# A DECADE OF GEOL 210 IN CALIFORNIA: TEACHING INTRODUCTORY FIELD METHODS TO NEW GEOSCIENCE MAJORS AT CENTRAL WASHINGTON UNIVERSITY

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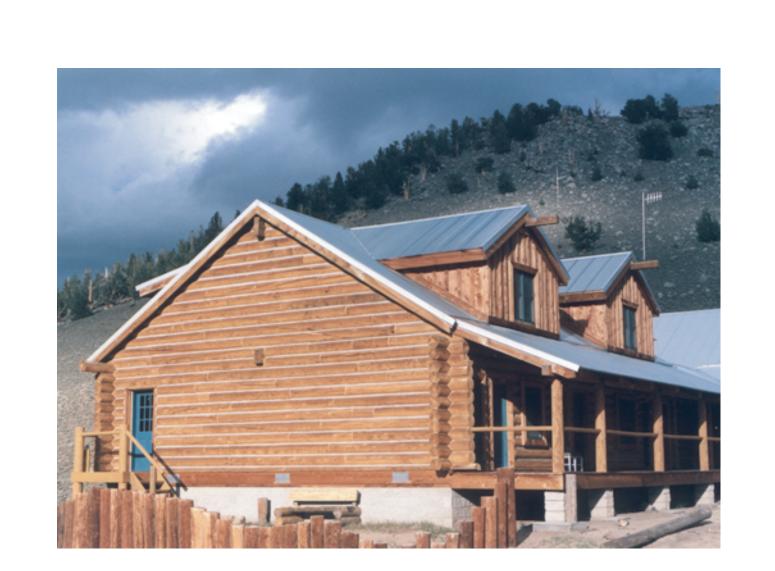
FIELD OBSERVATION IS A CRITICAL SKILL IN THE GEOSCIENCES, YET MOST UNDERGRADUATE MAJORS DEVELOP SUCH SKILL LATE IN THEIR UNDERGRADUATE CAREERS IN A CAPSTONE FIELD CLASS. CAPSTONE FIELD CLASSES TYPICALLY REQUIRE UPPER LEVEL COURSES, SUCH AS STRUCTURAL GEOLOGY, PETROLOGY, OR STRATIGRAPHY.

IN ORDER TO PROVIDE AN INTENSIVE FIELD EXPERIENCE FOR BEGINNING GEOSCIENCE MAJORS, THE GEOLOGICAL SCIENCES PROGRAM AT CWU OFFERS GEOL 210, A TWO-WEEK INTRODUCTORY FIELD COURSE IN EARLY SEPTEMBER. THE COURSE IS TAUGHT IN THE OWENS VALLEY, CALIFORNIA AND PROVIDES AN INTRODUCTION TO COLLECTING AND INTERPRETING FIELD DATA IN A VARIETY OF GEOLOGIC SETTINGS.

FIELD OBSERVATION INCLUDES ROCK DESCRIPTION, TOPOGRAPHIC MAP AND AERIAL PHOTO INTERPRETATION, AND COLLECTING STRUCTURAL DATA. REPORTS FOR THREE MAPPING PROJECTS REQUIRE DRAFTED GEOLOGIC MAPS, CROSS SECTIONS, ROCK DESCRIPTIONS, AND STRATIGRAPHIC DESCRIPTIONS. EACH OF THESE INTEGRATIVE REPORTS IS ASSESSED FOR EVIDENCE OF MASTERY OF GEOLOGIC CONCEPTS AND PRESENTATION OF DATA.



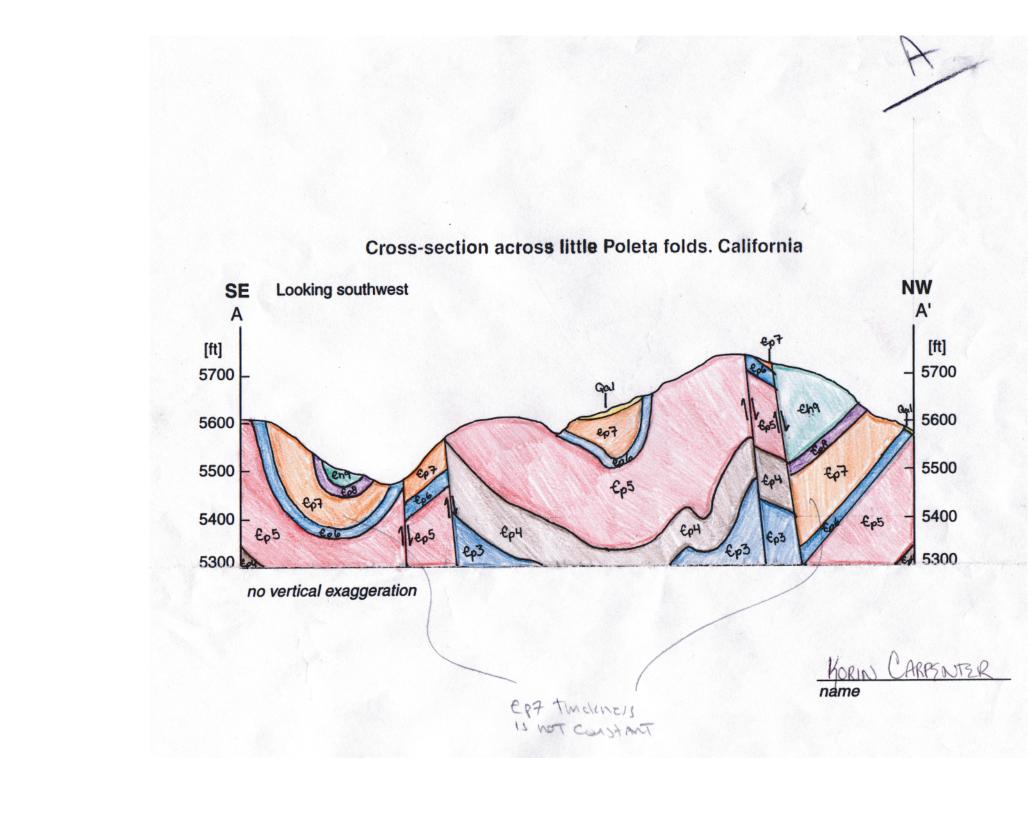
2000: BARSON, JENNIFER, ANNE, JON, BRIDGET, AND JON



