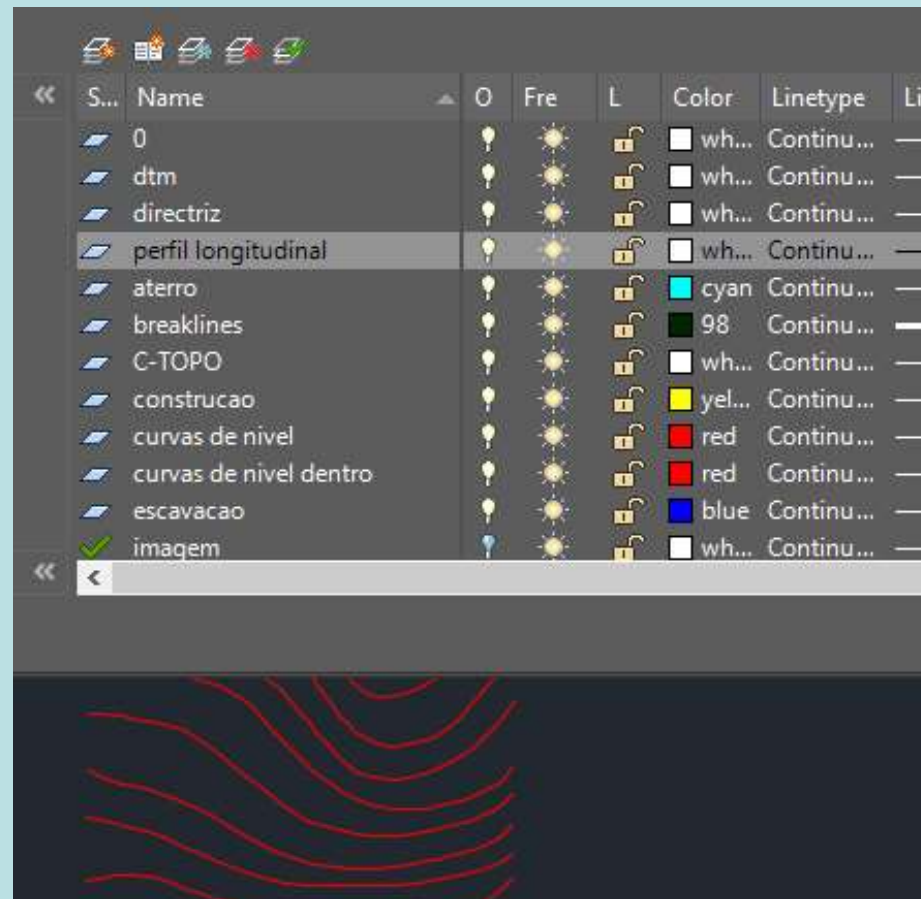


Posicionamento Geoespacial II

Cálculo de um perfil longitudinal do terreno com o Civil3D: para este efeito é necessário criar previamente uma superfície e um alinhamento.

1. Criar 3 layers adicionais, **dtm**, **directriz**, **perfil longitudinal**.



Posicionamento Geoespacial II

2. Criar superfície **mdt**.

The screenshot displays the AutoCAD Civil 3D software interface. The main window shows a drawing titled 'perfil longitudinal.dwg' with a 2D wireframe view of a terrain profile. The 'Surfaces' toolset is active, and a context menu is open over the 'Surfaces' folder in the Prospector, listing options such as 'Create Surface...', 'Create Surface From DEM...', and 'Create Surface From TIN...'. The 'Create Surface' dialog box is open, showing the following properties:

Properties	Value
Type:	TIN surface
Surface layer:	dtm
Information	
Name	mdt
Description	mdt
Style	Contours 1m and 5m (Design)
Render Material	Contours 1m and 5m (Design)

The dialog box also includes a warning icon and the text: "Selecting OK will create a new surface which will appear in the list of surfaces in Prospector." The 'OK' button is highlighted. The background shows the 'Active Drawing View' and 'Prospector' toolspaces, with the 'Surfaces' folder expanded to show a list of surfaces, including 'mdt'. The 'mdt' surface is highlighted, and its properties are visible in the 'Properties' palette on the right. The 'Properties' palette shows the following information:

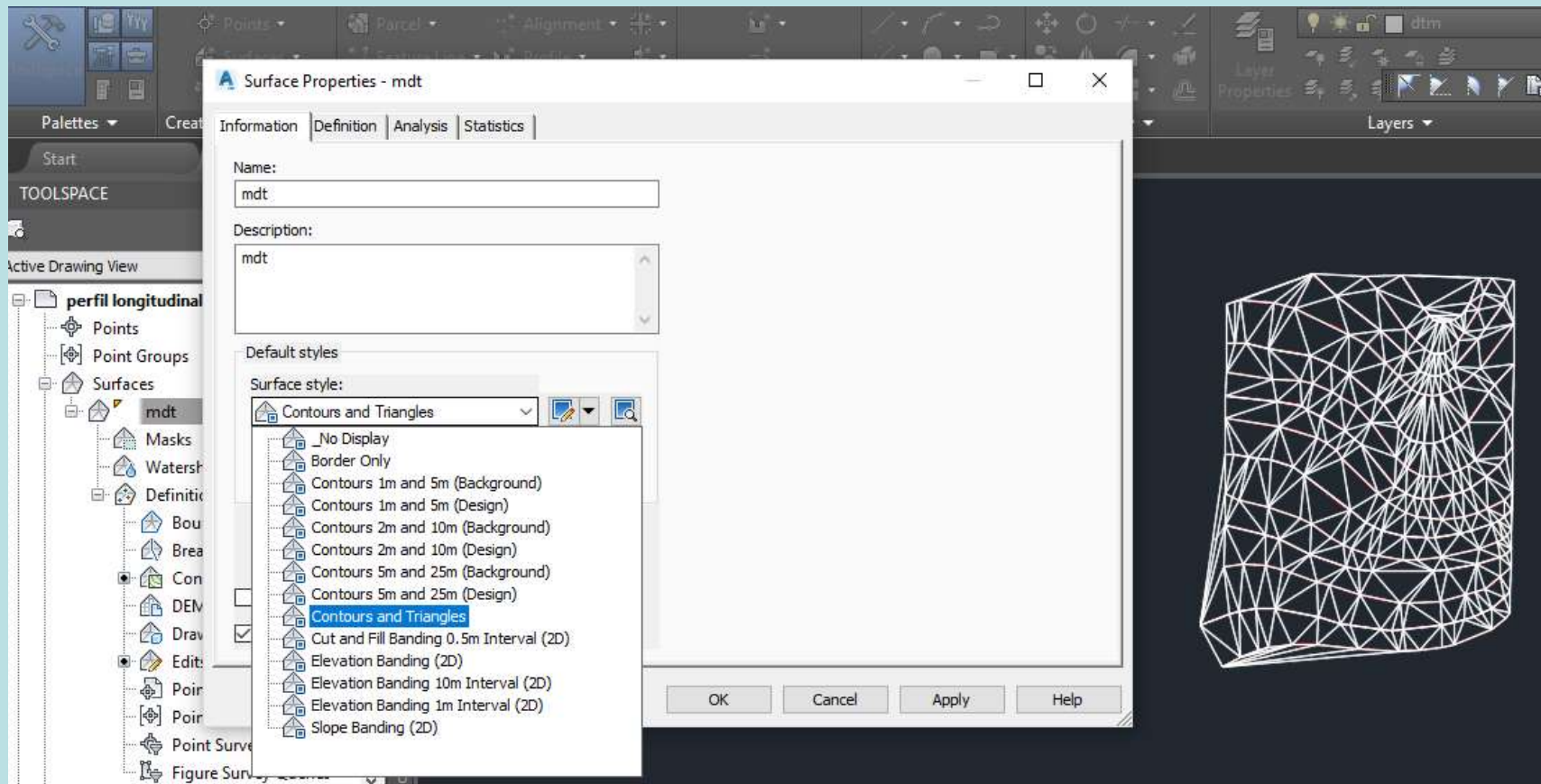
- Name: mdt
- Description: mdt
- Style: Contours 1m and 5m (Design)
- Render Material: Contours 1m and 5m (Design)

The software interface also shows the 'Command Line' at the bottom, which displays the command: "Command: 'Cancel'". The status bar at the bottom right shows the current view as 'MODEL', the scale as '1:1000', and the date as '09/11/2018'.

