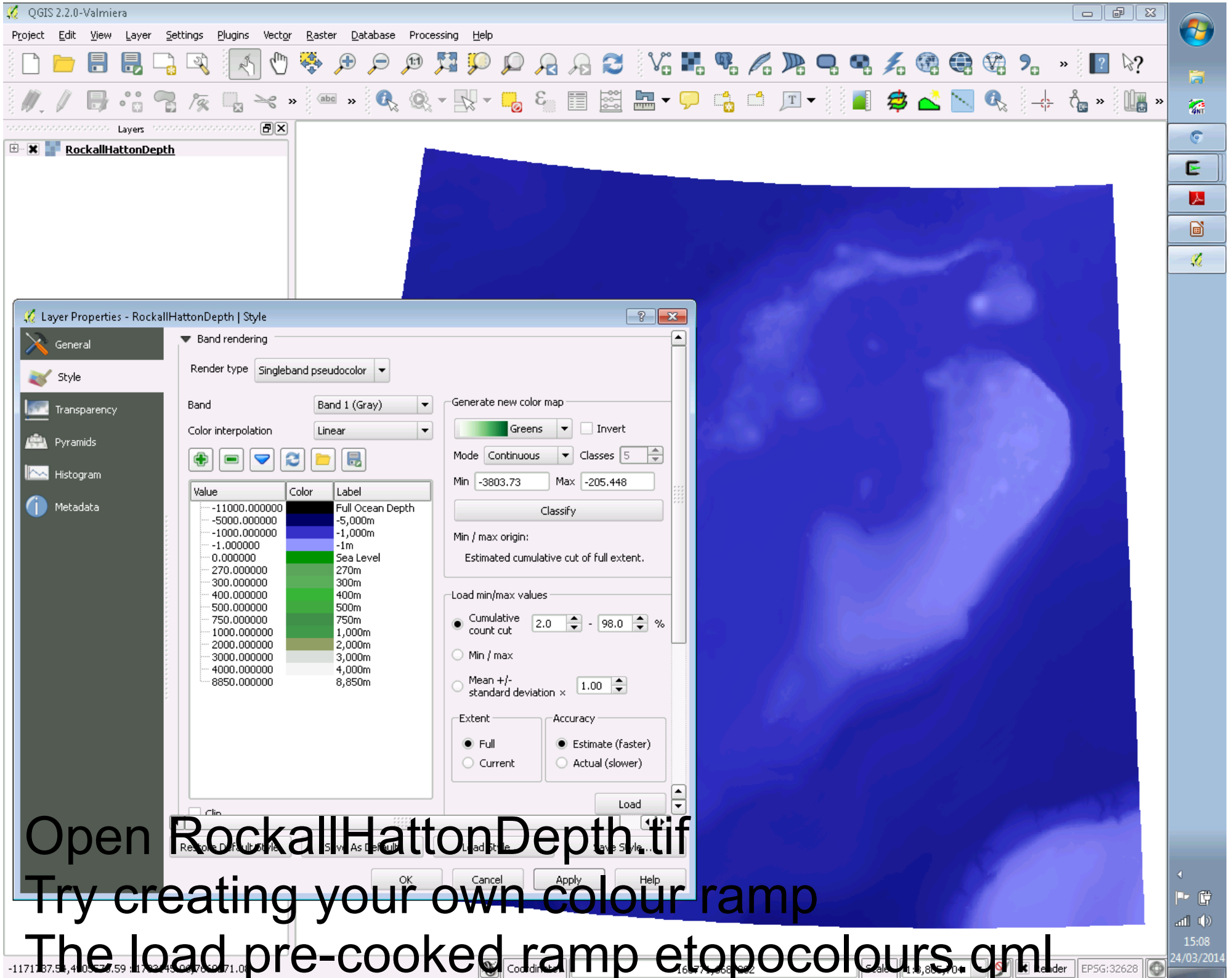
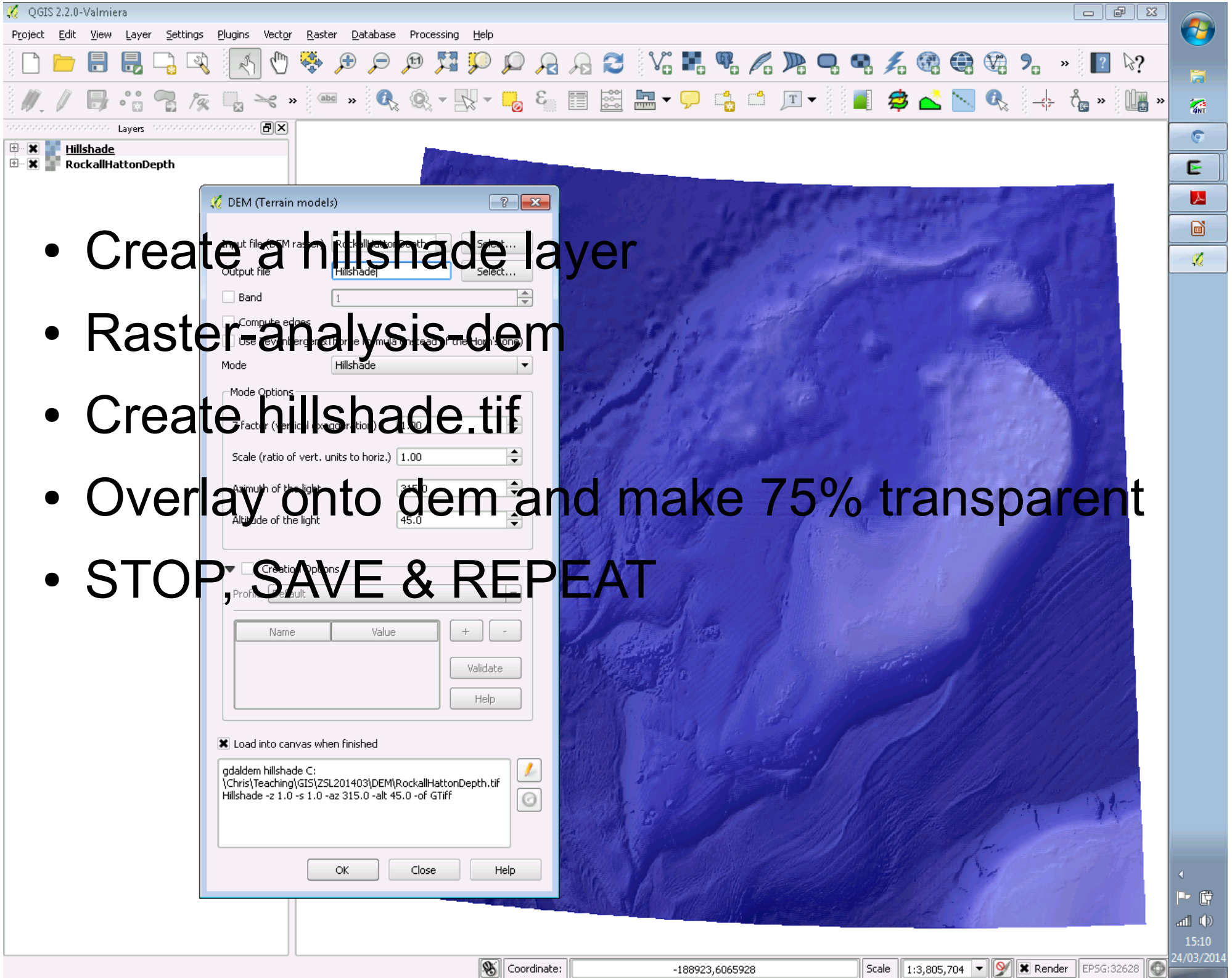
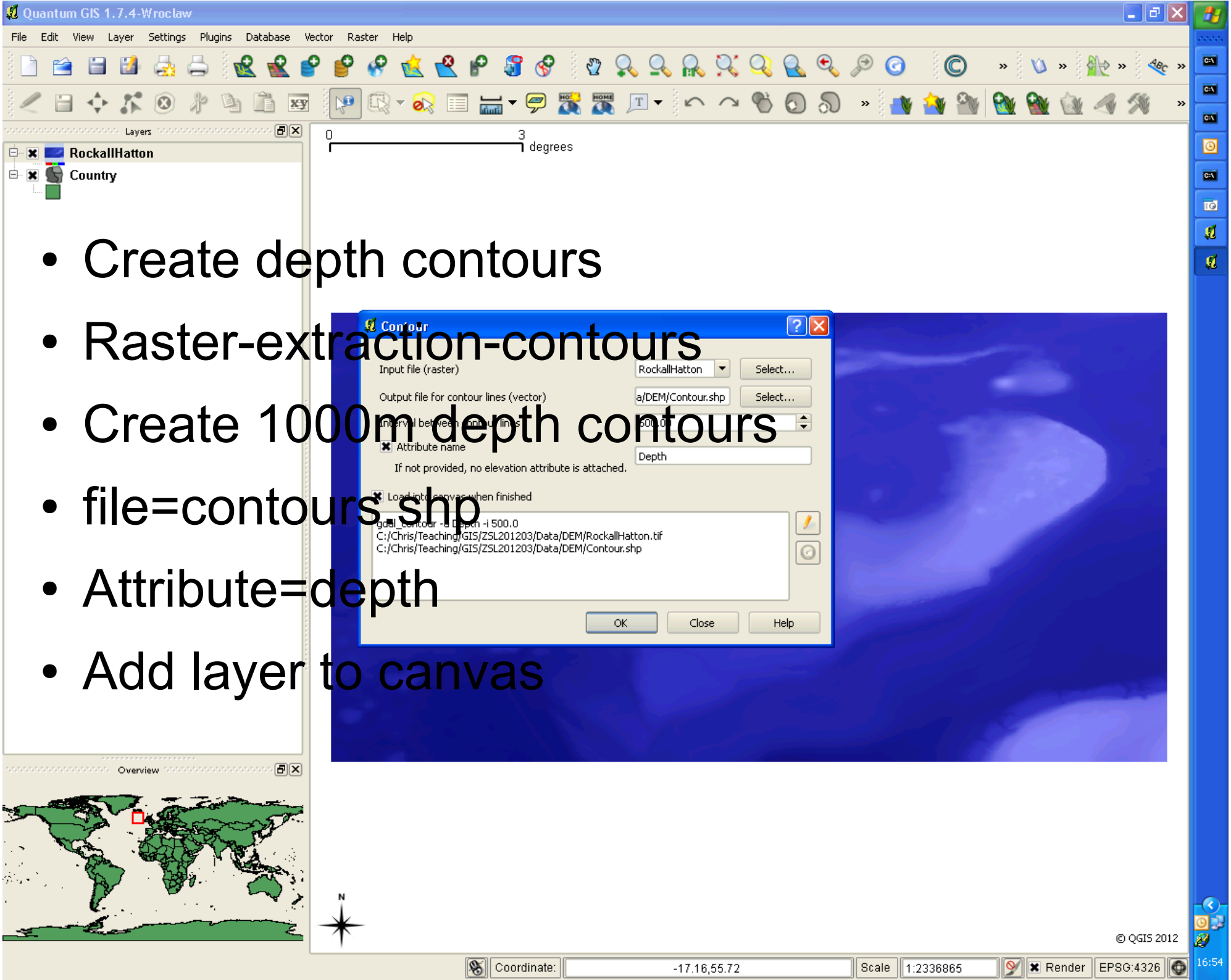

