>Percentage</GradeUnits>
<AngleUnits>DMSDegrees</AngleUnits>
<CoordinateOrder>North-East-Elevation</CoordinateOrder>
</DisplaySettings>
<RoadType>DBENTITY_TrimbleRoad</RoadType>
<RoadDesign>
<Name>Olivers Road</Name>
<Code>CL</Code>
<StakeoutMethod>StationAndOffset</StakeoutMethod>
<Station>20</Station>
<Offset>0</Offset>
<Elevation>15.942714881758</Elevation>
<HorizontalConstructionOffsetApplied>Horizontal
</HorizontalConstructionOffsetApplied>
<HorizontalConstructionOffset>0</HorizontalConstructionOffset>
<VerticalConstructionOffset>0</VerticalConstructionOffset>
<StationConstructionOffset>0</StationConstructionOffset>
<StationClass>CrossSection</StationClass>
</RoadDesign>
<LinearDeltas>
<DeltaStation>-0.00938561382147</DeltaStation>
<DeltaOffset>-0.00317508277058</DeltaOffset>
<DeltaElevation>-0.36254064748213</DeltaElevation>
<GradeToLine/>
<GradeToLineInDecimalDegrees/>
</LinearDeltas>

<GridDeltas>
```

```
                <DeltaNorth>-0.00082195794675</DeltaNorth>
                <DeltaEast>0.00987396994606</DeltaEast>
                <DeltaElevation>-0.36254064748213</DeltaElevation>
        </GridDeltas>
        <CrossSectionReport>
                <CenterPoint>
                        <Code>CL</Code>
                        <Station>20</Station>
                        <RightAzimuth>346.06831860418</RightAzimuth>
                        <ComputedGrid>
                                <North>704912.78070484</North>
                                <East>289868.46032999</East>
                                <Elevation>15.942714881758</Elevation>
                        </ComputedGrid>
                </CenterPoint>
                <LeftSide>
                        <Point>
                                <Code>CL</Code>
                                <Offset>0</Offset>
                                <Elevation>15.942714881758</Elevation>
                        </Point>
                        <Point>
                                <Code>Edge</Code>
                                <Offset>-5</Offset>
                                <Elevation>15.842714881758</Elevation>
                        </Point>
                        <Point>
```

```xml
                <Code>Shoulder</Code>
                <Offset>-7</Offset>
                <Elevation>15.602714881758</Elevation>

        </Point>
        <Point>

                <Code>D</Code>
                <Offset>-8</Offset>
                <Elevation>15.402714881758</Elevation>

        </Point>
        <SideSlope>

                <Code/>
                <CutGrade>100</CutGrade>
                <FillGrade>50</FillGrade>
                <DitchWidth>0</DitchWidth>

        </SideSlope>

</LeftSide>
<RightSide>

        <Point>

                <Code>CL</Code>
                <Offset>0</Offset>
                <Elevation>15.942714881758</Elevation>

        </Point>
        <Point>

                <Code>Edge</Code>
                <Offset>5</Offset>
                <Elevation>15.842714881758</Elevation>

        </Point>
```

```
<Point>

        <Code>Shoulder</Code>

        <Offset>7</Offset>

        <Elevation>15.602714881758</Elevation>

</Point>
<Point>

        <Code>D</Code>

        <Offset>8</Offset>

        <Elevation>15.402714881758</Elevation>

</Point>
<SideSlope>

        <Code/>

        <CutGrade>100</CutGrade>

        <FillGrade>50</FillGrade>

        <DitchWidth>0</DitchWidth>

</SideSlope>

        </RightSide>

</CrossSectionReport>

</Stakeout>
```

RXL road: Stake method is Position on road

```
<Stakeout DisplayMode="View Before Storage">

        <Name>ST002</Name>

        <Code>Olivers Road</Code>


        <ComputedGrid>

                <North>704913.77335822</North>

                <East>289865.22236506</East>
```

```xml
            <Elevation>16.305306912367</Elevation>

    </ComputedGrid>
    <DisplaySettings>

            <DistanceUnits>Metres</DistanceUnits>

            <HeightUnits>Metres</HeightUnits>

            <StationingFormat>1+000.0</StationingFormat>

            <GradeUnits>Percentage</GradeUnits>

            <AngleUnits>DMSDegrees</AngleUnits>

            <CoordinateOrder>North-East-Elevation</CoordinateOrder>

    </DisplaySettings>
    <RoadType>DBENTITY_TrimbleRoad</RoadType>
    <RoadDesign>

