

File Edit View Display Strings Drillhole Stats Grid DTM Wireframe Modelling Mining Pit Optimiser Scheduling Survey Plot Scripting Tools Window Help

Tools: [Icons for various functions like pan, zoom, rotate, etc.]

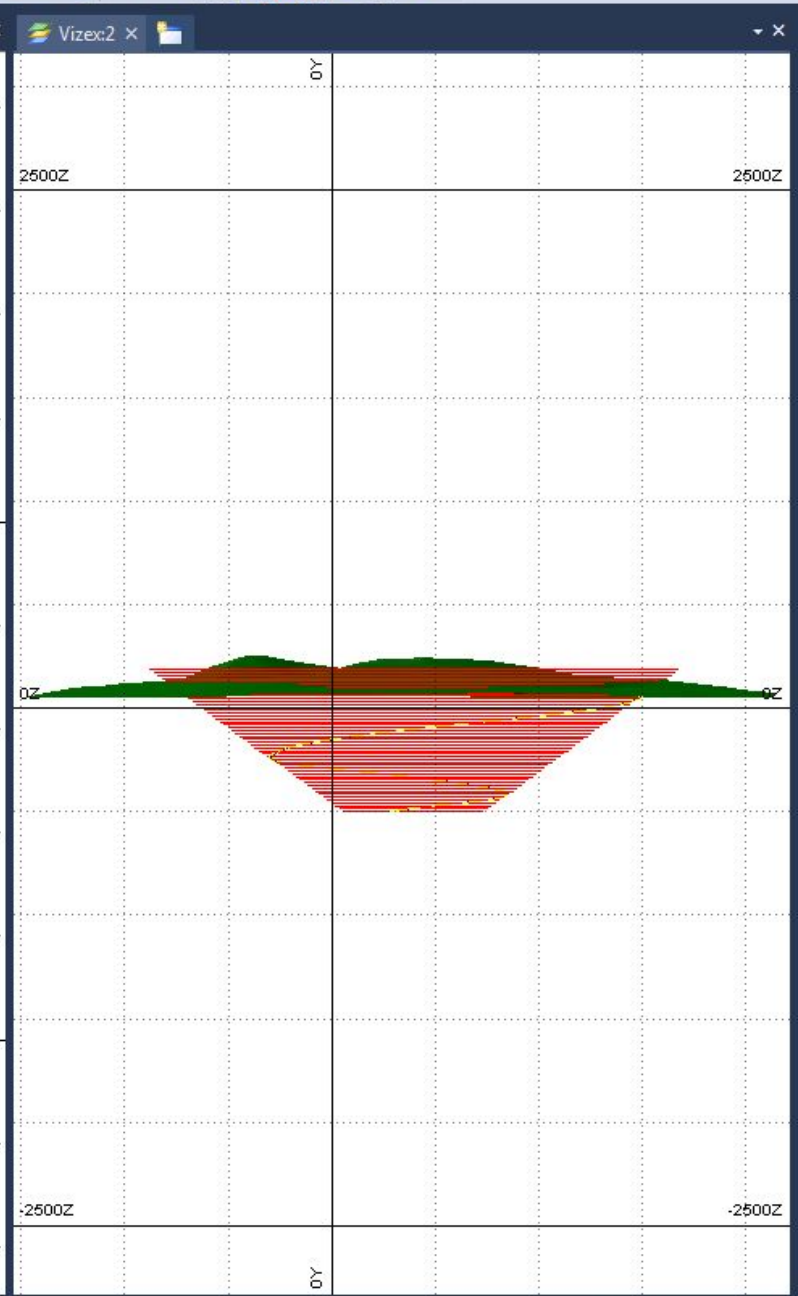
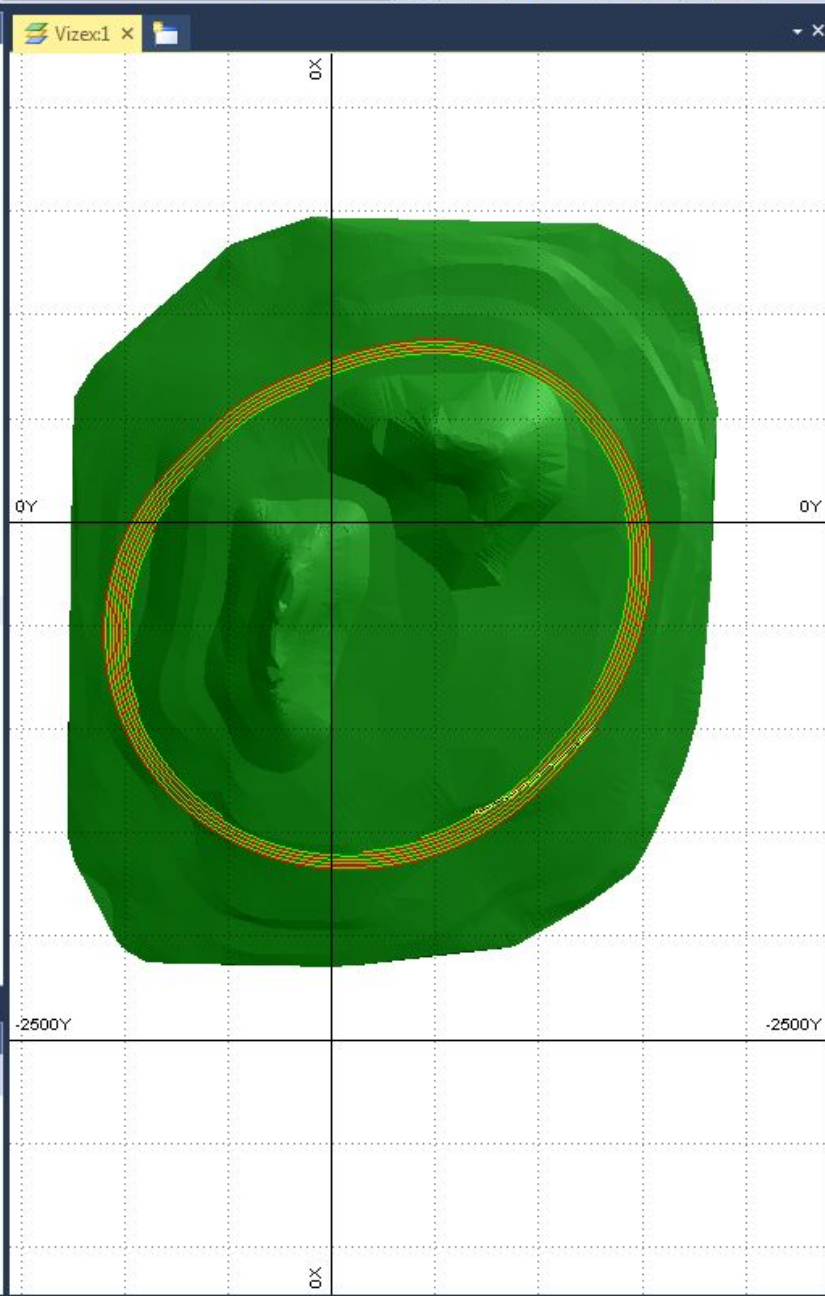
Coordinates: -248.00 Towards: Toward: Away Away

View: Cava0.PIT

Dimensions: 14 55 9

Vizex Forms

- Saved View
- Point
- String
 - 1 Curvas.STR
- Contour
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 - Trace
 - Interval Label
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 - Seam Correlation
- Pie Chart
- Image
- CAD/GIS
- Seismic SEG-Y
- Grid Surface
- Wireframe
- Search Ellipsoid
- Structural Trend Model
- Block Model
- Annotation
- Pit Design
 - Blasthole Design
 - Underground Design
 - Ring Design
 - Polygonal Model