QGIS 2.2.0-Valmiera
Project Edit View Layer Settings Plugins Vector Raster Database Processing Help
Layers
RockallHattonDepth
Layer Properties - RockallHattonDepth | Style
General
Style
Transparency
Pyramids
Histogram
Metadata
Band rendering
Render type Singleband pseudocolor
Band Band 1 (Gray)
Color interpolation Linear
Value Color Label
-11000.000000 Full Ocean Depth
-5000.000000 -5,000m
-1000.000000 -1,000m
-1.000000 -1m
0.000000 Sea Level
270.000000 270m
300.000000 300m
400.000000 400m
500.000000 500m
750.000000 750m
1000.000000 1,000m
2000.000000 2,000m
3000.000000 3,000m
4000.000000 4,000m
8850.000000 8,850m
Generate new color map
Greens
Invert
Mode Continuous
Classes 5
Min -3803.73
Max -205.448
Classify
Min / max origin:
Estimated cumulative cut of full extent.
Load min/max values
Cumulative count cut 2.0 - 98.0 %
Min / max
Mean +/- standard deviation × 1.00
Extent
Full
Current
Accuracy
Estimate (faster)
Actual (slower)
Load
Clip
Restore Default Style
Save As Default
Load Style
Save Style...
OK
Cancel
Apply
Help
Open RockallHattonDepth.tif
Try creating your own colour ramp
The load pre-cooked ramp etopocolours.qml
EPSG:32628
15:08
24/03/2014



