

## Introductory Fault Mapping Exercise Part 2

**Motivation:** The purpose of this exercise is to test the students' knowledge and experience with identifying faults from aerial imagery and hillshades prior to any material introduced in the course. Students will not receive a grade, rather the activity is for the instructors to establish a base level of understanding of the students before and after the course.

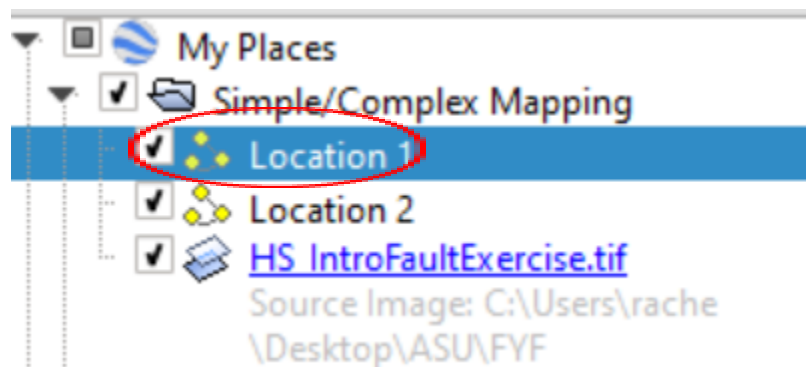
**Instructions:** Make sure Google Earth is downloaded and installed on your computer before class. Instructions to download the software can be found on <https://www.google.com/earth/download/gep/agree.html?hl=en-GB>.

*We expect you to identify linear features which are indicative of earthquake ground rupture in the past. These would be potentially active faults. Mark all feature(s) which you suspect may be active.*

*This exercise should only take 30 minutes and will be done outside of class meeting time.*

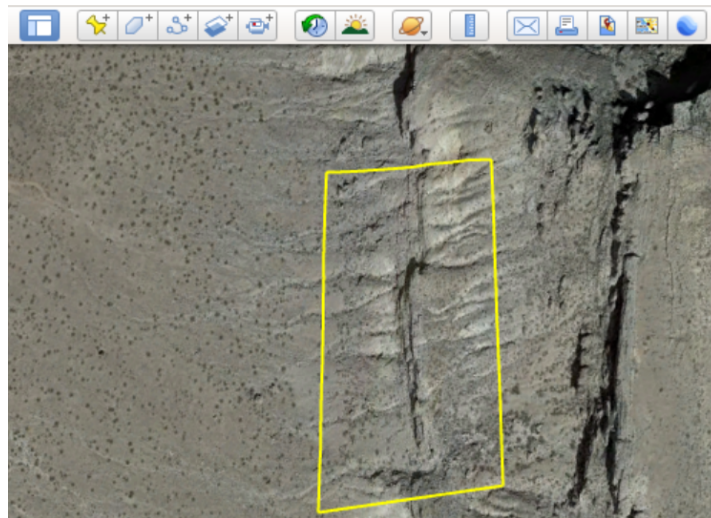
### Part I - 15 minutes

Download the .kmz file from the course website named 'Intro\_Fault\_Assignment' and load it into Google Earth. This file includes two locations to draw a fault line. Once downloading the folder into Google Earth, the left panel should appear like this:

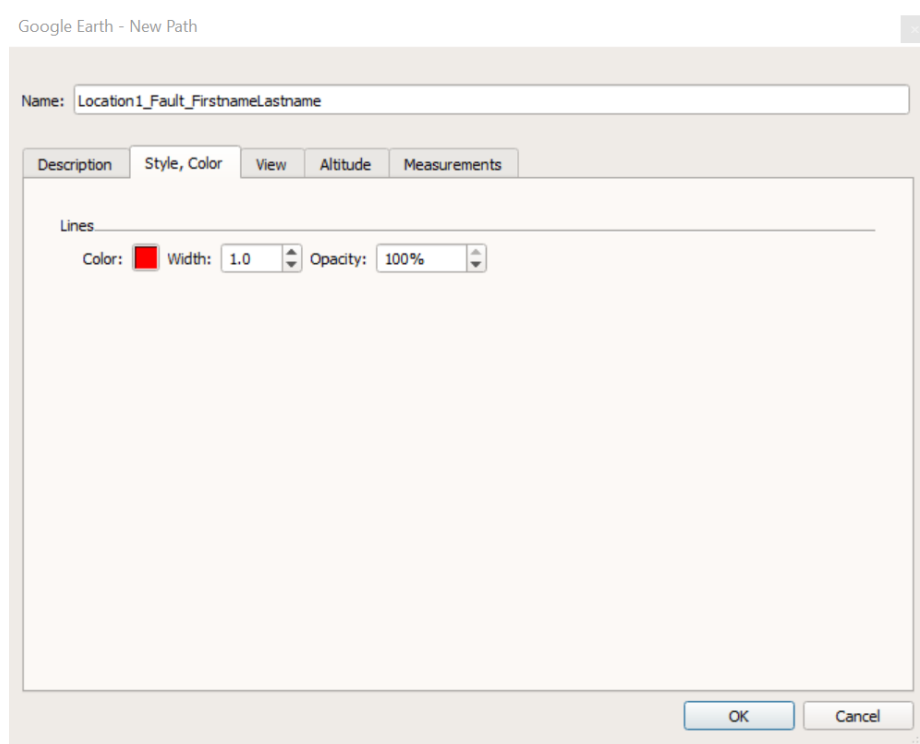


Once the folder is correctly opened, double-click on Location 1 to bring you to the first area where you will map a fault trace. The area should look like this when zoomed in and centered:

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To map the fault or faults that you observe, click the 'Add Path' button located at the top toolbar as circled in the above figure. Before mapping the fault, label the path 'Location1\_Fault\_FirstnameLastname' and change the color of the line to red as shown below.



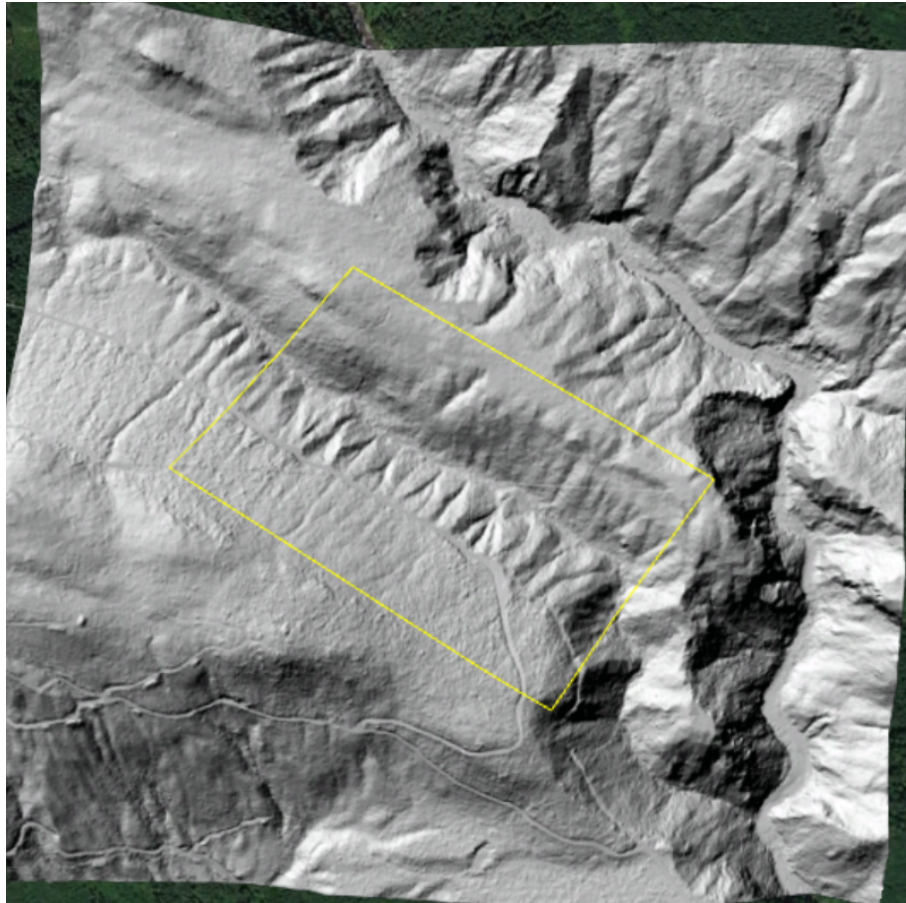
You must move the window over and map the fault line before clicking 'OK.' Otherwise, the window will disappear and close the path line before it is drawn. Once you are confident with the path drawn, click 'OK' and the line will save.

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### Part 2 - 15 Minutes

You will do the same process for Location 2 as you did with Location 1. This location is displayed as a rendered hillshade from a Digital Terrain Model (DTM). These data will already be included in the .kmz file. This dataset will display the surface without vegetation that often obscures the ground surface and evidence of faulting. We will work with these data types and other similar ones (DSM, Slope shade, lidar) throughout the course.

Once you double-click 'Location 2' you should see the following imagery:



Create a path with the label 'Location2\_Fault\_FirstnameLastname'.

**Deliverable:** Save the folder as a .kmz file and email it to Rachel Adam ([rnadam@asu.edu](mailto:rnadam@asu.edu))