            <Name>Olivers Road</Name>

            <Code>CL</Code>

            <StakeoutMethod>PositionOnRoad</StakeoutMethod>

            <Station>22.903719387881</Station>

            <Offset>1.7430408394973</Offset>

            <Elevation>15.899537069545</Elevation>

            <HorizontalConstructionOffsetApplied>Horizontal

            </HorizontalConstructionOffsetApplied>

            <HorizontalConstructionOffset>0</HorizontalConstructionOffset>

            <VerticalConstructionOffset>0</VerticalConstructionOffset>

            <StationConstructionOffset>0</StationConstructionOffset>

            <StationClass/>

    </RoadDesign>
    <LinearDeltas>

            <DeltaStation/>

            <DeltaOffset/>

            <DeltaElevation>-0.40576984282255</DeltaElevation>
```

```
            <GradeToLine/>

            <GradeToLineInDecimalDegrees/>

    </LinearDeltas>


<GridDeltas>

            <DeltaNorth/>

            <DeltaEast/>

            <DeltaElevation/>

</GridDeltas>
<CrossSectionReport>

    <CenterPoint>

            <Code>CL</Code>

            <Station>22.903719387881</Station>

            <RightAzimuth>346.06831860418</RightAzimuth>


            <ComputedGrid>

                    <North>704912.08159154</North>

                    <East>289865.64202786</East>

                    <Elevation>15.934397886335</Elevation>

            </ComputedGrid>

    </CenterPoint>

    <LeftSide>

        <Point>

                <Code>CL</Code>

                <Offset>0</Offset>

                <Elevation>15.934397886335</Elevation>

        </Point>
```

```
<Point>

        <Code>Edge</Code>

        <Offset>-5</Offset>

        <Elevation>15.834397886335</Elevation>

</Point>
<Point>

        <Code>Shoulder</Code>

        <Offset>-7</Offset>

        <Elevation>15.594397886335</Elevation>

</Point>
<Point>

        <Code>D</Code>

        <Offset>-8</Offset>

        <Elevation>15.394397886335</Elevation>

</Point>
<SideSlope>

        <Code/>

        <CutGrade>100</CutGrade>

        <FillGrade>50</FillGrade>

        <DitchWidth>0</DitchWidth>

</SideSlope>
</LeftSide>
<RightSide>

    <Point>

        <Code>CL</Code>

        <Offset>0</Offset>
```

```
            <Elevation>15.934397886335</Elevation>

        </Point>
        <Point>

            <Code>Edge</Code>
            <Offset>5</Offset>
            <Elevation>15.834397886335</Elevation>

        </Point>
        <Point>

            <Code>Shoulder</Code>
            <Offset>7</Offset>
            <Elevation>15.594397886335</Elevation>

        </Point>
        <Point>

            <Code>D</Code>
            <Offset>8</Offset>
            <Elevation>15.394397886335</Elevation>

        </Point>
        <SideSlope>

            <Code/>
            <CutGrade>100</CutGrade>
            <FillGrade>50</FillGrade>
            <DitchWidth>0</DitchWidth>

        </SideSlope>

    </RightSide>

</CrossSectionReport>

</Stakeout>
```

RXL road: Stake method is Nearest offset

```
<Stakeout DisplayMode="View Before Storage">
```

```
<Name>ST003</Name>
<Code>Olivers Road</Code>


<ComputedGrid>

        <North>704916.64897737</North>
        <East>289863.29188814</East>
        <Elevation>16.305259182268</Elevation>

</ComputedGrid>
<DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>
        <HeightUnits>Metres</HeightUnits>
        <StationingFormat>1+000.0</StationingFormat>
        <GradeUnits>Percentage</GradeUnits>
        <AngleUnits>DMSDegrees</AngleUnits>
        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

</DisplaySettings>
<RoadType>DBENTITY_TrimbleRoad</RoadType>
<RoadDesign>

        <Name>Olivers Road</Name>
        <Code>Edge</Code>
        <StakeoutMethod>NearestOffset</StakeoutMethod>
        <Station>24.085060681019</Station>
        <Offset>5</Offset>
        <Elevation>15.831014222551</Elevation>
        <HorizontalConstructionOffsetApplied>Horizontal
        </HorizontalConstructionOffsetApplied>
        <HorizontalConstructionOffset>0</HorizontalConstructionOffset>
        <VerticalConstructionOffset>0</VerticalConstructionOffset>
        <StationConstructionOffset>0</StationConstructionOffset>
        <StationClass/>
```

```
</RoadDesign>
<LinearDeltas>

        <DeltaStation>0</DeltaStation>
        <DeltaOffset>0.00113985064301</DeltaOffset>
        <DeltaElevation>-0.47424495971653</DeltaElevation>
        <GradeToLine/>
        <GradeToLineInDecimalDegrees/>

</LinearDeltas>


<GridDeltas>

        <DeltaNorth>0.00110632018186</DeltaNorth>
        <DeltaEast>-0.00027443584986</DeltaEast>
        <DeltaElevation>-0.47424495971653</DeltaElevation>

</GridDeltas>
<CrossSectionReport>

        <CenterPoint>

                <Code>CL</Code>
                <Station>24.085060681019</Station>
                <RightAzimuth>346.06831860418</RightAzimuth>

                <ComputedGrid>

                        <North>704911.79716619</North>
                        <East>289864.4954375</East>
                        <Elevation>15.931014222551</Elevation>

                </ComputedGrid>

        </CenterPoint>
        <LeftSide>

                <Point>
```

```xml
            <Code>CL</Code>
            <Offset>0</Offset>
            <Elevation>15.931014222551</Elevation>