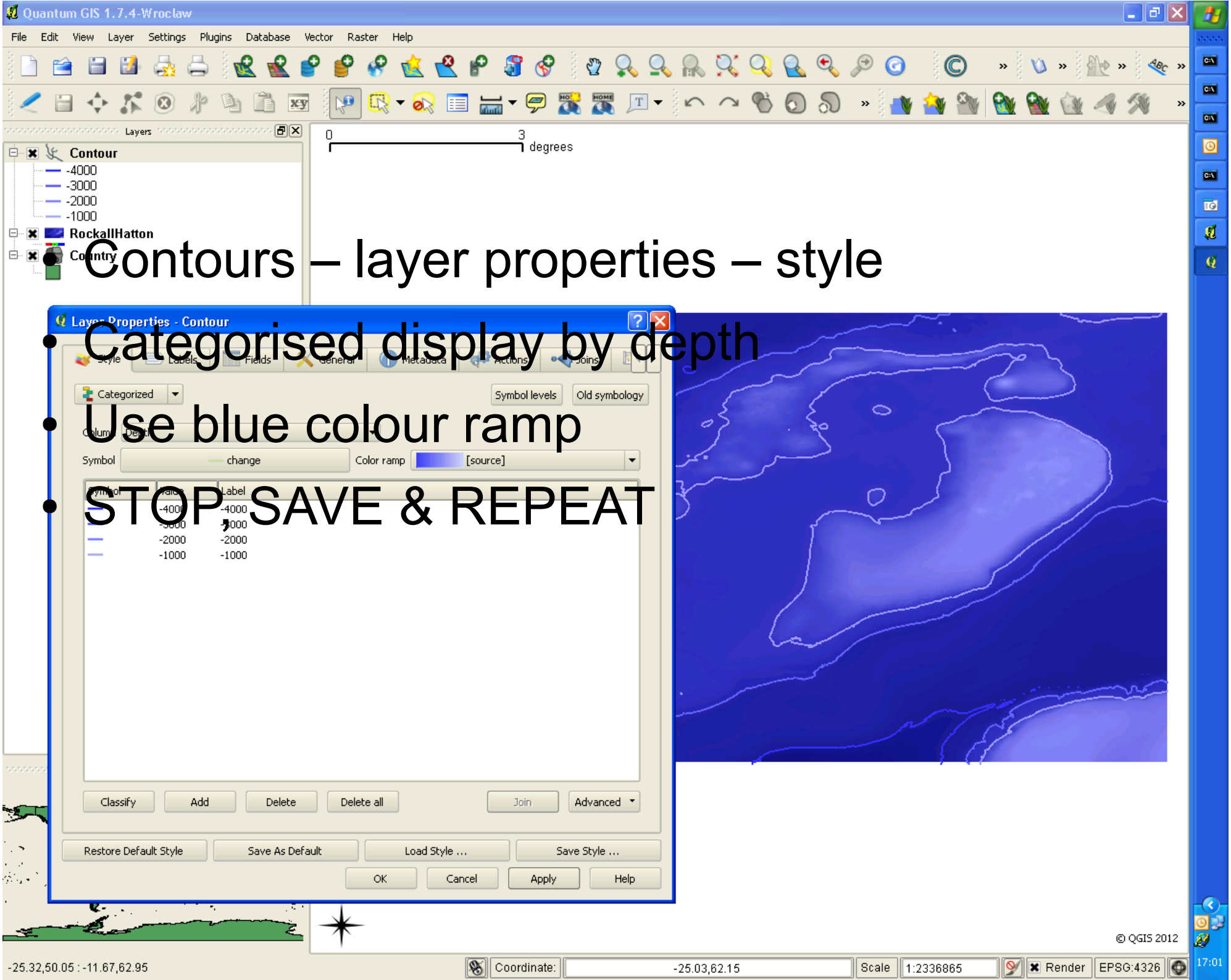

- Create a hillshade layer
- Raster-analysis-dem
- Create hillshade.tif
- Overlay onto dem and make 75% transparent
- STOP, SAVE & REPEAT

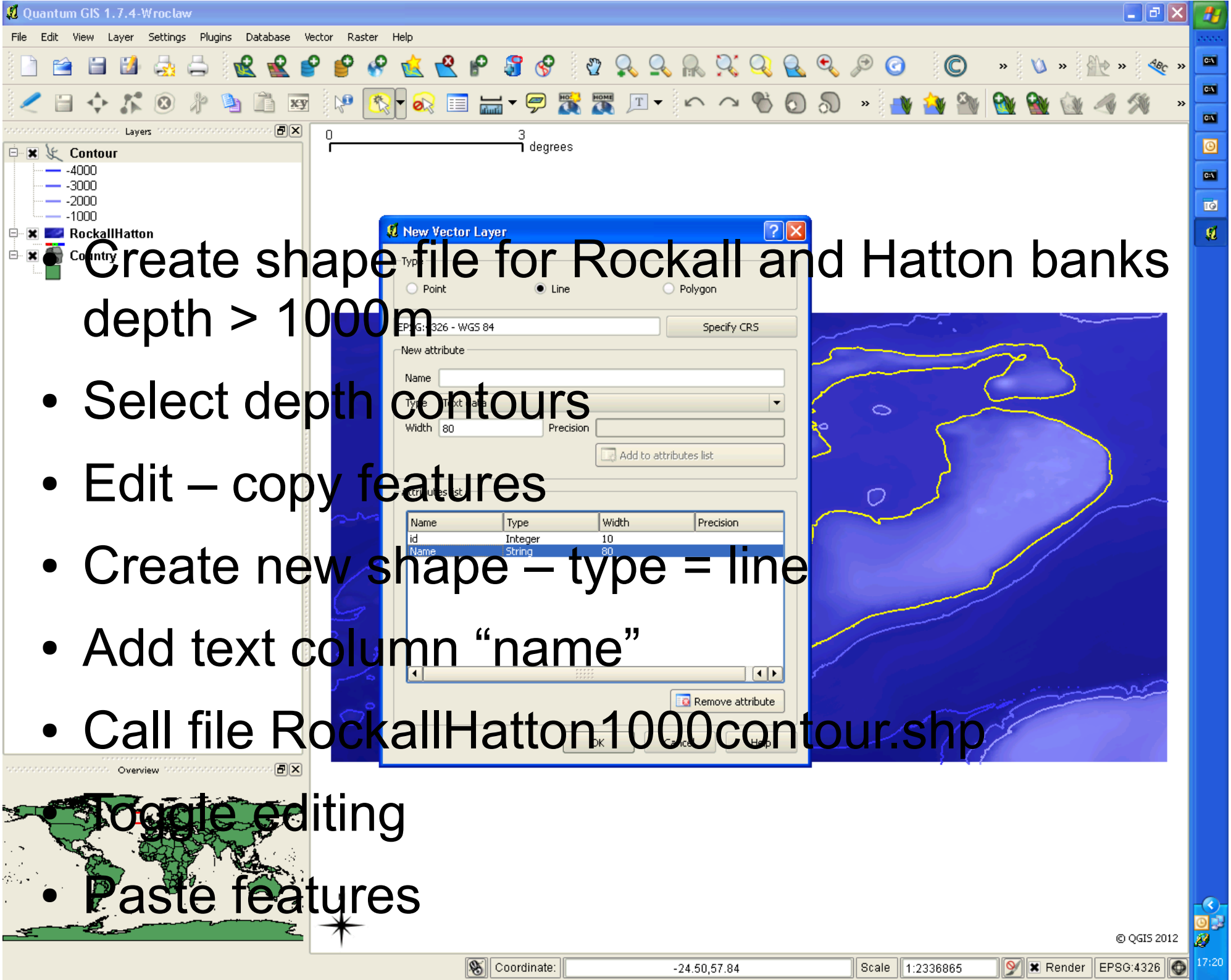



- Create depth contours
- Raster-extraction-contours
- Create 1000m depth contours
- file=contours.shp
- Attribute=depth
- Add layer to canvas