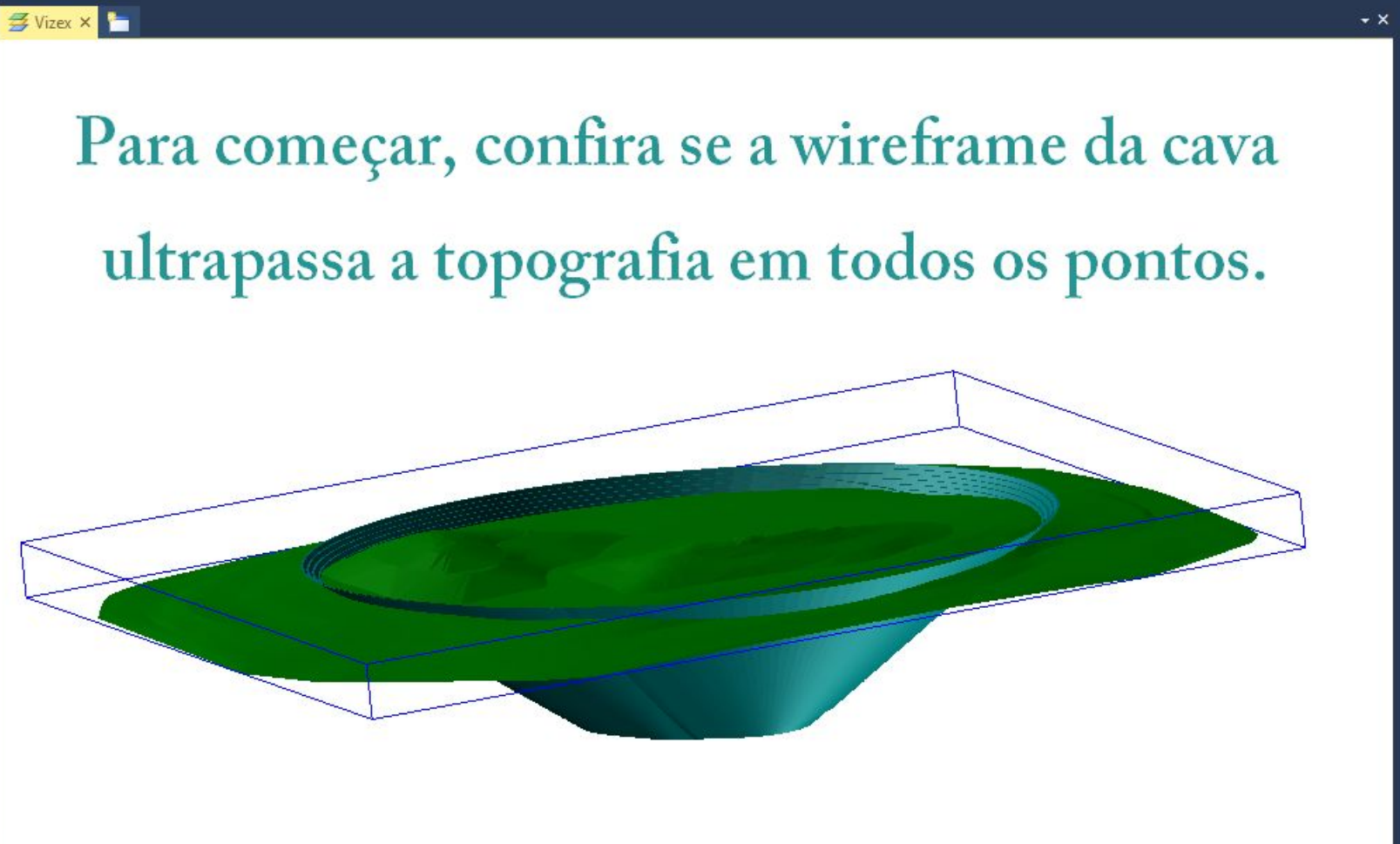


Vizex Forms Properties Sections

Display

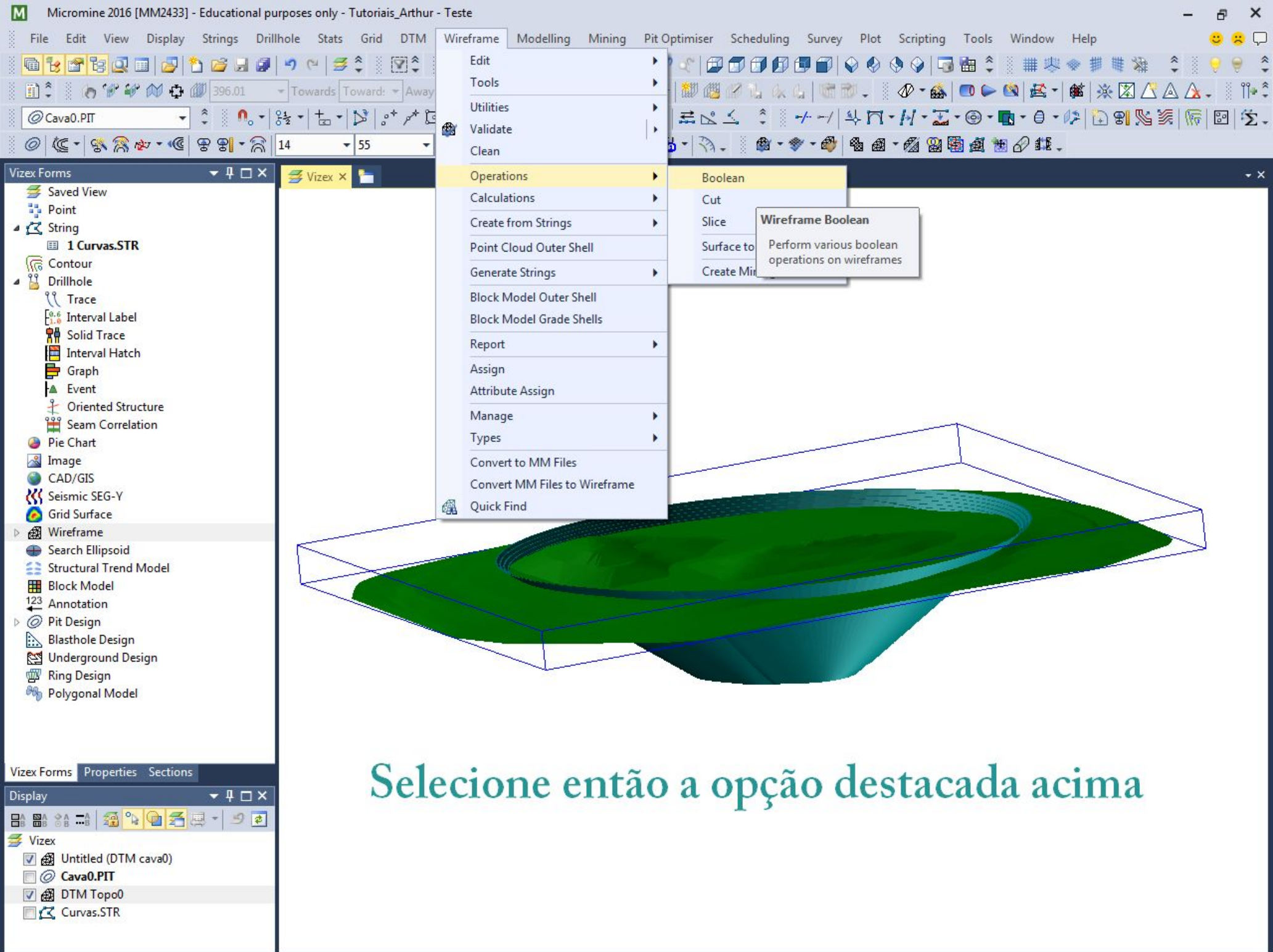
- Vizex
 - Cava0.PIT*
 - Untitled (DTM Topo0)
 - Curvas.STR

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Para começar, confira se a wireframe da cava ultrapassa a topografia em todos os pontos.