        </Point>
        <Point>

            <Code>Edge</Code>
            <Offset>-5</Offset>
            <Elevation>15.831014222551</Elevation>

        </Point>
        <Point>

            <Code>Shoulder</Code>
            <Offset>-7</Offset>
            <Elevation>15.591014222551</Elevation>

        </Point>
        <Point>

            <Code>D</Code>
            <Offset>-8</Offset>
            <Elevation>15.391014222551</Elevation>

        </Point>
        <SideSlope>

            <Code/>
            <CutGrade>100</CutGrade>
            <FillGrade>50</FillGrade>
            <DitchWidth>0</DitchWidth>

        </SideSlope>
</LeftSide>
<RightSide>
```

```xml
                <Point>

                        <Code>CL</Code>

                        <Offset>0</Offset>

                        <Elevation>15.931014222551</Elevation>

                </Point>
                <Point>

                        <Code>Edge</Code>

                        <Offset>5</Offset>

                        <Elevation>15.831014222551</Elevation>

                </Point>
                <Point>

                        <Code>Shoulder</Code>

                        <Offset>7</Offset>

                        <Elevation>15.591014222551</Elevation>

                </Point>
                <Point>

                        <Code>D</Code>

                        <Offset>8</Offset>

                        <Elevation>15.391014222551</Elevation>

                </Point>
                <SideSlope>

                        <Code/>

                        <CutGrade>100</CutGrade>

                        <FillGrade>50</FillGrade>

                        <DitchWidth>0</DitchWidth>

                </SideSlope>

        </RightSide>

</CrossSectionReport>
```

```
</Stakeout>
```

GENIO road: Stake method is Stake out station on string

```
<Stakeout DisplayMode="View Before Storage">

        <Name>ST004</Name>
        <Code>CR11</Code>

        <ComputedGrid>

                <North>704681.33516523</North>
                <East>289025.00680171</East>
                <Elevation>84.782187423697</Elevation>

        </ComputedGrid>
        <DisplaySettings>

                <DistanceUnits>Metres</DistanceUnits>
                <HeightUnits>Metres</HeightUnits>
                <StationingFormat>1+000.0</StationingFormat>
                <GradeUnits>Percentage</GradeUnits>
                <AngleUnits>DMSDegrees</AngleUnits>
                <CoordinateOrder>North-East-Elevation</CoordinateOrder>

        </DisplaySettings>
        <RoadType>DBENTITY_GenioRoad</RoadType>
        <RoadDesign>

                <Name>Main (A50Setout.crd)</Name>
                <Code>CR11</Code>
                <StakeoutMethod>StationOnString</StakeoutMethod>
                <Station>7349.9551064453</Station>
                <Offset>1.2501552855362</Offset>
                <Elevation>84.945</Elevation>
                <HorizontalConstructionOffsetApplied>Horizontal
                </HorizontalConstructionOffsetApplied>
```

```
            <HorizontalOffsetMethod>Tangential to master
            </HorizontalOffsetMethod>
            <HorizontalConstructionOffset>0</HorizontalConstructionOffset>
            <VerticalConstructionOffset>0</VerticalConstructionOffset>
            <StationConstructionOffset>0</StationConstructionOffset>
            <StationClass/>
</RoadDesign>
<LinearDeltas>

            <DeltaStation>0.00945505462962</DeltaStation>
            <DeltaOffset>0.00789192314554</DeltaOffset>
            <DeltaElevation>0.16281257630328</DeltaElevation>
            <GradeToLine/>
            <GradeToLineInDecimalDegrees/>

</LinearDeltas>


<GridDeltas>

            <DeltaNorth>-0.01116513984744</DeltaNorth>
            <DeltaEast>0.00519809208345</DeltaEast>
            <DeltaElevation>0.16281257630328</DeltaElevation>

</GridDeltas>
<CrossSectionReport>

      <CenterPoint>

            <Code>MDB1</Code>
            <Station>7349.9551064453</Station>
            <RightAzimuth>205.18398885351</RightAzimuth>

            <ComputedGrid>

                  <North>704682.45532312</North>
```

```
                <East>289025.54397391</East>
                <Elevation>84.944928170313</Elevation>

        </ComputedGrid>

</CenterPoint>
<LeftSide>

        <Point>

                <Code>MDB1</Code>
                <Offset>0</Offset>
                <Elevation>84.944928170313</Elevation>

        </Point>
        <Point>

                <Code>CL11</Code>
                <Offset>-1.2495926809984</Offset>
                <Elevation>84.945</Elevation>

        </Point>

</LeftSide>
<RightSide>

        <Point>

                <Code>MDB1</Code>
                <Offset>0</Offset>
                <Elevation>84.944928170313</Elevation>

        </Point>
        <Point>

                <Code>CR11</Code>
                <Offset>1.2501552855362</Offset>
                <Elevation>84.945</Elevation>
```

```
        </Point>

    </RightSide>

  </CrossSectionReport>

</Stakeout>
```

GENIO road: Stake method is Stake out position on road

```
<Stakeout DisplayMode="View Before Storage">

    <Name>ST005</Name>
    <Code>Main</Code>


    <ComputedGrid>

        <North>704683.13988652</North>
        <East>289022.02415092</East>
        <Elevation>84.782209073646</Elevation>