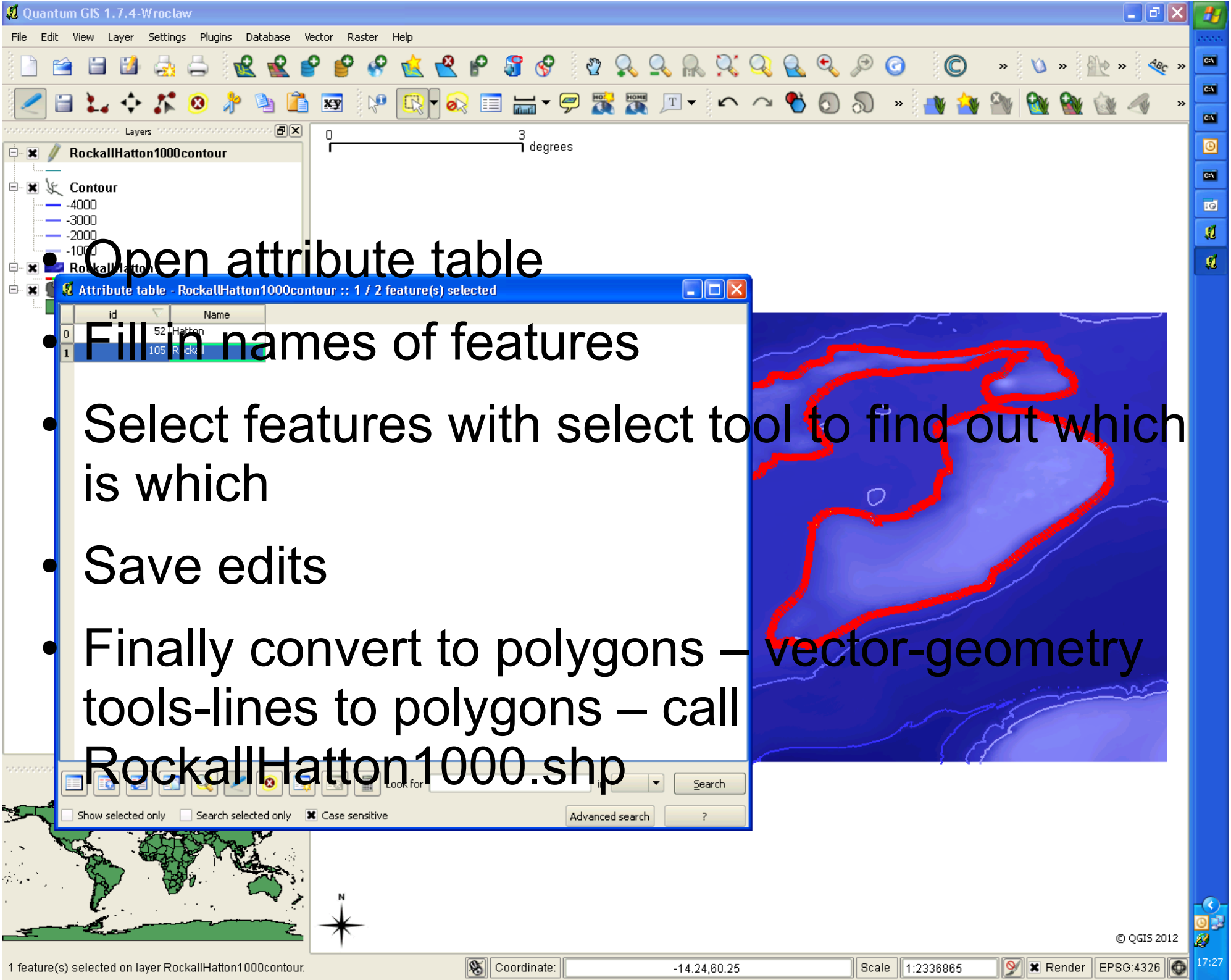
# Contours – layer properties – style

- Categorised display by depth
- Use blue colour ramp
- STOP SAVE & REPEAT

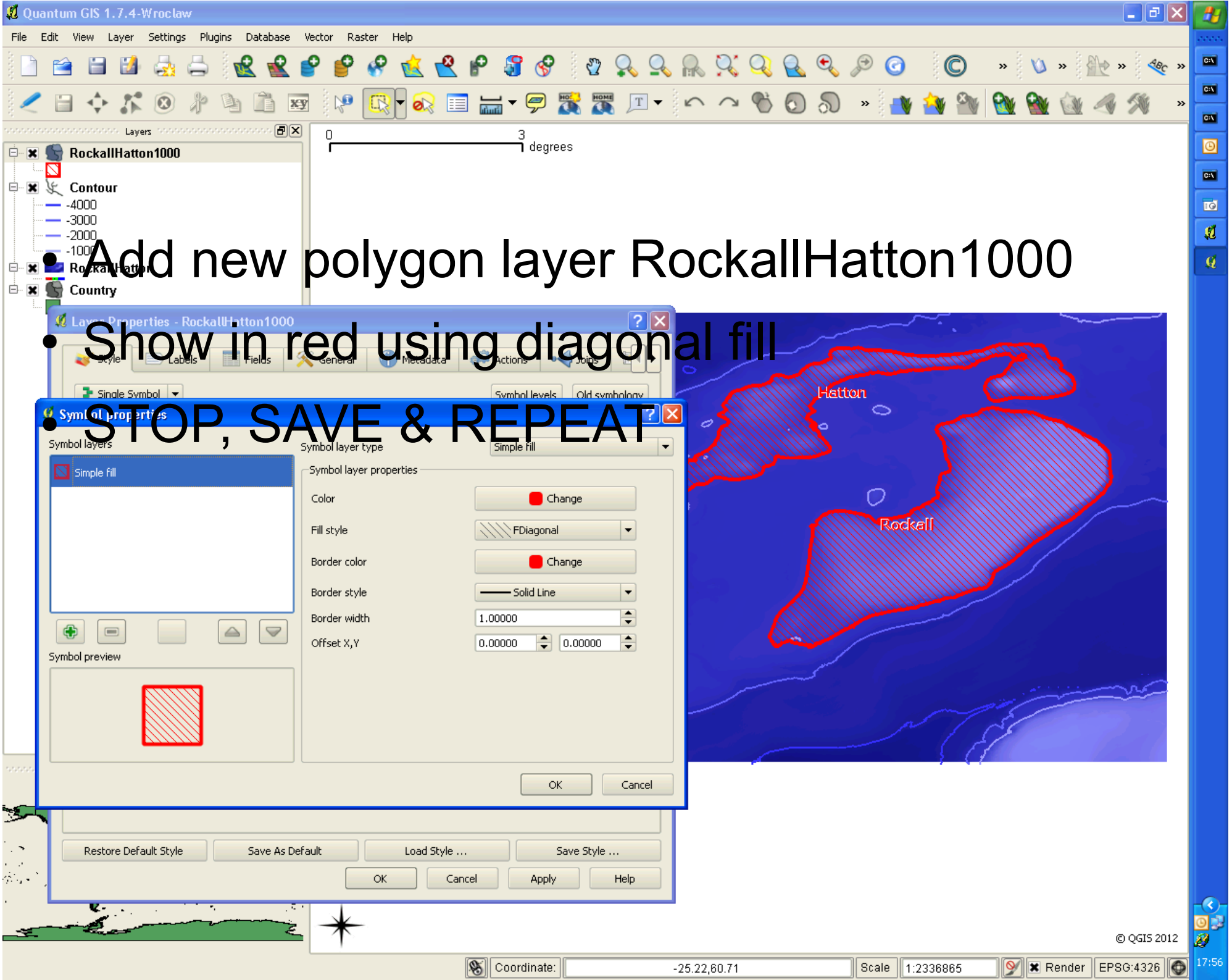




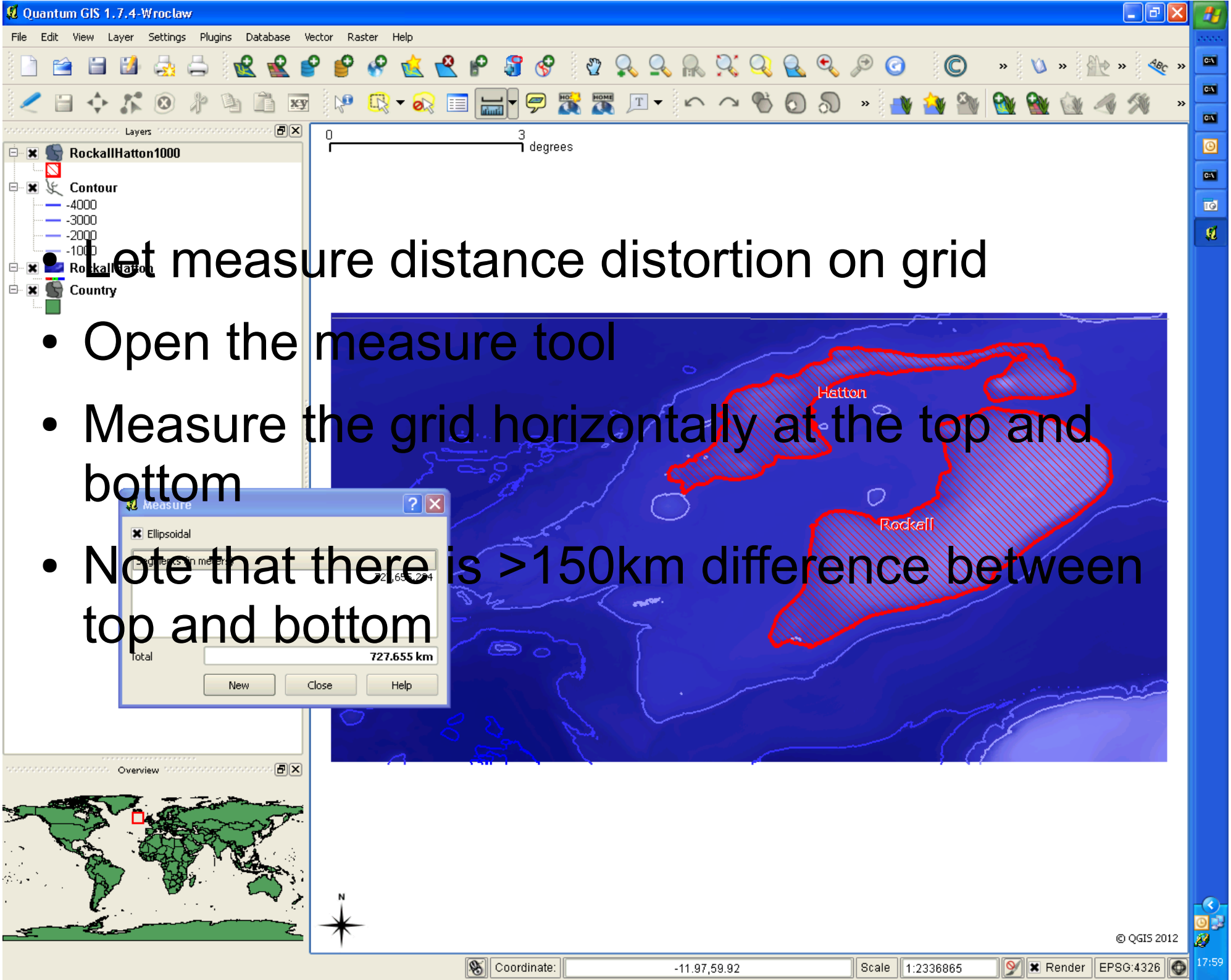

- Create shape file for Rockall and Hatton banks depth > 1000m
- Select depth contours
- Edit – copy features
- Create new shape – type = line
- Add text column “name”
- Call file RockallHatton1000contour.shp
- Toggle editing
- Paste features