- Vizex Forms Properties Sections
- Display
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 - DTM Topo0
 - Curvas.STR



Selecione então a opção destacada acima

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Vizex Forms Properties Sections

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Wireframe Boolean Operations

Operation: SURFACE MERGE

Advanced Boolean Operation

A inside B B inside A

A outside B B outside A

Include common triangles

Note: For surfaces, inside = below = right depending on surface orientation

Snap common triangles

Input Wireframes

	Type	Name
A	DTM	Topo0
B1	DTM	cava0

Output Wireframe

Type: DTM

Name: merge0

Use Input Wireframe names

Copy Properties From: A: DTM-Topo0

User Defined Properties

Code:

Colour:

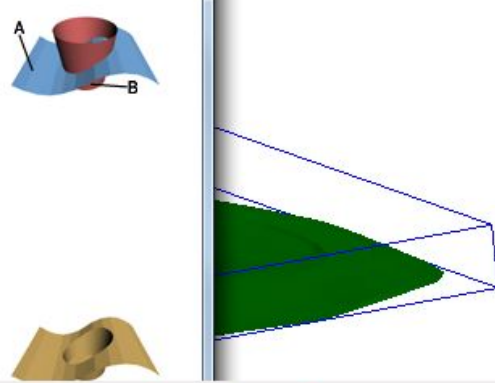
Title:

User Defined Attributes ...

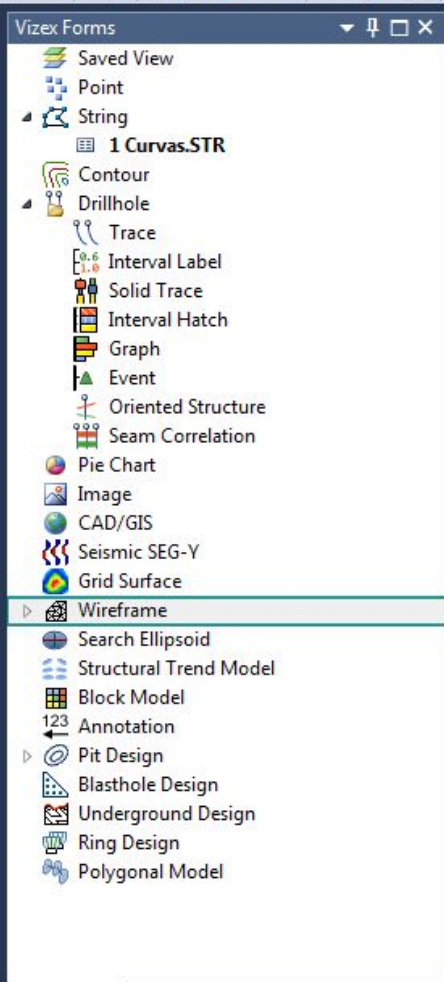
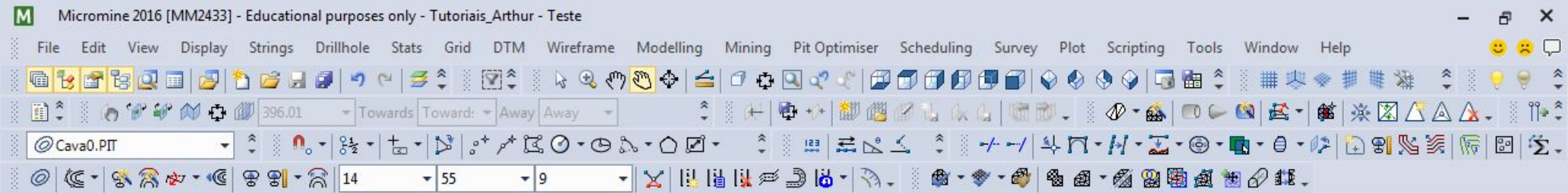
Clean the created wireframe(s)

Auto load

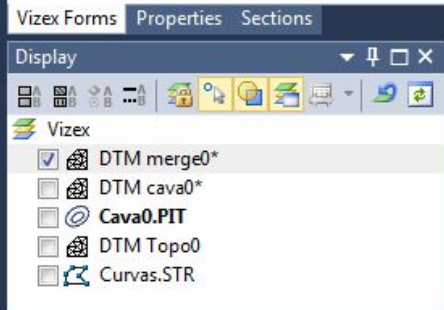
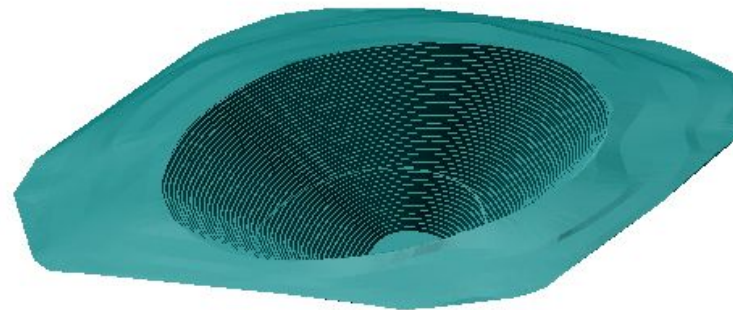
Buttons: Run, Close, Forms



Selecione as 2 wireframes, conferindo se não estão invertidas (vide ilustração à direita com A e B) e nomeie o arquivo de saída



Se tudo der certo, em Wireframe (destacado à esquerda)
você conseguirá abrir sua cava final inserida na topografia:

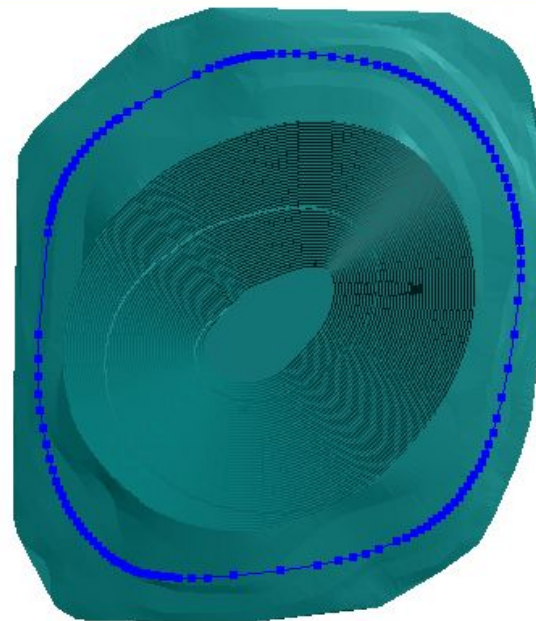
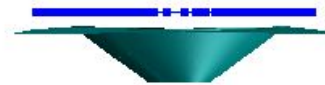


Properties

String: Untitled (Untitled.STR)

Filename	Untitled.STR
EAST	[-1127.856744, 1706.7448]
NORTH	[-1879.863148, 1200.1100]
RL	300.000000
STRING	
JOIN	3
Silhouette area	7234781.938630
Length	9640.014344

Com a vista em planta, desenhe uma string definindo a região da mina que deverá ser impressa em 3D.



Vizex Forms Properties Sections

Display

- Vizex
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 - DTM merge0*
 - DTM cava0*
 - Cava0.PIT
 - DTM Topo0
 - Curvas.STR

Micromine 2016 [MM2433] - Educational purposes only - Tutoriais_Arthur - Teste

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350.00 Towards Toward: Away Away

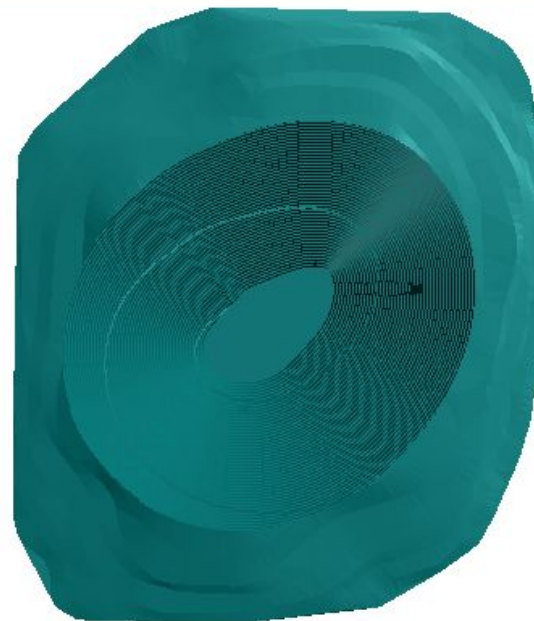
Untitled (Untitled.STR)

Properties

String: Untitled (Untitled.STR)

Filename	Untitled.STR
EAST	[-1127.856744, 1706.7448]
NORTH	[-1879.863148, 1200.1100]
RL	-700.000000
STRING	
JOIN	3
Silhouette area	7234781.938767
Length	9640.014344

Então abaixe a string intuitivamente até onde deseja que seja a base da "peça" que irá imprimir. Se uma parte ficar fina demais poderá quebrar facilmente, mas quanto mais volume, mais demora a impressão. Tente balancear esses dois fatores.