1995: White Mountain Research Station



1998: Steve assists Marshall and Kaleb at Poleta



1998: CHRIS AND CODY PLOTTING STRIKES & DIPS

**EQUIPMENT LIST** GEOLOGY 210 BISHOP, CALIFORNIA

REQUIRED FIELD GEAR:

BOOTS MUST BE BROKEN IN.

SHORTS/PANTS MUST HAVE BELT LOOPS! BAGGY OR LOOSE-FITTING MAKES LIFE EASIER.

BELT NEEDED TO SUPPORT BRUNTON COMPASS CASES AND POSSIBLE ROCK HAMMER HOLSTER.

MAP BOARD TWO 11" X 14" PIECES OF 1/8" ACRYLIC (PIECES LOOK LIKE SHEETS OF GLASS)...



2003: JESSICA AND KENDRA WRITING ROCK DESCRIPTIONS

CREATED IN 1994, GEOL 210 SERVES AS A GATEWAY COURSE IN OUR UNDERGRADUATE GEOSCEINCE PROGRAM. HALLMARKS OF THE COURSE INCLUDE COLLABORATIVE STUDENT PROBLEM-SOLVING IN THE FIELD, STRONG PERSONAL BONDING BETWEEN STUDENTS, AND CLOSE INSTRUCTOR/STUDENT RELATIONSHIPS THAT RESONATE WITHIN OUR UNDERGRADUATE PROGRAM IN SUBSEQUENT YEARS.

GEOL 210 IS BUILT AROUND THREE MAPPING PROJECTS. FISH SPRINGS IS A ONE-DAY PROJECT WITH STUDENTS MAPPING ON TOPOGRAPHIC MAPS IN THE MORNING AND THEN WORKING ON AIR PHOTOS IN THE AFTERNOON. THE THREE-DAY BIG PINE PROJECT FOLLOWS WITH MAPPING DONE EXCLUSIVELY ON AIR PHOTOS. FINALLY, A FOUR-DAY PROJECT AT POLETA FOLDS INVOLVES PLOTTING STRUCTURAL DATA ON TOPOGRAPHIC MAPS.

THIS INTRODUCTORY FIELD COURSE HIGHLIGHTS THE REMARKABLE GEOLOGY OF THE OWENS VALLEY, CALIFORNIA. STUDENTS WORK WITH FAULT-CUT CINDER CONES, GLACIAL DEPOSITS, FOLDED SEDIMENTARY AND METAMORPHIC STRATA, SIERRA NEVADA PLUTONS, LAVA FLOWS, AND A HOST OF ALLUVIAL DEPOSITS.