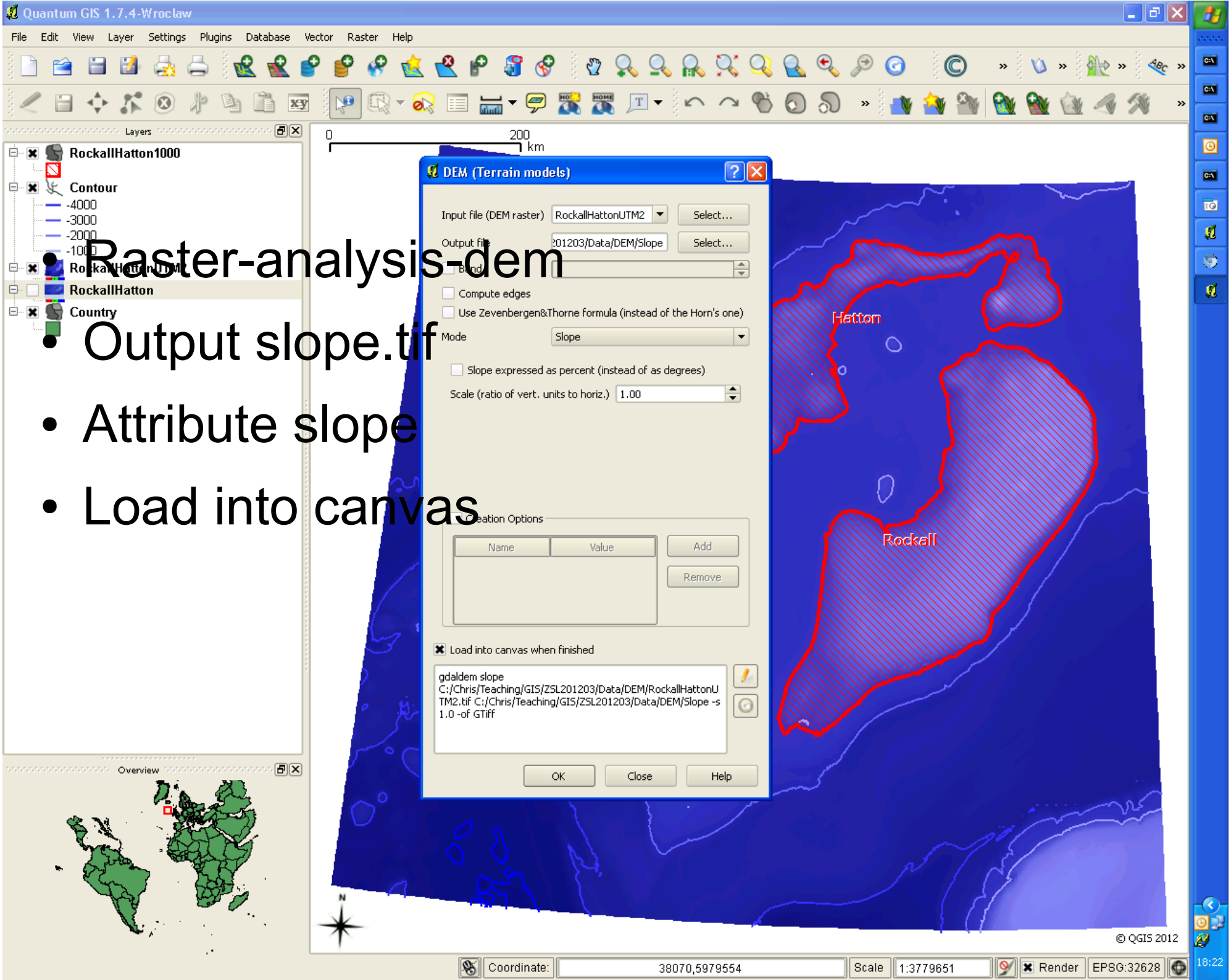



- Open attribute table
- Fill in names of features
- Select features with select tool to find out which is which
- Save edits
- Finally convert to polygons – vector-geometry tools-lines to polygons – call RockallHatton1000.shp