    </ComputedGrid>
    <DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>
        <HeightUnits>Metres</HeightUnits>
        <StationingFormat>1+000.0</StationingFormat>
        <GradeUnits>Percentage</GradeUnits>
        <AngleUnits>DMSDegrees</AngleUnits>
        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

    </DisplaySettings>
    <RoadType>DBENTITY_GenioRoad</RoadType>
    <RoadDesign>

        <Name>Main (A50Setout.crd)</Name>
        <Code>MDB1</Code>
        <StakeoutMethod>PositionOnRoad</StakeoutMethod>
        <Station>7346.477832185</Station>
```

```
            <Offset>0.87727742766917</Offset>
            <Elevation>84.939415145073</Elevation>
            <HorizontalConstructionOffsetApplied>Horizontal
            </HorizontalConstructionOffsetApplied>
            <HorizontalConstructionOffset>0</HorizontalConstructionOffset>
            <VerticalConstructionOffset>0</VerticalConstructionOffset>
            <StationConstructionOffset>0</StationConstructionOffset>
            <StationClass/>
    </RoadDesign>
    <LinearDeltas>
            <DeltaStation/>
            <DeltaOffset/>
            <DeltaElevation>0.1572060714271</DeltaElevation>
            <GradeToLine/>
            <GradeToLineInDecimalDegrees/>
    </LinearDeltas>

    <GridDeltas>
            <DeltaNorth/>
            <DeltaEast/>
            <DeltaElevation/>
    </GridDeltas>
    <CrossSectionReport>
            <CenterPoint>
                    <Code>MDB1</Code>
                    <Station>7346.477832185</Station>
                    <RightAzimuth>205.15078333029</RightAzimuth>
```

```xml
<ComputedGrid>

        <North>704683.93408327</North>

        <East>289022.39679989</East>

        <Elevation>84.939364531496</Elevation>

</ComputedGrid>

</CenterPoint>
<LeftSide>

        <Point>

                <Code>MDB1</Code>

                <Offset>0</Offset>

                <Elevation>84.939364531496</Elevation>

        </Point>
        <Point>

                <Code>CL11</Code>

                <Offset>-1.2496866750346</Offset>

                <Elevation>84.939436308646</Elevation>

        </Point>

</LeftSide>
<RightSide>

        <Point>

                <Code>MDB1</Code>

                <Offset>0</Offset>

                <Elevation>84.939364531496</Elevation>

        </Point>
        <Point>

                <Code>CR11</Code>
```

```
                    <Offset>1.2500991013535</Offset>

                    <Elevation>84.939436654618</Elevation>

              </Point>

          </RightSide>

      </CrossSectionReport>

</Stakeout>
```

GENIO road: Stake method is Stake out along a string

```
<Stakeout DisplayMode="View Before Storage">

      <Name>ST006</Name>

      <Code>CR11</Code>


      <ComputedGrid>

            <North>704685.89218142</North>

            <East>289015.24375654</East>

            <Elevation>84.782224532854</Elevation>

      </ComputedGrid>

      <DisplaySettings>

            <DistanceUnits>Metres</DistanceUnits>

            <HeightUnits>Metres</HeightUnits>

            <StationingFormat>1+000.0</StationingFormat>

            <GradeUnits>Percentage</GradeUnits>

            <AngleUnits>DMSDegrees</AngleUnits>

            <CoordinateOrder>North-East-Elevation</CoordinateOrder>

      </DisplaySettings>

      <RoadType>DBENTITY_GenioRoad</RoadType>

      <RoadDesign>

            <Name>Main (A50Setout.crd)</Name>

            <Code>MDB1</Code>
```

```
        <StakeoutMethod>NearestOffset</StakeoutMethod>
        <Station>7339.1686526179</Station>
        <Offset>1.2498854296691</Offset>
        <Elevation>84.927349489636</Elevation>
        <HorizontalConstructionOffsetApplied>Horizontal
        </HorizontalConstructionOffsetApplied>
        <HorizontalConstructionOffset>0</HorizontalConstructionOffset>
        <VerticalConstructionOffset>0</VerticalConstructionOffset>
        <StationConstructionOffset>0</StationConstructionOffset>
        <StationClass/>
</RoadDesign>
<LinearDeltas>

        <DeltaStation>0</DeltaStation>
        <DeltaOffset>-0.01326143954529</DeltaOffset>
        <DeltaElevation>0.14512495678164</DeltaElevation>
        <GradeToLine/>
        <GradeToLineInDecimalDegrees/>

</LinearDeltas>


<GridDeltas>

        <DeltaNorth>0.01201109227259</DeltaNorth>
        <DeltaEast>0.00562133797212</DeltaEast>
        <DeltaElevation>0.14512495678164</DeltaElevation>

</GridDeltas>
<CrossSectionReport>

        <CenterPoint>

                <Code>MDB1</Code>
                <Station>7339.1686526179</Station>
                <RightAzimuth>205.08096670821</RightAzimuth>
```

