

GEOL 332

Cape Sebastian

There are two assignments in this assignment. One is for those attending the field trip and one is for those who are not attending the field trip. In the preface is some background information for all students. This assignment is due electronically by November 5, 2016.

You have been hired, straight outta Humboldt, to prepare a report for a new startup investment firm. This firm, "You Want It, We Got It, Inc.," is interested in developing the natural resources currently being held by the Cape Sebastian State Park in coastal southern Oregon. Their online prospectus describes their company as an organization that specializes in privatizing public resources for the profit of its shareholders. Upon further inspection, major stock holders include politicians in the state of Oregon who promote the off sales of public lands to the public.

This investment firm would like to get a better idea of the geological formations in the area. They do not trust the scientific publications, so need an independent assessment. However, as an HSU Dept. of Geology graduate, you and your team recognize the value in these publications that include lithologic and stratigraphic analyses of the geological units found in the region.

Field Trip Attendees

Your new boss has placed you in a team of 2 other recent graduates because they know that people work better in teams. Your team will travel to the region of Cape Sebastian/Hunters Cove, just north of the mouth of the Pistol River and south of Gold Beach, Oregon. Take some time to observe some of the geological units described in Bourgeois et al., 1985 and in Hunter and Clifton, 1987. Utilize the description found in Hunter and Clifton (1987). In your literature review, take note of the lithologic descriptions and stratigraphic relations.

Take some notes of your bedrock outcrop observations. Prepare a lithologic description for each rock type you observe. Include information about the structures within these geologic units (bedding thickness, orientations). Prepare an illustration of each of the different geological units that you observe.

Prepare a report at least 2 pages long. Include (1) an introductory paragraph, (2) a paragraph for each geologic units (include a lithologic description and a sketch), and (3) a summary paragraph. The sketch could be a clean and legible scan from your field notebook (if the sketch is an excellent one) or it could be a redrafted version of your field sketch. Feel free to also include representative photos of these geological units (in addition to the sketch). These additional photos won't count towards your page count, so include them in the document, but after the main report. The investment firm would like to know which of the units described in Hunter and Clifton (1987) are exposed in the region that you were able to explore.

Field Trip Absentees

Please read the three documents Dott and Bourgeois (1982), Bourgeois et al. (1985), and Hunter and Clifton (1987). Feel free to spend less time with the longer document Bourgeois et al. (1985). The investment firm would like you to summarize the lithologic and stratigraphic data presented in Hunter and Clifton (1987). Please use Dott and Bourgeois (1982) as a source to help document any discussions of hummocky cross-stratification.

Write a paper at least 4 pages long. In the paper, include (1) an introductory paragraph, (2) a paragraph for each geologic units (include a lithologic description and a sketch), and (3) a summary paragraph. Describe the 4 geologic units listed by Hunter and Clifton (1987). Describe the stratigraphic relations. Write at least one paragraph describing the geologic history. The investment firm wants to know how such a wide variety of geologic units could be deposited in the sequence shown in coastal southern OR.