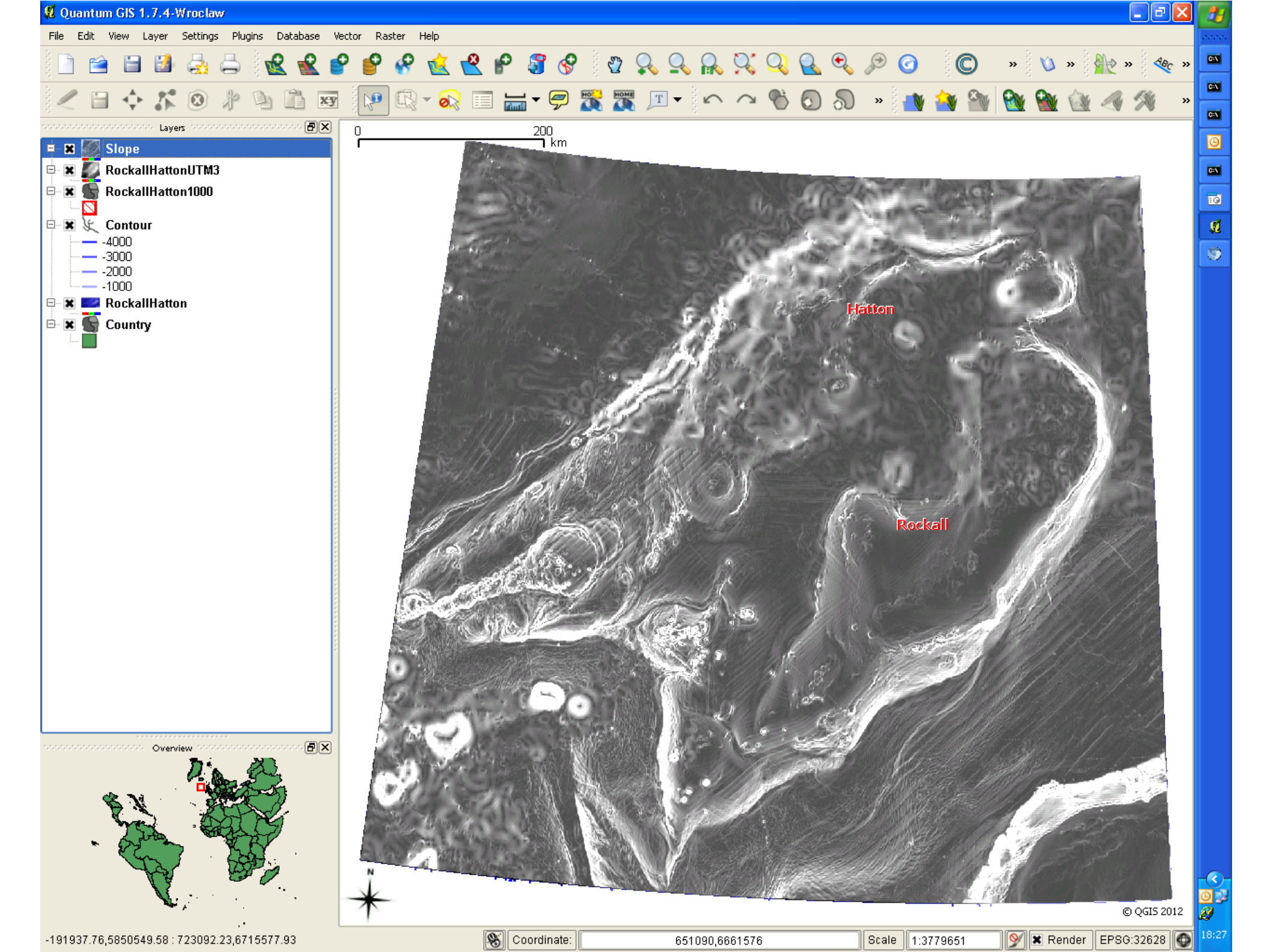


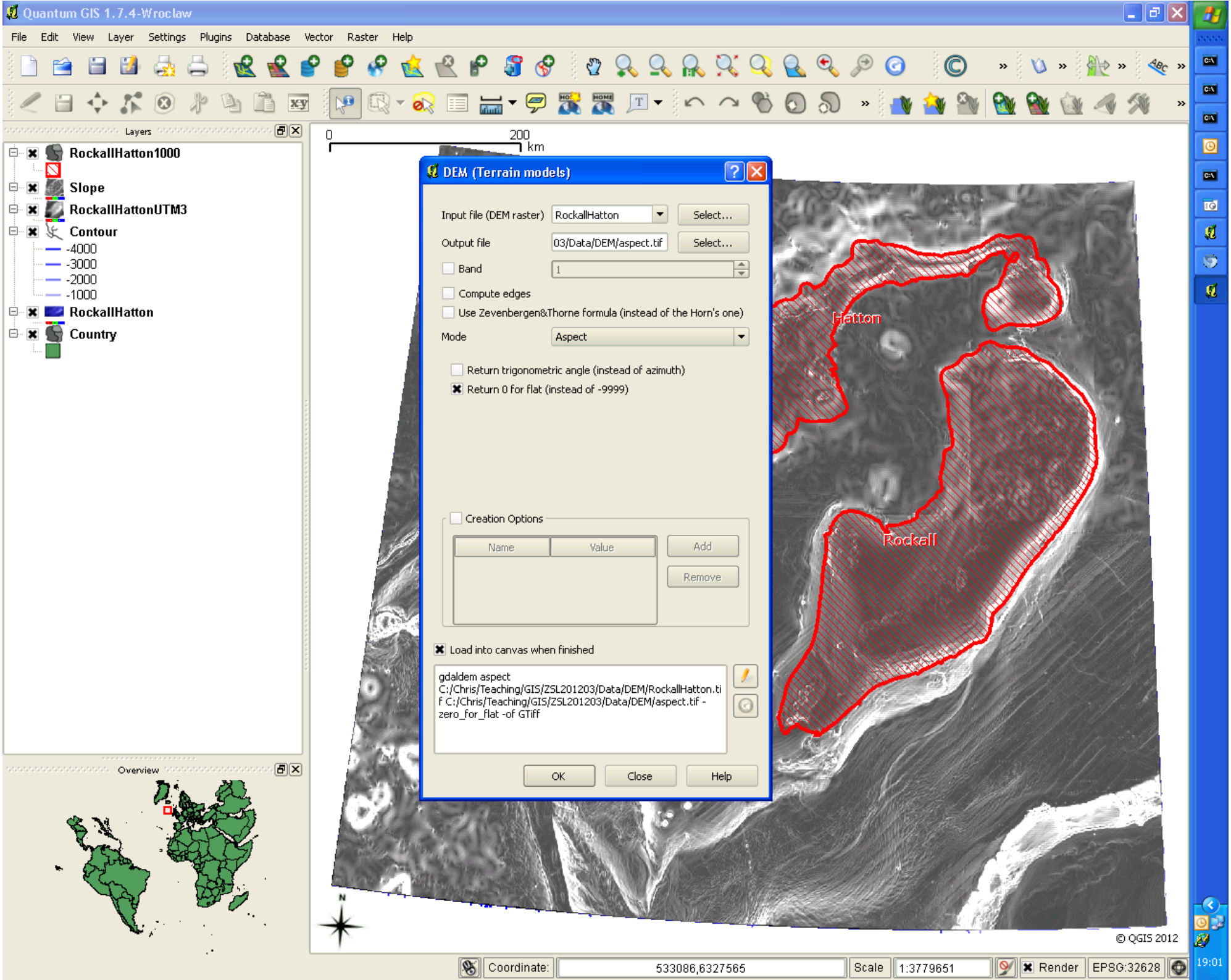

- Add new polygon layer RockallHatton1000
- Show in red using diagonal fill
- STOP, SAVE & REPEAT

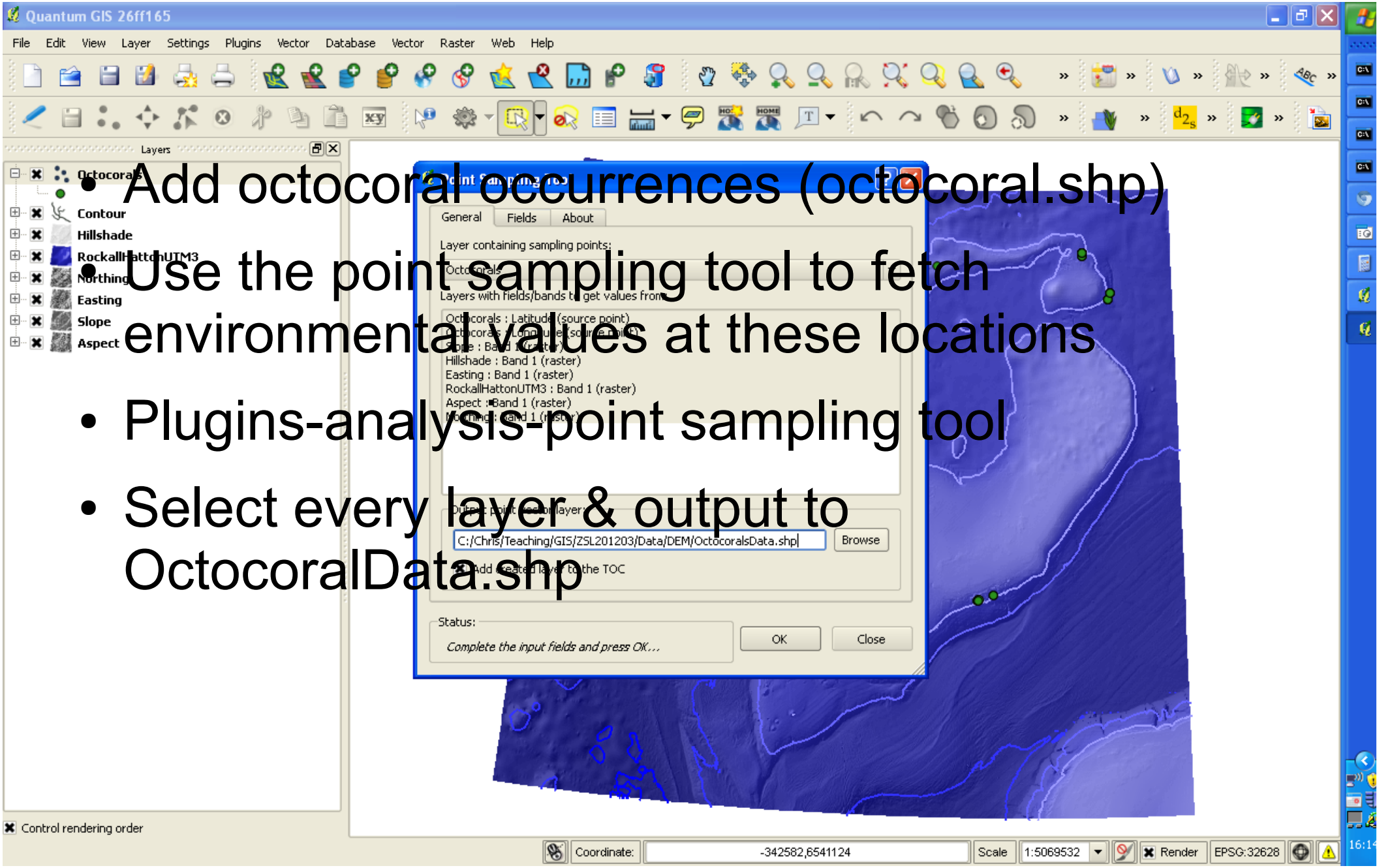

Quantum GIS 1.7.4-Wroclaw
File Edit View Layer Settings Plugins Database Vector Raster Help
Layers
RockallHatton1000
Contour
-4000
-3000
-2000
-1000
Country
0
3
degrees
Let measure distance distortion on grid
Open the measure tool
Measure the grid horizontally at the top and bottom
Note that there is >150km difference between top and bottom
Measure
Ellipsoidal
Total
727.655 km
New
Close
Help
Hatton
Rockall
Overview
N
© QGIS 2012
Coordinate:
-11.97,59.92
Scale
1:2336865
Render
EPSG:4326
17:59