```
<ComputedGrid>

        <North>704687.03622583</North>

        <East>289015.77920253</East>

        <Elevation>84.927337305236</Elevation>

    </ComputedGrid>

</CenterPoint>
<LeftSide>

    <Point>

        <Code>MDB1</Code>

        <Offset>0</Offset>

        <Elevation>84.927337305236</Elevation>

    </Point>
    <Point>

        <Code>CL11</Code>

        <Offset>-1.2499676057421</Offset>

        <Elevation>84.92734950102</Elevation>

    </Point>

</LeftSide>
<RightSide>

    <Point>

        <Code>MDB1</Code>

        <Offset>0</Offset>

        <Elevation>84.927337305236</Elevation>

    </Point>
    <Point>
```

```
                <Code>CR11</Code>
                <Offset>1.2498854296691</Offset>
                <Elevation>84.927349489636</Elevation>
            </Point>
        </RightSide>
    </CrossSectionReport>
</Stakeout>
```

Stakeout lines: Stake method is To the line

```
<Stakeout DisplayMode="View Before Storage">
    <Name>ST007</Name>
    <Code>Line0001</Code>

    <ComputedGrid>
        <North>704756.38840668</North>
        <East>289015.2561164</East>
        <Elevation>25.41848258278</Elevation>
    </ComputedGrid>
    <DisplaySettings>
        <DistanceUnits>Metres</DistanceUnits>
        <HeightUnits>Metres</HeightUnits>
        <StationingFormat>1+000.0</StationingFormat>
        <GradeUnits>Percentage</GradeUnits>
        <AngleUnits>DMSDegrees</AngleUnits>
        <CoordinateOrder>North-East-Elevation</CoordinateOrder>
    </DisplaySettings>
    <LineDesign>
        <Name>Line0001</Name>
        <Code/>
```

```
        <StakeoutMethod>ToTheLine</StakeoutMethod>
        <Station>124.4969529349</Station>
        <Offset/>
        <Elevation/>

    </LineDesign>
    <LinearDeltas>

        <DeltaStation/>
        <DeltaOffset>-0.52318366481356</DeltaOffset>
        <DeltaElevation>0.2255086694767</DeltaElevation>
        <GradeToLine>43.10315566849</GradeToLine>
        <GradeToLineInDecimalDegrees>23.317567002741
        </GradeToLineInDecimalDegrees>

    </LinearDeltas>

</Stakeout>
```

Stakeout lines: Stake method is Station on the line

```
<Stakeout DisplayMode="View Before Storage">

    <Name>ST008</Name>
    <Code>Line0001</Code>


    <ComputedGrid>

        <North>704732.33008102</North>
        <East>288944.74565348</East>
        <Elevation>25.350216273062</Elevation>

    </ComputedGrid>
    <DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>
        <HeightUnits>Metres</HeightUnits>
        <StationingFormat>1+000.0</StationingFormat>
```

```
        <GradeUnits>Percentage</GradeUnits>

        <AngleUnits>DMSDegrees</AngleUnits>

        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

    </DisplaySettings>
    <LineDesign>

        <Name>Line0001</Name>

        <Code/>

        <StakeoutMethod>PointOnLine</StakeoutMethod>

        <Station>50</Station>

        <Offset/>

        <Elevation/>

    </LineDesign>
    <LinearDeltas>

        <DeltaStation>0.00335794382903</DeltaStation>

        <DeltaOffset>-0.004450686415032</DeltaOffset>

        <DeltaElevation>0.12622521315209</DeltaElevation>

        <GradeToLine>0</GradeToLine>

        <GradeToLineInDecimalDegrees>0</GradeToLineInDecimalDegrees>

    </LinearDeltas>


    <GridDeltas>

        <DeltaNorth>0.00536144338548</DeltaNorth>

        <DeltaEast>0.00168491341174</DeltaEast>

        <DeltaElevation>0.12623276509736</DeltaElevation>

    </GridDeltas>

</Stakeout>
```

Stakeout lines: Stake method is Station/offset from line

```
<Stakeout DisplayMode="View Before Storage">
```

```
<Name>ST009</Name>
<Code>Line0001</Code>


<ComputedGrid>

        <North>704727.60847095</North>
        <East>288946.38613222</East>
        <Elevation>25.559306122314</Elevation>

</ComputedGrid>
<DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>
        <HeightUnits>Metres</HeightUnits>
        <StationingFormat>1+000.0</StationingFormat>
        <GradeUnits>Percentage</GradeUnits>
        <AngleUnits>DMSDegrees</AngleUnits>
        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

</DisplaySettings>
<LineDesign>

        <Name>Line0001</Name>
        <Code/>
        <StakeoutMethod>PointOffsetFromLine</StakeoutMethod>
        <Station>50</Station>
        <Offset>5</Offset>
        <Elevation>0.2</Elevation>

</LineDesign>
<LinearDeltas>

        <DeltaStation>0.01027919288286</DeltaStation>
        <DeltaOffset>-0.002299571600309</DeltaOffset>
        <DeltaElevation>0.11711979814509</DeltaElevation>
        <GradeToLine>0</GradeToLine>
```

