



حکومهتی هه‌ریمی کوردستانی - عێراق  
وهزارهتی خویندنی بالۆ تووژینه‌وهی زانستی  
زانکۆی هه‌ل‌ب‌ج‌ه - کۆلیژی زانسته‌مرۆفایه‌تیه‌کان  
به‌شی جوگرافیا - قو‌ناغی سییه‌م

## چۆنیه‌تی کارکردن له‌سه‌ر نه‌خشه‌ی Raster نیشان‌دانی داتا‌کان به‌شی‌وه‌ی 3D

ئاماده‌کردنی :

شاگۆن خلیل

به‌سه‌ر په‌رشته‌ی :

م . گه‌یلان ر‌سول

2022 - 2021

ئەگەر بمان ھەوئیت ئەو نەخشانەى ھەمانە  
بە شۆھى 3D نیشان بەدەین , لێرەدا ئیمە  
دو رېگەمان ھەپە باسیان ئەکەین .

سەرەتا ئەو نەخشە دیمە ﴿ Raster ﴾ ە داخڵ بەرنامەکە ئەکەین .

1:544,067

3D Analyst | soran\_dem30

Editor | Georeferencing | soran\_dem30

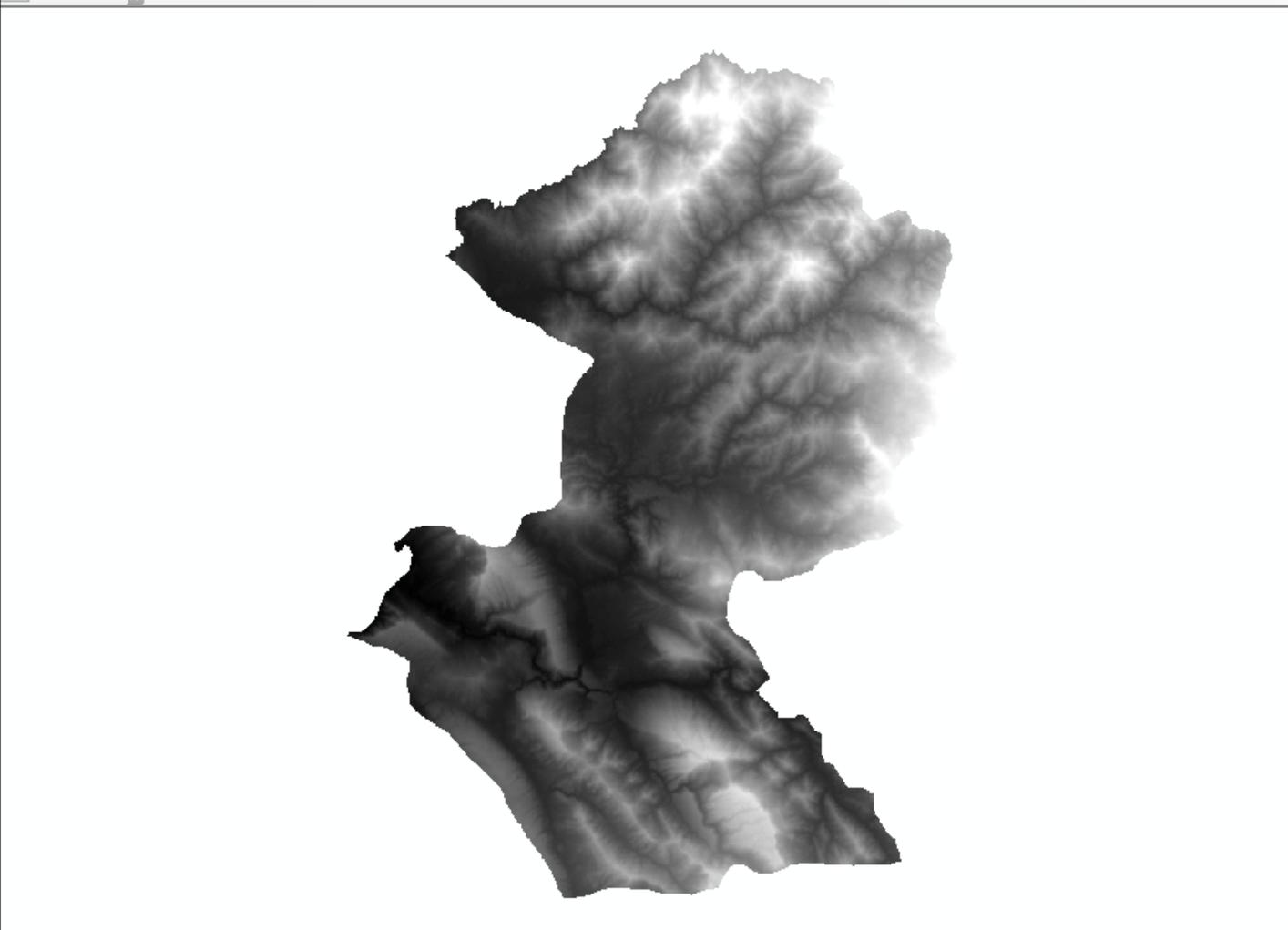
Drawing | Arial | 10 | B I U A

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Layers

- C:\Users\HP\Desktop\Exer\_16\_raster analysis\
  - soran\_dem30
    - Value
    - High : 3487
    - Low : 361