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100.00 Towards Toward: Away Away

Limite.STR

Vizex Forms

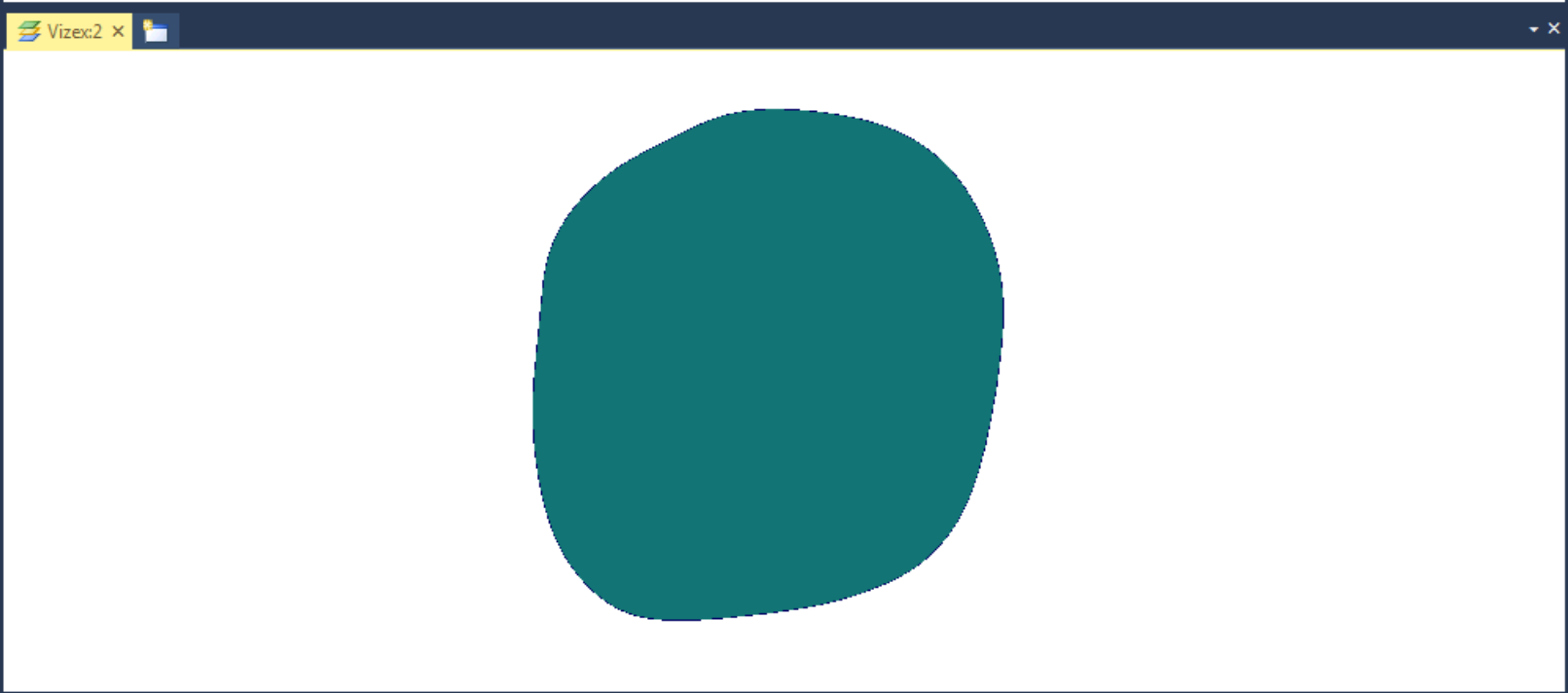
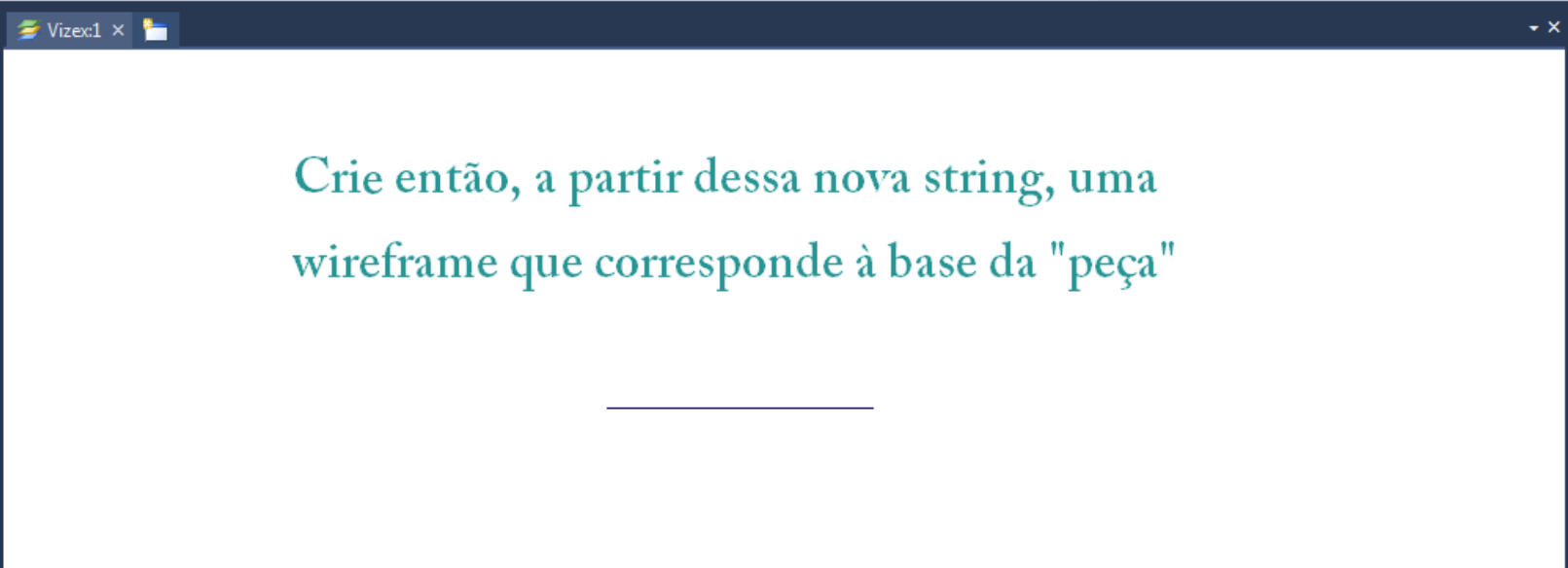
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Vizex Forms Properties Sections

Display

Vizex

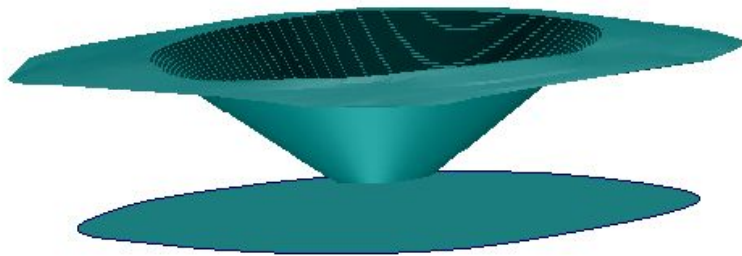
- DTM tampa0
- Limite.STR**
- DTM merge0*
- DTM cava0*
- Cava0.PIT
- DTM Topo0