```
            <GradeToLineInDecimalDegrees>0</GradeToLineInDecimalDegrees>

        </LinearDeltas>


        <GridDeltas>

            <DeltaNorth>0.00621562136803</DeltaNorth>

            <DeltaEast>0.00871843786445</DeltaEast>

            <DeltaElevation>0.11714291584542</DeltaElevation>

        </GridDeltas>

</Stakeout>
```

Stakeout lines: Stake method is Slope from line

```
<Stakeout DisplayMode="View Before Storage">

        <Name>ST010</Name>
        <Code>Line0001</Code>


        <ComputedGrid>

            <North>704734.49332465</North>
            <East>288946.37505216</East>
            <Elevation>25.559273222628</Elevation>

        </ComputedGrid>
        <DisplaySettings>

            <DistanceUnits>Metres</DistanceUnits>
            <HeightUnits>Metres</HeightUnits>
            <StationingFormat>1+000.0</StationingFormat>
            <GradeUnits>Percentage</GradeUnits>
            <AngleUnits>DMSDegrees</AngleUnits>
            <CoordinateOrder>North-East-Elevation</CoordinateOrder>

        </DisplaySettings>
        <LineDesign>
```

```
        <Name>Line0001</Name>
        <Code/>
        <StakeoutMethod>SlopeFromLine</StakeoutMethod>
        <Station>52.247850608158</Station>
        <Offset>-1.5010413640685</Offset>
        <Elevation/>

</LineDesign>
<LinearDeltas>

        <DeltaStation/>
        <DeltaOffset>0</DeltaOffset>
        <DeltaElevation>-0.07776881168436</DeltaElevation>
        <GradeToLine>-5.1809905806711</GradeToLine>
        <GradeToLineInDecimalDegrees>-2.9658371376255
        </GradeToLineInDecimalDegrees>
        <VDistSlope>-0.10778963896573</VDistSlope>

</LinearDeltas>
<SlopeDesign>

        <SlopeLeft>

                <Type>GradeAndHorizontalDistance</Type>
                <HorizontalDistance>5</HorizontalDistance>
                <VerticalDistance>-0.1</VerticalDistance>
                <SlopeDistance>5.00099990002</SlopeDistance>
                <Grade>-2</Grade>
                <GradeAsAngle>-1.1457628381751</GradeAsAngle>

        </SlopeLeft>

        <SlopeRight>

                <Type>HorizontalAndVerticalDistance</Type>
                <HorizontalDistance>5</HorizontalDistance>
```

```xml
            <VerticalDistance>-0.5</VerticalDistance>

            <SlopeDistance>5.0249378105604</SlopeDistance>

            <Grade>-10</Grade>

            <GradeAsAngle>-5.7105931374996</GradeAsAngle>

        </SlopeRight>

    </SlopeDesign>

</Stakeout>
```

Stakeout arcs: Stake method is To the arc

```xml
<Stakeout DisplayMode="View Before Storage">

    <Name>ST011</Name>

    <Code>Arc0001</Code>


    <ComputedGrid>

        <North>704709.44512267</North>

        <East>288946.51305733</East>

        <Elevation>26.37738401509</Elevation>

    </ComputedGrid>

    <DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>

        <HeightUnits>Metres</HeightUnits>

        <StationingFormat>1+000.0</StationingFormat>

        <GradeUnits>Percentage</GradeUnits>

        <AngleUnits>DMSDegrees</AngleUnits>

        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

    </DisplaySettings>

    <ArcDesign>

        <Name>Arc0001</Name>

        <Code/>
```

```
        <StakeoutMethod>ToTheArc</StakeoutMethod>
        <Station>221.64564646493</Station>
        <Offset/>
        <Elevation/>

    </ArcDesign>
    <LinearDeltas>

        <DeltaStation/>
        <DeltaOffset>0.36846589454494</DeltaOffset>
        <DeltaElevation>0.14975664686563</DeltaElevation>
        <GradeToLine>40.643285873332</GradeToLine>
        <GradeToLineInDecimalDegrees>22.118440630717
        </GradeToLineInDecimalDegrees>

    </LinearDeltas>

</Stakeout>
```

Stakeout arcs: Stake method is Station on the arc

```
<Stakeout DisplayMode="View Before Storage">

    <Name>ST012</Name>
    <Code>Arc0001</Code>


    <ComputedGrid>

        <North>704620.57914545</North>
        <East>288808.74508076</East>
        <Elevation>22.399762938242</Elevation>

    </ComputedGrid>
    <DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>
        <HeightUnits>Metres</HeightUnits>
        <StationingFormat>1+000.0</StationingFormat>
```