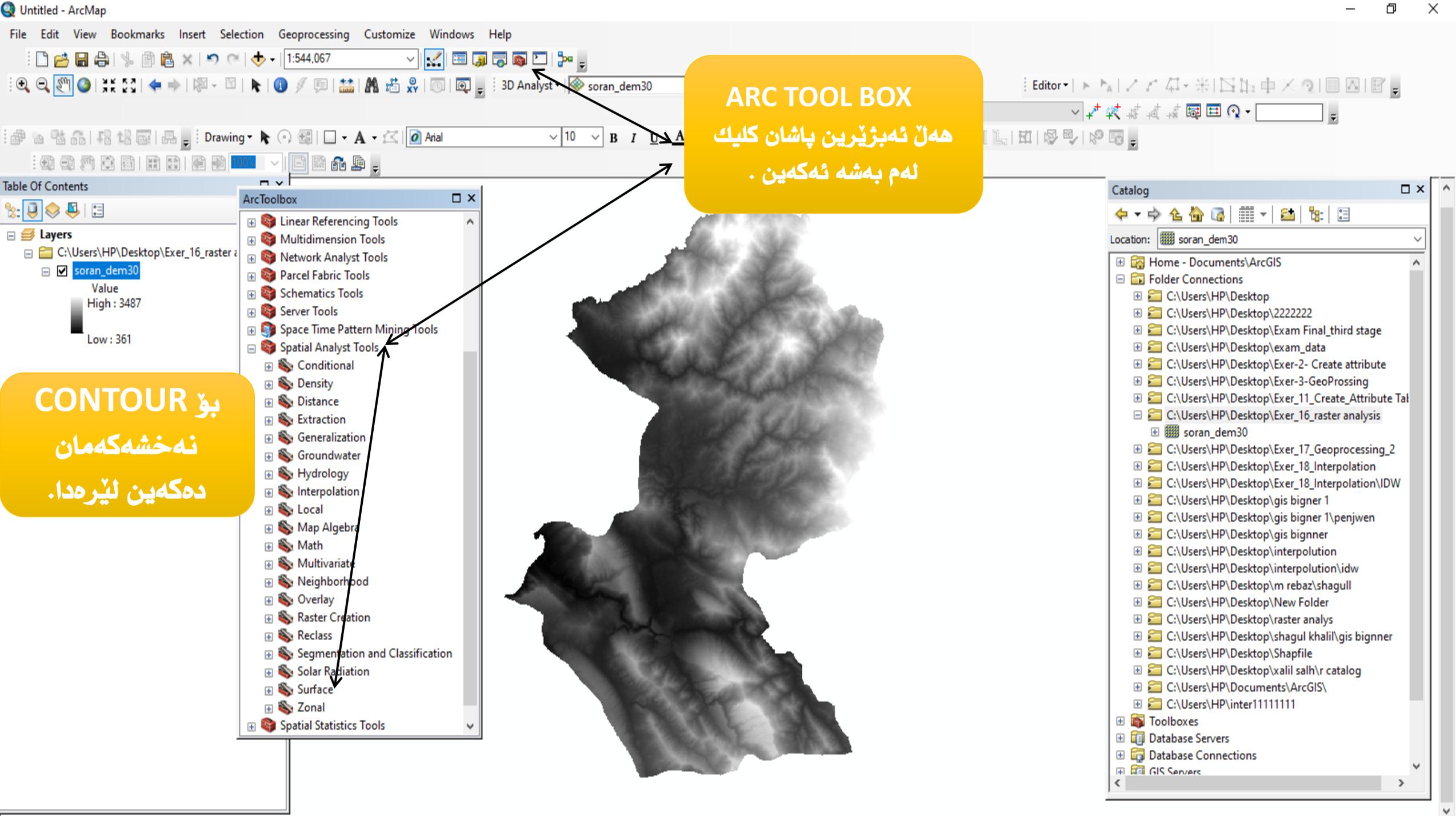
نه خشه که مان هیئا



Catalog

Location: soran\_dem30

- Home - Documents\ArcGIS
  - Folder Connections
    - C:\Users\HP\Desktop
    - C:\Users\HP\Desktop\2222222
    - C:\Users\HP\Desktop\Exam Final\_third stage
    - C:\Users\HP\Desktop\exam\_data
    - C:\Users\HP\Desktop\Exer-2- Create attribute
    - C:\Users\HP\Desktop\Exer-3-GeoProssing
    - C:\Users\HP\Desktop\Exer\_11\_Create\_Attribute Tal
    - C:\Users\HP\Desktop\Exer\_16\_raster analysis
      - soran\_dem30
    - C:\Users\HP\Desktop\Exer\_17\_Geoprocessing\_2
    - C:\Users\HP\Desktop\Exer\_18\_Interpolation
    - C:\Users\HP\Desktop\Exer\_18\_Interpolation\IDW
    - C:\Users\HP\Desktop\gis bigner 1
    - C:\Users\HP\Desktop\gis bigner 1\penjwen
    - C:\Users\HP\Desktop\gis bigner
    - C:\Users\HP\Desktop\interpolation
    - C:\Users\HP\Desktop\interpolation\idw
    - C:\Users\HP\Desktop\m rebaz\shagull
    - C:\Users\HP\Desktop\New Folder
    - C:\Users\HP\Desktop\raster analys
    - C:\Users\HP\Desktop\shagul khali\gis bigner
    - C:\Users\HP\Desktop\Shapfile
    - C:\Users\HP\Desktop\xalil salh\r catalog
    - C:\Users\HP\Documents\ArcGIS\
    - C:\Users\HP\inter1111111
  - Toolboxes
  - Database Servers
  - Database Connections
  - GIS Servers

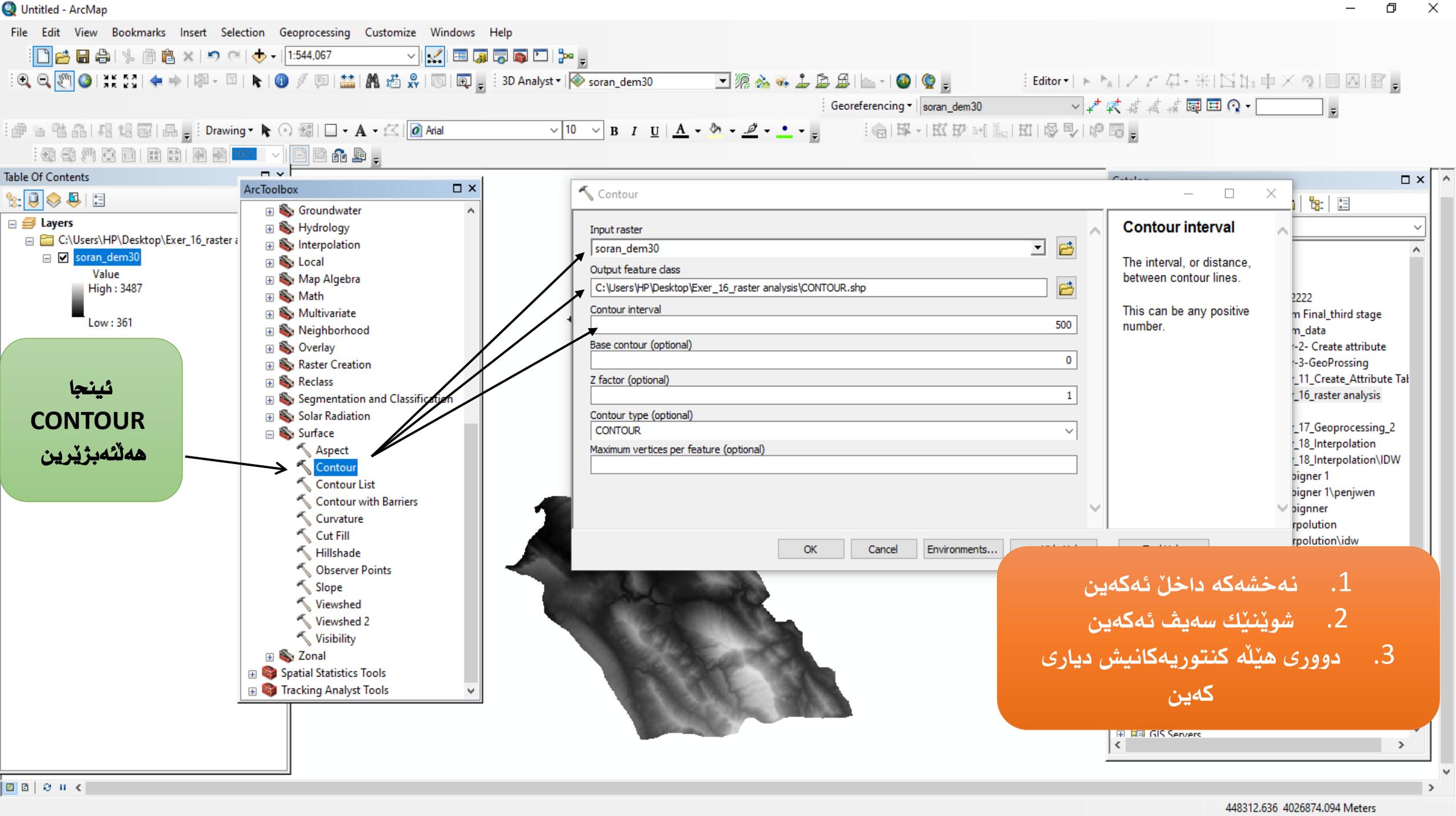


## ARC TOOL BOX

ههڵ ئه‌بژێرین پاشان کلیک  
له‌م به‌شه ئه‌که‌ین .

## بۆ CONTOUR

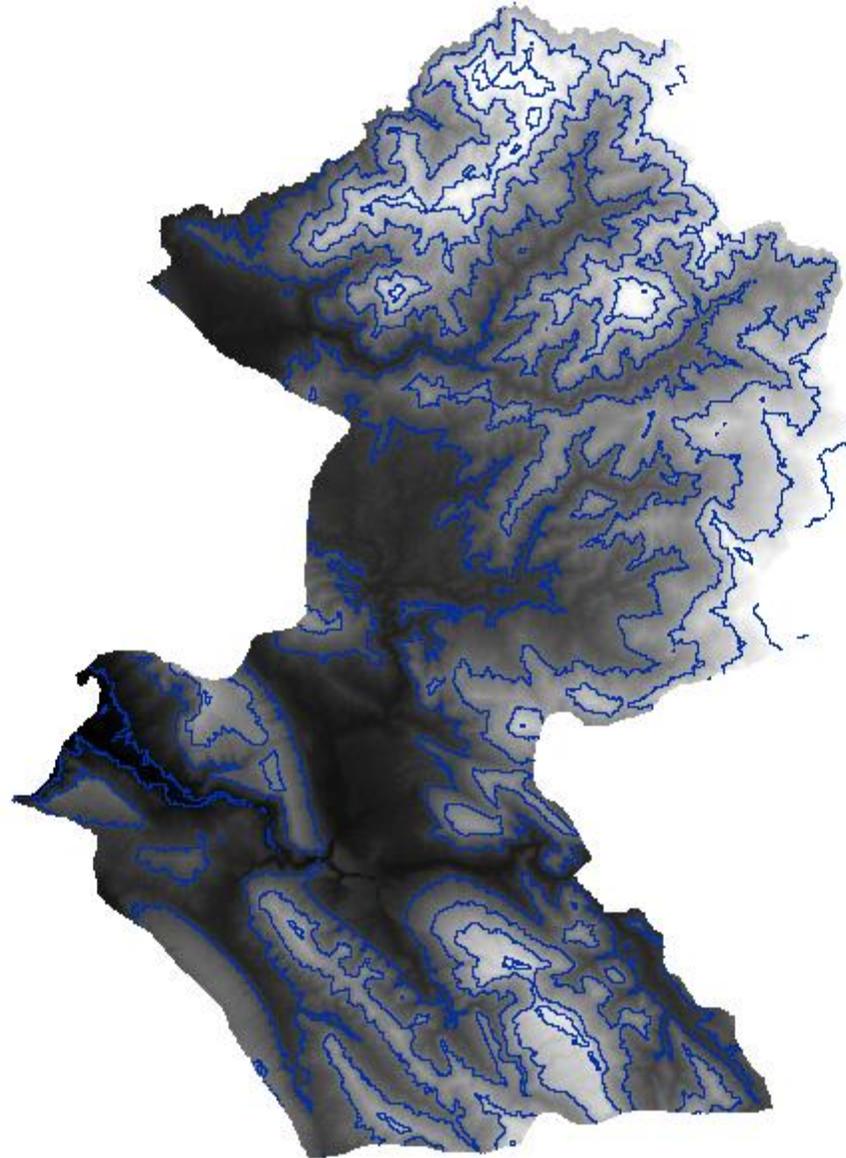
نه‌خشه‌که‌مان  
ده‌که‌ین لێره‌دا.



