


Increasing the Effectiveness of Undergraduate Field Camp Through the Integration of Preparatory Courses

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Field Camp 2005



Introduction to Field Methods 2005

The traditional field camp experience for undergraduate students has been paired down to a five week interval, leaving little time to accomplish the dual tasks of training in field methods and completion of a major, independent project. To increase efficiency and provide students with more time to concentrate on field efforts, the geology program at BYU-Idaho has integrated four courses; Introduction to Field Geology, Sedimentation and Stratigraphy, Structural Geology, and Advanced Field Methods (field camp). Students, therefore, become familiar with methodology, proper report-writing format, and the general geology of their project areas prior to the beginning of the camp. This presentation demonstrates how these courses can be linked to enhance the effectiveness of field camp for undergraduate students.

INTRODUCTION TO FIELD GEOLOGY

Introduction to Field Geology is taken just prior to the beginning of the Fall Semester of the Junior year. This course consists of a week-long trip through parts of Idaho and Wyoming and is used to introduce students to field methods; such as note taking, rock body description, measurement of stratigraphic sections, and illustration of relationships between stratigraphic units and geological structures. The trip also provides an opportunity for students to visit classic geological features and localities.



Measuring stratigraphic sections with a Jacob's staff



Detailed description of rock bodies

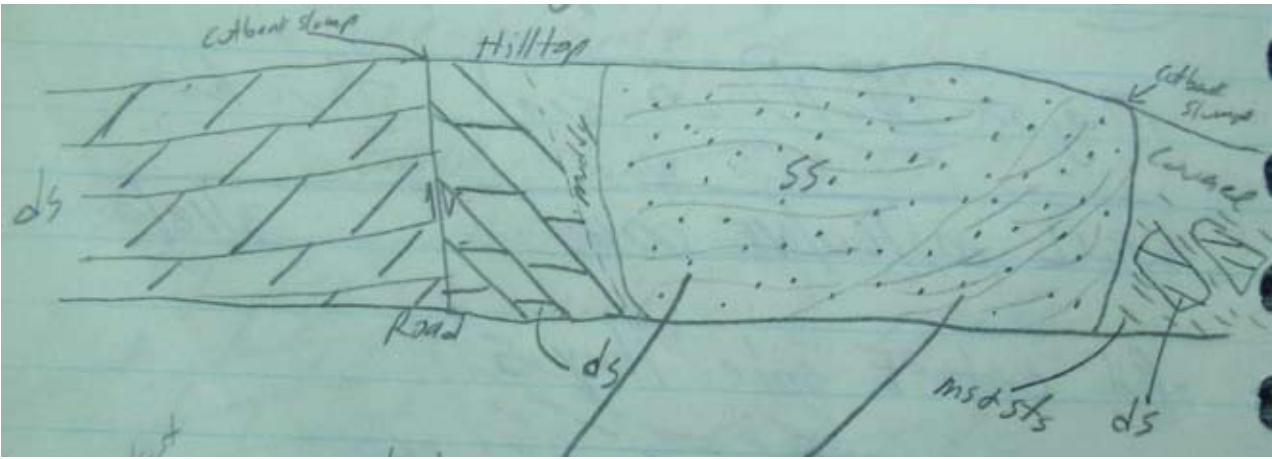


Illustration of complex relationships



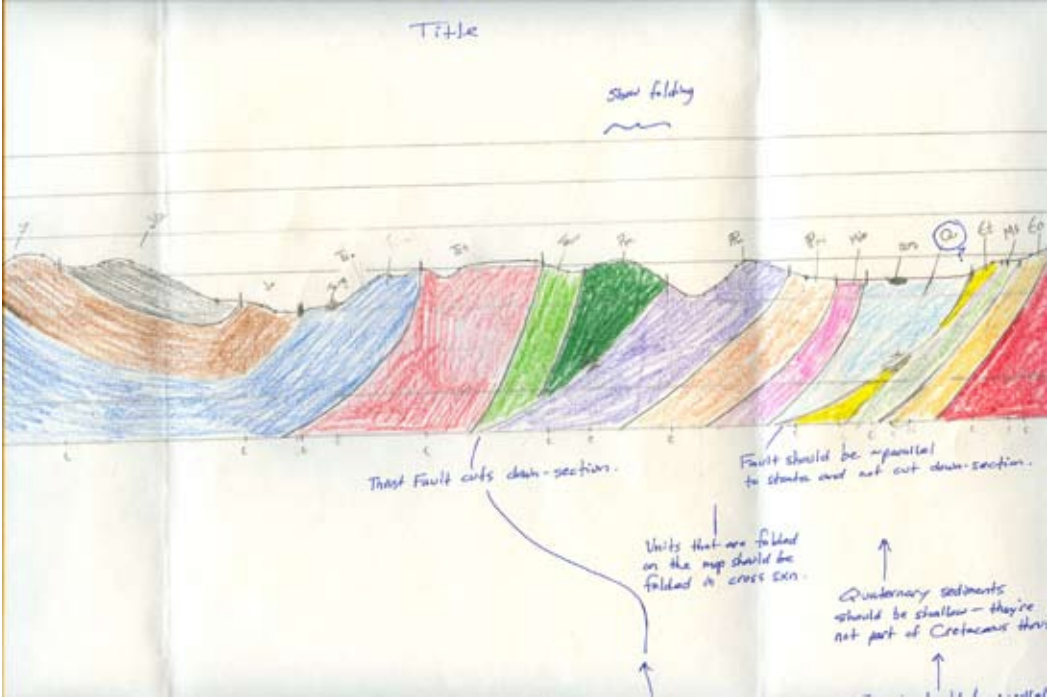
Visiting classic sites ("The Great Unconformity")

SEDIMENTOLOGY/STRATIGRAPHY AND STRUCTURAL GEOLOGY

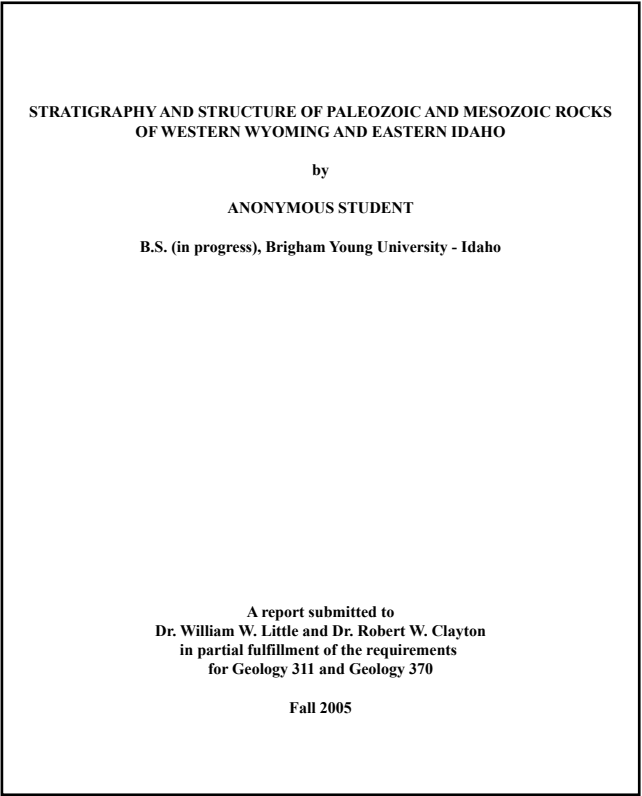
The sedimentology/stratigraphy and structural geology courses are taken concurrently during the Fall Semester of the Junior year and are taught by the same instructors who conducted the Introductory to Field Geology (IFG) course. Samples collected during the IFG trip are used with student notes, drawings, and photographs as the foundation for many class discussions and for laboratory exercises. These are combined with a literature review to write a geologic summary and interpretation of the area visited during the IFG trip. The report is submitted jointly in both the sed/strat and structural geology courses.



Samples collected during the IFG trip are used in sed/strat exercises on facies analysis and recognition of depositional environments.