```
        <GradeUnits>Percentage</GradeUnits>

        <AngleUnits>DMSDegrees</AngleUnits>

        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

    </DisplaySettings>
    <ArcDesign>

        <Name>Arc0001</Name>

        <Code/>

        <StakeoutMethod>PointOnArc</StakeoutMethod>

        <Station>30</Station>

        <Offset/>

        <Elevation/>

    </ArcDesign>
    <LinearDeltas>

        <DeltaStation>-0.00845470898721</DeltaStation>

        <DeltaOffset>0.0141041636224</DeltaOffset>

        <DeltaElevation>-0.33539480474793</DeltaElevation>

        <GradeToLine>0</GradeToLine>

        <GradeToLineInDecimalDegrees>0</GradeToLineInDecimalDegrees>

    </LinearDeltas>
    <GridDeltas>

        <DeltaNorth>-0.00902785139624</DeltaNorth>

        <DeltaEast>0.01374623348238</DeltaEast>

        <DeltaElevation>-0.33559184941309</DeltaElevation>

    </GridDeltas>

</Stakeout>
```

Stakeout arcs: Stake method is Station/offset from arc

```
<Stakeout DisplayMode="View Before Storage">

    <Name>ST013</Name>
```

```
<Code>Arc0001</Code>


<ComputedGrid>

        <North>704620.36310044</North>

        <East>288813.76632117</East>

        <Elevation>22.44519171747</Elevation>

</ComputedGrid>
<DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>

        <HeightUnits>Metres</HeightUnits>

        <StationingFormat>1+000.0</StationingFormat>

        <GradeUnits>Percentage</GradeUnits>

        <AngleUnits>DMSDegrees</AngleUnits>

        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

</DisplaySettings>
<ArcDesign>

        <Name>Arc0001</Name>

        <Code/>

        <StakeoutMethod>PointOffsetFromArc</StakeoutMethod>

        <Station>30</Station>

        <Offset>5</Offset>

        <Elevation>0.2</Elevation>

</ArcDesign>
<LinearDeltas>

        <DeltaStation>0.00227342134968</DeltaStation>

        <DeltaOffset>-0.01178502004698</DeltaOffset>

        <DeltaElevation>-0.18107361278951</DeltaElevation>

        <GradeToLine>0</GradeToLine>

        <GradeToLineInDecimalDegrees>0</GradeToLineInDecimalDegrees>
```

```
        </LinearDeltas>

        <GridDeltas>

                <DeltaNorth>0.00263711705338</DeltaNorth>

                <DeltaEast>-0.01168691279599</DeltaEast>

                <DeltaElevation>-0.18102062864167</DeltaElevation>

        </GridDeltas>

</Stakeout>
```

Stakeout arcs: Stake method is Slope from arc

```
<Stakeout DisplayMode="View Before Storage">

        <Name>ST014</Name>

        <Code>Arc0001</Code>

        <ComputedGrid>

                <North>704621.35957048</North>

                <East>288813.71574878</East>

                <Elevation>22.445180139238</Elevation>

        </ComputedGrid>

        <DisplaySettings>

                <DistanceUnits>Metres</DistanceUnits>

                <HeightUnits>Metres</HeightUnits>

                <StationingFormat>1+000.0</StationingFormat>

                <GradeUnits>Percentage</GradeUnits>

                <AngleUnits>DMSDegrees</AngleUnits>

                <CoordinateOrder>North-East-Elevation</CoordinateOrder>

        </DisplaySettings>

        <ArcDesign>

                <Name>Arc0001</Name>

                <Code/>
```

```xml
<StakeoutMethod>SlopeFromArc</StakeoutMethod>
<Station>31.042683011996</Station>
<Offset>4.9153541068065</Offset>
<Elevation/>
</ArcDesign>
<LinearDeltas>
<DeltaStation/>
<DeltaOffset>0</DeltaOffset>
<DeltaElevation>-0.35670838782793</DeltaElevation>
<GradeToLine>-7.2570231986742</GradeToLine>
<GradeToLineInDecimalDegrees>-4.1506917615741
</GradeToLineInDecimalDegrees>
<VDistSlope>-0.84824379850858</VDistSlope>
</LinearDeltas>
<SlopeDesign>
<SlopeLeft>
<Type>GradeAndHorizontalDistance</Type>
<HorizontalDistance>5</HorizontalDistance>
<VerticalDistance>-0.1</VerticalDistance>
<SlopeDistance>5.00099990002</SlopeDistance>
<Grade>-2</Grade>
<GradeAsAngle>-1.1457628381751</GradeAsAngle>
</SlopeLeft>
<SlopeRight>
<Type>HorizontalAndVerticalDistance</Type>
<HorizontalDistance>5</HorizontalDistance>
<VerticalDistance>-0.5</VerticalDistance>
<SlopeDistance>5.0249378105604</SlopeDistance>
```