ئىنجا  
CONTOUR  
هەلئەبژىرەين

1. نەخشەكە داخلى ئەكەين
2. شوپنىك سەيف ئەكەين
3. دوورى هيلە كىتورىەكانىش ديارى كەين

بہم شیوہیہ نہ خشہ کہمان  
ہیلہ کنتوریہ کانی تیادا  
دہرکہوت



## ههنگاوی دووهم / دروستکردنی SHAPE FILE بهم شیوهیه :

1. لهو فولدهری ئەمان ههویت کلیك راست ئەکەین .
2. NEW ههئدەبژیرین .
3. پاشان ئەو SHAPE دروست ئەکەین که ئەمانههویت , بهشیوهی POLYGON دروستی ئەکەین و ناساندنیشی بۆ ئەکەین واتە زۆنهکە ی دیاری ئەکەین .

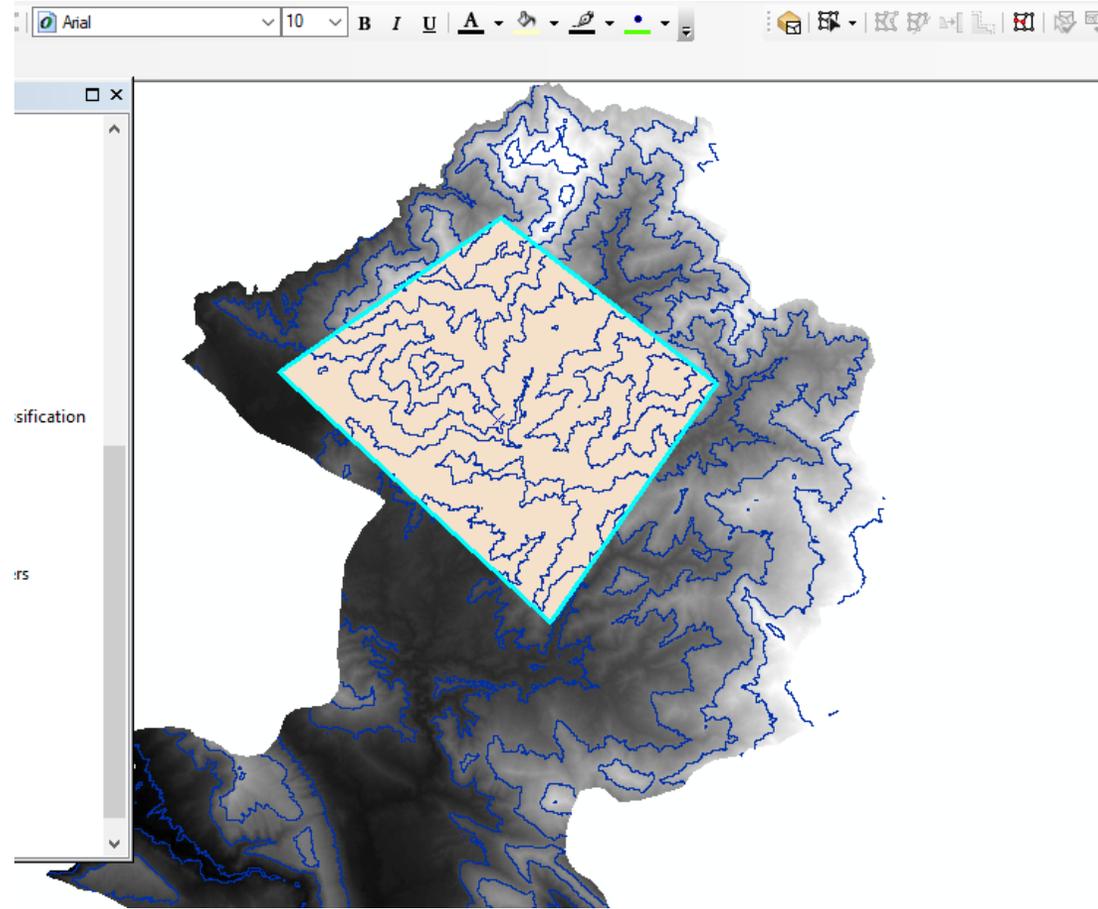
Hillshade یش بۆ نهخشکهمان ئەکەین به ههمان رێگهی پیشووتر که باسمان کردوو

**Hillshade** یش بو نه خشکه مان نه کهین به همان ریگهی پیشووتر که باسماں کردوه

دوای نهوهی نه م کردارانهمان نه نجام دا که پیویستن نهوا له ریگهی کرداری ITN وه نه خشکه که به 3D نیشان نه دهین .

نهتوانین هموو رووبه ری نه خشکه که به 3D نیشان بدهین به لام به شیک لهو رووبه ری هممانه وه ری نه گرین , به شیک لهو رووبه ری هممانه دیاری نه کهین له ریگهی Editor وه نهو شه پیهی دروستمان کرد دیاری ده کهین , به م شیوهیه .

بەم شیۆدیه ئهو  
بەشهی ئەمان ههوییت  
دیاری ئەکەین



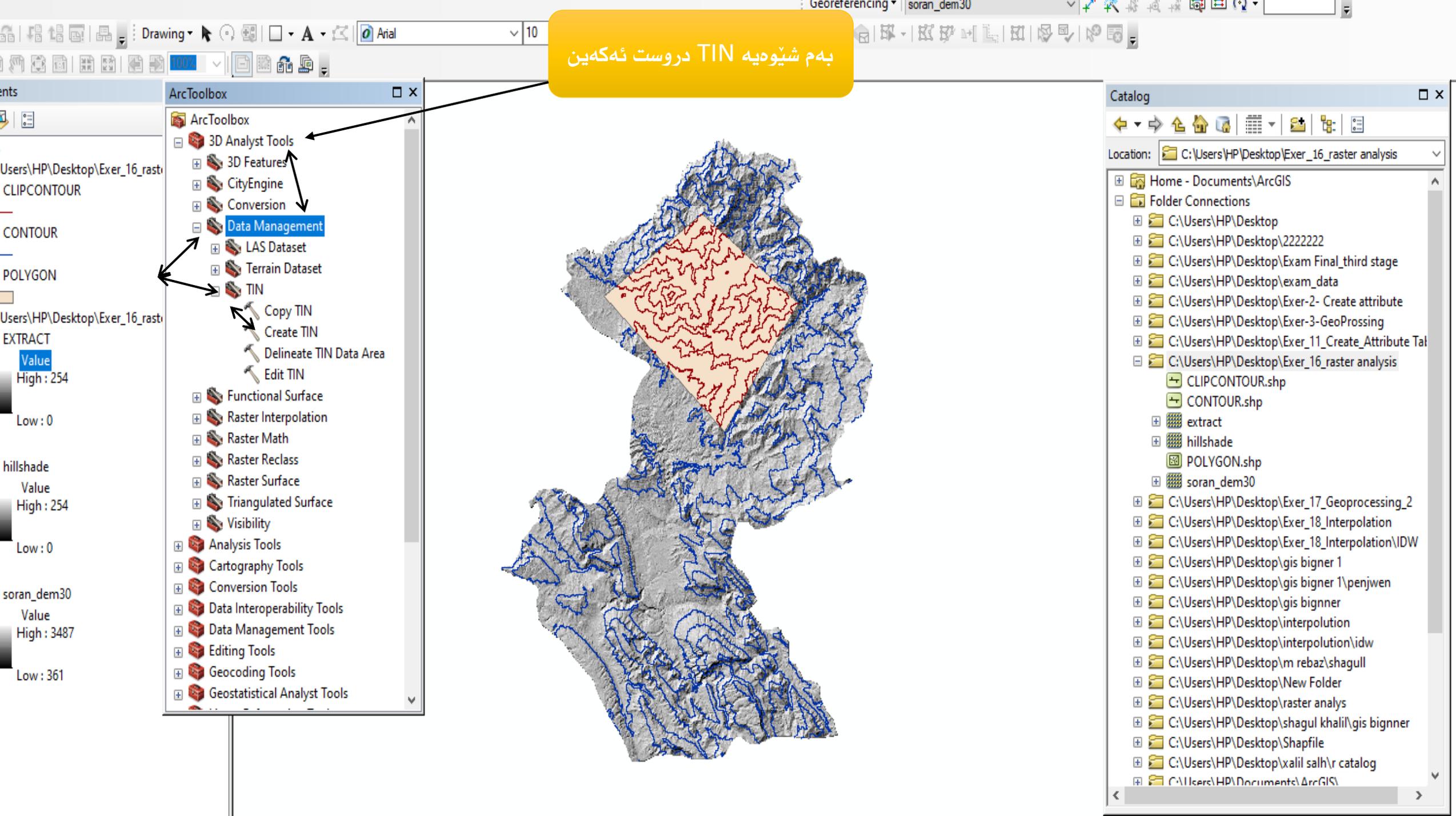
ئىنجا پىۋىستە بۇ contour and hillshade كىردارى بىرىن ئىنجام بىدەين  
لەسەر ئىو بەشە رىووبەرى كە پىشتر دىارىم كىردوو .