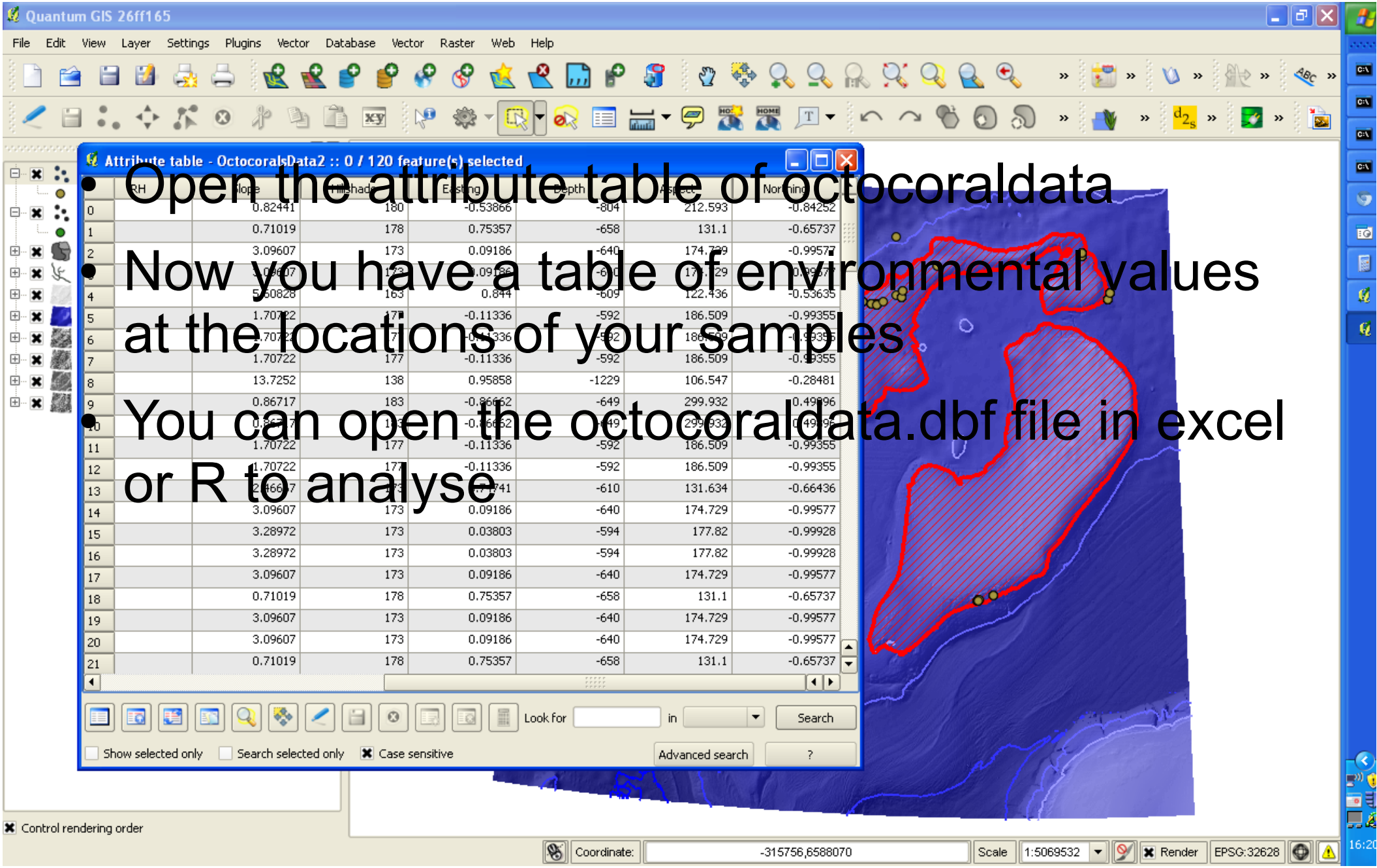

- Raster-analysis-dem
- Output slope.tif
- Attribute slope
- Load into canvas


Quantum GIS 1.7.4-Wroclaw
File Edit View Layer Settings Plugins Database Vector Raster Help
Layers
Slope
RockallHattonUTM3
RockallHatton1000
Contour
-4000
-3000
-2000
-1000
RockallHatton
Country
Overview
0
200
km
Hatton
Rockall
N
© QGIS 2012
-191937.76,5850549.58 : 723092.23,6715577.93
Coordinate:
651090,6661576
Scale
1:3779651
Render
EPSG:32628
18:27


Quantum GIS 1.7.4-Wroclaw
File Edit View Layer Settings Plugins Database Vector Raster Help
Layers
RockallHatton1000
Slope
RockallHattonUTM3
Contour
-4000
-3000
-2000
-1000
RockallHatton
Country
Overview
0
200
km
DEM (Terrain models)
Input file (DEM raster)
RockallHatton
Select...
Output file
03/Data/DEM/aspect.tif
Select...
Band
1
Compute edges
Use Zevenbergen&Thorne formula (instead of the Horn's one)
Mode
Aspect
Return trigonometric angle (instead of azimuth)
Return 0 for flat (instead of -9999)
Creation Options
Name
Value
Add
Remove
Load into canvas when finished
gdaldem aspect C:/Chris/Teaching/GIS/ZSL201203/Data/DEM/RockallHatton.tif C:/Chris/Teaching/GIS/ZSL201203/Data/DEM/aspect.tif -zero_for_flat -of GTiff
OK
Close
Help
Hatton
Rockall
© QGIS 2012
Coordinate:
533086,6327565
Scale
1:3779651
Render
EPSG:32628
19:01




- Add octocoral occurrences (octocoral.shp)
- Use the point sampling tool to fetch environmental values at these locations
- Plugins-analysis-point sampling tool
- Select every layer & output to OctocoralData.shp




- Open the attribute table of octocoraldata
- Now you have a table of environmental values at the locations of your samples
- You can open the octocoraldata.dbf file in excel or R to analyse

# A Challenge

- Try looking at a DEM of your favourite region
- Download 1 degree squares from the srtm3 grid (3 arc seconds grid) http://dds.cr.usgs.gov/srtm/version2_1/ (find site by googling “dds srtm”)
- Load DEM, colour, create hillshade and elevation contours
- Isle of wight as an example

http://dds.cr.usgs.gov/srtm/version2_1/SRTM3/Eurasia/N50W002.hgt.zip