

GEOL 440/540, Sedimentary Basin Analysis – Fall 2018

Guidelines for Field Trip Report

Due Date: November 13, 2018

On this field trip we visited a series of outcrops in the Roseburg area that contain a record of mountain building and basin formation in response to Eocene accretion of Siletzia. The trip was divided approximately into one day for the Umpqua Group and one day for the Tyee Formation. For this report you will summarize some key observations made on the trip, and explain how the rocks and their ages, thickness, and composition, etc., allow us to interpret regional deformation and basinal response to accretion of a major oceanic plateau at a continental-margin trench.

We observed rocks at 14 stops in two days. To help make this assignment a reasonable length, I'm asking you to write up your **favorite 3-5 stops** (more is okay, but this is what I expect). For each stop that you choose, *first briefly describe* your observations and descriptions of the rocks, and then *interpret the significance of the stop* based on your background knowledge, deductive reasoning, and discussions before, during, or after the trip. *Please indicate stop numbers that we assigned.* "Significance" might include depositional processes, paleo-environments, stratigraphic geometry, controls on basin evolution, source area, and implications for subduction, collision, mountain building, and controls on paleo-river systems in deep time. You should refer to the literature as it pertains to specific stops or regional issues. You may refer to figures in the field trip guide and use citations noted on the figures (I will provide references). Literature citations and references can be minimal because I want the report to focus on *your field observations* and how they inform *your understanding*. Please use the following outline for your report.

- Introduction: what we did, where we went, and why. Approx. ½ page overview of the trip.
- Stop Summaries: Describe and interpret 3-5 stops, as explained above. **Refer to our Stop #s.**
- Conclusions. What did you learn on this trip, and what do you think are some of the more interesting scientific questions that could be addressed in future work?
- References Cited (short): I will provide these, and you can copy-paste an appropriate subset of references into your report ... but make sure references match your in-text citations.

As with other projects, it is important to keep interpretations separate from observations. This can be done by making a clean break from descriptions to interpretations, and is best facilitated with headings and subheadings, and paragraph breaks. The length is flexible. I suggest you write about ½ to one page for each stop that you describe, so the section on stop summaries will be roughly 2-4 pages long (double-spaced or 1.5 line spacing are both okay, you decide). Adding a bit for Introduction and Conclusions (~0.5 to 1.0 page each), the text of your report might be about 3 to 5 pages long (does not include References or any figures, photos or field sketches that you might want to include). Please write all descriptions and interpretations in complete, grammatically correct sentences: not bulleted lists or sentence fragments.

Note: Always use the *present tense* for writing rock descriptions. The only time to use past tense is when discussing and interpreting events or processes that you infer occurred in the past.

Feel free to ask me if you have any questions about this assignment.