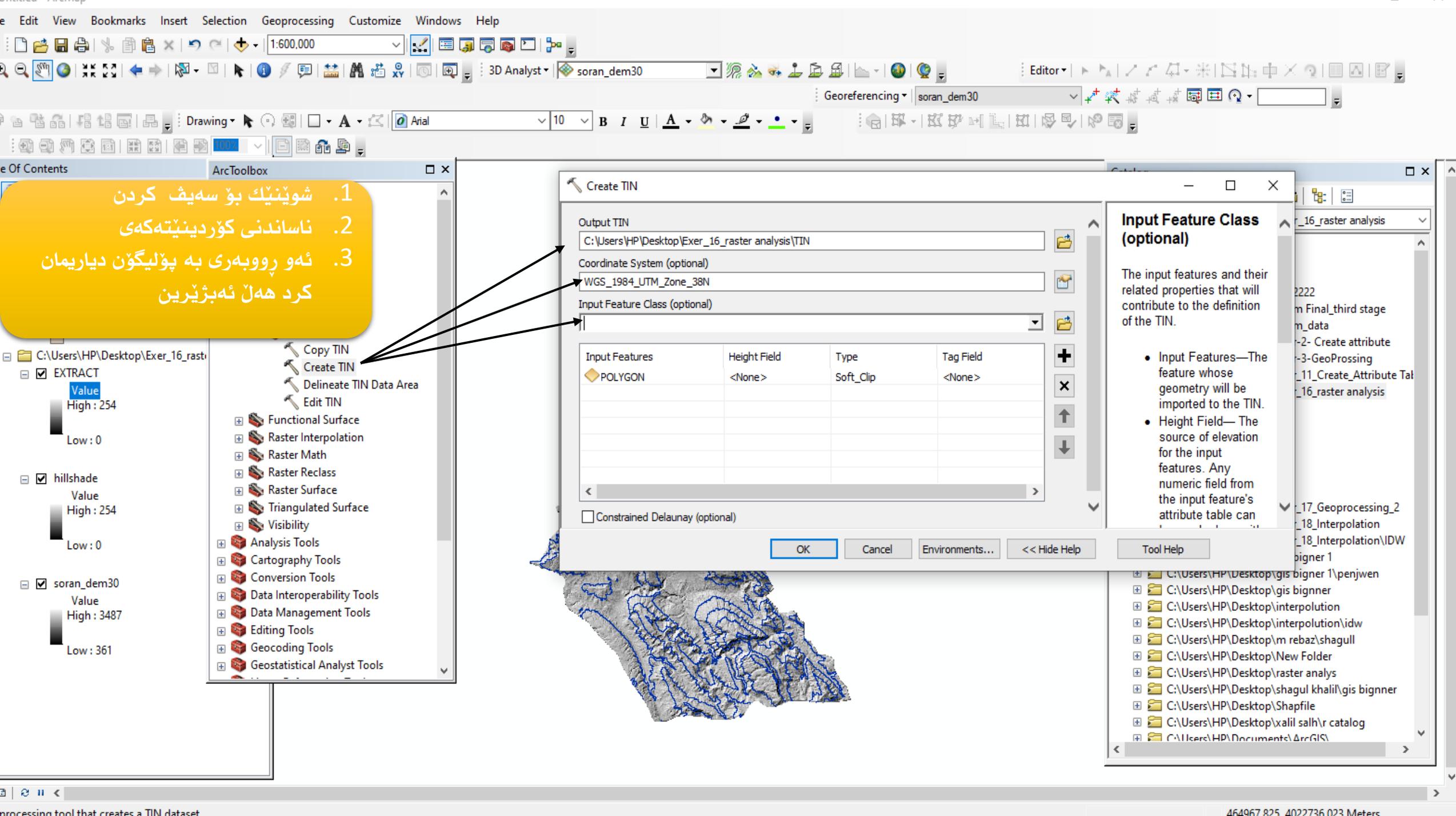
بۇ hillshade لە رىگەى Extract by mask ئىنجامى ئىدەين .

بۇ contour لە رىگەى clip ئىنجامى ئىدەين .

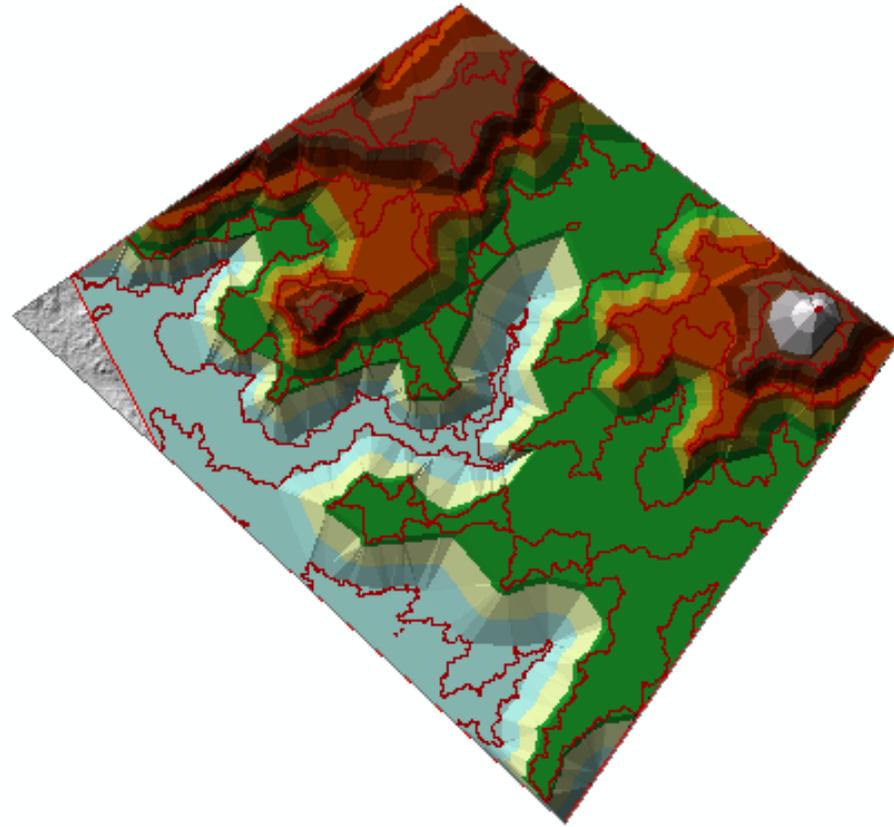
دواتر كىردارى ITN ئىنجام ئىدەين بەم شىۋەىه :