Posicionamento Geoespacial II

3. Importar informação para a superfície **mdt** e gerar a superfície.

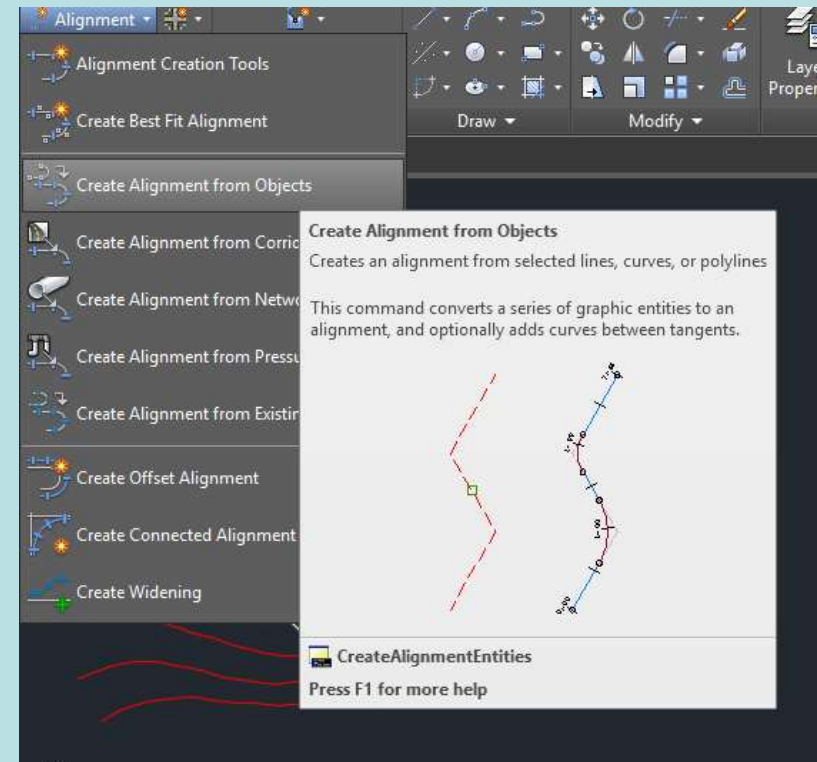
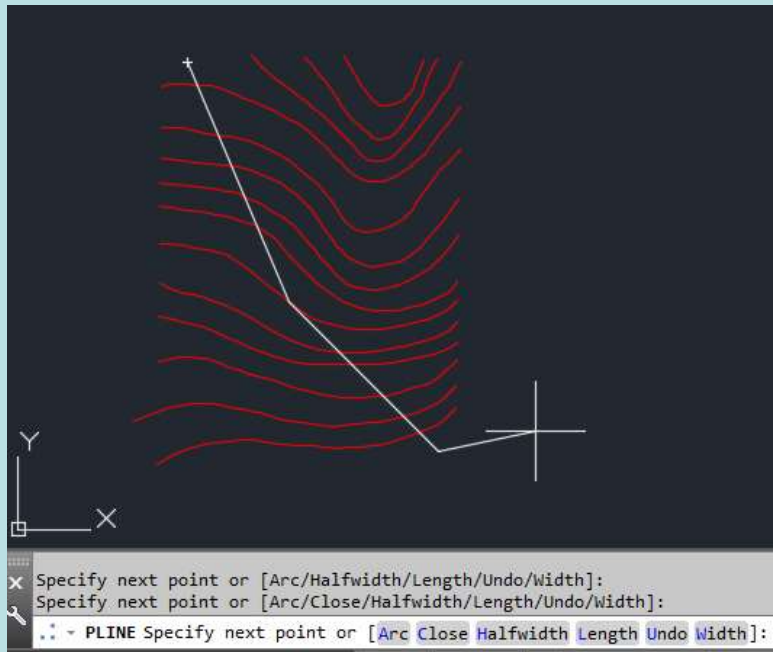
4. Eventualmente alterar a forma de visualização da superfície)



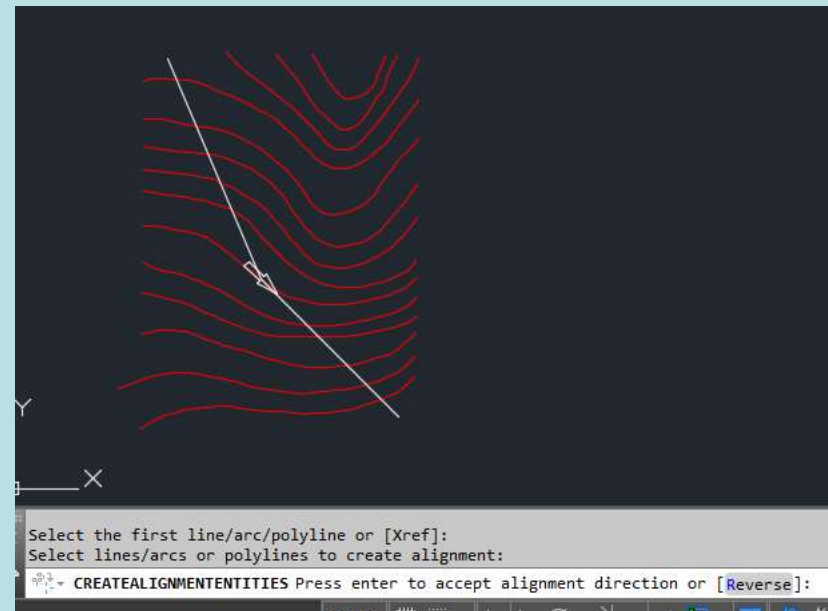
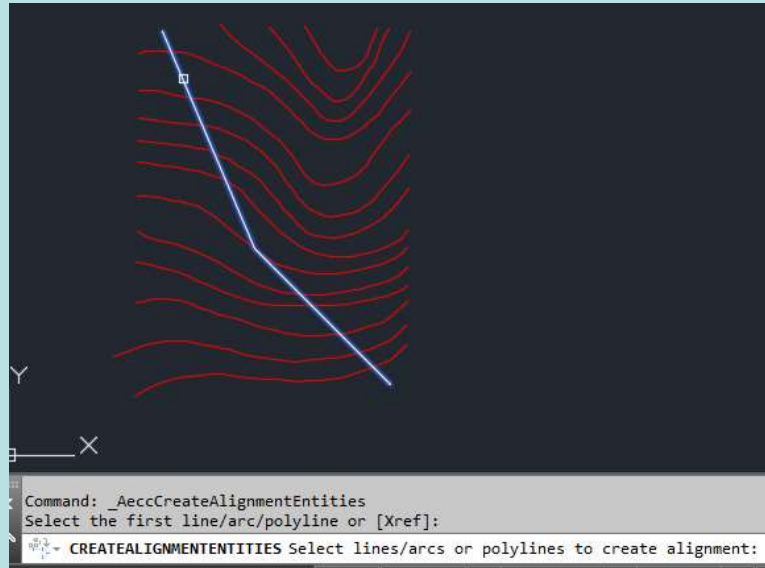
Posicionamento Geoespacial II