```
            <Grade>-10</Grade>

            <GradeAsAngle>-5.7105931374996</GradeAsAngle>

        </SlopeRight>

    </SlopeDesign>

</Stakeout>
```

Stakeout arcs: Stake method is Intersect point of arc

```
<Stakeout DisplayMode="View Before Storage">

    <Name>ST015</Name>

    <Code>Arc0001</Code>


    <ComputedGrid>

        <North>704702.95825669</North>

        <East>288782.29701969</East>

        <Elevation>22.581909070057</Elevation>

    </ComputedGrid>

    <DisplaySettings>

        <DistanceUnits>Metres</DistanceUnits>

        <HeightUnits>Metres</HeightUnits>

        <StationingFormat>1+000.0</StationingFormat>

        <GradeUnits>Percentage</GradeUnits>

        <AngleUnits>DMSDegrees</AngleUnits>

        <CoordinateOrder>North-East-Elevation</CoordinateOrder>

    </DisplaySettings>

    <ArcDesign>

        <Name>Arc0001</Name>

        <Code/>

        <StakeoutMethod>IntersectionPointOfArc</StakeoutMethod>

        <Station/>
```

```xml
        <Offset/>
        <Elevation/>

</ArcDesign>
<LinearDeltas>

        <DeltaStation/>
        <DeltaOffset/>
        <DeltaElevation/>
        <GradeToLine>0</GradeToLine>
        <GradeToLineInDecimalDegrees>0</GradeToLineInDecimalDegrees>

</LinearDeltas>


<GridDeltas>

        <DeltaNorth>-0.01018105493858</DeltaNorth>
        <DeltaEast>0.00518507021479</DeltaEast>
        <DeltaElevation>0.78428568687364</DeltaElevation>

</GridDeltas>

</Stakeout>
```

Stakeout arcs: Stake method is Center point of arc

```xml
<Stakeout DisplayMode="View Before Storage">

        <Name>ST016</Name>
        <Code>Arc0001</Code>


        <ComputedGrid>

                <North>704616.4808197</North>
                <East>288908.67395316</East>
                <Elevation>22.717915084848</Elevation>

        </ComputedGrid>
        <DisplaySettings>
```

```xml
            <DistanceUnits>Metres</DistanceUnits>
            <HeightUnits>Metres</HeightUnits>
            <StationingFormat>1+000.0</StationingFormat>
            <GradeUnits>Percentage</GradeUnits>
            <AngleUnits>DMSDegrees</AngleUnits>
            <CoordinateOrder>North-East-Elevation</CoordinateOrder>
        </DisplaySettings>
        <ArcDesign>
            <Name>Arc0001</Name>
            <Code/>
            <StakeoutMethod>CentrePointOfArc</StakeoutMethod>
            <Station/>
            <Offset/>
            <Elevation/>
        </ArcDesign>
        <LinearDeltas>
            <DeltaStation/>
            <DeltaOffset/>
            <DeltaElevation/>
            <GradeToLine>0</GradeToLine>
            <GradeToLineInDecimalDegrees>0</GradeToLineInDecimalDegrees>
        </LinearDeltas>

        <GridDeltas>
            <DeltaNorth>0.00169530021958</DeltaNorth>
            <DeltaEast>0.0009988983511</DeltaEast>
            <DeltaElevation>0.64452932304634</DeltaElevation>
        </GridDeltas>

</Stakeout>
```

Stakeout points

```
<Stakeout DisplayMode="View Before Storage">

        <Name>ST017</Name>
        <Code>102</Code>


        <ComputedGrid>

                <North>704590.87062706</North>
                <East>288812.01949495</East>
                <Elevation>21.78598980137</Elevation>

        </ComputedGrid>
        <DisplaySettings>

                <DistanceUnits>Metres</DistanceUnits>
                <HeightUnits>Metres</HeightUnits>
                <StationingFormat>1+000.0</StationingFormat>
                <GradeUnits>Percentage</GradeUnits>
                <AngleUnits>DMSDegrees</AngleUnits>
                <CoordinateOrder>North-East-Elevation</CoordinateOrder>

        </DisplaySettings>
        <PointDesign>

                <Name>102</Name>
                <Code>PT</Code>
                <StakeoutMethod>ToThePoint</StakeoutMethod>

        </PointDesign>


        <GridDeltas>

                <DeltaNorth>-0.01030760619324</DeltaNorth>
                <DeltaEast>-0.00603277684422</DeltaEast>
                <DeltaElevation>-0.42098980137014</DeltaElevation>

        </GridDeltas>
```

```
</Stakeout>
```

Stakeout DTMs

```
<Stakeout DisplayMode="View Before Storage">

        <Name>ST019</Name>
        <Code>Car park design surf</Code>


        <ComputedGrid>

                <North>704803.4160579</North>
                <East>288938.73214863</East>
                <Elevation>15.854924994476</Elevation>

        </ComputedGrid>
        <DisplaySettings>

                <DistanceUnits>Metres</DistanceUnits>
                <HeightUnits>Metres</HeightUnits>
                <StationingFormat>1+000.0</StationingFormat>
                <GradeUnits>Percentage</GradeUnits>
                <AngleUnits>DMSDegrees</AngleUnits>
                <CoordinateOrder>North-East-Elevation</CoordinateOrder>

        </DisplaySettings>
        <DTMDesign>

                <Name>Car park design surf</Name>
                <VerticalOffset>0</VerticalOffset>

        </DTMDesign>
        <DTMDeltas>

                <DeltaElevation>-0.47022578436438</DeltaElevation>

        </DTMDeltas>

</Stakeout>
```