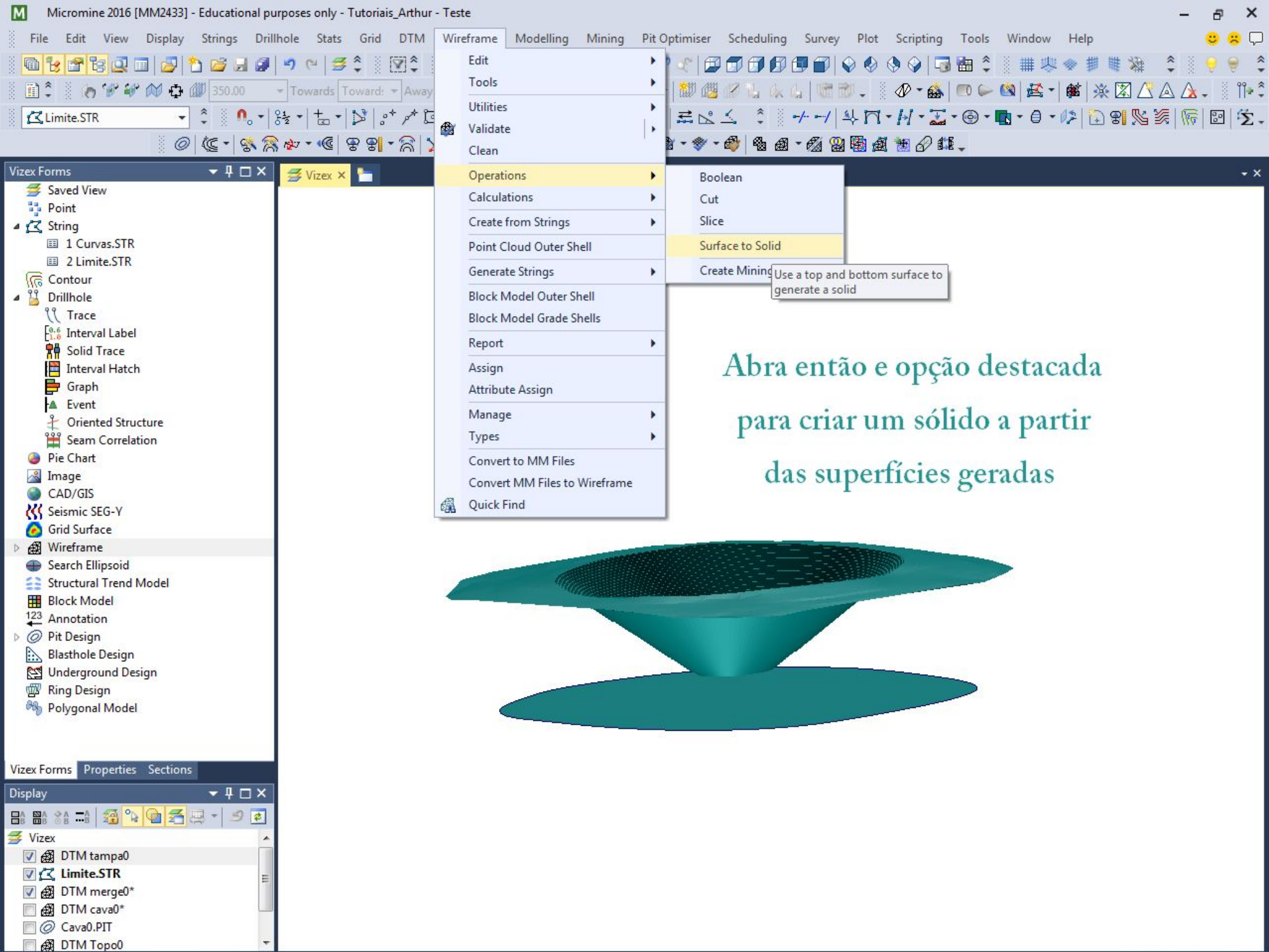


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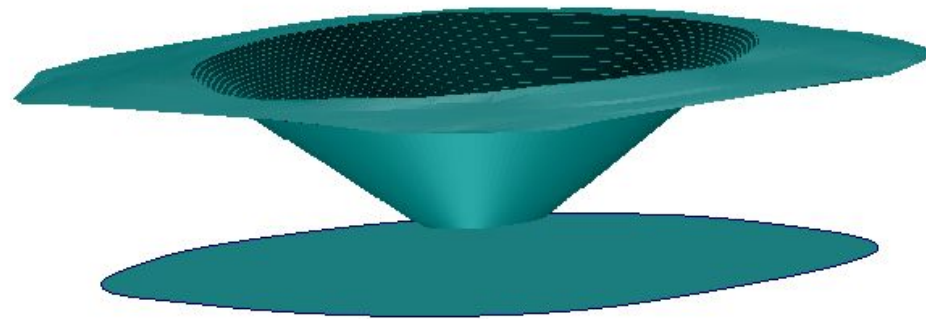
- Vizex Forms Properties Sections
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- Vizex
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Deverá ficar mais ou menos assim...





Abra então e opção destacada
para criar um sólido a partir
das superfícies geradas



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Surface to Solid

Input Data Polygonal Restriction Output Solid

Run Cancel Forms

Input

Top Surface

Type DTM

Name merge0

Z offset

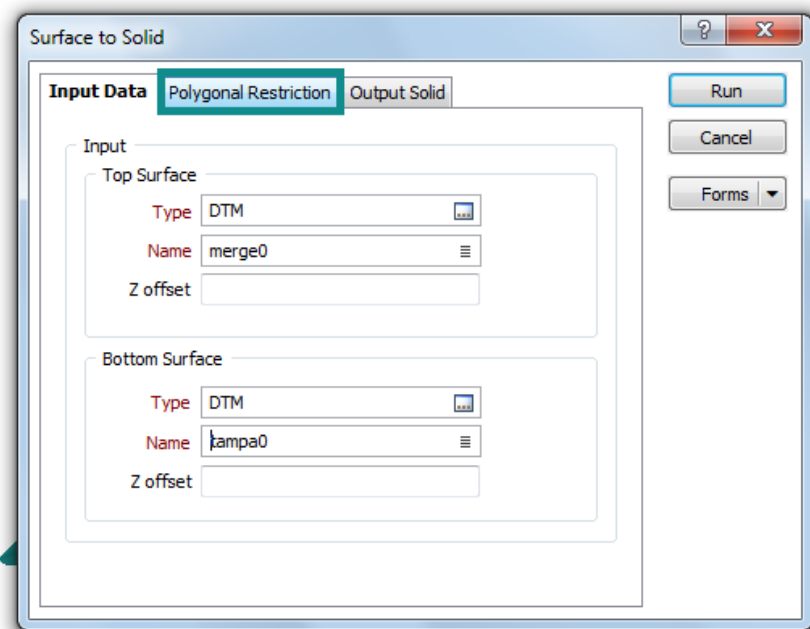
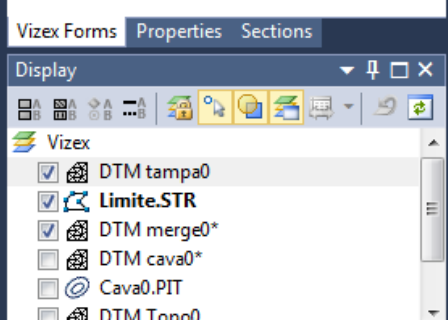
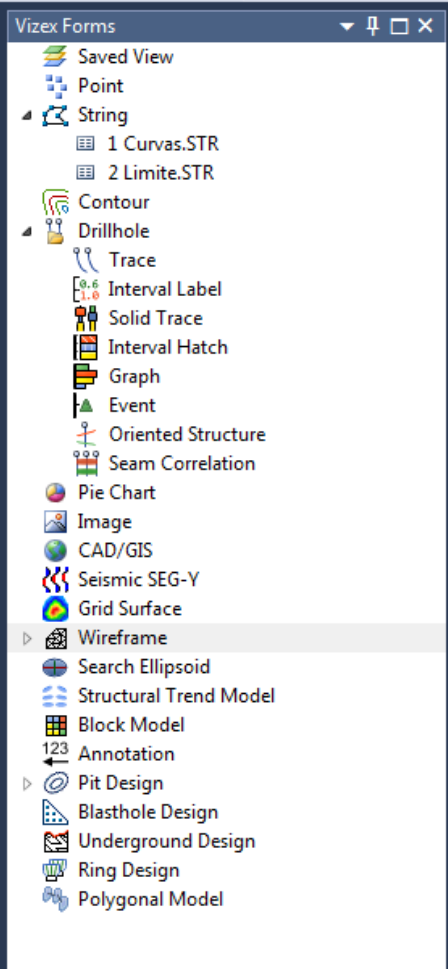
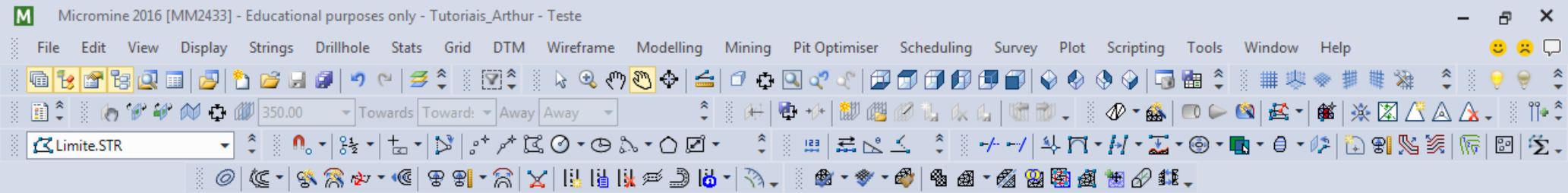
Bottom Surface