In structural geology, cross-sections are drawn through localities visited during the IFG trip



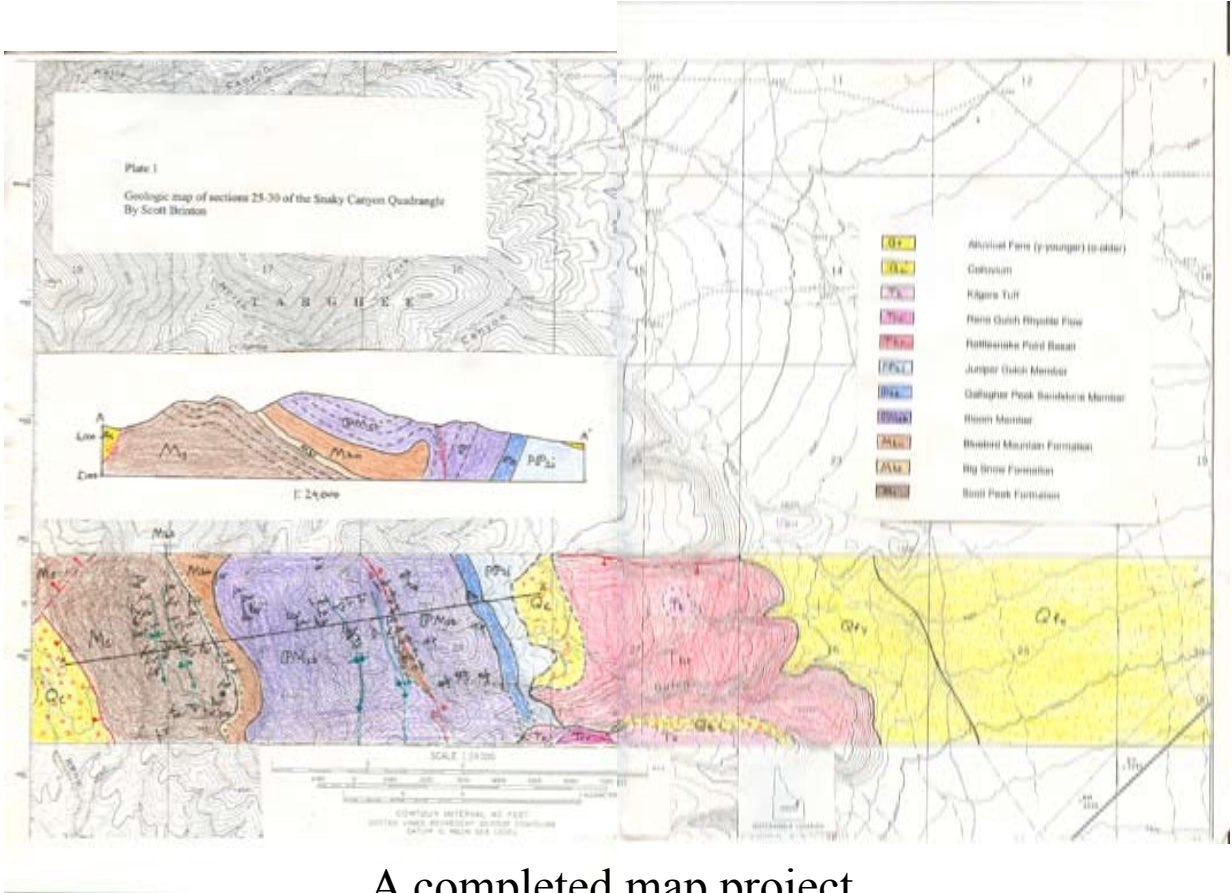
A final report is written and submitted jointly for both the sed/strat and structural geology courses. Much of the data for this report comes from work completed during the IFG trip.

ADVANCED FIELD METHODS (FIELD CAMP)

The primary objective of field camp is to assure that students are capable of completing an independent field project. In some cases, a project is expanded afterward into a senior thesis that focuses on a specific problem identified during the camp, with results presented at a professional meeting. By conducting most of the training and introducing students to area stratigraphy and structure during the introductory field geology, sedimentology/stratigraphy and structural geology courses, more time is available to students for work on their project during the five weeks of camp. Final projects include maps, cross-sections, measured sections, and a geologic report.



Students involved in geologic mapping during field camp.



A completed map project.



Finished at last.