5. Criar o alinhamento **directriz**:

a) Definindo o alinhamento com uma poliline (que já existe no desenho)



Posicionamento Geoespacial II



Posicionamento Geoespacial II

Create Alignment from Objects

Name:

Type: **Centerline**

Description:

Starting station:

General | Design Criteria

Site:

Alignment style: **Proposed**

Alignment layer:

Alignment label set:

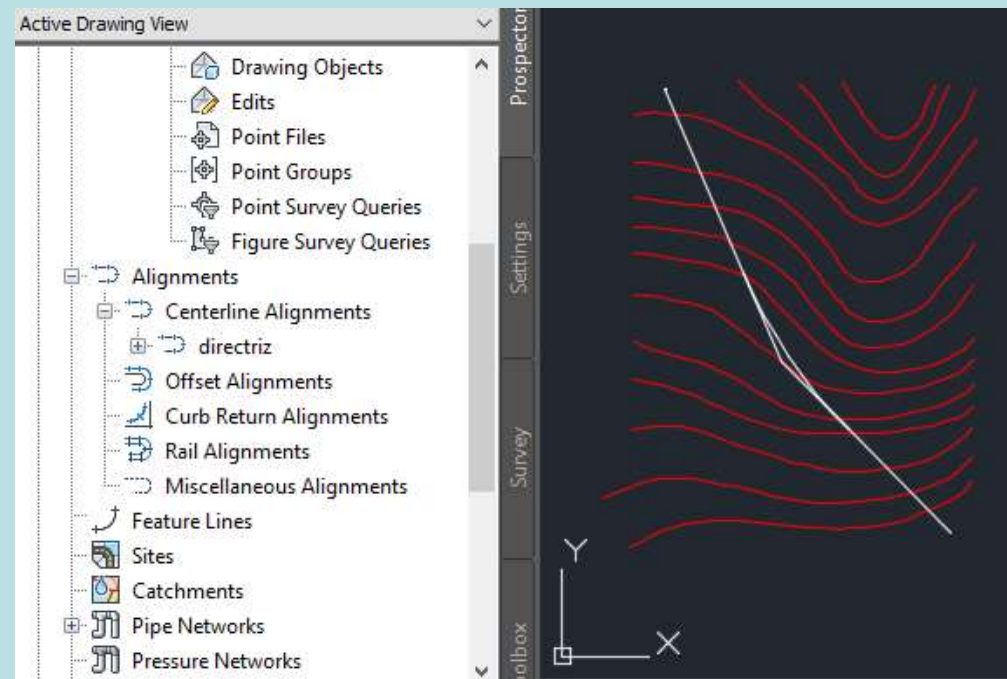
Conversion options

Add curves between tangents

Default radius:

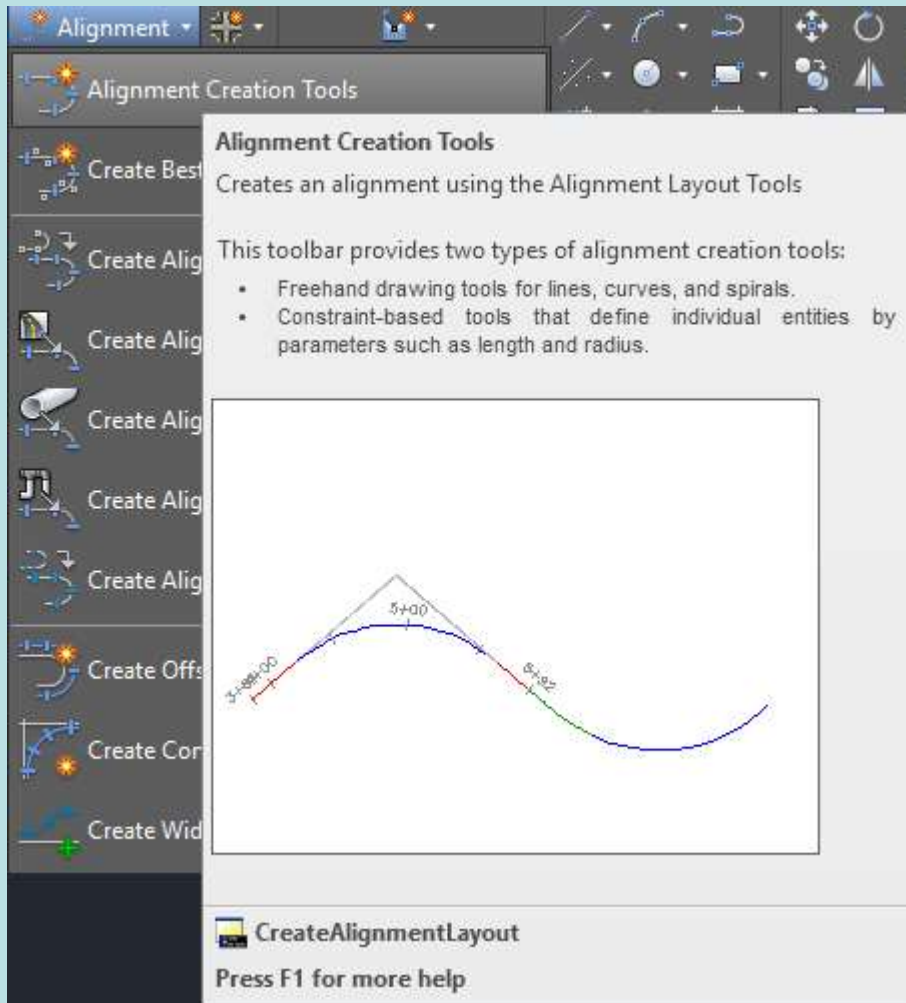
Erase existing entities

OK Cancel Help



Posicionamento Geoespacial II

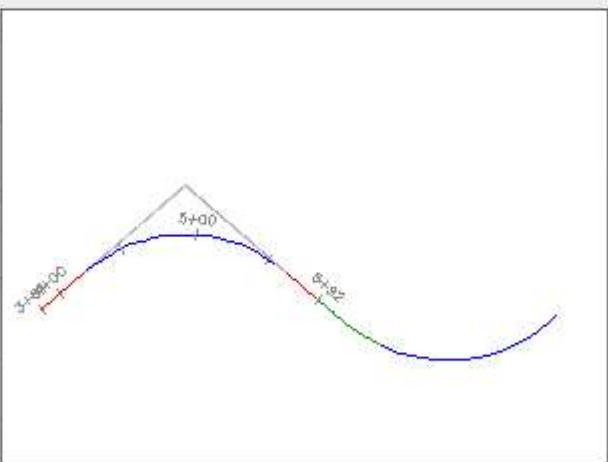
b) Definindo o alinhamento de raiz



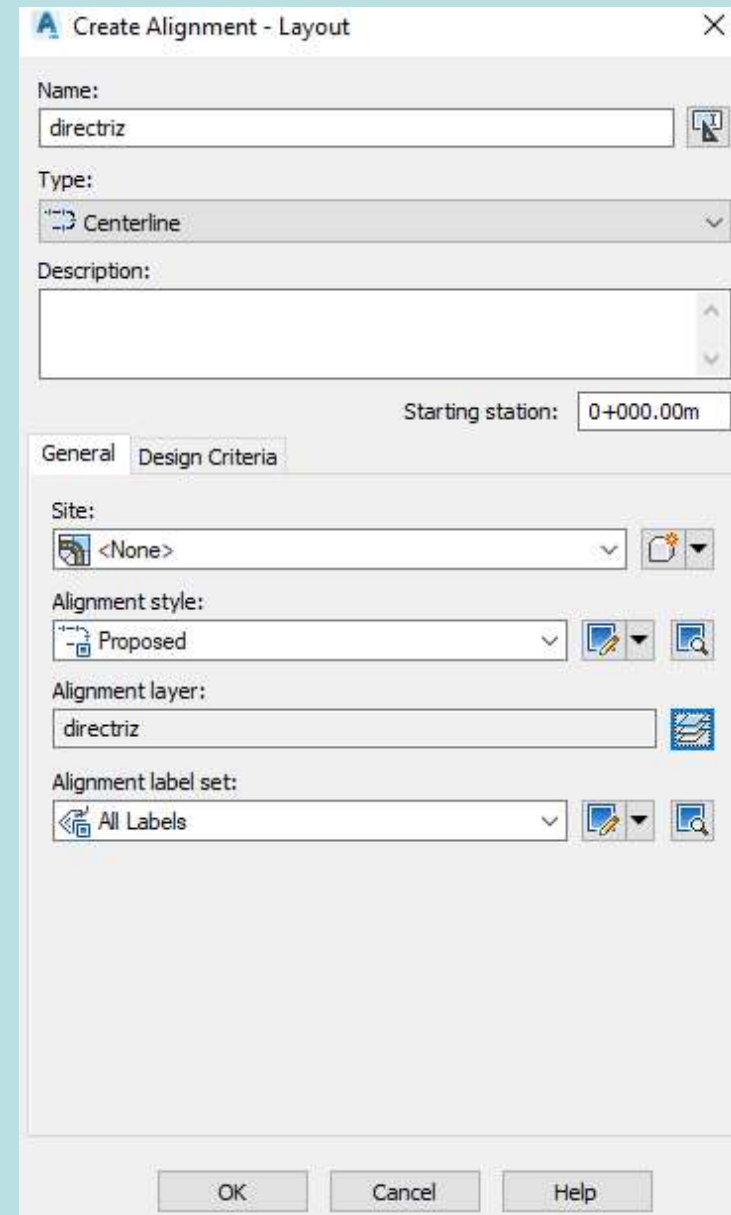
Alignment Creation Tools
Creates an alignment using the Alignment Layout Tools

This toolbar provides two types of alignment creation tools:

- Freehand drawing tools for lines, curves, and spirals.
- Constraint-based tools that define individual entities by parameters such as length and radius.



CreateAlignmentLayout
Press F1 for more help



Create Alignment - Layout

Name: directriz

Type: Centerline

Description:

Starting station: 0+000.00m

General Design Criteria

Site: <None>

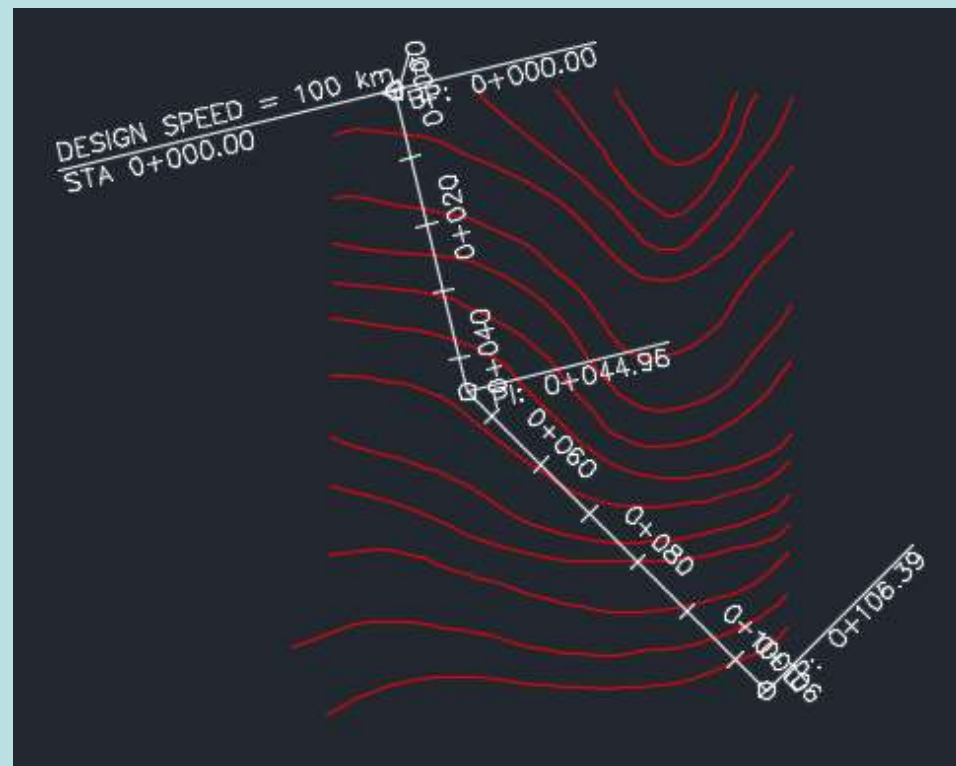
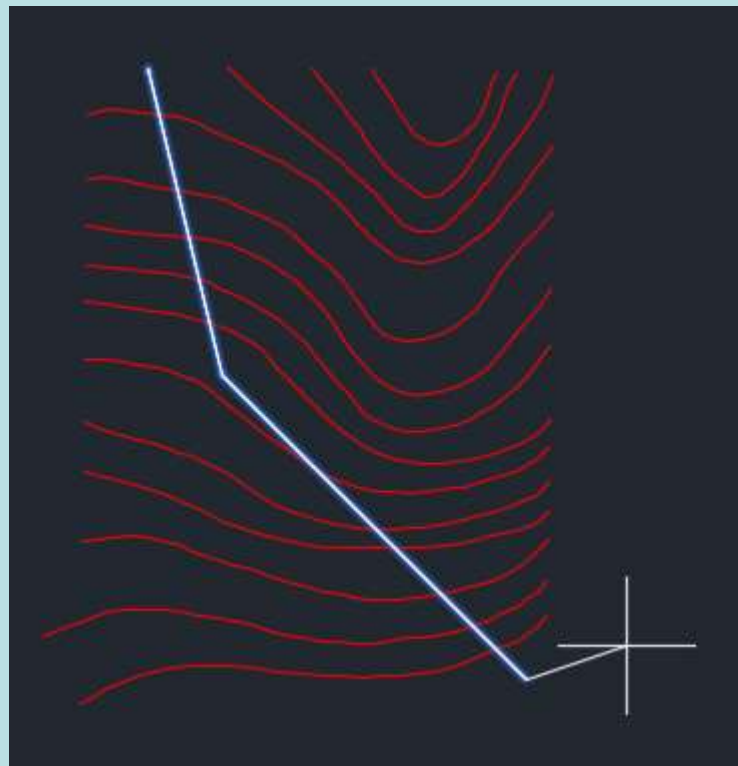
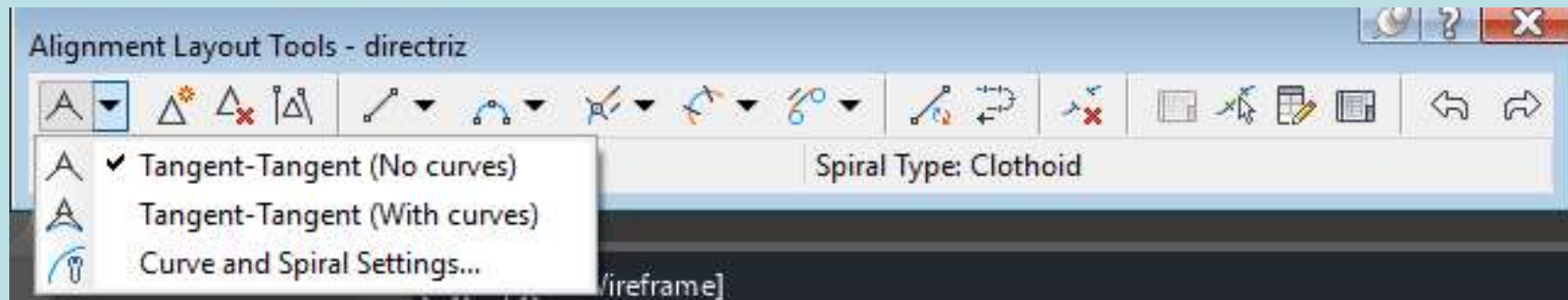
Alignment style: Proposed

Alignment layer: directriz

Alignment label set: All Labels

OK Cancel Help

Posicionamento Geoespacial II



Posicionamento Geoespacial II

6. Criar perfil longitudinal:

Create Surface Profile
Creates a profile from a surface along a specified alignment.

