# Bloody Canyon Moraines: Geomorphology

## Materials:

printed base map (topographic and aerial image), tracing paper, GPS (optional), colored pencils, rock hammer, hand lens, pencil/eraser, mapboard, rulers, Brunton

## Goals:

Mapping only (could combine with Ecology part)

1. Learn how to identify glacial geomorphic landforms in the field and in remote imagery and represent them on a geomorphic map.
2. Practice relative dating techniques in order to determine order of events
3. Develop a method for recording data in the field
4. Make connections between age of geomorphic feature/soils and vegetation(?)

## Activity:

Modified original activity “Walker Lake Moraine Mapping” in drive.

Will collect the following field data:

1)   mapping by inspection/cross-cutting relationships (sit and draw/change vantage points, compare between remote data and live views)

2)   “ping test” of boulders with hammers (and one Schmidt hammer)

3)   lichenometry of boulders

4)   soil and rock weathering descriptions

5)   moraine topographic profile (diffusion): either draw a topographic profile across each from map or using ArcGIS at end of day together.

## To discuss as a class:

1)   How do data collected from each field group compare?

2) What kind of statistical analyses can we/should we do with these data?

2) Absolute dating methods to produce a “glacial geochronology” for a region - why do we care?

## Turn In:

1)   Results: Completed map (geomorphic features mapped in designated field are – aerial image coverage) with all components

2)   Results: Data table with field observations and basic analysis

3)   Interpretation: Timeline and drawing of events shaping valley (with narrative caption)