# به م شیوهیه درست نهکهن



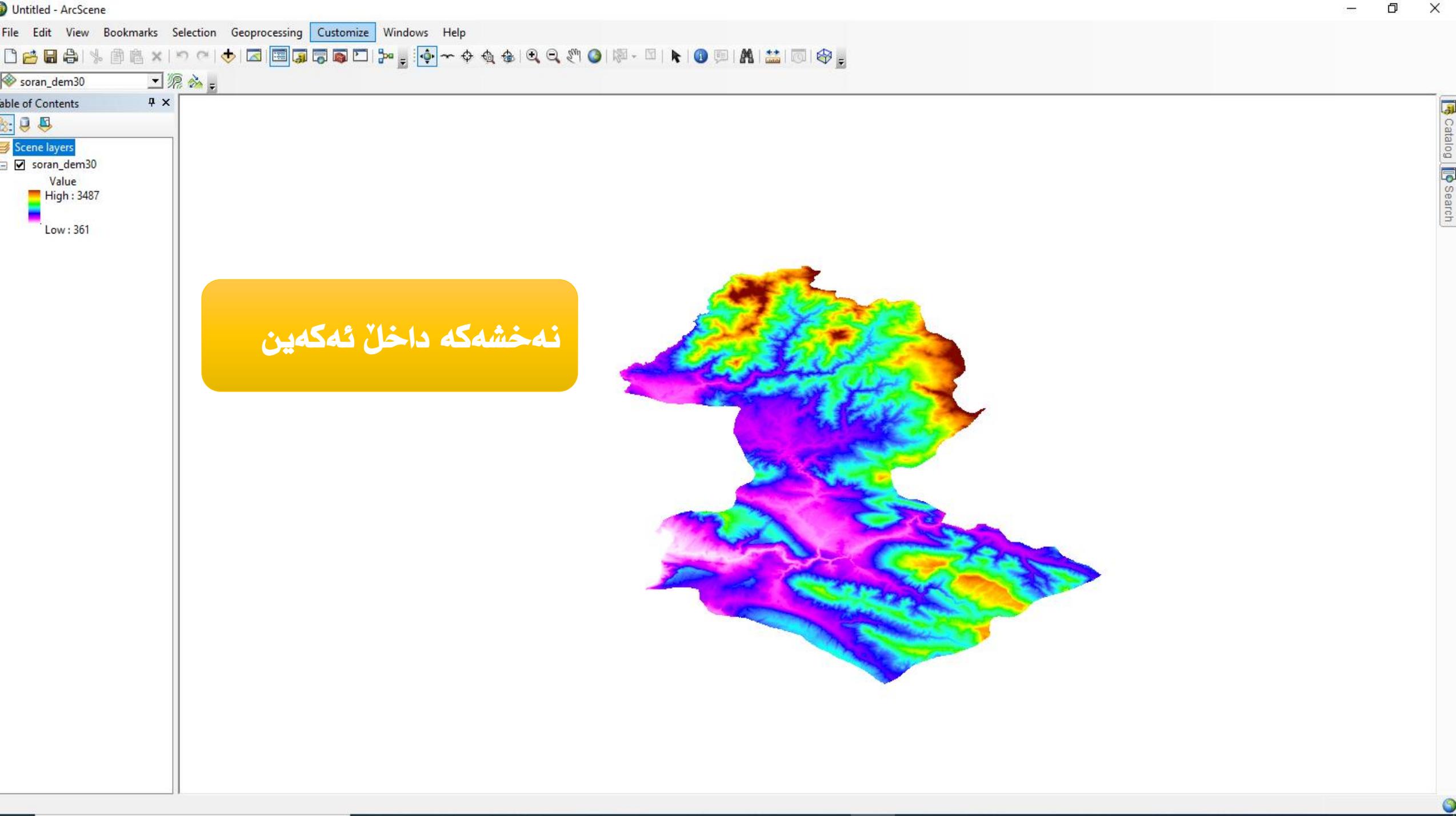


به م شیوهیه نه خشه که مان به  
شیوهی 3D درست کرد

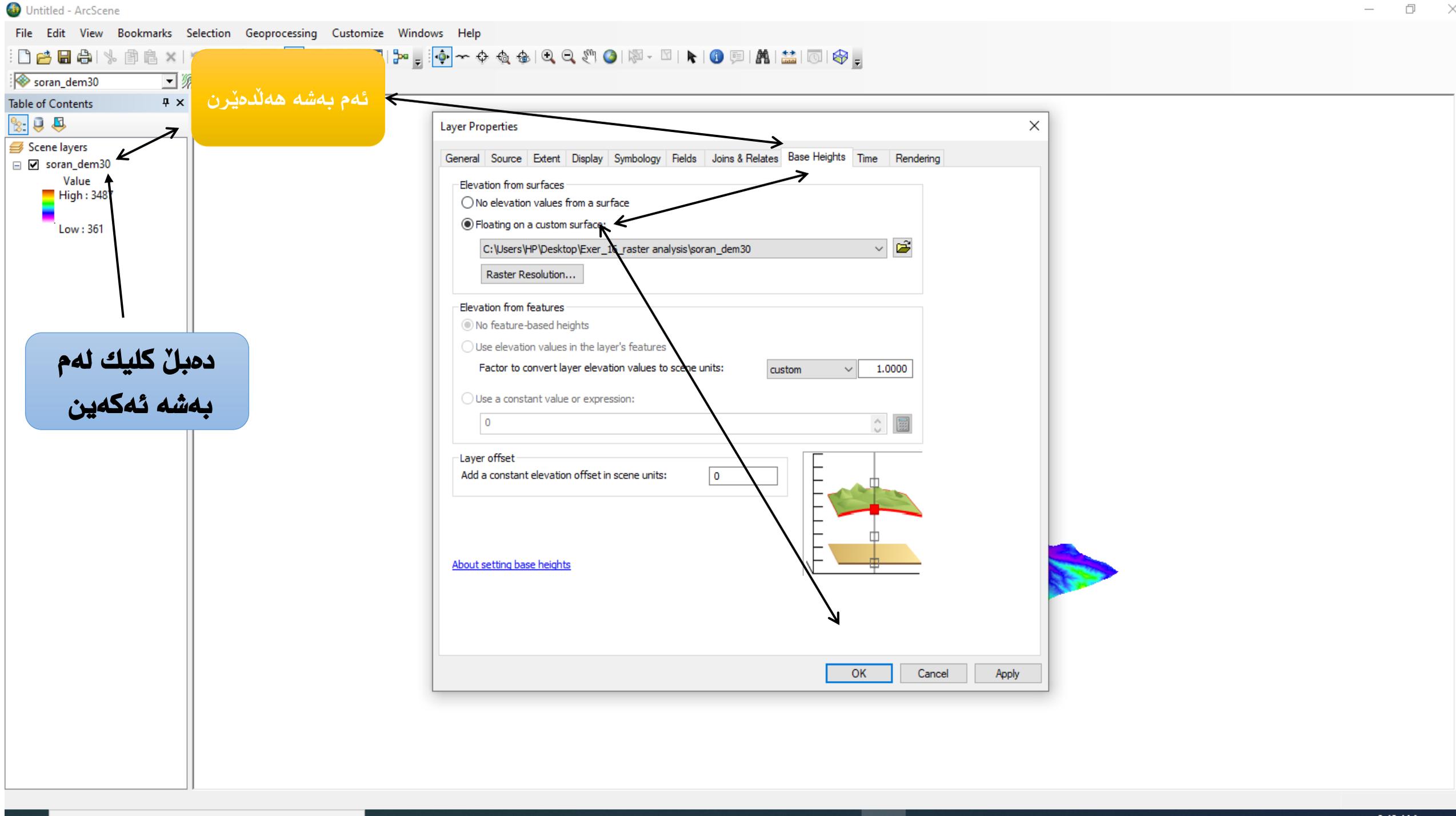


یەکیکی تر له رېڭاکان بو نیشاندا نیخشهکه به شیوهی 3D بهکارهینانی  
بهرنامه ArcScene ه، ئەمەش له رېڭهه ئهه ههنگاوانهه خواریوه  
ئەکریت :

سەرتهتا بهرنامه ArcScene دهکهینهوه، پاشان ئهوه نهخشهه ههمانه  
داخلی ئەکهین



نه‌خشه‌که داخل نه‌کپن



ئەم بەشە ھەلەدەپن

دەپن كليك ئەم بەشە ئەكەين

Layer Properties

General Source Extent Display Symbology Fields Joins & Relates **Base Heights** Time Rendering

Elevation from surfaces

- No elevation values from a surface
- Floating on a custom surface:
  - C:\Users\HP\Desktop\Exer\_10\_raster analysis\soran\_dem30
  - Raster Resolution...

Elevation from features

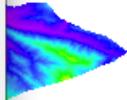
- No feature-based heights
- Use elevation values in the layer's features
  - Factor to convert layer elevation values to scene units: custom 1.0000
- Use a constant value or expression:
  - 0

Layer offset

Add a constant elevation offset in scene units: 0

[About setting base heights](#)

OK Cancel Apply





soran\_dem30

Table of Contents

Scene layers

soran\_dem30  
Value  
High : 3487  
Low : 361

Layer Properties

General Source Extent Display Symbology Fields Joins & Relates Base Heights Time **Rendering**

Visibility

- Render layer at all times
- Render layer only while navigation has stopped
- Render layer only while navigating

Draw simpler level of detail if navigation refresh rate exceeds: 0.750 second(s)

Effects

- Shade areal features relative to the scene's light position
- Use smooth shading if possible

Select the drawing priority of areal features, related to other layers that may be at the same location. This helps to determine which feature gets drawn on top of the other. 1

Optimize

- Render layer directly from data connection to conserve memory
- Cache layer for fastest possible rendering speed
- Enable Rendering with compressed textures