When you create a centerline profile, you can create one or more offset profiles at the same time. Use the Draw in Profile View option to display the profile in the drawing.

CreateProfileFromSurface
Press F1 for more help

Create Profile from Surface

Alignment: directriz

Start: 0+000.00m End: 0+104.34m

To sample: 0+000.00m 0+104.34m

Select surfaces: mdt

Sample offsets: Add>>

Profile list:

Name	Description	Type	Data Sou	Offset	Update ...	Layer	Style	Station Start	End	Eleva M...
------	-------------	------	----------	--------	------------	-------	-------	---------------	-----	------------

Remove Draw in profile view OK Cancel Help

Posicionamento Geoespacial II

Create Profile from Surface

Alignment: directriz

Select surfaces: mdt

Start: 0+000.00m End: 0+104.34m

To sample: 0+000.00m 0+104.34m

Sample offsets:

Profile list:

Name	Description	Type	Data Sou	Offset	Update ...	Layer	Style	Station Start	End	Eleva M...
mdt - Sur...			mdt	0.000m	Dynamic		Existing ...			0.000

Remove Draw in profile view OK Cancel Help

Create Profile View - General

Select alignment: directriz

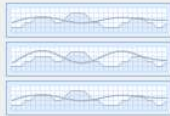
Profile view name: perfil longitudinal

Description:

Profile view style: Profile View

Profile view layer: C-ROAD-PROF-VIEW

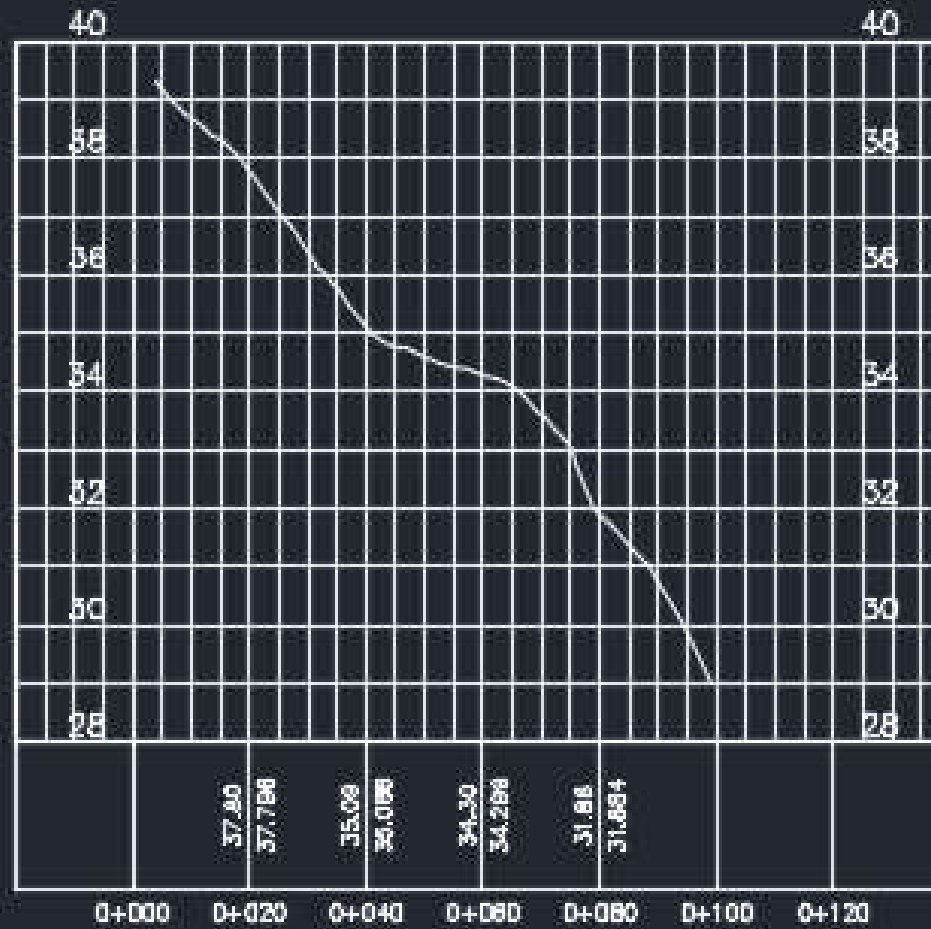
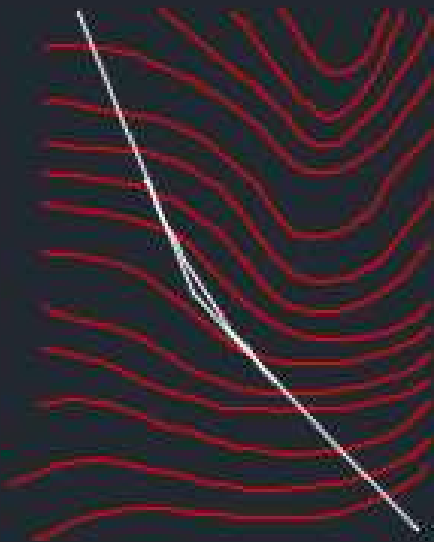
Show offset profiles by vertically stacking profile views