1999: MORE THAN A FEW HELL-RAISERS IN THIS GROUP

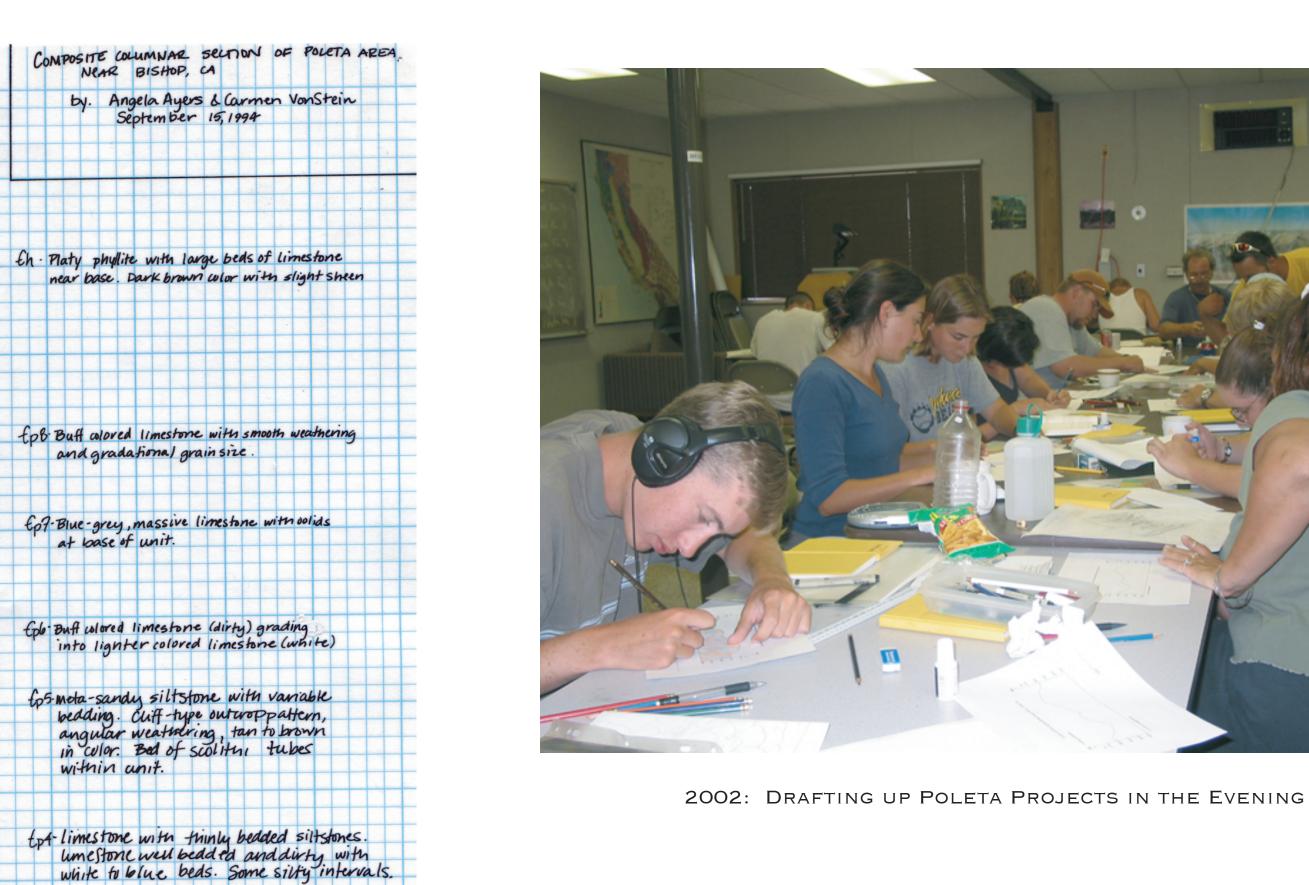


1994: Topographic map base



2003: FERNANDO AND LACY MAPPING AT BIG PINE

2003: CAMPFIRE IN THE WHITE MOUNTAINS ABOVE 10,000'



# SPECIFIC BENEFITS TO OUR DEPARTMENT:

#### 1. STUDENTS KNOW EACH OTHER!

SUBSEQUENT CLASSROOMS ARE VIBRANT PLACES.

#### 2. SETTING THE TONE.

COURSE GIVES FIRST TASTE OF OUR EXPECTATIONS.

## 3. OFF THE FENCE.

COURSE HELPS STUDENTS COMMIT TO GEOLOGY MAJOR.

# 4. COMMON EXPERIENCE.

UPPER LEVEL GEOLOGY COURSES REFER TO GEOL 210.

# 5. QUALITY ADVISING.

STUDENT STRENGTHS & WEAKNESS ON DISPLAY.

# 6. UNDERGRAD RESEARCH POTENTIAL.

APPROACH GOOD FIELD STUDENTS WITH PROJECTS.

#### 7. REFERENCE LETTERS.

COURSE ALLOWS FOR MEANINGFUL COMMENTS.

# BISHOP, CALIFORNIA SEPTEMBER 2004 ITINERARY



1998: Addie, Kyle, and Jennifer - Teaching Assistants

### Monday, August 30:

2:00 PM STUDENTS DROP OFF BAGS / PACK 3 VANS (BEHIND LIND HALL) CWU GEOLOGY DEPARTMENT SUPPLIES CHECKED OUT TO STUDENTS

2:15 PM BRUNTON COMPASS / AIR PHOTO EXERCISES ON CAMPUS

TUESDAY, AUG 31: ELLENSBURG, WA TO GOOSE LAKE STATE PARK, OR

6:00 AM LEAVE ELLENSBURG

NOON BEND, OR LUNCH

1:30 PM NEWBERRY NATIONAL VOLCANIC MONUMENT

### 6:00 PM LAKEVIEW, OR GROCERIES FOR SUPPER AND BREAKFAST

7:30 PM GOOSE LAKE STATE PARK (OREGON/CALIFORNIA STATE LINE)



1996: SAM IN RARE FORM