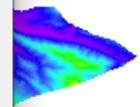
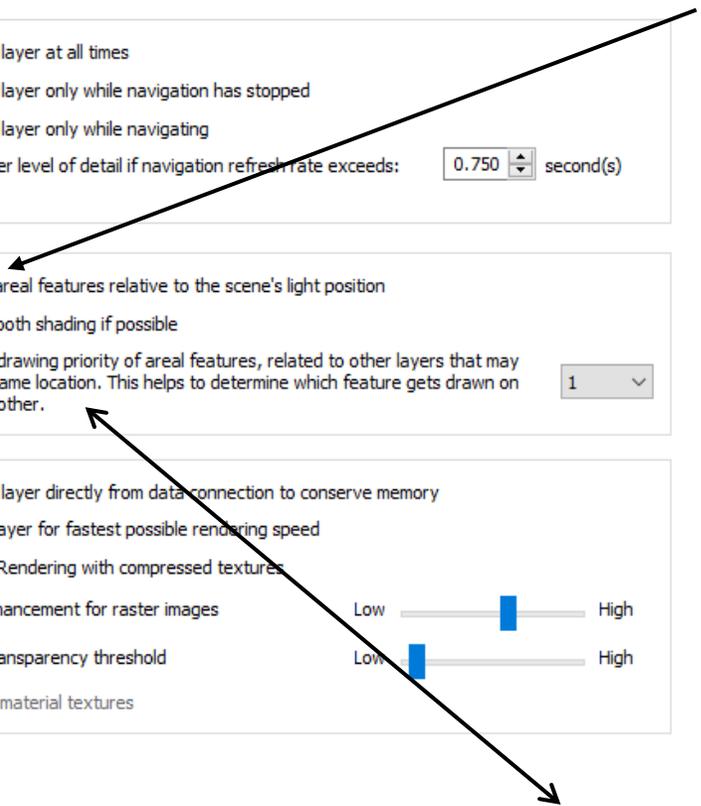
Quality enhancement for raster images Low High

Minimum transparency threshold Low High

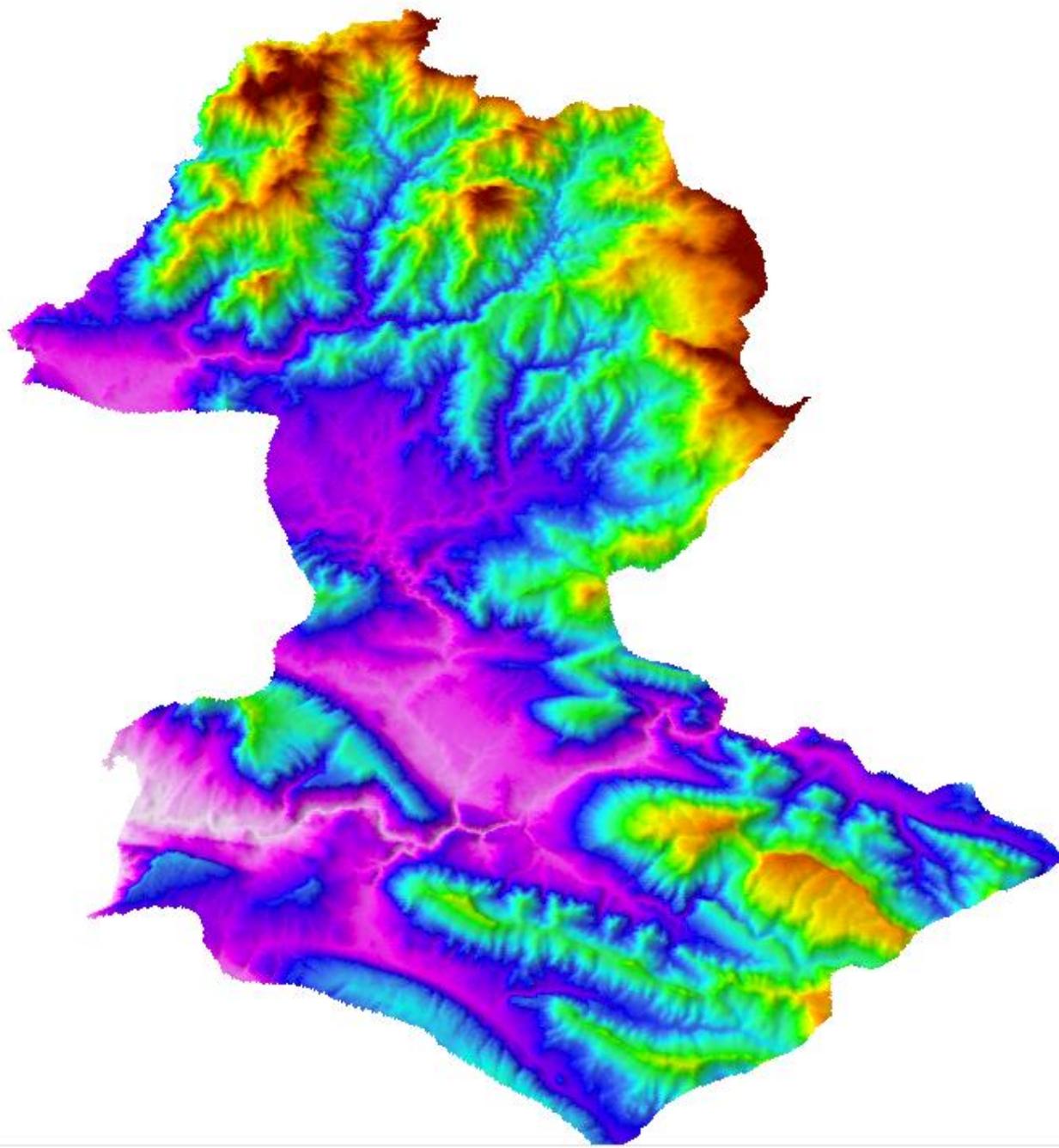
- Disable material textures

OK Cancel Apply

دواتر كليك لهم بهشه دهكهن

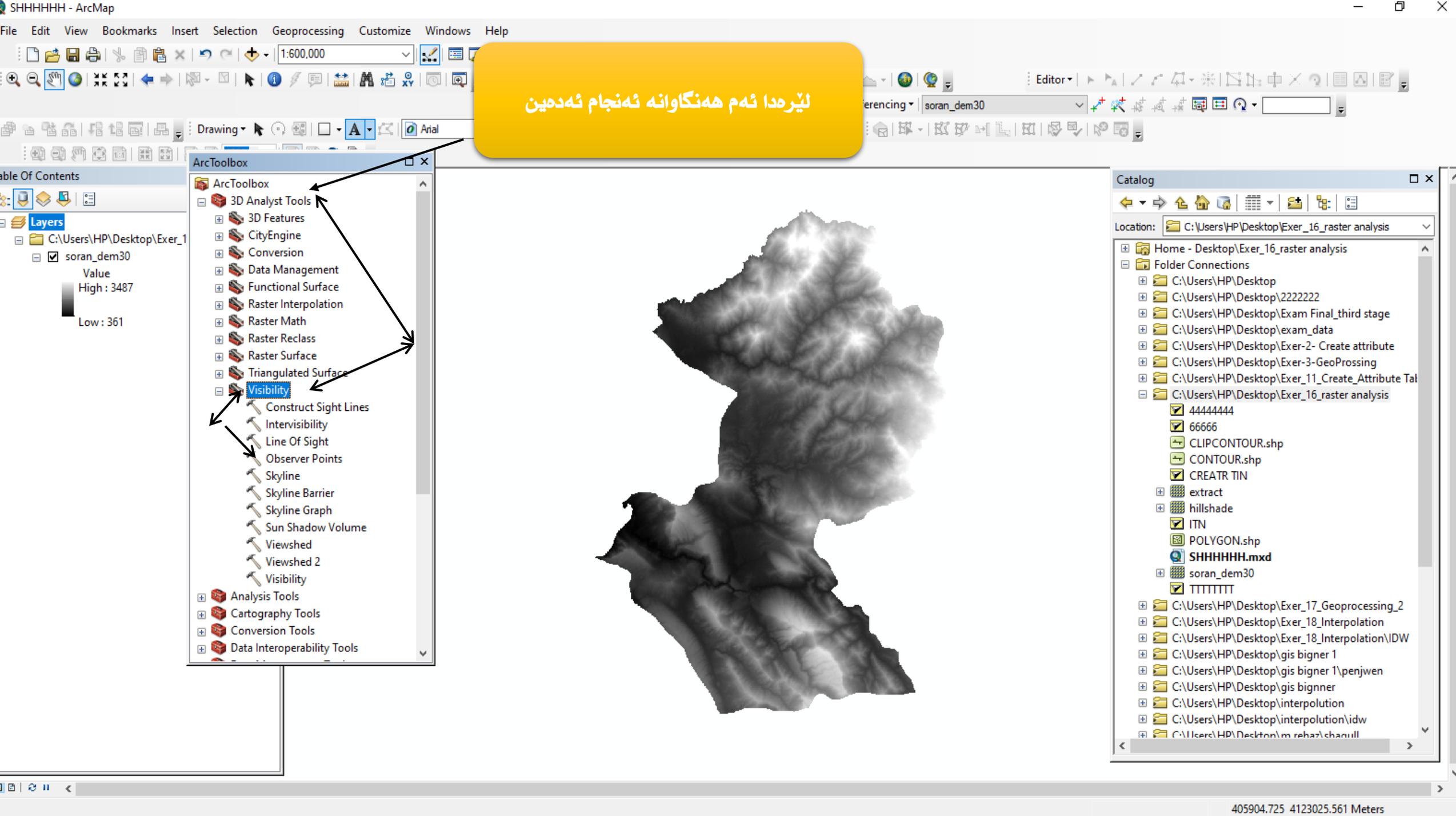


بەم شپۆهێه نەخشەکەمان بە  
شپۆهێ 3d نیشان ئەدات



کرداریکی ترمان ههیه به ناوی visibility که ئەم کرداره بهمانای بینین دیت بۆنمونه بمان ههویت بورجی ئینتەرنیٲ دابنئین دوری ئەو شەبهکه چەندە لەو شوینەهێ که بورجهکه دائەنریت ، ئەوا GIS ئەم کارهێ بۆمان ئاسان کردوو ، بهم شیوهیه ئەنجامی ئەدهین .