< Back Next > Create Profile View Cancel Help

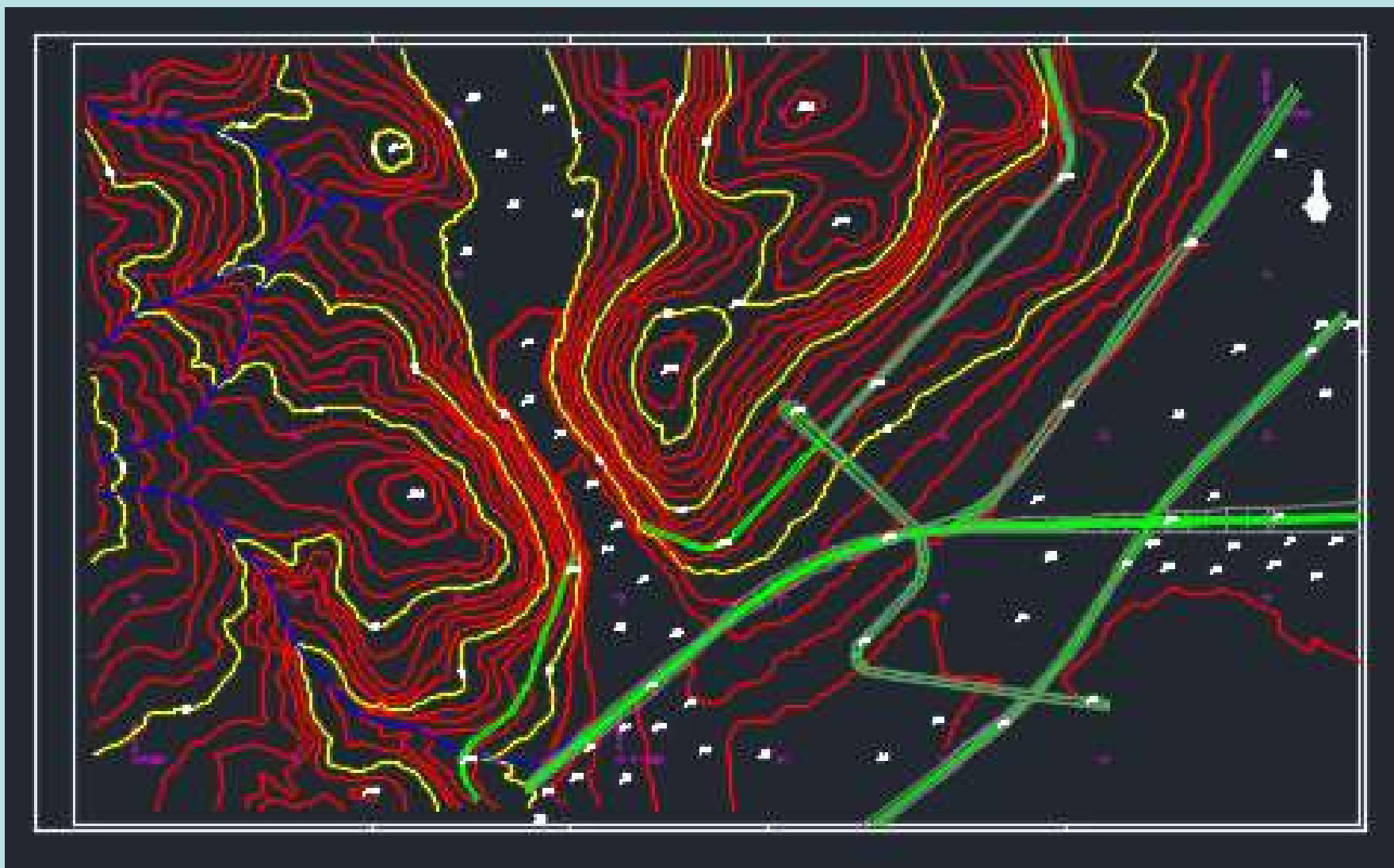
Posicionamento Geoespacial II

directriz PROFILE

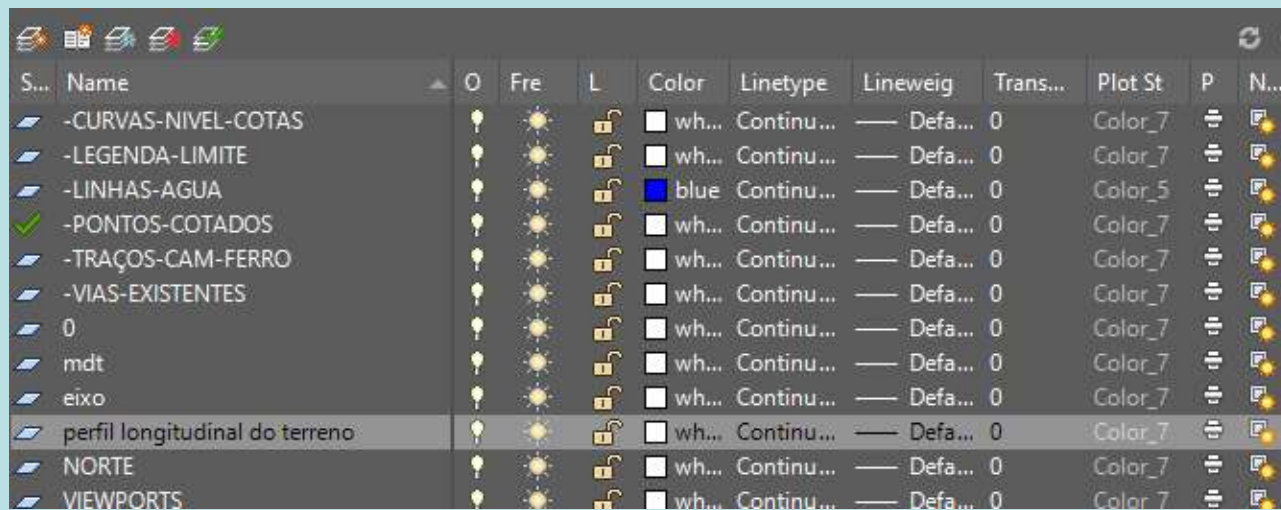


Posicionamento Geoespacial II

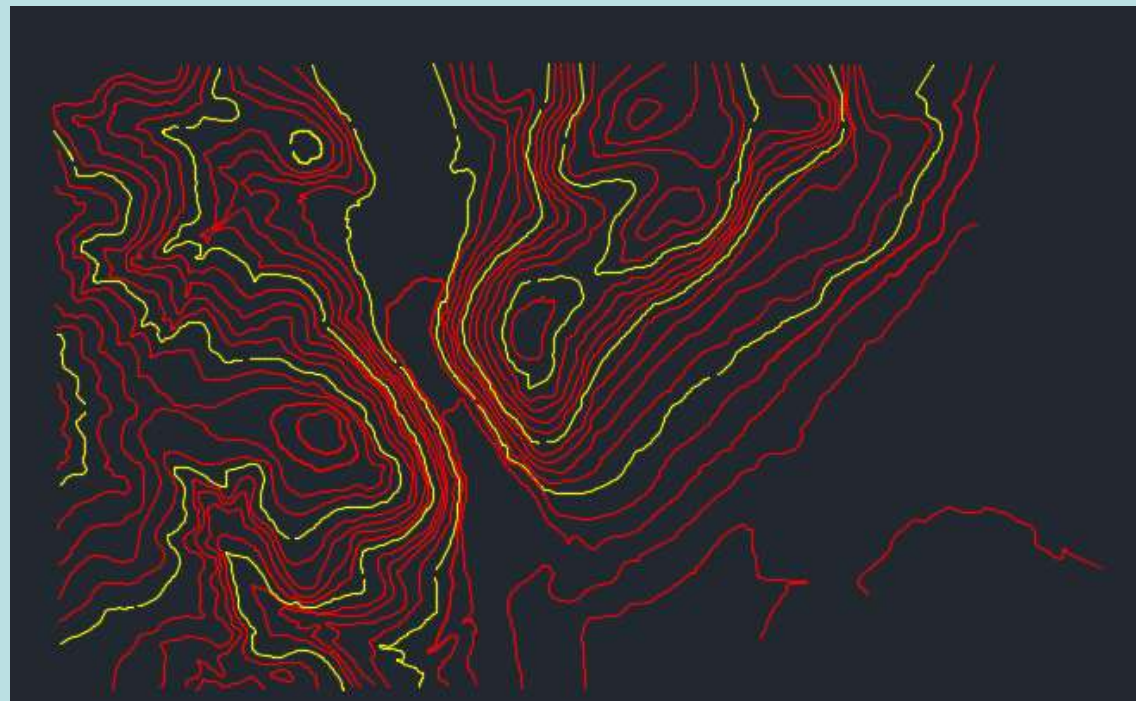
Exemplo:



Posicionamento Geoespacial II



S...	Name	O	Fre	L	Color	Linetype	Lineweig	Trans...	Plot St	P	N...
	-CURVAS-NIVEL-COTAS				wh...	Continu...	— Defa...	0	Color_7		
	-LEGENDA-LIMITE				wh...	Continu...	— Defa...	0	Color_7		
	-LINHAS-AGUA				blue	Continu...	— Defa...	0	Color_5		
	-PONTOS-COTADOS				wh...	Continu...	— Defa...	0	Color_7		
	-TRAÇOS-CAM-FERRO				wh...	Continu...	— Defa...	0	Color_7		
	-VIAS-EXISTENTES				wh...	Continu...	— Defa...	0	Color_7		
	0				wh...	Continu...	— Defa...	0	Color_7		
	mdt				wh...	Continu...	— Defa...	0	Color_7		
	eixo				wh...	Continu...	— Defa...	0	Color_7		
	perfil longitudinal do terreno				wh...	Continu...	— Defa...	0	Color_7		
	NORTE				wh...	Continu...	— Defa...	0	Color_7		
	VIEWPORTS				wh...	Continu...	— Defa...	0	Color_7		



Posicionamento Geoespacial II

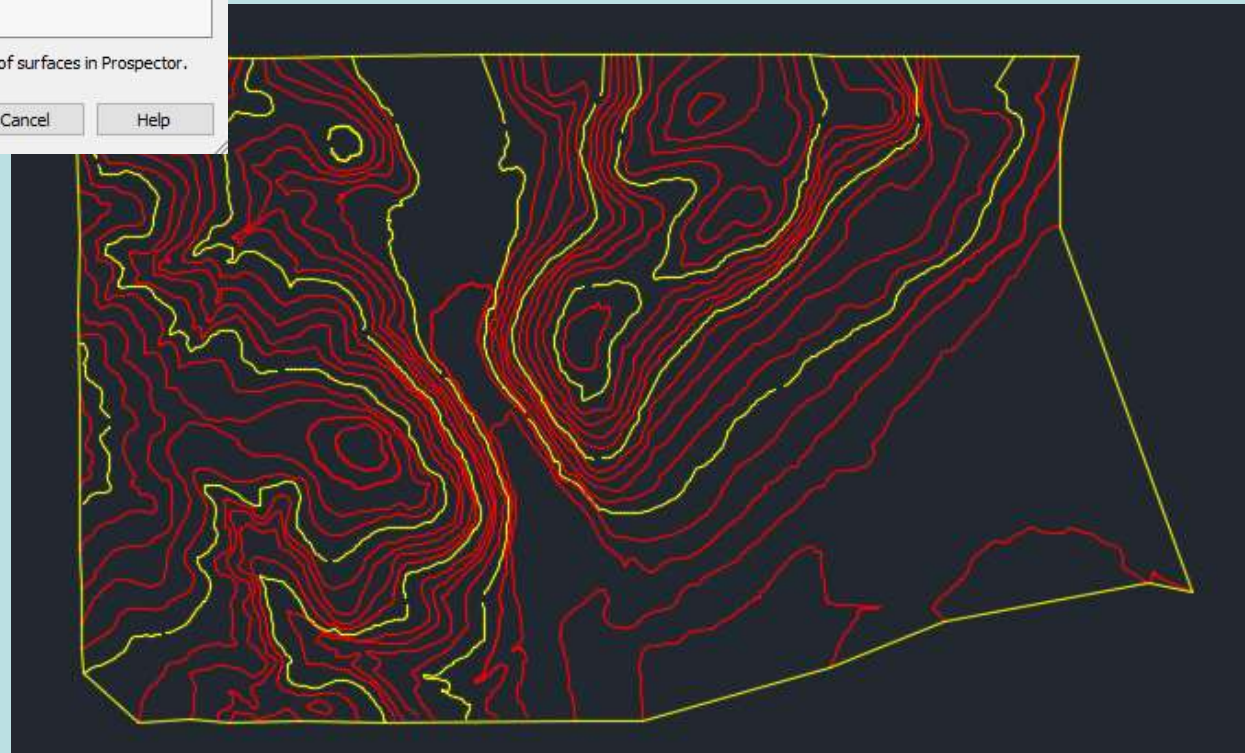
Create Surface

Type: TIN surface Surface layer: mdt

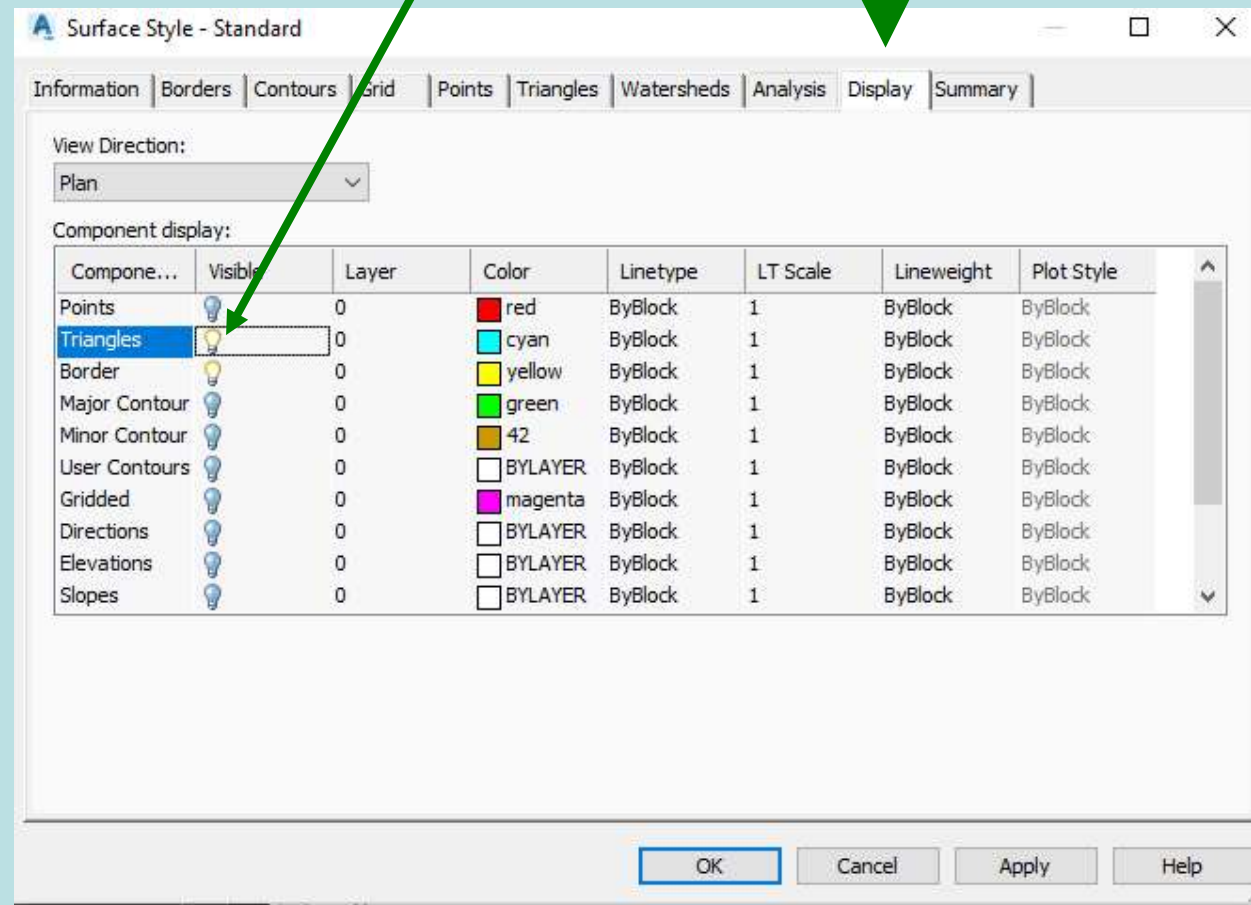
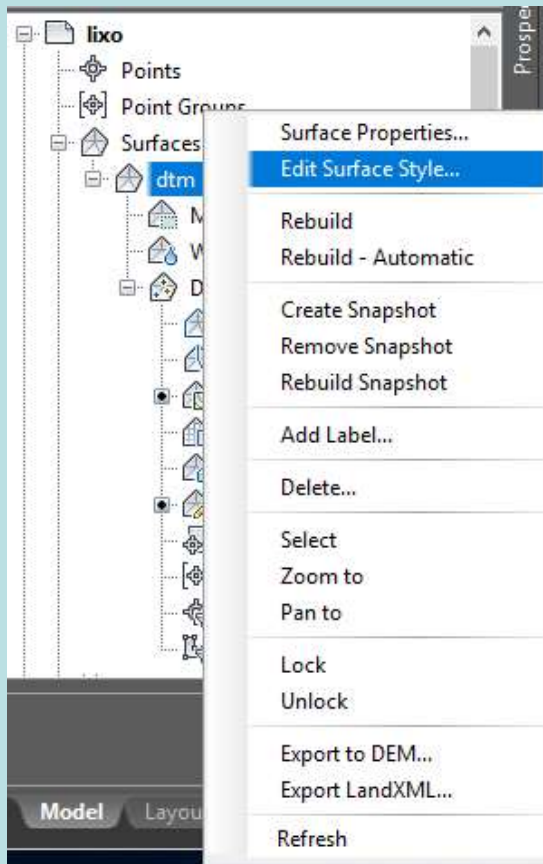
Properties	Value
Information	
Name	dtn
Description	modelo digital do terreno
Style	Standard
Render Material	ByLayer