Type DTM

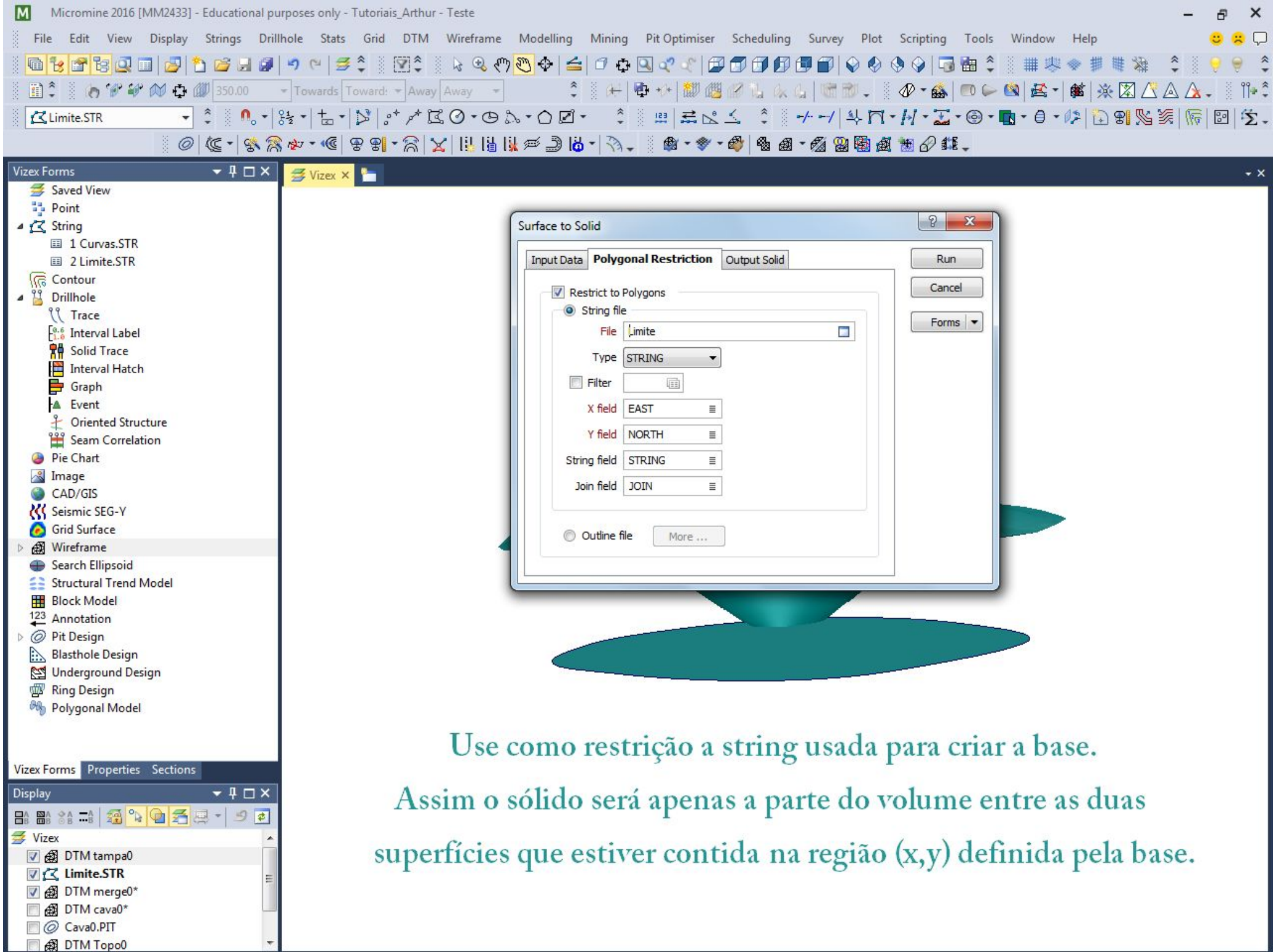
Name tampa0

Z offset

Selecione corretamente as superfícies de topo e de base



Abra então a aba destacada para definir os limites horizontais do sólido. Se não fizer isso, ele será gerado ligando as bordas das superfícies diretamente



Use como restrição a string usada para criar a base.

Assim o sólido será apenas a parte do volume entre as duas superfícies que estiver contida na região (x,y) definida pela base.

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Vizex Forms Properties Sections

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 - DTM tampa0
 - Limite.STR**
 - DTM merge0*
 - DTM cava0*
 - Cava0.PIT
 - DTM Topo0

Surface to Solid

Input Data Polygonal Restriction **Output Solid**

Run

Cancel

Forms

Output

Type: DTM

Name: solido0

Code:

Colour:

Title:

Attributes...

