

Geologic Field Methods

Basic learning guide #2

Test 2 – Wednesday, Oct. 21 approx. 75 points

Logistics: Closed book test (multiple choice, short answer), it is possible you may have access to your fieldbook during part of the test. I may ask you any question from content cover since the first test, if you are comfortable with the content below you should do very well.

Topics and chapters covered

1. Sedimentary settings and structures, Ch. 6
2. Graphic logs for sedimentary (clastic and chemical) stratigraphy, Ch. 6
3. Igneous settings and recording, Ch. 7
4. Recording structural geology, Ch. 8
5. I could potentially request that you also apply any content from Unit1/Test 1 as well, field geology is cumulative. Ch. 1, 2, 3, 4, 12, 13

Content

1. Sedimentary settings and structures
 - a. Hand sample description and rock name (clastic ternary diagrams or both Dunham and Folk classification schemes)
 - b. Importance and value of sedimentary data.
 - c. Variables associated with identifying and interpreting sedimentary structures
 - d. Ability to identify basic sedimentary structures as well as interpret their associated environments.
 - e. Walther's law and its importance to understanding depositional environments
2. Graphic logs for sedimentary (clastic and chemical) stratigraphy
 - a. Basic understanding of the various stratigraphy types, their construction and importance/use interpreting depositional environments and geologic history.
 - b. Ability to discuss sedimentary textures and scales
 - c. Steps to making a proper graphic log
 - d. Differences and similarities between field and office graphic logs
 - e. Table 6.5 sedimentary processes/features and their possible environments.
3. Igneous settings and recording
 - a. Importance of igneous mapping and interpretation
 - b. Understanding of Igneous textures, and how they are applied to interpretation
 - c. Relative and absolute age dating, using Igneous rocks
 - d. Landscape clues to unexposed contacts
 - e. Igneous rock names and proper hand sample descriptions
4. Recording structural geology
 - a. Understanding of common geologic structures, their symbols & importance toward geologic history.
 - b. Be able to discuss differences between Stress and Strain, Brittle vs Ductile processes and products.
 - c. Table 8.2, Landscape clues to the presence of faults
 - d. Table 8.3, Be able to link common tectonic fabrics to their settings, processes and field clues.
 - e. Development of folds and their analysis.