Selecting OK will create a new surface which will appear in the list of surfaces in Prospector.

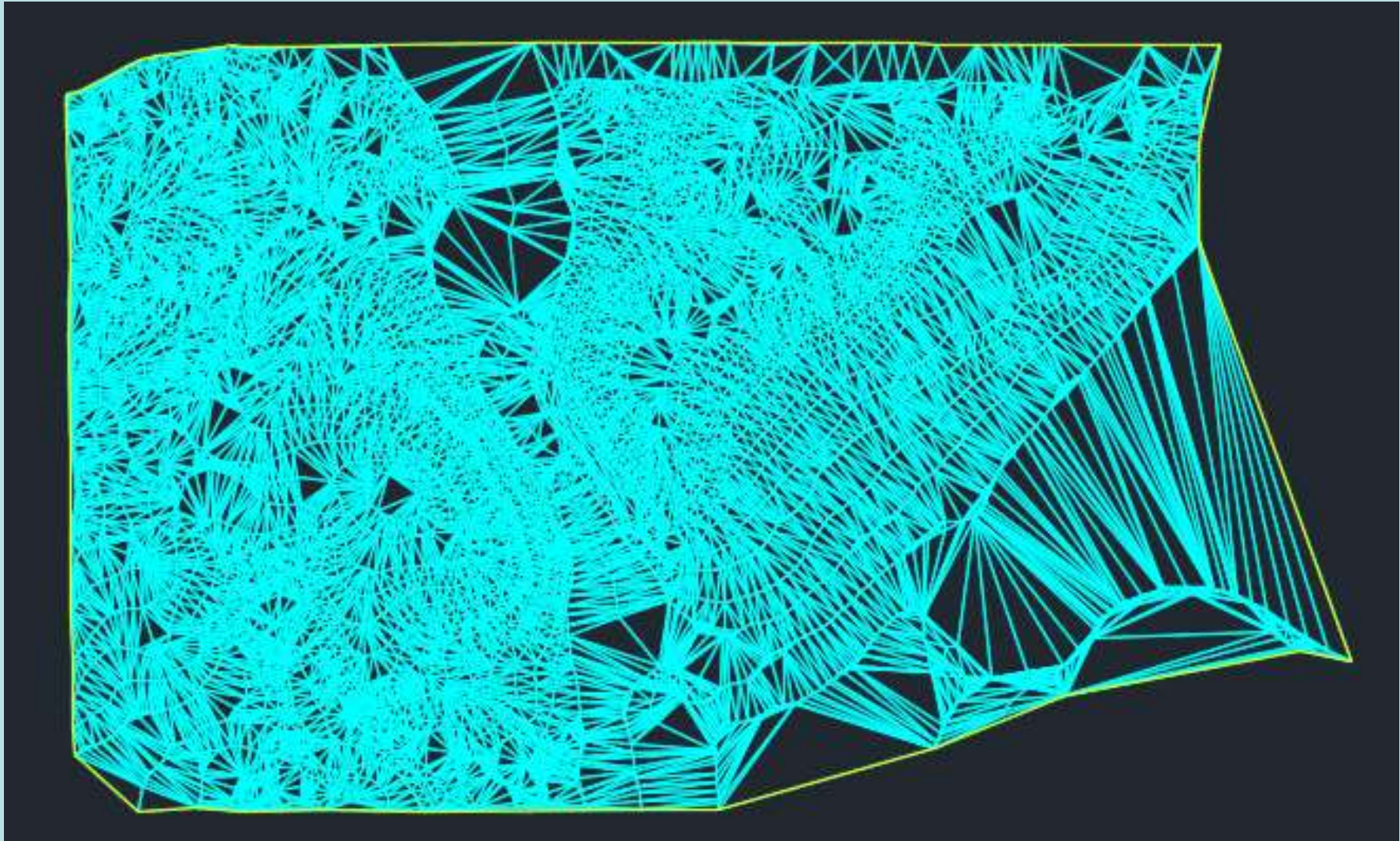
OK Cancel Help



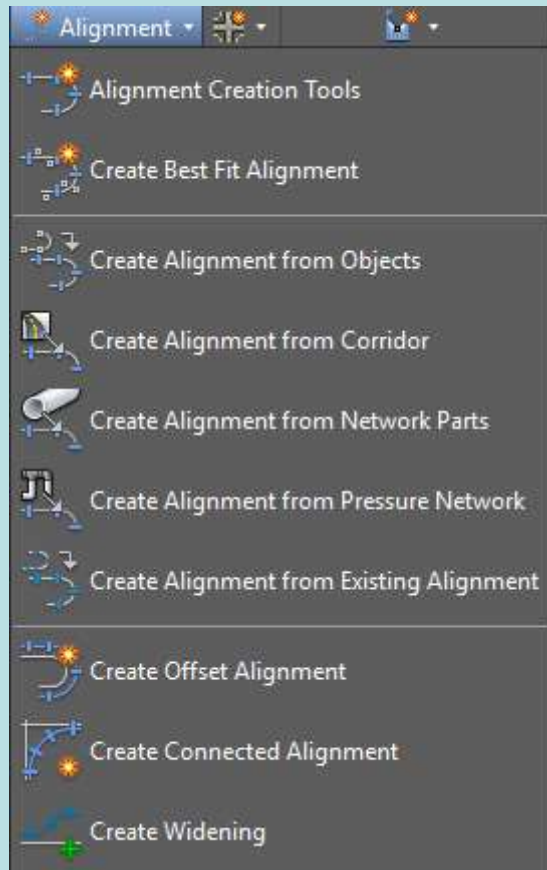
Posicionamento Geoespacial II



Posicionamento Geoespacial II



Posicionamento Geoespacial II



Create Alignment - Layout

Name: eixo

Type: Centerline

Description:

Starting station: 0+00.00m

General Design Criteria

Site: <None>

Alignment style: Standard

Alignment layer: eixo

Alignment label set: Standard

OK Cancel Help