Validate

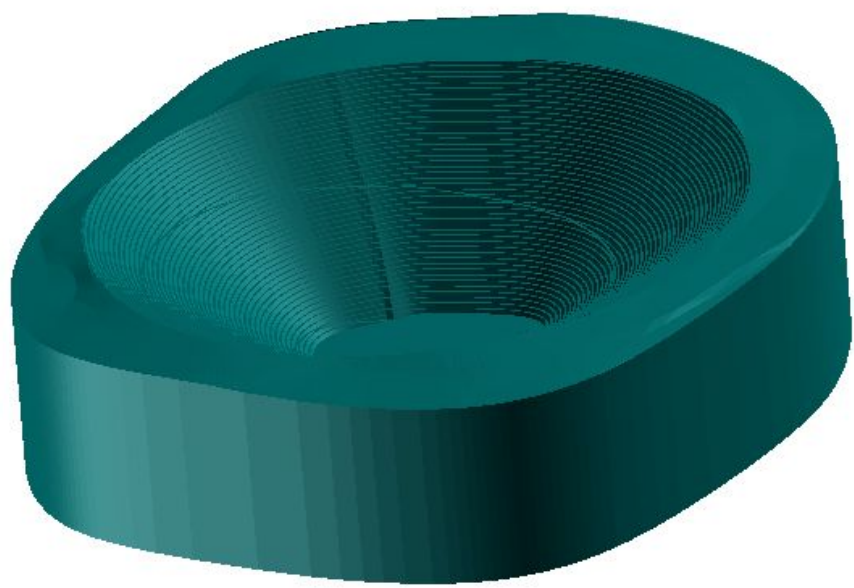
Auto load

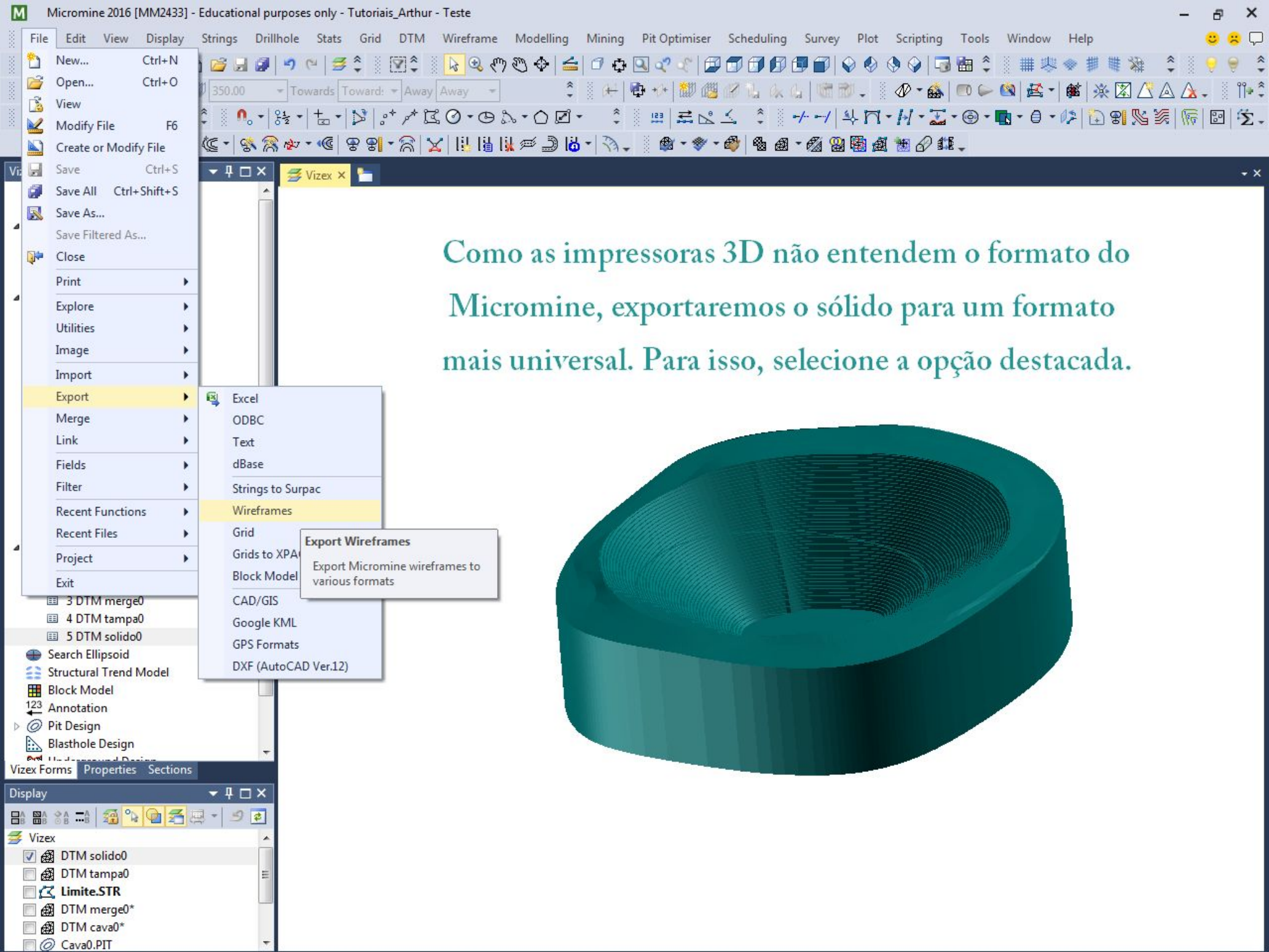
Defina então um arquivo de saída para o sólido

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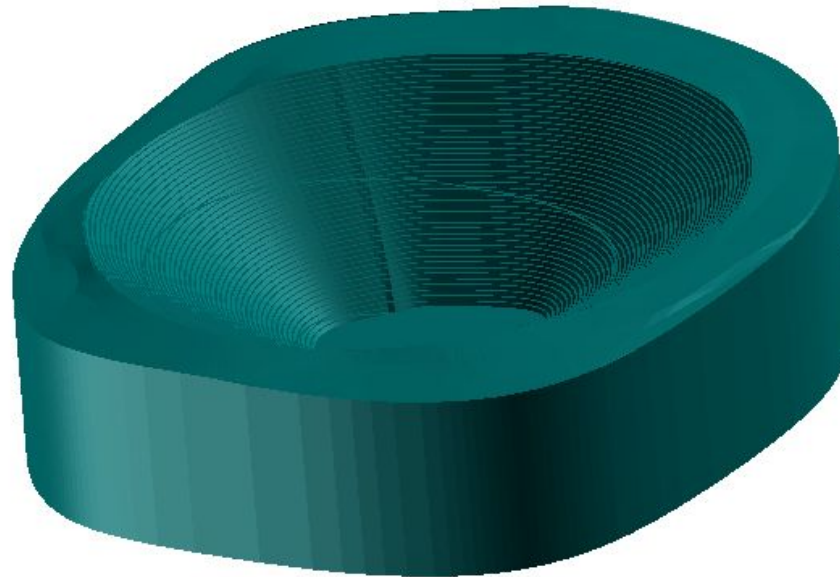
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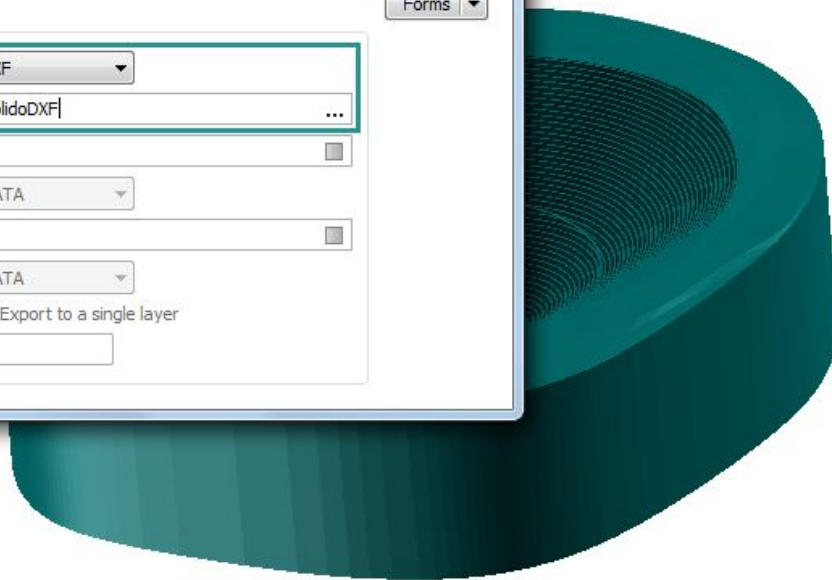
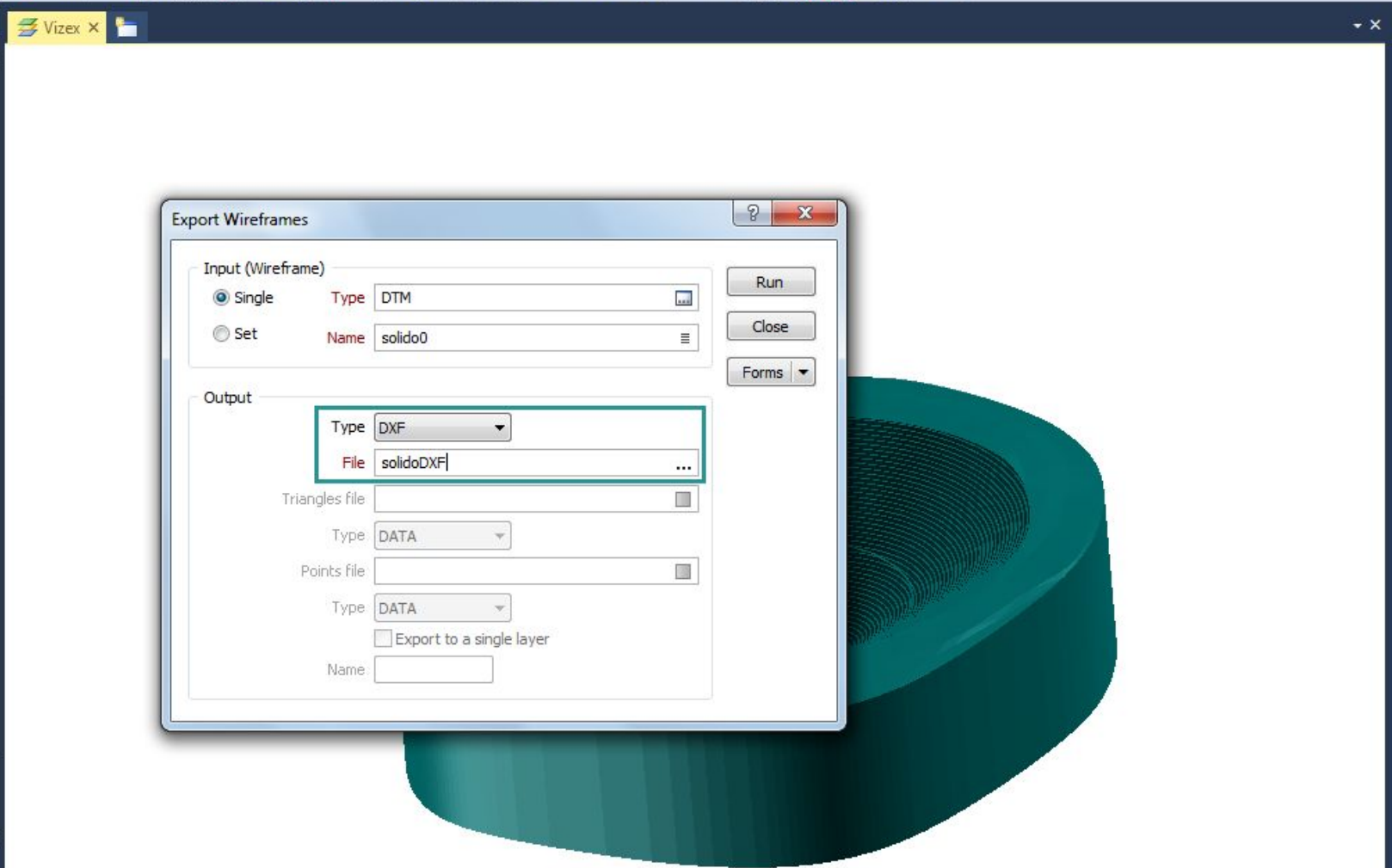
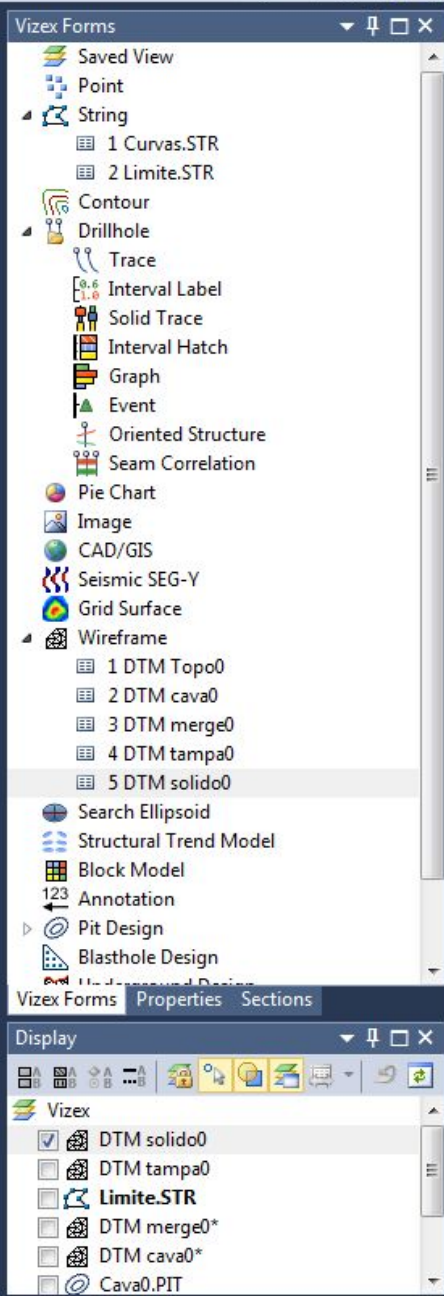
E aí está..