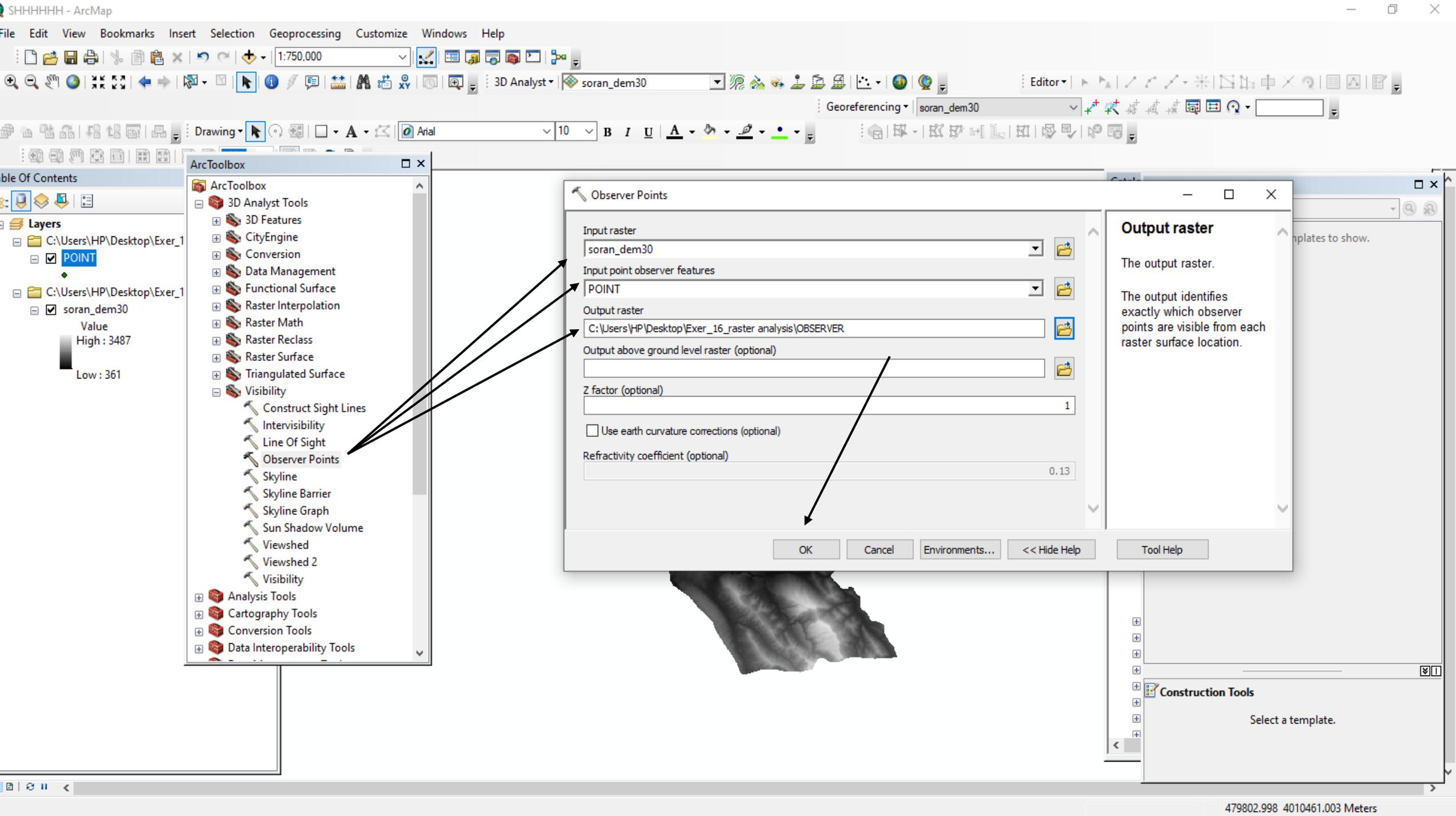
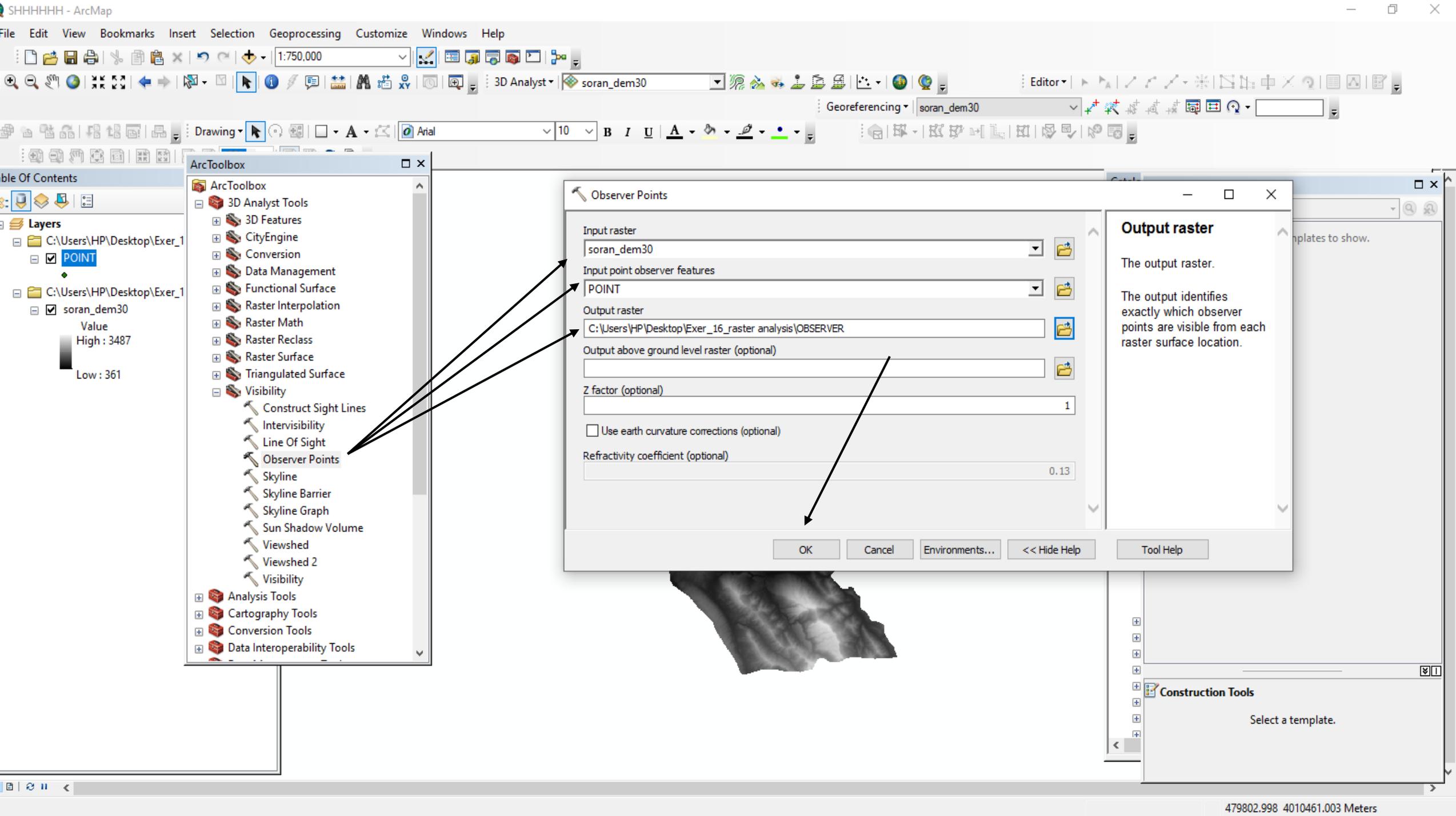
لە ARC TOOL BOX دا 3D دواتر visibility ههڵ ئەبژیرین ، لیڤه دا به دوجۆر دیاری ئەکهین یان به هیلّ یان به خالّ. لیڤه دا پیویستمان به دروستکردنی شهیپ فایل ئەبیت که پێشتر ئاماژەمان به شیوازی دروستکردنی داوه .



لیڤه‌دا ئه‌م هه‌نگاوانه ئه‌نجام ئه‌ده‌ین

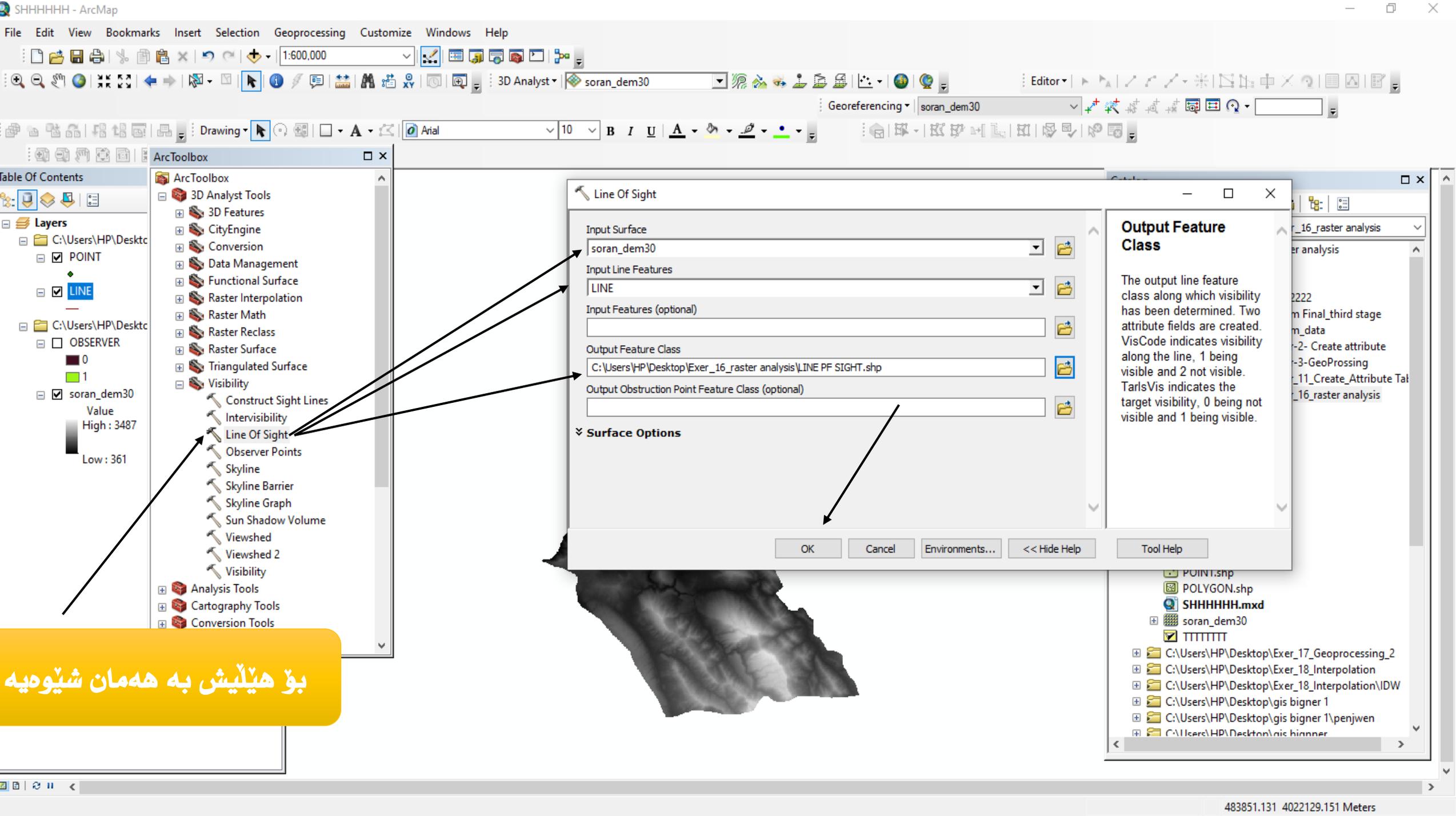
- ArcToolbox
  - 3D Analyst Tools
    - 3D Features
    - CityEngine
    - Conversion
    - Data Management
    - Functional Surface
    - Raster Interpolation
    - Raster Math
    - Raster Reclass
    - Raster Surface
    - Triangulated Surface
    - Visibility**
      - Construct Sight Lines
      - Intervisibility
      - Line Of Sight
      - Observer Points
      - Skyline
      - Skyline Barrier
      - Skyline Graph
      - Sun Shadow Volume
      - Viewshed
      - Viewshed 2
      - Visibility
  - Analysis Tools
  - Cartography Tools
  - Conversion Tools
  - Data Interoperability Tools

- Catalog
- Location: C:\Users\HP\Desktop\Exer\_16\_raster analysis
- Home - Desktop\Exer\_16\_raster analysis
  - Folder Connections
    - C:\Users\HP\Desktop
    - C:\Users\HP\Desktop\2222222
    - C:\Users\HP\Desktop\Exam\_Final\_third stage
    - C:\Users\HP\Desktop\exam\_data
    - C:\Users\HP\Desktop\Exer-2- Create attribute
    - C:\Users\HP\Desktop\Exer-3-GeoProcessing
    - C:\Users\HP\Desktop\Exer\_11\_Create\_Attribute Tal
    - C:\Users\HP\Desktop\Exer\_16\_raster analysis
      - 4444444
      - 66666
      - CLIPCONTOUR.shp
      - CONTOUR.shp
      - CREATR TIN
      - extract
      - hillshade
      - ITN
      - POLYGON.shp
      - SHHHHHH.mxd
      - soran\_dem30
      - TTTTTTTT
    - C:\Users\HP\Desktop\Exer\_17\_Geoprocessing\_2
    - C:\Users\HP\Desktop\Exer\_18\_Interpolation
    - C:\Users\HP\Desktop\Exer\_18\_Interpolation\IDW
    - C:\Users\HP\Desktop\gis bigner 1
    - C:\Users\HP\Desktop\gis bigner 1\penjwen
    - C:\Users\HP\Desktop\gis bigner
    - C:\Users\HP\Desktop\interpolation
    - C:\Users\HP\Desktop\interpolation\idw
    - C:\Users\HP\Desktop\m\_rehaz\sharull



بەم شۆۋەپەي ئەي بىنن  
رەنگە سەوزەكە ئەگەر  
بورجەكە لەم شوپنە بىت  
ئەو سبەكەكەي تەنھا لەو  
ناوچەپە ئەبىت





File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:600,000

3D Analyst sorandem30

Georeferencing sorandem30

Drawing Arial 10 B I U

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Layers

- C:\Users\HP\Desktop\POINT
- C:\Users\HP\Desktop\OBSERVER
- sorandem30
  - Value High: 3487 Low: 361

ArcToolbox

- 3D Analyst Tools
- 3D Features
- CityEngine
- Conversion
- Data Management
- Functional Surface
- Raster Interpolation
- Raster Math
- Raster Reclass
- Raster Surface
- Triangulated Surface
- Visibility
  - Construct Sight Lines
  - Intervisibility
  - Line Of Sight
  - Observer Points
  - Skyline
  - Skyline Barrier
  - Skyline Graph
  - Sun Shadow Volume
  - Viewshed
  - Viewshed 2
  - Visibility
- Analysis Tools
- Cartography Tools
- Conversion Tools

Line Of Sight

Input Surface: sorandem30

Input Line Features: LINE

Input Features (optional):

Output Feature Class: C:\Users\HP\Desktop\Exer\_16\_raster analysis\LINE PF SIGHT.shp

Output Obstruction Point Feature Class (optional):

Surface Options

Output Feature Class

The output line feature class along which visibility has been determined. Two attribute fields are created. VisCode indicates visibility along the line, 1 being visible and 2 not visible. TarlsVis indicates the target visibility, 0 being not visible and 1 being visible.

OK Cancel Environments... << Hide Help Tool Help

POINT.shp

POLYGON.shp

SHHHHHH.mxd

sorandem30

TTTTTTT

C:\Users\HP\Desktop\Exer\_17\_Geoprocessing\_2

C:\Users\HP\Desktop\Exer\_18\_Interpolation

C:\Users\HP\Desktop\Exer\_18\_Interpolation\IDW

C:\Users\HP\Desktop\gis bigner 1

C:\Users\HP\Desktop\gis bigner 1\penjwen

C:\Users\HP\Desktop\gis bigner

بۇ ھېلىش بە ھەمان شېۋەيە

483851.131 4022129.151 Meters

وہك ئه‌بینین ته‌نہا ئه‌و به‌شہی  
رہنگی سه‌وزہ شہ‌به‌كہی باشہ