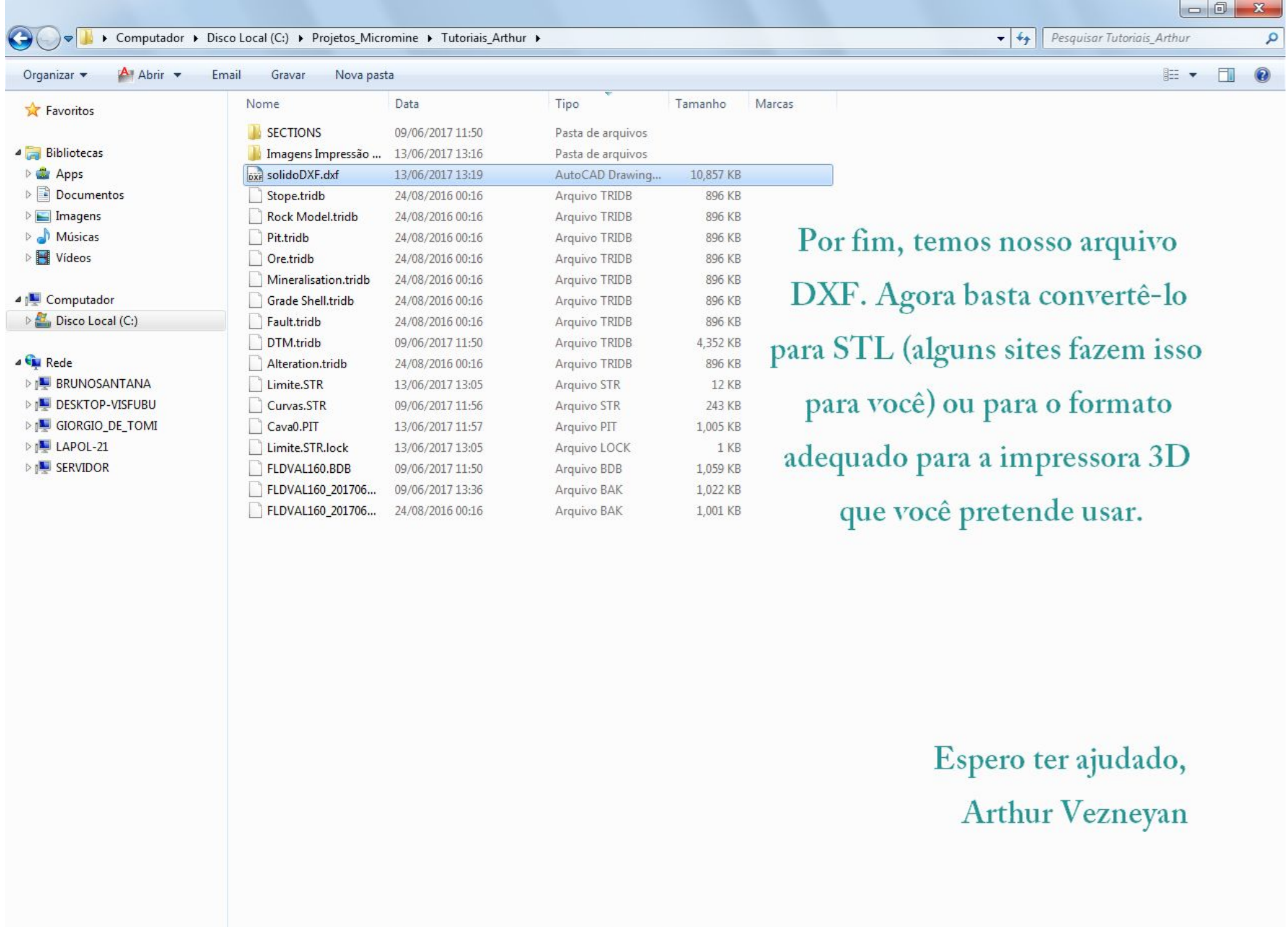


Como as impressoras 3D não entendem o formato do Micromine, exportaremos o sólido para um formato mais universal. Para isso, selecione a opção destacada.





Aqui você terá várias opções de formatos. O que funcionou para mim foi exportar para DXF (AutoCAD) e depois converter o DXF para STL (formato bastante usual para impressão 3D)



solidoDXF.dxf
AutoCAD Drawing Interchange

Data de modificaç... 13/06/2017 13:19
Tamanho: 10.6 MB

Data da criação: 13/06/2017 13:19

Espero ter ajudado,
Arthur Vezneyan